Agricultural Policy Monitoring and Evaluation 2020



OECD

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Note by Turkey
The information in this document with reference to "Cyprus" relates to the southern part of the Island. There is no single authority representing both Turkish and Greek Cypriot people on the Island. Turkey recognises the Turkish Republic of Northern Cyprus (TRNC). Until a lasting and equitable solution is found within the context of the United Nations, Turkey shall preserve its position concerning the "Cyprus issue".

Note by all the European Union Member States of the OECD and the European Union
The Republic of Cyprus is recognised by all members of the United Nations with the exception of Turkey. The information in this document relates to the area under the effective control of the Government of the Republic of Cyprus.

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Foreword

This report *Agricultural Policy Monitoring and Evaluation 2020* is the 33rd in the series of OECD reports that monitor and evaluate agricultural policies across countries, and the eighth report to include both OECD countries and a set of emerging and developing economies. The present report includes countries from all six continents, including the 37 OECD countries and the five non-OECD EU Member States, as well as twelve emerging economies: Argentina, Brazil, People's Republic of China, Costa Rica, India, Indonesia, Kazakhstan, the Philippines, the Russian Federation, South Africa, Ukraine and Viet Nam.

The OECD uses a comprehensive system for measuring and classifying support to agriculture — the Producer and Consumer Support Estimates (PSEs and CSEs) and related indicators. They provide insights into the increasingly complex nature of agricultural policy and serve as a basis for OECD's agricultural policy monitoring and evaluation.

The "Executive Summary" synthesises the key findings of the report. Chapter 1 provides an overview of recent developments in agricultural policies, including a focus on emerging agriculture and food policy responses to the outbreak of the COVID-19 pandemic. The chapter also assesses the environmental performance of agriculture and discusses the impact of agricultural policies on that performance and analyses the longer-term development of the level and structure of support to agriculture across countries included in the report. The publication also includes short Country Snapshots which briefly summarise the developments in agricultural policies and support to farms in each individual country covered by this report (the European Union which has a Common Agricultural Policy is presented as a single Country Snapshot). Policy responses to the COVID-19 pandemic are presented in greater detail in the Country Snapshots.

Comprehensive Country Chapters and the Statistical Annex containing detailed background tables with indicators of agricultural support are available only in electronic form on the OECD publication website (https://doi.org/10.1787/928181a8-en).

The Executive Summary and Chapter 1 are published under the responsibility of the OECD Committee for Agriculture. The remainder of the report is published on the responsibility of the Secretary-General of the OECD.

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List of Acronyms and Abbreviations

AEIs	Agri-environmental Indicators
AIS	Agricultural Innovation System
APMC	Agricultural Product Marketing Committee (India)
ASF	African Swine Fever
CAP	Common Agricultural Policy (of the European Union)
CARES	Coronavirus Aid, Relief, and Economic Security (Act) (United States)
CFAP	Coronavirus Food Assistance Program (United States)
CIFA	Canadian Food Inspection Agency
CO_2	Carbon dioxide
COVID-19	Corona Virus Disease, first recorded in 2019
EAEU	Eurasian Economic Union (Kazakhstan, Russia)
EFTA	European Free Trade Association
EU	European Union
FAO	Food and Agriculture Organization of the United Nations
FCC	Farm Credit Canada
FTA	Free Trade Agreement
GDP	Gross Domestic Product
GHG	Greenhouse Gases
GI	Geographical Indication
ICCC	The Interim Climate Change Committee
INTA	The Agricultural Technology Research and Transfer Institute (Costa Rica)
MAFF	Ministry of Agriculture, Forestry and Fisheries
MARA	Ministry of Agriculture and Rural Affairs (China)
MARD	Ministry of Agriculture and Rural Development (Israel)
NAFTA	North American Free Trade Agreement
NDC	Nationally Determined Contributions
NFA	National Food Authority (the Philippines)
OECD	Organisation for Economic Co-operation and Development
R&D	Research and Development
TRQ	Tariff Rate Quota

UN	United Nations
UNFCCC	United Nations Framework Convention on Climate Change
USDA	United States Department of Agriculture
VAT	Value Added Tax
WTO	World Trade Organization
ZCA	The Climate Change Response (Zero Carbon) Amendment Act (New Zealand)

Executive Summary

In 2017-19, the 54 countries covered in this report provided net transfers to their agricultural sectors of USD 619 billion (EUR 542 billion) per year.[1] These net transfers included USD 708 billion (EUR 620 billion) per year of support directed to the agricultural sectors, offset by an implicit taxation of farmers in some countries worth more than USD 89 billion (EUR 78 billion) per year. Of total transfers, USD 425 billion (EUR 373 billion) constituted budgetary spending for various support programmes, the remainder being market price support.

About three-quarters of all positive transfers, USD 536 billion (EUR 469 billion) per year, was provided to individual producers, with more than half of this amount provided via instruments with the greatest tendency to distort markets, specifically market price support and subsidies linked to output or the unconstrained use of variable inputs. At the same time, six countries, in particular Argentina and India, implicitly taxed their agricultural producers by using measures that depressed the domestic prices of some commodities. While lowering the level of aggregate support, these implicit taxes also increase overall market distortions.

Important changes to policies in 2019 included some significant steps to increase agriculture's contribution to climate change mitigation, other initiatives to improve the environmental sustainability of the agricultural sector, and the conclusion or implementation of several substantial regional trade agreements. In broad terms, however, the pace of policy reforms has stalled in recent years, with distorting support entrenched across many of the countries covered in this report.

The policy context changed abruptly in early 2020, with the outbreak of the COVID-19 pandemic. Governments introduced a wide set of policies in response to the virus and associated lockdown restrictions. These responses included the provision of various forms of support to farmers and other actors along the food chain; initiatives to keep food and agricultural supply chains moving; and the delivery of support to consumers and vulnerable populations, among others. Several countries took active steps to facilitate trade, although some countries also introduced export restrictions in efforts to ensure availability on domestic markets.

OECD Ministers of Agriculture agreed in 2016 on the need for integrated policy approaches to enable the agriculture and food sector to become more productive, environmentally sustainable, and resilient to all type of risks. Performance related to the productivity and sustainability dimensions has been mixed:

- Agricultural productivity has increased across the reviewed countries over the past decade, albeit with a wide variation in growth rates.
- The environmental performance of the sector, as measured by selected indicators, has been less consistent. Most countries have managed to reduce nitrogen balances, or at least see increases that are lower than the increases in productivity growth. On the other hand, for most countries, greenhouse gas (GHG) emissions per hectare have continued to grow, albeit more slowly than increases in productivity.
- Progress in decoupling productivity growth from the above environmental pressures has slowed in the past decade, corresponding to a loss of reform momentum compared with the 2000s, when there were deeper reforms of market distorting policies.

A number of policy approaches are available to help agriculture become more productive, sustainable and resilient, however those opportunities remain underused by governments:

- Budgetary support to the agricultural sector could prioritise innovation and the wider enabling environment. This would make agro-food systems more responsive to industry needs, societal demands and environmental pressures. Yet only one-eighth of total support goes to agricultural innovation systems, inspection and control systems, and rural infrastructure.
- Governments could provide targeted payments to produce environmental public goods; however only a handful of countries adopt these policies and they represent a small share of total support for agriculture.

Instead, most governments continue to provide support to agriculture via mechanisms that do not effectively address these objectives, and often hamper them:

- More than two-thirds of all government transfers to the sector across countries is provided through the potentially most distorting instruments. These support measures have the greatest tendency to retain farmers in uncompetitive and low-income activities, harm the environment, stifle innovation, slow structural and inter-generational change, and weaken resilience.
- Income support is often not supportive of productivity and sustainability objectives, and disconnected from the total incomes of farm households. In cases where support is conditional on environmental constraints, the payments are typically not targeted to outcomes, which reduces their effectiveness.
- Risk management measures rarely aim to build preparedness and long-term resilience in the sector. Most programmes involve subsidised insurance and stabilisation schemes, or ad hoc assistance in response to extreme events, that risk crowding out private risk management activities.
- While it is too early to assess the emerging responses to COVID-19, the absence of sunset clauses on selected production-related support measures, as well as the relaxation of environmental regulations, risks creating an economically and environmentally challenging institutional path dependency.

Recommendations

- Dismantle, in a gradual but consistent process, all policies identified as particularly detrimental to market efficiency and the sector's environmental performance. The priority reform should be the sectors where high support is provided via the most distorting measures. Such reforms would reduce intra-sectoral distortions and allow markets to function better, while simultaneously reducing environmental pressures that derive from incentives to intensify production in unsustainable ways.
- Phase out distorting budgetary support. This would liberate funds for more targeted policies, as well as for investments to make agriculture more productive, environmentally sustainable and resilient. Such funds could be allocated to wider societal priorities including climate adaptation and mitigation.
- Remove, as quickly as possible, trade restrictions imposed in the context of the COVID-19 pandemic. This would allow the market to perform its distributing and signalling role.
- Ideally, anchor reductions in distorting support and associated trade protection through the multilateral process. If that cannot be achieved, the trend towards broader and deeper regional trade agreements can offer a way forward.
- Improve the efficiency of support to individual producers by targeting well-defined, quantifiable outcomes of public interest. Payments for non-commodity outputs (such as the landscape) are

means to create markets for public goods, while providing agricultural producers with additional income opportunities.

- Strengthen the efficiency of agri-environmental policies by successively raising baseline requirements for agricultural practices, including by making cross-compliance mandatory where relevant. More ambitious public good and environmental outcomes can be delivered through targeted support.
- Integrate farm households into social security systems to reduce the need for spending on agriculture-specific income support. Governments should improve their understanding of the financial situation of farm households and target any market failures that lead to persistent low incomes within the agriculture sector.
- Focus public efforts in risk management on catastrophic and systemic risks for which private solutions cannot be developed. Care should be taken that public support does not crowd out on-farm and market-based risk-management tools. Governments should prioritise investments that build farmers' capacity to both manage current risks and to adapt to an evolving risk environment, especially under climate change.
- Collect lessons from the ongoing COVID-19 pandemic, notably regarding the effectiveness of different forms of government interventions in responding to shocks and developing preparedness.
- Increasingly prioritise the provision of key public services to the sector by investing in agricultural innovation systems, in relevant hard and soft infrastructure, and appropriate biosecurity systems protecting human, animal and plant health. Explore opportunities to improve the delivery of such services via digital technologies.
- Improve the coherence and transparency of policy packages by avoiding the provision of conflicting incentives to market participants, and by integrating agricultural policies into economy-wide programmes, such as those related to labour markets and social security, the environment, transportation and communication, trade and other infrastructure.

Note

[1] This report presents recent policy developments and support estimates across all OECD countries, the European Union and thirteen emerging and developing economies in 2019 and early 2020. Colombia became the 37th Member of the OECD in April 2020. In the data aggregates used in this report, however, it is included as one of the 13 Emerging Economies. This report mainly analyses agricultural policies in 2019, while synthesising emerging policy responses to the COVID-19 crisis implemented before the end of April 2020.

1 Developments in agricultural policies and support

The key economic and market developments which provide the framework for the implementation of agricultural policies are analysed in the first section of this chapter. The next section presents the main recent changes and new initiatives in agricultural policies 2019-20 with a focus on environment and trade. A specific section focuses on emerging agriculture and food policy responses to the outbreak of COVID-19 implemented by the end of April 2020. This chapter also analyses the level and structure of agricultural support against the various policy objectives identified by governments, both for agriculture and the wider food system, including productivity and sustainability. The chapter concludes with the assessment of these developments and policy recommendations.

This report describes the evolution of agricultural policies and quantifies the extent of support to the sector through to the end of 2019. Policies and associated support are influenced by developments in agricultural markets and wider macroeconomic conditions. As the first section of this chapter outlines, agricultural markets were generally stable through 2019, with low prices for most commodities. The wider context was one of weak economic growth, but with continued growth in employment, while inflation and interest rates remained low. With the outbreak of the new coronavirus SARS-CoV-2 and the subsequent spread of the COVID-19 disease, however, both overall economies and agricultural markets and policies have seen significant changes.

Governments introduced a wide set of policies in early 2020 to respond to the challenges posed by the COVID-19 pandemic. These generally fall into three broad categories: support to farmers and other actors along the food chain, through both domestic and trade measures; initiatives to keep food and agricultural supply chains moving; and support to vulnerable populations. More broadly, many countries have responded to the dramatic economic contraction through heavy fiscal support, facilitated by low real interest rates. This wider policy response also has direct and indirect implications for the food and agriculture sector. In order to accommodate this sudden change in the context in which policies are being made, this report complements its regular analysis of policies through to the end of 2019 with a description of policy responses put in place in the first four months of 2020 and which significantly affect the food and agriculture sector, highlighting both the diversity of measures introduced and commonalities across countries.

This chapter also analyses the level and structure of agricultural support against the various policy objectives identified by governments, both for agriculture and the wider food system, including productivity and sustainability performance. The chapter concludes with the assessment of these developments and policy recommendations. Where relevant and possible, this assessment also takes account of key policy responses to the COVID-19 pandemic.

Key economic and market developments

Conditions in agricultural markets are heavily influenced by macro-economic variables such as global gross domestic product (GDP) growth (which supports demand for agricultural commodities) and energy prices, especially for crude oil (which affects the price of inputs into agriculture, such as fuel, chemicals and fertiliser, and influences demand for cereals, sugar crops, and vegetable oils through the market for biofuels).

After strengthening in 2017, global economic growth has slowed since mid-2018, and for 2019 is estimated to have remained fragile at less than 3% (OECD, 2020[1]). Signs of stabilisation were visible at the end of the year. Nonetheless, growth in the OECD economies has fallen to an average of 1.7% in 2019, one percentage-point below growth two years earlier. This reduction in economic growth was most notable in the **Euro area**, which grew by just 1.2% in 2019, and in **Japan** where a growth rate of 1.0% was slightly higher than in 2018 but much lower than the 1.9% measured in 2017. The continued deepening of trade tensions since May 2019 has reduced confidence and investment, and increased policy uncertainty (OECD, 2019[2]).

Despite lower growth, labour markets have continued to expand in many OECD economies. Across the OECD area, unemployment declined to 5.2% in 2019, compared to 5.8% two years before. Average inflation has come back to 2.0% after slightly higher levels in 2018.

Growth in emerging economies has slowed as well, although different key economies have slowed to varying degrees. **Argentina**, which had slipped into recession in 2018, and where the exchange rate and financial crises have intensified, saw its economy shrinking by -3% in 2019 and access to market funding dry up. Growth in **Brazil**, at just over 1% in 2017, slowed marginally to 0.8% in 2019. Looking at the large

economies in Asia, growth in the **People's Republic of China** (hereafter, "China") continued to slow to 6.2% in 2019, while the **Indian** economy grew by less than 6% that year. Economic growth remained fairly robust in **Indonesia** with only a minor decline to 5.0% in 2019.

Lower economic growth and increasing trade restrictions, including higher tariffs applied to trade flows between **China** and the **United States**, have resulted in a continued and significant decline in the growth of global trade.

The outbreak of COVID-19 early in 2020, and in particular the measures to contain the spreading of the disease are having significant consequences for economies. In response to the pandemic, governments around the world have implemented significant restrictions to personal and economic activities, resulting in shutdowns of parts of the economies. OECD (2020[3]) estimates that the initial direct impact of the shutdowns could be a decline in the level of output of between one-fifth and one-quarter in many economies, with consumers' expenditures dropping by around one-third. The impact on annual GDP growth depends on a variety of factors, such as the magnitude and duration of national shutdowns, and the speed at which the significant fiscal and monetary policies take effect. Annual GDP could decline by up to 2 percentage points for each month that strict containment measures continue.

International trade is likely to be hit even more strongly. The WTO (2020[4]; Bekkers et al., 2020[5]), estimates that world merchandise trade might shrink in 2020 by between 13% and 32% compared to 2019. Even the lower end of this range is greater than the reduction in global trade observed after the economic crisis of 2008/09. The extraordinarily wide range of this estimate is indicative of the exceptionally high level of uncertainty associated with the health and economic recovery trajectory. Agro-food trade appears to be more robust, but still subject to a significant reduction due to COVID-19 and associated lockdown measures. For instance, **China**'s trade in agricultural products in the first quarter of 2020 is estimated to be at the lowest level over the same quarter since 2012 (China Daily, 2020[6]).

Table 1.1. Key economic indicators

	Average 2007-16	2017	2018	2019
Real GDP growth[1]				
World[2]	3.4	3.7	3.5	2.9
OECD[2]	1.4	2.7	2.3	1.7
United States	1.4	2.4	2.9	2.3
Euro area	0.7	2.7	1.9	1.2
Japan	0.5	1.9	0.8	1.0
Non-OECD[2]	5.4	4.6	4.6	3.9
Argentina	2.3	2.7	-2.5	-3.0
Brazil	2.1	1.1	1.1	0.8
China	9.0	6.8	6.6	6.2
India	6.8	7.2	6.8	5.8
Indonesia	5.6	5.1	5.2	5.0
South Africa	2.2	1.4	0.7	0.5
OECD area				
Unemployment rate[3]	7.2	5.8	5.3	5.2
Inflation[1,4]	1.7	2.0	2.3	2.0
World real trade growth[1]	3.8	5.8	3.7	1.2

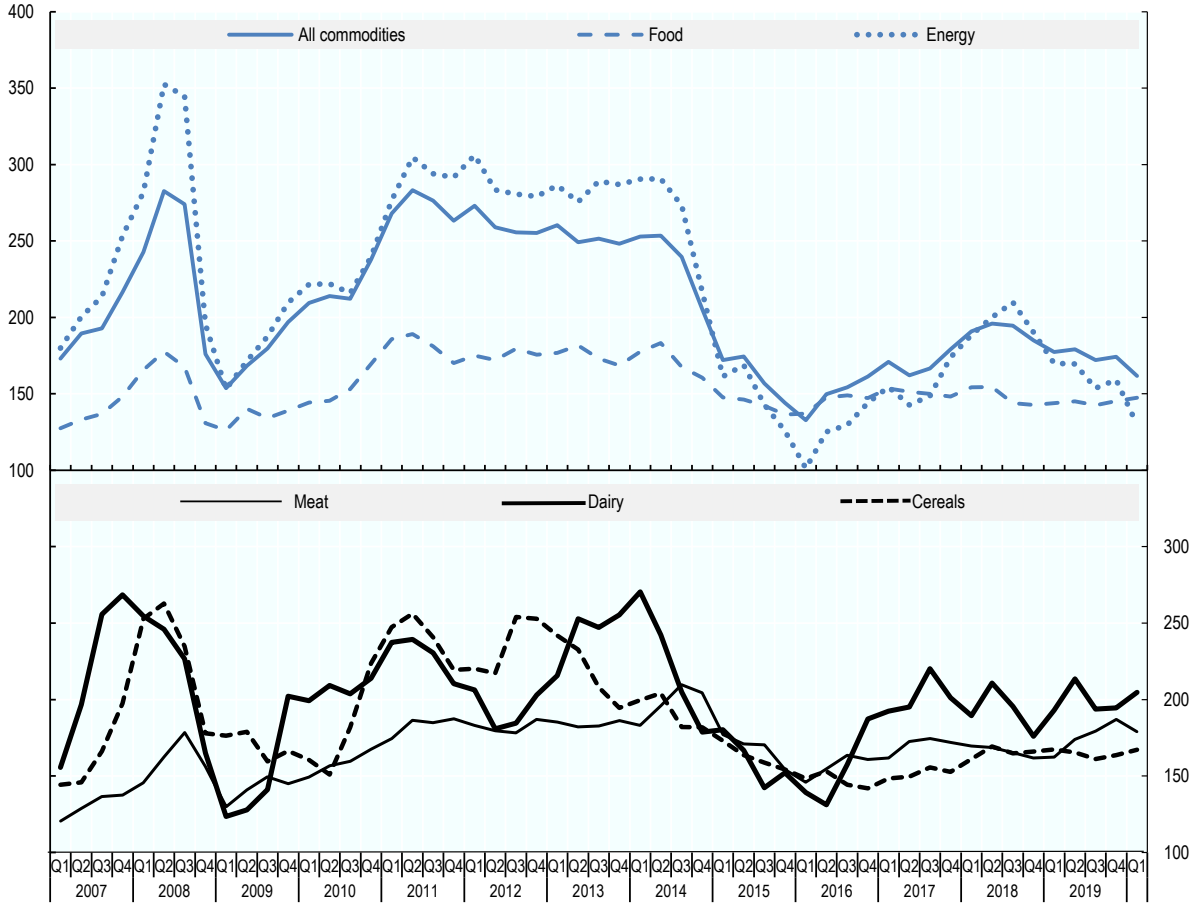
Notes: 1. Percentage changes; last three columns show the increase over a year earlier. 2. Moving nominal GDP weights, using purchasing power parities. 3. Per cent of labour force. 4. Private consumption deflator.
Source: OECD (2019), *OECD Economic Outlook*, Volume 2019 Issue 2, OECD Publishing, Paris, https://doi.org/10.1787/9b89401b-en. Last updated November 2019. OECD Economic Outlook 106 database.

Lower economic growth has put non-food commodity prices under some pressure. Energy prices declined from interim peaks observed in the second half of 2018. Slowing demand and ample supplies have pushed prices for coal and gas down by 37% and 27% on average in 2019, compared to 2018. Crude oil prices declined by 8% over the same period. Lower energy prices also pulled down fertiliser prices, which on average lost 17%, year-on-year (IMF, 2020[7]). Oil prices have since collapsed, as the COVID-19 pandemic has caused demand for transport fuel to plummet (IEA, 2020[8]).

In comparison, food prices remained more robust. On average, prices in 2019 were some 3% below those in 2018 (IMF, 2020[7]). Average food price developments were driven mainly by rising prices for meat, dairy products and, to a lesser extent, sugar, whereas grains and notably oilseed prices declined.

Figure 1.1. Commodity world price indices, 2007 to 2020

Index 2002-04=100



Note: The top part of the graph relates to the left scale, while the bottom part of the graph to the right scale.
Source: IMF (2020), Commodity Market Review, for all commodities, food and energy indices (base year: 2016), www.imf.org/external/np/res/commod/index.aspx; FAO (2020), FAO Food Price Index dataset, for meat, dairy and cereal indices (base period: 2002-04), www.fao.org/worldfoodsituation/foodpricesindex/en.

StatLink https://doi.org/10.1787/888934143185

World meat production fell by nearly 2% in 2019, driven by significant reductions in pig meat production in **China**, as a consequence of the African Swine Fever, a virus that also spread into a number of other East Asian, South-East Asian, Central European and African countries. The lower pig meat production in China

was partly offset by other meat sectors in China as well as increased meat production in **Argentina**, the **European Union**, **Turkey**, and the **United States** (OECD/FAO, 2020[9]). As a consequence of falling global meat production, average meat prices rose by 5.6% in 2019, compared to 2018 (FAO, 2020[10]).

Global dairy production rose mainly due to increased production in **India**, which however trades only marginal quantities of dairy products internationally. Milk production of the three major dairy exporters, **New Zealand**, **European Union** and the **United States**, increased only slightly. World butter prices continued to decline from relatively high levels, while those for skimmed milk powder recovered from low levels in 2019 (OECD/FAO, 2020[9]). On average, dairy prices registered a 3% increase between 2018 and 2019 (FAO, 2020[10]).

World sugar production in 2018/19 was below the previous season mainly due to lower sugar production in **Brazil**, following in particular an increased diversion of sugar cane towards ethanol production. In spite of continued growth in sugar consumption mainly due to increased use, notably in **India** and **Indonesia**, markets have remained in surplus. As a consequence, sugar prices remained below past levels for most of 2019 and fell further towards the end of the marketing year (FAO, 2020[10]). With the new marketing year announced to be in deficit primarily due to drought conditions in **India** and **Thailand**, prices started to rise again in late 2019 and the beginning of 2020. Following reduced fuel and sugar demand in most parts of the world due to COVID-19 related restrictions for travel and gastronomy, however, sugar prices have declined significantly in March 2020 (ibid).

In spite of rising production of major grains, global cereal stocks declined due to continued destocking of maize in **China**. Wheat and barley harvests recovered in the **European Union**, the **Russian Federation** and **Ukraine** from lower levels in 2018. Maize production increased, notably in **Brazil** and the **Russian Federation**. At the same time, **Australia** witnessed a major drought-related crop failure in 2019. Global rice production slightly declined from the all-time record in 2018 (OECD/FAO, 2020[9]). Overall, international grain prices in 2019 where slightly below 2018 levels, while those in early 2020 were only little affected by the COVID-19 pandemic (FAO, 2020[10]).

Global soybean production declined in 2019 due to significantly lower plantings in the **United States**, associated with both market uncertainty and extensive flooding in the US Midwest during the planting season. This decline was only partially offset by a record crop in South America. Reduced pig meat production due to African Swine Fever curbed feed demand in **China**. World output of other oilseeds also decreased slightly as shortfalls in the production of rapeseed in **Canada** and the **European Union** were not offset by increases in other producing countries. Despite these declines, international prices for oilseeds and products fell to multi-year lows in mid-2019, mainly reflecting a slowing global demand for oils and meals and uncertainties stemming from bilateral trade differences (OECD/FAO, 2020[9]). Oilseed prices continued to be volatile, rising significantly until early 2020 before dropping equally strongly in the first months of the year.

Recent developments in countries' agricultural policies, with a specific focus on environment and trade

Agricultural policy developments in 2019 were diverse in terms of scope, objectives and instruments. This section reviews some of the key agricultural policy changes, focusing on two areas of growing importance: policies aiming to improve the environmental sustainability of the agricultural sector and agricultural trade policy changes. Policy settings in these two areas have the potential to affect agricultural productivity, sustainability and resilience in coming years. Other main domestic policy developments, including those that may affect the environmental performance of agriculture and agricultural trade, are also reviewed.

Main policy changes aiming to improve the environmental sustainability of the agricultural sector

A number of policy changes undertaken in 2019 aim to reduce the environmental impact of agriculture or increase the provision of environmental public goods, via the use of incentives, regulations or other instruments, or encourage adaptation to climate change.

Several countries adopted targets, plans and policies to mitigate greenhouse gas emissions or to facilitate adaptation to climate change

While many countries have included agriculture in their Nationally Determined Contributions under the 2016 Paris Agreement, few have set specific targets for the agricultural sector. **New Zealand** and **Ireland** are the only countries with legally binding policy targets to mitigate agricultural greenhouse gas (GHG) emissions, with both countries making this significant policy step in 2019. Other countries have also set strategic mitigation goals for agriculture in their national climate policy frameworks, however, the specific policy measures for achieving these goals are still being developed.

With the Zero Carbon Amendment Bill passed in November 2019, **New Zealand** introduced specific agricultural targets for the reduction of biogenic methane emissions ranging from 10% by 2030, and from 24% to 47% by 2050 compared to 2017, in addition to reducing all other GHG emissions to net-zero by 2050. A complementary Bill introduced a process aiming to price GHG emissions from livestock at the farm gate, and fertiliser emissions at the manufacturer and importer level as of 2025 (Box 1.1). **Ireland**'s Climate Action Plan sets out a decarbonisation pathway to 2030, in which the agricultural sector is required to deliver 17% of total emission reductions, amounting annually to 8-9% of agricultural GHG emission in 2030. An additional contribution of 26% is expected from other land use actions, mainly in the forestry sector, over this same period.

The **European Commission** presented their European Green Deal proposal to the European Parliament, which lays down a strategy to reach net zero GHG emissions by 2050. Several EU Member States instituted specific programmes or projects designed to reduce agricultural GHG emissions, including **Denmark**'s pilot programme on arable land multifunctionality; **Finland**'s plans to become carbon neutral by 2035, including sourcing 30% of aviation fuel from biofuels; **France**'s funding of new on-farm anaerobic digestion projects; **Italy**'s offering of incentives for biogas plants that are powered at least 80% by waste produced by farms and no more than 20% by second harvest crops.; and **Spain**'s *Plan Renove* to replace old agricultural machinery with newer, lower-emissions models. Other countries passed or began implementation of national climate change or climate change adaptation plans that included agriculture, including in **Belgium (Flanders** and **Wallonia), Germany, Greece, Ireland, Luxembourg** and **Portugal**.

Box 1.1. New Zealand's Zero Carbon Act- implications for the agro-food sector

The Climate Change Response (Zero Carbon) Amendment Act (ZCA), passed in November 2019, makes New Zealand one of the first countries to bind its climate commitments into law including objectives for agriculture as an integral component. To help meet these commitments, the government has introduced another Bill, to price agricultural greenhouse gas (GHG) emissions and work with actors in the agricultural sector to achieve the targets for agricultural emissions.

The ZCA sets dual national targets to reduce GHG emissions. They aim to reduce biogenic methane emissions by 10% by 2030 and by between 24% and 47% by 2050, relative to 2017 levels, and to reduce all other GHG emissions to net zero by 2050.

Almost half of all GHG emissions in New Zealand originate from the agricultural sector, and more than a third are in the form of methane from the dairy, sheep and beef industries. Most of the remaining

agricultural emissions are in the form of nitrous oxide linked to fertiliser use and urine patches on pasture. While emissions from agriculture have stabilised in recent years, they increased by 13.5% from 1990 to 2017. With almost two-thirds of all New Zealand exports being agro-food products, originating to a large extent from the livestock sectors, trade-offs being considered in the development of the national mitigation policy are considerable for the economy as a whole and the rural economy.

The Interim Climate Change Committee (ICCC)[1] was established in 2018 to provide recommendations on ways to reduce emissions, including from agriculture. It concluded that on-farm emission reduction is most efficiently achieved through emissions pricing – pricing would drive innovation, reward farmers who significantly reduce emissions, and give them autonomy over actions on their farm. The ICCC noted that pricing should be part of a broader package that includes tools, support and advice to farmers. The ICCC noted that it would take until 2025 to implement a farm level pricing scheme and recommended that agricultural emissions be priced at the processor level in the interim.

Following the ICCC's recommendations and a proposal from primary industry organisations representing all farmers, the New Zealand government introduced, in October 2019, the Climate Change Response (Emissions Trading Reform) Bill (ETR) to price livestock emissions at a farm level, and fertiliser emissions at a processor level, from 2025. A pricing scheme is to be designed through a Joint Action Plan and in collaboration with a group of leading primary industry organisations. The Plan should also include on-farm programmes to support farmers to be ready for emissions reporting and pricing by 2025. The system would grant farmers 95% of their emission credits free with the remaining credits to be purchased. In the longer term, the share of emission credits to be purchased by farmers would increase, in line with the approach taken for other industries.

The Climate Change Commission is to monitor the progress being made under the Joint Action Plan and report back to the government in 2022. Should progress be considered inadequate, the government retains the option to impose pricing at processor level. The Minister for Climate Change is also to report back in 2022 on the details of a farm-level emissions pricing scheme, including details of an alternative pricing scheme to the New Zealand Emissions Trading Scheme.

Note: 1. As of December 2019, the Interim Climate Change Committee was disestablished and replaced by the independent Climate Change Commission, a government funded body set up under the Zero Carbon Bill to provide the government with advice on climate policy. The Commission is made up of a Chair and six Climate Change Commissioners who are experts in climate science, adaptation, agriculture economics and the Maori-Crown relationship.

The government of **Korea** released a second version of its Climate Change Response Plan, covering 2020-40. This plan sets a target to reduce GHG emissions by 37% from the business-as-usual (BAU) level by 2030, which is 24% lower than the 2017 level, and includes action plans across all economic sectors, including the agricultural sector, which is set to reduce GHG emissions by 7.9% from the BAU level by 2030. The plan also develops GHG monitoring and forecasting mechanisms, improves the current emissions trading system, and invests in infrastructures to adapt to climate change.

In **Norway** the 2017 Climate Change Act establishes by law the country's target of becoming a low-emission society by 2050. The government reported to the parliament in 2019 according to provisions in the Climate Change Act and a climate agreement for agriculture with farmers' organisations was negotiated. In 2019, an Action Plan was developed for the implementation of the national bio-economy strategy and work on developing a strategy on circular economy is in progress.

Efforts are also continuing to improve agriculture's adaptation to climate change. **Mexico** is working with the International Maize and Wheat Improvement Center (CIMMYT) and agricultural producers, to provide farmers with information on weather forecasts and the most appropriate adaptation practices to minimise the impact of climate change. **Costa Rica** improved provisions to its credit system to respond to climate change related disasters, by issuing instructions to State Banks to provide options to agricultural and

fisheries producers that defaulted on credit obligations due to climatic and pests disasters. These options comprise partial payments, debt rescheduling, extended grace periods, and improvements in interest rates, among others. This initiative also incorporates training strategies for financial education and the use of insurance for farmers.

In February 2020, the **United States** Department of Agriculture (USDA) announced a new initiative, the Agriculture Innovation Agenda (AIA) with the objective of aligning USDA resources, programmes and research to better equip farmers and producers to meet future food, fibre, fuel and feed demands while reducing the environmental footprint of US agriculture. The initiative sets goals and indicators for five outcomes: productivity growth, water quality, carbon sequestration, renewable energy, and reduction of food loss and waste.

Different approaches were employed to improve the use of agricultural inputs and control pollution

Several governments have introduced or implemented regulations on the approval or use of pesticides. In **Argentina**, a 2019 resolution established a list of legal restrictions on the use of active principles in agro-chemicals (pesticides). The **Brazilian** Health Regulatory Agency (Anvisa) approved in July 2019 a new regulatory framework for agrochemicals, updating the criteria of approval and classification of toxicity and improving the labelling requirements on risks of pesticides. At the **European Union** level, approvals for chlorpyrifos, chlorpyrifos-methyl, desmedipham and dimethoate were not renewed. Several Member States also introduced regulations on pesticides for environmental purposes. In particular, **France** banned two products that were deemed to function similarly to neonicotinoids (flupyradiforone and sulfoxaflor). Several EU Member States also either approved or began deploying national action plans for the sustainable use of pesticides, including **Estonia, France, Greece** and **Romania**.[1]

As complement to its regulation, Argentina's government launched a public consultation on the policy principles for the application of agro-chemicals and an inter-ministerial working group on good practices on pesticides applications. A new Action Plan on Bio-inputs that involves all actors from the public and private sectors is developing alternatives and complements to chemical products.

Several countries also undertook efforts to reduce pollution associated with the use of fertilisers. New regulations or adjustments to existing programmes to reduce nitrogen runoffs were introduced in Denmark, Estonia, Greece, and Ireland. National-level programmes or initiatives designed to improve air quality and reduce ammonia emissions were instituted in Estonia, Ireland and Luxembourg. Japan amended its Fertiliser Regulation Act to allow the production and sale of fertilisers combining chemical fertilisers and compost of livestock manure or soil amendment for a more efficient management of soil. The amendment also provides standards of raw materials to be used for producing fertilisers.

A few countries introduced broader conservation or farm measures to reduce the use of all chemical inputs. In Australia, the second phase of the National Landcare Program was deployed for the period 2019-23. The programme supports the development and uptake of best practice management through the Smart Farms Program and Regional Land Partnerships. The Agriculture Stewardship Package supports agricultural biodiversity, including the pilot testing of a certification scheme. China announced a plan to restrict farming that encroaches on major rivers, while accounting for food security concerns, defining "ecological protection red lines" with the objective of contributing to the restoration of contaminated water supplies. China is also implementing its 2019 Soil Pollution Prevention and Control Law, which aims to classify land, monitor risk, soil prevention and control measures in economic development and environmental protection plans.

India's 2019-20 Union Budget promotes additional pilots of "Zero Budget Natural Farming" (ZBNF) across the country, which could allow gathering information on its viability and assessing the opportunities for scaling up its application. ZBNF is a method of chemical-free agricultural production drawing from

traditional Indian practices. Costa Rica launched the Agro-ecological Zoning (ZAE) initiative for four cantons of the country. The initiative involves the development of zoning maps of soil use and soil fertility for selected crops, and offers training for farmers for the use of this tool to improve their decisions towards more resilient and sustainable production systems.

To prevent further land use change, Mexico will exclude support for productive units located outside the current agriculture production frontier. A platform entitled "National System for Consultation on Concurrent Incentives" (SINECI) will ensure the absence of support for productive activities on properties located in Natural Protected Areas and in priority areas for conservation. The government is also in the process of designing a National Strategy for the Conservation and Sustainable Use of Pollinators (ENCUSP), expected to be released in the first half of 2020.

Measures were planned or carried out to reduce agricultural freshwater use

One means to relieve the pressure of scarce freshwater resources is to call on the use of alternative water supplies. In December 2019, the **European Union** made a significant step towards the development of water reuse for irrigation by reaching an agreement on minimum water quality standards that ensure safety within reasonable treatment costs. The new rules, which are expected to be adopted in 2020, aim to ease the use of treated wastewater for agricultural irrigation, by introducing minimum water quality requirements, monitoring, and mandatory risk management plans for wastewater treatment plants.

In **India**, an Expert Committee of the Ministry of Environment, Forest and Climate Change suggested a set of measures for curbing exploitation of groundwater, including through tighter regulation on the overuse of water in the agriculture sector. The Committee recommends designing policies that would encourage crop diversification in areas where groundwater is overexploited and proposes the introduction of a groundwater conservation fee for farmers with landholdings above 5 hectares as well as of "water credit" for users who conserve groundwater above a certain threshold.

Sector-wide policies were introduced to reduce food loss and waste

Several countries introduced measures or legislation to reduce food waste and losses. Enacted in 2019, **Japan**'s Food Loss Act requires the national government to establish a basic policy to reduce food waste, and the local governments to devise their own action plans. These plans should include measures to educate consumers and businesses, and to facilitate the activities of non-governmental organisations collecting and distributing food expected to be wasted. The Act also urges businesses and consumers to be proactive about reducing food losses. **Turkey**'s National Strategy Document and Action Plan on Prevention, Reduction and Management of Food Losses and Waste were prepared in collaboration with the FAO in 2019 as part of the global SAVE FOOD campaign.[2] The **European Commission** published a decision establishing a common EU methodology to measure food waste, which allows Member States to collect data on food waste beginning in 2020 and to report on national food waste levels starting in 2022. Food loss and waste activities were also undertaken within different EU Member States such as **France, Germany, Latvia, Luxembourg, Slovakia**, and **Spain** and the Flanders and Wallonia regions of **Belgium**. The **United States** began implementation in 2019 of the Winning on Reducing Food Waste Initiative with six priority action areas, including enhanced interagency co-ordination, increased consumer education and outreach efforts; improved co-ordination and guidance on food loss and waste measurement; clarification and communication of information on food safety, food date labels, and food donations; collaboration with private industry to reduce food loss and waste across the supply chain; and encouragement of food waste reduction by Federal agencies in their own facilities. Under its food loss plan, **Argentina**'s government implemented its National Plan on Food Waste and Losses and introduced a new law to limit the responsibility of the donor of food, while ensuring the conformity with food safety standards. The **Philippines** launched an initiative to exchange plastic for rice. Starting in September 2019, residents of

Bayanan can get one kilogramme of rice for every two kilogrammes of plastic waste, which are handed over to the government for proper disposal or recycling.

Organic product legislations were enacted

The **Russian Federation** enacted its law on organic products in January 2020. The law defines the organic standard, and regulates the production, storage, transportation, labelling, and marketing of organic products. The law also outlines the role of accredited certification bodies in verifying organic production processes. It stipulates the maintenance of a state register of organic products developers. The Russian Government is also developing regulations, standards, and labelling related to environmentally friendly production. A draft law "On environmentally clean agricultural products, raw materials and foodstuffs" has gone through public discussion, to be later submitted to the Parliament. In **Ukraine**, the law on organic production and marketing came into force in August 2019 and defines the main framework for the production of, and the functioning of markets for, organic products. It also defines the roles and obligations for public authorities and organic market operators, and lays out further public policy directions for the development of organic product markets. In pursuance of the Law, the Cabinet of Ministers approved, in October 2019, the "Procedure for the Organic Production and Circulation of Organic Products". The main provisions of this procedure are in line with the requirements of EU Regulation 889/2008.

Main agricultural trade policy changes

While multilateral trade negotiations have stalled, countries have continued to pursue regional and bilateral trade agreements. As shown in Table 1.2, at least 60 trade agreements were either negotiated, signed, ratified or revised by the countries covered in this report during 2019 or early 2020. This section highlights selected agreements of importance for the agriculture sector, but also some of the main import or export measures taken by the covered countries during this period.

Major regional trade agreements were signed or ratified

In June 2019, the **European Union** and Mercosur reached a political agreement on a free trade agreement involving EU member countries and the members of Mercosur (**Argentina, Brazil, Paraguay and Uruguay**). On agricultural goods, the agreement removes tariffs on 82% of EU imports from Mercosur (including many fruits, juice and coffee), and on 93% of Mercosur imports from the European Union (including olive oil, wine and chocolate), all with a transition period of up to 10 years after entering into force. It also includes the expansion of the EU Tariff Rate Quotas (TRQs) for sensitive products such as beef, poultry, pork, sugar, ethanol and cheese coming from Mercosur countries. The agreement also foresees facilitating trade with streamlined border and sanitary and phytosanitary (SPS) procedures, mutual recognition of geographical indications, and a chapter on trade and sustainable development. The agreement is still undergoing technical revision and translation, and remains to be approved by the European Union, as well as by Mercosur.

The Agreement between **Canada, Mexico** and the **United States** (called CUSMA in Canada, T-MEC in Mexico, and USMCA in the United States), signed in November 2018, was approved by the Mexican Senate in December 2019, the US Senate and US president in January 2020, and the Canadian Parliament on 13 March 2020. This new agreement will replace the North American Free Trade Agreement (NAFTA) and will enter into force on 1 July 2020. In the case of agriculture, its provisions preserve the existing agricultural commitments under NAFTA, eliminate tariffs for certain additional products (e.g. whey and margarine for Canada-US), and establish TRQs for other products (e.g. US dairy exports in Canada) on a bilateral basis. The agriculture chapter in the new agreement also includes new obligations for agricultural biotechnology, aiming to provide further transparency and predictability in the trade of products derived from current and future technologies.

As a member of the Eurasian Economic Union (EAEU) the **Russian Federation** was directly involved in the negotiation process for the conclusion of the Union's free trade agreements with Singapore and Serbia, which were signed in 2019. After the completion of domestic approval procedures, the agreements will enter into force. An interim agreement leading to the formation of a free trade zone between the EAEU and Iran also entered into force in 2019. All these documents include, in particular, mutual concessions in agri-food trade.

Table 1.2. Developments of bilateral trade agreements in 2019-early 2020

	ARG	AUS	BRA	CAN	CHL	CHN	COL	CRI	EU	IND	IDN	ISR	JAP	KOR	MEX	NZD	PHL	SAF	TUR	UKR	USA	VNM	EAEU	EFTA	MERCOSUR	OTHER
ARG																										
AUS																										
BRA																										
CAN																										
CHL	F		S	f																						
CHN																										
COL		n		n																						
CRI																										
EU		N				N																				
IND		N			N																					
IDN		S			F				N																	
ISR				f		N																				
JAP						N	N		F																	
KOR	N		N							N	S	S	N													
MEX				S																						
NZD						s	n		N																	
PHL									N					F												
SAF																										
TUR							N				N		N													
UKR												S							N							
USA				S		F							F		S											
VNM									S			N														
EAEU																										
EFTA					N					N		s										N				
MERCOSUR									S					N										S		
OTHER		NSF			NS	N F	NS	S	NF			SF	N	NF					NF				S	N		

Notes: N: ongoing negotiations, S: negotiations concluded (often with a signature but not ratified), F: agreements entered into force. Capital letters new agreements and small letters indicate cases of revised agreements.
Kazakhstan and the Russian Federation are under EAEU; Iceland, Norway and Switzerland are under EFTA; Argentina and Brazil are listed separately from Mercosur as they also have signed agreements separately, the United Kingdom is included in the EU and in the "other" category for individual agreements. Specific GI or SPS agreements are not included.
Source: Country chapters.

Bilateral free trade agreements continue to be developed and signed

Japan's agreements with major agricultural traders entered into force. The Trade Agreement between Japan and the **United States** was signed in September 2019 and entered into force in January 2020. Under this agreement, Japan sets to eliminate or reduce customs duties and mark-ups on the main agricultural imports from the United States, including beef, pork and wheat, while maintaining its tariffs for rice. At the same time, the United States eliminates or reduces customs duties on 42 agricultural products, such as cut flowers and yams, which Japan would like to export to the United States.

The **European Union-Japan** Economic Partnership Agreement entered into force on 1 February 2019 and substantially reduces tariffs and trade barriers for both partners. The European Union is scheduled to eliminate duties on 99% of tariff lines from Japan and Japan is set to eliminate duties on 90% of agricultural products exported from the European Union when the agreement is fully applied. Duties on most remaining products will be reduced over time, while Japan has opened country-specific TRQs for others. Aside from market access, the agreement establishes rules for the protection of more than 200 EU and 50 Japanese products' Geographical Indications (GIs).

An "Economic and Trade Agreement between the United States and the People's Republic of China" (also called "Phase One Deal" Agreement) was announced by **China** and the **United States** on 13 December 2019. The agreement was signed on 15 January 2020 and entered into force on 14 February 2020. The Agreement includes several chapters with a direct link to agriculture: Chapter 1 covers issues relating to geographical indications; Chapter 3 addresses non-tariff measures aspects for several agro-food products and issues with respect to the application of China's TRQ system for wheat, rice and maize. Chapter 6 includes commitments from China to import various goods and services from the United States. In particular, the Agreement commits China to purchase and import no less than USD 12.5 billion in 2020 and no less than USD 19.5 billion in 2021 of oilseeds, meat, cereals, cotton, and other agricultural commodities over its baseline purchases in 2017. The United States also agreed to modify tariff actions under Section 301.

Other agreements entered into force. In particular, the revised **Canada-Israel** Free Trade Agreement (CIFTA) entered into force on 1 September 2019 opening new opportunities for the agriculture and agro-food sector. The agreement also includes new chapters on SPS Measures and Technical Barriers to Trade. **Chile**'s free trade agreements with **Argentina** and **Indonesia** also entered into force, bringing the number of Chile's FTAs in operation to 29.

Negotiations on upgrading the **New Zealand-China** FTA were concluded in 2019, providing better conditions for improved market access for agro-food goods, streamlined border processes and simplification of trade documentation, as well as improved mechanisms for co-operation on non-tariff measures. **Korea** concluded negotiations for three free trade agreements in 2019, with **Israel**, the **United Kingdom** and **Indonesia**, which are expected to take effect in 2020-2021. On 30 June 2019, the **European Union** and **Viet Nam** signed a bilateral free trade agreement, the EU-Viet Nam FTA. **India** continued to negotiate trade agreements with **Australia, Chile, Korea and the European Free Trade Association** (EFTA), while **Turkey** engaged with **Colombia, Indonesia, Japan**, and **Ukraine**.

On 6 November 2019, **China** and the **European Union** (EU) concluded negotiations on a China-EU Geographical Indications (GI) Agreement – China's first comprehensive bilateral GI Agreement – which will protect 100 Chinese GIs in the European Union and 100 EU GIs in China. The protected EU GIs include dairy products, beer, wine, and spirits.

The United Kingdom exited the European Union

After 47 years of membership, on 31 January 2020, the **United Kingdom** officially left the **European Union**. The departure of the United Kingdom – dubbed "Brexit" – has been negotiated under a Withdrawal Agreement. The two have entered into a transition period, slated to last until 31 December 2020, under which EU law will continue to apply in the United Kingdom. The future nature of the partnership between the United Kingdom and the European Union (with respect to areas such as regulatory harmonisation, trade in goods and services, and movement of people) has yet to be jointly agreed, with negotiations continuing during the transition period.

Selected countries reduced import barriers, but other barriers continued

The Philippines replaced the quantitative restrictions on rice imports with tariffs as of March 2019. There is a TRQ system with applied most favoured nations (MFN) tariffs within and outside of the quota of 40% and 180%, respectively. For imports from ASEAN countries, a single tariff (35%) is applied. A special rice safeguard duty may be imposed to protect the industry from extreme or sudden price fluctuations.

China adopted several measures to relax sanitary and phytosanitary measures for selected agricultural imports. First, China lifted the import ban on poultry and related products from **France**, **Spain** and **Slovakia**, as well as restrictions on poultry imports from the **United States**. China also lifted the import ban on beef imports and cleared four beef producing sites for export from the **United Kingdom**. It also approved beef imports from several meat-processing plants in **Argentina** and **Brazil**. Furthermore, it approved dairy imports from specific plants in Brazil. Lastly, **China** approved wheat imports from the Kurgan region as well as soybeans and barley imports from all regions of the **Russian Federation**.

In line with the country's WTO commitments, the TRQ of the **Russian Federation** on pig meat was eliminated, these imports now paying a flat *ad valorem* rate at less than one-half of the previous TRQ's over-quota rate. At the same time, the ban on agro-food imports from a number of countries imposed in 2014 was extended until end-2020.

In response to a suspension by the Russian Federation of its free trade regime with **Ukraine** under the Agreement on Free Trade in the Commonwealth of Independent States (CIS) Area, and the implementation of a ban by the Russian Federation on imports of agro-food products from Ukraine, Ukraine in turn has suspended trade preferences for imports from the Russian Federation foreseen by the CIS FTA. Ukraine has banned imports of a list of 43 agricultural goods from the Russian Federation. In December 2019, the suspension of trade preferences and the ban on specific imports were further prolonged until the end of 2020, and a number of corn-based products were added to the list of banned products. Since July 2019, Ukraine has also banned the import of mineral fertilisers, animal feeds and veterinary products from the Russian Federation.

Efforts were made to reduce export subsidies, but new export taxes were introduced

Some countries took steps to reduce or eliminate export subsidies. In **Norway**, all export subsidies are to be phased out by the end of 2020, at the latest. As a result of the abolition of export subsidies on cheese, milk production must be reduced by up to 100 million litres. The government and the Norwegian Farmers Union agreed on a scheme where quotas for up to 40 million litres of milk are removed from the market. The remaining overproduction is to be reduced by lower milk quotas on each farm. **Switzerland** adopted legislation abolishing export subsidies for processed food products. In **India,** the export subsidy programme Merchandise Exports from India Scheme will be replaced with the Scheme for Remission of Duties or Taxes on Export Product.

At the same time, several countries maintained or expanded trade-distorting measures for export. **Argentina**'s government approved an export tax exception for small and medium enterprises and increased the export tax rate for soya products. **Ukraine** had suspended VAT refunds for export of soybeans from September 2018, and for exports of rapeseed from January 2020. However, VAT refunds for exports of both commodities were re-established by the Ukrainian Parliament in January 2020. **Indonesia**'s government has maintained its variable export tax system on palm oil and, since 2015, added an additional fixed export levy of USD 50/tonne which will be reversed to the Palm Oil development Fund. Faced with a price hike of onions, the government of **India** initially introduced in mid-September 2019 a minimum export price (MEP) for onions, followed at the end of September 2019 by an export ban on onions. In addition, the government of India introduced limits on onions stocks held by private traders. India also started applying a sugar export subsidy to sugar mills in October 2019. This subsidy is transferred directly to the farmers' accounts on behalf of the mills against cane price dues, while mills have to provide

transaction details to the government for transferring the money in proportion to the cane bought from farmers.

Trade policies were evaluated in several countries

The WTO verification procedures with member countries regarding **Korea**'s tariffs on rice were finalised in January 2020. The **New Zealand** Government established the Trade for All Advisory Board (TFAAB) in December 2018 to conduct an in-depth review of New Zealand's trade policy. The TFAAB published its independent report to the government in November 2019.Recommendations relevant to agro-food trade cover measures to address public confidence and trust, and to modernise trade policy; improving policy and foresight through better evaluation, assessment, and inclusion; advancing New Zealand's interests in an enhanced international system; and aligning trade policy with improving productivity and sustainability.

A trade and climate change initiative was launched

New Zealand, Costa Rica, Fiji, Iceland, **Norway** and **Switzerland** launched negotiations towards an Agreement on Climate Change, Trade and Sustainability (ACCTS). The agreement aims to bring together some of the inter-related elements of the climate change, trade and sustainable development agendas.

Main domestic policy changes potentially affecting trade and the environmental performance of the sector

This section highlights other important domestic policy changes in the countries covered in this report in 2019 and early 2020 that may negatively affect agricultural trade or the environmental performance of agriculture.

Some countries introduced or reinforced measures with potential negative effects on the environment and international trade

Despite the increasing number of policy actions to improve the environmental sustainability of agriculture, several countries expanded their support for the use of agricultural inputs. Under its 2019-20 Union Budget, **India**'s allocation for fertiliser subsidy was increased by about INR 100 billion (USD 1.4 billion) to INR 799 billion (USD 11.2 billion). **Mexico** launched a fertiliser programme in 2019, which grants support to small-scale producers, particularly small producers of maize, beans, rice, sugar cane and coffee located in highly marginalized localities in the state of Guerrero. Up to 450 kg of fertiliser per hectare can be granted per producer per year for no more than three hectares, with a level of support that is not based on soil characteristics or nutrient needs.

Fuel tax concessions and compensations were introduced or expanded. The government of the **Czech Republic** continued to increase expenditures on fuel tax relief. In 2018, fuel tax relief was extended to fuel used in livestock production, and in 2019, this support was extended to fuel used in fruit, vegetable and wine production. In October 2019, **Romania** extended its list of institutions eligible to receive compensation on fuel excise duties to include research and development institutes in the agriculture sector. The **Slovak Republic** reinstituted their fuel tax reimbursement scheme for farmers, a programme that had been abolished in 2011. Fuel tax concessions such as these are only one type of tax concession for agriculture commonly offered in the covered countries; a review of agricultural taxation regimes shows that there is a wide disparity in levels and applications of agricultural tax and tax concessions across OECD countries (Box 1.2). The review highlights, in particular, that taxes can be applied to improve the environmental sustainability of agriculture, although the impacts of these tax instruments are rarely assessed.

Guaranteed minimum prices were introduced or increased for specific commodities. **Mexico** initiated a guaranteed minimum price programme granted to small and medium size producers of maize, beans, wheat, milk and rice, with prices exceeding current market prices. This programme establishes limits per

hectare and volume for each crop and producer. **India** increased its minimum support prices (MSPs) for all *kharif* (summer planted) crops for 2019 and *rabi* (winter planted) crops that will be harvested and marketed during the 2020-21 marketing year at levels that significantly exceed national average weighted average cost of productions.

Self-sufficiency plans were consolidated. In 2019, **China**'s State Council issued a white paper on food security that stresses the importance for China to remain self-sufficient in grains by ensuring domestic production capacity while allowing for "moderate" imports. Through the white paper, China envisages "upholding its red line of absolute security of staple food and zero risk to farmers from low grain prices" while adapting "itself to the WTO rules, actively and steadily reforming its grain purchase and storage systems and pricing mechanisms".

Output or price supporting measures were announced or introduced. The government of **Viet Nam** identified key national products eligible for preferential support measures. These measures include exemptions from or reductions in land or water surface rent and preferential credit, among others. The **Russian Federation** announced a change in the mechanism of provision of direct subsidies to support large investments for the agri-food sector. The government of **Indonesia** intervenes in markets to ensure both a minimum price for producers and a maximum retail price. **Kazakhstan** amended the agricultural legislation updated the 2021 State Programme. The policy focus is now to orient agriculture to import substitution and to develop exports of high value-added products.

Box 1.2. Taxation and agriculture

Agriculture-specific tax concessions are widespread

A recent review of tax systems across countries (OECD, 2020[11]) outlines the diversity of tax provisions affecting agriculture and confirms the widespread use of tax concessions specifically for agriculture, although their importance and modalities differ across tax areas and countries.

Most countries offer tax concessions on personal income from farming, in particular for smaller farms, but concessions for corporate income and capital gains are less frequent. Common concessions also include reducing annual land and property taxes, reducing the taxes associated with the transfer of land between generations, and exempting farmers from being registered for value added taxes. Agricultural goods (outputs and inputs including pesticides and fertilisers) benefit from reduced taxation in almost all countries reviewed, as does fuel used in agriculture – a cost-reduction policy measure with potentially negative environmental effects.

A comparative analysis of these regimes is complicated by several factors, including that the overall tax burden varies across countries, and that some of the observed measures are not viewed as agricultural concessions in some countries, as the same treatment is available for non-farm households.

Tax policy affects agriculture

The review also suggests that tax policy is often used as a lever through which to affect behaviour in the agricultural sector, with impacts on producer income, farmland transfer, investment, innovation, and sustainability outcomes.

There is evidence that in many countries, tax provisions supported farm income, facilitated innovation and investment, thus allowing farm expansion. The economic position improved for farm households compared to non-farm households when after-tax income was considered. At the same time, income taxation generally reduces the frequency of low incomes among farm households. Another general finding is that tax instruments have limited capacity to improve sectoral productivity and sustainability when inefficient farms are largely exempted from taxation. There is growing evidence, however, that

environmental taxation can be an effective tool to curb pollution, but careful design and communication on objectives are needed.

The impact of tax provisions on agriculture needs to be evaluated

Although many countries include provisions in their tax codes designed to influence the agricultural sector, there remains only scant sector-specific analysis that can inform future policymaking efforts on the impact of specific taxes on income levels, farm transfers and structural adjustment, investment and innovation, or environmental sustainability (with some recent exceptions). There is some evidence associated with the implementation of tax reforms, but long-standing concessions are rarely evaluated.

Further investigation is needed in order to make more definitive determinations on whether or not tax provisions have achieved their aims (and if so, under what conditions), what secondary effects these tax policies have had on production and investment decisions in the sector, and how they affect competition, within and across countries.

Source: (OECD, 2020[11]).

Other support measures could have limited, positive, or ambiguous effects on trade or the environment

Some policy changes could have limited or positive effects on trade or the environment. While the government of **China** will continue the minimum purchase price programme in the major wheat and rice producing regions in 2020, it introduced a minimum purchase price ceiling capping the volumes to be procured each year from farmers under this system. The destocking of grains from central reserves slowed down in 2019 due to a good harvest, weak demand and downward pressure on farm gate prices. **Iceland** revised the agreements on the operating environment for sheep farmers and cattle farmers. For sheep farming, the revision entails the introduction of voluntary financial support for up to four years to help sheep farmers to diversify their operations to other activities, while for cattle farming, the milk-quota system remains unchanged.

Korea is continuing to progress towards a transition to payments further decoupled from production of specific commodities (especially rice), together with reinforcing the environmental cross-compliance of farmers. In 2019, the government set up a new direct payment programme, which combines the direct payments for rice, upland crops and less favoured areas into one scheme. The Government of **India** is also engaged in some decoupling of support. It allocated INR 750 billion (USD 10.6 billion) for the direct income transfer scheme Pradhan Mantri Kisan Samman Nidhi (PM-KISAN) in fiscal year 2019-20. Initially covering small-scale farmers operating a land area up to 2 hectares, the PM-KISAN scheme has been extended to all farm households with land titles, who will receive an annual direct transfer of INR 6 000 (USD 84).

Others policy changes could have limited or ambiguous effects on trade or the environment. **Ukraine** instated new support for small and medium sized producers. The area payments are higher for newly established farms during the first three years of their creation than for longer existing farms and require that the eligible land be used for farming purposes. Another new measure provides partial reimbursement of up to 30% of the investment for construction or reconstruction of grain storage and grain processing capacities. **Kazakhstan** transformed the public mandatory crop insurance system to a voluntary insurance scheme with a view to expand crop insurance markets in the country. The new subsidy would cover insurance premiums instead of provide indemnities. Further, investment subsidies were rationalised and focused primarily on the renewal of agricultural machinery and equipment, modernisation and creation of new agricultural enterprises, import-substitution, and the realisation of export potential. In October 2019,

the government of **China** announced the expansion of insurance premium coverage for rice, wheat and maize to over 70% by 2022.

Other domestic policy developments: financing, disaster and risk management, agriculture marketing and nutrition

This section reviews other important policy developments in 2019, as identified in the country chapters, covering selected policy development related to financing, disaster and risk management and agriculture marketing and nutrition. It should be noted that this list is not comprehensive; other policy changes have been made by individual countries (including on innovation, digital infrastructure development, or rural development).

Preferential credit limits were increased in some countries

For the first time since 2007, in **Canada**, the loan limit under the Advance Payments Program (APP), which provides agricultural producers with easy access to credit through cash advances loan limit, was raised in line with farm operating costs. The maximum resources for rural credit in **Brazil** increased by 16% compared to the previous plan 2018/19. A new law also facilitated new sources of collateral for rural credit, allowing credit co-operatives and other private financial institutions – and not just federal official banks – to receive resources from the National Treasury to cover the difference between market rates and those applied to certain rural credit operations.

Disaster assistance and compensation programmes were provided in response to trade policy changes and disasters

The **United States** Department of Agriculture announced a second package of trade mitigation programmes to assist farmers affected by retaliatory tariffs resulting in the loss of traditional export markets. In **Canada**, the Dairy Direct Payment Program will provide payments based on quota holding to dairy producers as market access commitments made under the recent international trade agreements will affect the sector. In order to offset the effect of the liberalisation of rice imports, the government of **the Philippines** established a Rice Competitiveness Enhancement Fund with an annual PHP 10 billion (USD 192.3 million) appropriation to be spent over the next six years. In **Switzerland**, the funds used to finance the eliminated export subsidies are to be transferred to the agricultural budget to finance direct payments to milk and grain to compensate for the price reduction related to this policy change.

The **United States'** Additional Supplemental Appropriations for Disaster Relief Act of 2019 authorised just over USD 3 billion in disaster assistance for necessary expenses related to crop losses as a consequence of hurricanes, floods, tornadoes, typhoons, volcanic activity, snowstorms and wildfires occurring in 2018 and 2019. In December 2019, the Further Consolidated Appropriations Act, 2020 opened up funding to crop losses from excessive moisture, severe drought, and quality issues. This act also transferred unused funds from the disaster assistance provided under the Bipartisan Budget Act of 2018 – approximately USD 1.5 billion – to be used for 2018 and 2019 crop losses. In **New Zealand**, several medium-scale adverse events, including drought, wildfire and flooding events, have triggered government support for the Enhanced Task Force Green programmes and Rural Assistance Payments in 2019. These programmes provide funding for clean-up and recovery work, and relief to farmers in hardship, respectively.

Australia undertook a series of measures to respond to the continued drought. These consisted of extensions to concessional loans, direct payments and tax exemptions. New loans were made available, payback conditions of existing credit instruments eased. At the same time, the network of farm financial counsellors was strengthened to improve farmer access to financial information and advice. Tax exemptions were extended, and eligibility to income support for farm households was widened. The payment amount was increased and the application process was simplified and matched by an increased

and open-ended budget. Additional drought payments were made available and access to water was supported with rebated water rates and support to on-farm water infrastructures investments. Funding was secured for large-scale water infrastructure development.

Several measures were taken in the **European Union** in response to natural hazards in 2019. Primarily in response to hot and dry conditions, in August, Member States and the Commission agreed to a series of support measures, including advancing CAP payments and providing derogations on certain greening obligations in order to allow farmers to produce sufficient fodder for animals. Additionally, compensation was provided to affected farmers in response to natural hazards in **Austria**, **Bulgaria**, **Czech Republic**, **Hungary**, **Italy**, **Latvia**, **Romania**, **Slovenia** and **Sweden**. EU rules for responding to adverse events under state aid provisions were also revised, with the Commission raising the maximum amount of support that individual farmers can receive to EUR 20 000 (USD 22 388) per farm over three years without the need for prior approval by the European Commission.

A series of large-scale natural disasters, including typhoons and heavy rains, continued to hit **Japan**, causing major damage to the agricultural sector. The government earmarked supplementary budget funds of JPY 105.4 billion (USD 1 billion) for the restoration of these sectors, mostly used for the recovery of agricultural facilities and farmland as well as landslides and road destruction in mountains.

Measures were taken to curb the spread of African Swine Fever

In **Canada**, the government and industry took steps to prevent and prepare for African Swine Fever (ASF). In particular, the government strengthened import control measures, developed a national ASF action plan, increased testing capacity for ASF, and negotiated zoning arrangements with key trading partners. A government-industry working group was established to develop a better understanding of the implications of ASF on the pig industry. **China**'s central and provincial government responses to the ASF outbreak focused on policy measures to contain and prevent the spread of the virus, to compensate producers, as well as to rebuild the pig herd and enhance pig meat production. They also encouraged local authorities to relax the application of local environmental bans on livestock farms. Several Member States of the **European Union** also took steps to prevent or respond to ASF, including the installation of fencing to limit the movement of wild boar populations (**Belgium** and **Luxembourg**), offering compensation for culled animals (**Bulgaria** and **Czech Republic**), or increasing surveillance efforts and border controls (**Bulgaria** and **Luxembourg**).

Several countries upgraded their agriculture marketing and nutrition strategies and food assistance policies

Colombia developed a major policy strategy on contract farming. This programme seeks a sustainable linkage between small-scale producers and markets, through the execution of projects that promote inclusive business schemes between companies and smallholders. These projects include a sector marketing strategy; alliances with the industrial sector; comprehensive technical assistance; the creation of produce fairs for farmers and processors; the development of rural supply; and follow-up on the executions of contracts under this strategy. Eight Indian states also finalised action plans for the implementation of the national Agriculture Export Policy (AEP) framework, which focuses primarily on the exports-enhancing dimension of AEP through roadmaps for production clusters development, capacity building, and infrastructure and logistics.

The government of **Canada** launched its first-ever Food Policy for Canada, which aims to create a more co-ordinated and food systems-based approach to food policy and regulations. Short-term actions will focus on improving access to healthy food, promoting Canadian food, supporting food security in northern and indigenous communities, and reducing food waste. The new Safe Food for Canadians regulations, which are based on international standards, were implemented at the beginning of 2019. Moreover, the

government proposed changes to food labelling requirements to make food labels clearer and easier to compare across products.

In **Israel**, efforts to improve nutrition continued with a programme to educate children on the consumption of vegetables and fruits and the January 2020 implementation of a mandatory nutritional labelling scheme providing warning labels on packaged food to signal excessive sugar, sodium and saturated fat levels. In September 2019, **Germany** decided to introduce, on a voluntary basis, the food labelling system Nutri-Score which has already been used in **France, Spain, Belgium** and **Portuga**l. The label provides an aggregate signal to consumers, based on the content of sugar, fat and salt, but also that of vegetables, fibres and proteins.

New food-related social programmes were also introduced. In **Argentina**, a new social programme entitled "Argentina against hunger" was introduced in January 2020. It provides monthly financial support to current beneficiaries of social welfare through an electronic "Food card" allowing them to buy various foods up to the value of a basic basket including dairy, vegetables, meat, and other fresh food. A programme of electronic food vouchers (called BPNT) was implemented in **Indonesia**. Under this programme, eligible households receive a total value of IDN 110 000 (USD 8.2) per month onto a purchasing card that can be used to buy rice and eggs at selected retailer stores.

Emerging agriculture and food policy responses to the outbreak of COVID-19

This section synthesises agriculture and food policy responses to the COVID-19 outbreak from 1 January up to 28 April 2020 in the 54 countries covered in this report. The synthesis is based on information collected directly from governments, and from complementary information found on public databases. While it covers a broad set of measures, it should not be understood to cover all policies undertaken in response to COVID-19. OECD (2020[12])summarises the direct and indirect impacts of the virus infection and consequent lockdowns on the agriculture and food sector and offers general policy recommendations in the short and longer terms (Box 1.3). This section focuses on additional policy responses to address both the virus impacts and adapt to the economic and business regulatory measures. It should be noted that not all countries faced the virus at the same time; Table 1.A.1. in the Annex shows the dates of outbreak as notified to the World Health Organisation. Lockdowns and resulting agriculture measures may vary across countries with the dynamics of the virus. Furthermore the timing of measures may differ, as explained in country chapters.

Box 1.3. COVID-19 and the Food and Agriculture Sector: Impacts and Policy Responses

The impacts of the COVID-19 pandemic are being felt by the agriculture and food sector, both directly and as a result of necessary measures put in place to contain the spread of the virus.

Agricultural production. Agricultural sectors in many countries are experiencing seasonal labour shortages. While this is not widely observed yet, farmers may also face extra difficulties in sourcing agricultural inputs due to restrictions on the movement of people and goods. In some cases, the disruptions downstream from farms are also causing surpluses to accumulate putting a strain on storage facilities and increasing food losses.

Shifts in consumer demand. The collapse in consumption of food away from home is placing some food value chains under pressure. The macroeconomic shock due to COVID-19 and associated measures is expected to have a strong impact on demand for higher value premium products and those with more service addition. Lower oil prices are also reducing demand for crops for biofuels.

Food supply chains disruption. Production and distribution costs have increased and the available workforce has also been reduced due to the virus and associated policy responses. Food supply chains are also experiencing delays and disruptions to transport and logistics services; border closures and additional procedures have led to congestion and delays, affecting the transit of perishable products in particular.

Finally, and potentially most important of all, the impacts on livelihoods and food security in developing countries may be more severe, because food systems are more labour-intensive, food supply chains are less well developed, and the macroeconomic shock of COVID-19 risks plunging large numbers of people into poverty. A high incidence of sickness among farmers and farm workers could have substantial effects on agricultural production.

How damaging these impacts are will depend on national and international policy responses in the short, medium and long term. The OECD has suggested that governments should prioritise three areas.

First, governments should keep domestic, regional and international agro-food markets open, transparent and predictable. Well-functioning domestic markets, regional co-operation and an open international trading system are important to connect producers to market opportunities, and help food get to where it is needed.

Second, governments should ensure the food and nutrition needs of vulnerable populations are met – now and in the future. Co-operative global solutions may be needed to address the needs of the poorest countries and ensure that COVID-19 does not result in a food crisis in these countries.

Finally, looking ahead, the COVID-19 pandemic offers an opportunity to enhance the resilience, sustainability, and productivity of the agriculture and food sector. Governments should work with stakeholders and international organisations to learn from the crisis, and accelerate investments and reforms to strengthen the resilience of food systems to a range of risks, including those associated with climate change.

Source: OECD (2020[12]).

A diverse set of agriculture and food related measures have been taken by governments in response to the crisis, focusing on agricultural production, the functioning of the food chain and consumer demand. A review of the more than 400 collected policy responses suggests seven broad categories of measures: 1) Sector-wide and institutional measures, 2) Information and co-ordination measures, 3) Measures on trade and product flows, 4) Labour measures, 5) Agriculture and food support measures, 6) General support applicable to agriculture and food, 7) Food assistance and consumer support.[3] Each of these categories can be further separated into sub-categories of measures, as indicated in Table 1.3.

The number of measures are unevenly distributed among categories. The most frequently observed measures belong to category 5 (close to a quarter of total measures), on agriculture and food support, followed by categories 2, 6, 3 and 4 on information, general economic measures, trade and product flows, and labour. At the sub-category level, the largest number of measures focused on financial support for the sector (5.A) and overall economic measures (6.A), the third related to website or campaigns (2.A) and the fourth sub-category was that of agriculture labour measure (4.B). Of course, these numbers are limited by a number of factors, and do not reflect the importance and impact of each measure taken, which also varies widely. Furthermore, as noted above, countries are still in the process of developing measures, including those to limit the spread of the pandemic, in response to socio-economic developments.

The following sections provide examples of measures under each of the seven categories in the 54 covered countries.[4] Detailed descriptions of each policy measure can be found in the relevant country chapters.

Table 1.3. Agriculture and Food Policy actions in response to the COVID-19 outbreak

Category	Sub-category of measures
1. Sector-wide and institutional measures	1.A. Declaration of essential sector
	1.B. Measures related to the functioning of the government
2. Information and co-ordination measures	2.A. Websites, campaigns
	2.B. Monitoring the agriculture market
	2.C. Co-ordination with the private sector
	2.D. International co-ordination
3. Measures on trade and product flows	3.A. Trade easing measures
	3.B. Logistics and transport facilitation measures
	3.C. Trade restricting measures
	3.D. Rechannelling product flows
	3.E. Facilitating internal market integration
4. Labour measures	4.A. Measures to ensure the health of workers
	4.B. Agriculture labour measures
5. Agriculture and food support measures	5.A. General financial support for the sector
	5.B. Specific product support
	5.C. Administrative and regulatory flexibility
6. General support applicable to agriculture and food	6.A. Overall economic measures
	6.B. Social safety nets
7. Food assistance and consumer support	7.A. Food assistance
	7.B. Market measures to support consumers

Source: Authors, based on country chapters.

Governments have exempted agriculture and food activities from lockdowns and adjusted their own activities

All governments with lockdown restrictions exempted key agriculture and food production and marketing activities, often by declaring these activities as essential or critical (for instance, **Argentina, Australia, India, Israel, Italy**, **New Zealand or the Philippines**). The precise legal definitions of these exempt activities vary among countries. For instance, most countries allowed the production, trade and distribution of agricultural inputs (including, for instance, **Canada, Slovenia, Ukraine** or the **United States**), **New Zealand** and **France** excluded cut flowers/flower buds/bulb activities from its list of essential activities;[5] **Australia**'s list includes services supporting the agriculture food and business, including food markets and food banks conditional on the application of social distancing measures. Some others have emphasised particular functions of the agriculture and food sector, for instance, **Chile** considers agriculture a critical infrastructure, the **European Commission** and **Ukraine** consider agriculture workforce as critical. Specific exemptions have also been introduced for particular agriculture and food services; for instance, **Switzerland** allows direct sale from farms to consumers, farm shops, and the online sale of seeds and other gardening products, but forbids food markets.

Governments have adjusted their work methods and scope of activities in response to the crisis, maintaining selected programmes and deferring pending policy actions. While agriculture ministries in countries under confinement have largely functioned by telework, adjustments varied in scope and intensity. For instance, **Israel**'s ministry of agriculture restricted its activity to 33% of its staff deemed essential early on, on par with other ministries, a proportion that gradually climbed to 51% in late April, while **Costa Rica** requested regional offices to switch to online activities. The **United States**, via the CARES Act, provided extra funding for US Department of Agriculture agencies to help with salaries and expenses in light of their adjusted activities related to the COVID–19 pandemic. **Canada** adjusted the work of the Canadian Food Inspection Agency, focusing on priority activities, and was allocated additional

support to train and equip its personnel. **Mexico** maintained its regular agricultural support programmes and its programmes related to the conservation and restoration of water infrastructure. The government of **India** extended the current Foreign Trade Policy 2015-20 for six more months until 30 September 2020, as it was due to expire at the end of March. In the **European Union,** the release of the European Commission's Farm to Fork Strategy and negotiations around the next multi-annual financial framework and the Common Agricultural Policy were delayed.

Governments adopted measures to inform producers and consumers, monitor the situation, and co-ordinate their action with private and international actors

Many governments have used online or more traditional approaches to *inform producers or consumers, facilitate exchanges, or to promote specific products or practices*. Web platforms were set up for instance to inform the public in **Australia** and the agro-food sector in **Chile**; many countries used online platforms as part of their campaigns to recruit seasonal labourers (including **Austria, France, Germany, Hungary**, **Luxembourg**, **Switzerland** or the **United Kingdom**). **Ireland** set up a database to identify available relief workers to replace farmers who contract COVID-19. **China** launched a campaign to assist co-operatives in communicating with farmers on safeguard measures, including via social media, while **India** encouraged farmers to use the federally-developed weather- and market-data online platform. **Austria, Bulgaria**, and **Romania** set up online platforms to link producers and consumers for direct sales. Other countries launched promotion campaigns, to support consumer purchases of national agricultural and food products (e.g. **Italy** and **Portugal**) or of specific products particularly affected by the crisis, as done by **Japan** for products subject to lower demand, **Costa Rica** for fish and **Korea** for horticultural and floricultural products. Finally, governments used information campaigns to inform consumers; for instance, the **Philippines** informed consumers on healthy eating, while **Japan** and the **Russian Federation** reassured its consumers of the availability of food through press conferences and websites, and used campaigns at retailers to discourage panic buying.

Many governments *monitored more closely (frequently) food supply, demand and stocks to inform their decisions*. Certain governments relied on existing institutions to monitor the agricultural market situation (**Chile, European Union**), while others set up new mechanisms to do so (**Costa Rica**). Some countries focused on all supply chains, such as **Japan**, while others focused on particular products, such as fruits and vegetables in **Israel**. A number of countries used this monitoring or assessments of the availability of food to identify possible shortages, including **Korea**, **Norway, South Africa**, the **Russian Federation** or **Israel**. Additionally, G20 members, including the **European Union**, and major grain trading countries used the Agriculture Market Information Systems (AMIS) to share information and improve global market transparency.

Many governments undertook *new measures to co-ordinate their actions with the private sector*. For instance, **Canada**, **Chile**, **Denmark** and **Portugal** set up new institutional mechanisms to co-ordinate with the private sector, allowing them to have regular discussions about the situation and needed actions. The Ministry of Agriculture of **Mexico** has worked with representatives of the private sector such as producers, organisations and chambers of commerce to guarantee the production and distribution of agro-food products. Similar mechanisms operate in **Canada** and **Japan**. **Norway**'s minister holds daily phone conversations with the head of the farmers' union about the situation and **Switzerland's** authorities have been in regular contact with relevant companies and the farmers' unions. The **United Kingdom** temporarily suspended its competition law to facilitate intra-industry exchanges, allowing supermarket chains to exchange data on stocks and share distribution depots and delivery vans.

Many countries have also engaged in *international co-operation efforts*, whether by adopting common principles or practical mechanisms. Agriculture ministers of the **G20** adopted a statement, in which they discouraged trade restrictions, and stressed the need to take the necessary actions to improve the functioning of food chains, support affected populations and advance towards a more resilient and

sustainable food systems. Under the initiative of Canada, governments of 23 members of the World Trade Organisation, including **Australia**, **Chile**, **Colombia**, **Costa Rica**, **the European Union**, **Japan**, **Korea, Mexico**, **New Zealand**, **Switzerland**, **Ukraine**, the **United Kingdom** and the **United States**, committed to keep supply chains open and remove any existing trade restrictive measures on agricultural products.[6] Agricultural ministers of 25 **Latin American countries** also signed a declaration whereby they committed to a series of actions, including assisting vulnerable producers and consumers, and ensuring the well-functioning of markets and limiting disruption of international trade. At the sub-regional level, agriculture ministers of **Colombia**, **Chile**, **Peru**, **Bolivia** and **Ecuador** agreed to share sanitary protocols, measures and experiences in the agriculture sector, and agriculture ministries of Central American countries (including **Costa Rica** and **Mexico**) agreed to set up an inventory of products ready to be exported as well as food transportation protocols.

A number of measures have been taken to facilitate or in some cases restrict trade and product flows

Governments have taken diverse measures to *ease agricultural trade flows* either to secure a continued income for their exporting industries or to ensure that food supplies are available for their consumers. **Indonesia** took a series of measures, from tariff reduction to relaxing export restrictions and facilitating border formalities. On the export side, **Korea** is monitoring trade developments and finding alternative markets to those that are difficult to access. **Australia** published COVID-19 updates to the manual of importer requirements for exporters, and like **New Zealand**, set up funds to support the additional freight costs of aviation-based exporters of specific products with established markets. **Costa Rica** has established an online real-time system for phytosanitary certificates of exported products, while **New Zealand** has adapted export verification requirements for animal or plant products. On the importing side, several countries have relaxed their importing regulations to facilitate entry of specific products. **China**, **Colombia, Ukraine**, the **Russian Federation** and **Turkey** have lifted duties on certain food items, from meat (**China**) to grains (other four), **Israel** has expanded some of its TRQs for onions, cucumbers and eggs to loosen market constraints, and **Switzerland** introduced flexibilities to its TRQs, with measures applied on butter and eggs at this report's writing. A number of countries have also adopted additional trade facilitation measures, accepting digital versions of specific (phytosanitary) certificates (such as **Australia, China, Costa Rica**, the **European Union** and **Mexico**), reducing physical inspections at ports and borders based on records of trader compliance (**Portugal**), providing for 24/7 clearance of agro-food goods in major ports (**China**), or providing flexibility to the application of trade-related fees and charges in ports (**India**).

Governments in many countries adopted *logistics and transportation measures* to facilitate the transportation of food and agriculture products, internally and at the border. The **Philippines, China** (for animal feed, and food distribution) and **the Russian Federation** (for food imports) set up priority lanes for transportation of agriculture commodities, speeding transportation and simplifying procedures. The **European Union** set up such lanes for shipments of goods, including agro-food products. As part of the South Agricultural Council, **Argentina, Brazil** and **Chile** agreed to secure transit of trucks with food and agriculture products across their borders. **India** allowed interstate regulatory exemption to deliveries of feed and fodder, and some Indian state took measure to ease agriculture machineries transports across states. **Chile** also permitted trucks to cross quarantine areas, the **Russian Federation** allows food trucks to enter urban areas, and **Canada** exempted truck drivers from travel bans. **India** also set up special railway services only to deliver essential items like food, in small parcels.

At the same time, certain countries have *imposed trade restrictions*. The governments of **Kazakhstan**, the **Russian Federation**, **Ukraine, Turkey** and **Viet Nam** have implemented temporary export bans or export quotas of selected products, including wheat for the first three, lemons for **Turkey** and rice for **Viet Nam**.[7] Upon declaring a state of emergency, the government of **South Africa** shut down ports and halted all exports for from March 27 until April 17. **China** has implemented a trade and consumption ban on wild

animals to reduce the transmission of the virus. At the same time, national products promotion campaigns (cited above), while aiming to support local industry, may reduce import potential. Going a step further, **Bulgaria** has mandated retailers with more than 10 stores to sell Bulgarian food, and to ensure that 90% of milk sold is of national origin.

A few countries engaged actively in *rechannelling surplus food products*. **Japan** supports producers affected by the lockdown of schools to find alternative channels to sell their products. If they do not find such channels, they can provide food to food banks, with a transport cost compensation. Similarly, the government of the **Czech Republic** is distributing food originally intended for the country's fruit, vegetable and milk school schemes to food banks in the wake of school closures. **Korea** encouraged organic growers who have lost markets to find alternative outlets. The **United States** is procuring dairy and meat products, and fresh produce from wholesale and food distributors affected by the closing of hotels, restaurants and other services, to provide to food banks, community and faith-based groups. In the **Philippines**, oversupply of rice in local areas was purchased for distribution in areas in need.

Lastly, several measures have been taken to *ease internal market transactions*. Online trading was facilitated via platforms in **India**, while the governments of **China**, **Israel** and **Korea** encouraged e-commerce platforms. In **Ireland**, Bord Bia (the Irish Food Board) offered a marketing grant programme to assist food producers and manufacturers in accelerating e-commerce operations and expanding marketing activities. **Costa Rica** is maintaining its farmer fairs under sanitary measures, and **India**'s central and state level governments have been making efforts to maintain the operation of distribution channels for fruit and vegetables. The **Philippines**' Department of Agriculture has a marketing system whereby producers can locate where to sell products at retail prices to local consumers.

Governments have introduced measures to safeguard their agriculture and food workforce or and to ensure the availability of seasonal labour

A diverse set of efforts were made to *ensure the health of agriculture and food workers*. For instance, **Argentina** and **Japan** developed and disseminated protocols for actors in the agriculture and food supply chain to minimise risks of contagion. Some countries have implemented strict sanitary measures in food production systems, including **France**, **Korea** and the **United States**. In **Costa Rica**, the government has applied these measures to cattle auctions, and requires the disinfecting of wholesale market places regularly. Many countries, such as **China, New Zealand**, or **South Africa** are requiring that food workers follow a strict protocol. **Norway**'s Food Safety Authority prepared meat control personnel at slaughterhouse and border points, and has maintained monitoring of the protection of workers to limit contamination. **Denmark** has decreed flexibility in extending the working hours for slaughterhouses in order to maintain meat production levels while also protecting the health of workers. **Italy**, **Spain** and **Turkey** have undertaken specific measures for their agricultural seasonal workers. The **European Union** has reduced the use of on-farm spot checks to decrease physical contact.

Many countries have taken measures to *ensure the availability of seasonal labour* to plant, harvest or package food, especially fruits and vegetables, under the restriction of movements and closure of borders. Many countries loosened their visa or work allowance procedures to encourage foreign seasonal workers to come or stay longer (including **Austria**, **Australia**, **Canada**, **Estonia**, **Finland**, **Israel**, **Korea**, **New Zealand**, **Norway**, **Poland** or the **United States**). The **European Union** permitted the free movement of seasonal agricultural workers within the European Union, and the entry of seasonal agricultural workers originating from third countries. **Germany** allowed the entry of up to 40 000 foreign seasonal workers by planes from designated airports, with the cost of transportation to be borne by employers. A number of countries have introduced measures to ease the reallocation of unemployed people towards agricultural work. Seven European countries used web platforms (as noted above), **Korea** increased the number of agriculture job matching centres for farmers and candidates. The governments of **France** and **Spain** offered flexible arrangements to ease the temporary hiring of unemployed people, with unemployment

benefits continued for those hired as seasonal agricultural workers in Spain. **Norway** introduced a temporary scheme to incentivise laid off citizens to work on farm, keeping unemployment benefits (that are higher than seasonal workers) for half of their time. **Israel** offered transportation and accommodation for volunteer workers and more flexible arrangements for workers to allow them to change employers. **Italy** offered compensation for seasonal labourers who had worked more than 50 days in 2019. **Iceland** and **Estonia** provided support to farmers to hire workers if they are infected by the COVID-19 virus. Farmers not finding seasonal workers in **Norway** are eligible for an insurance compensation.

Governments have taken a wide set of measures to support the agriculture and food sector

At least thirty-five countries and the **European Union** have set up *general financial support schemes* for affected farmers and other actors in the sector. Most of these measures involve expanded financial options, like credit lines, loan guarantees, loan repayment deference, lower interest rate loans or a combination thereof (including, among others, **Chile, China**, **Colombia, Czech Republic, Germany, Hungary, India, Italy, Japan, Korea,** the **Netherlands, Norway**, **Poland** and the **United States**). **Canada** uses similar instruments in addition to the support of their risk management programmes and advisory services.[8] Secondly, a number of countries have deployed emergency funds – or support payments – for farmers or agro-food companies to cope with higher costs or reduced demand (for instance, **Austria, Belgium-Flanders region, Finland, Greece, Japan, Korea, or South Africa**). **Colombia** provided a one-time payment to farmers and farm workers older than 70. Other countries have implemented temporary exemptions or postponement of contributions to retirement, health or disability pensions for farmers (**Poland** and **Slovenia**). **India**, **Switzerland** and selected **EU Member States** advanced their agricultural payments from existing support measures (direct payments). Additionally a few countries used other mechanisms to support their producers. For instance, the government of **Estonia** allowed land sale and lease back to provide liquidity, the government of **Hungary** reimbursed VAT or accelerated VAT refunding and **Latvia's** government provided compensation for producers no longer able to supply the country's school schemes. The governments of the **Czech Republic** and **Poland** compensated producers who have to take care of their children and the government of **Japan** gave a subsidy to employers in the sector who grant a special leave to those needing to take care of children.

Some countries also resorted to pricing, input and output support measures for agriculture and agro food chains. **China, India, Kazakhstan** and **Viet Nam** expanded their procurement of grains. **China** also increased its minimum support price for rice. At the same time, **China** encouraged rice growers to use double cropping in order to increase supply. Input support measures were also undertaken. **Costa Rica**'s government procured seeds and fertilisers for small producers, **South Africa**'s government provided input support for poultry, livestock and vegetable producers. The government of **China** purchased animal feed for the Hubei province, prioritised energy supplies towards fertiliser companies, and water, electricity and gas to animal feed and poultry meat producers, slaughterhouses and processors. **Kazakhstan** implemented a diesel fuel discount to growers. **Mexico** promoted the "Sembrando Vida" Programme which fosters the production of traditional crops in conjunction with fruit and timber trees in a sustainable manner targeted to low-income producers. **Israel** prepared to release a water quota as it expected to increase its agricultural production area to fulfil the internal demand during this year.

Several governments set up *specific support for particularly affected agriculture supply chains*. The **United States** provided disaster relief for specific producers and production chains (including specialty crops, dairy and livestock producers). The **European Union** announced a series of measures to support the storage of dairy and meat products, to provide flexibility in the reallocation of funding towards crisis management for apiculture, fruits and vegetables, olive oil, and wine, and on a temporary and exceptional basis, to allow operators in the milk, flowers and potatoes sectors to collectively adopt self-organised market measures to stabilise markets. Among others, the governments of **Iceland, Korea, Belgium** (Flanders), and the **Netherlands** provided special support to impacted horticultural or floricultural

producers (including potatoes for the Netherlands). The government of **Japan** introduced measures to support its milk producers and processors, **Spain**'s government provided support for its lamb producers, while **Portugal**'s government did so for fruit and vegetables and wine producers, and the **Latvian** government for the livestock industry.[9] The government of **Switzerland** allocated funds to encourage the freezing of beef, pork and goat meat for which demand has reduced. **Costa Rica's** state owned National Sugarcane Liquor Factory was tasked to produce alcohol and alcohol-based antiseptic solution for national hospitals and makes home deliveries.

Lastly, many countries instituted temporary *administrative and regulatory flexibilities* to agriculture and agro-food companies to ease their operations. The **European Commission** provided flexibility for countries to offer extended deadlines for farmers' applications to annual payments. Some EU Member States opted to defer application for payments accordingly (for instance, the **Czech Republic**, **France, Greece** or **Spain**), while others temporarily halted or delayed on-farm compliance inspections (**Estonia**, **Finland**, **Ireland**, **Luxembourg** and **Portugal**) or other compliance activities (compliance for animal husbandry subsidies in **Hungary**, or organic farming checks in **Portugal**). **Poland** extended the validity of health certificates for livestock and the deadlines for livestock identification. **Canada**'s Food Inspection Agency was given funding to develop flexible ways to carry out inspections, notably via the use of digital tools. Several EU Member States also temporarily relaxed conditionality, cross-compliance or green measures (**Hungary, Ireland, Portugal**), while **Germany** delayed the application of its amended fertiliser ordinance. **Greece** and **Japan** deferred the payment of insurance premia for their farmers, while **Croatia** postponed the payments of rents on government owned land. In the **United States**, USDA agencies have also introduced temporary labelling flexibilities to facilitate the distribution of food to retail locations, e.g. relaxing the application of country of origin or nutrition labelling requirements. The **Czech Republic** allowed distilleries to produce disinfectants from denatured alcohol.

Actors in the food and agriculture sector are mostly eligible for general economic relief measures

Governments in many countries have introduced *overall economic packages* that apply to firms and actors in the agriculture and food sectors, and in some cases are the main source of assistance. These include stimulus packages in **Japan, New Zealand**, or **Switzerland**; direct support to business (for instance in **France**, **Germany**, **Greece**, **Luxembourg**, **Spain** and the **European Union**) or to freelancers and the self-employed (such as in **Austria**, **Belgium**, **Denmark**, **Germany,** and **Slovakia,** among others); or wage compensation, either for employers or employees (e.g. in **Denmark**, **Estonia**, **France**, **Ireland**, the **Netherlands** and **Slovakia**). Governments also adjusted their fiscal instruments, via tax concessions, deferrals or rebates (including in **Croatia**, **Costa Rica**, **Denmark**, **Estonia**, **France**, **Germany**, **India**, **Indonesia**, **Italy**, **Latvia**, **Lithuania**, or the **Netherlands**); delayed payment of rents or utility bills (**France**); deferred or suspended social contributions for some or all firms (including in **Belgium**, **Estonia, Hungary**, **Luxembourg**, or **Poland**); or the suspension of penalty or waivers for late taxes (e.g. in the **Czech Republic**, **Estonia**, **Lithuania** or **the Netherlands**). **Canada, Kazakhstan** and the **Russian Federation** employed a combination of measures, including support, wages or adjusted taxes or charges.

Many countries also introduced measures to increase the financing means for all sectors. For instance, agricultural producers in the **United States** are eligible for a guaranteed loan programme that aims to support the payroll of small businesses during the coronavirus pandemic. The **European Union** has increased financing availability from the European Investment Bank Group to be directed toward bridging loans, credit holidays, or other measures, to alleviate capital market constraints. Governments in some EU Member States (such as **Austria**, **Belgium**, **Estonia**, **Denmark**, **France**, **Ireland**, **Italy**, or **Spain**) also offered credit guarantees, or provided improved access to investment or business loans, including at concessional rates (including **Czech Republic**, **Estonia**, **Germany**, **Latvia** or **Portugal**). The governments of **Denmark** and **Portugal** also offered increased access to or state guarantees for export credit.

Poor or affected farmers, agro-food chain actors and consumers can also benefit from *social safety net programmes*. This includes temporary unemployment compensations in a number of countries, emergency monthly financial assistance for vulnerable workers and people in **Brazil**, a safety welfare programme in **Indonesia**, and a range of social payments in the **Russian Federation**. The government of **Chile** is implementing a family emergency income for the poorest 60% of the population whose incomes are mainly from informal sources. This subsidy will be given for three months, the amount will depend on the vulnerability and the size of the family, being higher for the largest and poorest families, and will decrease monthly. The government of **Denmark** offered economic support for high-risk employees and reduced working hour requirements for senior employees.

Governments have provided food assistance to vulnerable population and acted to ensure consumer food affordability

Governments in many countries bolstered existing programmes or launched new initiatives of *food assistance* to cope with the large number of people affected by the economic lockdowns. For instance, the **United States** largely expanded the budget allocated to food and nutrition support and procured excess supply for food banks. The **European Union** amended the regulation on the EU's Fund for European Aid to the Most Deprived – which provides food and/or basic material assistance to those in need – with a set of measures designed to address the COVID-19 crisis, such as allowing the use of electronic cards or vouchers as alternative to food, and ensuring the safety of aid workers. **Canada** and **Italy** expanded their funding of food banks or assistance programmes (Italy initially provided EUR 50 million and then added EUR 250 million in a later decree). The **Philippines** delivered pay-outs from its cash transfer programme earlier than scheduled. In the **United Kingdom**, vouchers were given to low income families in lieu of free school meals. The government of **Portugal** announced support for the distribution of fruits and vegetables through social solidarity NGOs and the national food bank network. Other countries also provided in-kind food assistance. For example, **China, Costa Rica** and **Chile** provided food baskets to low income populations. The **Czech Republic** distributed fruits, vegetables and milk destined for schools to food banks. Food distribution was scaled up, delivering food for school children in **South Africa**. The **United Kingdom** government distributed food parcels to vulnerable citizens. The government of **India** decided to distribute a six-month quota of subsidised food grains in one-go to beneficiaries under the Public Distribution System and also increased the monthly allocation of subsidised food grains by 2 kg to 7 kg per person. In addition, specific state- or Union Territory-level initiatives in India target as well distribution of grains and other food products such as pulses or sugar.

A number of *market measures* were also adopted by governments to ensure food affordability and availability for consumers. **China** released 10m tonnes of wheat to stabilise its market. Other countries, like **Ukraine**, the **Russian Federation**, **Slovenia** or **Viet Nam** encouraged or expanded their stocks of grains. The governments of **Israel, Turkey, Poland, Portugal** and **Romania** increased their oversight on prices of consumer products. **Colombia** focused its price monitoring activities on food baskets for vulnerable population, while the governments of **Croatia** and **the Philippines** fixed consumer prices for selected commodities.

Assessment of developments in agricultural support and performance

This section provides a quantitative assessment of developments in policy support to agriculture. The assessment relies on a set of quantitative indicators that are comparable across countries and time. First, OECD indicators of agricultural policy support are used to characterise the diversity of support measures applied in different countries (Annex 1.B provides definitions of these indicators). Second, the assessment utilises three indicators of performance of the sector to capture productivity and sustainability outcomes:

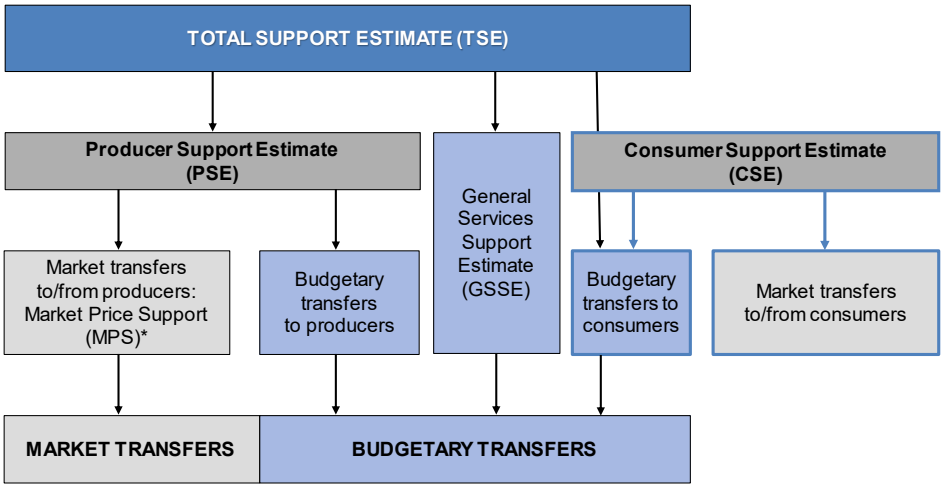
total factor productivity (USDA, 2019[13]), nitrogen balance per hectare and greenhouse gas emissions per hectare (two OECD agri-environmental indicators).

These indicators are compared for 36 OECD countries, five non-OECD EU Member States, and thirteen emerging and developing economies. The assessment also discusses aggregate results for all the OECD and all emerging and developing economies, as well as for all countries combined. The **European Union** is presented as one economic region, and includes the **United Kingdom**, an EU member until January 2020. The assessment compares the evolution of indicators over time starting with a brief analysis of the most recent yearly changes in 2019. These figures are subject to the caveat that many numbers used for this estimate are provisional. Their discussion serves also to introduce the main components and concepts of support in the OECD methodology. Second a longer term comparison presents developments in support between most recent years and the early 2000s. For the outcome indicators on productivity and sustainability, comparisons are made over slightly different periods of time, from 1997-99 to 2013-15, recognising the lags in the publication of some of these indicators.

In 2019 total net support to agriculture decreased in OECD countries but increased in emerging and developing economies

The Total Support Estimate (TSE) is the OECD's broadest indicator of support. It comprises policy expenditures in general services for primary agriculture that benefit the sector as a whole (General Services Support Estimate or GSSE); policy transfers to individual producers (Producer Support Estimate or PSE); and budgetary support to consumers included in the Consumer Support Estimate (CSE) (Figure 1.2). Total net support to agriculture in OECD countries fell in 2019 by 4.4% to USD 315 billion relative to 2018 levels, while it grew by 2% in the emerging and developing economies to USD 281 billion. This total net support in the latter group hides USD 100 billion of negative price support to commodities whose production is taxed, while transfers flowing to the sector in this group were correspondingly higher at USD 381 billion. The aggregate of net total support to agriculture across all countries covered in the report decreased by 1.5% to USD 601 billion.[10]

Figure 1.2. Structure of agricultural support indicators



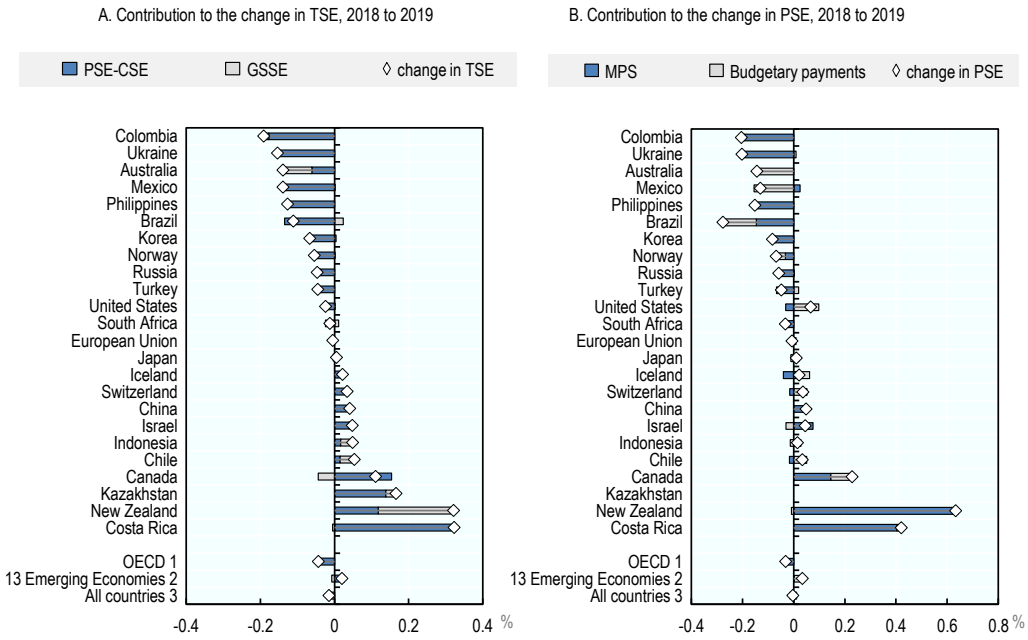
Note: *Market Price Support (MPS) is net of producer levies and excess feed cost.
Source: Annex 1.B.

These aggregates do not always reflect the diversity of changes in support across countries between 2018 and 2019. Total support to agriculture was reduced in many OECD countries (**Australia**, the **European**

Union, **Korea**, **Mexico**, **Norway**, the **United States** and **Turkey**) and in several emerging and developing economies (**Brazil, Colombia**, **the Philippines**, **Russian Federation**, **South Africa** and **Ukraine**),[11] (Panel A in Figure 1.3). In contrast, total support to agriculture increased in **China**, **Costa Rica**, **Indonesia** and **Kazakhstan**, but also in many OECD countries (**Canada**, **Chile**, **Israel**, **Iceland**, **Japan**, **New Zealand** and **Switzerland**). In almost all countries, the change in total support was mainly driven by changes in the policy transfers to individual producers and consumers (PSE-CSE), rather than to the sector in general (GSSE expenditures). Changes in expenditures on general services were larger than PSE changes only in **New Zealand**, **Chile**, **Australia** and **Indonesia**.

The amount of Producer Support Estimate (PSE), which measures policy transfers to agricultural producers individually, was reduced by 3.1% in OECD countries to USD 232 billion in 2019, while it grew by 3.4% to USD 199 billion in emerging and developing economies covered in the report. This latter is net of USD 100 billion negative price support, so positive producer support amounted to USD 298 billion. The aggregate of net producer support across all countries fell by 0.3% to USD 436 billion. The same countries that increased (reduced) the total support to the sector (TSE), also increased (reduced) producer support to farmers (PSE) (Figure 1.3). The only exception is the **United States** where the reduction in TSE was driven by reductions in budgetary transfers to consumers (food assistance programmes) in the CSE, despite support to producers PSE increasing in 2019.

Figure 1.3. Changes in Total Support to the sector (TSE) and in Producers Support (PSE), 2018 to 2019



Notes: Argentina, India and Viet Nam are not shown due to negative PSE estimates.

1. The OECD total does not include the non-OECD EU Member States.

2. The 13 Emerging Economies include Argentina, Brazil, China, Colombia, Costa Rica, India, Indonesia, Kazakhstan, the Philippines, Russian Federation, South Africa, Ukraine and Viet Nam.

3. The All countries total includes all OECD countries, non-OECD EU Member States, and the Emerging Economies.

The statistical data for Israel are supplied by and under the responsibility of the relevant Israeli authorities. The use of such data by the OECD is without prejudice to the status of the Golan Heights, East Jerusalem and Israeli settlements in the West Bank under the terms of international law.

Source: OECD (2020), "Producer and Consumer Support Estimates", OECD Agriculture statistics (database), http://dx.doi.org/10.1787/agr-pcse-data-en.

StatLink https://doi.org/10.1787/888934143204

The level of producer support relative to farm revenues fell slightly in 2019

In order to compare the degree of support to producers across countries, the OECD calculates the share of gross farm receipts (including market revenue) that is coming from support policies in each country (PSE over gross farm receipts or %PSE). Measured in relation to farm revenue, average producer support in OECD countries fell slightly to 17.8% of gross farm receipts in 2019, compared with 18.0% in 2018. In the emerging and developing economies covered in this report, net producer support as a share of gross farm receipts also decreased slightly, from 7.8% to 7.7% on average.

Transfers to producers in the PSE comprise market price support (MPS) provided through domestic market prices that are higher (or lower if support is negative) than world prices, and budgetary payments from the government to farmers (Figure 1.2). Focusing on MPS, the price gaps generated by trade policies and domestic market interventions [see Chapter 1 in OECD (2019[14])] are preferably calculated as a differential between domestic and reference prices, but in some cases alternative methods are used for these calculations (Box 1.4). In most countries covered in this report, the main contributing factor to PSE changes in 2019 was changes in market price support rather than changes in budgetary expenditures from the government to farmers (Figure 1.3). However there are notable exceptions. In the **United States**, the increase in producer support was largely driven by additional payments to farmers through the trade mitigation programmes and disaster assistance. Similarly, increases in the PSE in **Chile**, **Iceland** and **Switzerland** were due to increases in budgetary payments to farmers. In Mexico, reductions in expenditure on the investment on productive assets programme contributed most to the reduction in producer support, and in Australia, where market price support is zero, lower payments to farmers caused reductions in producer support.

Changes in MPS were also the main drivers of changes in producer support in 2019 for most of the emerging and developing economies covered in this report. For instance, in **China** the observed growth in producer support was driven by increasing price gaps in pig meat and other livestock commodities, following the African swine fever outbreak. In **the Philippines**, budgetary payments are a small share of support and they had only a minor contribution to changes in producer support. In contrast, in **India**, market price support remained negative and relatively stable, and increases in producer support were determined by the extended coverage of the direct income transfer scheme *Pradhan Mantri Kisan Samman Nidhi* (PM-KISAN) introduced in 2018.

Box 1.4. Market price support – concept and interpretation

Market price support (MPS) is defined as the "annual monetary value of gross transfers from consumers and taxpayers to agricultural producers, arising from policy measures that create a gap between domestic market prices and border prices of a specific agricultural commodity, measured at the farm gate level" (OECD, 2016[15]). It is calculated for individual commodities, as the gap between the domestic price paid to producers and the equivalent price at the border (market price differential, MPD), multiplied by the quantity produced, and aggregated to the national level.

This definition contains three key elements. First, it measures the transfers that arise from policy measures that create a price gap (e.g. import tariffs, minimum prices, export taxes, etc.). Second, it measures gross transfers (positive or negative) to agricultural producers from consumers and taxpayers. Third, it is measured at the farm gate level to ensure that MPS values are consistent with the production and price data for the farming sector overall.

The price gap (MPD) is calculated only if policies exist that can cause the gap such as border measures that restrict or promote imports or exports, and government purchases, sales and intervention prices in the domestic market. If countries do not implement such policies, the MPD is assumed to be zero. A non-zero MPD, whether positive or negative, originates from price-distorting policies. It is important to

note that MPS measures the "policy effort" (or level of support to prices), not the policy effect (e.g. the impact on farm income). In addition to policy instruments that restrict price transmission (say, a target price), market developments (such as exchange rate movements affecting world prices expressed in local currencies) may influence the implied policy effort and, hence, the transfers implied.

The calculation of the MPD for individual commodities based on prices requires information not only on product prices, but also on differences in product qualities, processing and transportation margins, to compare like with like. In some cases, difficulties in identifying and obtaining relevant prices or other information required prevent the MPD calculation from being based on observed price gaps. An alternative option for calculating the MPD is the use of import tariffs or export taxes (OECD, 2016[15]).

The use of tariffs rather than price gap data comes with a number of complex measurement issues, covering issues such as the composition of product groups across tariff lines and the seasonality of production and trade. Moreover, in order to capture the marginal rather than the average import protection rate, the statutory applied MFN tariffs are used. In light of the growing number of preferential trade agreements (PTAs) engaged in by countries covered by this report (Table 1.2), an important caveat therefore relates to the fact that the statutory applied MFN tariffs remain unchanged even when increased quantities of products are imported under preferential tariffs or duty-free within such PTAs. As a consequence, potential liberalising effects of new PTAs are not reflected in the MPS estimates when tariffs are used to calculate them. With the increased relevance of PTAs for international trade, it therefore becomes even more important to base the MPD calculations on price gap calculations whenever data allow.

When interpreting MPS values, it is important to bear in mind that MPS is not a measure of public expenditures but an estimation of implicit or explicit transfers. MPS estimates published by the OECD therefore often differ from, and should not be confused with, those published by other organisations, including by the World Trade Organization, which may use very different concepts to calculate their indicators, despite similar names (Diakosavvas, 2002[16]; Effland, 2011[17]; Brink, 2018[18]).

Source: (OECD, 2019[14]).

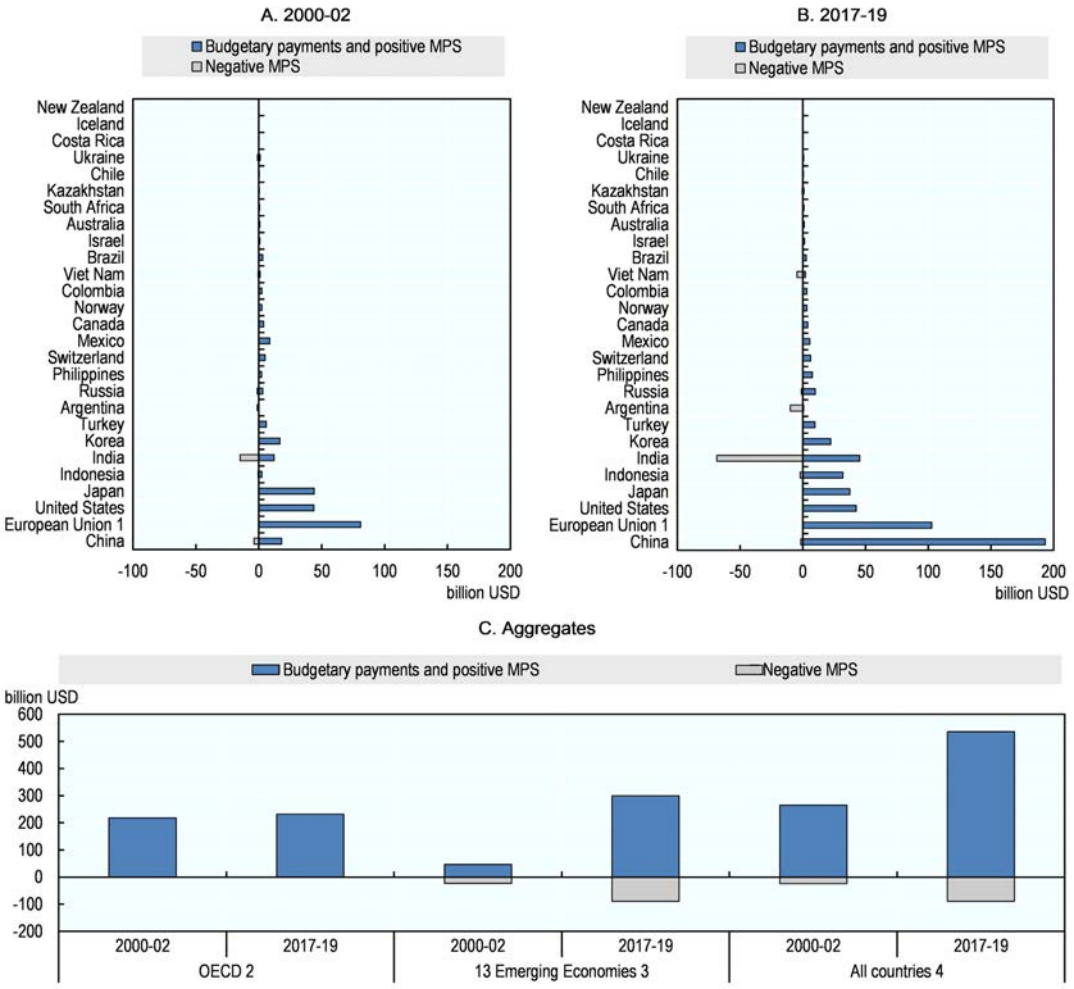
The overall value of support grew mainly due to higher rates of support in large emerging economies

In 2000-02 the overall value of producer support was concentrated in a few OECD countries, with the **European Union**, the **United States** and **Japan** – the three largest economic areas – dominating the global figures (Panel A in Figure 1.4). Since then, support in the largest emerging economics – in particular, **China**, **India** and **Indonesia** – has also become increasingly important (Panel B in Figure 1.4). This evolution reflects both increasing rates of producer support in the largest emerging economies, and the fact that such support is extended to large agricultural sectors with much greater agricultural populations. Overall, the monetary value of the aggregate producer support in emerging and developing economies was less than one tenth of the aggregate PSE across OECD countries in 2000-02, yet by 2017-19 it was higher (Panel C in Figure 1.4).

In some emerging and developing economies – **India**, **Argentina, Viet Nam**, **Indonesia**, the **Russian Federation** and **Kazakhstan** – there is negative market price support for some commodities, implying that policies tax rather than support producers. These negative transfers harm producers and, in combination with budgetary payments and positive market price support to other commodities, distort production and trade. The amount of budgetary payments and positive market price support to producers in emerging and developing economies has multiplied by six in less than two decades while the amount of negative price support quadrupled, with these trends sending conflicting signals to farmers. Almost all the change in the

amount of support to producers in recent years (87% of the change in net support) has taken place outside OECD countries.

Figure 1.4. Distribution of Producer Support Estimate across countries, 2000-02 and 2017-19



Notes: Countries are ranked according to the PSE levels in 2017-19.

1. EU15 for 2000-02 and EU28 for 2017-19.

2. The OECD total does not include the non-OECD EU Member States. The Czech Republic, Estonia, Hungary, Poland, the Slovak Republic and Slovenia are included in the OECD total for both periods and in the European Union for 2017-19. Latvia and Lithuania are included in the OECD and in the European Union only for 2017-19.

3. The 13 Emerging and developing Economies include Argentina, Brazil, China, Colombia, Costa Rica, India, Indonesia, Kazakhstan, the Philippines, Russian Federation, South Africa, Ukraine and Viet Nam.

4. The All countries total includes all OECD countries, non-OECD EU Member States, and the Emerging and developing Economies.

Source: OECD (2020), "Producer and Consumer Support Estimates", OECD Agriculture statistics (database), http://dx.doi.org/10.1787/agr-pcse-data-en.

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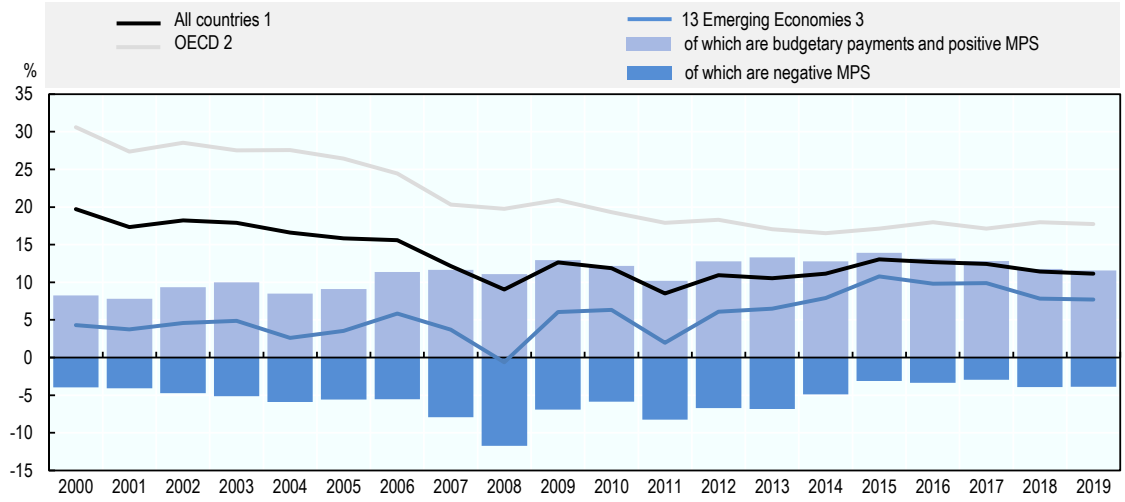
The average rate of producer support in OECD countries remains more than double that in emerging and developing economies

The long-term evolution of average %PSE (producer support as a share of gross farm receipts) reveals some convergence between OECD countries and emerging and developing economies from, respectively 28.9% and 4.2% in 2000-02 to 17.6% and 8.5% in 2017-19 (Figure 1.5). However this convergence seems

to have halted since 2015. The average %PSE across all countries in this report declined in the long run from 18.4% in 2000-02 to 11.7% in 2017-19. Most of this decline took place before 2008, and was driven by reforms in OECD countries. From 2008 to 2015, the average %PSE declined more slowly in OECD countries while it increased more rapidly in emerging and developing economies. The decline in the average %PSE across all countries in this report from 13.1% in 2015 to 11.1% in 2019 masks an increase in average %PSE from 17.1% to 17.8% in OECD countries and a decline in the average of emerging and developing economies from 10.8% to 7.7%. This latter reduction also masks higher levels of negative market price support in some of these countries.

Figure 1.5. Evolution of the % Producer Support Estimate, 2000 to 2019

Percentage of gross farm receipts



Notes: The two bars relate to emerging and developing economies and represent a decomposition of PSE on its positive and negative parts.
1. The All countries total includes all OECD countries, non-OECD EU Member States, and the 13 Emerging and developing Economies.
2. The OECD total does not include the non-OECD EU Member States. Latvia and Lithuania are included only from 2004.
3. The 13 Emerging and developing Economies include Argentina, Brazil, China, Colombia, Costa Rica, India, Indonesia, Kazakhstan, the Philippines, Russian Federation, South Africa, Ukraine and Viet Nam.
Source: OECD (2020), "Producer and Consumer Support Estimates", OECD Agriculture statistics (database), http://dx.doi.org/10.1787/agr-pcse-data-en.

StatLink https://doi.org/10.1787/888934143242

Behind the total %PSE numbers in emerging and developing economies there is a component of negative support to farmers through depressed domestic prices of certain commodities in some countries. These negative price support transfers are significant also relative to gross farm receipts and generate distortions in domestic and world markets beyond what is reflected in the net %PSE (Figure 1.5). Indeed, the %PSE, which indicates the net of positive and negative MPS elements tends to underestimate price distortions when both positive and negative price support are present.

Producer support declined in all OECD countries, and increased to above average in the Philippines, Indonesia and China from 2000-02 to 2017-19

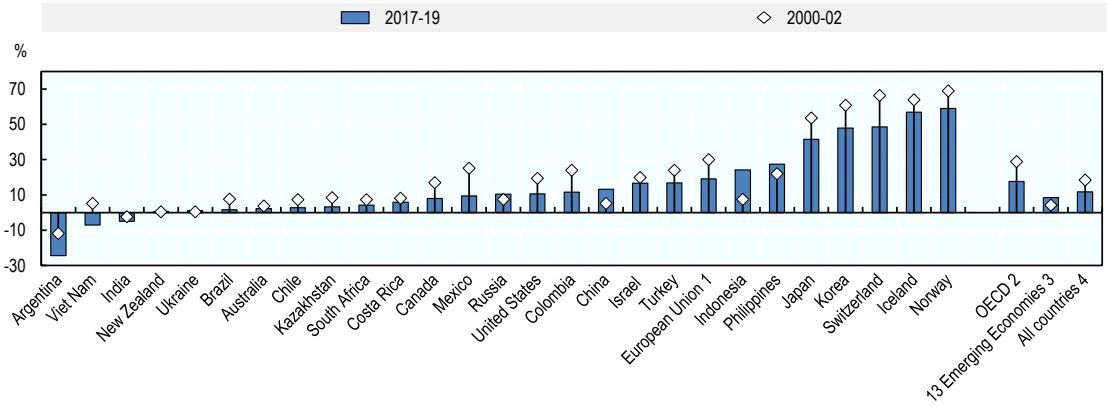
The long-term trends in the aggregates reflects what happened in most individual countries. The level of producer support as a share of gross farm receipts was reduced in all OECD countries between 2000-02 and 2017-19 (Figure 1.6). The largest declines took place in **Switzerland** (18 percentage points), **Mexico** (16), **Korea** (13), **Japan** (12), the **European Union** (11), **Norway** (10), the **United States** (9), **Canada** (9) and **Turkey** (7), while it declined as well in low support countries, including New Zealand, Australia and

Chile. In some emerging and developing economies, %PSE declined – particularly in **Brazil** (by 6 percentage points) but also in **Colombia**, **Costa Rica**, **South Africa** and **Kazakhstan**. Several emerging and developing economies increased their level of support as measured by the %PSE, including Indonesia (by 17 percentage points), **China** (8), the **Philippines** (5) and the **Russian Federation** (3). Three emerging economies – **Argentina**, **Viet Nam** and **India** – have negative %PSEs, with the %PSE declining in all three between 2000-02 and 2017-19.

There are wide differences in the level of producer support across countries (Figure 1.6). In 2017-19, five OECD countries have the highest levels of support, with rates of between 40% and 60% of gross farm receipts: **Norway**, **Iceland**, **Switzerland**, **Korea** and **Japan**. In these countries about half of the revenue of farmers is coming from agricultural policy transfers due to tariffs and other support measures. Five countries – the **Philippines**, **Indonesia**, **Turkey**, **Israel** and **China** – and the **European Union** have levels of support above the average across all countries covered in the report (11.7%) but below 30%. Six countries have levels of support below the average but above 5%: **Colombia**, the **United States**, **the Russian Federation**, **Mexico**, **Canada**, and **Costa Rica**. Seven countries have low levels of support below 5%: **South Africa**, **Kazakhstan**, **Chile**, **Australia**, **Brazil**, **Ukraine** and **New Zealand**. Finally, three countries have negative support with very different levels: **Argentina**, **Viet Nam** and **India**. Only three countries have significantly changed their relative position since 2000-02: **China** and **Indonesia** have moved from well below average to above the average; and **Mexico** has made the opposite movement from well above average to below the average.

Figure 1.6. Producer Support Estimate by country, 2000-02 and 2017-19

Percentage of gross farm receipts



Notes: Countries are ranked according to the 2017-19 levels.
1. EU15 for 2000-02 and EU28 for 2017-19.
2. The OECD total does not include the non-OECD EU Member States. The Czech Republic, Estonia, Hungary, Poland, the Slovak Republic and Slovenia are included in the OECD total for both periods and in the European Union for 2017-19. Latvia and Lithuania are included in the OECD and in the European Union only for 2017-19.
3. The 13 Emerging and developing Economies include Argentina, Brazil, China, Colombia, Costa Rica, India, Indonesia, Kazakhstan, the Philippines, Russian Federation, South Africa, Ukraine and Viet Nam.
4. The All countries total includes all OECD countries, non-OECD EU Member States, and the Emerging and developing Economies.
Source: OECD (2020), "Producer and Consumer Support Estimates", OECD Agriculture statistics (database), http://dx.doi.org/10.1787/agr-pcse-data-en.

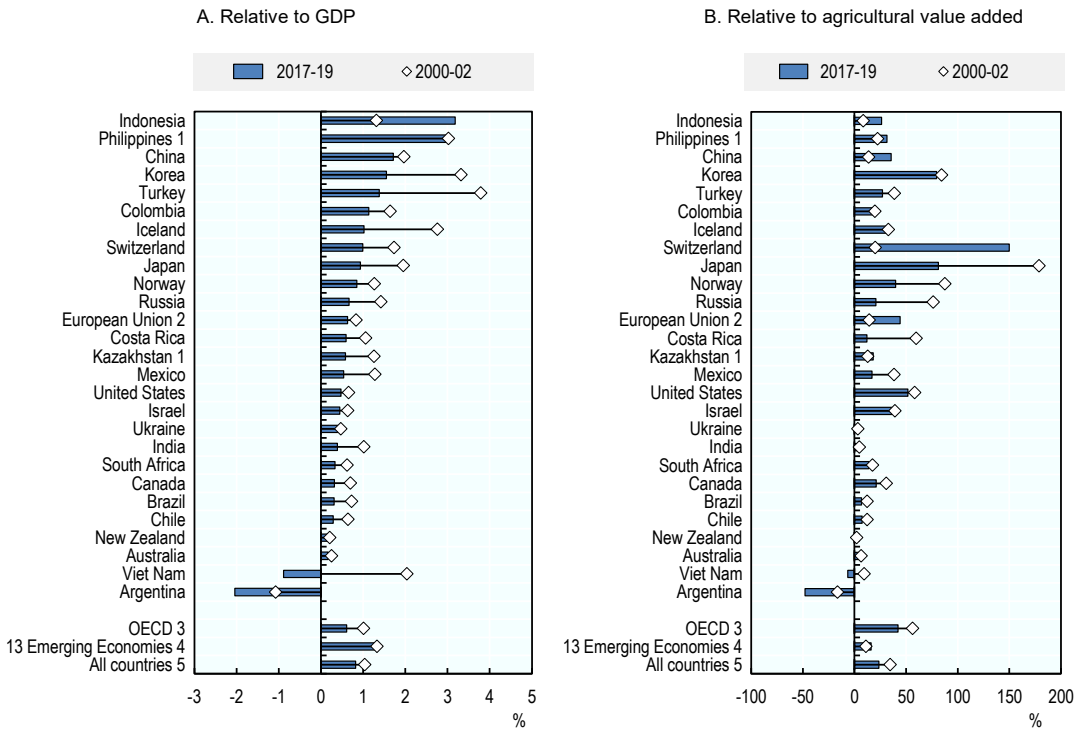
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On average, the share of total agricultural support in the economy is higher in emerging economies, but remains high in some OECD countries

The overall share of total agricultural support in the economy, including support to producers (PSE), to general services for the sector (GSSE) and subsidies to consumers (part of the CSE), is measured by the share of TSE in GDP or %TSE (Panel A in Figure 1.7). In OECD countries total support declined from 1.0% of GDP in 2000-02 to 0.6% in 2017-19. Reductions have been particularly large in countries where the burden was highest like **Korea**, **Turkey**, **Iceland**, **Switzerland**, **Japan** and **Norway**. The %TSE continued be above 0.8% of GDP in these OECD countries despite the relatively low share of agriculture in the economy in all of them except **Turkey**.

Total support to agriculture represented on average 1.3% of GDP in emerging and developing economies, more than double the OECD average in 2017-19. The %TSE is as high as 3.2% in **Indonesia**, 3.0% in the **Philippines**, and 1.7% in **China**. These higher shares reflect that fact that a given rate of support agriculture will translate into a higher share of GDP when agriculture's share of GDP is higher. The %TSE declined since 2000-02 in **China**, **Colombia**, the **Russian Federation**, **Costa Rica**, **Kazakhstan**, **India**, **South Africa**, **Brazil** and **Viet Nam**.

Figure 1.7. Total Support Estimate by country, 2000-02 and 2017-19



Notes: Countries are ranked according to the %TSE in 2017-19.

1. For Kazakhstan and the Philippines, 2017-19 is replaced by 2016-18, due to missing GDP and agricultural value added for 2019.

2. EU15 for 2000-02 and EU28 for 2017-19.

3. The OECD total does not include the non-OECD EU Member States. The Czech Republic, Estonia, Hungary, Poland, the Slovak Republic and Slovenia are included in the OECD total for both periods and in the European Union for 2017-19. Latvia and Lithuania are included in the OECD and in the European Union only for 2017-19.

4. The 13 Emerging Economies include Argentina, Brazil, China, Colombia, Costa Rica, India, Indonesia, Kazakhstan, the Philippines, Russian Federation, South Africa, Ukraine and Viet Nam.

5. The All countries total includes all OECD countries, non-OECD EU Member States, and the Emerging Economies.

Source: OECD (2020), "Producer and Consumer Support Estimates", OECD Agriculture statistics (database), http://dx.doi.org/10.1787/agr-pcse-data-en.

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The level of agricultural support relative to the size of the agricultural sector is high in some OECD countries

The level of total support relative to the agricultural sector value added continues to be high in OECD countries compared to the overall average, corresponding to 42% of the agricultural value added in 2017-19, compared with 56% in 2000-02 (Panel B in Figure 1.7). Total support relative to the size of the sector varies widely across OECD countries, from 150% in **Switzerland**, 81% in **Japan** and 79% in **Korea** to less than 10% in only three countries: **Australia**, **New Zealand** and **Chile**. In several countries TSE relative to the agricultural value added was close to the OECD average including in **Norway** (40%), the **European Union** (44%) and the **United States** (52%).

In all emerging and developing economies total support relative to the size of the agricultural sector is below the average in OECD countries. The importance of support in the sector is highest in **China** (36%), the **Philippines** (32%), **Indonesia** (26%) and the **Russian Federation** (21%), low in **Brazil** (7%) and negative in **Argentina** and **Viet Nam**. The total effective tax on agriculture relative to the size of the sector was 48% in **Argentina** and 6% in **Viet Nam**.

From support to policy reform and sector performance

Building on the goals defined by the OECD Ministers of Agriculture in 2016 (OECD, 2016[19]) the OECD Agro-food Productivity-Sustainability-Resilience Framework (OECD, 2020[20]) provides a benchmark for policy performance. There is evidence that agricultural policy reform away from market price support towards less distorting forms of support, decoupled payments and general services for the sector can potentially improve productivity and reduce negative environmental outcomes (DeBoe, 2020[21]; Henderson and Lankoski, 2019[22]; OECD, 2019[23]).

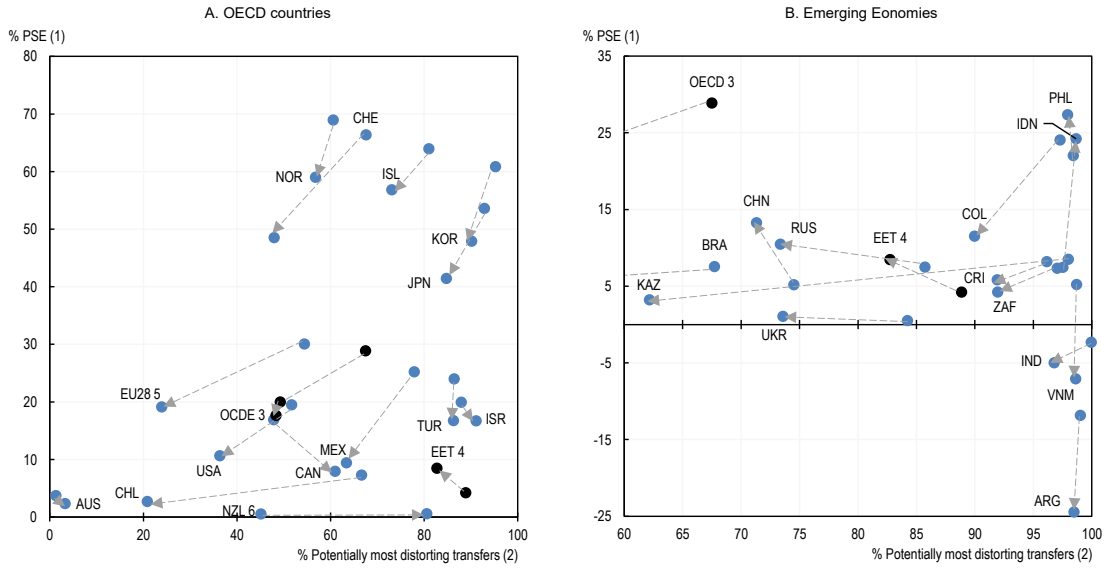
The pace of agricultural policy reform has slowed in OECD countries since 2008

One way of evaluating the scope of reform is through the level of support (%PSE) and the share of potentially most distorting transfers (market price support, payments based on output and payments based on unconstrained use of variable inputs). Reform in most OECD countries in the last two decades has resulted in reductions in the level of support and in the share of most distorting support. All countries, with the exception of **Canada**, **Israel** and **New Zealand** (where support is in any event very low), have followed this pattern (Panel A in Figure 1.8). On aggregate, OECD countries have reduced %PSE from an average of 28.8% in 2000-02 to 17.6% in 2017-19, and have reduced the share of most distorting support from 67.5% to 48.3%

However, most of the reductions had already taken place in 2008-10 when %PSE was 19.9% and the share of most distorting support was 49.3% (see the first two steps in Panel A of Figure 1.8). Reforms in several OECD countries took place mainly up to 2008-10 and have slowed since, including in the **European Union**, and particularly in the United States where both %PSE and share of most distorting support have increased in recent years.

In emerging and developing economies, on average, the level of support is lower and the share of most distorting support in all transfers is higher than in OECD countries (Panel B in Figure 1.8). **Brazil**, **Colombia**, **Costa Rica**, **South Africa** and **Kazakhstan** have followed the same pattern of reform as OECD countries, reducing both the level of support and the share of most distorting support. The rest of emerging and developing economies have either increased the level of positive support (**China**, the **Russian Federation**, **Ukraine**, **Indonesia** and the **Philippines**) or saw an increase in negative transfers (implicit taxes) to producers (**India**, **Viet Nam** and **Argentina**).

Figure 1.8. Developments in Producer Support Estimate level and composition, 2000-02 to 2017-19



Notes: 1. Producer Support Estimate (PSE) as a share of the gross farm receipts. For the OECD aggregate, the beginning of the arrows indicates the composition in 2000-02; the intermediate point refers to 2008-10 period, while the end of the arrow to 2017-19 period. The scales in both axis are different in panels A and B.

2. Potentially most distorting transfers in cumulated gross producer transfers. Potentially most distorting transfers include transfers based on output (including positive and absolute value of negative market price support, and output payments) and on the unconstrained use of variable inputs.

3. The OECD total does not include the non-OECD EU Member States. The Czech Republic, Estonia, Hungary, Poland, the Slovak Republic and Slovenia are included in the OECD total for both periods and in the European Union for 2016-18. Latvia and Lithuania are included in the OECD and in the European Union only for 2017-19.

4. The 13 Emerging and developing Economies include Argentina, Brazil, China, Colombia, Costa Rica, India, Indonesia, Kazakhstan, the Philippines, Russian Federation, South Africa, Ukraine and Viet Nam.

5. EU15 for 2000-02 and EU28 for 2017-19.

6. In New Zealand, price support is measured only for poultry and eggs and is due to non-tariff protection applied on SPS grounds.

Source: OECD (2020), "Producer and Consumer Support Estimates", OECD Agriculture statistics (database), http://dx.doi.org/10.1787/agr-pcse-data-en.

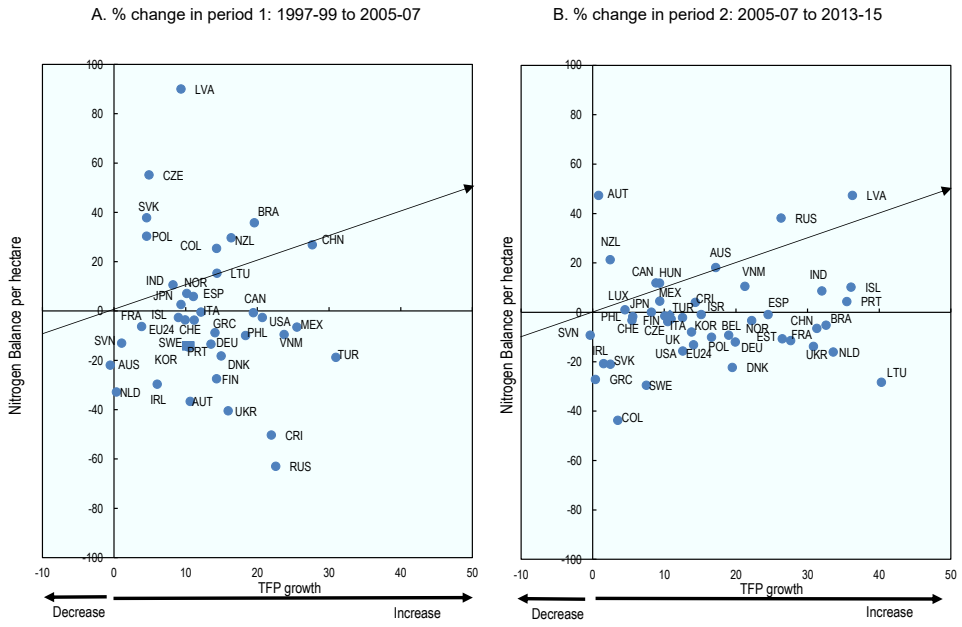
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Almost all countries have increased their productivity in the last two decades and, while nitrogen balances have fallen in many countries, GHG emissions per hectare have continued to grow in most countries

Observed performance in terms of productivity and sustainability varies across countries and periods of time as shown by a partial performance assessment based on Total Factor Productivity (TFP), nitrogen balances per hectare[12] and greenhouse gas (GHG) emissions per hectare. Each of these indicators is discussed in the country chapters.

Figure 1.9 and Figure 1.10 plot the long-term performance of countries with respect to TFP and nitrogen balances per hectare, and TFP and GHG emissions per hectare, respectively, in two different periods of comparable length: period 1 from 1997-99 to 2005-07; and period 2 from 2005-07 to 2013-15. All countries but two increase TFP in each of the two periods, with changes in the range between -1% and 40% in each period. The performance of countries in terms of nitrogen balances and GHG emissions is even more diverse with increases in some countries and decreases in others, reflecting also the large differences in the starting levels of nutrient balances.

Figure 1.9. Total Factor Productivity and Nitrogen Balance per hectare



Notes: Data are not available on TFP for Belgium and Luxembourg and on NB for Chile, Estonia, Hungary, Israel and the United Kingdom for period 1; for Chile for period 2; and for Argentina, Indonesia, Kazakhstan and South Africa for both periods.
EU24 refers to all countries in the European Union except for Estonia, Hungary, Croatia and the United Kingdom for which indicators of Nitrogen balances series are incomplete for the period.
Source: USDA Economic Research Service, Agricultural Productivity database; OECD statistical database; FAO database and national data.

StatLink https://doi.org/10.1787/888934143318

There are two types of de-linking − commonly called decoupling − environmental impacts from economic growth. Decoupling is said to be relative when the relevant environmental parameter (e.g. nitrogen balance or GHG emissions) is increasing at a slower rate than the relevant economic variable (total factor productivity in this case). Such relative decoupling appears to be fairly common and is represented by locations below the diagonal arrow in Figure 1.9 and Figure 1.10. Decoupling is said to be absolute when the economic variable is growing, while the environmental variable is stable or decreasing (locations in the lower-right quadrant in the figures).

In both periods, in almost all countries, productivity growth was relatively decoupled from growth in nitrogen balances (Figure 1.9). Fewer countries, but still a majority, are also in the "absolute decoupling" lower-right quadrant in the figure, that is, they experienced increased productivity with reduced nitrogen balances per hectare in both period 1 and period 2. In both panels of Figure 1.9, the number of countries in this quadrant is twice as large as the number of countries in "coupled" quadrants in which productivity growth comes with a higher nitrogen balance. In period 1, the correlation between productivity and nitrogen balance changes is negative. In the most recent period 2, the average increase in total factor productivity is stronger across countries and the relationship becomes flatter with a slight positive correlation between productivity and nitrogen balance changes, meaning that, on average, higher productivity growth is associated with higher nitrogen balance.

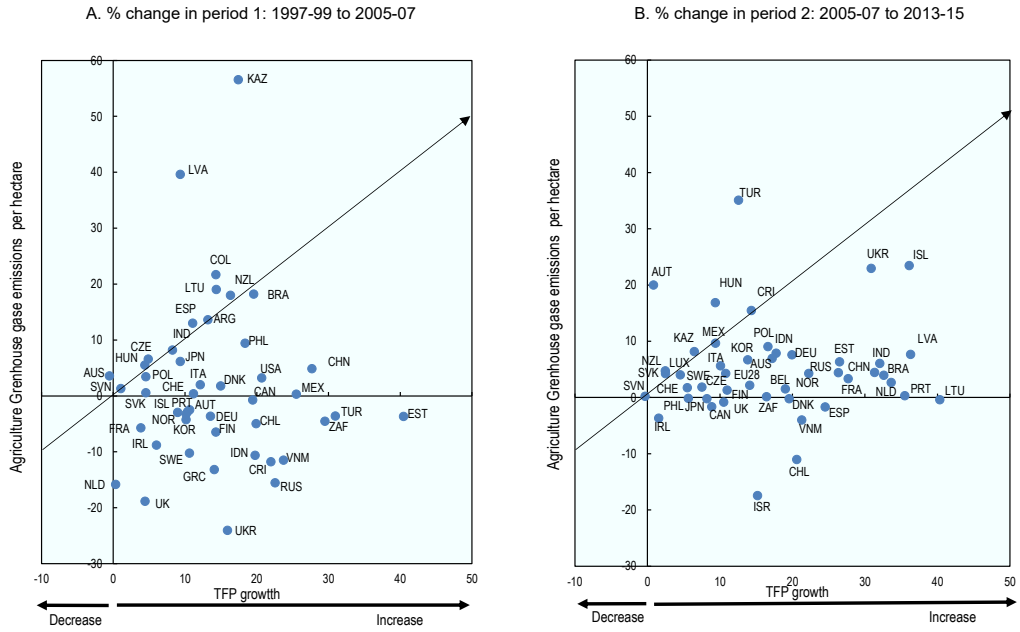
For the first period prior to 2005-07, many EU countries are in the absolute decoupling quadrant (including **Austria**, **Denmark**, **Finland**, **France**, **Germany**, **Greece**, **Ireland**, **Netherlands**, **Portugal**, **Slovenia**, **Sweden** and the group of **European Union** countries[13]) with average increase of TFP of around 10% in the period and decreases of nitrogen balances of similar magnitude. Other countries in this quadrant include **Switzerland**, **Korea**, **Turkey**, **Ukraine**, **Russian Federation**, **Viet Nam** and **Costa Rica**. North

American countries experienced relatively higher increases in TFP beyond 18%, but minor reductions in nitrogen balances. In eastern EU countries like **Latvia**, **Czech Republic**, **Slovak Republic**, **Poland** and **Lithuania**, and in emerging economies like **China** and **Brazil**, productivity growth was coupled with larger increases in nitrogen surpluses,[14] even if they start from different nitrogen balance levels.

For period 2, after 2005-07, most EU countries remain again in the absolute decoupled quadrant. **Brazil** and **China** continue experiencing large TFP growth rates above 30%, but, unlike in period 1, they show small reductions in the nitrogen balance. **Australia** and **New Zealand** experienced increases in both TFP and nitrogen balances.

Figure 1.10 plots the long-term performance of countries with respect to TFP and GHG emissions per hectare in the same two periods. In period 1 (1997-99 to 2005-07) there is a weak negative correlation and an equal number of countries in the coupled and decoupled quadrants. In period 2, the correlation becomes positive and most of the countries are in the coupled quadrant, that is, their increase in productivity takes place while increasing emissions per hectare. This is consistent with a general trend to increasing the agricultural GHG emissions in OECD countries (OECD, 2019[24]).

Figure 1.10. Total Factor Productivity and GHG emissions per hectare



Note: Data are not available on TFP for Belgium and Luxembourg, on GHG emissions for Israel and the European Union (EU28) for period 1.
Source: USDA Economic Research Service, Agricultural Productivity database; UNFCCC database; FAO database and national data.

StatLink https://doi.org/10.1787/888934143337

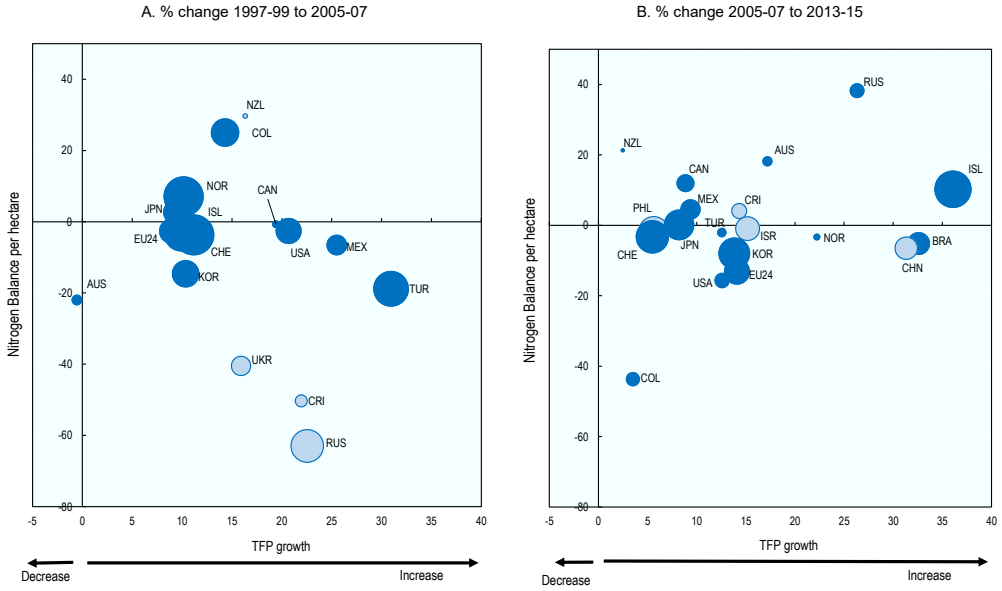
In the first period (pre-2005-07), a majority of **EU countries** stay in the right-low quadrant of environmental absolute decoupling, that is, increase in TFP and reduction in GHG emissions per hectare. However there are ten EU countries that increased their emissions in that period. Among American countries, only **Canada**, **Chile** and **Costa Rica** are in the decoupling quadrant, while **Argentina**, **Brazil**, **Colombia**, **Mexico** and the **United States** increased their TFP at the expense of raising GHG emissions per hectare. Other countries in the decoupled quadrant include **Korea**, **Turkey**, **Indonesia**, the **Russian Federation**, **Ukraine**, **Viet Nam** and **South Africa**.

In the second period (post-2005-07), less than one-third of the countries reduce their GHG emissions per hectare, being able to decouple its growth on productivity from the pressures on additional emissions. Among these countries, two have reduced these emissions by more than 10%: **Israel** and **Chile**.

Reforms in support in the past may have contributed to productivity growth that is more decoupled from environmental pressures

There are many factors that have an incidence on sustainability (OECD, 2019[24]) and productivity outcomes and, therefore, the performance of these indicators and their relationship is not only attributable to policy developments. However, there seems to be a higher degree of decoupling between productivity and nitrogen balances in period 1 compared to period 2, and, to a lesser extent, between TFP and GHG emissions. This is revealed by the negative relationship between TFP growth and growth in these agri-environmental indicators. Period 1 coincides in time with more active policy reforms in OECD countries towards less distorting support than in period 2.

Figure 1.11. Total Factor Productivity, N balance per hectare and share of distorting support



Note: Shares of potentially most distorting support in gross farm receipt is represented by bubbles. The size of each bubble is proportional to the magnitude of the change in the share; while colour indicates the direction of change – dark blue for a decreasing share and light blue for an increasing share.
Countries exhibiting negative NB or PSE are excluded from the figure.
EU24 refers to all countries in the European Union except for Estonia, Hungary, Croatia and UK for which indicators of Nitrogen balances series are incomplete for the period.
Source: USDA Economic Research Service, Agricultural Productivity database; OECD statistical database; FAO database and national data.

StatLink https://doi.org/10.1787/888934143356

This relationship between most distorting support and these two sustainability indicators can also be visualised by plotting bubbles whose size represent the change in the share of distorting support against TFP and nitrogen balances (where dark blue bubbles indicate a decline in support, while light blue bubbles indicate an increase in Figure 1.11). The dark blue bubbles, indicating reduction in most distorting support, are bigger in period 1 than in period 2. The reform towards less distorting support could be a factor of this better performance in period 1. In period 1, despite the reduction of distorting support, high support countries like **Norway** and **Japan** do not reduce N balances. On the other hand, in low support countries

such as **Australia** or **New Zealand** further reductions of already low levels of distorting support do not show correlation with productivity and N balance performance. In several emerging and developing economies the share of distorting support in gross farm receipts has increased as reflected by bubbles in light blue. In these countries the total level of support transfers has increased significantly and this may create a differentiated relationship with these two indicators of environmental performance.

These results suggest that reducing most distorting forms of support may not only have improved the environmental and the productivity performance of agriculture (OECD, 2019[23]), but also helped to decouple productivity growth from increasing use of nitrogen and GHG emissions.

The profile of agricultural support across countries

This section analyses the current profile of agricultural support policies across different countries beyond the broad developments in support. The status of current policies and the scope of achieved reforms differ significantly across countries, particularly when accounting for the details on how support is provided. The analysis is based on additional OECD indicators of agricultural policy support that serve to characterise the diversity of support measures applied (Annex 1.B).

The way in which support is provided to producers matters. Although common across countries, market price support measures are just a subset of policies used to support farmers. Governments can implement a range of other measures that includes subsidies to reduce farmers' input costs, and payments to farmers that can be provided on the basis of: farm output, area, animal numbers or farm income. Payments can also be provided with conditions in terms of specific production practices and input uses, pursuing environmental outcomes or other societal objectives. Other government policies focus on the provision of general services and public goods for the whole sector and the economy.

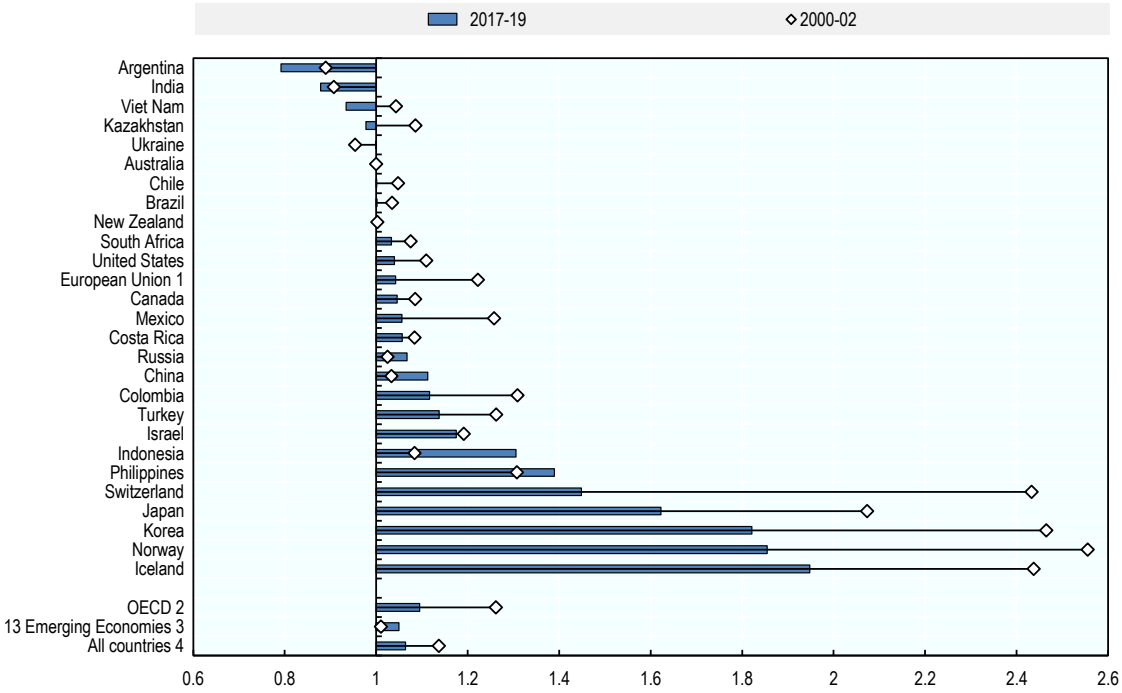
Different forms of support have different impacts on production, income, trade, farm practices, nutrient balances, emissions and many other outcomes that contribute to productivity, sustainability and resilience objectives. The most distorting forms of support – market price support, payments based on output and payments based on unconstrained variable inputs – are generally found to have a negative impact on farm technical efficiency and productivity (DeBoe, 2020[21]). They are also found to generally produce negative environmental outcomes (Henderson and Lankoski, 2019[22]). Negative environmental impacts of coupled support are particularly a concern for high intensity agricultural systems where existing high input use combined with policy signals to further intensify are more likely to result in negative environmental pressures (OECD, 2019[23]). Payments that are decoupled from production allow price signals to reach farmers and keep efficiency incentives; they also do not generally affect incentives at the intensive or extensive margin, although they might affect incentives at the entry-exit margin (Ibid.) and also impact production and trade through risk related effects.

Domestic prices not always aligned with international prices

The scope of agricultural policy reform towards policies that enhance productivity and sustainability outcomes is reflected by the extent to which prices received by producers are aligned with those prevailing on world markets. The Nominal Protection Coefficient (NPC) in Figure 1.12 is a ratio that compares effective prices received by producers – including per unit output payments – with world market prices. Across all OECD countries, producer prices have become more closely aligned with world markets, from an average of 1.26 in 2000-02 to 1.09 in 2017-19. In some emerging economies, like **South Africa**, **Brazil**, **Colombia** and **Costa Rica**, domestic prices have also tended to approach world market levels. However, in the majority of emerging and developing economies the gap has tended to widen over the same period, both in countries where effective producer prices are above world market prices (NPC larger than 1), and

in those with prices below them (NPC below 1). The largest increases took place in **China**, the **Russian Federation**, **Indonesia** and the **Philippines**.

Figure 1.12. Producer Nominal Protection Coefficient by country, 2000-02 and 2017-19



Notes: Countries are ranked according to 2017-19 levels.

1. EU15 for 2000-02 and EU28 for 2017-19.

2. The OECD total does not include the non-OECD EU Member States. The Czech Republic, Estonia, Hungary, Poland, the Slovak Republic and Slovenia are included in the OECD total for both periods and in the European Union for 2017-19. Latvia and Lithuania are included in the OECD and in the European Union only for 2017-19.

3. The 13 Emerging and developing Economies include Argentina, Brazil, China, Colombia, Costa Rica, India, Indonesia, Kazakhstan, the Philippines, Russian Federation, South Africa, Ukraine and Viet Nam.

4. The All countries total includes all OECD countries, non-OECD EU Member States, and the Emerging Economies.

Source: OECD (2020), "Producer and Consumer Support Estimates", OECD Agriculture statistics (database), http://dx.doi.org/10.1787/agr-pcse-data-en.

StatLink https://doi.org/10.1787/888934143375

Despite the general reduction in the nominal protection coefficients in all OECD countries, large differences persist in the degree of price protection to producers across countries. Effective prices received by producers are very closely aligned with world prices in **Australia**, **Chile**, **Brazil** and **New Zealand**. Effective producer prices are less than 7% *above* world market prices in **South Africa**, the **United States**, the **European Union**, **Canada**, **Mexico**, **Costa Rica** and the **Russian Federation**. Effective prices are less than 7% *below* world market prices in **Ukraine**, **Kazakhstan** and **Viet Nam**.

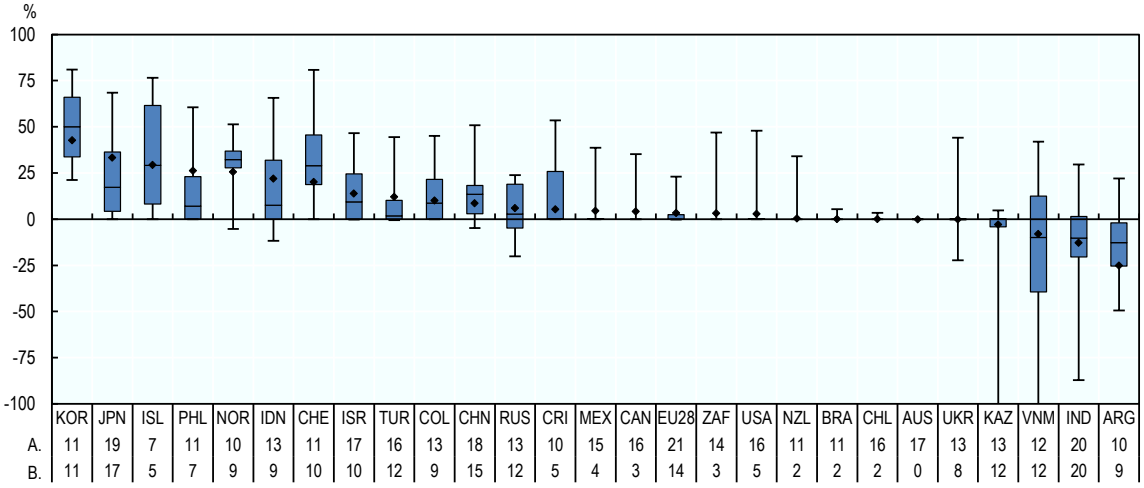
The differences between effective producer prices and world prices are larger in all other countries: between 10% and 20% larger in **China**, **Colombia**, **Turkey** and **Israel**, and between 30% and 50% in **Indonesia**, the **Philippines** and **Switzerland**. Very large gaps between effective producer prices, larger than 50% and up to 95%, prevail in **Japan**, **Korea**, **Norway** and **Iceland**. In two emerging economies effective producer prices are more than 10% below world market prices: 12.2% lower in **India** and 19.8 % lower in **Argentina**.

Market price support rates differ also across commodities, creating additional distortions

Because market price support (MPS) is the main component of producer support, for most countries and commodities producers' prices are often higher than world market prices. But there is a wide range of levels of price support for different commodities in different countries as measured by the share of MPS in gross farm receipts. The distribution of these levels of price support across different commodities in each country are represented in Figure 1.13. This diversity of price support across commodities have additional implications for the allocation of resources among agricultural products.

Figure 1.13. Relative magnitude of product-specific market price support by country, 2017-19

Simple average of MPS as a percentage of gross farm receipts



Notes: A. Number of MPS commodities. B. Number of MPS commodities with non-zero MPS values.
The ends of the whiskers represent the minimum and maximum values across commodities, while the boxes indicate ranges between the first and the third quartiles with the horizontal line inside indicating the median. Diamonds represent mean values for total agriculture.
Minimum values for Kazakhstan and Viet Nam are -107% and -116%, respectively.
Source: OECD (2020), "Producer and Consumer Support Estimates", OECD Agriculture statistics (database), http://dx.doi.org/10.1787/agr-pcse-data-en.

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There are eleven countries with a relatively low average share of market price support in gross farm receipts in 2017-19, equal to or lower than 5%: **Costa Rica**, **Mexico**, **Canada**, the **European Union**, **South Africa**, the **United States**, **New Zealand, Brazil**, **Chile**, **Australia** and **Ukraine**. Out of these countries only **Brazil**, **Chile** and **Australia** have levels of market price support below 5% for all commodities. All other countries with low average market price support have at least one commodity with price support above 20%. Most of the countries with low average price support have most of their commodities with zero price support, but the **European Union** and **Ukraine** have more than two-thirds of the commodities with positive price support.

Israel, **Turkey**, **Colombia**, **China** and the **Russian Federation** have in 2017-19 average shares of market price support on gross farm receipts between 6% and 15%. In **Turkey**, high levels of market price support are concentrated in three commodities – sunflower, beef and potatoes. In the rest of these countries, the range of MPS rates is large across commodities and high support is less concentrated in few commodities.

Seven countries have high average levels of market price support, above 20% of gross farm receipts, but very different distribution across commodities. In one extreme, price support levels in **Norway** have similar values across commodities with a distribution concentrated around the median value. In the other extreme, there are high average price support countries in which few main commodities have much larger rates of

price support than the average creating larger price distortions in the national markets. Domestic prices of rice, milk, pig meat and some fruits and vegetables in **Japan**, and of rice and sugar in the **Philippines** were more than 40% higher than in world markets. This means that farm revenues for these commodities in these countries were more than 67% higher than what they would have been if they were valued at world market prices. Finally, in all other countries with levels of market price support above 20% − **Korea**, **Iceland**, **Indonesia** and **Switzerland** − the range of market price support rates is large across different commodities and high support is less concentrated in few commodities.

Some commodities have prices below world market prices (negative MPS) in **Norway** (sheep meat due to higher costs of feed), **Indonesia** (palm oil and milk), **China** (eggs), the **Russian Federation** (wheat, barley, oats and sunflower) and **Ukraine** (oats, sunflower and milk), creating distortions that are hidden in positive averages for market price support in these countries. Average market price support is negative in **Kazakhstan**, **Viet Nam**, **India** and **Argentina**. In **Argentina**, export taxes depress domestic prices across several commodities, but negative price support is concentrated in soybeans with a share of more than 50% of gross farm receipts. Negative support is also mostly concentrated in only two commodities - rice and sunflower - in **Kazakhstan**.

Most of the cost of support policies are paid by consumers through higher prices

Market price support policies directly affect consumers of agricultural commodities, including food processors, livestock producers and final consumers. In most countries covered in this report, domestic prices are higher than world market prices, which increases the cost for consumers. The percentage Consumer Support Estimate (%CSE) expresses the monetary value of the transfers to consumers (both through prices and through food assistance programmes) as a percentage of consumption expenditure (measured at farm gate). When prices are higher than world market prices, this additional cost for consumers contribute negatively to %CSE, indicating an implicit tax to consumers.

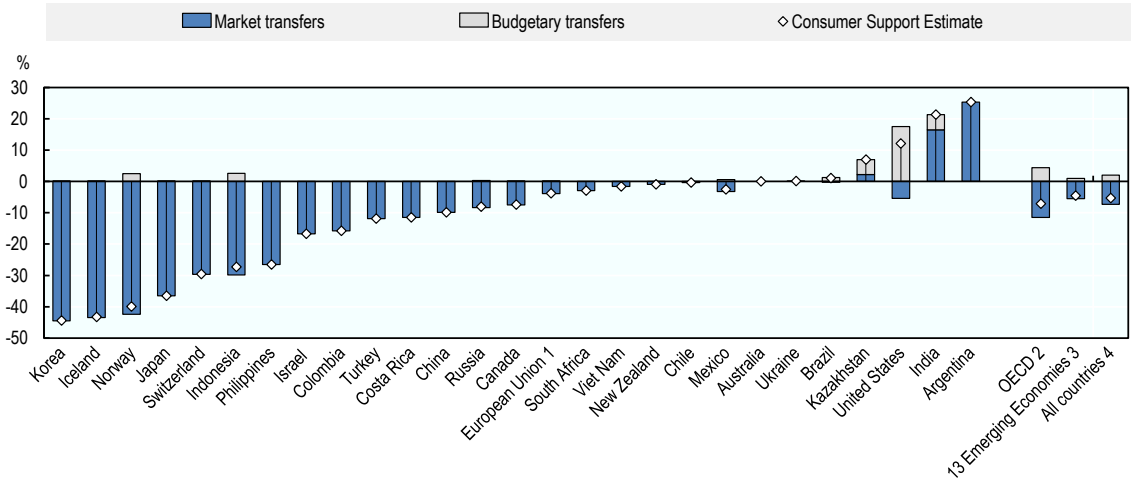
Price support creates significant distortions to markets and reduces welfare. High agricultural prices burden poor consumers relatively more than rich ones, because food accounts for a greater share of their overall expenditures. Additionally, small producers in emerging and developing economies are often net buyers of agricultural products and, as a result, also bear part of these costs. Some countries, including the **United States**, **Brazil**, **Mexico**, **Indonesia** and **Norway**, provide targeted food assistance through budgetary transfers. This assistance may reduce negative impacts on poor consumers. Some food assistance programmes are focused on specific products (staples and milk in **Mexico**, rice and eggs in **Indonesia**) while others allow consumers buy a diversity of food products (the *Supplemental Nutrition Assistance Program* in the **United States**).

Finally, market price support also hinders the competitiveness of the downstream food industry. Livestock producers have to pay higher prices for their feed, and food processing industries higher prices for their inputs.

In most countries, consumers are harmed by price support policies as reflected in negative values in %CSE (Figure 1.14). In 2017-19, the level of this implicit tax ranges from zero in **Australia** to 40% or more in **Norway**, **Iceland** and **Korea**. The increased market price support transfers in most emerging and developing economies have increased the burden on their consumers when %CSE is negative. When %CSE is positive, as in **Kazakhstan**, **India** and **Argentina**, these transfers benefit consumers. The only OECD country with a positive %CSE is the **United States** where the budgetary transfers through the food assistance programmes are relatively high, while costs to consumers from market price support policies are relatively low.

Figure 1.14. Composition of the Consumer Support Estimate by country, 2017-19

Percentage of consumption expenditure at farm gate



Notes: Countries are ranked according to percentage CSE levels. A negative percentage CSE is an implicit tax on consumption.
1. EU28.
2. The OECD total does not include the non-OECD EU Member States.
3. The 13 Emerging Economies include Argentina, Brazil, China, Colombia, Costa Rica, India, Indonesia, Kazakhstan, the Philippines, Russian Federation, South Africa, Ukraine and Viet Nam.
4. The All countries total includes all OECD countries, non-OECD EU Member States, and the Emerging Economies.
Source: OECD (2020), "Producer and Consumer Support Estimates", OECD Agriculture statistics (database), http://dx.doi.org/10.1787/agr-pcse-data-en.

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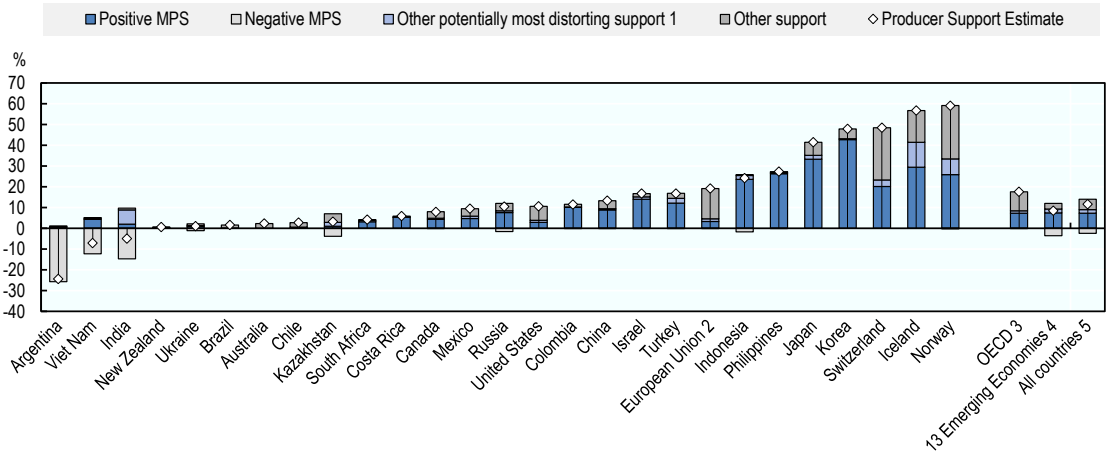
Despite reforms in some countries, potentially most distorting measures predominate

In addition to market price support, payments based on output and payments based on variable inputs without constraints on its use are also potentially most production and trade distorting, and are generally found to have a negative impact on productivity and to produce negative environmental outcomes (OECD, 2019[23]). Support provided through these potentially most distorting forms represents more than half of all support measures in all countries with only five exceptions. In **Brazil**, **Australia** and **Chile** most distorting measures are less than a fourth of all support, and in **Switzerland**, the **European Union** and the **United States** they represent less than a half (Figure 1.15)

In all countries, market price support makes up the largest share of potentially most distorting support. The countries that provide high levels of support through other potentially most distorting support measures are also heavy users of market price support. In some of these countries, payments based on output are the second category of potentially most distorting support – up to 12.0% of gross farm receipts in **Iceland**, 7.6% in **Norway**, 3.1% in **Switzerland** and 2.3% in **Turkey**. In **India**, the share of other potentially most distorting support in gross farm receipts is 7.0%, mostly payments based on variable inputs without constraints.

Figure 1.15. Potentially most distorting transfers and other support by country, 2017-19

Percentage of gross farm receipts



Notes: Countries are ranked according to the %PSE levels.
1. Support based on output payments and on the unconstrained use of variable inputs.
2. EU28.
3. The OECD total does not include the non-OECD EU Member States.
4. The 13 Emerging Economies include Argentina, Brazil, China, Colombia, Costa Rica, India, Indonesia, Kazakhstan, the Philippines, Russian Federation, South Africa, Ukraine and Viet Nam.
5. The All countries total includes all OECD countries, non-OECD EU Member States, and the Emerging Economies.
Source: OECD (2020), "Producer and Consumer Support Estimates", OECD Agriculture statistics (database), http://dx.doi.org/10.1787/agr-pcse-data-en.

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Support to variable inputs without constraints is potentially distorting and significant in selected countries

Unlike market price support, the cost of payments, including those based on inputs, burdens taxpayers rather than consumers. Just like market price support, however, payments based on variable inputs without appropriate constraints are not well targeted. For instance, general fertiliser subsidies reduce the costs of fertilisers regardless of the individual needs of each plot, increase the risk of over- or misuse, and may aggravate the potential harmful consequences for human health and the environment. Support to fixed capital formation in the form of grants or preferential loans for investment on farm are potentially less distorting and less likely to increase pressures on sustainability.

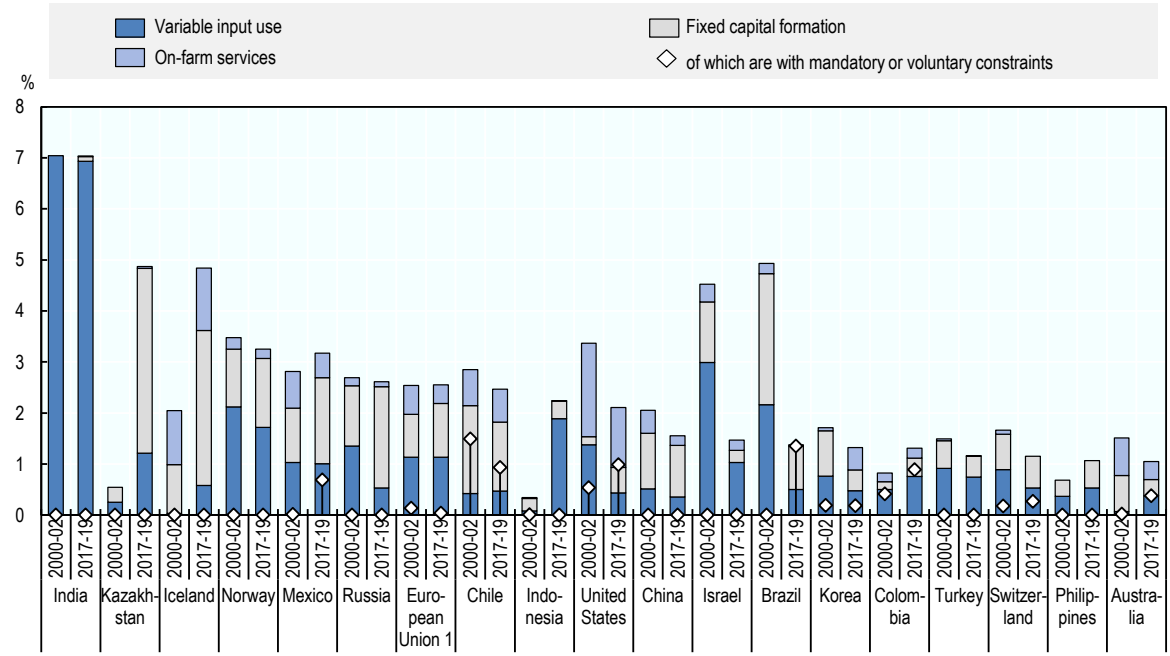
In most countries, support based on input use is mainly provided without constraints that could potentially ensure that variable inputs are not used in an unsustainable manner. **India** has the largest rate of support based on inputs, worth 7% of gross farm receipts in 2017-19 (Figure 1.16). Almost all of this support is provided for variable inputs such as fertilisers and without constraints on their use. In **Indonesia** and the **Philippines**, most of input support goes to variable inputs and services rather than fixed capital, and they have both significantly increased its input support in the last two decades. **Kazakhstan** and **Iceland** have more doubled their rates of support to inputs, but most of it is based on fixed capital formation (that is, investments on the farm). **Israel** and **Brazil** have more than halved their rates of support based on input use, with fewer resources dedicated to preferential credit in recent years in **Brazil**.

But there are countries that impose constraints on a significant share of their payments based variable inputs. **Brazil** provides all its input support – including support to investment loans – with constraints that are adjusted for local environmental sustainability. In **Colombia**, most input support is also subject to constraints on how inputs are used, while in **Chile**, **Mexico** and **Australia**, between one-third and half of

the payments based on inputs are subject to such constraints. In the **United States**, mandatory constraints apply to all crop insurance payments.

Figure 1.16. Use and composition of support based on input use in selected countries, 2000-02 and 2017-19

Percentage of gross farm receipts



Notes: Figure presents countries having share of payments based on input use above 1% for 2017-19 period. Countries are ranked according to the total share of payments for 2017-19.
1. EU15 for 2000-02 and EU28 for 2017-19.
Source: OECD (2020), "Producer and Consumer Support Estimates", OECD Agriculture statistics (database), http://dx.doi.org/10.1787/agr-pcse-data-en.

StatLink https://doi.org/10.1787/888934143451

Support has shifted to less distorting forms, but rarely to the provision of sectoral public goods and services

Particularly during the 1990s and the 2000s, several OECD countries engaged in policy reforms that moved support away from market price support into payments that were less coupled to production, in particular, payments based on area, animal numbers, farm receipts and farm incomes, as well as payments based on other criteria not linked to agricultural commodities. In more recent years some emerging economies have also moved in this direction with area payments in **China** and income support in **India**. In general, these payments are less production and trade distorting. However, some of these payments are based on current criteria with a closer link to production. Payments based on current area can provide incentives to maintain marginal land in production and their impact on sustainability depends on contextual factors such as whether land would otherwise be simply abandoned, or converted to potentially more environmentally-friendly uses (OECD, 2019[23]; Henderson and Lankoski, 2019[22]). Payments based on current area or animal numbers mostly affect environmental pressures via the extensive and entry-exit margins and they would therefore have environmentally positive (negative) impacts if they support shifts towards land uses with relatively lower (higher) intensity (Ibid.).

Other less distorting payments are not based on current farming parameters, most often based on historical criteria, and may even not require production. Some are based on non-commodity criteria, such as environmental outcomes, regardless of any agricultural production. These "more decoupled" payments allow for price signals to reach producers, who then have the freedom to make production decisions in light of market signals and their own resource situation. Decoupled payments generally do not affect incentives at the intensive or extensive margin, but they may affect incentives at the entry-exit margin (OECD, 2019[23]). Specifically, they could supplement incomes and thereby improve the viability of agricultural enterprises, dampening incentives to other land uses.

Finally, some support programmes do not provide payments or transfers to individual farmers, but provide services and public goods such as research, innovation, health inspection, infrastructure and marketing. These services are valuable for the sector as a whole, often improving its competitiveness and capacity to respond to market signals and societal demands. However they are in general smaller than support to individual producers.

There are significant decoupled payments to producers and input constraints in OECD countries

Because of policy reform in several members, less distorting payments account for an increasing share of producer support in OECD countries, from an average of 9.7% in 1986-88, to 26.8% in 2002-02 and 42.9% in 2017-19. In 2017-19, less distorting payments accounted for a large share of producer support in the **European Union** (69%), **Australia** (54%), **Switzerland** (47%), the **United States** (46%), **Norway** (41%) and **Canada** (34%). This type of payments are rare in emerging and developing economies, with the exception of **China**, which has increased these payments from 9% of its PSE in 2000-02 to 21% in 2017-19.

However, since 2002-02, the level of less distorting support as a share of gross farm receipts has increased only in **Switzerland**, **Japan**, **Korea** and **China** (Figure 1.17). In some countries, including the **European Union** and **Norway**, these payments have increasingly been made on historical basis or without the need of recipient farmers to produce, decoupling them from current production decisions. In the **European Union**, 60% of direct payments are based on non-current criteria without production requirements, including the Basic Payment Scheme.

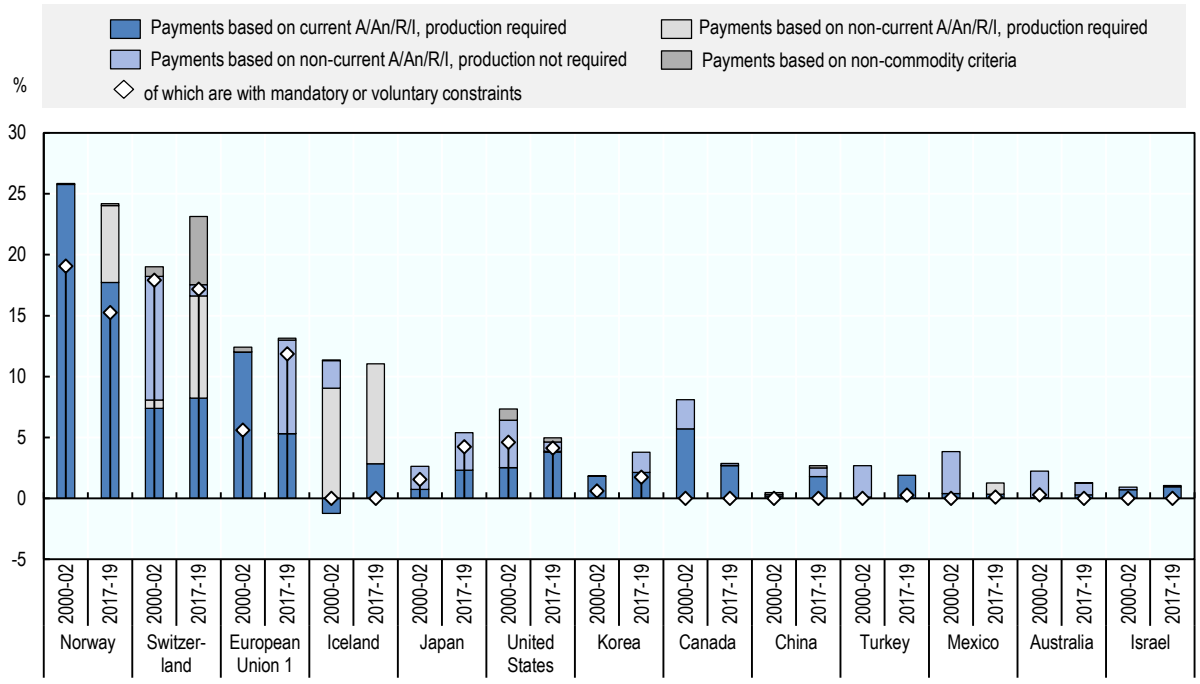
In some countries, the opposite has occurred, with support moving out of decoupled payments. In **Switzerland** and **Mexico**, some support has shifted from not being based on current criteria in 2000-02, to requiring production in 2017-19. In the **United States** a larger share of less distorting support required production in 2017-19 than in 2000-02.

Payments based on non-commodity criteria are significant only in two countries, the **United States** and **Switzerland**, and have increased in the latter in the last two decades. These payments to farmers are in principle directly targeted to environmental or landscape outputs that are not necessarily linked to the production of any agricultural commodity.

In some countries, payments are tied to specific production practices that are intended to improve the environmental performance of the farm or the welfare of animals. This may include constraints in the use of inputs, treatment of animals or agri-environmental constraints. These constraints could be compulsory or part of programmes to which farmers can opt-in voluntarily, for instance committing to reduce nutrient applications or creating buffer strips. Only six countries apply these constraints to payments based on area, animal numbers, receipts and income: **Norway**, **Switzerland**, the **European Union**, **Japan**, the **United States** and **Korea** (Figure 1.17). In the **European Union**, most of these payments are conditional on the adoption of mandatory production practices and the 28 Member States have to spend a minimum share of Pillar 2 funds on voluntary climate and environmental measures. In **Norway**, **Switzerland**, **Japan** and the **United States**, more than two-thirds of these payments are subject to constraints.

Figure 1.17. Use and composition of support based on area, animal numbers, receipts and income and payments based on non-commodity criteria in selected countries, 2000-02 and 2017-19

Percentage of gross farm receipts



Notes: Figure presents countries having share of payments based on area, animal numbers, farm receipts or farm income and on non-commodity criteria above 1% for 2017-19 period. Countries are ranked according to the total share of payments for 2017-19.
1. EU15 for 2000-02 and EU28 for 2017-19.
Source: OECD (2020), "Producer and Consumer Support Estimates", OECD Agriculture statistics (database), http://dx.doi.org/10.1787/agr-pcse-data-en.

StatLink https://doi.org/10.1787/888934143470

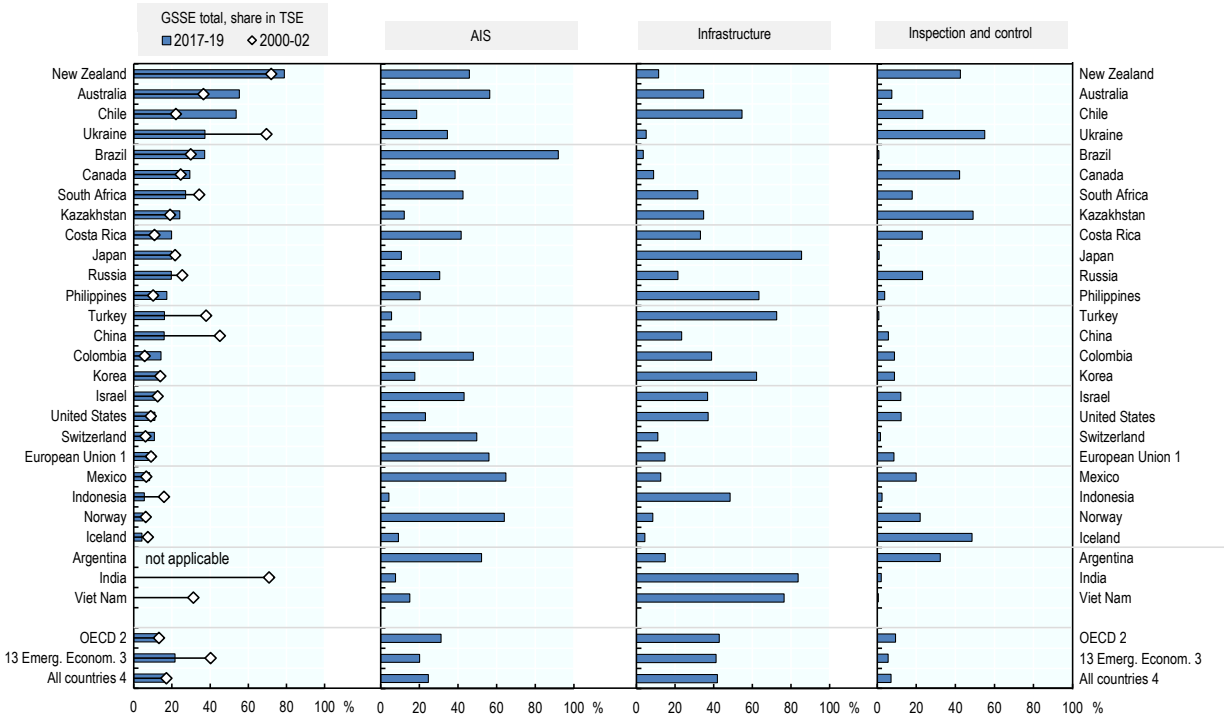
The share of expenditures on general services and public goods on total support has not increased

In addition to support to individual producers, governments also support agriculture through the provision of public goods and services that create enabling conditions for the agricultural sector and improve its competitiveness. Investments in innovation, in infrastructure, including transportation and the provision of information and communication technologies, and in biosecurity can contribute to the productivity and resilience of the sector. Public policies have a role to facilitate these investments. This support is measured by the General Services Support Estimate (GSSE), including expenditures on innovation systems, inspection services and development and maintenance of infrastructure, but also on marketing and promotion and public stockholding. Despite its potential to contribute to sustainable productivity growth, on average it is much lower than support provided directly to producers individually. Repurposing agricultural support could mean shifting most distorting forms of taxpayer-financed producer support to payments targeted on specific non-commodity outputs or general services and public goods, or even policy areas that are not specific to agriculture, such as the wider climate agenda. Some of the support to general services as measured by the GSSE may contain distorting elements, however. For example, government expenditures may indirectly support domestic producers by financing stockholding beyond market needs, by promoting sales on domestic and foreign markets, and by expanding irrigation infrastructure in ways that may be detrimental to the environment. For some of these investments, a detailed analysis is required

to measure their wider costs and benefits, and avoid unintended consequences for the economic or environmental sustainability of the sector.

The ratio of the GSSE relative to the absolute value of Total Support Estimate (TSE) is only 17% on average in OECD countries in 2017-19, a share that has not increased since 2000-02. Support to general services has tripled in nominal value since 2000-02 in emerging and developing economies, but its share in total support has fallen from 40% to 21% in 2017-19 due to a much larger increase in producer support (Figure 1.18). Only in **New Zealand**, **Australia**, **Chile**, **Ukraine** and **Brazil** does the GSSE represent more than 30% of the TSE. Some countries have increased the share of GSSE in total support, however: **New Zealand**, **Australia**, **Chile**, **Brazil**, **Canada**, **Kazakhstan**, the **Philippines**, **Colombia**, the **United States** and **Switzerland**.

Figure 1.18. General Services Support Estimate: Share in TSE and composition



Notes: AIS = Agricultural Innovation System. Countries are ranked according to the share of total GSSE in TSE.
1. EU15 for 2000-02 and EU28 for 2017-19.
2. The OECD total does not include the non-OECD EU Member States.
3. The 13 Emerging Economies include Argentina, Brazil, China, Colombia, Costa Rica, India, Indonesia, Kazakhstan, the Philippines, Russian Federation, South Africa, Ukraine and Viet Nam.
4. The All countries total includes all OECD countries, non-OECD EU Member States, and the Emerging Economies.
Source: OECD (2020), "Producer and Consumer Support Estimates", OECD Agriculture statistics (database), http://dx.doi.org/10.1787/agr-pcse-data-en.

StatLink https://doi.org/10.1787/888934143489

Among the different services provided to the sector, countries tend to prioritise the development and maintenance of infrastructure which represents 42% of expenditures on average, with very similar averages across OECD and emerging and developing economies, but with large differences across individual countries. Infrastructure represents more than 70% of GSSE in **Japan**, **India**, **Viet Nam** and **Turkey**, and more than half of expenditures on general services is on infrastructure in **Korea**, the **Philippines** and **Chile**.

The second priority across countries is expenditures on agricultural innovation systems (AIS), accounting on average for 31% of the GSSE in OECD countries and for 25% in emerging and developing economies. The knowledge created, shared and adopted through the AIS has the greatest potential for improving the capacity of the sector to grow sustainably and increase its resilience by adapting to shocks and the evolving market environment. **Brazil** dedicates 92% of its GSSE to innovation, and in **Mexico**, **Norway**, **Australia**, the **European Union** and **Argentina**, AIS represents more than half of expenditures on general services.

Expenditures for inspection and control systems represent a third important group of general services provided to the sector. While on average these systems receive a much smaller share of the GSSE than both infrastructure and innovation systems, inspection and control can be an essential service to increase competiveness, ensuring the safety of the production, protecting the environment and ensuring the consistency of the international agro-food trading system. In **Ukraine**, **Kazakhstan**, **New Zealand**, **Iceland** and **Canada**, inspection and control represent 40% or more of all expenditures for general services.

Box 1.5. Food systems and the challenge of coherent policies

The global food system is expected to deliver on a formidable triple challenge. The first is to deliver safe and nutritious food to consumers, in sufficient quantities and at prices they can afford. The second is to use natural resources sustainably while reducing greenhouse gas emissions and avoiding the destruction of valuable ecosystems and biodiversity. The third is to provide a livelihood to farmers and others in the food chain, and promote rural development.

The fact that these goals are a long way from being attained, has led to charges of “system failure”. Yet the scale of past achievements is as remarkable as what remains to be done.

- The world population has grown from 3 billion in 1960 to about 7.8 billion today and there is more food available per capita than generations ago. Yet globally there are over 800 million people undernourished, with an even greater number either overweight or obese, and both aspects (plus wider forms of malnutrition) are associated with a rising public health burden.
- The tripling of production since 1960 was achieved primarily through improved yields and productivity growth, with little overall change in agricultural area. Had those productivity gains not been realised, the consequences for human development and for the environment would have been devastating. Nevertheless, production growth has imposed stresses on soils and water resources. The agricultural sector also accounts for 11% of GHG emissions, with that share doubling once land use change is factored in.
- The process of technical and structural change has ultimately benefited many farmers who have been successfully absorbed in faster growing parts of the economy, while consumers have benefited from lower food prices. However, it has put pressure on the incomes of farmers who are not competitive, and in some countries led to distress migration to urban areas.

The challenges for the global food system are a crucial aspect of the broader challenges facing humanity as a whole, with implications for nearly all of the 17 UN Sustainable Development Goals (SDGs).

Addressing these challenges will require a perspective on the food system as a whole, i.e. “all the elements (environment, people, inputs, processes, infrastructures, institutions, etc.) and activities that relate to the production, processing, distribution, preparation and consumption of food, and the outputs of these activities, including socio-economic and environmental outcomes.” (HLPE, 2017[25]).

A critical aspect of national food systems is that different aspects of the triple challenge interact, sometimes in ways that create policy synergies, but also in ways that involve difficult trade-offs. For example, dietary guidelines in several countries suggest people should adopt diets with a limit on

consumption of red meat. Insofar as those guidelines reduce demand for ruminant meat there could be a benefit in terms of lower emissions (a synergy). However, policies that lead to lower livestock production could reduce protein availability in regions where it remains low (a trade-off). Similarly, policies to raise farm productivity could generate income growth in agriculture and beyond and benefit consumers through lower prices, but this will raise trade-offs with respect to producers who are not able to raise their productivity. As another example, paying for public goods could benefit the environment and simultaneously support farm incomes, but pricing natural capital according to its social cost could lower incomes, at least in the short term. In some cases, there are complex synergies or trade-offs across all three dimensions. A single-issue perspective on any objective is unlikely to make headway in the face of these interactions, and could lead to unintended side effects.

OECD work on food systems is examining how countries can improve their policies in the face of such complex interactions. In many countries there are wide gaps between policies that would be effective in addressing the "triple challenge" and the policies that are currently in place. Those gaps may arise due to difficulties in identifying and addressing synergies and trade-offs, but they may also reflect issues such as divergences between popular beliefs and scientific evidence, or the relative power of specific interests. Responsibilities over different relevant policy areas may also be fragmented, requiring co-ordination by policymakers. OECD work is accordingly focused on both the substantive requirements for effective and ambitious policies and how policy-making processes can be oriented to ensure coherence in the face of multiple objectives.

Source: OECD (2020[26]).

Assessing support and reforms

OECD Ministers of Agriculture agreed in 2016 on the need for integrated policy approaches that would better enable farmers and the food sector to improve productivity, manage natural resources more sustainably and increase resilience (OECD, 2016[19]). These desired outcomes can be seen as essential pre-requisites for addressing a "triple challenge" confronting the global food system (Box 1.5). They are also reflected as benchmark indicators for assessing the performance of food and agricultural policies and support measures in the OECD Agro-food Productivity-Sustainability-Resilience Policy Framework (OECD, 2020[20]). In order to achieve these outcomes Ministers identified a set of key principles for agricultural policies. These include, among others, that they should be targeted to specific outcomes, tailored to the magnitude of those outcomes, equitable within and across countries, market oriented to support a well-functioning global trading system, and coherent with policies in other areas (OECD, 2016[19]). Together with existing analyses, these principles guide the assessment of policy developments.

Total support to the agricultural sector averaged USD 619 billion (EUR 542 billion) per year during 2017-19, while some countries implicitly taxed their producers. Little of this support is targeted to stated objectives

In 2017-19, the 54 countries covered in this report provided on average a total of USD 708 billion (EUR 620 billion) per year of support to their agricultural sectors. About three-quarters of this support, USD 536 billion (EUR 469 billion) per year, was transferred to individual producers, with more than half of this amount provided via instruments with the greatest tendency to distort markets – principally market price support to producers and subsidies linked to output or the unconstrained use of variable inputs. At the same time, six countries, in particular **Argentina** and **India**, implicitly taxed their agricultural producers by using measures that depressed the domestic prices of some commodities. These implicit taxes amounted to more than USD 89 billion (EUR 78 billion) per year in 2017-19, which when deducted from

the gross positive transfers, resulted in net transfers to agricultural producers of USD 446 billion (EUR 391 billion) and to the sector overall of USD 619 billion (EUR 542 billion) per year. While lowering the level of aggregate support, these implicit taxes also increase overall market distortions.

Market price support (both positive and negative) and most distorting budgetary support are generally found to have negative impacts on productivity and to produce negative environmental outcomes, and therefore a majority of agricultural support is not targeted to governments' desired outcomes. Countries' performance on sectoral productivity and environmental outcomes respond to developments and incentives well beyond agricultural support policies, including technological change. But these final outcomes are influenced – most likely negatively for most of the support – by existing distorting policies.

Budget expenditures in the same period amounted to USD 425 billion (EUR 373 billion) per year, a volume that has increased significantly since the early 2000s, notably in a number of emerging and developing economies but also in several OECD countries. This part of support is particularly important in the context of governments looking for ways to improve the efficiency of public outlays.

Improvements of productivity and sustainability of countries' agricultural sectors have been mixed

World agricultural productivity, as measured by the Total Factor Productivity, has increased at an average annual rate of 1.6% in the last decade. Despite the large differences across countries, all countries have experienced improvements in productivity when measured across two decades, from less than 0.1% to more than 3% per year.

While aggregate agri-environmental indicators show improvements in some elements of the environmental footprint, the performance of the sector varies across countries, regions and periods of time. There are many countries in which productivity improvements have occurred without additional agri-environmental pressures, enabling both lower GHG emissions per hectare and lower nitrogen balances per hectare. However this environmental decoupling was stronger in the decade of the 2000s and has been reduced in the last decade, coinciding with the loss of momentum in agricultural policy reform in OECD countries, as measured by reductions in the most distorting forms of support. This suggests that policy reforms in favour of lower and less distorting support could stimulate improvements in sustainable productivity growth.

More efforts are needed to monitor the environmental performance of agriculture and the environmental impacts of support policies. Governments should invest in improving the agri-environmental performance of farmers and policies, taking advantage of the existing digital technologies that allow the gathering and combining of different information sources and more granular data. In particular, there is scope for governments to expand the use of digital tools to monitor compliance with existing policy measures, to assess and revise regulations, and to improve access to agricultural data. The development of indicators requires co-ordination between researches and policy makers. The linkages between innovation and productivity deserve special attention to design policies that support innovative ways of decoupling productivity growth from additional environmental pressures.

A number of policy approaches are available for helping agriculture to become more productive, sustainable and resilient – but the focus on them remains limited

The policies that are best targeted to increase the productivity of the agricultural sector are those that contribute to improve its capacity to innovate, to respond to changing economic, social and environmental demands and incentives, and to flexibly manage external shocks that test the resilience of the sector. Those policies include no-regret policies and appropriate investments in targeted services and infrastructure for the sector that improve productivity and sustainability, even in the absence of a shock. Services that generate a high-performing agricultural innovation system and a competitive and resilient biosecurity environment contribute to both productivity and sustainability.

Governments' support measures do not sufficiently prioritise public goods and services to the sector, with one-eighth of support going to agricultural innovation systems, inspection and control systems, and rural infrastructure

However, the bulk of the agricultural support measures are not focused on improving the public goods and services that make the sector more productive and responsive to environmental challenges. Support to these general services (GSSE) represents only 17% of net total support (TSE) and it has not been increasing since 2000-02 in most countries. Only five countries spend more than 30% of their respective total support on general services – **New Zealand**, **Australia**, **Chile**, **Ukraine** and **Brazil**. On average across all countries, only 7% of total support is dedicated to sector infrastructure, 4% to investment in agricultural innovation systems and 1% to inspection services.

Innovation is a key driver of agricultural productivity and sustainability, which makes the system more responsive to industry needs, societal demands and environmental pressures. In particular, international co-operation in research allows complementary specialisation across countries and knowledge spill-overs. The competitiveness of the agricultural sector and its resilience to shocks and new challenges also depends on investments in infrastructure, including transportation, and the provision of information and communication technologies, including connectivity infrastructure in rural areas. Public policies have a role to facilitate these investments – particularly those that improve human capital and facilitate farm-level decision-making through access to services, knowledge and information. Investments in biosecurity, animal and plant health that create incentives for producers to prevent and prepare for adverse events are also fundamental for a competitive and resilient sector. Funding of inspection services should respond to national needs, reducing the risk of pest and disease outbreaks without hindering production or trade.

Some general services support may have distorting elements, however. For example, government expenditures financing stockholding beyond market needs or expanding irrigation infrastructure in ways that may be detrimental to the environment can provide incentives for production and exports beyond market signals or sustainability limits. Policies supporting the provision of public goods and services would benefit from cost-benefit analysis including on their unintended environmental consequences.

Reforms of producer support toward less distorting measures lost momentum in the last decade, and targeted measures are still relatively underutilised

In past decades, many OECD countries implemented policy reforms that moved support away from market price support and other most distorting measures towards producer payments that are less coupled to current production decisions. In several OECD countries, payments based on area, animal numbers, receipts or incomes, or payments not linked to the production of agricultural commodities, represent a large share of producer support. These payments are more efficient in transferring income to the owners of land and other production factors, and they reduce the potential for creating market distortions and generating negative environmental impacts. However, in general these programmes are still not directly targeted to specific objectives for the sector or the society as a whole. Only a handful of countries have developed producer support programmes that are not linked to any agricultural production variables, present or historical, and are instead linked to the provision of other non-commodity outputs such as environmental or landscape. Such programmes represent a very small share of total support.

In a number of countries, payments are tied to specific farm practices or associated with mandatory or voluntary agri-environmental and animal welfare constraints. The increasing use of such payments by some countries reflects the growing importance of societal concerns with respect to the environment, animal welfare or the provision of other public goods. The efficiency and effectiveness of these measures requires that they are effectively targeted to the intended outcome and to the investments that prevent misallocation of resources due to market failures. These constraints can reduce some of the negative consequences of these policies on the environment but rarely target the final objective.

Policy interventions are generally more efficient and effective if they are targeted to the specific problem at hand. Governments can significantly improve the targeting of agricultural support to well defined and measurable outcomes. Progress towards targeting has been limited and most of the support provided through budget expenditure is not targeted to clearly identified beneficiaries or outcomes.

In contrast, policies identified as potentially both most distorting and most environmentally harmful provide for the majority of support

Most distorting support has declined only marginally as a share of all support, and has increased in absolute terms

In contrast, the majority of support continues to be provided in forms that are known to have particularly distorting effects on production and international trade. Market price support (of either sign), together with payments based on production quantities or on the unconstrained use of variable inputs such as fertilisers, account for more than half of all transfers to and from the sector, or 70% of transfers to and from individual producers. Differences in price support across commodities within countries, and the co-existence of significant price support in some products with depressed prices for others, create additional distortions in domestic markets.

Such forms of support also have the potential to harm the environmental performance of the sector. Higher effective output prices for producers and lower prices for important yet potentially harmful production inputs can affect production both at the extensive and the intensive margins, thereby potentially increasing greenhouse gas (GHG) emissions, raising the surplus of nutrients and their displacement into water reservoirs and air, and reducing biodiversity in agricultural areas.

Some emerging economies have increased levels of support, particularly most distorting support, to similar levels of those in OECD countries

Across the OECD area, many countries have reduced levels of harmful support in the 1990s and 2000s, but reforms have largely stalled in the more recent past. Looking more broadly, however, several emerging economies, notably **Indonesia**, **China** and, to a lesser extent, the **Philippines** and the **Russian Federation**, have moved in the opposite way and increased support to their agricultural sectors. More recently, however, **China** has made steps to provide some of its support in less distorting ways. On the other hand, several countries, in particular **Argentina** and **India**, apply various forms of export restrictions and, in the case of **India**, domestic marketing regulations, which effectively tax their agricultural producers. Across the 13 emerging and developing economies covered by this report, positive support to the sector in these most distorting forms today accounts for more than 9% of gross farm receipts – compared to 8.5% across the OECD countries, while the implicit taxation from suppressed domestic prices in several emerging and developing economies adds to regional and global distortions.

Growing needs for high-value food and rising demand for public goods, provide opportunities for the agricultural sector, while increasing resource pressures and uncertainties related to climate change create additional challenges

The agro-food sector continues to face great opportunities but also a number of challenges in the coming years and decades. Growing and more affluent populations and changing lifestyles are estimated to result in rising demand, notably for high-quality food products, such as fruits and vegetables, meat and dairy products. At the same time, natural resources in a number of countries are increasingly under pressure, and climate change is projected to result in more frequent and more intense extreme weather events. While the OECD-FAO Agricultural Outlook (OECD/FAO, 2020[9])) projects that the core tendency should be for supply growth to continue to outpace demand growth at the global level over the coming decade, a

wide range of uncertainties imply that both higher and lower real prices are possible (OECD, 2016[27]). Irrespective of the outlook for prices, greater efforts are needed to ensure sustainable productivity growth and resilient food systems, in line with the call made by Agricultural Ministers at their Meeting at the OECD in April 2016 (OECD, 2016[19]). The current low price environment, with little risk of food production being unable to meet demand, provides a window of opportunity for fundamentally improving the sustainability of agricultural production.

Future priorities are to phase out support most harmful to markets and environment, better target income support, and shift the balance of support to investments that improve the productivity, sustainability and resilience of the sector

Much can be gained by reducing market distorting and environmentally harmful support

A large part of public policies continue to target producer prices for outputs or inputs. Given the size of such support and the increasing evidence on negative effects for sustainability, countries should reinvigorate efforts to reduce and eventually phase out such forms of support. Reducing market price support generally does not liberate public resources, but may temporarily create additional demands for budgetary expenditures to compensate farmers for the reduced protection. Where such compensation is needed for a limited period of time, it should be tailored to the actual losses in income. This amount of compensation required would be lower than suggested by the value of transfers implied by price support, because a large share of those transfers "leak" to other beneficiaries, including suppliers of purchased inputs and landowners. Support for variable inputs often aims to compensate farmers for insufficient infrastructure and access to input markets; investments in such infrastructure are generally a more efficient measure for overcoming such deficiencies.

Phasing out market price support and other potentially most distorting forms of support also improves the effectiveness of other policies. Producers protected by high border measures and insulated from market fluctuations are less likely to invest in cost-saving technologies, and structural change tends to be slowed down by such protection. The removal of distorting price signals would also increase the payoff to policies that reinforce the value of economic activities – in particular investments in research and development, and innovation more widely.

While in the 1990s and 2000s significant efforts to reduce distorting support in many countries were reinforced by multilateral pressures, the impetus to adopt more effective policies has largely stalled over the last decade. Nevertheless, a number of major preferential and regional trade agreements have recently come into force or are currently under negotiation. While greater gains can be realised through widespread multilateral reforms, preferential and regional trade agreements offer a way forward for cross-country action to reduce harmful domestic support and market access barriers. Moreover, they can be seen as viable second-best options to, at a minimum, binding applied tariffs and good regulatory practices (OECD, 2019[28]). To maximise that potential, participating countries should avoid protecting sub-sectors that receive high support in order to reduce distortions within domestic markets arising from a widening spread of support levels across commodities.

Recent responses by several countries concerned about the food security of their own populations following the COVID-19 pandemic suggest, however, that ad hoc trade restrictions remain on the trade policy agenda. Export constraints or outright export bans punish domestic producers who provide food as an essential good to the global community, risk undermining trust in the international trading system, and harm net food importing countries.

The efficiency of producer support would be improved by targeting well-defined, quantifiable outcomes of public interest

Payments to land users should increasingly focus on the provision of public goods. A few countries, notably **Switzerland** and the **United States**, are paying farmers for providing specific non-commodity outputs, such as landscape amenities or other goods that respond to societal demands. However, such payments are small in relative terms, representing a little more than 0.3% of public expenditures for the sector, or less than 0.6% of budgetary support to individual producers. Payments for non-commodity outputs are a means to create markets for public goods; while supplied by individual land holders or producer associations, they benefit the society as a whole. Governments therefore represent the demand side, offering specific contracts on the delivery of products which, while generally linked to the use of land, are not coupled with agricultural production. Countries should make increased use of such contracts to increase the supply of values that are in the public interest. As a positive side-effect, such instruments also offer an additional income opportunity for farmers and other land holders. However, when the provision of non-market goods and services requires government action, the payment should ideally target the specific outcome, while paying for the use of a specific practice or technology may be seen as a second best if outcome-based payments are not possible. Tailoring the payments is equally important, but requires additional information on the dimension of the problem and the marginal costs of reducing it. Digital technologies may facilitate the implementation of outcome-based payments and their tailoring, by helping to overcome information asymmetries and gaps, and lower policy-related transaction costs that previously may have been prohibitive for such measures (OECD, 2019[29]).

Reform income support by fully integrating farm households into social support systems

Past decades have seen a rapid expansion of direct income support, which has become less production distorting and hence more efficient in transferring income to farmers compared to other forms of support it replaced. Originally institutionalised to compensate agricultural producers for losses incurred from reduced price protection or lowered coupled payments, these payment have typically become permanent transfers rather than temporary compensation measures. Despite their relatively high transfer efficiency, however, such payments favour land owners and do not address social needs, as larger and wealthier farms benefit more than small and potentially more economically distressed producers. Governments should improve their understanding of the financial situation of farm households, and identify and target the market failures that may lead to persistent low incomes within the agriculture sector. To strengthen the social safety net for agricultural producers, social benefits should be integrated into the general social security system and consider both income and wealth.

Reconsider income support, including when linked to restrictions on environmentally harmful production processes and inputs

A number of countries have implemented policies that link income support to requirements to reduce the negative environmental impact of agricultural production. Linking support to environmental constraints can reduce policy inefficiencies, but such measures remain untargeted as the payments typically do not reach the most distressed beneficiaries, and generally are not targeted to the regions or farms causing environmental harm. Efficiency could therefore be further strengthened by making such cross-compliance a mandatory new baseline for delivering more ambitious public good and environmental outcomes linked to targeted support payments.

Focus risk management policies on measures that improve the sector's resilience to catastrophic risks and improve sector and farm-level preparedness

Public engagement in risk management continues to involve a wide range of insurance and stabilisation schemes, in addition to ad hoc assistance in response to extreme events. Governments should focus their engagement on systemic risks for which private solutions cannot be developed, taking care that public support does not crowd out on-farm or market-based risk management tools. Governments should consider the risk landscape over the long term and prioritise investments that build farmers' capacities to manage current risks, as well as to adapt and transform in response to uncertainty and an evolving risk environment, especially under climate change, while contributing to productivity and sustainability even in the absence of a shock. This includes building farmers' entrepreneurial and risk management skills, and increasing preparedness through investments in research and development, knowledge transfer and innovation, market and weather information, and planning and assessment tools. Importantly, governments should adopt collaborative, participatory approaches to develop risk management policies, to ensure that all farmers are aware of the risks they face and understand their responsibilities for managing them.

The COVID-19 pandemic that has hit economies since the beginning of 2020 has required significant public attention and underscored the importance of policies that enhance the resilience of agriculture and food systems with respect to a wide range of shocks and uncertainties. The extraordinary scale of policy measures to mitigate the impact of COVID-19 on the economies and agro-food systems responds to the systemic nature of the pandemic. Care should be taken to ensure that lessons – such as the effectiveness of different government interventions in facilitating the continued functioning of the food system – are learnt, while specific support responses remain temporary and are rolled back as the situation improves.

Increasingly prioritise policy efforts targeted to the provision of key public services

A number of countries today focus their agricultural policies on providing the environment the sector needs for increasing productivity and sustainability. Other countries should follow their example, by prioritising key services for the sector and payments targeted to specific and quantifiable outcomes in the form of increased productivity, reduced environmental pressures and increased provision of agriculture's public goods.

Public intervention is most important where markets fail to provide sufficient incentives for socially optimal outcomes. This particularly holds for a range of public services for the sector, which private agents tend to undersupply. Innovation through research and development is the backbone for sustainable productivity growth. Although private research has an essential role in the development of marketable technologies, stable and sufficient public funding is also important in areas generally undersupplied by private research, including, among others, basic research, linkages between innovation actors (including internationally) and innovation targeted to non-market outcomes. On average only 6% of the budgetary efforts highlighted above are targeted towards the agricultural innovation system, a share that has fallen over the past decade.

Government expenditures are equally important for providing the essential infrastructure that allows the agro-food sector to work efficiently. This includes both physical and knowledge infrastructure, ranging from rural, national and international transportation systems to digital systems for information and communication. Digital technologies are closely related to the information system, and investments connectivity infrastructure can provide significant synergies if properly linked to private activities.

Bio-security, control and inspection are a third group of key services to the sector. These services are essential for ensuring that agricultural production and trade are safe for human, animal and plant health and for the environment. Bio-security needs depend on the specific conditions within each country, but should always be based on available scientific evidence, both to be effective and to avoid unjustified trade restrictions and trade costs.

Reinvigorating the largely stalled process of policy reforms needs further steps in the direction of shifting support towards the stated objectives and the provision of public goods and services for the sector. Reforming policies for a more productive, sustainable and resilient agro-food sector therefore implies – for many countries – a greater focus on investments in these services that make the whole sector more resilient to unforeseeable shocks such as the COVID-19 pandemic. This means being able to absorb, adapt and transform, including in response to possible longer-term changes in the structure of food demand following the ongoing COVID-19 crisis. To some extent, this may require governments to shift some of the support elements to producers provided in the form of budgetary expenditures towards these critical general services.

Make agro-food systems fit to respond to future opportunities and challenges, by improving the coherence and transparency of policy packages

Agricultural policies should send consistent signals to producers and other market participants. Consistency in policy packages improves the predictability of outcomes and increases policy efficiency. Policies continue to provide conflicting incentives to market participants. For instance, support based on commodity output fosters the intensification of production processes, while agri-environmental payments aim to reduce unsustainably intensive practices. Removing such conflicting signals would reduce transaction costs and the gap between stated objectives and adopted policy instruments.

Moreover, policy packages for the agro-food value chain need to be transparently and coherently integrated into economy-wide policy areas such as labour markets and social security, environmental policy and investments in transportation, trade and other infrastructure. Agricultural policies that are focused on the provision of public goods and services, that underpin the competitiveness and resilience of the agro-food sector, and that are part of a broad coherent policy package have the best potential to effectively and efficiently achieve policy goals and to improve the long-term productivity, sustainability and resilience of the sector.

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Annex 1.A. First Appearance of the COVID-19 outbreak

The World Health Organisation (WHO) presents detailed information at country level on the appearance of confirmed cases and evolution over time of the COVID-19 disease in terms of new cases, overall confirmed cases and deaths. The table below gives a snapshot of the WHO reporting of the date of the appearance of confirmed cases by country and may inform the sequence of policy responses.

Annex Table 1.A.1. WHO reporting of first appearance of confirmed cases

Country	Date
Argentina	03/03/2020
Australia	25/01/2020
Brazil	26/02/2020
Canada	26/01/2020
Chile	03/03/2020
China	11/01/2020
Colombia	06/03/2020
Costa Rica	08/03/2020
European Union	
Austria	25/02/2020
Belgium	04/02/2020
Bulgaria	08/03/2020
Croatia	25/02/2020
Cyprus[1]	09/03/2020
Czech Republic	01/03/2020
Denmark	27/02/2020
Estonia	27/02/2020
Finland	29/01/2020
France	24/01/2020
Germany	28/01/2020
Greece	26/02/2020
Hungary	04/03/2020
Ireland	01/03/2020
Italy	29/01/2020
Latvia	02/03/2020
Lithuania	28/02/2020
Luxembourg	01/03/2020
Malta	07/03/2020
Netherlands	27/02/2020
Poland	05/03/2020
Portugal	02/03/2020
Romania	26/02/2020
Slovak Republic	06/03/2020
Slovenia	04/03/2020
Spain	31/01/2020
Sweden	31/01/2020
United Kingdom	31/01/2020

Iceland	01/03/2020
India	30/01/2020
Indonesia	02/03/2020
Israel	21/02/2020
Japan	14/01/2020
Kazakhstan	14/03/2020
Korea	19/01/2020
Mexico	28/02/2020
New Zealand	28/02/2020
Norway	26/02/2020
The Philippines	30/01/2020
Russian Federation	31/01/2020
South Africa	05/03/2020
Switzerland	25/02/2020
Turkey	11/03/2020
Ukraine	03/03/2020
United States	20/01/2020
Viet Nam	24/02/2020

1. *Note by Turkey*: The information in this document with reference to "Cyprus" relates to the southern part of the Island. There is no single authority representing both Turkish and Greek Cypriot people on the Island. Turkey recognises the Turkish Republic of Northern Cyprus (TRNC). Until a lasting and equitable solution is found within the context of the United Nations, Turkey shall preserve its position concerning the "Cyprus issue".
Note by all the European Union Member States of the OECD and the European Union: The Republic of Cyprus is recognised by all members of the United Nations with the exception of Turkey. The information in this document relates to the area under the effective control of the Government of the Republic of Cyprus.
Source: https://covid19.who.int/, accessed on 23/04/2020.

Annex 1.B. Definition of OECD indicators of agricultural support

Nominal indicators used in this report

Producer Support Estimate (PSE): The annual monetary value of gross transfers from consumers and taxpayers to agricultural producers, measured at the farm gate level, arising from policy measures that support agriculture, regardless of their nature, objectives or impacts on farm production or income. It includes market price support, budgetary payments and budget revenue foregone, i.e. gross transfers from consumers and taxpayers to agricultural producers arising from policy measures based on: current output, input use, area planted/animal numbers/receipts/incomes (current, non-current), and non-commodity criteria. PSE categories are defined in Annex Box 1.B.1.

Market Price Support (MPS): The annual monetary value of gross transfers from consumers and taxpayers to agricultural producers arising from policy measures that create a gap between domestic market prices and border prices of a specific agricultural commodity, measured at the farm gate level. MPS is available by commodity, and sums of negative and positive components are reported separately where relevant along with the total MPS.

Producer Single Commodity Transfers (producer SCT): The annual monetary value of gross transfers from consumers and taxpayers to agricultural producers, measured at the farm gate level, arising from policies linked to the production of a single commodity such that the producer must produce the designated commodity in order to receive the payment. This includes broader policies where transfers are specified on a per-commodity basis. Producer SCT is also available by commodity.

Group Commodity Transfers (GCT): The annual monetary value of gross transfers from consumers and taxpayers to agricultural producers, measured at the farm gate level, arising from policies whose payments are made on the basis that one or more of a designated list of commodities is produced, i.e. a producer may produce from a set of allowable commodities and receive a transfer that does not vary with respect to this decision.

All Commodity Transfers (ACT): The annual monetary value of gross transfers from consumers and taxpayers to agricultural producers, measured at the farm gate level, arising from policies that place no restrictions on the commodity produced but require the recipient to produce some commodity of their choice.

Other Transfers to Producers (OTP): The annual monetary value of gross transfers from consumers and taxpayers to agricultural producers, measured at the farm gate level, arising from policies that do not require any commodity production at all.

Consumer Single Commodity Transfers (consumer SCT): The annual monetary value of gross transfers from (to) consumers of agricultural commodities, measured at the farm gate level, arising from policies linked to the production of a single commodity. Consumer SCT is also available by commodity.

Consumer Support Estimate (CSE): The annual monetary value of gross transfers from (to) consumers of agricultural commodities, measured at the farm gate level, arising from policy measures that support agriculture, regardless of their nature, objectives or impacts on consumption of farm products. If negative, the CSE measures the burden (implicit tax) on consumers through market price support (higher prices), that more than offsets consumer subsidies that lower prices to consumers.

General Services Support Estimate (GSSE): The annual monetary value of gross transfers arising from policy measures that create enabling conditions for the primary agricultural sector through development of private or public services, institutions and infrastructure, regardless of their objectives and impacts on farm production and income, or consumption of farm products. The GSSE includes policies where primary agriculture is the main beneficiary, but does not include any payments to individual producers. GSSE transfers do not directly alter producer receipts or costs or consumption expenditures. GSSE categories are defined below.

Total Support Estimate (TSE): The annual monetary value of all gross transfers from taxpayers and consumers arising from policy measures that support agriculture, net of the associated budgetary receipts, regardless of their objectives and impacts on farm production and income, or consumption of farm products.

Total Budgetary Support Estimate (TBSE): The annual monetary value of all gross budgetary transfers from taxpayers arising from policy measures that support agriculture, regardless of their objectives and impacts on farm production and income, or consumption of farm products.

Ratio indicators and percentage indicators

Percentage PSE (%PSE): PSE transfers as a share of gross farm receipts (including support in the denominator).

Percentage SCT (%SCT): Single Commodity Transfers as a share of gross farm receipts for the specific commodity (including support in the denominator).

Share of SCT in total PSE (%): Share of Single Commodity Transfers in the total PSE. This indicator is also calculated by commodity.

Producer Nominal Protection Coefficient (producer NPC): The ratio between the average price received by producers (at farm gate), including payments per tonne of current output, and the border price (measured at farm gate). The Producer NPC is also available by commodity.

Producer Nominal Assistance Coefficient (producer NAC): The ratio between the value of gross farm receipts including support and gross farm receipts (at farm gate) valued at border prices (measured at farm gate).

Percentage CSE (%CSE): CSE transfers as a share of consumption expenditure on agricultural commodities (at farm gate prices), net of taxpayer transfers to consumers. The %CSE measures the implicit tax (or subsidy, if CSE is positive) placed on consumers by agricultural price policies.

Consumer Nominal Protection Coefficient (consumer NPC): The ratio between the average price paid by consumers (at farm gate) and the border price (measured at farm gate). The Consumer NPC is also available by commodity.

Consumer Nominal Assistance Coefficient (consumer NAC): The ratio between the value of consumption expenditure on agricultural commodities (at farm gate) and that valued at border prices.

Percentage TSE (%TSE): TSE transfers as a percentage of GDP.

Percentage TBSE (%TBSE): TBSE transfers as a percentage of GDP.

Percentage GSSE (%GSSE): Share of expenditures on general services in the Total Support Estimate (TSE).

Share of potentially most distorting transfers in cumulated gross producer transfers (%): represents the sum of positive MPS, the absolute value of negative MPS, payments based on output and payments

based on unconstrained use of variable inputs, relative to the sum of positive MPS, the absolute value of negative MPS, and all budgetary payments to producers.

Annex Box 1.B.1. Definitions of categories in the PSE classification

Definitions of categories

Category A1, Market price support (MPS): Transfers from consumers and taxpayers to agricultural producers from policy measures that create a gap between domestic market prices and border prices of a specific agricultural commodity, measured at the farm gate level.

***Category A2, Payments based on output*:** Transfers from taxpayers to agricultural producers from policy measures based on current output of a specific agricultural commodity.

Category B, Payments based on input use: Transfers from taxpayers to agricultural producers arising from policy measures based on on-farm use of inputs:

- ***Variable input use*** that reduces the on-farm cost of a specific variable input or a mix of variable inputs.
- ***Fixed capital formation*** that reduces the on-farm investment cost of farm buildings, equipment, plantations, irrigation, drainage, and soil improvements.
- ***On-farm services*** that reduce the cost of technical, accounting, commercial, sanitary and phyto-sanitary assistance and training provided to individual farmers.

Category C, Payments based on current A/An/R/I, production required: Transfers from taxpayers to agricultural producers arising from policy measures based on current area, animal numbers, revenue, or income, and requiring production.

Category D, Payments based on non-current A/An/R/I, production required: Transfers from taxpayers to agricultural producers arising from policy measures based on non-current (i.e. historical or fixed) area, animal numbers, revenue, or income, with current production of any commodity required.

Category E, Payments based on non-current A/An/R/I, production not required: Transfers from taxpayers to agricultural producers arising from policy measures based on non-current (i.e. historical or fixed) area, animal numbers, revenue, or income, with current production of any commodity not required but optional.

Category F, Payments based on non-commodity criteria: Transfers from taxpayers to agricultural producers arising from policy measures based on:

- ***Long-term resource retirement:*** Transfers for the long-term retirement of factors of production from commodity production. The payments in this subcategory are distinguished from those requiring short-term resource retirement, which are based on commodity production criteria.
- ***A specific non-commodity output:*** Transfers for the use of farm resources to produce specific non-commodity outputs of goods and services, which are not required by regulations.
- ***Other non-commodity criteria:*** Transfers provided equally to all farmers, such as a flat rate or lump sum payment.

Category G, Miscellaneous payments: Transfers from taxpayers to farmers for which there is a lack of information to allocate them among the appropriate categories.

Note: A (area), An (animal numbers), R (receipts) or I (income).

Definitions of labels

With or without current commodity production limits and/or limit to payments: Defines whether or not there is a specific limitation on current commodity production (output) associated with a policy providing transfers to agriculture and whether or not there are limits to payments in the form of limits to area or animal numbers eligible for those payments. Applied in categories A – F.

With variable or fixed payment rates: Any payments is defined as subject to a variable rate where the formula determining the level of payment is triggered by a change in price, yield, net revenue or income or a change in production cost. Applied in categories A – E.

With or without input constraints: defines whether or not there are specific requirements concerning farming practices related to the programme in terms of the reduction, replacement, or withdrawal in the use of inputs or a restriction of farming practices allowed. Applied in categories A – F. The payments with input constrains are further broken down to:

- Payments conditional on compliance with basic requirements that are mandatory (with mandatory);
- Payments requiring specific practices going beyond basic requirements and voluntary (with voluntary).
  - Specific practices related to environmental issues.
  - Specific practices related to animal welfare.
  - Other specific practices.

With or without commodity exceptions: defines whether or not there are prohibitions upon the production of certain commodities as a condition of eligibility for payments based on non-current A/An/R/I of commodity(ies). Applied in Category E.

Based on area, animal numbers, receipts or income: defines the specific attribute (i.e. area, animal numbers, receipts or income) on which the payment is based. Applied in categories C – E.

Based on a single commodity, a group of commodities or all commodities: defines whether the payment is granted for production of a single commodity, a group of commodities or all commodities. Applied in categories A – D.

Drivers of the change in PSE

Decomposition of PSE

***Per cent change in PSE*:** Per cent change in the nominal value of the PSE expressed in national currency. The per cent change is calculated using the two most recent years in the series.

***Contribution of MPS to per cent change in PSE*:** Per cent change in nominal PSE if all variables other than MPS are held constant.

***Contribution of price gap to per cent change in the PSE*:** Per cent change in nominal PSE if all variables other than gap between domestic market prices and border prices are held constant.

***Contribution of quantity produced to per cent change in the PSE*:** Per cent change in nominal PSE if all variables other than quantity produced are held constant.

***Contribution of budgetary payments (BP) to per cent change in PSE*:** Per cent change in nominal PSE if all variables other than BP are held constant.

***Contribution of BP elements to per cent change in PSE*:** Per cent change in nominal PSE if all variables other than a given BP element are held constant. BP elements include Payments based on output, Payments based on input use, Payments based on current A/An/R/I, production required, Payments based on non-current A/An/R/I, production required, Payments based on non-current A/An/R/I, production not required, Payments based on non-commodity criteria and Miscellaneous payments.

Change in Producer Price

***Per cent change in Producer Price*:** Per cent change in Producer Price (at farm gate) expressed in national currency. The per cent change is calculated using the two most recent years in the series.

Decomposition of the change in the Border Price

***Per cent change in Border Price*:** Per cent change in Border Price (at farm gate) expressed in national currency. The per cent change is calculated using the two most recent years in the series.

***Contribution of Exchange Rate to per cent change in Border Price*:** Per cent change in the Border Price (at farm gate) expressed in national currency if all variables other than Exchange Rate between national currency and USD are held constant.

***Contribution of Border Price expressed in USD to per cent change in Border Price*:** Per cent change in the Border Price (at farm gate) expressed in national currency if all variables other than Border Price (at farm gate) expressed in USD are held constant.

Definition of GSSE categories

Agricultural knowledge and innovation system

- ***Agricultural knowledge generation***: Budgetary expenditure financing research and development (R&D) activities related to agriculture, and associated data dissemination, irrespective of the institution (private or public, ministry, university, research centre or producer groups) where they take place, the nature of research (scientific, institutional, etc.), or its purpose.
- ***Agricultural knowledge transfer***: Budgetary expenditure financing agricultural vocational schools and agricultural programmes in high-level education, training and advice to farmers that is generic (e.g. accounting rules, pesticide application), not specific to individual situations, and data collection and information dissemination networks related to agricultural production and marketing.

Inspection and control

- ***Agricultural product safety and inspection***: Budgetary expenditure financing activities related to agricultural product safety and inspection. This includes only expenditures on inspection of domestically produced commodities at first level of processing and border inspection for exported commodities.
- ***Pest and disease inspection and control:*** Budgetary expenditure financing pest and disease control of agricultural inputs and outputs (control at primary agriculture level) and public funding of veterinary services (for the farming sector) and phytosanitary services.
- ***Input control:*** Budgetary expenditure financing the institutions providing control activities and certification of industrial inputs used in agriculture (e.g. machinery, industrial fertilisers, pesticides, etc.) and biological inputs (e.g. seed certification and control).

Development and maintenance of infrastructure

- ***Hydrological infrastructure:*** Budgetary expenditure financing public investments into hydrological infrastructure (irrigation and drainage networks).
- ***Storage, marketing and other physical infrastructure***: Budgetary expenditure financing investments to off-farm storage and other market infrastructure facilities related to handling and marketing primary agricultural products (silos, harbour facilities – docks, elevators; wholesale markets, futures markets), as well as other physical infrastructure related to agriculture, when agriculture is the main beneficiary.
- ***Institutional infrastructure***: Budgetary expenditure financing investments to build and maintain institutional infrastructure related to the farming sector (e.g. land cadastres; machinery user groups, seed and species registries; development of rural finance networks; support to farm organisations, etc.).
- ***Farm restructuring***: Budgetary payments related to reform of farm structures financing entry, exit or diversification (outside agriculture) strategies.

Marketing and promotion

- ***Collective schemes for processing and marketing***: Budgetary expenditure financing investment in collective, mainly primary, processing, marketing schemes and marketing facilities, designed to improve marketing environment for agriculture.
- ***Promotion of agricultural products***: Budgetary expenditure financing assistance to collective promotion of agro-food products (e.g. promotion campaigns, participation on international fairs).

Cost of public stockholding: Budgetary expenditure covering the costs of storage, depreciation and disposal of public storage of agricultural products.

Miscellaneous: Budgetary expenditure financing other general services that cannot be disaggregated and allocated to the above categories, often due to a lack of information.

OECD indicators of support

ACT	All Commodity Transfers
CSE	Consumer Support Estimate
GCT	Group Commodity Transfers
GSSE	General Services Support Estimate
MPS	Market Price Support
NAC	Nominal Assistance Coefficient
NPC	Nominal Protection Coefficient
OTP	Other Transfers to Producers
PEM	Policy Evaluation Model
PSE	Producer Support Estimate
SCT	Single Commodity Transfers
TBSE	Total Budgetary Support Estimate
TSE	Total Support Estimate

More detailed information on the indicators, their use and limitations is available in the *OECD's Producer Support Estimate and Related Indicators of Agricultural Support: Concepts, Calculation, Interpretation and Use* (the PSE Manual) available on the OECD public website (http://www.oecd.org/agriculture/topics/agricultural-policy-monitoring-and-evaluation/documents/producer-support-estimates-manual.pdf).

Currencies

ARS	Argentinian peso
AUD	Australian dollar
BRL	Brazilian real
CAD	Canadian dollar
CLP	Chilean peso
COP	Colombian peso
CHF	Swiss frank
CNY	Chinese yuan renminbi
CRC	Costa Rican colon
EUR	Euro
IDR	Indonesian roupiah
INR	Indian rupee
ILS	Israeli shekel
ISK	Icelandic krona
JPY	Japanese yen
KRW	Korean won
KZT	Kazakh tenge
MXN	Mexican peso
NOK	Norwegian krone
NZD	New Zealand dollar
PHP	Philippines peso
RUR	Russian rouble
TRY	New Turkish lira
UAH	Ukrainian hryvnia
USD	United States dollar
VND	Vietnamese dong
ZAR	South African rand

Notes

[1] Several EU Member States also took actions to ban or phase out the use of glyphosate in agriculture, albeit for health related reasons.

[2] More details on the initiative are available at http://www.fao.org/save-food/en/.

[3] While categories were designed to be mutually exclusive, a few measures can be considered to belong to two of the seven categories. The section mentions those where this is the case.

[4] Measures taken by EU member states are those reported in the EU chapter. Actions taken by the European Union as a whole are also mentioned where relevant.

[5] New Zealand also excluded wool activities starting on 25 March. Restrictions on wool and floriculture were eased on 28 April.

[6] See https://t.co/bmRPVVBPDn?amp=1

[7] See country chapters for exact duration of export restrictions. **Romania** also introduced an export ban for grains and other foodstuffs going to non-EU countries, but it was lifted six days later.

[8] Additional countries have similar support for any business including agriculture business (see next section).

[9] A slate of measures were proposed by the European Commission to support the temporary storage of meat, milk and dairy products and to reorient existing support to manage the crisis for certain production systems (fruits and vegetables, olive oil, wine). These measures would need to be agreed by Member States before being implemented.

[10] The totals of OECD countries and emerging and developing economies (EET) do not add up to the total across countries (TOT) because non-OECD EU Member States are included in the overall total (TOT) only.

[11] In 2018, PSE was negative for Argentina, India and Viet Nam and, therefore, decomposition of changes in TSE cannot be interpreted for these countries.

[12] The analysis focuses on countries with N surpluses since changes in negative balances cannot be interpreted in the same manner. A nitrogen surplus could stay in the soil, reach groundwater or surface water, or volatilise into the air causing pollution.

[13] In Figure 1.9, EU24 refers to all countries in the European Union except for Estonia, Hungary, Croatia and the United Kingdom for which indicators of Nitrogen balances series are incomplete for the selected period.

[14] These are the countries for which productivity and nitrogen balances were not even relatively decoupled.

Developments in Agricultural Policy and Support by Country

This part contains an overview of the developments of support in the OECD area and selected Emerging Economies overall, followed by chapters on agricultural policy developments and support to agriculture in each of the countries covered in this report. Each country chapter includes a brief summary of policy developments and support to agriculture and related assessments and recommendations; a description of measures implemented in response to the COVID-19 pandemic affecting the agro-food sector; information on the context in which agricultural policies are implemented; and a more detailed description of the main policy developments in 2019-20.

2 Overall trends in agricultural support

OECD Countries

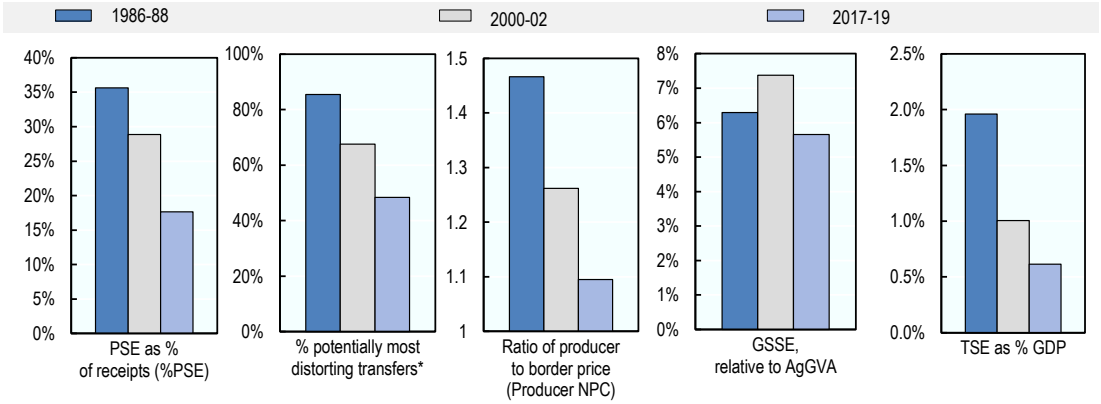
The total support to agriculture (TSE) provided in OECD countries[1] represented USD 319 billion (EUR 279 billion) per year on average in 2017-19, of which 72%, or USD 231 billion (EUR 202 billion) was provided as support to producers individually (PSE). Producer support represented 17.6% of gross farm receipts (%PSE) in 2017-19 across the OECD area, a decline from around 29% in 2000-02 and more than 35% in 1986-88 (Table 2.1).

The way support is delivered to producers has also evolved. In particular, the development in support to agriculture in the OECD area is characterised by the long-term decline of support based on commodity output (including market price support and output payments). OECD work has identified this form of support as having the strongest potential to distort agricultural production and trade, together with the payments based on the unconstrained use of variable inputs, which has slightly increased across OECD countries compared to the beginning of the millennium. These forms of support together represent 8.5% of gross farm receipts and 48% of producer support in 2017-19, down from 19.5% and 68%, respectively, in 2000-02.

At the other end of the spectrum in the PSE classification, some countries also apply less distorting forms of support, such as payments based on parameters that are not linked to current production or based on non-commodity criteria such as land set aside or payments for specific environmental or animal welfare outcomes. Most notably, payments based on historical entitlements (generally crop area or livestock numbers of a given reference year in the past) have increased significantly in many OECD countries in the last two decades, representing some 3.5% of gross farm receipts and about a fifth of the PSE during 2017-19. Payments based on current crop area and animal numbers have remained largely unchanged compared to 2000-02, and currently represent around 22% of total producer support (Table 2.1).

The expenditures financing general services to the sector (GSSE) increased (in nominal terms) in the OECD area from USD 36 billion per year in 2000-02 to USD 43 billion in 2017-19. Most of these expenditures in 2017-19 go to the financing of infrastructure (USD 18.4 billion), recording a slight increase compared to 2000-02, while the expenditures for agricultural knowledge and innovation (USD 13 billion) have increased by two-thirds. Expenditures for inspection and control services doubled, while spending for marketing and promotion activities and, more substantially, public stockholding declined over the same period, but all of these represented smaller shares of the GSSE expenditure (Table 2.1).

Figure 2.1. OECD: Development of support to agriculture

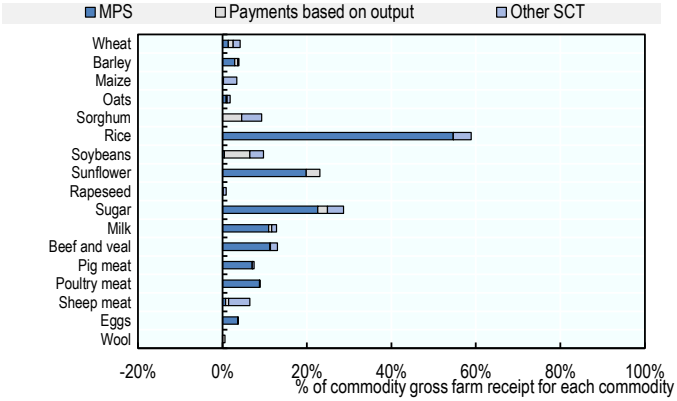


Note: * Share of potentially most distorting transfers in cumulated gross producer transfers.
Source: OECD (2020), "Producer and Consumer Support Estimates", OECD Agriculture statistics (database), http://dx.doi.org/10.1787/agr-pcse-data-en.

StatLink https://doi.org/10.1787/888934143508

Support to producers in the OECD area as a share of gross farm receipts (%PSE) has declined gradually over the long term. In 2017-19, support has been at 17.6% of gross farm receipts. The share of potentially most distorting support has decreased over time mainly due to a reduction in market price support (MPS) (Figure 2.1 and Table 2.1). Effective prices received by producers, on average, were 9% higher than world prices; large differences between commodities persist with domestic prices for rice being more than twice the world price, prices for sunflower 30%, sugar 35%, milk 13% and beef 13% above world prices in 2017-19. Overall, in the OECD area, Single Commodity Transfers (SCT) represented 51% of the total PSE during 2016-18. Rice, sugar, sunflower, beef and veal, and milk had the highest share of SCT in commodity gross farm receipts, with MPS representing the main component of SCTs for most commodities (Figure 2.2). The relative expenditures for general services (GSSE), mainly on knowledge and infrastructure, have declined steadily as agricultural value added has grown more rapidly. Total support to agriculture as a share of GDP has declined significantly over time. More than 70% of this support is provided to individual producers (PSE).

Figure 2.2. OECD: Transfer to specific commodities (SCT), 2017-19



Source: OECD (2020), "Producer and Consumer Support Estimates", OECD Agriculture statistics (database), http://dx.doi.org/10.1787/agr-pcse-data-en.

StatLink https://doi.org/10.1787/888934143527

Table 2.1. OECD: Estimates of support to agriculture (USD)

Million USD

	1986-88	2000-02	2017-19	2017	2018	2019p
Total value of production (at farm gate)	**594 108**	**660 730**	**1 175 353**	**1 169 107**	**1 189 910**	**1 167 041**
***of which:** share of MPS commodities (%)*	71.3	70.0	71.6	71.7	71.7	71.5
Total value of consumption (at farm gate)	**557 330**	**650 661**	**1 060 814**	**1 035 114**	**1 086 864**	**1 060 463**
Producer Support Estimate (PSE)	**231 446**	**217 716**	**231 046**	**222 199**	**239 170**	**231 769**
Support based on commodity output	188 500	138 942	102 561	98 807	111 956	96 920
Market Price Support[1]	175 904	123 989	96 053	95 212	99 775	93 174
Positive Market Price Support	180 205	124 575	96 272	95 567	99 948	93 300
Negative Market Price Support	-4 302	-585	-218	-355	-174	-126
Payments based on output	12 596	14 953	6 508	3 595	12 181	3 747
Payments based on input use	19 578	19 428	27 283	26 863	28 742	26 243
Based on variable input use	9 153	7 955	9 715	10 014	10 023	9 108
with input constraints	1 146	305	803	1 029	668	713
Based on fixed capital formation	6 882	5 063	9 921	9 053	11 161	9 548
with input constraints	1 638	625	2 608	2 479	2 914	2 431
Based on on-farm services	3 543	6 410	7 647	7 797	7 558	7 588
with input constraints	439	959	1 557	1 497	1 615	1 557
Payments based on current A/An/R/I, production required	19 377	42 516	49 776	44 516	46 443	58 369
Based on Receipts / Income	2 052	3 173	3 725	3 352	4 114	3 708
Based on Area planted / Animal numbers	17 325	39 343	46 051	41 164	42 328	54 662
with input constraints	4 093	18 032	38 431	32 513	34 919	47 860
Payments based on non-current A/An/R/I, production required	533	71	2 274	2 014	2 443	2 364
Payments based on non-current A/An/R/I, production not required	2 080	13 721	45 790	46 202	46 091	45 077
With variable payment rates	181	4 318	3 495	3 640	3 021	3 826
with commodity exceptions	0	4 079	3 346	3 486	2 864	3 689
With fixed payment rates	1 899	9 403	42 295	42 562	43 070	41 251
with commodity exceptions	1 561	6 081	2 539	2 574	2 510	2 532
Payments based on non-commodity criteria	1 078	3 205	2 998	3 451	3 103	2 439
Based on long-term resource retirement	1 076	2 900	1 574	2 178	1 614	929
Based on a specific non-commodity output	2	237	1 355	1 201	1 413	1 450
Based on other non-commodity criteria	0	68	69	71	75	60
Miscellaneous payments	300	-166	365	347	392	356
Percentage PSE (%)	**35.6**	**28.9**	**17.6**	**17.1**	**18.0**	**17.8**
Producer NPC (coeff.)	**1.47**	**1.26**	**1.09**	**1.09**	**1.10**	**1.09**
Producer NAC (coeff.)	**1.55**	**1.41**	**1.21**	**1.21**	**1.22**	**1.22**
General Services Support Estimate (GSSE)	**25 568**	**36 401**	**42 788**	**43 354**	**43 146**	**41 863**
Agricultural knowledge and innovation system	4 846	7 959	13 388	13 051	13 619	13 494
Inspection and control	1 076	1 919	3 998	3 902	4 244	3 847
Development and maintenance of infrastructure	10 223	16 297	18 386	19 461	18 423	17 274
Marketing and promotion	2 156	5 572	4 676	4 555	4 598	4 875
Cost of public stockholding	5 872	2 282	639	687	558	672
Miscellaneous	1 395	2 371	1 701	1 698	1 704	1 701
Percentage GSSE (% of TSE)	**9.2**	**13.1**	**13.4**	**13.9**	**13.1**	**13.3**
Consumer Support Estimate (CSE)	**-156 552**	**-116 803**	**-72 106**	**-65 457**	**-76 023**	**-74 837**
Transfers to producers from consumers	-165 483	-122 248	-92 323	-90 454	-96 498	-90 018
Other transfers from consumers	-22 445	-18 718	-25 724	-23 420	-27 177	-26 576
Transfers to consumers from taxpayers	19 956	23 580	45 001	47 103	46 894	41 006
Excess feed cost	11 420	583	941	1 313	757	751
Percentage CSE (%)	**-29.1**	**-18.6**	**-7.1**	**-6.6**	**-7.3**	**-7.3**
Consumer NPC (coeff.)	**1.51**	**1.28**	**1.13**	**1.12**	**1.13**	**1.12**
Consumer NAC (coeff.)	**1.41**	**1.23**	**1.08**	**1.07**	**1.08**	**1.08**
Total Support Estimate (TSE)	**276 970**	**277 697**	**318 835**	**312 657**	**329 210**	**314 638**
Transfers from consumers	187 928	140 966	118 048	113 874	123 675	116 594
Transfers from taxpayers	111 487	155 449	226 511	222 203	232 712	224 620
Budget revenues	-22 445	-18 718	-25 724	-23 420	-27 177	-26 576
Percentage TSE (% of GDP)	**2.0**	**1.0**	**0.6**	**0.6**	**0.6**	**0.6**
Total Budgetary Support Estimate (TBSE)	**101 066**	**153 708**	**222 781**	**217 445**	**229 435**	**221 464**
Percentage TBSE (% of GDP)	**0.7**	**0.6**	**0.4**	**0.4**	**0.4**	**0.4**

Note: p: provisional. NPC: Nominal Protection Coefficient. NAC: Nominal Assistance Coefficient.
A/An/R/I: Area planted/Animal numbers/Receipts/Income.
The OECD total for 1986-88 includes all countries except Chile, Israel, Latvia, Lithuania and Slovenia, for which data are not available. The OECD total for 2000-02 includes all countries except Latvia and Lithuania. TSE as a share of GDP for 1986-88 for the OECD is an estimate based on available data.
1. Market Price Support (MPS) is net of producer levies and excess feed cost. MPS commodities: see notes to individual country tables.

Source: OECD (2020), "Producer and Consumer Support Estimates", *OECD Agriculture statistics* (database), http://dx.doi.org/10.1787/agr-pcse-data-en.

Emerging Economies

The total support to agriculture (TSE) provided in the Emerging Economies[2] represented USD 295 billion (EUR 258 billion) per year on average in 2017-19, of which 71% or USD 210 billion (EUR 184 billion) was provided as support to producers (PSE). Expressed as a share of gross farm receipts (%PSE), aggregate support to producers represented 8.5% in 2017-19 on average across the Emerging Economies, up from 4.2% in 2000-02 (Table 2.2). The aggregate %PSE remains one-half that of the OECD area, although this is partly related to the large negative MPS in a few countries, worth USD 89 billion (EUR 78 billion) per year. This means that support to producers and the sector in other countries has been correspondingly higher than suggested by aggregate indicators.

The share of transfers based on output (accounting for both positive and negative MPS and output-based payments) and input use in total producer support has decreased only slightly, still averaging about 83% in 2017-19 compared to 89% in 2000-02. The transfers based on output have been identified as having the strongest potential to distort agricultural production and trade, together with the payments based on the unconstrained use of variable inputs. These transfers combined now represent 7% of gross farm receipts, up from 4% in 2000-02 but below the OECD average.

Among the remaining forms of producer support, the most important are payments based on other input use (mainly fixed capital formation) and payments to areas planted and animal numbers. Across the Emerging Economies, payments based on areas and animal numbers were almost non-existent in 2000-02 but reached close to 13% of aggregate support to producers in 2017-19. In turn, the relative importance of support for investments, often related to irrigation, has declined over time, now representing some 9% of the PSE. All other forms of support to producers remain small (Table 2.2).

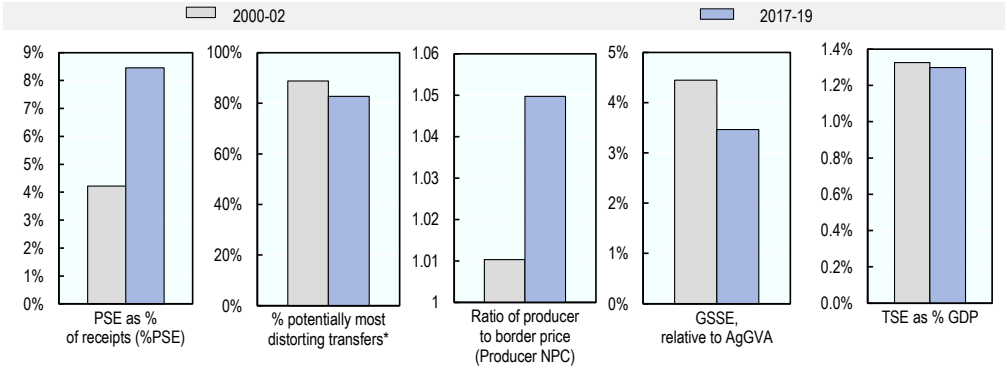
The expenditures financing general services to the sector (GSSE) in the Emerging Economies reached an annual average of USD 64 billion (EUR 56 billion) in 2017-19. Most of these expenditures went to the financing of infrastructure projects (USD 26 billion), again often related to irrigation, and public stockholding (USD 20 billion), the remaining expenditures went to finance mainly agricultural knowledge and innovation (USD 13 billion) (Table 2.2).

Notes

[1] The OECD total does not include the non-OECD EU Member States, nor Colombia which joined the OECD in April 2020.

[2] The Emerging Economies total includes Argentina, Brazil, People's Republic of China, Costa Rica, India, Indonesia, Kazakhstan, Philippines, Russian Federation, South Africa, Ukraine and Viet Nam, as well as Colombia which joined the OECD in April 2020.

Figure 2.3. Emerging Economies: Development of support to agriculture

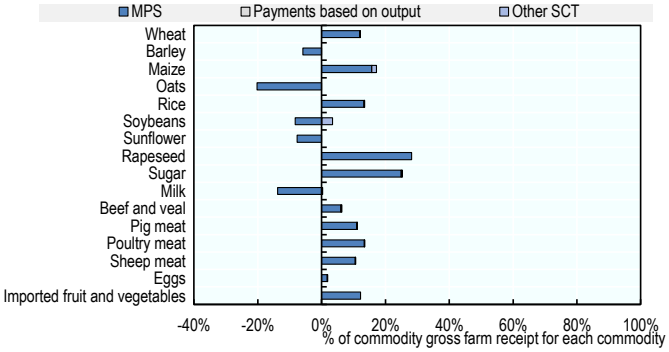


Note: * Share of potentially most distorting transfers in cumulated gross producer transfers.
Source: OECD (2020), "Producer and Consumer Support Estimates", OECD Agriculture statistics (database), http://dx.doi.org/10.1787/agr-pcse-data-en.

StatLink https://doi.org/10.1787/888934143546

In contrast to the OECD area, the **support to producers** in Emerging Economies has increased over the long term. In 2017-19, aggregate producer support has been close to 8.5% of gross farm receipts (GFR), still well below the OECD average, but including both implicit taxes on producers through negative MPS, worth 3.6% of GFR, and transfers to producers worth 12% of GFR. The share of gross producer transfers (whether positive or negative, i.e. expressed in absolute terms) arising from potentially most distorting measures (support based on output and variable input use – without input constraints) has gone down only slightly and stays above 80% on average in 2017-19 (Figure 2.3). Effective prices received by producers, on average, were 5% higher than world prices. This average figure hides large differences across countries and commodities as domestic prices stand below world market levels in a range of markets. Overall, Single Commodity Transfers (SCT) on average represented just over half of the total PSE during 2017-19 – with a falling trend in recent years partly due to more negative SCTs in India and Argentina and the extended direct income scheme in India. Rapeseed, sugar, maize, rice and wheat had the highest share of SCT in commodity gross farm receipts, while SCTs were negative for barley, oilseeds, milk and oats. Aggregate MPS is the main component of the SCTs in most cases (Figure 2.4). On average, the expenditures for general services (GSSE), relative to agricultural value added are lower than those observed for the OECD average. Aggregate total support to agriculture as a share of GDP has barely changed over time, and is mainly driven by producer support, which was about 84% of the total support.

Figure 2.4. Emerging Economies: Transfer to specific commodities (SCT), 2017-19



Source: OECD (2020), "Producer and Consumer Support Estimates", OECD Agriculture statistics (database), http://dx.doi.org/10.1787/agr-pcse-data-en.

StatLink https://doi.org/10.1787/888934143565

Table 2.2. Emerging Economies: Estimates of support to agriculture (USD)

Million USD

	2000-02	2017-19	2017	2018	2019p
Total value of production (at farm gate)	**535 036**	**2 369 625**	**2 309 142**	**2 343 832**	**2 455 901**
of which: *share of MPS commodities (%)*	75.3	76.7	76.0	77.4	76.6
Total value of consumption (at farm gate)	**529 958**	**2 233 524**	**2 175 923**	**2 197 899**	**2 326 749**
Producer Support Estimate (PSE)	**23 415**	**209 983**	**239 008**	**192 224**	**198 717**
Support based on commodity output	4 056	101 944	134 532	84 911	86 390
Market Price Support[1]	3 640	96 833	129 333	80 320	80 847
Positive Market Price Support	27 276	185 998	200 649	176 991	180 353
Negative Market Price Support	-23 636	-89 164	-71 316	-96 671	-99 506
Payments based on output	416	5 111	5 199	4 591	5 543
Payments based on input use	17 415	64 609	65 007	64 646	64 172
Based on variable input use	11 535	42 074	40 928	42 087	43 206
with input constraints	37	1 002	1 389	935	683
Based on fixed capital formation	4 482	19 520	20 810	19 557	18 193
with input constraints	5	1 464	1 949	1 353	1 089
Based on on-farm services	1 397	3 015	3 269	3 003	2 773
with input constraints	8	21	18	8	36
Payments based on current A/An/R/I, production required	813	26 880	26 811	27 377	26 451
Based on Receipts / Income	813	2 398	2 399	2 397	2 398
Based on Area planted / Animal numbers	0	24 482	24 412	24 980	24 053
with input constraints	0	0	0	0	0
Payments based on non-current A/An/R/I, production required	0	0	0	0	0
Payments based on non-current A/An/R/I, production not required	370	13 197	9 642	11 432	18 518
With variable payment rates	0	0	0	0	0
with commodity exceptions	0	0	0	0	0
With fixed payment rates	370	13 197	9 642	11 432	18 518
with commodity exceptions	0	0	0	0	0
Payments based on non-commodity criteria	459	2 302	2 351	2 326	2 227
Based on long-term resource retirement	459	2 302	2 351	2 326	2 227
Based on a specific non-commodity output	0	0	0	0	0
Based on other non-commodity criteria	1	0	0	0	0
Miscellaneous payments	302	1 052	664	1 532	959
Percentage PSE (%)	**4.2**	**8.5**	**9.9**	**7.8**	**7.7**
Producer NPC (coeff.)	**1.01**	**1.05**	**1.07**	**1.04**	**1.04**
Producer NAC (coeff.)	**1.04**	**1.09**	**1.11**	**1.08**	**1.08**
General Services Support Estimate (GSSE)	**18 889**	**63 567**	**64 751**	**63 992**	**61 958**
Agricultural knowledge and innovation system	3 037	12 793	13 357	12 769	12 253
Inspection and control	801	3 552	3 553	3 578	3 526
Development and maintenance of infrastructure	7 057	26 254	25 236	27 478	26 047
Marketing and promotion	29	665	735	629	631
Cost of public stockholding	7 861	19 901	21 627	18 945	19 130
Miscellaneous	104	403	243	594	372
Percentage GSSE (% of TSE)	**40.2**	**21.6**	**19.8**	**23.2**	**22.0**
Consumer Support Estimate (CSE)	**-3 555**	**-100 742**	**-125 151**	**-82 897**	**-94 176**
Transfers to producers from consumers	-6 271	-108 275	-135 380	-94 901	-94 544
Other transfers from consumers	-3 105	-22 021	-20 285	-17 233	-28 544
Transfers to consumers from taxpayers	4 735	20 951	22 624	19 622	20 607
Excess feed cost	1 086	8 603	7 890	9 615	8 306
Percentage CSE (%)	**-0.7**	**-4.6**	**-5.8**	**-3.8**	**-4.1**
Consumer NPC (coeff.)	**1.02**	**1.06**	**1.08**	**1.05**	**1.06**
Consumer NAC (coeff.)	**1.01**	**1.05**	**1.06**	**1.04**	**1.04**
Total Support Estimate (TSE)	**47 040**	**294 501**	**326 383**	**275 839**	**281 282**
Transfers from consumers	9 376	130 296	155 665	112 134	123 089
Transfers from taxpayers	40 769	186 226	191 003	180 938	186 738
Budget revenues	-3 105	-22 021	-20 285	-17 233	-28 544
Percentage TSE (% of GDP)	**1.3**	**1.3**	**1.5**	**1.2**	**1.2**
Total Budgetary Support Estimate (TBSE)	**43 400**	**197 668**	**197 050**	**195 519**	**200 435**
Percentage TBSE (% of GDP)	**1.2**	**0.9**	**0.9**	**0.8**	**0.9**

Note: p: provisional. NPC: Nominal Protection Coefficient. NAC: Nominal Assistance Coefficient.
A/An/R/I: Area planted/Animal numbers/Receipts/Income.
The Emerging Economies include Argentina, Brazil, China, Colombia, Costa Rica, India, Indonesia, Kazakhstan, the Philippines, Russian Federation, South Africa, Ukraine and Viet Nam.
1. Market Price Support (MPS) is net of producer levies and excess feed cost. MPS commodities: see notes to individual country tables.
Source: OECD (2020), "Producer and Consumer Support Estimates", *OECD Agriculture statistics* (database), http://dx.doi.org/10.1787/agr-pcse-data-en.

All Countries

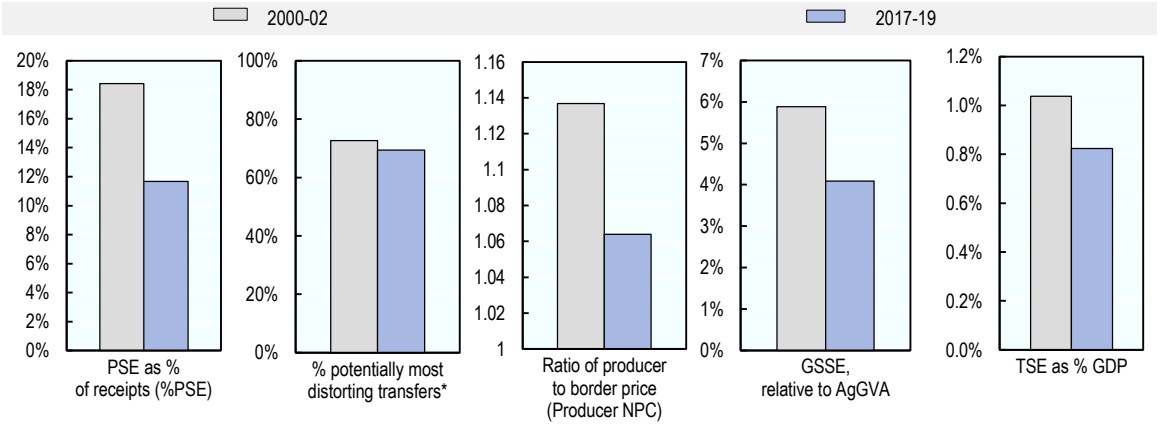
The total support to agriculture (TSE) provided in all countries covered in this report represented USD 619 billion (EUR 542 billion) per year on average in 2017-19 of which around 72% or USD 446 billion (EUR 391 billion) were provided as support to producers (PSE). Given the significant negative elements in market price support that are estimated for some of the emerging economies, gross transfers are significantly larger than that: in total, USD 708 billion (EUR 620 billion) were transferred to the sector across the 54 countries covered, while at the same time negative MPS in some countries amounted to USD 89 billion (EUR 78 billion). Expressed as a share of gross farm receipts (%PSE), aggregate support to producers represented 12.5% in 2017-19 on average for all countries covered, a reduction from 18.4% in 2000-02 (Table 2.3).

The changes of the structure of support related to all countries in the report, in the period from 2000-02 to 2017-19, were relatively moderate. The share of the potentially most distorting forms of transfers (including positive or negative MPS, and payments based on output or based on unconstrained use of variable inputs) has declined slightly, but these policies continue to represent around 69% of gross producer transfers across all countries (whether positive or negative, in absolute terms), compared to 73% in 2000-02. They now represent 8% of aggregate gross farm receipts, down from 13% in 2000-02. Transfers based on output are shrinking in relative terms but those based on unconstrained input use have increased.

Among the remaining forms of support to producers, the most important are payments based on areas planted and animal numbers (18% of all producer support), and payments based on historical parameters not requiring production. The importance of these latter payments, which are decoupled from current production and hence much less production and trade distorting, has increased significantly and today represents 14% of all producer support (Table 2.3).

Across all countries covered in this report, the expenditures financing general services to the sector (GSSE) reached an annual average of USD 106 billion (EUR 93 billion) in 2017-19. Most of these expenditures went to the financing of infrastructure projects (USD 45 billion), agricultural knowledge and innovation (USD 26 billion) and public stockholding (USD 21 billion) (Table 2.3).

Figure 2.5. All countries: Development of support to agriculture

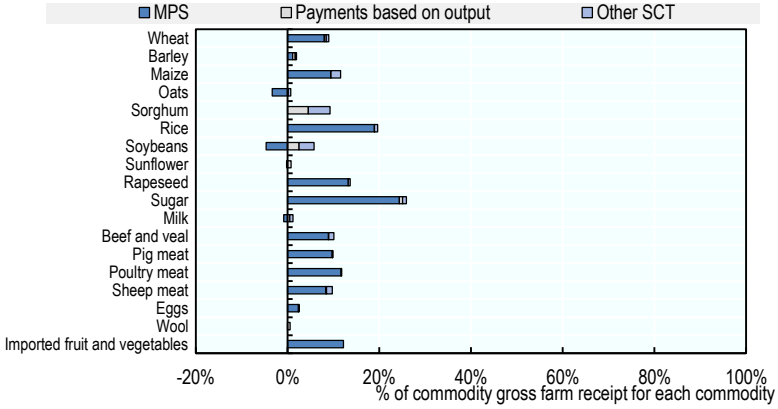


Note: * Share of potentially most distorting transfers in cumulated gross producer transfers.
Source: OECD (2020), "Producer and Consumer Support Estimates", OECD Agriculture statistics (database), http://dx.doi.org/10.1787/agr-pcse-data-en.

StatLink https://doi.org/10.1787/888934143584

Support to producers (%PSE), when measured for all countries in the report, has declined between 2000-02 and 2017-19 and is currently around 12% of gross farm receipts. The share of gross producer transfers (whether positive or negative, i.e. expressed in absolute terms) arising from potentially **most distorting** measures (support based on output and variable input use – without input constraints) remains almost unchanged and stays around 69% in 2017-19 (Figure 2.5). Effective prices received by producers, on average, were 6% higher than world prices; larger price gaps are recorded for sugar and rice. Overall, Single Commodity Transfers (SCT) represented above 50% of the total PSE during 2017-19. Sugar and rice had the highest share of SCT in commodity gross farm receipts (Figure 2.6). MPS is the main component of the SCTs in most cases. On average, the relative expenditures for **general services** (GSSE), mainly on infrastructure, knowledge and public stockholding, have declined as agricultural value added has grown more rapidly. **Total support to agriculture** as a share of GDP has declined slightly over time, mainly driven by the smaller relative size of the sector within the overall economies.

Figure 2.6. All countries: Transfer to specific commodities (SCT), 2017-19



Source: OECD (2020), "Producer and Consumer Support Estimates", OECD Agriculture statistics (database), http://dx.doi.org/10.1787/agr-pcse-data-en.

StatLink https://doi.org/10.1787/888934143603

Table 2.3. All countries: Estimates of support to agriculture (USD)

Million USD

	2000-02	2017-19	2017	2018	2019p
Total value of production (at farm gate)	**1 195 766**	**3 571 747**	**3 503 131**	**3 561 521**	**3 650 590**
***of which:** share of MPS commodities (%)*	72.4	75.0	74.6	75.5	74.9
Total value of consumption (at farm gate)	**1 180 619**	**3 348 913**	**3 260 847**	**3 344 489**	**3 441 404**
Producer Support Estimate (PSE)	**241 131**	**446 424**	**466 296**	**437 050**	**435 925**
Support based on commodity output	142 998	205 118	234 050	197 478	183 824
Market Price Support[1]	127 629	193 372	224 987	180 648	174 481
Positive Market Price Support	151 850	282 785	296 708	277 512	274 136
Negative Market Price Support	-24 221	-89 413	-71 720	-96 864	-99 655
Payments based on output	15 369	11 746	9 063	16 830	9 344
Payments based on input use	36 843	92 425	92 198	94 027	91 051
Based on variable input use	19 491	51 908	50 971	52 276	52 476
with input constraints	342	1 807	2 419	1 604	1 398
Based on fixed capital formation	9 545	29 784	30 101	31 118	28 133
with input constraints	630	4 071	4 428	4 267	3 520
Based on on-farm services	7 807	10 734	11 126	10 634	10 441
with input constraints	967	1 577	1 515	1 623	1 593
Payments based on current A/An/R/I, production required	43 329	78 427	73 017	75 659	86 603
Based on Receipts / Income	3 986	6 126	5 753	6 515	6 109
Based on Area planted / Animal numbers	39 343	72 301	67 264	69 144	80 494
with input constraints	18 032	39 640	33 639	36 180	49 101
Payments based on non-current A/An/R/I, production required	71	2 277	2 017	2 447	2 367
Payments based on non-current A/An/R/I, production not required	14 091	61 418	58 169	60 038	66 048
With variable payment rates	4 318	3 495	3 640	3 021	3 826
with commodity exceptions	4 079	3 346	3 486	2 864	3 689
With fixed payment rates	9 773	57 923	54 529	57 017	62 223
with commodity exceptions	6 081	2 539	2 574	2 510	2 532
Payments based on non-commodity criteria	3 664	5 333	5 826	5 466	4 707
Based on long-term resource retirement	3 358	3 876	4 530	3 940	3 157
Based on a specific non-commodity output	237	1 389	1 225	1 451	1 491
Based on other non-commodity criteria	69	69	71	75	60
Miscellaneous payments	136	1 426	1 019	1 934	1 324
Percentage PSE (%)	**18.4**	**11.7**	**12.5**	**11.4**	**11.1**
Producer NPC (coeff.)	**1.14**	**1.06**	**1.07**	**1.06**	**1.06**
Producer NAC (coeff.)	**1.23**	**1.13**	**1.14**	**1.13**	**1.13**
General Services Support Estimate (GSSE)	**55 290**	**106 416**	**108 179**	**107 205**	**103 865**
Agricultural knowledge and innovation system	10 996	26 219	26 437	26 428	25 790
Inspection and control	2 719	7 550	7 455	7 822	7 373
Development and maintenance of infrastructure	23 354	44 681	44 734	45 945	43 364
Marketing and promotion	5 602	5 319	5 285	5 209	5 463
Cost of public stockholding	10 144	20 544	22 326	19 503	19 802
Miscellaneous	2 475	2 104	1 941	2 298	2 073
Percentage GSSE (% of TSE)	**17.0**	**17.2**	**16.8**	**17.6**	**17.3**
Consumer Support Estimate (CSE)	**-120 358**	**-173 358**	**-191 073**	**-159 485**	**-169 515**
Transfers to producers from consumers	-128 519	-201 147	-226 362	-191 993	-185 084
Other transfers from consumers	-21 823	-47 749	-43 708	-44 413	-55 126
Transfers to consumers from taxpayers	28 315	65 974	69 762	66 532	61 628
Excess feed cost	1 669	9 563	9 234	10 388	9 067
Percentage CSE (%)	**-10.4**	**-5.3**	**-6.0**	**-4.9**	**-5.0**
Consumer NPC (coeff.)	**1.15**	**1.08**	**1.09**	**1.08**	**1.08**
Consumer NAC (coeff.)	**1.12**	**1.06**	**1.06**	**1.05**	**1.05**
Total Support Estimate (TSE)	**324 737**	**618 814**	**644 237**	**610 787**	**601 419**
Transfers from consumers	150 342	248 895	270 070	236 406	240 211
Transfers from taxpayers	196 218	417 668	417 876	418 794	416 334
Budget revenues	-21 823	-47 749	-43 708	-44 413	-55 126
Percentage TSE (% of GDP)	**1.0**	**0.8**	**0.9**	**0.8**	**0.8**
Total Budgetary Support Estimate (TBSE)	**197 108**	**425 442**	**419 250**	**430 139**	**426 938**
Percentage TBSE (% of GDP)	**0.6**	**0.6**	**0.6**	**0.6**	**0.6**

Note: p: provisional. NPC: Nominal Protection Coefficient. NAC: Nominal Assistance Coefficient.
A/An/R/I: Area planted/Animal numbers/Receipts/Income.
The All countries total includes all OECD countries, non-OECD EU Member States, and the Emerging Economies: Argentina, Brazil, China, Colombia, Costa Rica, India, Indonesia, Kazakhstan, the Philippines, Russian Federation, South Africa, Ukraine and Viet Nam. The All countries total for 2000-02 includes data for all countries except Latvia and Lithuania, for which data are not available.
1. Market Price Support (MPS) is net of producer levies and excess feed cost. MPS commodities: see notes to individual country tables.
Source: OECD (2020), "Producer and Consumer Support Estimates", *OECD Agriculture statistics* (database), http://dx.doi.org/10.1787/agr-pcse-data-en.

3 Argentina

Support to agriculture

Argentina provides negative support to its agricultural sector mainly due to export taxes that depress domestic producer prices. Estimated producer support was negative at -21.4% of gross farm receipts in 2017-19. Budgetary payments to producers are limited and focused on input support, provided mainly in the form of credit at preferential rates.

Agricultural production and exports in Argentina have been growing dynamically in the last two decades due to an innovative private sector, and to public services, particularly for knowledge, research, extension and sanitary inspection. Most of Argentina's budgetary support to the sector goes to these general services (GSSE). However, the total budgetary support to farmers and the sector overall (TBSE) was only 0.1% of GDP, well below the absolute value of negative market price support, making the total support estimate to agriculture (TSE) also negative, representing -1.8% of GDP.

Main policy changes

In December 2019, the new government re-established a separate Ministry of Agriculture, Livestock and Fisheries. The Ministry of Social Development created a new social programme "Argentina against hunger" in January 2020. This provides monthly financial support to current beneficiaries of social welfare through an electronic "Food card" allowing buying all categories of food products up to the value of a basic basket including dairy, vegetables, meat, and other fresh foods.

The National Plan against Food Waste and Losses set up a Register of institutions that are eligible to receive food products for their free distribution to final consumers. Moreover, a new law limits the responsibility of the food donor in order to facilitate donations that could otherwise be discarded, while ensuring conformity with the Argentine Food Code.

Several government initiatives have focused on improving the application of agro-chemicals. A resolution from the plant and animal health agency SENASA establishes a list of restrictions on the use of active agro-chemical principles. The former Ministries of Agro-industry and of Sustainable Development approved a joint resolution to create an inter-ministerial working group on Good Practices on Pesticides Applications. Finally, the new Action Plan on Bio-inputs involves all actors from the public and private sectors to develop alternatives and complements to chemical products.

In June 2019, the European Union and Mercosur (Argentina, Brazil, Paraguay and Uruguay) reached a free trade agreement. The agreement includes several provisions for increasing market access of Mercosur agricultural products – including beef, poultry, pork, sugar, ethanol and cheese – into the European Union.

Assessment and recommendations

- Export taxes create distortions and uncertainty. However, in response to the macroeconomic turmoil in September 2018, a new tax was established on all exports that should be phased out as part of a long-term government plan of integrating the sector into a reformed economy-wide tax system and enhancing policy certainty with alternative sources of fiscal revenue. In the current environment, it will be crucial to reduce uncertainty and find the right balance between the long-term objective of reducing export taxes and the short-term needs to raise fiscal revenues.
- Historically, Argentine policies have been unpredictable and biased against agriculture. Agricultural policy could be better anchored in broad legislation, such as a specific framework law and an economy-wide reform of the tax system, keeping a long-term direction of gradually moving towards a more neutral, stable, predictable and targeted policy package.
- The new social programme "Argentina against hunger", providing monthly financial support through an electronic card, needs to be well targeted to the population in need. In order to tackle food poverty, this approach through social policies is more effective and efficient than trade measures that depress domestic prices of primary food commodities which represent just a small share of food expenditures.
- Recent measures to improve the application of agro-chemicals are a step in the right direction towards creating awareness and the identification of science-based principles and practices. Moving forward, in particular on pesticide use, will require improving monitoring and information systems for better policy design, such as on location-specific negative externalities and hotspots from pesticide use.
- In order to deliver the research, extension and other public goods required for future agricultural innovation, the Argentine agricultural innovation system needs to develop systematic monitoring of efforts and results in R&D and innovation, and to define and implement strategic priorities. Public policies on innovation should focus on the provision of public goods in areas where the private sector has difficulties to deliver, such as those related to sustainability and less developed value chains, or for regional economies outside the Pampas region.
- The Special Tobacco Fund (FET), with a budget similar to that of the National Institute for Agricultural Technology INTA, should be reformed. The output payments to tobacco producers should be phased out and resources used to finance a programme for the development of poor tobacco producing areas through investment in human and physical capital. The reform should include a monitoring and evaluation system of all the initiatives implemented by the provinces.
- Argentina's Nationally Determined Contributions (NDCs) under the 2016 Paris Agreement sets a goal to reduce GHG emissions by 18% in 2030 compared with projected emissions for that year. No specific target has been defined for agriculture. Among the main measures affecting the agricultural sector are the Native Forest Law, the improvement of soils through practices such as no-tillage, and the substitution of fossil fuels by biofuels. Further scope exists for Argentina to strengthen the contribution of agriculture, forestry and other land use (AFOLU) to its climate change mitigation efforts.

Policy responses in relation to the COVID-19 outbreak

Agricultural policies

Decree 297/2020 of 19 March establishing compulsory social distance measures includes the production, transportation and trading of food and agricultural inputs such as fertilisers in the list of essential sectors

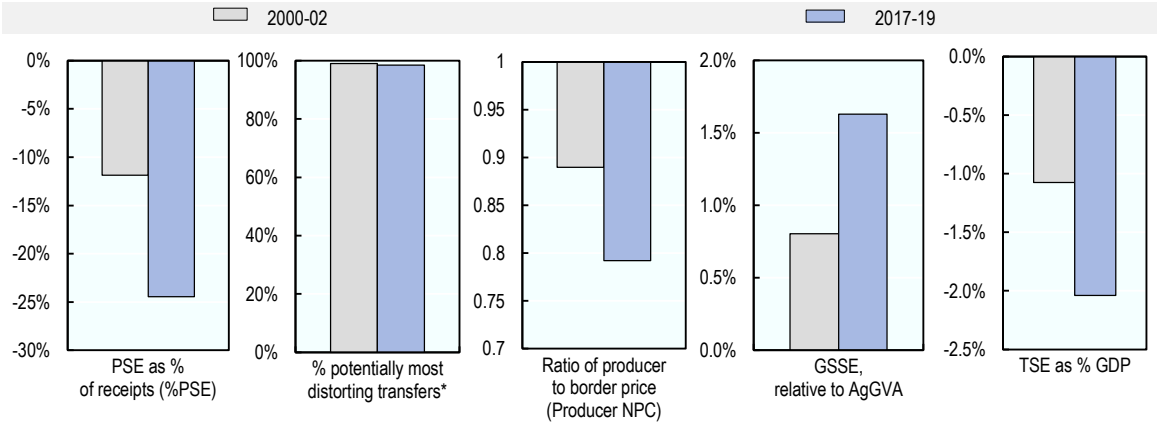
not subject to the limitations of lockdown measures. The tax agency AFIP established on 23 March that customs services will prioritise operations of essential products, which includes all food related products.

The Ministry of Agriculture Livestock and Fisheries together with other Ministries (Health, Labour and Transport) and with the chambers of commerce work together on a harmonised set of protocols to be used in all food related enterprises. Manuals per branch of activity are being drafted to minimise the risk of contagion.

There have been some operative difficulties related with protecting the health of the workers, coinciding with the end of the summer harvest. This included the temporary closure of some export terminal facilities in mid-March that were reopened per government decree on the 23 March. These difficulties have been rapidly tackled by the Ministry of Agriculture Livestock and Fisheries and other government agencies to ensure fully operative international agro-food trade.

The Southern Agricultural Council (joining Argentina, Brazil, Bolivia, Chile, Paraguay and Uruguay) made a joint declaration on 24 March guaranteeing the secure transit of trucks across their borders.

Figure 3.1. Argentina: Development of support to agriculture

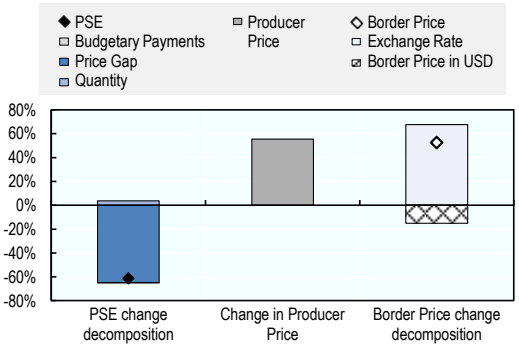


Note: * Share of potentially most distorting transfers in cumulated gross producer transfers.
Source: OECD (2020), "Producer and Consumer Support Estimates", OECD Agriculture statistics (database), http://dx.doi.org/10.1787/agr-pcse-data-en.

StatLink https://doi.org/10.1787/888934143622

Support to producers (%PSE) has remained negative in the last two decades, with large fluctuations: -11.9% of gross farm receipts in 2000-02; reaching extreme negatives in 2008 with -51.1%; then back to -10.3% in 2017; and more negative numbers since the beginning of depreciation of the peso and economic recession in 2018, with -24.5% in 2017-19 (Figure 3.1). Negative market price support is the main component of the PSE and, as a result, 98% of the policy transfers were most distorting in 2017-19. The change in the price gap, and in particular the depreciation of the exchange rate, is the main driver of the expansion of the negative PSE in 2019 (Figure 3.2). The ratio of producer to border price (NPC) is as low as 0.79%, that is, producers' prices are on average 21% below world market prices. The support to general services (GSSE) relative to agricultural value added has increased from 0.8% in 2000-02 to 1.6% in 2017-19, not enough to avoid a negative Total Support Estimate (TSE) of -1% of GDP in 2000-02 and -2% in 2017-19. Negative market price support is dominated by the main export product soybeans but concerns several other commodities, including meat and milk (Figure 3.3).

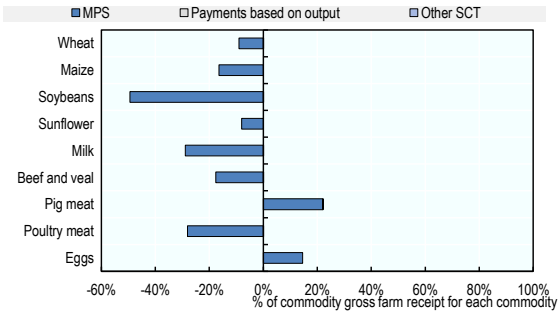
Figure 3.2. Argentina: Drivers of the change in PSE, 2018 to 2019



Source: OECD (2020), "Producer and Consumer Support Estimates", OECD Agriculture statistics (database), http://dx.doi.org/10.1787/agr-pcse-data-en.

StatLink https://doi.org/10.1787/888934143641

Figure 3.3. Argentina: Transfer to specific commodities (SCT), 2017-19



Source: OECD (2020), "Producer and Consumer Support Estimates", OECD Agriculture statistics (database), http://dx.doi.org/10.1787/agr-pcse-data-en.

StatLink https://doi.org/10.1787/888934143660

Table 3.1. Argentina: Estimates of support to agriculture

Million USD

	2000-02	2017-19	2017	2018	2019p
Total value of production (at farm gate)	**17 022**	**42 887**	**38 935**	**48 261**	**41 464**
of which: *share of MPS commodities (%)*	85.7	83.9	83.9	83.7	84.1
Total value of consumption (at farm gate)	**7 998**	**28 522**	**24 212**	**33 745**	**27 609**
Producer Support Estimate (PSE)	**-1 035**	**-9 422**	**-4 040**	**-12 488**	**-11 738**
Support based on commodity output	-1 069	-9 644	-4 371	-12 712	-11 850
Market Price Support[1]	-1 131	-9 719	-4 477	-12 786	-11 894
Positive Market Price Support	150	300	391	245	265
Negative Market Price Support	-1 280	-10 019	-4 868	-13 031	-12 158
Payments based on output	62	75	106	75	44
Payments based on input use	34	216	321	218	109
Based on variable input use	2	11	21	10	1
with input constraints	0	0	0	0	0
Based on fixed capital formation	23	152	219	152	84
with input constraints	0	0	0	0	0
Based on on-farm services	8	53	81	55	24
with input constraints	0	0	0	0	0
Payments based on current A/An/R/I, production required	0	6	10	6	3
Based on Receipts / Income	0	0	0	0	0
Based on Area planted / Animal numbers	0	6	10	6	3
with input constraints	0	0	0	0	0
Payments based on non-current A/An/R/I, production required	0	0	0	0	0
Payments based on non-current A/An/R/I, production not required	0	0	0	0	0
With variable payment rates	0	0	0	0	0
with commodity exceptions	0	0	0	0	0
With fixed payment rates	0	0	0	0	0
with commodity exceptions	0	0	0	0	0
Payments based on non-commodity criteria	0	0	0	0	0
Based on long-term resource retirement	0	0	0	0	0
Based on a specific non-commodity output	0	0	0	0	0
Based on other non-commodity criteria	0	0	0	0	0
Miscellaneous payments	0	0	0	0	0
Percentage PSE (%)	**-11.9**	**-24.5**	**-10.3**	**-25.7**	**-28.2**
Producer NPC (coeff.)	**0.89**	**0.79**	**0.89**	**0.78**	**0.77**
Producer NAC (coeff.)	**0.89**	**0.80**	**0.91**	**0.80**	**0.78**
General Services Support Estimate (GSSE)	**116**	**408**	**606**	**374**	**245**
Agricultural knowledge and innovation system	66	213	305	210	123
Inspection and control	33	126	171	114	92
Development and maintenance of infrastructure	17	68	125	48	29
Marketing and promotion	0	3	5	2	1
Cost of public stockholding	0	0	0	0	0
Miscellaneous	0	0	0	0	0
Percentage GSSE (% of TSE)	..	..	..	..	..
Consumer Support Estimate (CSE)	**456**	**6 301**	**1 454**	**9 227**	**8 222**
Transfers to producers from consumers	483	6 751	1 740	9 740	8 772
Other transfers from consumers	-6	-1	-6	-4	9
Transfers to consumers from taxpayers	0	0	0	0	0
Excess feed cost	-21	-449	-280	-509	-559
Percentage CSE (%)	**12.6**	**25.4**	**6.0**	**27.3**	**29.8**
Consumer NPC (coeff.)	**0.88**	**0.79**	**0.93**	**0.78**	**0.76**
Consumer NAC (coeff.)	**0.89**	**0.80**	**0.94**	**0.79**	**0.77**
Total Support Estimate (TSE)	**-919**	**-9 014**	**-3 433**	**-12 114**	**-11 493**
Transfers from consumers	-477	-6 750	-1 733	-9 736	-8 780
Transfers from taxpayers	-436	-2 263	-1 694	-2 374	-2 722
Budget revenues	-6	-1	-6	-4	9
Percentage TSE (% of GDP)	**-1.1**	**-2.0**	**-0.5**	**-2.3**	**-2.6**
Total Budgetary Support Estimate (TBSE)	**212**	**705**	**1 043**	**672**	**400**
Percentage TBSE (% of GDP)	**0.1**	**0.1**	**0.2**	**0.1**	**0.1**
GDP deflator (2000-02=100)	**100**	**3 164**	**2 092**	**2 943**	**4 458**
Exchange rate (national currency per USD)	**1.70**	**30.97**	**16.56**	**28.11**	**48.23**

.. Not available

Note: p: provisional. NPC: Nominal Protection Coefficient. NAC: Nominal Assistance Coefficient.
A/An/R/I: Area planted/Animal numbers/Receipts/Income.
1. Market Price Support (MPS) is net of producer levies and excess feed cost. MPS commodities for Argentina are: wheat, maize, soybean, sunflower, fruit and vegetables, milk, beef and veal, pig meat, poultry and eggs.

Source: OECD (2020), "Producer and Consumer Support Estimates", *OECD Agriculture statistics* (database), http://dx.doi.org/10.1787/agr-pcse-data-en.

Contextual information

Argentina is an upper middle income country with an efficient agricultural sector that makes a growing contribution to the GDP, from 4.7% of the GDP in 2000 to 6.1% in 2018. In contrast, agriculture's share of employment is decreasing and well below 1%, with a high degree of mechanisation of production in the Pampas region. The country is one of the world's largest agricultural exporters, and agro-food exports have been growing significantly in the last decades, representing 42% of total exports in 2000, and 51% in 2018, almost eight times the average share across all countries in the report. In contrast, agro-food imports represent only 7% of total imports.

Argentina has abundant agricultural land representing 5% of the total agricultural area of all countries covered in this report, although a large share constitutes pasture land. The share of livestock in the total value of production was 36% in 2018.

Table 3.2. Argentina: Contextual indicators

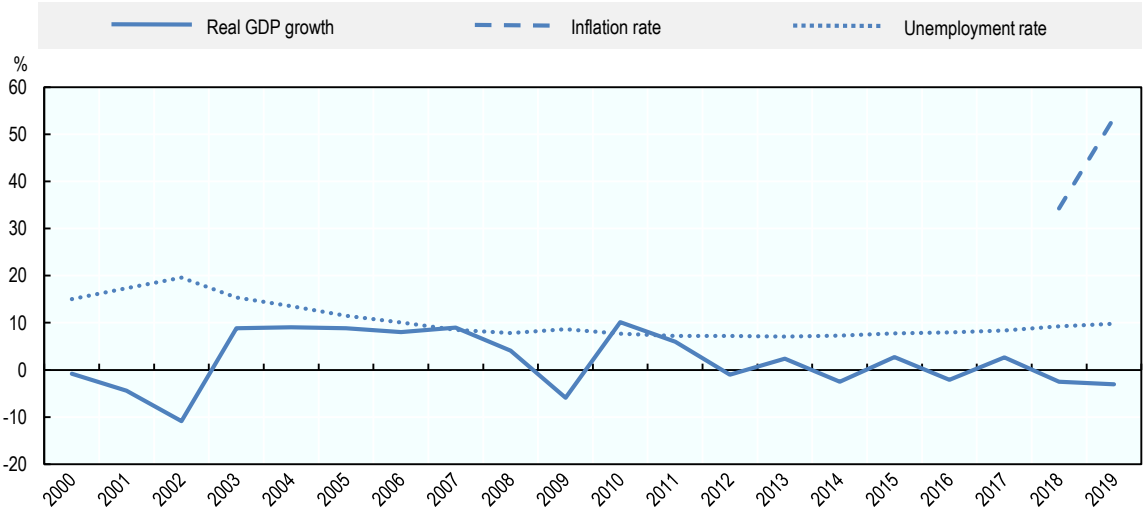
	Argentina		International comparison	
	2000*	2018*	2000*	2018*
Economic context			**Share in total of all countries**	
GDP (billion USD in PPPs)	439	917	1.1%	0.8%
Population (million)	37	44	0.9%	0.9%
Land area (thousand km^2)	2 737	2 737	3.4%	3.3%
Agricultural area (AA) (thousand ha)	128 510	148 700	4.3%	5.0%
			All countries[1]	
Population density (inhabitants/km^2)	14	16	53	62
GDP per capita (USD in PPPs)	11 917	20 611	9 275	21 924
Trade as % of GDP	9	12	12.4	15.3
Agriculture in the economy			**All countries[1]**	
Agriculture in GDP (%)	4.7	6.1	3.1	3.6
Agriculture share in employment (%)	0.7	0.1	-	-
Agro-food exports (% of total exports)	41.5	50.9	6.2	7.3
Agro-food imports (% of total imports)	5.4	7.0	5.5	6.3
Characteristics of the agricultural sector			**All countries[1]**	
Crop in total agricultural production (%)	59	64	-	-
Livestock in total agricultural production (%)	41	36	-	-
Share of arable land in AA (%)	22	26	32	33

Notes: *or closest available year. 1. Average of all countries covered in this report. EU treated as one.
Sources: OECD statistical databases; UN Comtrade; World Bank, WDI and national data.

The Argentine economy began to stall when the peso came under pressure in April 2018. The value of the peso vis-à-vis the USD was reduced by half in 2018 and by a further third in 2019, plunging the economy into recession and inducing high annual inflation rates above 40% during these two years. In 2018, the International Monetary Fund and Argentina reached a USD 57 billion financing agreement.

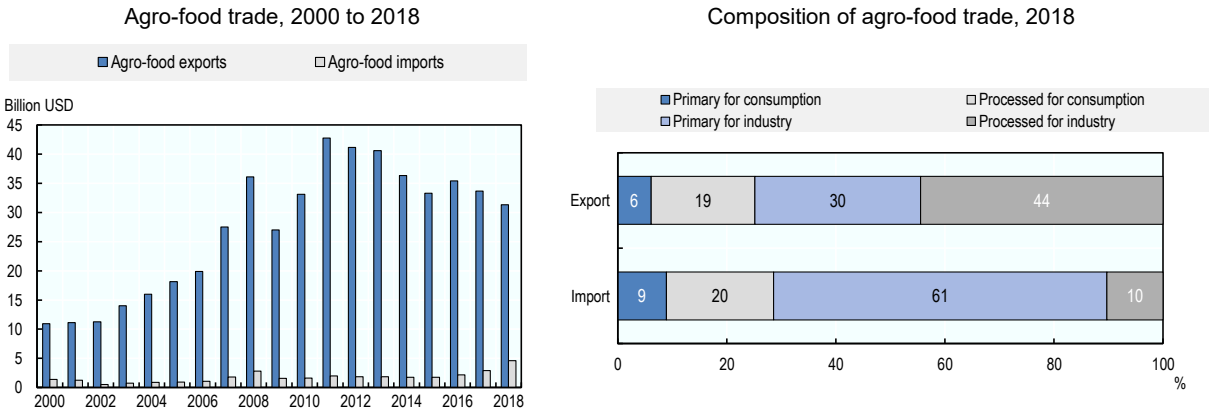
The agro-food trade surplus was above USD 30 billion in 2018. Most of agro-food exports (74%) are primary or processed products used as inputs in downstream industries abroad, whereas the much smaller bundle of agro-food imports is mostly concentrated in primary products for the industry.

Figure 3.4. Argentina: Main economic indicators, 2000 to 2019



Sources: OECD statistical databases; World Bank, WDI and ILO estimates and projections.

Figure 3.5. Argentina: Agro-food trade

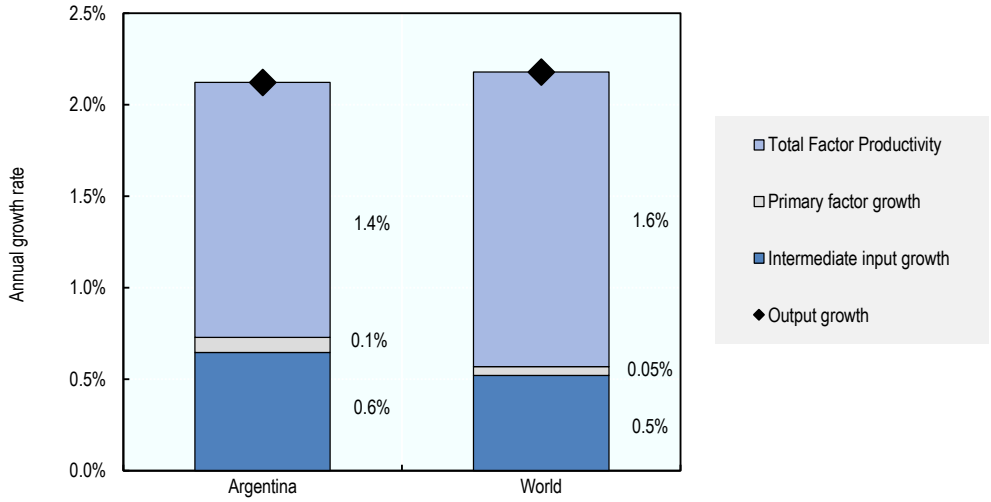


Note: Numbers may not add up to 100 due to rounding.
Source: UN Comtrade Database.

Argentine agricultural production has increased at an annual rate of 2% between 2007 and 2016, similar to the world average. Out of this total growth, 0.6% was due to an increase in intermediate inputs, while the bulk of production growth (1.4%) was due to Total Factor Productivity (TFP), that is, innovations and technical improvements in the way resources are used in production. The contribution of TFP to production growth is slightly below the world average.

Agricultural nutrient balances in Argentina are below the OECD average and slightly negative. The shares of agriculture in energy use and in greenhouse gas (GHG) emissions are, at 6.4% and 30.6% respectively, well above the OECD average, related to the importance of the sector in GDP and the large number of ruminants.

Figure 3.6. Argentina: Composition of agricultural output growth, 2007-16



Note: Primary factors comprise labour, land, livestock and machinery.
Source: USDA Economic Research Service Agricultural Productivity database.

Table 3.3. Argentina: Productivity and environmental indicators

	Argentina		International comparison	
	1991-2000	2007-2016	1991-2000	2007-2016
			World	
TFP annual growth rate (%)	1.7%	1.4%	1.6%	1.6%
			OECD average	
Environmental indicators	**2000***	**2018***	**2000***	**2018***
Nitrogen balance, kg/ha	-1.4	-5.7	33.3	29.1
Phosphorus balance, kg/ha	2.0	-0.1	3.3	2.3
Agriculture share of total energy use (%)	5.4	6.7	1.7	2.0
Agriculture share of GHG emissions (%)	40.5	30.6	8.1	8.9
Share of irrigated land in AA (%)	..	1.6	-	-
Share of agriculture in water abstractions (%)	..	73.9	46.0	49.0
Water stress indicator	..	..	9.9	8.9

Notes: * or closest available year.
Sources: USDA Economic Research Service, Agricultural Productivity database; OECD statistical databases; FAO database and national data.

Description of policy developments

Main policy instruments

In addition to the Ministry of Agriculture, Livestock and Fisheries, other government agencies also implement policy measures providing support to agriculture in Argentina, such as the Ministry of Finance that designs and implements export taxes. In contrast to most other countries covered by this report, producers of main agricultural products in Argentina are implicitly taxed through negative price support. Export restrictions have had, and continue to have, a major impact in depressing producers' prices below international references and creating negative transfers to producers. The government made efforts to reduce export taxes between 2015 and September 2018, but introduced a new tax of 12% on all exports and of 30% on soya, oriented to raising fiscal revenue in September 2018. The export tax rates can be

and are adjusted by the government through a decree. These measures remain the major component of policy transfers from the agricultural sector. Argentina provides only few payments to farmers. Highly distorting measures are limited to the mentioned export taxes and specific output payments to tobacco producers.

Budgetary programmes are concentrated on financing the provision of general services such as the agricultural knowledge and innovation system or inspection control services, which represent the majority of budgetary support in Argentina. Research and development and extension services are mainly provided by the National Institute for Agricultural Technology INTA, while animal and plant health and input control services are provided mainly by the plant and animal health agency SENASA.

The Special Tobacco Fund (*Fondo Especial del Tabaco* FET) provides a supplementary payment to market prices as part of a broader policy arrangement. Created in 1972, the FET (Decree Law 19.800) provides this additional revenue to tobacco producers located in the northern provinces of Jujuy, Salta, Misiones, Tucuman, Corrientes, Chaco and Catamarca. These provinces are dominated by small producers with economic and social difficulties. The fund is financed by a tax of 7% on tobacco retail consumption prices (excluding IVA) and the interests and other revenue generated by the fund, and is directly managed by the Ministry of Agriculture, Livestock and Fisheries. The federal government transfers 80% of the funds to the tobacco producing provinces proportional to their share in national production. Historically, in accordance with the provisions of Law 19800, that percentage of the funds goes to the so-called FET amount used by the provinces to supplement prices to producers. However, after the signature of the WTO agreement in 1994, Argentina committed to reduce this support as part of its Aggregate Measurement of Support (AMS) commitment, constraining FET output payments expenditure to the equivalent of USD 75 million, with the rest being spent on programmes to provide technical assistance, to invest in local infrastructure and even to provide social and health assistance.

Argentina provides very limited input subsidies, mostly in the form of implicit interest rate subsidies through preferential credit provided by a set of programmes under FINAGRO. These credits are targeted to a range of products to finance investment and working capital. A new fund, FONDAGRO, was created in 2017 to finance investment in the sector at preferential interest rates, but its current scope is limited.

There are almost no other direct payments to producers in Argentina. Limited amounts are provided as disaster assistance in response to extreme weather events, mainly droughts. There are no national direct payments for agri-environmental services, and few at provincial level.

The Agricultural Provincial Services Programme (PROSAP), financed with loans by the Inter-American Development Bank (IADB) and managed by the Ministry of Agriculture, Livestock and Fisheries, invests mainly in large agricultural irrigation infrastructure.

Argentina submitted its Nationally Determined Contributions (NDCs) under the Paris Agreement on Climate Change in October 2016. Argentina's goal is to reduce GHG emissions by 18% in 2030 with respect to projected emissions for that year. Among the main measures affecting the agricultural sector in response to the commitments made in the Argentine NDCs are the Native Forest Law (Law 26.331), the improvement of soils through practices such as no-tillage, and the substitution of fossil fuels by biofuels.

The agriculture and livestock sector contributes to 28% of total GHG emissions in Argentina. The **National Plan for Agriculture and Climate Change** and the inventory of agricultural emissions monitor the contribution of the sector to the country's mitigation efforts under its NDCs commitments. The plan includes the following measures to reduce emissions from agriculture: increasing the application of crop rotation; promotion of grass fed livestock for capturing carbon; and generation of thermic energy with biomass (PROBIOMASA). Law 25080 that promotes new forest plantations to act as carbon sinks, was extended for a new ten-year period.

Argentina is a large exporter of biodiesel produced from soya and has an active biofuel policy. The Biofuel Law 26.093, approved in 2006, established compulsory blend mandates since 2010, starting at 5% but

then progressively increased to 10% for diesel and 12% for gasoline. The law also assures the purchase of biofuels at a calculated price up to the end-term of the law in 2021. Biofuel production can also benefit from some fiscal concessions. First, exports of biofuels have historically been taxed less than the export of crops, in particular soybeans. Second, the law establishes that domestic consumption of biofuels benefits from a VAT rebate under certain conditions.

Since January 2020, a new social programme "Argentina against hunger" provides financial support for children, pregnant women and disabled people. Support is channelled through an electronic food card to be used in any store to buy food products.

Domestic policy developments in 2019-20

Economic and policy uncertainty was high in Argentina during 2019, with economic recession and a general election in October. The peso continued to depreciate losing an additional third of its value, inflation exceeded 50% and public debt was expected to exceed 90% of GDP by end-2019, while being highly sensitive to exchange rate movements as over 75% of public debts are nominated in foreign currency. The resulting liquidity challenges have led to a re-profiling of short-term debt and the reinstatement of currency controls in mid-2019. In April 2019, in order to curb inflation, Argentina fixed retail prices of agro-food products, including rice and wheat flour products. The newly established prices were set at levels similar to the prevailing market prices and the Ministry of Internal Trade monitors retailers' compliance to the policy.[1]

In December 2019, the new government **re-established a separate Ministry of Agriculture, Livestock and Fisheries**. The new ministry takes over the responsibilities of the former Secretariat of Government of Agro-Industry, which had been part of the Ministry of Production and Labour since September 2018.

The new government introduced **a new social programme "Argentina against hunger"** in January 2020 (Resolution 8/2020) with the objective of guarantee access to food, with special attention to the most economically and socially vulnerable sectors. The programme provides monthly financial support through an electronic "food card" allowing card holders to buy all categories of food products (excluding alcoholic drinks) up to the value of a basic basket of quality food including dairy, vegetables, meat, and other fresh food. The cards are to be distributed to the parents that are current beneficiaries of the universal allowance for children under 6 years of age (AUH programme), pregnant women from the third month of pregnancy and disabled persons eligible for AUH.

In late 2018, the Congress approved Law 27454 that created the **National Plan against Food Waste and Losses** (FW&L) in order to continue working with the FAO and other allies on the implementation of this plan that will include the following actions: improvements in infrastructure; implementation of new technologies; and agreements with NGOs, schools and media to reduce FW&L and to increase donations. The new law limits the responsibility of the food donor in order to facilitate donations that could otherwise be wasted, while ensuring conformity with the Argentine Food Code. The government is working with the FAO on the implementation of this plan that includes the following actions: communication campaigns to create awareness across all actors in the food chain.

In July and November 2019, the Ministry of Finance increased the price of sugarcane-based and maize-based ethanol used in fuel blending by 8% and 3%, respectively (Resolutions 119/2019 and 290/2019).

The Ministry of Agriculture, Livestock and Fisheries launched a **National Programme to support Good Agronomic Practices (GAPs) in the Fruits and Vegetables sector** (Resolution 174/18). These practices became mandatory since their inclusion in the Argentine Food Code by joint Resolution 5/2018 from the State Secretariat of Health and the former Ministry of Agro-industry. The GAPs aim to strengthen the safety of fresh fruit and vegetable foods, as well as the preservation and rational management of soil, water and energy resources, to promote sustainable production systems. The training is mandatory with official certification and periodic update through a virtual course designed by the Ministry together with INTA and

SENASA. Resolution 198/19 created the **National Programme on Food and Vegetables** in October 2019, focussing on the adoption of technological innovations that could improve competiveness, and on systematic data collection related to the application of inputs in order to better plan production in different geographical areas.

A new programme for good agricultural practices in the dairy primary sector was launched in 2019 (Resolution 166/19). It provides technical assistance and capacity building services to producers, promoting the use of certificates and protocols. This is in line with the "Rotterdam Declaration for the contribution of the Dairy sector to the SDGs", to which Argentina adhered in 2019 (Resolution 105/19). The province of Córdoba approved Law 10.663 on good agricultural practices in 2019, the first legislation in the country defining compulsory general criteria for sustainable production and management of natural resources.

The Ministry of Agriculture, Livestock and Fisheries created a working group on the environmental competitiveness of the agro-food sector (Resolution 122/19). The group has so far proposed an information system for the analysis of the life cycle of food products, a set of agri-environmental indicators to monitor the performance of the sector in this area, and capacity building measures.

Resolutions 36/2019 and 44/2019 created a **new regulatory procedure for the evaluation and approval of new GMO events** based on a case-by-case assessment by the National Commission of Advice on Agricultural Biotechnology (CONABIA). In 2019, seven new GMO events[2] were approved in Argentina for cotton and maize.

Several government initiatives focused on improving the application of agro-chemicals. SENASA Resolution 32/19 establishes a **list of active agro-chemical principles** according to their legal status: forbidden or usable under certain restrictions. The joint Resolution 1/2018 of the Ministries of Agriculture, Livestock and Fisheries and Environment had launched a public consultation in 2018 on the public policy principles for the application of agro-chemicals, including a comparative analysis of legislation across provinces. Additionally, in 2019 the Ministry of Environment launched an inter-ministerial working group on the use of chemical products. The former Ministry of Agro-industry and the former Ministry of Sustainable Development approved a joint resolution (1/2018) that creates the Inter-ministerial Working Group on Good Practices on Pesticide Applications. The Action Plan on Bio-inputs (Resolution 105/19) involves all actors from the public and private sectors to develop alternatives and complements to chemical products.

SENASA Resolution 67/19 approves the National Plan for the Control and Eradication of Bovine Brucellosis. The plan includes compulsory vaccination in all territories except Tierra de Fuego, Antarctica and the South Atlantic Islands.

On 13 June 2019, the Ministry of Agriculture, Livestock and Fisheries granted ARS 87 million (USD 1.44 million) through the National Fund for the Mitigation of Agricultural Emergencies and Disasters to assist producers in the Chaco province who were affected by severe floods (Resolution 33/19).

Trade policy developments in 2019-20

Two Decrees (280/2019 and 335/2019) modified the temporary emergency measure re-establishing export taxes of up to 12% on all exports of goods and services adopted in September 2018 and expected to expire in December 2020. They provide an export tax allowance to micro, small and medium enterprises for all exports exceeding the FOB value of their exports in the previous calendar year. The allowance only applies if exports did not exceed USD 50 million in the previous year and to a maximum of USD 0.6 million (USD 0.3 million if the firm did not export in the previous year).

The Decree 37/2019 eliminates the ceiling on the export tax of ARS 4 per USD for primary agricultural goods, which *de facto* raises the export tax to 30% for soya products and 12% for other products. In addition, Law 27.541 (article 52) authorises the government to modify the export tax of these commodities

to a maximum of 33% and 15%, respectively. On 5 March 2020, Argentina (Decree 230/2020) increased export taxes for soybean and soybean products from 30% to 33%. Export taxes were lowered from 9% to 5% for maize flour and from 9% to 7% for wheat flour, while export taxes for maize and wheat were kept constant at 12%.

In May 2019, the Ministry of Treasury in Argentina exempted imports of soybeans that are crushed for re-export in the form of meal/oil from the generic import tax.[3] The exemption was granted to support the local crushing industry and facilitate the country's exports of soymeal/oil.

In June 2019 the **European Union and Mercosur reached a free trade agreement** involving EU Member States and the members of Mercosur (Argentina, Brazil, Paraguay and Uruguay) (Baltensperger and Dadush, 2019[1]). On industrial goods, the agreement removes all tariffs on EU imports from Mercosur and on 90% of imports by Mercosur from EU Member States. On agricultural goods, the agreement removes tariffs on 82% of EU imports from Mercosur (including many fruits, juice, wine, coffee and fish products), and on 93% of Mercosur imports from the European Union (including olive oil, wine and chocolate),[4] all with a transition period of up to 10 years after entering into force. Market access to the EU common market from Mercosur member countries is to be further improved through the expansion of the EU tariff rate quotas (TRQs) for sensitive products such as beef, poultry, pork, sugar, ethanol and cheese. The agreement also foresees facilitating trade with streamlined border and sanitary and phytosanitary (SPS) procedures, mutual recognition of Geographical Indications (GIs), and a chapter on trade and sustainable development. The agreement is still undergoing technical revision and translation, and remains to be approved by the European Union and Member States as well as by Mercosur countries.

References

Baltensperger, M. and U. Dadush (2019), "The European Union-Mercosur Free Trade Agreement: Prospects and risks", *Policy Contribution, Bruegel* 11, https://www.bruegel.org/wp-content/uploads/2019/09/PC-11_2019.pdf. [1]

Notes

[1] AMIS Market Monitor No 68, May 2019.

[2] A GM event is defined by the insertion of DNA into the plant genome as a result of a single transformation process. Each event needs to be approved by the authorities before its commercial use.

[3] AMIS Market Monitor No 69, June 2019.

[4] Mercosur-EU Strategic Association Agreement, informative summary prepared by the Argentine Government (July 2019), https://www.cancilleria.gob.ar/userfiles/prensa/resumen_acuerdo_mcs-ue_elaborado_por_gobierno_argentino.pdf.

4 Australia

Support to agriculture

Australia's support to agricultural producers continues to be among the lowest in the OECD, estimated at around 2% of gross farm receipts for the period 2017-19, with total support to agriculture (TSE) representing around 0.1% of GDP. Over time, the composition of the TSE has moved away from producer support (PSE) and the share of General Services Support (GSSE) in total support (TSE) has increased, from less than 10% in the late 1980s to 55% in 2017-19. The GSSE has consistently exceeded support to producers (PSE) since 2012.

Policy measures that conveyed market price support to producers were terminated in 2000 and, since that date, domestic prices for Australia's main agricultural outputs have been at parity with world prices. Around 45% of support provided to producers was in the form of subsidies to input use in the 2017-19 period. Much of these subsidies were for upgrading on-farm water infrastructure and for concessional loans, including related to droughts and other adverse events. The bulk of the remaining producer support (about 40% of the PSE) is directed towards income smoothing programmes that address cash flow fluctuations, such as the Farm Management Deposits and income tax averaging arrangements. In addition, recourse to disaster payments has occurred in the recent period.

With approximately one-third of total public expenditure attributed to knowledge and innovation services, Australia has developed an extensive agricultural knowledge and innovation system. Public expenditure also funds inspection and control services, and support to develop and upgrade infrastructure, mostly hydrological, represents the bulk of the remaining expenditure on GSSE.

Main policy changes

In 2019, the main policy changes related to response measures to continued drought conditions. These consisted of extensions to concessional loans, direct payments and tax exemptions. New loans were made available and payback conditions of existing credit instruments were eased. At the same time, the network of farm financial counsellors was strengthened to improve farmer access to financial information and advice. Tax exemptions were extended and eligibility to income support for farm households was widened, with the payment amount increased and the application process simplified, and matched by a larger budget that can be further increased. Additional drought payments were available in specific areas and access to water was supported with rebated water rates and support to on-farm water infrastructures investments. Funding was secured for large-scale water infrastructure development.

Other developments included credit for farm transmission and new funds attributed to enhancing environmentally sustainable farm management practices. The mandatory code of conduct for the dairy sector was implemented to address market transparency and fairness issues. Support measures for small exporters' access to foreign markets were prolonged and the Australia-Hong Kong, China Free Trade Agreement entered into force.

Assessment and recommendations

- Australia provides low levels of support to its agricultural sector, and effort is focused primarily on improving the capacity of the sector overall to operate productively and sustainably.
- Farm support is delivered through subsidised inputs, credits, and advisory and biosecurity services together with financial risk management tools. A decline in farm income may be compensated through ad hoc grants. Challenging farming conditions due to continued drought have seen increasing use of response measures such as concessions on credit, water rates, fodder transport subsidies and additional ad hoc payments. These contrast with the past approach aimed at strengthened farm resilience to drought as a normal farming condition and may encourage risk-taking by producers.
- Research and development is a major component of general services provided to the sector, while extension and education services receive smaller funding. Further consideration should be given to these services as they facilitate knowledge transfer and innovation take-up by farmers.
- Ensuring farm economic viability in the face of resource constraints – particularly with respect to water – remains the greatest challenge to Australia's agricultural sector. Reforms have initiated water pricing mechanisms that help convey the scarcity of water to producers. Investments support better water use efficiency at both the farm level and in wider water management basins. These efforts may be undermined by recent support to the development of new sources of water in response to continued drought conditions. Policymakers should continue to evaluate future projects cautiously to ensure that they take into account longer-term climatic projections and do not incentivise maladaptive behaviour that may worsen conditions for the sector's future.
- Australia's agricultural sector, as part of the land-based sectors, contributes to the country's response to the 2016 Paris Agreement on Climate Change, including through a commitment to reduce the sector's greenhouse gas (GHG) emissions by between 26% and 28% in 2030 compared to the 2005 levels, as defined in the Australian Nationally Determined Contributions (NDCs). Abatement subsidies are available through the Emissions Reduction Fund (ERF) and the sector's emissions should be better informed by the release of a new version of the FullCAM modelling tool. Improved evidence offers an opportunity to develop a more systematic and sector-wide approach; in anticipation of future climate policies that may impact the sector to a greater extent than in the past.

Policy responses in relation to the COVID-19 outbreak

Agricultural policies

Farming, food and beverage production, livestock sale yards and wool auctions and those who support these businesses, including food markets and food banks, are identified as essential services and are exempt from indoor and outdoor gathering restrictions while adhering to social distancing and hygiene guidelines. Businesses are encouraged to consider online and remote alternatives. Furthermore, services that support agriculture are also exempt from state and territory border restrictions.[1]

The Australian Government made temporary changes to visa arrangements. Implemented from 4 April 2020, temporary work visas under three programmes for foreign workers in the agricultural sector may be extended by up to 12 months.[2]

Measures taken to support the continuity of Australian agro-food exports include COVID-19 related updates of the manual of importing country requirements (MICoR).[3] Air cargo exporters of high-value perishable agricultural and fisheries products with established overseas customers benefit from a total air

freight support budget of AUD 110 million (USD 75 million); identified products include premium red meat and seafood, dairy, and horticultural premium fruits and packaged salad or vegetables.[4]

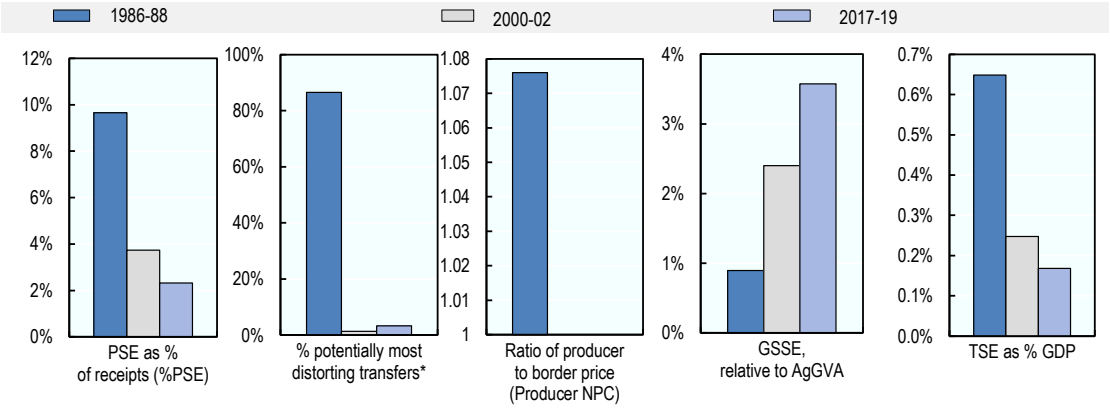
While biosecurity and imported food requirements continue to apply to food imports,[5] temporary arrangements are made to ease import requirements for imports that must be accompanied by certificates. Arrangements include accepting electronic copies of phytosanitary certificates (PCs) and health certificates (HC), when an original HC has been previously provided, in lieu of original paper-based documents. This temporary arrangement is currently foreseen until 1 July 2020 with any extension to be announced closer to the date.[6] Stakeholders are also informed to expect delays in the import permit functions for processed plant-based stock feed.[7]

Consumer policies

Messages on food safety and food security are directed to public in general with the aim to reassure consumers on quality and quantity of available food.

Food and meal distribution institutions are attributed an extra AUD 120 million (USD 77 million) to cover costs resulting from the impact of COVID-19. Dedicated phone lines for older and vulnerable people have been strengthened to support their access to basic food and groceries.[8]

Figure 4.1. Australia: Development of support to agriculture

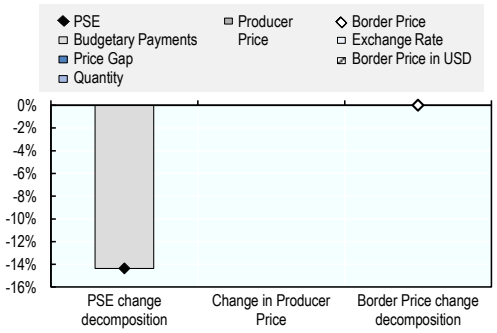


Note: * Share of potentially most distorting transfers in cumulated gross producer transfers.
Source: OECD (2020), "Producer and Consumer Support Estimates", OECD Agriculture statistics (database), http://dx.doi.org/10.1787/agr-pcse-data-en.

StatLink https://doi.org/10.1787/888934143679

Support to farmers (%PSE) has declined gradually over the long term. During 2017-19, support is estimated at 2.3% of gross farm receipts, well below the OECD average (Figure 4.1). The share of potentially **most distorting support** is low, and now represents a very small share of the already low PSE. Prices received by Australian farmers are on par with international prices, with only sugar producers receiving single commodity transfers (SCT) related to capital subsidies to reduce environmentally detrimental run-off (Figure 4.3). Overall, the value of farm support dropped by 14% in 2019 compared to 2018, largely due to lower expenditures in 2019 on relief measures in response to natural disasters. (Figure 4.2). Expenditures for **general services** (GSSE) have generally increased over time reaching their highest level in 2017. Since then, however, overall GSSE expenditure has declined, mostly due to lower expenditure on hydrological infrastructure (Table 4.1). **Total support to agriculture** as a share of GDP has declined significantly over time, with GSSE expenditure representing the majority of support since 2012 (around 55% from 2017-19).

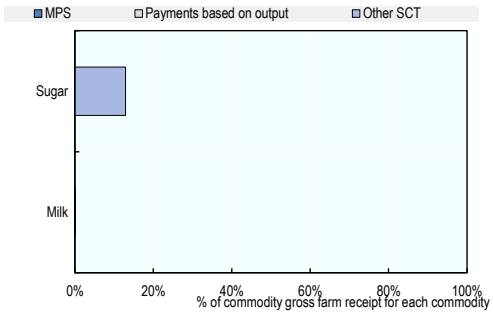
Figure 4.2. Australia: Drivers of the change in PSE, 2018 to 2019



Source: OECD (2020), "Producer and Consumer Support Estimates", OECD Agriculture statistics (database), http://dx.doi.org/10.1787/agr-pcse-data-en.

StatLink https://doi.org/10.1787/888934143698

Figure 4.3. Australia: Transfer to specific commodities (SCT), 2017-19



Source: OECD (2020), "Producer and Consumer Support Estimates", OECD Agriculture statistics (database), http://dx.doi.org/10.1787/agr-pcse-data-en.

StatLink https://doi.org/10.1787/888934143717

Table 4.1. Australia: Estimates of support to agriculture

Million USD

	1986-88	2000-02	2017-19	2017	2018	2019p
Total value of production (at farm gate)	**14 358**	**19 605**	**44 659**	**45 317**	**46 493**	**42 167**
of which: *share of MPS commodities (%)*	82.4	74.3	72.9	73.6	73.2	71.9
Total value of consumption (at farm gate)	**5 066**	**7 567**	**20 932**	**18 388**	**22 948**	**21 460**
Producer Support Estimate (PSE)	**1 411**	**761**	**1 068**	**1 410**	**999**	**796**
Support based on commodity output	1 000	0	0	0	0	0
Market Price Support[1]	1 000	0	0	0	0	0
Positive Market Price Support	1 002	0	0	0	0	0
Negative Market Price Support	-2	0	0	0	0	0
Payments based on output	0	0	0	0	0	0
Payments based on input use	230	309	484	799	356	298
Based on variable input use	217	14	177	409	60	62
with input constraints	0	4	143	373	26	29
Based on fixed capital formation	4	145	147	191	146	103
with input constraints	0	0	34	59	26	18
Based on on-farm services	9	150	161	199	149	133
with input constraints	0	0	0	0	0	0
Payments based on current A/An/R/I, production required	0	11	134	77	220	104
Based on Receipts / Income	0	11	134	77	220	104
Based on Area planted / Animal numbers	0	0	0	0	0	0
with input constraints	0	0	0	0	0	0
Payments based on non-current A/An/R/I, production required	0	0	0	0	0	0
Payments based on non-current A/An/R/I, production not required	181	442	449	533	422	393
With variable payment rates	181	343	446	529	418	389
with commodity exceptions	0	110	306	383	276	257
With fixed payment rates	0	99	4	4	4	3
with commodity exceptions	0	0	0	0	0	0
Payments based on non-commodity criteria	0	0	1	1	1	1
Based on long-term resource retirement	0	0	0	0	0	0
Based on a specific non-commodity output	0	0	0	1	0	0
Based on other non-commodity criteria	0	0	1	0	1	1
Miscellaneous payments	0	0	0	0	0	0
Percentage PSE (%)	**9.7**	**3.7**	**2.3**	**3.0**	**2.1**	**1.9**
Producer NPC (coeff.)	**1.08**	**1.00**	**1.00**	**1.00**	**1.00**	**1.00**
Producer NAC (coeff.)	**1.11**	**1.04**	**1.02**	**1.03**	**1.02**	**1.02**
General Services Support Estimate (GSSE)	**98**	**370**	**1 316**	**1 513**	**1 351**	**1 085**
Agricultural knowledge and innovation system	95	252	740	702	786	731
Inspection and control	3	39	99	131	86	81
Development and maintenance of infrastructure	0	75	462	663	463	260
Marketing and promotion	0	4	11	14	10	11
Cost of public stockholding	0	0	0	0	0	0
Miscellaneous	0	0	4	3	7	2
Percentage GSSE (% of TSE)	**6.5**	**36.4**	**55.3**	**51.8**	**57.5**	**57.7**
Consumer Support Estimate (CSE)	**-513**	**-116**	**0**	**0**	**0**	**0**
Transfers to producers from consumers	-513	0	0	0	0	0
Other transfers from consumers	0	0	0	0	0	0
Transfers to consumers from taxpayers	0	-116	0	0	0	0
Excess feed cost	0	0	0	0	0	0
Percentage CSE (%)	**-10.1**	**-1.5**	**0.0**	**0.0**	**0.0**	**0.0**
Consumer NPC (coeff.)	**1.11**	**1.00**	**1.00**	**1.00**	**1.00**	**1.00**
Consumer NAC (coeff.)	**1.11**	**1.02**	**1.00**	**1.00**	**1.00**	**1.00**
Total Support Estimate (TSE)	**1 509**	**1 015**	**2 384**	**2 923**	**2 350**	**1 881**
Transfers from consumers	513	0	0	0	0	0
Transfers from taxpayers	996	1 015	2 384	2 923	2 350	1 881
Budget revenues	0	0	0	0	0	0
Percentage TSE (% of GDP)	**0.6**	**0.2**	**0.2**	**0.2**	**0.2**	**0.1**
Total Budgetary Support Estimate (TBSE)	**509**	**1 015**	**2 384**	**2 923**	**2 350**	**1 881**
Percentage TBSE (% of GDP)	**0.2**	**0.2**	**0.2**	**0.2**	**0.2**	**0.1**
GDP deflator (1986-88=100)	**100**	**149**	**240**	**234**	**239**	**246**
Exchange rate (national currency per USD)	**1.40**	**1.83**	**1.36**	**1.30**	**1.34**	**1.44**

Note: p: provisional. NPC: Nominal Protection Coefficient. NAC: Nominal Assistance Coefficient.
A/An/R/I: Area planted/Animal numbers/Receipts/Income.
1. Market Price Support (MPS) is net of producer levies and excess feed cost. MPS commodities for Australia are: wheat, barley, oats, sorghum, rice, soybean, rapeseed, sunflower, sugar, cotton, milk, beef and veal, sheep meat, wool, pig meat, poultry and eggs.

Source: OECD (2020), "Producer and Consumer Support Estimates", *OECD Agriculture statistics* (database), http://dx.doi.org/10.1787/agr-pcse-data-en.

Contextual information

Australia has experienced consistent positive economic growth over the period under review, with low unemployment and inflation (Figure 4.4). Australia is the world's 14th largest economy (in 2018) and the sixth largest country by land area, accounting for 12% of all agricultural land in the countries included in this report but only 0.5% of the population. The country's GDP per capita is more than twice the average of the countries covered in this report (Table 4.2). While agriculture represents a small share in the economy, it contributes significantly to Australia's total exports, making the country a key supplier to world markets for agricultural products.

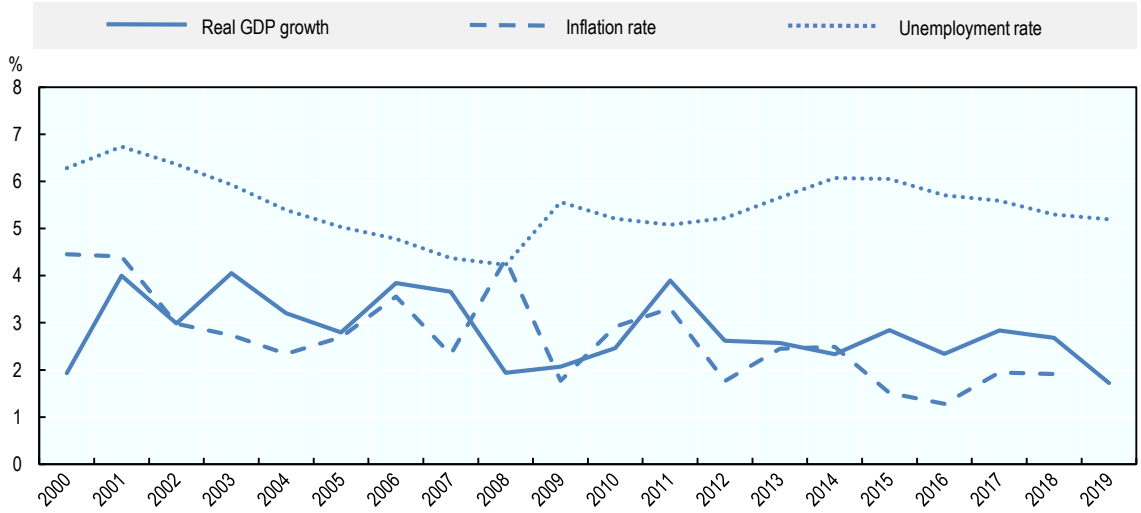
Table 4.2. Australia: Contextual indicators

	Australia		International comparison	
	2000*	2018*	2000*	2018*
Economic context			**Share in total of all countries**	
GDP (billion USD in PPPs)	538	1 341	1.3%	1.2%
Population (million)	19	25	0.4%	0.5%
Land area (thousand km²)[2]	7 682	7 692	9.4%	9.3%
Agricultural area (AA) (thousand ha)[2]	455 469	371 837	15.1%	12.4%
			All countries[1]	
Population density (inhabitants/km²)	2	3	53	62
GDP per capita (USD in PPPs)	28 249	53 663	9 275	21 924
Trade as % of GDP	17	17	12.4	15.3
Agriculture in the economy			**All countries[1]**	
Agriculture in GDP (%)	3.8	2.5	3.1	3.6
Agriculture share in employment (%)	4.8	2.6	-	-
Agro-food exports (% of total exports)	23.1	13.5	6.2	7.3
Agro-food imports (% of total imports)	4.3	6.2	5.5	6.3
Characteristics of the agricultural sector			**All countries[1]**	
Crop in total agricultural production (%)	55	49	-	-
Livestock in total agricultural production (%)	45	51	-	-
Share of arable land in AA (%)	5	8	32	33

Notes: *or closest available year. 1. Average of all countries covered in this report. EU treated as one. 2. Data are not comparable between time periods due to change in methodology.
Sources: OECD statistical databases; UN Comtrade; World Bank, WDI and national data.

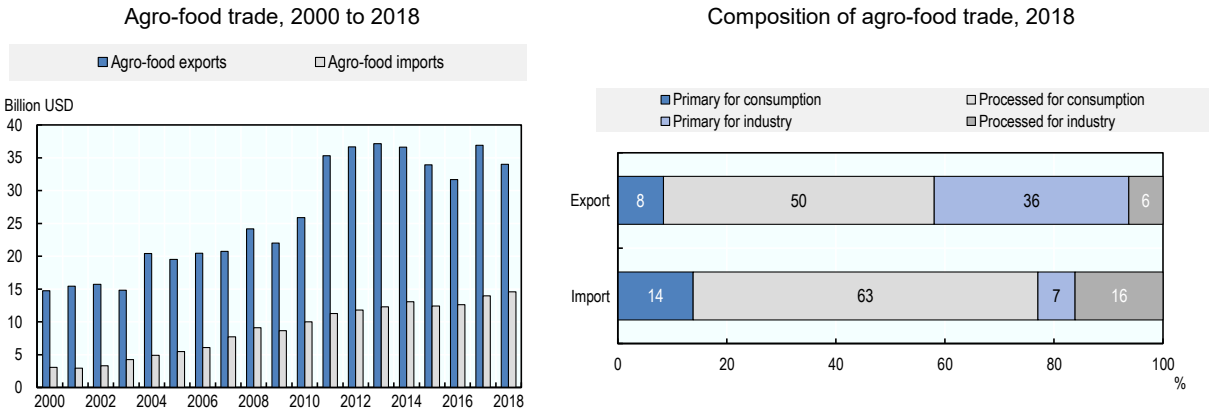
Australia is an important producer and exporter of agricultural products, while the sector's contribution to the economy and its trade has been falling over time, a trend that has continued in recent years. Australia's agro-food sector is well integrated into world markets; imports are sizeable as are exports and the country is a consistent and significant net exporter. Processed goods for final consumption and further processing make up more than half (56%) of the country's agro-food exports. Approximately three-quarters of Australia agro-food imports go to domestic final consumption and the remaining share (24%) is destined for the processing industry (Figure 4.5).

Figure 4.4. Australia: Main economic indicators, 2000 to 2019



Sources: OECD statistical databases; World Bank, WDI and ILO estimates and projections.

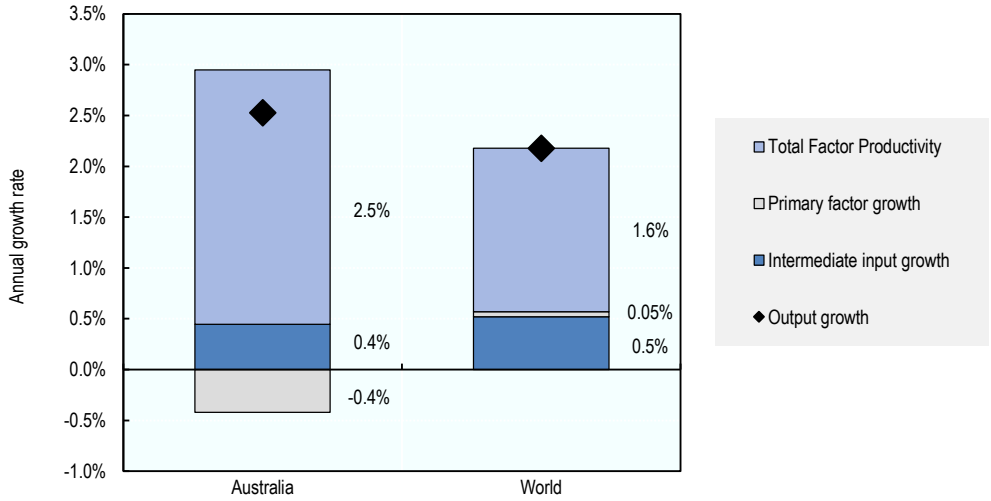
Figure 4.5. Australia: Agro-food trade



Note: Numbers may not add up to 100 due to rounding.
Source: UN Comtrade Database.

Over the 2007-16 period, total factor productivity (TFP) growth in Australia (2.5% per year) outpaced the world average (1.6%), driven by continued structural adjustment and the uptake of innovative technologies and practices in the sector (Figure 4.6). Average TFP growth slowed compared to 1991-2000 partly due to challenging climate conditions (Table 4.3). Water availability and competition with other sectors is a particularly limiting factor, which may be exacerbated by climate change.

Figure 4.6. Australia: Composition of agricultural output growth, 2007-16



Note: Primary factors comprise labour, land, livestock and machinery.
Source: USDA Economic Research Service Agricultural Productivity database.

Table 4.3. Australia: Productivity and environmental indicators

	Australia		International comparison	
	1991-2000	2007-2016	1991-2000	2007-2016
			World	
TFP annual growth rate (%)	3.3%	2.5%	1.6%	1.6%
			OECD average	
Environmental indicators	2000*	2018*	2000*	2018*
Nitrogen balance, kg/ha	20.7	19.8	33.3	29.1
Phosphorus balance, kg/ha	1.3	0.8	3.3	2.3
Agriculture share of total energy use (%)	2.3	3.2	1.7	2.0
Agriculture share of GHG emissions (%)	16.2	13.2	8.1	8.9
Share of irrigated land in AA (%)	0.5	0.6	-	-
Share of agriculture in water abstractions (%)[1]	67.7	23.3	46.0	49.0
Water stress indicator	6.1	4.8	9.9	8.9

Note: * or closest available year. 1. Data are not comparable between time periods due to change in methodology.
Sources: USDA Economic Research Service, Agricultural Productivity database; OECD statistical databases; FAO database and national data.

Description of policy developments

Main policy instruments

Australia's agricultural sector remains strongly market oriented with domestic and international prices generally aligned. A number of sanitary and phyto-sanitary (SPS) measures are in place that restrict imports of agricultural products from certain regions.

Support to agriculture is delivered through a mix of direct budgetary outlays, concessional loans and tax concessions. Direct support is provided to upgrade on-farm infrastructure that aims to improve natural resource use and environmental management. Concessional loan schemes are used to incentivise investments in weather and market risks preparedness. Since 2018, the Regional Investment Corporation

(RIC) administers farm business loans and support to States and Territories for water infrastructure projects. Farm preparedness is further strengthened through income stabilisation tools such as the Farm Management Deposits scheme and income tax averaging arrangements. Nonetheless, natural disaster payments and farm household income support occasionally are implemented during periods of hardship.

With a low level of direct government support to farmers, research and development programmes (R&D) are a major component of Australian support to agriculture, while a smaller portion of public expenditure goes to the development and maintenance of large infrastructures and inspection services, including pest and disease control activities. Industry and governments cost share the eradication of outbreaks, while trade related costs of biosecurity and food safety inspection services are covered by industry.

Rural research and development corporations (RDCs) are the Australian Government's primary vehicle for supporting rural innovation. RDCs are a partnership between the government and industry created to share the funding and strategic direction setting for primary industry R&D, investment in R&D and the subsequent adoption of R&D outputs. A levy system provides for the collection of contributions from farmers to finance RDCs, and the Australian Government provides matching funding for the levies on eligible R&D activities, up to legislated caps.

The Australian Climate Change policy directed towards agriculture seeks to address both adaptation and mitigation while, at the same time, developing responses that maintain and enhance productivity, profitability and food security. The policy was reviewed in 2017 and implementation of review outcomes began in 2019.

Australia's agricultural sector, as part of the land-based sectors, contributes to the country's response to the 2016 Paris Agreement on Climate Change, including through a commitment to reduce the sector's greenhouse gas (GHG) emissions by between 26% and 28% in 2030 compared to the 2005 levels, as defined in the Australian Nationally Determined Contributions (NDCs).

Australia's "Direct Action Plan" supports whole of economy emissions cuts through government purchase of emission reductions by the Emission Reduction Fund (ERF). The ERF is a voluntary scheme, open to all sectors, to undertake emission reductions and carbon sequestration (capture and storage of carbon) projects that meet strict integrity requirements, including in relation to additionality. Under the scheme, landowners and farmers can earn alternative and additional income through the sales to the government or to third parties of generated Australian Carbon Credit Units. The scheme is amended periodically[9] offering space for improving issues identified. These include the ability of the scheme to deliver additional carbon abatement relative to what may have occurred anyway (Burke, 2016[1]; Freebairn, 2016[2])) and for the funded projects to deliver on their intended reductions.

Trade

Australia's agriculture is trade oriented with eleven comprehensive regional or bilateral free trade agreements in force.[10] While imports of agriculture and food products, on average, face lower tariff rates than non-agricultural goods,[11] a number of sanitary and phyto-sanitary (SPS) measures are in place that restrict imports of agricultural products from certain regions.

Domestic policy developments in 2019-20

Two new concessional loans programmes were launched in 2020, to be delivered through the Regional Investment Corporation (RIC).[12] The AgriStarter loan offers a maximum amount of AUD 2 million (USD 1.4 million) over a period of 10 years to farmers who purchase, take a controlling stake or undertake succession arrangements of a farm business. The Small Business Drought Loans (AgBiz Drought loan) is available in specific geographic areas to small businesses that directly provide primary production related goods and services to farm businesses, for a maximum amount of AUD 500 000 (USD 350 000) over a period of 10 years. Drought concessional loans are available to farmers that operate a drought

management plan. From January 2020, RIC Drought loans benefit from a two-year no repayment interest-free period, three-year interest only period, followed by principal and interest over the remaining five years.

The second phase of the National Landcare Program was deployed for the period 2019-23. Total funding for the programme is AUD 1 billion (USD 700 million) for the period 2017-23, of which AUD 134 million (USD 93 million) supports the development and uptake of best practice management through the Smart Farms Program (Agriculture) and AUD 450 million (USD 312 million) goes to Regional Land Partnerships.[13] The Agriculture Stewardship Package[14] adds a further AUD 34 million (USD 24 million) over four years to the Landcare programme in support of agricultural biodiversity, including the pilot testing of a certification scheme.

Drought conditions continued in 2019 that aggravated farming conditions. A number of measures targeting affected farmers were added to the portfolio of available support at national and local levels. The Drought Response, Resilience and Preparedness Plan, released in November 2019, outlines the government's response measures. The government eased eligibility and application process to the farm household allowance payment and increased the amount available to AUD 365 million (USD 254 million) of public expenditure that can be further increased (Department of Agriculture, 2019[3]). Additional direct support is also available through the Drought Community Support Initiative, which has a budget of AUD 65 million (USD 45 million) (FY 2018-19 and FY 2019-20). With regard to concessional credit, the government added flexibility to loan repayment. The Rural Financial Counsellors Service supports farmers' capacity to understand their business options, including applying for government programmes and loans with a budget of AUD 77 million (USD 54 million) from FY 2016-17 to FY 2019-20. Investments for improved on-farm water access is supported through an investment rebate scheme with a total envelope of AUD 50 million[15] (USD 35 million) FY 2018-19 to FY 2020-21. Predetermined volumes of water at rebated rates in 2019 through 2021 are available to farmers connected to the southern Murray–Darling Basin.[16] Foregone tax income related to fodder amounts to AUD 75 million (USD 52 million) and pest and weed control to AUD 25 million (USD 17 million). From 1 July 2020, AUD 100 million (USD 70 million) supports drought resilience projects each year through the Future Drought Fund.

Farmers in areas affected by wildfires that have occurred since 31 August 2019 can access grants of up to AUD 75 000 (USD 50 000) to assist in their emergency clean-up efforts. From January 2020, low interest loans for up to AUD 500 000 (USD 348 million), with varying amounts and duration for working capital or larger investments have also been made available.[17] A two-year interest free and repayment free period applies to these loans.

Long-term water infrastructures developments are also supported with AUD 3.5 billion (USD 2 billion) from FY 2015-16 to FY 2025-26. In addition, central and regional funding support large scale water infrastructure investments with AUD 70 million (USD 49 million) from FY 2019-20 to FY 2023-24. Local government initiatives deployed include AUD 10 million (USD 6.5 million) on a "Drought Resilience Fund" for South Australian farmers.

Farmer access to information is also strengthened through the FarmHub, with AUD 770 000 (USD 535 000) over FY 2018-19 to FY 2020-21 and improved weather information collection (AUD 80 million (USD 56 million) over FY 2019-20 to FY 2041-42) and dissemination.

The mandatory dairy code of conduct came into force on 1 January 2020.[18] The code applies to supply contracts drawn after that date and regulates business relationships between farmers and processors, including banning retrospective reduction of farm gate milk price. The code is under the authority of the Australian Competition and Consumer Commission (ACCC) and provides for a dispute resolution process. It replaces the voluntary Code of practice for contractual arrangements between dairy farmers and processors in Australia in place since 2017.

Funds attributed to the Emissions Reduction Fund were increased to AUD 4.6 billion (USD 3 billion) with an addition of AUD 2 billion (USD 1.4 billion) from the Climate Solutions Fund[19] available to farmers for projects relating to land and water quality improvements and adaptation to drought.

On 25 October 2019, Australian agriculture ministers agreed to a work programme to deliver a co-ordinated national approach to supporting agriculture to adapt to climate change and manage emissions. The work programme is to be implemented through ongoing collaboration between jurisdictions and is defined by four priority areas: deliver information and tools for better decision and climate risk management, drive research and innovation to support adaptation and mitigation, strengthen market opportunities and business models to build resilience, and prepare for increasing biosecurity risk. A Climate Change Task Group has been established to oversee delivery of the work programme.

Following the 2017 review of the Australian Government's climate change policy, in March 2019 the government amended the baseline of the Emissions Reduction Fund Safeguard Mechanism. From April 2020, a new version of the Full Carbon Accounting Model (FullCAM) is to be available that should improve accounting of Australia's national greenhouse gas emissions for the land sector. The FullCAM is also to be used for calculations under the ERF. An amendment of the ERF's Carbon Credits (Carbon Farming Initiative) Rule 2015 is under development that should improve project continuity by allowing their transfer to new proponents.

The Department of Agriculture, Water and the Environment was established on 1 February 2020, bringing together the Department of Agriculture, and the Department of the Environment and Energy (Environment portfolio). At the same date, the climate change function of the Department of the Environment and Energy was transferred to the Department of Industry, Science, Energy and Resources.

Trade policy developments in 2019-20

Australia's trade policy seeks further market opening through multilateral, bilateral and regional trade agreements. The Australia-Hong Kong, China Free Trade Agreement entered into force on 17 January 2020. At this date, custom duties were eliminated for all goods including food and agriculture, while special provisions apply to imports into Australia. On 11 February 2020, the Peru-Australia Free Trade Agreement (PAFTA) entered into force. At this date, most duties on food and agricultural goods were eliminated and the elimination of remaining duties is scheduled during the subsequent four-year period.

Since the conclusion of negotiations in January 2018, the CPTPP has entered into force on 30 December 2018 for Australia, Canada, Japan, Mexico, New Zealand, Singapore and 14 January 2019 for Viet Nam. The agreement contains a number of provisions on agriculture, with expanded market access for a range of products in the various member countries, including reduced Japanese beef tariffs; new access to dairy products into Japan, Canada, and Mexico; and the elimination of all tariffs on sheep meat, cotton, and wool (DFAT, 2018[4]).

Australia also concluded negotiations for several other agreements in 2018 that have yet to enter into force. These include the Indonesia-Australia Comprehensive Economic Partnership Agreement (IA-CEPA) and the Pacific Agreement on Closer Economic Relations (PACER) Plus.[20] These agreements are expected to advance economic integration between the signatory countries in addition to improving market access. The agreements secure tariff reductions or new quotas for some of Australia's most important agricultural exports, including beef, sheep meat, dairy, and sugar (DFAT, 2020[5]).

Australia is currently engaged in seven other FTA negotiations. These include two individual bilateral FTA negotiations with India and the European Union. In addition, there are five plurilateral FTA negotiations underway – the Gulf Cooperation Council (GCC), the Environmental Goods Negotiations (undertaken in conjunction with 45 other WTO member countries), the Pacific Alliance Free Trade Agreement, the Regional Comprehensive Economic Partnership Agreement (RCEP) and the Trade in Services Agreement (TiSA) (DFAT, 2020[5]).

Support measures are designed for small exporters to overcome market access barriers and costs associated with exports registration. In 2019, the Package Assisting Small Exporters (PASE) was extended for four years to 2022 with a total budget of AUD 5 million (USD 3 million).

Standards that apply to exports of livestock, the Australian Standards for the Export of Livestock (ASEL), are reviewed every three years to ensure that the standards remain fit for purpose and reflect the latest science. The most recent review was completed in 2019 and a new version of the ASEL (ASEL version 3) is expected to be released for implementation in 2020. With regard to imports, offshore pre-shipment inspections (OPI) of horticultural fresh produce for human consumption from New Zealand and the United States will no longer be conducted from 1 May 2020 and consignments will need to go through on-arrival verification.[21]

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Notes

[1] https://www.agriculture.gov.au/coronavirus/food-agriculture.

[2] https://www.employment.gov.au/seasonal-worker-programme; https://www.dfat.gov.au/geo/pacific/engagement/pacific-labour-mobility/Pages/default.

[3] https://www.agriculture.gov.au/export/micor.

[4] https://minister.infrastructure.gov.au/sites/default/files/documents/fact_sheet_-_air_freight_assistance.pdf.

[5] https://www.agriculture.gov.au/coronavirus/import.

[6] https://bicon.agriculture.gov.au/BiconWeb4.0/ViewElement/Element/Alert?elementPk=1299586; https://bicon.agriculture.gov.au/BiconWeb4.0/ViewElement/Element/Alert?elementPk=1292850.

[7] https://bicon.agriculture.gov.au/BiconWeb4.0/ViewElement/Element/Alert?elementPk=1296462.

[8] https://www.health.gov.au/sites/default/files/documents/2020/04/assistance-with-food-and-meals-for-older-australians-impacted-by-covid-19.pdf.

[9] Last updated in April 2019 https://www.legislation.gov.au/Series/F2015L00156.

[10] These include with New Zealand (ANZCERTA 1983), Singapore (SAFTA 2003), Thailand (TAFTA 2005), the United States (AUSFTA 2005), Chile (ACIFTA 2009), the ASEAN-Australia-New Zealand Free Trade Area (AANZFTA 2010), Malaysia (MAFTA 2013), Republic of Korea (KAFTA 2014), Japan (JAEPA 2015), the People's Republic of China (ChAFTA 2015), and the Comprehensive and Progressive Agreement for Trans-Pacific Partnership (CPTPP 2018).

[11] https://www.wto.org/english/res_e/statis_e/daily_update_e/tariff_profiles/NZ_E.pdf.

[12] https://www.ric.gov.au/.

[13] http://www.nrm.gov.au/national-landcare-program.

[14] https://www.agriculture.gov.au/about/reporting/budget/sustaining-future-australian-farming.

[15] https://www.agriculture.gov.au/water/national/on-farm-infrastructure-rebate.

[16] https://www.agriculture.gov.au/water/mdb/programs/basin-wide/water-for-fodder.

[17] https://www.raa.nsw.gov.au/disaster-assistance/special-disaster-loan-bushfires.

[18] https://www.legislation.gov.au/Details/F2019L01610.

[19] https://www.environment.gov.au/climate-change/climate-solutions-package.

[20] PACER Plus has been signed by Australia, New Zealand and nine Pacific island countries (Cook Islands, Kiribati, Nauru, Niue, Samoa, Solomon Islands, Tonga, Tuvalu and Vanuatu).

[21] https://bicon.agriculture.gov.au/BiconWeb4.0/ViewElement/Element/Alert?elementPk=1295562.

5 Brazil

Support to agriculture

Reflecting its position as a competitive exporter, Brazil provides relatively low levels of support and protection to agriculture. Producer support as a share of gross farm receipts fell from 7.6% to 1.7% between 2000-02 and 2017-19. Domestic prices are currently aligned with international markets and there is very little market price support (MPS). Most of support to producers is provided through input payments, in particular concessional credit and, to lesser extent, crop insurance. Concessional credit is available for farm marketing and working capital but also for investment fixed capital. Since 2008 all support based on input use is conditional to environmental criteria and on farming practices.

Support to general services (GSSE), mainly on research, development and innovation, represented 37% of the Total support Estimate (TSE), but has fallen since 2000-02 as a percentage of agricultural gross value added. As a percentage of GDP, the TSE has also declined from 0.7% in 2000-02 to 0.3% in 2017-19.

Main policy changes

The Agriculture and Livestock Plan 2019/20 increased the maximum resources for rural credit by 8.6% compared to the plan 2018/19. Preferential interest rates remained constant for several credit lines after several years of reductions. The Law 13986 of 7 April 2020 makes legal changes to facilitate new sources of collateral for rural credit, allow credit co-operatives and other private financial institutions to receive resources from the National Treasury to cover the difference between market rates and those applied to certain rural credit operations. Up to now, only federal official banks were allowed to receive resources from the National Treasury for that purpose.

The maximum budgetary resources for insurance subsidies for 2020 have been more than doubled compared to 2019 levels to BRL 1 billion (USD 253 million) in an attempt to increase the number of insured hectares.

Under the Agriculture and Livestock Plan 2019/20, the maximum resources for marketing programmes allocated to public purchases and deficiency payments have been reduced by 28% compared to the 2018/19 plan to BRL 1.85 billion (USD 468 million). However, the regionally-set minimum prices have increased in nominal terms by 7% with higher increases in some crops such as soybean (15%) and wheat (12%).

In June 2019, the European Union and Mercosur (Argentina, Brazil, Paraguay and Uruguay) reached a free trade agreement. The agreement, which remains to be ratified, includes several provisions for increasing market access of Mercosur agricultural products – including beef, poultry, pork, sugar, ethanol and cheese – into the European Union.

Assessment and recommendations

- Agricultural credit at preferential interest rates represents an important share of agricultural support. A reform of the concessional credit system could consider a gradual downsizing of concessional loans for working capital to commercial farms. Given the reduction in the overall market interest rate in Brazil, access to credit by rural borrowers could be further facilitated through the simplification of regulations and procedures for accessing commercial credit. Agricultural credit support could be further oriented to on-farm investments that explicitly fund innovative and advanced farm management and environmental practices. The provisional measure on rural credit introduced in 2019 aims to facilitate a transition to a more liberalised rural credit market with multiple credit providers further targeting credit support to small and medium farmers. However, this measure does not modify the main structure of the National Rural Credit System (NRCS) and maintains the quotas system of compulsory resources established by the Central bank.
- It is essential to continue strengthening the information base for insurance products while using public funds efficiently, monitoring the impacts of insurance subsidies and ensuring they are not crowding out market solutions.
- Insurance and credit support is conditional on environmental criteria and zoning rules that encourage environmental improvements. Specific long-term sustainability and environmental outcomes should be assessed in order to improve the policy design of the environmental conditionality and to inform the strategies for climate change mitigation and adaptation.
- Brazil has no agricultural sector specific mitigation targets in its Nationally Determined Contributions (NDCs) but its National Policy on Climate Change sets an emission reduction target for agriculture of 5-6% by 2020. As part of the NDC, a small share of total preferential credit is available to modernise sustainable production systems and mitigate emissions through the Low Carbon Emission Agriculture (ABC) programme. An assessment of the performance of the ABC programme and the application of the Forest Law and deforestation programs should be envisaged to improve policy design and strengthen the contribution of agriculture, forestry and land use (AFOLU) to Brazil's climate change mitigation efforts.
- Access to export markets is crucial for Brazilian agriculture. The agreement between Mercosur and the European Union should open new opportunities for Brazilian exports. In this respect, efforts should continue to improve animal health and traceability, while good environmental performance may also facilitate market access.
- More than a third of total support to the agricultural sector in 2017-19 is spent on general services, with government expenditure on research, development and innovation accounting for most of these services. The agricultural innovation system has succeeded in maintaining relatively high productivity growth in the commercial sector. It is important to maintain Brazil's significant research capacity, notably through EMBRAPA, and increase the diffusion of innovations to a wider range of smaller farmers.

Policy responses in relation to the COVID-19 outbreak

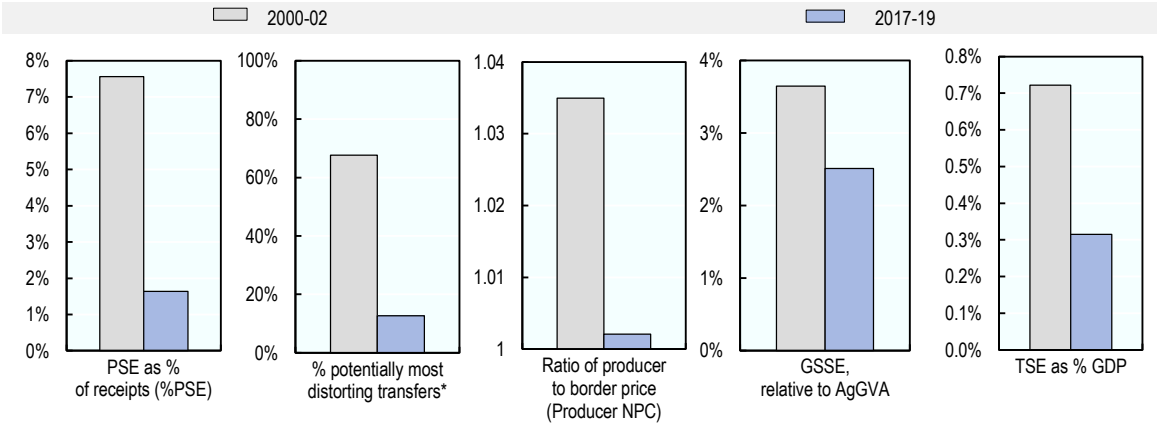
Agricultural policies

Several policy measures were approved on April 9th by the Central Bank of Brazil (BACEN) at the request of the Ministry of Agriculture aiming at mitigating the impact of the pandemic which has aggravated farmers' losses due to climatic adversities in the southern region (BACEN Resolutions number 4.801 and 4.802). These aim to postpone rural debt reimbursement (both on investment and working capital loans) and to provide liquidity to farmers and co-operatives, mainly small and medium farmers and in particular

the producers of perishable agricultural products. Special lines of credit for family farmers have been created through PRONAF and for medium size farmers through PRONAMP. The required resources for these measures have been assured without compromising the budget for the next agricultural year.

A new emergency monthly financial assistance of BRL 600 (USD 152) for three months was granted to informal workers (without an employment contract), unemployed, individual “micro-entrepreneur” and to the poorest families. For spouses who are in support of the family, the family allowance is BRL 1 200 (USD 304) per month.

Figure 5.1. Brazil: Development of support to agriculture

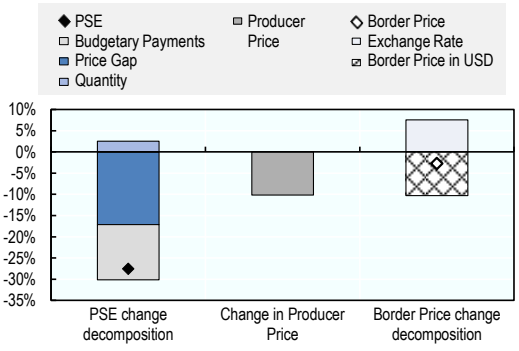


Note: * Share of potentially most distorting transfers in cumulated gross producer transfers.
Source: OECD (2020), "Producer and Consumer Support Estimates", OECD Agriculture statistics (database), http://dx.doi.org/10.1787/agr-pcse-data-en.

StatLink https://doi.org/10.1787/888934143736

Support to producers (%PSE) in Brazil was 1.6% of gross farm receipts in 2017-19, down from 7.6% in 2000-02 and well below the OECD average (Figure 5.1). The share of potentially most distorting support has been significantly reduced to 11% of cumulated gross producer transfers compared to 66% in 2000-02, driven by the introduction of environmental constraints in the payments based on input use. Producer prices are aligned with world market prices with a ratio (NPC) of 1.00. The expenditure on general services (GSSE) reached 2.5% of agricultural value added in 2017-19, down from 3.6% in 2000-02. Government expenditures on agricultural innovation systems represent 92% of general services support in Brazil. Total support to agriculture (TSE), including producer support and general services, was also reduced from 0.7% to 0.3% of GDP. Producer Support Estimate (PSE) fell by almost 30% in 2019 compared with 2018, driven by both reductions in budgetary payments and price gaps (Figure 5.2). The products with the highest rates of specific commodity transfer (SCT) were wheat and cotton, both below 10% of commodity gross farm receipts (Figure 5.3).

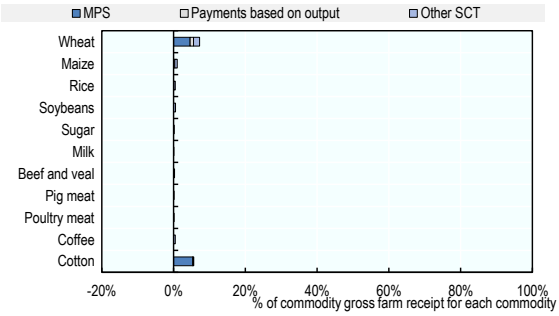
Figure 5.2. Brazil: Drivers of the change in PSE, 2018 to 2019



Source: OECD (2020), "Producer and Consumer Support Estimates", OECD Agriculture statistics (database), http://dx.doi.org/10.1787/agr-pcse-data-en.

StatLink https://doi.org/10.1787/888934143755

Figure 5.3. Brazil: Transfer to specific commodities (SCT), 2017-19



Source: OECD (2020), "Producer and Consumer Support Estimates", OECD Agriculture statistics (database), http://dx.doi.org/10.1787/agr-pcse-data-en.

StatLink https://doi.org/10.1787/888934143774

Table 5.1. Brazil: Estimates of support to agriculture

Million USD

	2000-02	2017-19	2017	2018	2019p
Total value of production (at farm gate)	**35 538**	**158 731**	**168 893**	**153 043**	**154 259**
***of which:** share of MPS commodities (%)*	77.5	86.1	84.5	87.5	86.2
Total value of consumption (at farm gate)	**34 573**	**90 264**	**95 553**	**85 974**	**89 266**
Producer Support Estimate (PSE)	**2 869**	**2 701**	**3 752**	**2 604**	**1 747**
Support based on commodity output	1 013	348	524	454	66
Market Price Support[1]	973	284	350	443	59
Positive Market Price Support	1 179	284	350	443	59
Negative Market Price Support	-206	0	0	0	0
Payments based on output	40	64	174	11	7
Payments based on input use	1 856	2 264	3 113	2 117	1 563
Based on variable input use	825	824	1 195	784	492
with input constraints	0	824	1 195	784	492
Based on fixed capital formation	955	1 405	1 878	1 287	1 049
with input constraints	0	1 405	1 878	1 287	1 049
Based on on-farm services	76	36	39	46	21
with input constraints	0	0	0	0	0
Payments based on current A/An/R/I, production required	0	89	115	32	119
Based on Receipts / Income	0	89	115	32	119
Based on Area planted / Animal numbers	0	0	0	0	0
with input constraints	0	0	0	0	0
Payments based on non-current A/An/R/I, production required	0	0	0	0	0
Payments based on non-current A/An/R/I, production not required	0	0	0	0	0
With variable payment rates	0	0	0	0	0
with commodity exceptions	0	0	0	0	0
With fixed payment rates	0	0	0	0	0
with commodity exceptions	0	0	0	0	0
Payments based on non-commodity criteria	0	0	0	0	0
Based on long-term resource retirement	0	0	0	0	0
Based on a specific non-commodity output	0	0	0	0	0
Based on other non-commodity criteria	0	0	0	0	0
Miscellaneous payments	0	0	0	0	0
Percentage PSE (%)	**7.6**	**1.6**	**2.2**	**1.7**	**1.1**
Producer NPC (coeff.)	**1.04**	**1.00**	**1.00**	**1.00**	**1.00**
Producer NAC (coeff.)	**1.08**	**1.02**	**1.02**	**1.02**	**1.01**
General Services Support Estimate (GSSE)	**1 242**	**2 227**	**2 271**	**2 221**	**2 189**
Agricultural knowledge and innovation system	663	2 046	2 099	2 012	2 028
Inspection and control	51	20	21	20	17
Development and maintenance of infrastructure	471	80	59	104	77
Marketing and promotion	5	4	3	7	4
Cost of public stockholding	53	77	90	77	63
Miscellaneous	0	0	0	0	0
Percentage GSSE (% of TSE)	**29.8**	**37.1**	**31.2**	**37.0**	**44.3**
Consumer Support Estimate (CSE)	**-1 184**	**933**	**1 012**	**915**	**870**
Transfers to producers from consumers	-1 176	-141	-179	-186	-59
Other transfers from consumers	-284	-71	-65	-74	-74
Transfers to consumers from taxpayers	31	1 145	1 256	1 175	1 004
Excess feed cost	245	0	0	0	0
Percentage CSE (%)	**-3.4**	**1.0**	**1.1**	**1.1**	**1.0**
Consumer NPC (coeff.)	**1.04**	**1.00**	**1.00**	**1.00**	**1.00**
Consumer NAC (coeff.)	**1.03**	**0.99**	**0.99**	**0.99**	**0.99**
Total Support Estimate (TSE)	**4 142**	**6 073**	**7 279**	**5 999**	**4 940**
Transfers from consumers	1 460	212	244	260	133
Transfers from taxpayers	2 967	5 931	7 100	5 813	4 881
Budget revenues	-284	-71	-65	-74	-74
Percentage TSE (% of GDP)	**0.7**	**0.3**	**0.4**	**0.3**	**0.3**
Total Budgetary Support Estimate (TBSE)	**3 169**	**5 789**	**6 930**	**5 556**	**4 881**
Percentage TBSE (% of GDP)	**0.6**	**0.3**	**0.3**	**0.3**	**0.3**
GDP deflator (2000-02=100)	**100**	**349**	**338**	**348**	**362**
Exchange rate (national currency per USD)	**2.37**	**3.60**	**3.19**	**3.65**	**3.94**

Note: p: provisional. NPC: Nominal Protection Coefficient. NAC: Nominal Assistance Coefficient.
A/An/R/I: Area planted/Animal numbers/Receipts/Income.
1. Market Price Support (MPS) is net of producer levies and excess feed cost. MPS commodities for Brazil are: wheat, maize, rice, soybean, sugar, milk, beef and veal, pig meat, poultry, cotton, coffee.

Source: OECD (2020), "Producer and Consumer Support Estimates", *OECD Agriculture statistics* (database), http://dx.doi.org/10.1787/agr-pcse-data-en.

Contextual information

In area and population, Brazil is the largest country in Latin America, and one of the ten biggest economies of the world. It has abundant land and water resources and is a major agricultural producer and exporter. The share of agriculture in Brazil's GDP has fallen from 5.5 % in 2000 to 4.4% in 2018, while the share in employment has halved during this period to 9.4%. These shares remain higher than in most other countries covered in this report. Agro-food exports have grown, representing 35% of total exports. Brazil accounts for 4.1% of the population of countries covered in this report, and for 8% of all agricultural land. Arable land accounts for 23% of Brazilian agricultural land.

Brazil is among the world's leaders in the production of soybeans, poultry, beef, cotton, corn, and orange juice, being the third biggest exporter of agro-food products after the European Union and the United States. Two-thirds of the total value of agricultural production are crop products, and one-third livestock products. The main product in Brazilian exports is soybeans (grain, meal, and oil), which represent almost 50% of the agro-food exports.

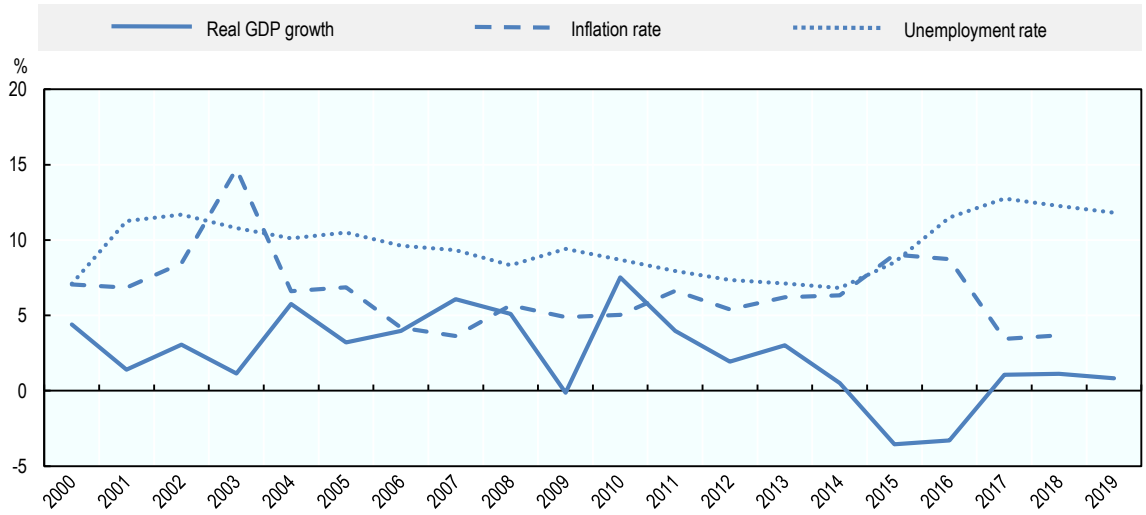
Table 5.2. Brazil: Contextual indicators

	Brazil		International comparison	
	2000*	2018*	2000*	2018*
Economic context			**Share in total of all countries**	
GDP (billion USD in PPPs)	1 586	3 255	4.0%	2.9%
Population (million)	175	209	4.1%	4.1%
Land area (thousand km²)	8 358	8 358	10.2%	10.1%
Agricultural area (AA) (thousand ha)	228 324	235 919	7.6%	7.9%
			All countries[1]	
Population density (inhabitants/km²)	21	25	53	62
GDP per capita (USD in PPPs)	9 074	16 096	9 275	21 924
Trade as % of GDP	8	11	12.4	15.3
Agriculture in the economy			**All countries[1]**	
Agriculture in GDP (%)	5.5	4.4	3.1	3.6
Agriculture share in employment (%)	20.0	9.4	-	-
Agro-food exports (% of total exports)	23.4	35.3	6.2	7.3
Agro-food imports (% of total imports)	7.1	5.8	5.5	6.3
Characteristics of the agricultural sector			**All countries[1]**	
Crop in total agricultural production (%)	67	67	-	-
Livestock in total agricultural production (%)	33	33	-	-
Share of arable land in AA (%)	20	23	32	33

Notes: *or closest available year. 1. Average of all countries covered in this report. EU treated as one.
Sources: OECD statistical databases; UN Comtrade; World Bank, WDI and national data.

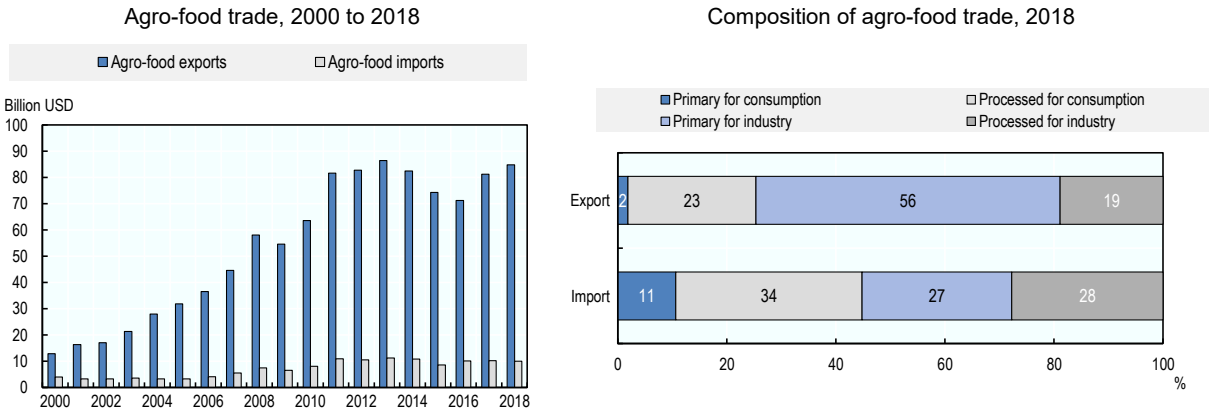
Brazilian GDP has been growing at moderate rates below 2% since 2017. Inflation has stabilised at around 3%, but unemployment is high with rates above 10%. Agro-food exports in Brazil reached more than USD 80 billion in 2018, generating an agro-food trade surplus of more than USD 70 billion. While more than half of Brazilian agro-food exports are primary products for industry (56% including soybeans), more than 60% of the country's imports are processed products.

Figure 5.4. Brazil: Main economic indicators, 2000 to 2019



Sources: OECD statistical databases; World Bank, WDI and ILO estimates and projections.

Figure 5.5. Brazil: Agro-food trade

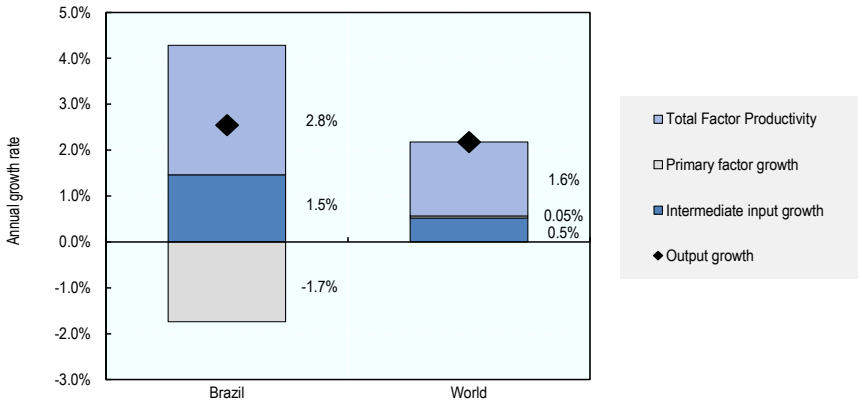


Note: Numbers may not add up to 100 due to rounding.
Source: UN Comtrade Database.

Between 2007 and 2016, Brazilian agricultural production increased at an annual rate of 2.6%, slightly above the world's output growth. Increases in production were driven by an above-world average growth in Total Factor Productivity (TFP) of 2.8% per year, but also by an increased use of intermediary inputs. The use of primary factor in agricultural production fell in the same period.

Agriculture accounted for 43% of greenhouse gas (GHG) emissions and 5% of energy use in 2018, which is below the country levels in 2000 but still well above the OECD average. The larger share of the agricultural sector in the Brazilian economy and the importance of pasture-based livestock contribute to these outcomes. Even if the share of agriculture in water abstractions remained high at 62%, the water-stress indicator scores 1.0, much lower than the OECD average of 8.9. Nutrient surpluses in Brazil have increased since 2000, and the phosphorous balance is seven times the OECD average.

Figure 5.6. Brazil: Composition of agricultural output growth, 2007-16



Note: Primary factors comprise labour, land, livestock and machinery.
Source: USDA Economic Research Service Agricultural Productivity database.

Table 5.3. Brazil: Productivity and environmental indicators

	Brazil		International comparison	
	1991-2000	2007-2016	1991-2000	2007-2016
			World	
TFP annual growth rate (%)	1.9%	2.8%	1.6%	1.6%
			OECD average	
Environmental indicators	**2000***	**2018***	**2000***	**2018***
Nitrogen balance, kg/ha	26.8	28.6	33.3	29.1
Phosphorus balance, kg/ha	11.7	16.1	3.3	2.3
Agriculture share of total energy use (%)	4.8	4.7	1.7	2.0
Agriculture share of GHG emissions (%)	46.0	43.4	8.1	8.9
Share of irrigated land in AA (%)	1.3	2.2	-	-
Share of agriculture in water abstractions (%)	50.5	61.7	46.0	49.0
Water stress indicator	0.6	1.0	9.9	8.9

Notes: * or closest available year.
Sources: USDA Economic Research Service, Agricultural Productivity database; OECD statistical databases; FAO database and national data; UNCCC (for GHG emissions).

Description of policy developments

Main policy instruments

The main instruments of agricultural policy in Brazil are price support and rural credit, implemented and developed since the 1960s; risk management programmes, including subsidised insurance programmes that were introduced in 2005; and disaster payments. Other policy instruments include agricultural land zoning to facilitate farmers' adaptation to climate change and climate risks through environmental compliance, and promotion of biofuels. Agricultural policy is defined in the annual Agricultural and Livestock Plan (PAP) administered by the Ministry of Agriculture, Livestock and Food Supply (MAPA). Since 2019 small-scale family agriculture is also under the responsibility of MAPA.[1]

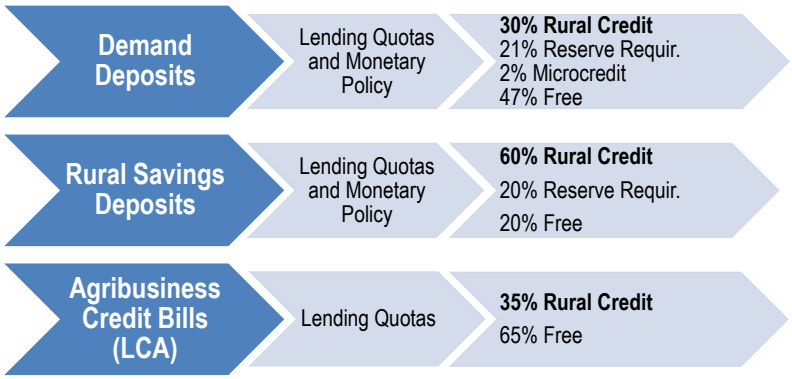
The basic element of price support policy consists of regionally set **minimum guaranteed prices**, which cover a broad range of crops and a few livestock products like cow and goat milk, and honey. To secure these minimum guaranteed prices, the government implements several price support mechanisms on the

domestic market, including direct government purchases (AGF programme); premiums to commercial buyers who pay minimum prices to producers; and public and private options contracts backed by a private risk premium option. In addition to these price support programmes, producers receive reduced-interest marketing loans, which enable them to withhold the sale of a product in anticipation of a higher market price. The National Food Supply Agency (CONAB) is in charge of operating these programmes on behalf of MAPA. Several programmes offer deficiency payments calculated as the difference between the market price and the minimum (reference) price (e.g. the Rural Equity Prize programme called PEPRO, and the Product Reward Prize programme known as PEP).

Agricultural credit is the major policy instrument for both commercial, medium and small-scale family farms designed and implemented in co-operation between the Central Bank, the Treasure (Ministry of the Economy) and the Ministry of Agriculture. Most of the rural credit is earmarked under the National Rural Credit System (SNCR) and provided at preferential interest rates with differentiated conditions for small farmers (PRONAF) and medium size farmers (PRONAMP) compared to commercial ones. The main sources of preferential rural credit are "Compulsory Resources" or lending quotas (Figure 5.7), equivalent to 30% of sight deposits in commercial banks and 60% of "Rural Saving" deposits, "Constitutional Funds" and loans from the National Bank for Economic and Social Development (BNDES). Additional sources of preferential rural credit are the Coffee Fund (FUNCAFÉ) and the Agribusiness Credit Notes called LCAs (*Letras de Crédito do Agronegócio*), which are fixed income securities backed by credit transactions linked to agribusiness, out of which 35% are compulsorily allocated to rural credit. Major agricultural **debt rescheduling** occurred during the late 1990s and early 2000s for both commercial and family producers, and since then, support is provided through debt rescheduling arrangements that are set to end by 2022.

Figure 5.7. Compulsory resources for rural credit in Brazil

Lending quotas for rural credit



Note: The percentages in the diagram define the share of each type of financial assets that has to be dedicated to rural credit or compulsory uses according to the regulations of the Central Bank of Brazil.
Source: Central Bank of Brazil (BACEM).

Brazil has other specific credit programmes, mainly the Low Carbon Agricultural Programme (ABC), to promote **sustainable agricultural practices**. These include credit for the crop-livestock-forest integration and agroforestry systems, the recovery of degraded areas and pasture land, the implementation of organic Agriculture and Livestock production systems, the implementation and improvement of no-till farming systems, plantings on unproductive and degraded soils, forest planting, improved production systems and the preservation of natural resources.

Three main agricultural **insurance** programmes provide support in the form of insurance premium subsidies or by compensating farmers for production losses due to climatic adversities: PROAGRO, Price

Premium Subsidy Program (PSR) and Garantia-Safra (GS). The first one is divided into two sub-programmes: first, PROAGRO Mais (or Family Agriculture Insurance) is aimed at family farmers who use rural credit resources from PRONAF, which by law must obligatorily contract PROAGRO coverage to have access to credit. Second, PROAGRO for medium-sized farmers who are generally linked to PRONAMP are required by law to buy insurance. PROAGOR is a federal government programme that subsidises fees for contracting this instrument, and pays the indemnities through government payments that compensate for the losses and, in the case of PROAGRO Mais, pays the farmer a small income to survive until the next season.

Under the Rural Insurance Price Premium Subsidy Program (PSR), accredited insurance companies develop rural insurance products for producers of all sizes and pay damages to farmers. The federal government provides insurance premium subsidies to farmers, most of them small or medium farmers. More than 80% of the operations are concentrated in the production of soya, corn and wheat and in the states of Rio Grande do Sul and Paraná, but there are expectations of expanding the programme to other eligible activities.

Finally, small-scale family farmers in Minas Gerais and the Northeast - generally planting corn and beans on less than 5 hectares – can benefit from the Garantia-Safra (GS) Program. These regions have systematic losses in production due to drought, and farmers in a municipality receive social assistance to buy food, conditional on catastrophic loss measured through indices. It is a federal programme with financial contributions from the farmer, the municipality and the state.

In some credit programmes, support is conditioned by environmental criteria. This is the case of **agricultural zoning** of climatic risks (Agricultural Risk Zoning ZARC) which links agricultural support to farming practices and activities that are adapted for the environmental sustainability of each geographical zone. Compliance with zoning is required to access concessional rural credit, subsidised insurance programmes and PROAGRO. Since 2008, access to subsidised credit for agricultural production in the Amazon biome requires compliance with environmental regulations, in particular land use regulations set out in the Forestry Code. Rural environmental registration of geo-referenced information on rural property, including property perimeters, location of Permanent Preservation Areas, Legal Reserves, Restricted use Areas, and areas of agricultural production is compulsory in the whole country since 2012. Access to rural credit additionally requires compliance with the Environmental Rural Registry (CAR), a mandatory digital registration.

Biofuels production has been supported since the launch of the National Alcohol Program (Pró-Álcool) and the Plan of Production of Vegetable Oils for Energy Purposes (Pró-Óleo) in 1975. The National Programme for the Production and Use of Biodiesel (PNPB) was launched in 2004 to improve environmental performance and energy independence. In 2017, the national policy initiative RenovaBio was launched to foster the implementation of the greenhouse gas (GHG) emission reduction commitments under the Paris Agreement on Climate Change, by increasing the supply of alternatives to fossil fuels.

Domestic policy developments in 2019-20

A new government took office in January 2019. In the **new government structure**, the Special Secretariat for Family Farm and Agrarian Development (SEAD), which reported directly to the Presidency and was responsible for small-scale family agriculture, was incorporated into the MAPA under the Secretariat for Family Agriculture and Cooperatives (SAF). The creation of a new Secretariat for Innovation, Rural Development and Irrigation in MAPA indicates an increased focus and competencies on innovation in rural areas.

In 2019, the MAPA assumed new responsibilities, previously under other Ministries such as the Forest Services, to further ensure the sustainability of Brazilian agriculture. The MAPA published **Guidelines for Sustainable Development of Brazilian Agriculture** in January 2020, identifying the main sustainability

challenges of Brazil's agriculture: innovation in tropical agriculture; land governance and conformity to settle historic conflicts as in the Amazon; implementation of the Forest Code; generate income from environmental conservation activities; financial instruments for sustainable production; inclusion of medium and small farmers in the value chain; develop chains of bio-economy; and opening new markets. The MAPA developed a plan for 2020-23 that incorporates more prominently sustainability together with efficiency and competitiveness. The plan identifies priority actions in three themes: land governance and environmental compliance; innovation and sustainable production; and production inclusion.

In July 2019, the MAPA **released the Agricultural and Livestock plan 2019/20** (PSA). The plan defines the maximum resources for **rural credit** (BRL 222.7 billion or USD 56.4 billion) with an increase of 8.6% compared to the 2018/19 plan. The compulsory share of sight deposits allocated to medium size producers (PRONAMP) increased from 15% to 25%. A resolution from the Central Bank in January 2019 changed the conditions for the allocation of 35% of resources from Agribusiness Credit Notes (LCA) to rural credit, allowing these credits to be provided at non-preferential rates. The 2019/20 plan foresees a continuation of the trend towards increasing LCA resources, which are to represent 25% of the National Rural Credit System funds and to be provided at rates freely determined by the banks. The inflation rate in Brazil fell from 10.7% in 2015 to 3.3% in 2019, while the reference interest rate SELIC also fell from 14.2% to 4.5% in the same period. After significant reductions in recent years, preferential interest rates were kept constant in several rural credit programmes at 0.5% to 4.6% for small producers (PRONAF), 6% for medium-size producers (PROMAMP) and 5.25% for the Environmental Program for Reducing Greenhouse Gases Emissions in Agriculture (ABC). Other credit conditions were changed for credits for machinery: a reduction in the repayment terms from 10 to 7 years, and an increase of the grace period from 12 to 14 months. The objectives of the Agricultural programme of the BNDES for 2019/20 are: increasing the storage capacities of the industry for meat, milk, sugar and wheat; purchasing aerial sprayers; and modernising the storage capacity of co-operatives and private firms.

The **Provisional Measure PM 897/2019 on rural credit** published in October 2019 aims to reduce the free market interest rates for rural credit, expanding the financial resources from the private capital market and increasing the competition among all credit institutions benefiting from support to rural credit. First, the PM facilitates the creation of collective funds (FAF) to be allowed to guarantee rural credit together with individual guarantees; and it gives more flexibility to use rural property as credit guarantee. Second, building on the recent expansion of LCA resources provided at free interest rates, the PM proposes legal changes to other financial assets to facilitate their use for rural credit. Third, the list of financial institutions eligible to interest rate subsidy paid by the Treasury is to be expanded beyond federal public banks and co-operative banks, to include credit co-operatives and other private financial institutions. These measures are already operative and it is planned to convert them into law in 2020.[2]

The PSA plan 2019/20 **increased the resources for insurance** programmes to BRL 1000 million (USD 253 million) from BRL 440 million (USD 111 million) in the previous year. In addition, adjustments were made to the percentage of subsidy granted, which was reduced from up to 70% and now ranges from 20% to 40%, and the minimum coverage level required to 65%. In line with the objectives of the new government, the goal is to more than double the number of insured hectares to 15.6 million. A new decree in June 2019 provided a regulatory framework to the Agricultural Zoning Program (ZARC) that is compulsory for farmers participating in subsidised insurance programmes.

In September 2019, the Ministry of Agriculture of Brazil authorised BRL 25.3 million (USD 5.9 million) in payments to producers affected by severe drought through the *Garantia Safra* Programme. The payments were available to farmers from September 2019 in the north and the north-east regions (Ordinance No. 4315).[3] In October, further assistance from the same programme, amounting to BRL 442.4 million (USD 112.1 million), was announced for farmers in the states of Bahia, Pernambuco and Piauí, who have a monthly income of up to one and a half times the minimum wage and who incurred production losses of at least 50% during the 2017/18 season.[4]

The PSA plan also defines the resources for **marketing programmes** allocated to public purchases and deficiency payments and sets the regional minimum guaranteed prices and reference prices. These resources have significantly been reduced for 2019/20 to BRL 1.85 billion (USD 469 million) compared to BRL 2.6 billion (USD 711 million) in the previous year. However, the minimum prices have increased in nominal terms by 7% on average, with higher increases in some crops such as soybean (15%) and wheat (12%).

In July 2019, the Brazilian Health Regulatory Agency (Anvisa) approved a new **regulatory framework for agrochemicals**, updating the criteria of approval and classification of toxicity and improving the labelling requirements on danger.[5] The number of pesticides registered in Brazil by Anvisa was 450 in 2018, an additional 211 pesticides were registered in the first half of 2019.[6]

In August 2019, Brazil's National Agency for Petroleum, Natural Gas and Biofuels (ANP) raised the minimum biodiesel blend from 10% to 11% effective from 1 September. In November, a further increase from 11% to 12% effective from 1 March 2020 was announced. Blend levels are to be increased by a further one percentage point each year, targeting a 15% mix by 2023. The maximum blending requirement remains unchanged at 15%.[7]

Trade policy developments in 2019-20

In June 2019 the **European Union and Mercosur reached a free trade agreement** involving EU Member States and the members of Mercosur (Argentina, Brazil, Paraguay and Uruguay) (Baltensperger and Dadush, 2019[1]). The agreement is pending a technical revision and translation, and the approval by the European Union and its Member States and Mercosur. On industrial goods, once in force the agreement stipulates the removal of all tariffs on EU imports from Mercosur and on 90% of imports by Mercosur from EU Member States. On agricultural goods, the European Union would remove tariffs on 82% of imports from Mercosur (including many fruits, juice and coffee), while Mercosur would remove them on 93% (including olive oil, wine and chocolate) of its imports from the European Union. Market access to the EU common market from Mercosur member countries would be increased through the expansion of the EU Tariff Rate Quotas (TRQs) for sensitive products such as beef, poultry, pork, sugar, ethanol and cheese. The agreement also foresees facilitating trade with streamlined border and sanitary and phytosanitary (SPS) procedures, mutual recognition of Geographical Indications (GIs), and a chapter on trade and sustainable development under which the two parties commit to the effective implementation of already subscribed international agreements such as the Paris Agreement.

References

Baltensperger, M. and U. Dadush (2019), "The European Union-Mercosur Free Trade Agreement: Prospects and risks", *Policy Contribution, Bruegel* 11, https://www.bruegel.org/wp-content/uploads/2019/09/PC-11_2019.pdf. [1]

Notes

[1] Up to 2019 there was a Special Secretariat for Family Farm and Agrarian Development (SEAD) reporting directly to the Presidency.

[2] This type of provisional measures in Brazil can be applied before they are approved by the Parliament.

[3] AMIS Market Monitor No 72, October 2019.

[4] AMIS Market Monitor No 73, November 2019.

[5] http://www.agricultura.gov.br/noticias/normativo-vai-disciplinar-o-uso-de-drones-na-pulverizacao-de-defensivos-agricolas.

[6] http://www.agricultura.gov.br/noticias/mesmo-com-aumento-do-registro-de-defensivos-agricolas-venda-do-produto-caiu-nos-ultimos-anos and http://www.agricultura.gov.br/noticias/diario-oficial-traz-registro-de-42-defensivos-agricolas-objetivo-e-aumentar-concorrencia-e-baratear-custo-dos-produtos.

[7] AMIS Market Monitor No 71 and 73, September and November 2019.

6 Canada

Support to agriculture

Canada has significantly reduced its agricultural support since the late 1980s. Producer support as a share of gross farm receipts (%PSE) was halved between 1986-88 and 2000-02, in large part because market price support (MPS) to the grains industry was discontinued in 1995. As a result, most commodity prices are aligned with world levels except in the dairy, poultry and egg sectors, which continue to be under supply management. Producer support was halved again between 2000-02 and 2017-19, but given the importance of business risk management programmes, payment levels vary annually.

Canada's PSE accounted for 8% of gross farm receipts in 2017-19, compared to 35% in 1986-88 and 17% in 2000-02. Canada's %PSE has been consistently below the OECD average over the period. However, the share of potentially most distorting support (based on output and variable input use – without input constraints) was 61% in 2017-19, above the OECD average, but lower than in 1986-88. MPS for milk accounts for the largest share of potentially most distorting support. On average, prices received by farmers were 5% higher in 2017-19 than those observed in world markets. The share of the General Services Support Estimate (GSSE) in the Total Support Estimate to agriculture (TSE) has almost doubled since 1986-88 and reached 42% in 2017-19. Support to the agricultural innovation system and the inspection system each accounted for about 40% of the GSSE in recent years.

Main policy changes

The government launched its first-ever Food Policy for Canada, which aims to create a more co-ordinated and food systems-based approach to food policy and regulations. Short-terms actions will focus on improving access to healthy food, promoting Canadian food, supporting food security in northern and indigenous communities, and reducing food waste. Moreover, the new Safe Food for Canadian regulations were implemented at the beginning of 2019.

The loan limit under the Advance Payments Program (APP), which provides agricultural producers with easy access to credit through cash advances, was raised for the first time since 2007. This was done to reflect changes in farm operating costs over time.

During the fiscal year April 2019 to March 2020, the Dairy Direct Payment Program (DDPP) provided one-off payments based on quota holding to dairy producers affected by market access commitments made under the recent international trade agreements.

The governments and industry took steps to prevent and prepare for African Swine Fever (ASF). The government also took a few initiatives to attract workers in the agricultural sector and rural areas. For example, AAFC provided financial assistance to a project designed to clarify best practices for recruiting and retaining international workers.

Assessment and recommendations

- The Canadian Agriculture Partnership (The Partnership) Framework Agreement for 2018-22 continues the positive trend towards greater emphasis on general service support to the sector through programmes that target industry-led research and development, adoption of innovation, and marketing initiatives.
- Support to producers continues to be well below the OECD average in recent years. While the share of potentially most distorting transfers in producer transfers is higher than the OECD average, it remains well below the OECD average as a percentage of gross farm receipts.
- For most commodities, domestic market prices are fully aligned with world prices, but the dairy, poultry and egg sectors continue to be protected from international competition and to receive market price support, which distorts production and trade.
- The Dairy Direct Payment Program (DDPP), created to support cow's milk producers affected by recent international trade agreements, provides payments based on quota holding. It is thus expected to maintain production and farms in place, although some adjustment should occur if compensation was partial.
- As a step towards phasing out the supply management, the available quotas should be increased in size and price support for the dairy, poultry and egg sectors should be reduced. This would encourage greater market responsiveness, stimulate innovation (to increase efficiency and diversify towards higher value products), and reduce quota rents.
- The 2018-22 framework agreement renews programmes that provide budgetary support to mitigate farm income fluctuations. Strict protocols and disciplines should be in place to reduce potential pressure for additional support in situations where existing programmes suffice, stimulate the development of market-based tools, and encourage farmers to find better ways to manage risk at farm level.
- Steps were taken to prevent and prepare for African Swine Fever (ASF). The measures implemented should improve the sector's preparedness to this disease risk.
- The Pan-Canadian Framework (PCF) on Clean Growth and Climate Change is a useful step in reducing GHG emissions in agriculture, but it is important to evaluate its effectiveness and efficiency.
- The new carbon tax on fossil fuel users can potentially reduce the reliance on fossil fuels and the pollution of the environment. However, the exemption for gasoline and light fuel oil delivered to farms for use in farming activities in all provinces is a missed opportunity for reducing the environmental footprint of the sector.
- The various initiatives taken to attract workers in the agricultural sector and rural areas are important steps to ensure the longer-term competitiveness of the sector.

Policy responses in relation to the COVID-19 outbreak

Agricultural policies

A number of general measures were introduced to support individual or corporate firms affected by the COVID-19 crisis, to which agriculture and agri-food firms have access. Business support includes tax deferrals, wage subsidies, minimum income to those who had to stop their activity because of COVID-19; and additional funding for existing programmes. For example, the Business Credit Availability Program will allow the Business Development Bank of Canada (BDC) and Export Development Canada (EDC) to provide more than CAD 10 billion of additional support, largely targeted to small and medium-sized businesses. Through the Canada Emergency Wage Subsidy the Government of Canada provides a 75% wage subsidy to eligible employers for up to 12 weeks. Temporary changes to the Canada Summer Jobs programme will now provide employers with a 100% wage subsidy to hire temporary staff for up to 70 000 seasonal jobs. In addition, there are specific resources and measures that have been announced and implemented for the agriculture and agri-food sector:

- The government of Canada announced CAD 50 million to help the sector to put in place measures to follow the mandatory 14-day isolation period required for temporary foreign workers. The government of Quebec announced CAD 45 million to attract Quebec workers to the fields, which includes a CAD 100 bonus for seasonal agricultural workers who work a minimum of 25 hours per week.
- Farm Credit Canada (FCC) increased its lending capacity by an additional CAD 5 billion. This new credit allows FCC to help farmers, agribusinesses and food processors who face cash flow issues from deferral to the principal or interest portions of their loans to accessing additional credit.
- Producers with loans under the Advance Payments Program who have a reimbursement deadline in March or April 2020, and whose marketing options were reduced for their commodities, were granted an additional six months to reimburse their outstanding loan balance.
- Under the Canadian Agricultural Partnership (CAP), producers continue to have access to a comprehensive suite of Business Risk Management (BRM) programmes to help them manage significant financial impacts and risks beyond their control. A number of these programme parameters and deadlines have been modified or extended in multiple provinces. The government of Prince-Edward-Island announced a new CAD 750 000 COVID-19 Strategic Fund for Agriculture to help commodities and small processors adapt to the pandemic. The government of New Brunswick is reviewing all programmes within CAP and will be adjusting and enhancing targeted programmes to help producers deal with relevant challenges and issues surrounding COVID-19.
- Business support includes the expansion of financial and advisory services to the agriculture and agri-food sector. The government of Saskatchewan launched the Business ResponseTeam, which works with business to identify programme supports available to them both provincially and federally. FCC initiated customer support programmes, which invite customers to contact their offices to discuss their finances and options. The Alberta's Agricultural and Finance Services Corporations is also encouraging its customers to contact their relationship manager for enhanced loan arrangements. Support could include personalised solutions such as, loan payment relief through interest-only payment, payment re-amortisation or payment deferral options.

Agro-food supply chain policies

On 16 March, the government established an Industry-Government COVID-19 working group made up of national sector organisations, who meet by phone three times a week to share information and discuss issues facing industry, including potential impacts on trade.

To facilitate the movement of agri-food products and inputs, both at home and abroad, labour-related measures were introduced. Truck drivers, plane crews and others who are transporting goods are exempted from travel bans, as long as they are not showing symptoms. Temporary foreign workers in agriculture, agri-food, seafood processing and other key industries will be allowed to travel to Canada. The government of Canada is also increasing the maximum allowable employment duration for workers in the low-wage stream of the Temporary Foreign Worker Program from one to two years.

Consumer policies

The food system continues to provide enough supplies for consumers at the retail level. The government of Canada is working with established national and regional networks to help improve access to food for people experiencing food insecurity. Up to CAD 100 million in funding is going to food banks and other local food organisations.

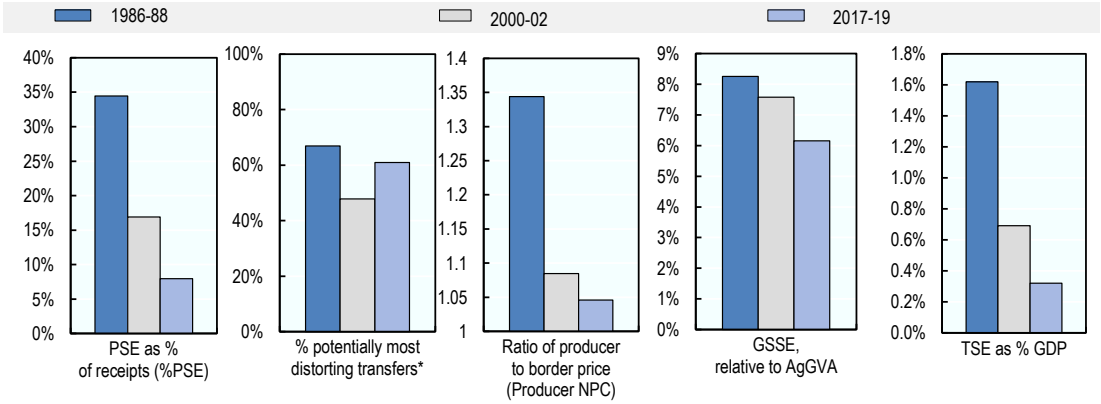
Food safety and security policies

The Canadian Food Inspection Agency (CFIA) has temporarily suspended certain low-risk inspection activities to reassign existing employees to higher priority activities to better support Canadians and industry during this pandemic. Under these unprecedented circumstances, the government of Canada has invested CAD 20 million to continue important work to safeguard Canada's food system and better support the production demands of Canada's food industry.

This investment will help to ensure that Canadians will have continued access to safe, high-quality food to feed their families by allowing the CFIA to hire, train and equip additional staff to conduct critical inspection activities, and work closer with industry and trading partners to minimize supply disruptions during this crisis. The CFIA and the provinces and territories are working closely together to safeguard the Canadian food supply during the COVID-19 pandemic. This funding will also support the training of provincial food inspectors so they can provide assistance to the CFIA as needed.

The funding will also support the CFIA in developing flexible ways to carry out inspections, including through the expanded use of electronic tools such as tablets and access to the CFIA's remote service delivery network. While the CFIA works to keep food safe and protect the health of animals and plants during this pandemic, it is introducing flexibility where possible. For example, the CFIA is making packaged food intended for use by restaurants and hotels more easily available for sale at retail outlets and grocery stores. This will help to make more food products available to Canadians while reducing food waste and supporting businesses without compromising food safety. In addition the CFIA is drafting agreements with provinces and territories on sharing of inspector resources and has developed standard operating procedures for inspector overtime coverage and extra shift requests. The CFIA has provided guidance to industry in respect of a positive COVID-19 case in a meat slaughter/processing plant as well as contact information and an escalation protocol to follow should issues arise in plants.

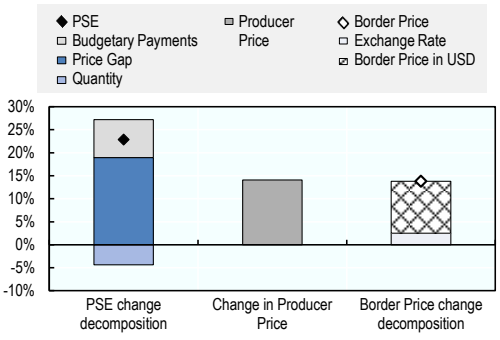
Figure 6.1. Canada: Development of support to agriculture



Note: * Share of potentially most distorting transfers in cumulated gross producer transfers.
Source: OECD (2020), "Producer and Consumer Support Estimates", OECD Agriculture statistics (database), http://dx.doi.org/10.1787/agr-pcse-data-en.
StatLink https://doi.org/10.1787/888934143793

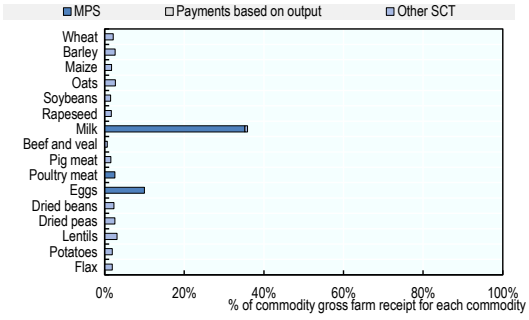
Support to producers (%PSE) has declined gradually since the late 1980s, accounting for about 8% of gross farm receipts in the period 2017-19, about half the OECD average. The potentially most distorting support remains the largest share of producer support, due to market price support (MPS) to the dairy, poultry and egg sectors (Figure 6.1). The level of support increased by 23% between 2018 and 2019, due to both higher MPS and budgetary payments. The increase in MPS results from wider price gaps for milk, poultry and eggs as domestic prices rose more than border prices, mainly because of the exchange rate movement (Figure 6.2). Prices received by farmers, on average, were about 5% higher than world prices, but large differences between commodities persist. While most commodity prices are aligned with world levels, the domestic price for milk was 55% higher in 2017-19. MPS is the main component of Single Commodity Transfers (SCT): milk has the highest share of SCT in commodity gross farm receipts (36%) (Figure 6.3). Overall, SCTs represent over 70% of the total PSE. The expenditures for general services (GSSE) measured relative to agriculture value added were above the OECD average. Total support to agriculture as a share of GDP has declined significantly over time and was half the OECD average in 2017-19. About 70% of the total support was provided to individual farmers (PSE) in 2017-19.

Figure 6.2. Canada: Drivers of the change in PSE, 2018 to 2019



Source: OECD (2020), "Producer and Consumer Support Estimates", OECD Agriculture statistics (database), http://dx.doi.org/10.1787/agr-pcse-data-en.
StatLink https://doi.org/10.1787/888934143812

Figure 6.3. Canada: Transfer to specific commodities (SCT), 2017-19



Source: OECD (2020), "Producer and Consumer Support Estimates", OECD Agriculture statistics (database), http://dx.doi.org/10.1787/agr-pcse-data-en.
StatLink https://doi.org/10.1787/888934143831

Table 6.1. Canada: Estimates of support to agriculture

Million USD

	1986-88	2000-02	2017-19	2017	2018	2019p
Total value of production (at farm gate)	**14 083**	**20 696**	**46 308**	**46 040**	**46 445**	**46 439**
***of which:** share of MPS commodities (%)*	85.6	82.0	82.8	84.0	83.2	81.0
Total value of consumption (at farm gate)	**12 688**	**15 538**	**30 455**	**29 672**	**30 933**	**30 759**
Producer Support Estimate (PSE)	**5 862**	**3 891**	**3 823**	**3 605**	**3 575**	**4 289**
Support based on commodity output	3 214	1 622	2 035	2 172	1 732	2 200
Market Price Support[1]	2 851	1 602	2 035	2 172	1 732	2 200
Positive Market Price Support	2 997	1 602	2 069	2 172	1 835	2 200
Negative Market Price Support	-146	0	-35	0	-104	0
Payments based on output	364	20	0	0	0	0
Payments based on input use	1 098	368	392	391	425	359
Based on variable input use	629	242	270	299	274	237
with input constraints	0	0	0	0	0	0
Based on fixed capital formation	448	108	115	83	142	120
with input constraints	0	0	0	0	0	0
Based on on-farm services	20	18	7	10	9	2
with input constraints	0	0	0	0	0	0
Payments based on current A/An/R/I, production required	1 336	1 307	1 295	1 029	1 356	1 500
Based on Receipts / Income	467	586	579	486	659	593
Based on Area planted / Animal numbers	869	721	716	543	697	908
with input constraints	0	0	0	0	0	0
Payments based on non-current A/An/R/I, production required	0	0	8	0	23	0
Payments based on non-current A/An/R/I, production not required	0	553	74	0	0	221
With variable payment rates	0	0	0	0	0	0
with commodity exceptions	0	0	0	0	0	0
With fixed payment rates	0	553	74	0	0	221
with commodity exceptions	0	0	0	0	0	0
Payments based on non-commodity criteria	8	0	0	0	0	0
Based on long-term resource retirement	8	0	0	0	0	0
Based on a specific non-commodity output	0	0	0	0	0	0
Based on other non-commodity criteria	0	0	0	0	0	0
Miscellaneous payments	206	41	20	12	39	9
Percentage PSE (%)	**34.5**	**16.9**	**8.0**	**7.6**	**7.4**	**8.8**
Producer NPC (coeff.)	**1.34**	**1.08**	**1.05**	**1.05**	**1.04**	**1.05**
Producer NAC (coeff.)	**1.53**	**1.20**	**1.09**	**1.08**	**1.08**	**1.10**
General Services Support Estimate (GSSE)	**1 153**	**1 260**	**1 598**	**1 681**	**1 689**	**1 424**
Agricultural knowledge and innovation system	483	536	616	640	627	581
Inspection and control	283	348	674	716	753	554
Development and maintenance of infrastructure	268	182	142	146	130	151
Marketing and promotion	85	179	140	154	157	109
Cost of public stockholding	0	0	0	0	0	0
Miscellaneous	34	15	26	27	22	28
Percentage GSSE (% of TSE)	**16.3**	**24.5**	**29.3**	**31.8**	**31.9**	**24.8**
Consumer Support Estimate (CSE)	**-2 533**	**-1 712**	**-2 248**	**-2 425**	**-1 916**	**-2 401**
Transfers to producers from consumers	-2 766	-1 596	-2 032	-2 172	-1 727	-2 196
Other transfers from consumers	-31	-117	-235	-262	-213	-229
Transfers to consumers from taxpayers	31	0	19	9	24	24
Excess feed cost	234	0	0	0	0	0
Percentage CSE (%)	**-20.1**	**-11.0**	**-7.4**	**-8.2**	**-6.2**	**-7.8**
Consumer NPC (coeff.)	**1.28**	**1.12**	**1.08**	**1.09**	**1.07**	**1.09**
Consumer NAC (coeff.)	**1.25**	**1.12**	**1.08**	**1.09**	**1.07**	**1.08**
Total Support Estimate (TSE)	**7 046**	**5 151**	**5 440**	**5 295**	**5 288**	**5 737**
Transfers from consumers	2 798	1 713	2 267	2 434	1 941	2 425
Transfers from taxpayers	4 279	3 555	3 408	3 123	3 561	3 541
Budget revenues	-31	-117	-235	-262	-213	-229
Percentage TSE (% of GDP)	**1.6**	**0.7**	**0.3**	**0.3**	**0.3**	**0.3**
Total Budgetary Support Estimate (TBSE)	**4 195**	**3 549**	**3 405**	**3 123**	**3 557**	**3 537**
Percentage TBSE (% of GDP)	**1.0**	**0.5**	**0.2**	**0.2**	**0.2**	**0.2**
GDP deflator (1986-88=100)	**100**	**138**	**192**	**189**	**192**	**196**
Exchange rate (national currency per USD)	**1.32**	**1.53**	**1.31**	**1.30**	**1.30**	**1.33**

Note: p: provisional. NPC: Nominal Protection Coefficient. NAC: Nominal Assistance Coefficient.
A/An/R/I: Area planted/Animal numbers/Receipts/Income.
1. Market Price Support (MPS) is net of producer levies and excess feed cost. MPS commodities for Canada are: wheat, maize, barley, oats, soybean, rapeseed, flax, potatoes, lentils, dried beans, dried peas, milk, beef and veal, pig meat, poultry and eggs.

Source: OECD (2020), "Producer and Consumer Support Estimates", *OECD Agriculture statistics* (database), http://dx.doi.org/10.1787/agr-pcse-data-en.

Contextual information

Canada is a large, wealthy country with a small population relative to its land area. Primary agriculture accounts for l.8% of GDP, but is important in some of its regions. Canada is a large net exporter of agro-food products, which account for about 11% of total exports, and access to export markets is a significant issue for the sector. More than half of Canada's agro-food exports are destined to the United States. Crop production is concentrated in the western prairies, where the typical farm is twice as large as the national average, highly productive, and produces largely for export. Most milk production is located in Eastern Canada, which has relatively smaller farms and a larger variety of crops. Red meat industries (hogs and beef cattle) are present across Canada, especially in western Canada.

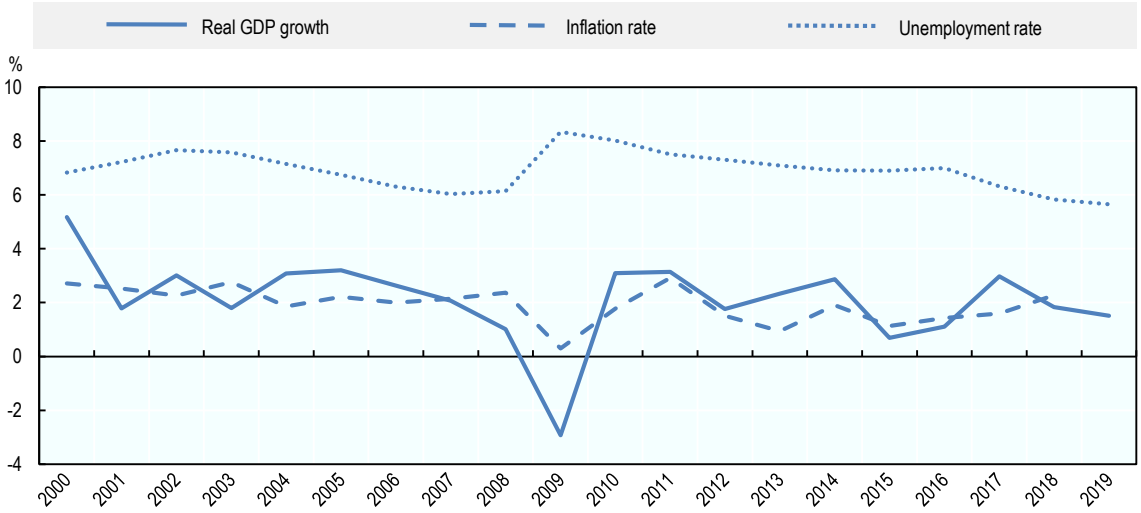
Table 6.2. Canada: Contextual indicators

	Canada		International comparison	
	2000*	2018*	2000*	2018*
Economic context			**Share in total of all countries**	
GDP (billion USD in PPPs)	901	1 856	2.3%	1.6%
Population (million)	31	37	0.7%	0.7%
Land area (thousand km^2)	8 966	8 966	11.0%	10.8%
Agricultural area (AA) (thousand ha)	61 287	57 694	2.0%	1.9%
			All countries[1]	
Population density (inhabitants/km^2)	3	4	53	62
GDP per capita (USD in PPPs)	29 364	50 076	9 275	21 924
Trade as % of GDP	33	25	12.4	15.3
Agriculture in the economy			**All countries[1]**	
Agriculture in GDP (%)	2.3	1.8	3.1	3.6
Agriculture share in employment (%)	3.3	1.9	-	-
Agro-food exports (% of total exports)	6.0	11.0	6.2	7.3
Agro-food imports (% of total imports)	5.0	7.9	5.5	6.3
Characteristics of the agricultural sector			**All countries[1]**	
Crop in total agricultural production (%)	43	58	-	-
Livestock in total agricultural production (%)	57	42	-	-
Share of arable land in AA (%)	67	66	32	33

Notes: *or closest available year. 1. Average of all countries covered in this report. EU treated as one.
Sources: OECD statistical databases; UN Comtrade; World Bank, WDI and national data.

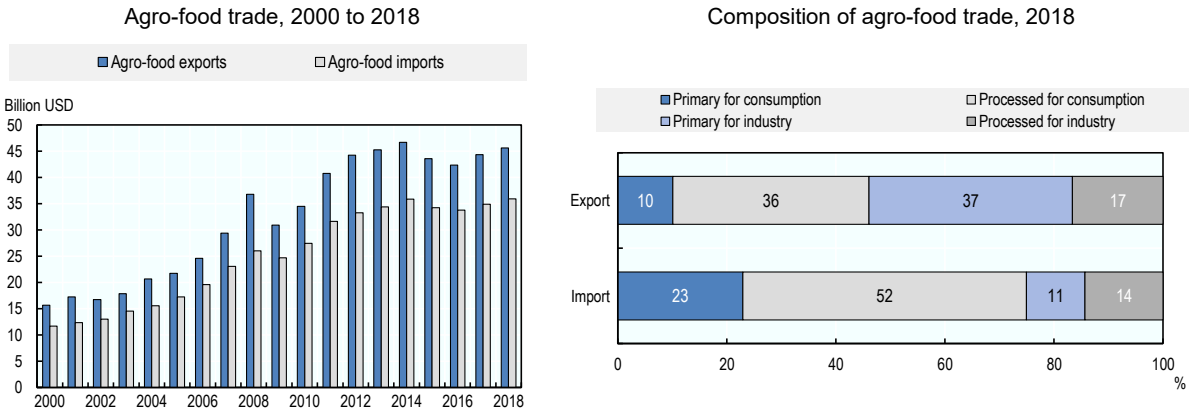
Canada enjoys a stable macroeconomic environment, although annual GDP growth continues to slow down since the 2017 peak of 3%. Inflation rates have been below 2% between 2012 and 2017, but rose to 2.3% in 2018. Unemployment rates have been declining regularly since the peak of 2009, to about 5.7% in 2019. Exports of agro-food products are well above imports, with recent changes in values mainly reflecting commodity price fluctuations. Most of Canada's agro-food exports are either primary products for processing (37% in 2018), forming part of other country's production system, or processed products for consumption (36% in 2018). Over half of agro-food imports are processed products for consumption.

Figure 6.4. Canada: Main economic indicators, 2000 to 2019



Sources: OECD statistical databases; World Bank, WDI and ILO estimates and projections.

Figure 6.5. Canada: Agro-food trade

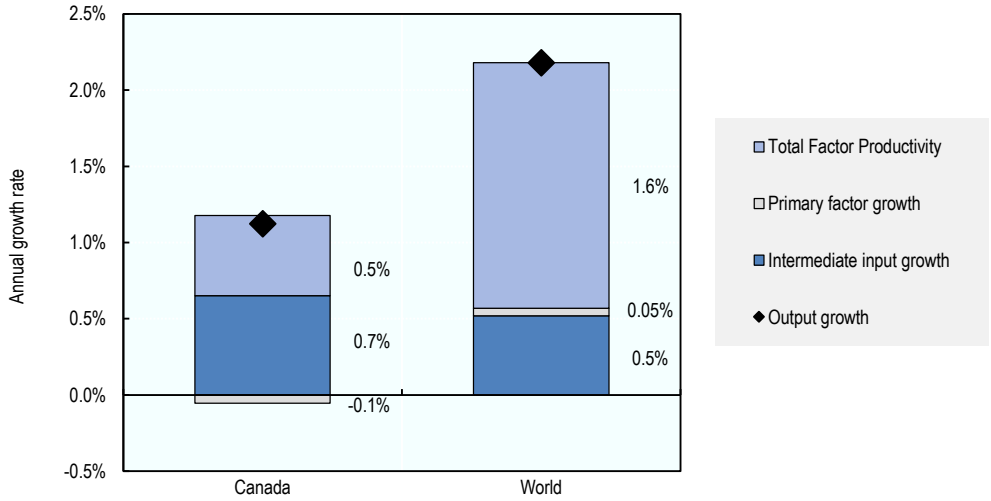


Note: Numbers may not add up to 100 due to rounding.
Source: UN Comtrade Database.

Intermediate input growth has become the first driver of agricultural output growth in Canada during the period 2007-16. This reflects the decline in TFP growth, which averaged 0.5% per year during this period, compared to 3% in the 1990s. Both TFP growth and output growth have been well below the world average during 2007-16.

Canadian agriculture benefits from relatively abundant resources (e.g. land and water), and agricultural output growth has been achieved with reduced or minimal increased pressure on natural resources in most cases. Surplus intensities have been stable since 2000 for nitrogen and decreasing for phosphorous. Both surplus are below the average for OECD countries, as are greenhouse gas (GHG) emissions, although these have increased since 2000.

Figure 6.6. Canada: Composition of agricultural output growth, 2007-16



Note: Primary factors comprise labour, land, livestock and machinery.
Source: USDA Economic Research Service Agricultural Productivity database.

Table 6.3. Canada: Productivity and environmental indicators

	Canada		International comparison	
	1991-2000	2007-2016	1991-2000	2007-2016
			World	
TFP annual growth rate (%)	2.4%	0.5%	1.6%	1.6%
			OECD average	
Environmental indicators	**2000***	**2018***	**2000***	**2018***
Nitrogen balance, kg/ha	24.0	23.7	33.3	29.1
Phosphorus balance, kg/ha	1.5	0.6	3.3	2.3
Agriculture share of total energy use (%)	2.2	3.5	1.7	2.0
Agriculture share of GHG emissions (%)	7.8	8.4	8.1	8.9
Share of irrigated land in AA (%)	1.2	1.0	-	-
Share of agriculture in water abstractions (%)	9.7	8.3	46.0	49.0
Water stress indicator	1.2	0.9	9.9	8.9

Note: * or closest available year.
Sources: USDA Economic Research Service, Agricultural Productivity database; OECD statistical databases; FAO database and national data.

Description of policy developments

Main policy instruments

Under the Canadian Constitution, federal and provincial governments share responsibility for agriculture. The current Canadian Agricultural Partnership (the Partnership) framework covering 2018-23 (AAFC, 2018[1]) provides flexibility for provinces and territories to design and deliver programmes that respond to their regional priorities. In addition, provinces and territories can develop and fund their own agriculture programmes outside of this framework.

The Partnership is a five-year agreement which provides CAD 3 billion (USD 2.3 billion) to fund strategic initiatives in the agriculture and agri-food sector that includes CAD 1 billion (USD 0.8 billion) in federal

programmes and activities, and CAD 2 billion (USD 1.5 billion) in cost-shared programmes and activities by federal, provincial and territorial governments. In addition to these strategic initiatives, farmers have access to a suite of Business Risk Management (BRM) programmes, with a budget of CAD 1.5 billion (USD 1.1 Billion) per year.

There are five BRM programmes, cost-shared between the federal and provincial governments, which are built on the BRM programmes delivered during the previous multilateral policy framework agreement. AgriStability is a whole-farm margin programme providing support in years of significant income declines. AgriInvest provides matching contributions to producers, who make annual deposits to a savings account, to help manage moderate declines in income or make investments in farming operations to mitigate risk. AgriInsurance provides cost-shared insurance to reduce the financial impact of production or assets losses due to natural perils. AgriRecovery is a disaster relief framework to help producers with the cost of activities necessary for recovery following natural disaster events. The AgriRisk programme supports the development of new risk management tools by the private sector.[1]

Canada's agricultural support policies differentiate between the supply-managed sectors, which are protected by high custom tariffs and are oriented towards the domestic market, and other commodity sectors, which operate within an open market environment and are export oriented. A supply management system provides market price support to the dairy, poultry and eggs sectors through tariffs and production quotas that are tradable only within provinces, combined with a system of domestic price-setting according to production costs.

Strategic Initiatives that are federally-funded focus on three key areas. Under the growing trade and expanding markets area, AgriMarketing supports industry-led market development activities aimed at assisting the sector in identifying and seizing domestic and international opportunities; and AgriCompetitiveness helps the sector adapt to changing commercial and regulatory environments, share best practices, and provide mentorship opportunities. Under the innovative and sustainable growth area, AgriScience supports innovation driven by industry research priorities, including pre-commercialisation activities and investments in cutting-edge research to benefit the agricultural and agri-food sector; and AgriInnovate supports projects that aim to accelerate the demonstration, commercialisation or adoption of innovative products, technologies, processes or services that increase sector's competitiveness and sustainability. Under the supporting diversity and a dynamic, evolving sector area, AgriAssurance aims to prevent and control risk to the animal and plant resource base, and to provide safe food and meet new market demands for assurance, while AgriDiversity aims at increasing the capacity of youth, women, Indigenous Peoples and persons with disabilities to better participate in the agricultural sector. It supports skills, leadership, and entrepreneurial development; facilitates knowledge sharing and best management practices.

Strategic initiatives that are cost-shared by federal, provincial and territorial governments prioritise investment in six areas. The science, research and innovation priority area is to help industry adopt practices to improve resiliency and productivity through research and innovation. The markets and trade priority area is to open new markets and help farmers and food processors improve their competitiveness through skills development and improved export capacity, underpinned by a strong and efficient regulatory system. The environmental sustainability and climate change priority area is to build the sector capacity to mitigate agricultural greenhouse gas emissions, protect the environment and adapt to climate change by enhancing sustainable growth. The value-added agriculture and agro-food processing priority area is to support the continued growth of this sector. The risk management priority area is to enable proactive and effective risk management, mitigation and adaptation to facilitate a resilient sector by working to ensure programmes are comprehensive, responsive and accessible. This priority area includes initiatives such as Emergency preparedness, and Food/Animal/Plant Assurance Systems. The public trust priority area is to build a firm foundation for public trust in the sector through improved assurance systems in food safety and plant and animal health, stronger traceability and effective regulations.

Provincial governments design and administer most farm-level environmental programmes. Two programmes (cost-shared between federal and provincial governments) aim to advance environmentally sustainable agriculture: the Environmental Farm Plans (EFP) programmes and the Environmental Stewardship Incentive programmes. The EFP consists of an assessment of on-farm environmental risks, and the development of an action plan to mitigate those risks. The Environmental Stewardship Incentive programmes provide cost-shared financial assistance to farms with an EFP to adopt specific Beneficial Management Practices (BMP), such as nutrient management, manure storage and soil erosion controls. It is implemented on the basis of regional partnerships programmes, such as the 2018 Canada-Ontario Lake Erie action plan to reduce phosphorus pollution analysed in Gruère and Boëdec (2019).[2]

Over the period 2018-23, the Canadian agriculture and agri-food sector's contribution to the Pan-Canadian Framework (PCF) on Clean Growth and Climate Change will be primarily delivered through the Partnership. Federal-only programmes will support actions that help support resiliency and sustainability of the sector through science, research and adoption of innovative practices and technologies (e.g. AgriInnovate and AgriScience). The PCF has been adopted, following Canada's ratification of the Paris Agreement in 2016, to reduce GHG emissions across all sectors in Canada, including agriculture. It identifies three agriculture-related actions: increasing stored carbon in agricultural soils to partially offset emissions from the sector; generating bioenergy and bio-based products to displace emissions in other economic sectors; and, advancing innovation in GHG-efficient management practices to reduce agricultural emissions and emission intensity.

Domestic policy developments in 2019-20

Risk management

Since March 2019, federal, provincial, and industry partners have been working closely together on prevention of African Swine Fever (ASF) and preparedness activities, and to discuss potential response and recovery measures. The Canadian Food Inspection Agency (CFIA) has been leading activities to prevent and prepare for ASF including strengthening import control measures, developing a national ASF action plan, increasing testing capacity for ASF, and negotiating zoning arrangements with key trading partners. The federal ministry in charge of food and agriculture, Agriculture and Agri-Food Canada (AAFC), has established a government-industry working group to develop a better understanding of the implications of ASF on the pig industry. AAFC has also undertaken internal analysis on what response options could address the potential impact to industry and the level of support that AAFC's existing suite of programmes would deliver.

In 2019, the government of Canada announced a Canada/United States zoning arrangement to safeguard the Canadian and American pork industries. Canada and the European Commission's Department of Health and Food Safety (DG SANTE) also agreed to an ASF zoning arrangement to allow for safe trade of pig products from disease-free zones in the event of an ASF outbreak.

At the Provincial level, under the Animal Health Act, Prince Edward Island (PEI) modernised its Swine Importation Regulations to combat the spread of animal disease, and align with industry needs and technological advancements. The province also developed the Cattle Disease Emergency Response and the Small Ruminant and Camelid Disease Emergency Response Manuals. The manuals provide outlines of the necessary steps needed within the first 48 hours following suspicion of a disease to minimise and prevent the spread of disease within the herd and to other herds or susceptible species.

Quebec has offered a financial assistance to cervid producers affected by measures taken to eradicate the Chronic Wasting Disease. These measures are: 1) the slaughter and disposal of animals, and 2) the implementation of sanitary measures. Both measures are required under the Animal Health Protection Act.

In November 2019, Saskatchewan replaced the existing Disease of Animal Act with a new Animal Health Act. The new Act sets out veterinary inspectors' authorities and responsibilities with regard to entering and inspecting a premises, establishing quarantines, disease surveillance and control zones, and euthanising animals to prevent suffering or spread of disease.

Business and market development

In addition to supporting business and market development through the Partnership AgriCompetitiveness and AgriMarketing programmes, Canada's federal government provides agricultural producers with easy access to credit through cash advances through the Advance Payments Program (APP). The programme is administered on behalf of AAFC by 34 producer organisations across Canada. On average, approximately CAD 2.2 billion (USD 1.7 billion) in APP advances are issued to 21 300 producers each programme year.

In 2019 the federal government amended the Agricultural Marketing Programs Regulations: for the first time since 2007, the overall APP loan limit was raised to better reflect farm operating costs and the interest-free limit was increased for canola (rape seed) advances only in the 2019 programme year to help farmers impacted by the trade restrictions imposed by the People's Republic of China in 2019 on Canadian canola exports.

Under the Partnership, provinces and territories have the opportunity to stimulate growth and diversification in the agricultural sector through value added programmes. In 2019, Alberta developed the Canadian Agricultural Partnership Emerging Opportunity Program to enable growth and diversification of Alberta's value-added industries. The programme is mainly for bio-industrial and food processors, agri-businesses, and industry organisations and provides a maximum grant of CAD 1 million (USD 0.8 million) per applicant per fiscal year, up to a maximum of CAD 2 million (USD 1.5 million) per project.

In Ontario, the Grassroots Growth Program provides project-based funding aiming to support the growth of the Ontario's agri-food sector, ensuring the sustainability of agriculture and fostering vibrant rural economies. The projects must focus on at least one of the following objectives: 1) increase public engagement and support local food and rural development; 2) build youth leadership capacity and increase youth involvement in the agri-food sector; 3) enhance safety and risk management practices in the agri-food sector; 4) strengthen public trust and knowledge about Ontario's agri-food system and, 5) encourage agri-food and rural development outcomes.

In October 2019, Manitoba implemented modernisation of the Agricultural Crown Land leasing programme with amendment to the provincial Agricultural Crown Lands Leases and Permits Regulation. Key changes for new leases include the use of an auction process to allocate forage and cropping land leases, shorter forage lease terms with transfers limited to the immediate family members, an updated forage lease rental rate based on beef market prices, simplification of eligibility to acquire a lease, and a focus on ensuring the land is used productively in a sustainable manner.

Environment and climate change

Additional programmes and initiatives outside of the Partnership contribute to progress on agriculture-related actions identified under the PCF. In August 2019, the government of the Northwest Territories released a Sustainable Livelihoods Action Plan (Action Plan) for 2019-23, which focuses on food programmes and research in the context of climate change. Sustainable livelihoods, in the context of the Action Plan, are considered to be a way of life connected to the land. This plan approaches the land in a holistic way, considering the processes and connections that exist between plants, animals, water, air, and people. Specific actions will focus on "on-the-land" activities and traditional foods and will align well with work underway through the Northwest Territories Agriculture Strategy to promote and address food security.

Another initiative outside of the Partnership includes the 2018-21 Agricultural Clean Technology programme, which supports investments made by provincial and territorial governments and industry stakeholders in research, development and adoption of clean technologies for the agriculture, agro-food and agriculture-based products sector, specifically precision agriculture and bio-based products from agriculture.

On 1 April 2019, the government of Canada through the Greenhouse Gas Pollution Pricing Act (GGPPA) began implementing the federal fuel surcharge (also known as "carbon tax"). Users of fossil fuels pay an extra CAD 0.0442 (USD 0.0333) per litre for gasoline and CAD 0.0537 (USD 0.0405) per litre for light fuel oil (includes diesel). This fuel surcharge is imposed to the provinces that did not have a carbon pricing system already in place. However, gasoline and light fuel oil delivered to farms for use in farming activities are eligible for an exemption. This exemption applies to fuel used in farm trucks or tractors, vehicles not licensed for public roads, and industrial machines or engines.

At the provincial level, In October 2019, the Manitoba government unveiled the first three projects under the CAD 52 million (USD 39 million) Growing Outcomes in Watersheds (GROW) Trust to support the protection of wetlands and watershed management. The GROW Trust has been established to help producers and ranchers with projects such as restoring wetlands, planting windbreaks and balancing drainage with water retention to improve resiliency to a changing climate. The first intake of applications to the GROW Trust was held in January 2020. This will allow watershed districts, with local GROW committees to apply for project funding that will encourage and support the delivery of ecological goods and services in Manitoba.

The province also launched a new approach to drainage under the Water Rights Act that will streamline the approval process for producers and landowners, while protecting Manitoba's wetlands by implementing the commitment to "no-net-loss" of wetland benefits. The regulation for drainage and water control works registration and licensing will provide consistent regulatory regimes for these works. It will also include a new streamlined registration process for applications and approvals to reduce red tape and provide timely approvals for lower-risk and lower-impact projects, while increasing focus on reviewing higher-risk and higher-impact projects.

Food safety

The Canadian Food Inspection Agency has developed the new Safe Food for Canadians Regulations (SFCR), which came into force on 15 January 2019. The SFCR focuses on prevention and allows for faster removal of unsafe food from the marketplace. The SFCR is based on international standards and will reduce unnecessary administrative burden on businesses by replacing 14 sets of regulations with one.

Food policy

In June 2019, the government of Canada launched its first-ever Food Policy for Canada, with funding of over CAD 134 million (USD 101 million) in investments to support this food policy budgeted for 2019. While the government has policies, regulations and investments across a number of departments and agencies that directly or indirectly address food-related issues, the Food Policy aims to create a more co-ordinated and food systems-based approach to taking action on food-related opportunities and challenges. The Food Policy establishes four areas for near-term action, including: 1) help Canadian communities access healthy food; 2) make Canadian food the top choice at home and abroad; 3) support food security in northern and indigenous communities; and 4) reduce food waste.

The new Canada's Food Guide was released in early 2019. It is an integral part of Canada's Healthy Eating Strategy, which aims to make the healthier choice the easier choice for all Canadians. The revised Canada's Food Guide moved away from the all-in-one format that acted as both a policy and educational tool. It was informed by research and aimed to promote healthy eating habits. The guide placed emphasis

on plant-based eating and protein sources and made water the drink of choice. It reduced emphasis on meats and dairy products favouring low-fat dairy and non-dairy alternatives where possible. It eliminated the traditional “four food groups”, replacing them with three: vegetables and fruits, whole grains, and proteins.

The government of Quebec has put in place programmes to support the production and consumption of local products. The “Programme proximité” supports individual and collective projects promoting and consolidating local marketing initiatives that meet consumer needs. The “Programme Jardins de solidarité” aims to increase the production of fresh local fruits and vegetables with the aim of distributing them to people experiencing poverty or social exclusion. At least 75% of the market garden production must be delivered to a food bank.

Supply managed commodities

In the Budget Plan 2019, the government of Canada had proposed introducing up to CAD 3.9 billion (USD 2.9 billion) in support for supply-managed agricultural producers. Within that envelop, CAD 1.5 billion (USD 1.1 billion) have been earmarked to fund a Quota Value Guarantee Program, which will offer support to producers, who incurred losses due to a reduction of their quota values when sold. In addition, up to CAD 2.4 billion (USD 1.8 billion) will be available for milk, poultry and egg producers, of which CAD 250 million (USD 188 million) have already been spent to support dairy producers under the Dairy Farm Investment Program.[3] The remaining CAD 2.15 billion (USD 1.6 billion) are available over the coming years to support producers of supply-managed commodities, who incurred income losses resulting from implementation of the Canada–European Union Comprehensive Economic and Trade Agreement (CETA) and the Comprehensive and Progressive Agreement for Trans-Pacific Partnership (CPTPP). In August 2019, the government announced that it will make available CAD 1.75 billion (USD 1.3 billion) over eight years to supply-managed cow’s milk producers. Some of these funds were delivered through the Dairy Direct Payment Program (DDPP), which made available up to CAD 345 million (USD 260 million) for the 2019/20 fiscal year to eligible supply-managed milk producers. The Canadian Dairy Commission (CDC) was responsible for calculating payments to producers based on the percentage of their provincial quota holding as of 31 August 2019.

For the other supply-managed sectors and processors, the government of Canada continues to work in partnership with stakeholders to determine the potential compensation package.

New products

The Cannabis Act, which came into force in 2018, has provided a strict legal framework for the production, distribution, sale, and possession of cannabis in Canada. Producers of cannabis are required to be federally-licensed to operate. On 17 October 2019, the production and sale of edible cannabis, cannabis extracts and cannabis topicals became legal in Canada under the Cannabis Act.

Starting from mid-December 2019, a limited selection of edible cannabis products became available in physical and online stores. These products are subjected to strict regulations, to address their unique public health and safety risks. Edible cannabis products are regulated under the Cannabis Act and Regulations which are separate from the Food and Drugs Act; Health Canada considers it a controlled substance rather than a food. However, edible cannabis products must comply with certain labelling and safety requirements similar to conventional foods.

Cannabis growers and processors are eligible to apply for federal programmes under the Partnership such as cost-shared non-BRM programmes. The project applications will be assessed on a case-by-case basis according to the programme’s funding criteria. Provinces and territories have the discretion to determine eligibility of cannabis for cost-shared strategic initiative programmes. For BRM programmes, income from cannabis (including both medicinal and recreational) is not eligible for support under AgriStability and

AgriInvest. Federal and provincial/territorial governments will monitor this once the cannabis industry matures and stabilises.

Innovation and knowledge transfer

The Partnership AgriScience Program aims to accelerate the pace of innovation by providing funding and support for pre-commercial science activities and cutting-edge research that benefits the agriculture and agri-food sector and Canadians. AAFC is supporting two AgriScience Clusters related to the bioeconomy.

The Biomass Cluster will focus on three key areas of research including: advanced technologies to boost biomass production; using biomass heat and energy to extend the greenhouse growing season in northern Canada; and reducing production costs and expanding export markets for biomass. The Bioproducts Cluster will support cutting-edge research to develop new applications for farm crops and residues, from energy, to chemicals, to industrial products. These new research clusters will drive innovation and help improve technologies to support the development and adoption of renewable bioproducts based upon agricultural biomass.

A partnership of industry organisations across the agriculture and forestry sectors released an industry-led strategy entitled “Bio-Design: Canada’s Bioeconomy Strategy in May 2019.[4] It advances a vision for the acceleration of large-scale deployment of the bioeconomy in Canada, leveraging Canada’s natural advantages. This is not a government-led or endorsed strategy, however it is an important complement to government of Canada investments in the bioeconomy, and clearly outlines industry priorities to support industry-government collaboration to further the development of the bioeconomy in Canada.

The Canadian Agricultural Strategic Priorities Program (CASPP) is a CAD 50.3 million (USD 37.9 million), five-year investment that was introduced in February 2019. Replacing the Canadian Agricultural Adaptation Programme (CAAP), it focuses on four priority areas: adoption of new technology; environmental sustainability; strategic development and capacity building; and, emerging issues. The programme also builds on other government of Canada initiatives to support competitiveness and sustainability in the agricultural sector.

Innovation and knowledge transfer remains a priority for provincial governments. Through the strategic initiatives envelope under the Partnership, an investment of CAD 191.5 million (USD 144.3 million) was committed to build on Saskatchewan’s competitive advantages through scientific advancement and improved research capacity. As part of this initiative, the provincial government has announced CAD 6.8 million (USD 5.1 million) funding for 24 livestock and forage related research projects. The new projects include new vaccine strategies, integrating DNA paternity and genomic programme information to enable producers to make better breeding decisions, and studying the physiology behind forage-efficient beef cows.

Quebec offered financial assistance to crop producers to help them increase productivity through the acquisition or adaptation of production, harvesting or conditioning equipment or the acquisition of precision farming equipment.

Agricultural labour and rural viability

Labour shortage has been a recurrent issue in Canadian agriculture. Data from the Canadian Agricultural Human Resource Council (CAHRC) shows that farmer’s across Canadian agriculture industry lost CAD 2.9 billion (USD 2.2 billion) in sales due to unfilled vacancies. In 2019, the government announced a few initiatives to address some of these issues.

AAFC provided financial assistance to the Canadian Agricultural Human Resource Council (CAHRC) to lead the International Phase of the Quality AgriWorkforce Management Program. This project was designed to clarify best practices for recruiting and retaining international workers. It involved developing

and delivering communications and training products for employers, including guides and workshop training materials.

Immigration, Refugees and Citizenship Canada (IRCC) has developed the Agri-Food Immigration Pilot to test a new, industry-specific approach to help address the labour needs of the Canadian agri-food sector. While immigration in the agricultural sector is largely based on seasonal workers, this pilot aims to enhance the benefits of economic immigration to the agri-food sector by testing a new pathway to permanent residence. The pilot will seek to attract experienced, non-seasonal workers who can economically establish in Canada, and who support the ongoing labour needs of the agri-food sector. In particular, the pilot will focus on attracting retail butchers, industrial butchers, food processing, harvesting and general farm workers, farm supervisors and specialised livestock workers.

The government of Quebec has implemented two programmes in order to contribute to the occupation and vitality of the regions. The “Programme Territoires – Priorités bioalimentaires” aims to increase the development and enhancement of the bio-based food sector according to the established territorial priorities. Through the “Programme Territoires : relève, entrepreneuriat et entreprises de petite taille”, Quebec wants to ensure the attractiveness and dynamism of the bio-food sector in all regions by consolidating small agricultural businesses and supporting agricultural entrepreneurship.

Trade policy developments in 2019-20

Canada, Mexico and the United States signed a new trade agreement (called CUSMA in Canada) on 30 November 2018. Canada, on 2 April 2020, and Mexico, on 4 April 2020, notified their partners that they have completed internal procedures required for the agreement to take effect. Once ratified by all parties, the agreement would enter into force “on the first day of the third month following the last notification”. Once applied, the new agreement will preserve the existing agricultural commitments under the North American Free Trade Agreement (NAFTA) and will eliminate tariffs for certain additional products between Canada and the United States (e.g. margarine and whey). It establishes US tariff-rate quotas (TRQs) for Canadian exports of refined sugar and sugar-containing products, as well as certain dairy products (including cheese, cream, milk beverages, butter). It also establishes Canadian TRQs for US exports of dairy, poultry, and eggs. The new agreement also includes a new chapter on Sanitary and Phytosanitary Measures (SPS), which reinforces and builds on provisions contained in the original NAFTA and the World Trade Organization (WTO) SPS Agreement, and reflects the strong trade and regulatory relationship between the Parties. The agriculture chapter in the new agreement includes new obligations for agricultural biotechnology, aiming to provide further transparency and predictability in the trade of products derived from current and future technologies. The new agreement also requires Canada to eliminate milk classes 6 and 7; establishes a mechanism to monitor exports of skim milk powder, milk protein concentrate, and infant formula; and allows US grown wheat of varieties registered in Canada to receive an official Canadian grain grade.

The revised Canada-Israel Free Trade Agreement (CIFTA) entered into force on 1 September 2019. New market access opportunities under the modernised CIFTA largely pertain to the agriculture and agri-food sector. The agreement also includes new chapters on SPS Measures and Technical Barriers to Trade.

The modernised *Canada-Chile Free Trade Agreement (CCFTA)* entered into force on 5 February 2019. CCFTA is a comprehensive FTA that covers trade in goods, services and investment, with parallel agreements on environment and labour co-operation. The modernised CCFTA includes new chapters on SPS measures and Technical Barriers to Trade that are expected to benefit the trade of agriculture and agri-food products.

The conclusion of exploratory discussions for a possible Canada-ASEAN (Brunei, Cambodia, Indonesia, Laos, Malaysia, Myanmar, Philippines, Singapore, Thailand, and Viet Nam) free trade agreement (FTA) was announced on 10 September 2019. The discussions served as an opportunity for Canada and ASEAN

to exchange information about each other's typical approach to FTA negotiations and respective domestic regulatory regimes, and to explore the elements of a possible Canada-ASEAN FTA. Together, ASEAN member states represent the fifth largest economy in the world, and Canada's sixth largest trading partner.

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AAFC (2018), *Canadian Agricultural Partnership*, http://www.agr.gc.ca/eng/about-us/key-departmental-initiatives/canadian-agricultural-partnership/?id=1461767369849. [1]

Gruère, G. and H. Le Boëdec (2019), "Navigating pathways to reform water policies in agriculture"*, OECD Food, Agriculture and Fisheries Papers*, No. 128, OECD Publishing, Paris, https://dx.doi.org/10.1787/906cea2b-en. [2]

Notes

[1] See Canadian case study on "Strengthening agricultural resilience in the face of multiple risks" [TAD/CA/APM/WP(2019)26/FINAL] for an analysis of Canadian BRM programmes.

[2] For example the 2018 Canada-Ontario Lake Erie action plan to reduce phosphorus pollution (see Box 6 in Gruère and Le Boëdec (2019[2]).

[3] The Dairy Farm Investment Program is a five-year (beginning 2017/18) programme to help Canadian producers of cow's milk to improve productivity through upgrades to their equipment.

[4] See Canada's National Bioeconomy Strategy web site at: https://bionb.org/canadas-national-bioeconomy-strategy/.

7 Chile

Support to agriculture

Chile's level of support to farmers is one of the lowest amongst OECD countries at 2.7% of gross farm receipts (%PSE). Almost no market price support is provided to the sector and budgetary support is mostly targeted to small-scale farmers and mainly based on input use, in particular support to fixed capital formation.

More than half of public expenditures in the sector are allocated to general services, especially, for off-farm irrigation infrastructure, inspection and control, land access and restructuring, and agricultural knowledge and innovation system. This share allocated to general services is among the highest of countries covered in the report.

Main policy changes

In 2019, the government emphasised four strategic areas: 1) Institutional modernisation, 2) Producer associations, 3) Sustainability and water use, and 4) Strengthening rural development. Moreover, in response to the protests during the last trimester of 2019, the Ministry of Agriculture proposed a plan called: "Rural Action for a fairer Chile" based on a participative process called "Listening rural". The plan has four strategic axes: 1) Emergency management against drought, 2) Quality of rural life, 3) Support for family farming and agricultural SMEs, and 4) Transparency and good commercial practices. In this new context, the Institute for Agricultural Development (INDAP), the agency promoting smallholders' agriculture, has begun a modernisation plan for three of its major programmes. It has also developed working lines to promote farmer associations and improve market access, in order to increase the number of small-scale farmers participating in high-value domestic markets and export markets.

The Ministry of Agriculture created the national plan "Más Unidos" ("working closely"), launched in August 2019, to encourage farmer associations. The Ministry also created the Agro+ project, an instrument that promotes agricultural and forestry farmer associations through formal and modern models of co-operation and corporate structures. Furthermore, to mitigate territorial inequalities, the Promulgation of the National Rural Development Policy was established in early 2020, with the participation of 12 ministries. This promulgation aims to improve access and quality of public services and connectivity of the poorest regions in the country.

In 2019, the animal and plant health agency, the Agriculture and Livestock Service (SAG) developed a web platform called "Portal Productor RPF/Red de Pronóstico Fitosanitario" (Farmers website of phytosanitary forecast) for early alert for pests.

A new Sustainable Agriculture Agreement was signed in 2019 by different public agencies, including ODEPA, INDAP, CORFO, ASCC and FIA. This agreement gives continuity to the work done in the frame of the Sustainable Agriculture Plan.

During 2019, the south-central part of Chile experienced the country's most severe drought of the last 100 years. Several efforts took place to address the consequences of the drought, including the promotion of water availability (construction of irrigation infrastructure) and water use efficiency, through pressurised irrigation, improvement of distribution systems and construction of dams. The project "Sustainability Program for the Chilean Agro-food Sector" was launched and the tool kit for the development of sustainability standards was finished. Moreover, sustainability standards for the pork, poultry and dairy production sectors were developed. Regarding climate action, Chile promoted the Climate Action Platform for Agriculture of Latin America and the Caribbean (PLACA), which was launched within the frame of COP25 under the Chilean presidency.

Assessment and recommendations

- Agricultural policies in Chile continue to move in a positive direction, with few market distortions and a PSE averaging 2.7% of gross farm receipts in 2017-19. Total support to agriculture imposes a smaller burden on the economy than in most OECD countries, accounting for only 0.3% of GDP in 2019.
- Support to the sector has emphasised the provision of key services to the sector. As a result, general services account for 51% of total public expenditures to the sector, allocated mostly on irrigation infrastructure inspection and control, and agricultural knowledge and innovation systems.
- While payments to farmers are targeted towards small-scale agriculture and indigenous farmers, careful attention should be paid to assessing their effectiveness. Impact assessments should be carried out systematically, as these payments account for about the other half of total public outlays. Direct payments targeted at small-scale agriculture aim to improve productivity, competiveness, recovery of degraded soils, and on-farm irrigation systems.
- As more projects and programmes related to agriculture have been created that are not under the auspices of the Ministry of Agriculture, the need for co-ordination across ministries and agencies becomes progressively more important, as well as strong systems of programme evaluation, particularly for those that involved large monetary amounts.
- Furthermore, given the increasing number of support programmes created at the regional level by regional governments improved co-ordination, communication and accountability processes are needed between regional and national governments to avoid overlapping efforts and supports, which will contribute to better public governance.
- Chile has committed to a 30% reduction in greenhouse gas (GHG) emissions by 2030 (base 2007). Several national plans have been put in place, although these plans do not have specific mitigation targets on agriculture. At the same time, the National Climate Change Adaptation Plan specifies 21 measures for climate change adaptation and mitigation, which mainly focus on water management, research, information and capacity building, risk management and agricultural insurance and forestry management. From December 2019 to 2021, this agricultural plan is being updated, in order to strengthen it and provide a more regional perspective.

Policy responses in relation to the COVID-19 outbreak

Agricultural policies

The Ministry of Agriculture has created a working group formed of relevant stakeholders of key food sectors (beef, poultry, pork, eggs, dairy, seeds, wheat/flour, rice, oats, fruits and vegetables) to monitor the progress of COVID-19.

The Ministry of Agriculture has launched a special website about COVID-19[1] for the agro-food sector and for smallholders with recommendations and relevant information.

Agro-food supply chain policies

The Ministry of Agriculture established a supply committee, with representatives of the private food sector, to co-ordinate joint actions, centralise information and guarantee the supply of food to the population. This committee meets frequently to co-ordinate its actions

Consumer policies

Agriculture is part of the critical infrastructure and hence exempt from certain restrictions on mobility, and prioritised within the transportation system.

Procedures related to import and export controls were simplified so that digital copies of phytosanitary certificates are accepted and on-site inspections at the borders are reduced. These changes were notified to IPPC, the most relevant trade partners and the SPS Committee of the WTO.

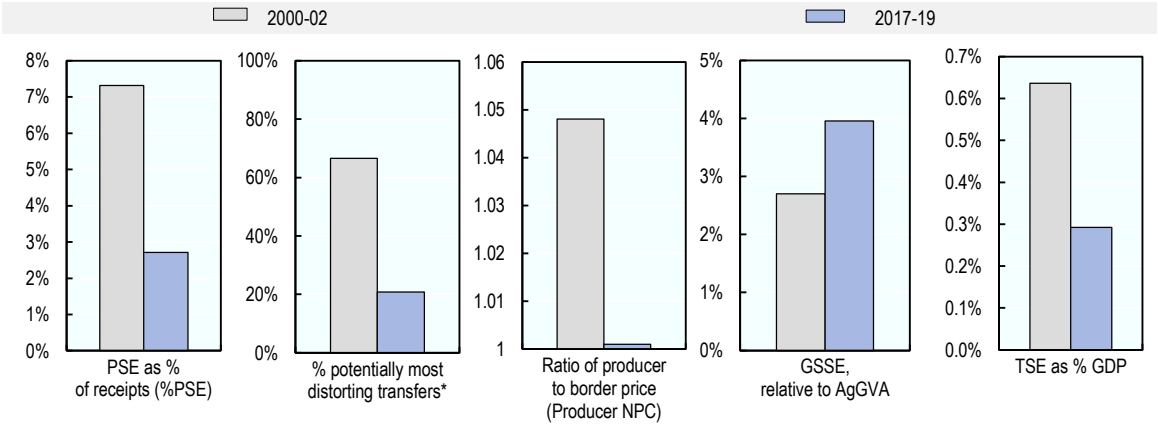
The poorest 60% of the population have received a one-off subsidy of CHL 50 000 (USD 71) per family. In addition, the government is implementing a family emergency income for the poorest 60% of the population with incomes mainly from informal sources. The payment is to be provided for three months depending on both family size and the level of its vulnerability, and decreases monthly. A family of four within the poorest 40% of the population should receive about CHL 260 000 for the first month. This measure should benefit about 4.5 million Chileans.

The Institute of Agricultural Development (INDAP), which focuses on smallholders and family farmers, has implemented two measures for economic support:

- Interest rates for current loans were reduced, benefiting up to 3 369 smallholders. Interest rates were also reduced for new loans benefiting 9 271 smallholders.
- Credit payments and expirations were rescheduled by 120 days, without charges. This measure benefits 29 580 smallholders.

Food baskets were delivered to the poorest families with school children who normally get food in school canteens but are affected by the suspension of classes.

Figure 7.1. Chile: Development of support to agriculture

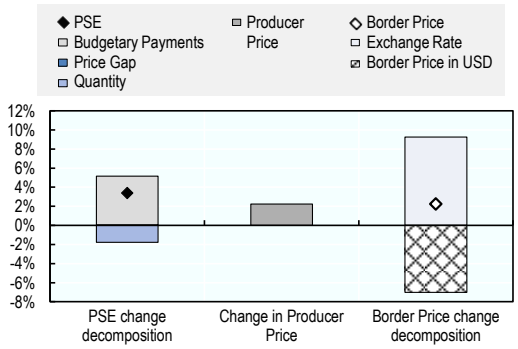


Note: * Share of potentially most distorting transfers in cumulated gross producer transfers.
Source: OECD (2020), "Producer and Consumer Support Estimates", OECD Agriculture statistics (database), http://dx.doi.org/10.1787/agr-pcse-data-en.

StatLink https://doi.org/10.1787/888934143850

Support to producers as measured by the %PSE declined from 7.3% in 2000-02 to 2.7% in 2017-19. This support is amongst the lowest in the OECD area and it is delivered largely through direct payments, mainly to smallholders. Chile has reduced the potentially most distorting support – such transfers now represent 21% of all transfers to producers. Most of the support to farmers has been linked to input subsidies, in particular to fixed capital formation. Producer prices are almost fully aligned with world prices (Figure 7.1). Expenditures for general services (GSSE) were equivalent to 4% of the agricultural value added in 2017-19, slightly below the OECD average. Total agricultural support was a low 0.3% of GDP in 2017-19. Support to general services accounted for about half of the total support (TSE) in 2017-19. Support to producers increased slightly in 2019 due to an increase in budgetary allocations, more than offsetting a small decline in MPS (Figure 7.2). Transfers to single commodities are limited to low levels for sugar and maize (Figure 7.3).

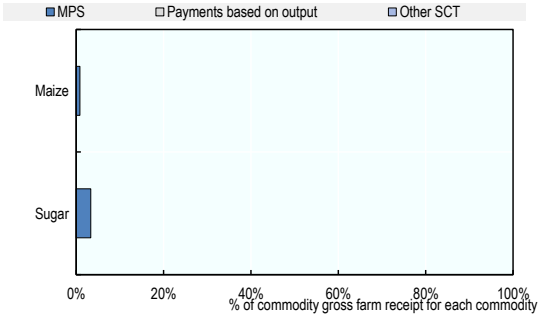
Figure 7.2. Chile: Drivers of the change in PSE, 2018 to 2019



Source: OECD (2020), "Producer and Consumer Support Estimates", OECD Agriculture statistics (database), http://dx.doi.org/10.1787/agr-pcse-data-en.

StatLink https://doi.org/10.1787/888934143869

Figure 7.3. Chile: Transfer to specific commodities (SCT), 2017-19



Source: OECD (2020), "Producer and Consumer Support Estimates", OECD Agriculture statistics (database), http://dx.doi.org/10.1787/agr-pcse-data-en.

StatLink https://doi.org/10.1787/888934143888

Table 7.1. Chile: Estimates of support to agriculture

Million USD

	2000-02	2017-19	2017	2018	2019p
Total value of production (at farm gate)	**4 806**	**13 979**	**13 931**	**14 714**	**13 291**
***of which:** share of MPS commodities (%)*	72.9	69.4	66.7	69.8	71.7
Total value of consumption (at farm gate)	**4 118**	**10 730**	**10 685**	**11 502**	**10 001**
Producer Support Estimate (PSE)	**369**	**390**	**417**	**387**	**365**
Support based on commodity output	227	14	22	14	7
Market Price Support[1]	227	14	22	14	7
Positive Market Price Support	228	14	22	14	7
Negative Market Price Support	-1	0	0	0	0
Payments based on output	0	0	0	0	0
Payments based on input use	140	354	360	364	338
Based on variable input use	21	67	66	68	67
with input constraints	0	0	0	0	0
Based on fixed capital formation	85	195	199	201	183
with input constraints	66	97	103	99	89
Based on on-farm services	35	92	94	95	88
with input constraints	7	37	36	35	40
Payments based on current A/An/R/I, production required	1	21	35	9	21
Based on Receipts / Income	0	0	0	0	0
Based on Area planted / Animal numbers	1	21	35	9	21
with input constraints	1	21	35	9	21
Payments based on non-current A/An/R/I, production required	0	0	0	0	0
Payments based on non-current A/An/R/I, production not required	0	0	0	0	0
With variable payment rates	0	0	0	0	0
with commodity exceptions	0	0	0	0	0
With fixed payment rates	0	0	0	0	0
with commodity exceptions	0	0	0	0	0
Payments based on non-commodity criteria	0	0	0	0	0
Based on long-term resource retirement	0	0	0	0	0
Based on a specific non-commodity output	0	0	0	0	0
Based on other non-commodity criteria	0	0	0	0	0
Miscellaneous payments	0	0	0	0	0
Percentage PSE (%)	**7.3**	**2.7**	**2.9**	**2.6**	**2.7**
Producer NPC (coeff.)	**1.05**	**1.00**	**1.00**	**1.00**	**1.00**
Producer NAC (coeff.)	**1.08**	**1.03**	**1.03**	**1.03**	**1.03**
General Services Support Estimate (GSSE)	**103**	**449**	**432**	**464**	**453**
Agricultural knowledge and innovation system	22	84	84	96	73
Inspection and control	3	104	92	101	120
Development and maintenance of infrastructure	67	246	239	251	247
Marketing and promotion	10	15	16	15	13
Cost of public stockholding	0	0	0	0	0
Miscellaneous	1	0	0	0	0
Percentage GSSE (% of TSE)	**22.0**	**53.6**	**50.9**	**54.5**	**55.3**
Consumer Support Estimate (CSE)	**-317**	**-35**	**-47**	**-31**	**-25**
Transfers to producers from consumers	-226	-14	-22	-14	-7
Other transfers from consumers	-92	-22	-30	-17	-18
Transfers to consumers from taxpayers	0	0	0	0	0
Excess feed cost	1	2	5	0	0
Percentage CSE (%)	**-7.5**	**-0.3**	**-0.4**	**-0.3**	**-0.3**
Consumer NPC (coeff.)	**1.08**	**1.00**	**1.00**	**1.00**	**1.00**
Consumer NAC (coeff.)	**1.08**	**1.00**	**1.00**	**1.00**	**1.00**
Total Support Estimate (TSE)	**472**	**839**	**849**	**851**	**818**
Transfers from consumers	318	36	52	31	25
Transfers from taxpayers	245	825	827	837	811
Budget revenues	-92	-22	-30	-17	-18
Percentage TSE (% of GDP)	**0.6**	**0.3**	**0.3**	**0.3**	**0.3**
Total Budgetary Support Estimate (TBSE)	**244**	**825**	**827**	**837**	**811**
Percentage TBSE (% of GDP)	**0.3**	**0.3**	**0.3**	**0.3**	**0.3**
GDP deflator (2000-02=100)	**100**	**224**	**219**	**223**	**229**
Exchange rate (national currency per USD)	**621.08**	**664.63**	**648.68**	**641.90**	**703.31**

Note: p: provisional. NPC: Nominal Protection Coefficient. NAC: Nominal Assistance Coefficient.
A/An/R/I: Area planted/Animal numbers/Receipts/Income.
1. Market Price Support (MPS) is net of producer levies and excess feed cost. MPS commodities for Chile are: wheat, maize, apples, grapes, sugar, tomatoes, milk, beef and veal, pig meat, poultry, eggs, blueberries, cherries and peaches.
2. Time series on value of production, consumption, production, and producer prices of several products changed, as new and more reliable data was obtained by the national government. As a result, estimations may differ from previous years.

Source: OECD (2020), "Producer and Consumer Support Estimates", *OECD Agriculture statistics* (database), http://dx.doi.org/10.1787/agr-pcse-data-en.

Contextual information

Chile has enjoyed average real GDP growth of around 4% since 2000. This growth has helped the country to become an upper middle income country with a GDP per capita slightly above the average of all countries covered in this report. Agriculture accounted for 4% of GDP and 9.2% of total employment in 2018, reflecting the duality of its structure, where small-scale labour intensive farms co-exist alongside a large-scale commercial farm sector. Chile is a net exporter of agro-food products with a surplus of USD 5 billion (excluding fish and forestry). Agro-food exports are around 16.5% of total exports of the country.

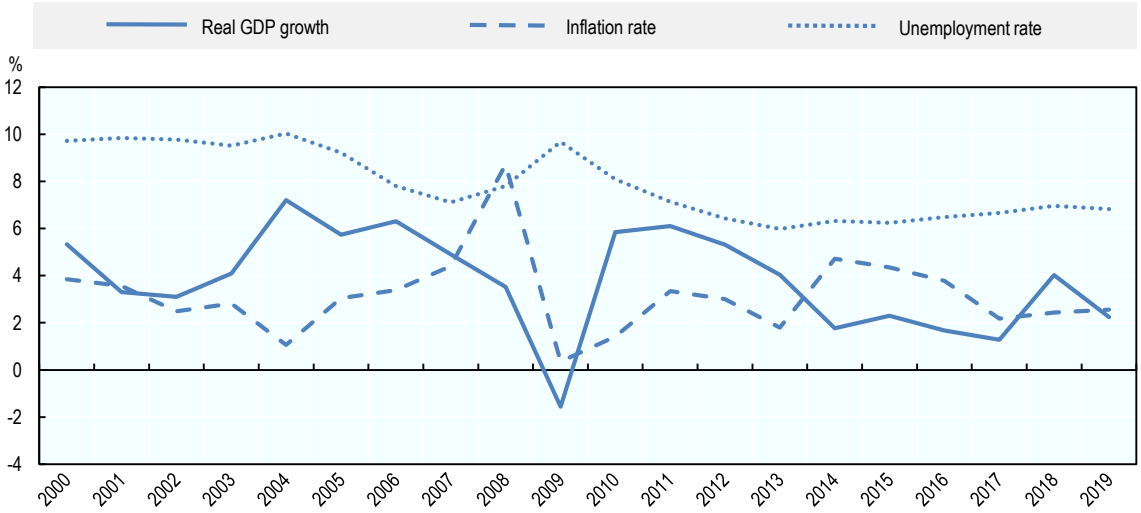
Table 7.2. Chile: Contextual indicators

	Chile		International comparison	
	2000*	2018*	2000*	2018*
Economic context			**Share in total of all countries**	
GDP (billion USD in PPPs)	147	464	0.4%	0.4%
Population (million)	15	19	0.4%	0.4%
Land area (thousand km²)	744	744	0.9%	0.9%
Agricultural area (AA) (thousand ha)	15 110	15 747	0.5%	0.5%
			All countries[1]	
Population density (inhabitants/km²)	21	25	53	62
GDP per capita (USD in PPPs)	9 519	24 709	9 275	21 924
Trade as % of GDP	22	25	12.4	15.3
Agriculture in the economy			**All countries[1]**	
Agriculture in GDP (%)	5.9	4.0	3.1	3.6
Agriculture share in employment (%)	14.1	9.2	-	-
Agro-food exports (% of total exports)	17.0	16.5	6.2	7.3
Agro-food imports (% of total imports)	7.7	9.6	5.5	6.3
Characteristics of the agricultural sector			**All countries[1]**	
Crop in total agricultural production (%)	68	69	-	-
Livestock in total agricultural production (%)	32	31	-	-
Share of arable land in AA (%)	12	8	32	33

Notes: *or closest available year. 1. Average of all countries covered in this report. EU treated as one.
Sources: OECD statistical databases; UN Comtrade; World Bank, WDI and national data.

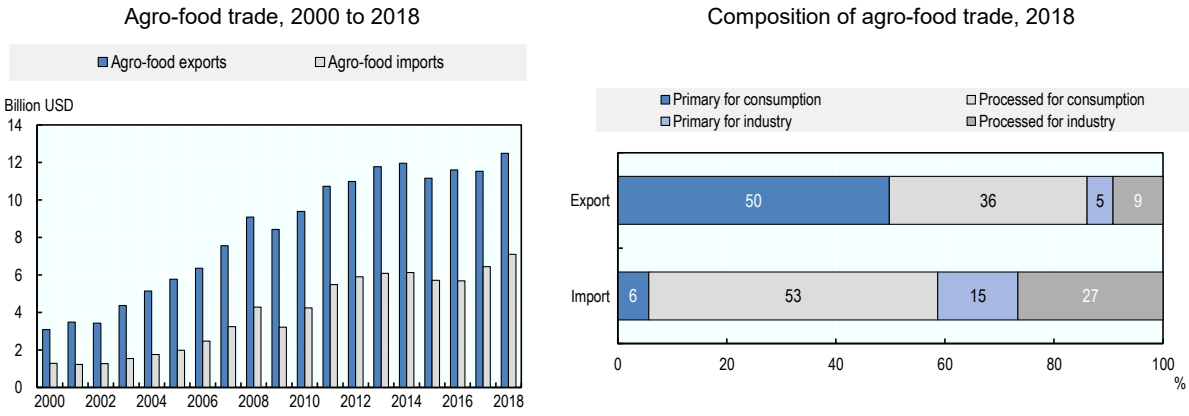
Over the past two years, GDP growth has recovered from relatively low levels between 2014 and 2017. Chile's agricultural and agro-food sector has been successful in adding value to the production of primary commodities, by producing more differentiated products like temperate fruits and processed products such as wine. In 2018, 86% of exports were mostly products for final consumption, both primary and processed, and only 14% were products for further industrial processing. Agro-food imports are mostly processed products, where 53% are for consumption and 27% for further processing in industry.

Figure 7.4. Chile: Main economic indicators, 2000 to 2019



Sources: OECD statistical databases; World Bank, WDI and ILO estimates and projections.

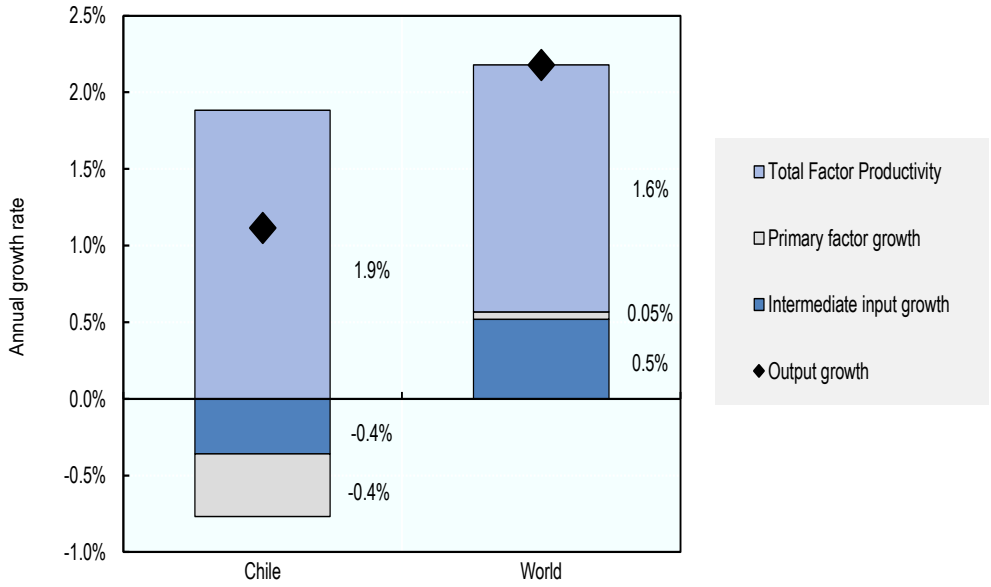
Figure 7.5. Chile: Agro-food trade



Note: Numbers may not add up to 100 due to rounding.
Source: UN Comtrade Database.

The agricultural sector has played a key role in Chile's economic success, both benefiting from stability and reforms, and making an important contribution via strong output and exports growth. Productivity growth has been central to Chile's agriculture. With a relatively stable use of primary and intermediate inputs into production, growth in output has been achieved by significant improvements in total factor productivity (TFP), with an average of 1.9% per year over the period 2007 to 2016, slightly higher than the global average.

Figure 7.6. Chile: Composition of agricultural output growth, 2007-16



Note: Primary factors comprise labour, land, livestock and machinery.
Source: USDA Economic Research Service Agricultural Productivity database.

Table 7.3. Chile: Productivity and environmental indicators

	Chile		International comparison	
	1991-2000	2007-2016	1991-2000	2007-2016
			World	
TFP annual growth rate (%)	2.2%	1.9%	1.6%	1.6%
			OECD average	
Environmental indicators	**2000***	**2018***	**2000***	**2018***
Nitrogen balance, kg/ha	..	..	33.3	29.1
Phosphorus balance, kg/ha	..	..	3.3	2.3
Agriculture share of total energy use (%)	..	1.4	1.7	2.0
Agriculture share of GHG emissions (%)	18.3	10.6	8.1	8.9
Share of irrigated land in AA (%)	7.0	7.0	-	-
Share of agriculture in water abstractions (%)	..	..	46.0	49.0
Water stress indicator	..	..	9.9	8.9

Note: * or closest available year.
Sources: USDA Economic Research Service, Agricultural Productivity database; OECD statistical databases; FAO database and national data.

Description of policy developments

Main policy instruments

The fundamental orientation of agricultural policy has remained almost unchanged over the past few years. The policy objectives continue to emphasise the development of small-scale agriculture, the improvement of agricultural sustainable productivity and competitiveness and the conservation of natural resources.

Chilean agricultural policies focus mainly on the provision of key services for the sector. About half of total expenditures to the sector are investments in infrastructure mainly on the expansion and improvements of

the irrigation systems, while other investments target the restructuring of and access to land, agricultural research and development, sanitary and phyto-sanitary services and inspection services. The other half is provided as payments directed mostly to small-scale farmers, through different types of input subsidies such access to credit at preferential interest rates; subsidies for fixed capital formation, in particular for improving degraded soils; and on on-farm services like producer association programmes for small-scale and indigenous farmers.

An open trade regime has helped Chile to emerge as a globally important producer of agricultural and food products such as fruits, vegetables, dairy products, poultry, pig meat and wine.

Domestic policy developments in 2019-20

In 2019, the government emphasised and developed policies within four strategic areas: 1) Institutional modernisation, 2) Producer associations, 3) Sustainability and water use, and 4) Strengthening rural development. Furthermore, in response to the protests during the last trimester of 2019, the Ministry of Agriculture proposed a plan called: “Rural Action for a fairer Chile” based on a participative process called “Listening rural”. The plan has four strategic axes: 1) Emergency management against drought, 2) Quality of rural life, 3) Support for family farming and agricultural SMEs, and 4) Transparency and good commercial practices.

In this new context, the Institute for Agricultural Development (INDAP), the agency promoting smallholders’ agriculture, has begun a modernisation plan for three emblematic programmes: the Local Development Program (PRODESAL), the Agricultural Program for the Comprehensive Development of Small Farmers of the Coquimbo Region (PADIS), and the Technical Advice Program (SAT). This plan includes a characterisation of INDAP beneficiaries, as well as the definition of the target population and the designing of the new objectives for these three programmes, which will result in new rules for their implementation during 2020. INDAP has also developed working lines to promote farmer associations and improve market access, in order to increase the number of small-scale farmers participating in high-value domestic markets and export markets. In 2019, INDAP and the Ministry of Agriculture carried out a territorial diagnostic to assess the level of development of rural and agricultural tourism, aiming at boosting this sector in rural areas.

In 2018, the Guaranteed Credit Program for indigenous peoples, called CORFO-COBIN (Indigenous Coverage), was created; this programme establishes a line of financing for individual or collective projects that are economically viable and sustainable but have difficulties in being accepted by the financial system because of lack of collateral and relatively small operations that increase transaction costs, among other reasons.

To mitigate territorial inequalities, the Promulgation of the National Rural Development Policy was established in early 2020, with the participation of 12 ministries. This promulgation aims to improve access and quality of public services and connectivity of the poorest regions in the country. In addition, a pilot rural development initiative in the Araucania Region was created, which has several objectives 1) promote the diversification of agricultural production; 2) formalise economic activities such as the agricultural/rural tourism that have hitherto been informal; 3) improve linkages and co-ordination between public institutions that implement rural development programmes. Several other programmes, including from INDAP and other agencies, focus more on rural development in the poorest regions of the country.

The Ministry of Agriculture created the national plan “Más Unidos” (“working closely”), launched in August 2019, to encourage farmers’ associations. The Agro+ is an instrument developed under this national plan that promotes agricultural and forestry farmer associations through formal models of co-operation like modern co-operatives and traditional corporate structures. This new instrument supports groups of small-scale producers willing to create, formalise or strengthen farmer associations by providing technical assistance on marketing capabilities and in other key areas.

In 2019, the animal and plant health agency, the Agriculture and Livestock Service (SAG) developed a web platform called "*Portal Productor RPF/Red de Pronóstico Fitosanitario*" (Farmers website of phytosanitary forecast). This platform contains two Decision Support Systems: 1) the Early Alert System (SAT) for pests, which is used to monitor and allow early control of the fly pest Lobesia botrana; and 2) the Expert Diagnosis System (SED) for detecting pests and diseases in blueberries and raspberries. These systems provide information in advance, so that decision makers can take actions on diagnosis and control in a faster, more focused and more effective manner, and using lower quantities of pesticides. SAG also implemented a technique of releasing sterile specimens of insects to prevent the settling of Ceratitis capitata and to control L. botrana.

Other areas of work using digital technologies have been developed and implemented supporting the inspection process of SAG. The inspection process has been modernised through web and mobile platforms. Additionally, the SAG website now features a platform allowing farmers to consult all documents related to inspections on their farms (National Information Inspection System, SINIF). In the framework of the System of Incentives for the Sustainability of Agricultural Soils (SIRSD-S), SAG plans to use drones to quantify and check the implementation of certain practices, thus saving inspection time.

During 2020, a new census is to be conducted and results should be made available in 2021. This new census aims at collecting economic, social and environmental information on the sector in order to improve decision-making and the targeting of public instruments.

"¿A Cuánto?" ("How much?") is an application created in the Ministry of Agriculture, through the Office of Agricultural Policies and Studies (ODEPA), which allows to easily and instantly check the prices of more than 50 agricultural products sold in wholesale markets throughout the country.

In July 2019, the Department of Sustainability and Climate Change was created in ODEPA. This new department has four main goals: 1) developing a sustainability strategy for the ministry; 2) promoting public-private partnership regarding sustainable agriculture; 3) co-ordinating the participation of the Ministry of Agriculture in COP 25; and 4) contributing to the country's image through the communication of the Chilean sustainability achievements in agriculture. Additionally, as part of this new department, a special unit on Climate Change was created. During 2019, the Ministry of Agriculture, through ODEPA, started the development of a Sustainable Agrifood Strategy. This strategy is focused on policy coherence, private-public partnership and concrete actions. A new Sustainable Agriculture Agreement was signed in 2019 by different public agencies, including ODEPA, INDAP, CORFO, ASCC and FIA. This agreement gives continuity to the work done in the frame of the Sustainable Agriculture Plan. The Working Group on Sustainability of the Agro-Food Exporting Council has continued developing public-private projects to improve tools that promote and certify sustainable agriculture.

The project "Sustainability Program for the Chilean Agro-food Sector" was launched in 2019 and the tool kit for the development of sustainability standards was finished. Moreover, the development of the sustainability standards for the pork, poultry and dairy production sectors are being developed. The rules of this project were established in January 2019. Regarding climate action, Chile promoted the Climate Action Platform for Agriculture of Latin America and the Caribbean (PLACA), which was launched in the frame of COP25 under the Chilean presidency.

During 2019, the south-central part of Chile experienced the country's most severe drought of the last 100 years. Several efforts took place to address the consequences of the drought, including the promotion of water availability (construction of irrigation infrastructure) and water use efficiency, through pressurised irrigation, improvement of distribution systems and the construction of dams. The Large Dams Plan is expected to benefit a population of 40 000 farmers and 400 000 hectares, by increasing the current water storage capacity by 40% or 1 200 million cubic meters. Four Large Dams are under construction: Punilla (Ñuble Region), Valle Hermoso (Coquimbo Region), Chironta (Arica and Parinacota Region) and Las Palmas (Valparaiso Region) with a total investment of CHL 633 billion (USD 900 million).

In terms of water use efficiency, the National Irrigation Commission (CNR), through Act No. 18.450 for private investment in irrigation supports different projects such as efficient irrigation systems, channel improvements, telemetric systems, aquifers recharge, and small dams. The CNR increased its budget to a total of CHL 88 billion (USD 125 million) for 2019. Finally, in order to strengthen the capacities of the Water Users Organization, CNR executed several training programmes to improve administrative competences, operational infrastructure, management systems and base information.

Trade policy developments in 2019-20

In 2019, Free Trade Agreements with Argentina and Indonesia entered into force, bringing the number of Chile's FTAs in force to 29; the FTAs with Brazil, and the Comprehensive and Progressive Agreement For Trans-Pacific Partnership (CPTPP) are signed but are not yet in force.

In 2019, four rounds have taken place in the negotiation with Ecuador to modernise the commercial agreement, including a new chapter on environmental issues. With the European Union, six rounds have taken place for the modernisation of the association agreement, which includes new chapters on environment, labour and gender, among other issues; and the deepening of some chapters of the current agreement; likewise negotiations with India began. In the context of the Brexit, Chile and the United Kingdom have already signed an agreement that should enter in force on 1 January 2021, when the transition period ends.

Progress was made on the sanitary and phytosanitary (SPS) agenda in 2019. Access to the market for the People's Republic of China was granted for pears, hazelnuts (without shell), citrus fruits, honey and bee products; access to the Indian market was granted for blueberries, avocados, nuts with/without shell; and access to Viet Nam was granted for apples. At the Chilean border control, an Import Information System (SIIS) was also implemented by SAG, moving to a paperless registration connected with customs agencies and importers, for all the products under SAG supervision.

Note

[1] https://covid19.minagri.gob.cl/.

8 China

Support to agriculture

The share of support to agricultural producers in gross farm receipts (%PSE) in the People's Republic of China (hereafter "China") has been decreasing gradually since 2016 after two decades of steady growth. The %PSE averaged 13.3% in 2017-19, reflecting policy reforms undertaken with respect to the market intervention systems for soybeans, rapeseed, cotton, and maize, as well as to the minimum purchase price system for wheat and rice. The nominal depreciation of the CNY vis-à-vis the USD since 2014, after a long period of gradual appreciation, has been another factor influencing the evolution of price gaps and thus contributing to stabilising levels of Market Price Support (MPS) in recent years. Payments based on area planted have been consistently increasing since 2014 as a result of the recent reforms, but MPS remains the dominant part of total support, generated through both domestic price support policy and various border measures on imports. MPS levels differ across imported commodities, while prices of exported commodities are not supported. The higher domestic producer prices, on average, indicate an implicit tax imposed on consumers, with a percentage Consumer Support Estimate (%CSE) of -9.9% in 2017-19.

Within the General Services Support Estimate (GSSE), three categories attract the largest financial support: public stockholding, development and maintenance of infrastructure, and agricultural knowledge and innovation system. The GSSE corresponds however to only 15.9% of total support to agriculture in 2017-19.

Main policy changes

Ceilings on the volumes of grains procured at minimum purchase prices were fixed for the first time at 37 million tonnes for wheat and at 50 million tonnes for rice. Minimum purchase prices for early and mid-late indica rice were increased in February 2020 for the first time since 2014.

Central and provincial governments intensified policy responses to the African swine fever (ASF) outbreak, focusing on the compensation of producers affected, rebuilding the pig herd, and enhancing pig meat production. Specific measures included the strengthening of veterinary laboratories' capacities and disease prevention, as well as support to the set up and extension of pig farms including through the relaxation of existing environmental regulations.

China lifted import bans on selected meat and related products for several countries and approved various facilities for importing in 2019.

The Soil Pollution Prevention and Control Law entered into force in 2019. The Ministry of Ecology and Environment together with the Ministry of Agriculture and Rural Affairs and the Ministry of Natural Resources are establishing a soil environmental monitoring system with regular soil examinations.

Assessment and recommendations

- Recent reforms to replace intervention prices for key crops by direct payments based on area planted are a step in the direction of rebalancing the policy portfolio towards measures that reflect China's policy orientation towards long-term productivity growth and sustainability. The most recent reform of the maize purchasing and storage system towards direct payments has eased the burden on the cost of public stockholding that still represents the largest expenditure share in general services support. Such reforms could be extended to gradually include rice and wheat. Should direct payments to farmers be maintained over a longer-term, the link between these and production decisions should be further loosened by providing payments on a historical area basis, for instance, and 'greened' by making them conditional on environmentally friendly production practices.
- Public expenditure on general services has been increasing, but at a slower pace than support to individual producers. More efforts are thus needed to restructure agricultural support towards public investment in research and development, and agricultural infrastructure. Further investments in sanitary inspection and control services will be key to support the implementation of the Food Safety Law revised provisions and the recovery of the pig meat sector following the African swine fever outbreak. This restructuring of public expenditure can be achieved by scaling down input subsidies such as the subsidy to purchase farm machinery and ensuring that support through direct payments only has a transitory role in backing farmers' adjustment to a new market environment.
- Recent reforms in land transfer rules have contributed to the emergence of "new-style" farms, including large family farms, co-operative farms and farms run by agribusiness companies. For the reforms in land regulations to continue delivering expected outcomes, these need to be complemented by further investments in education and training and improved access to financial services.
- To establish a solid framework for agri-environmental policies, China should define environmental targets well adapted to local ecological conditions and strengthen monitoring mechanisms for the enforcement of environmental regulations. In this sense, the soil environmental information platform and monitoring system with regular soil examinations – under the 2019 Soil Pollution Prevention and Control Law – need to be fully implemented and can set the stage for similar efforts relating to water use in agriculture. More specifically, under the current discussions on a law on groundwater pollution control and establishment of a national groundwater environmental monitoring system, a comprehensive review of water governance could help to better define responsibilities, remove conflicts, and ensure effective and efficient policy implementation.
- China's Nationally Determined Contributions (NDCs) distinguishes agriculture's importance to its economy-wide emission reduction target, but no sector-specific targets have been set. Policy efforts for mitigating GHG emissions have focused on increased fertiliser efficiency, reduced emissions from rice cultivation, and agricultural biogas production. Several work plans have been recently put forward with the aim of strengthening policies supporting the sector's adaptation to climate change. In this context, the Ministry of Ecology and Environment can mainstream adaptation policy objectives across current and planned programmes, including a better targeting of extension services for farmers. Prior to any extension of the insurance premium coverage, an evaluation of the performance of the subsidy to the agricultural insurance premium would allow assessing its cost-efficiency and impacts on adaptation.

Policy responses in relation to the COVID-19 outbreak

Agricultural policies

A statement by the State Council on 28 February 2020 encourages farmers to adopt double cropping of rice[1] – in areas where planting conditions are favourable – with the objective to avoid potential grain supply disruptions for the 2020-21 marketing year (Xinhua, 2020[1]). The National Development and Reform Commission (NDRC) also raised by 0.8% the minimum purchase price for indica rice for 2020-21, the first time since 2014: reaching RMB 2 420 (USD 343) per tonne for early indica rice and RMB 2 540 (USD 361) per tonne for mid-late indica rice (State Council, 2020[2]) (Teller Report, 2020[3]).

With rice procurement being slowed following the COVID-19 outbreak, in February 2020 the National Administration of Grain and Commodity Reserves extended the procurement of rice at minimum prices in North-eastern provinces until the end of March[2] (State Council, 2020[4]). The state-owned China Grain Reserves Group (CGRG) also released an estimated 10 million tonnes of grains from stocks between 20 January and 31 March 2020 to stabilise market supply (XInhua, 2020[5]) (China.org, 2020[6]).

In March 2020, several guidelines were issued with the view to avoiding disruptions in spring planting and ensuring the continuation of farm operations. This includes the 26 March 2020 joint circular by the Ministry of Agriculture and Rural Affairs (MARA) and the Ministry of Human Resources and Social Security on an "Implementation Plan for Enlarging the Scale of Local Employment for Returning Rural Migrant Workers" which contributes to ensuring that migrant workers can swiftly retake farming operations under the lead of farmer co-operatives following the relaxation of confinement measures (SNSJ Agri China, 2020[7]).

MARA signed co-operation agreements with the China United Insurance Group and with the Agricultural Bank of China to ensure the availability of financial services for farmers and agribusinesses (SNSJ Agri China, 2020[8]) (SNSJ Agri China, 2020[9]).

The fiscal support policies put in place for small and medium-sized enterprises (SMEs) in February and March 2020 also cover agribusinesses. Measures include, among others: deferred tax payment; extended loans repayment periods; tax and social contributions exemptions for SMEs in difficulty (China Briefing, 2020[10]) (China Banking and Insurance Regulatory Commission, 2020[11]) (MOFCOM, 2020[12]).

China temporarily reduced import tariffs on certain products, including for instance medical supplies, raw materials, agricultural products, and meat (International Trade Centre, 2020[13]).

Agro-food supply chain policies

Several policies address input constraints. On 6 February 2020, the CGRC supplied over 8 000 tonnes of soybean meal to poultry farms at below market prices in the Hubei province in order to address animal feed shortages (China Daily, 2020[14]). On 15 February 2020, MARA issued together with the NDRC and the Ministry of Transport an "Urgent notice on addressing practical difficulties for resuming production in poultry and other livestock sectors". The notice specifically supports the creation of domestic "green channels" for transporting feed from feed producers to livestock farmers facing logistical bottlenecks due to the COVID-19 quarantine restrictions (MARA, 2020[15]). MARA and the NDRC issued a 27 March 2020 notice prioritising the supply of water, electricity and gas to animal feed and poultry meat producers, as well as slaughtering and processing facilities (SNSJ Agri China, 2020[16]).

A central government Notice of 20 February 2020 addresses disruptions in access to fertilisers for crop farmers and to raw materials for fertiliser producers. China's energy companies were requested to prioritise coal and gas supplies to fertiliser production, while several producers of potash fertiliser were requested to build up domestic stocks of those (Argus Media, 2020[17]).

Central and local governments have also supported e-commerce as an alternative channel for the purchase and distribution of agricultural inputs. Platforms such as Pinduoduo or Alibaba's Taobao marketplace have been facilitating this for seeds, fertilisers, sprinklers, and other agricultural machinery (Reuters, 2020[18]).

On 31 January 2020, MARA released the "Initiative to the National Farmers Cooperatives" outlining the role of farmers co-operatives in the collection of real-time information both on the supply of agricultural products such as vegetables or meat and on the operation of transportation channels linking farmers to main wholesale markets. Under existing limits on the mobility of people, farmer co-operatives also have to supervise the quality and food safety requirements within supply chains (MARA, 2020[19]).

In February 2020, China introduced a ban on the transportation of live poultry, considered a factor of potential risk in the transmission of the virus, as well as a permanent ban on the trade and consumption of wildlife as food (IFPRI, 2020[20]).

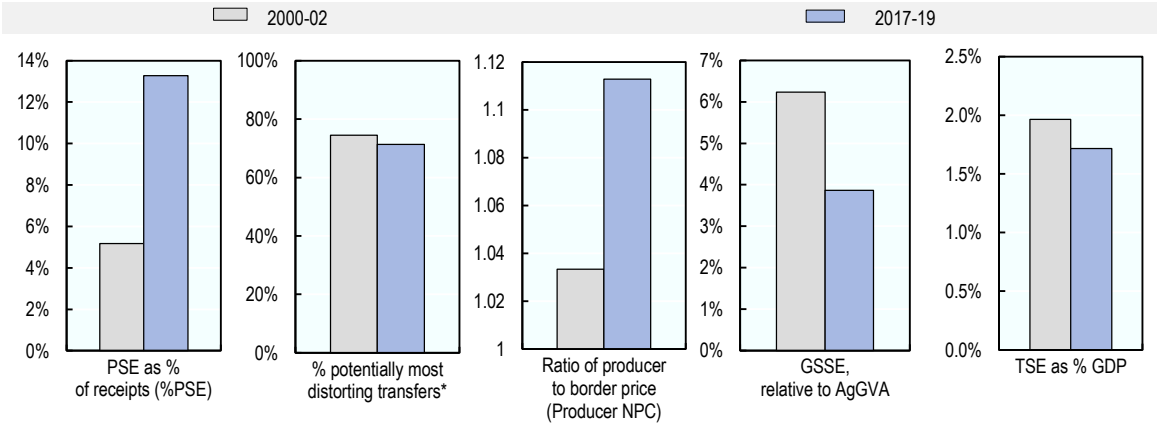
"Green lanes" were also set up at major ports starting February 2020 to provide 24/7 clearance for agro-food goods. Imported agro-food products have been given priority in inspection over other goods to the extent possible (General Administration of Customs China, 2020[21]).

Consumer policies

MARA issued a notice at the end of January 2020 urging related departments to co-ordinate to maintain ample supplies of vegetables and stable prices. State-owned companies COFCO and Sinograin stepped up supplies of rice, meat and cooking oil to Hubei province in January 2020 also through the operation of specific "green channels" for food distribution (Japan Times, 2020[22]). About 44 600 food emergency supply outlets were established throughout the country (State Council, 2020[2]).

On 24 February 2020, the Wuhan Municipal Bureau of Commerce launched the "special vegetable package", selling 4.5 kg of vegetables at the price of CNY 10 (USD 1.4) until 15 March 2020 (Teller Report, 2020[23]).

Figure 8.1. China: Development of support to agriculture

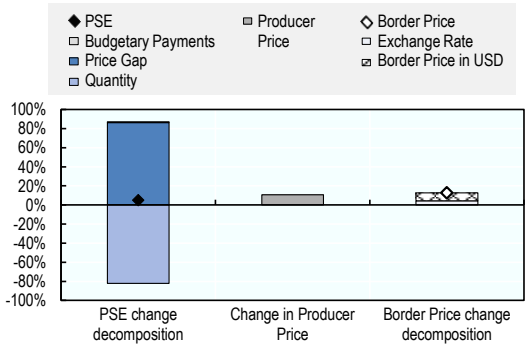


Note: * Share of potentially most distorting transfers in cumulated gross producer transfers.
Source: OECD (2020), "Producer and Consumer Support Estimates", OECD Agriculture statistics (database), http://dx.doi.org/10.1787/agr-pcse-data-en.

StatLink https://doi.org/10.1787/888934143907

Support to producers (%PSE) had steadily increased from 2000-02 to 2016 before stabilising at 13.3% of gross farm receipts in 2017-19, below the OECD average. More than two-thirds of support to producers are in the form of potentially most distorting transfers, a consistent pattern since 2000-02. Prices received by farmers were on average 11% higher than world prices in 2017-19 (Figure 8.1). The absolute level of producer support remained stable year-on-year, with relatively steady budgetary payments, but increasing price gaps in pig meat and other livestock commodities following the African swine fever outbreak (Figure 8.2). With the exception of eggs, peanuts, and fruit and vegetables that are exported, producers are benefiting from high transfers accounting for between 11% and 51% of commodity receipts in 2017-19 (Figure 8.3). At 3.9% in 2017-19, expenditure for general services (GSSE) relative to agriculture value added is lower than the OECD average of 5.7%. Total support to agriculture as a share of GDP (%TSE) has remained relatively stable since 2000-02. At 1.7% in 2017-19, %TSE is nevertheless one of the highest among the countries covered, almost three times higher than the OECD average.

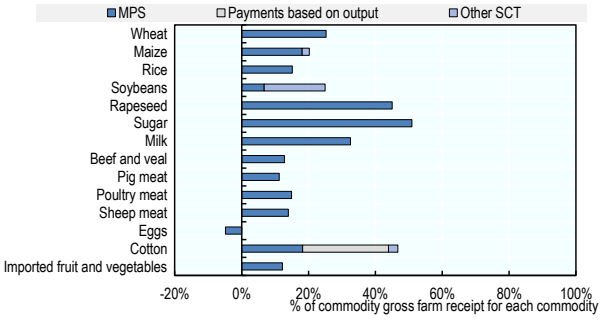
Figure 8.2. China: Drivers of the change in PSE, 2018 to 2019



Source: OECD (2020), "Producer and Consumer Support Estimates", OECD Agriculture statistics (database), http://dx.doi.org/10.1787/agr-pcse-data-en.

StatLink https://doi.org/10.1787/888934143926

Figure 8.3. China: Transfer to specific commodities (SCT), 2017-19



Source: OECD (2020), "Producer and Consumer Support Estimates", OECD Agriculture statistics (database), http://dx.doi.org/10.1787/agr-pcse-data-en.

StatLink https://doi.org/10.1787/888934143945

Table 8.1. China: Estimates of support to agriculture

Million USD

	2000-02	2017-19	2017	2018	2019p
Total value of production (at farm gate)	**270 118**	**1 375 601**	**1 293 043**	**1 362 576**	**1 471 184**
***of which:** share of MPS commodities (%)*	75.8	79.5	80.0	80.3	78.3
Total value of consumption (at farm gate)	**281 331**	**1 451 371**	**1 355 591**	**1 423 557**	**1 574 964**
Producer Support Estimate (PSE)	**14 354**	**191 477**	**203 315**	**185 203**	**185 913**
Support based on commodity output	7 329	130 492	143 240	122 517	125 718
Market Price Support[1]	7 329	125 959	138 729	118 351	120 797
Positive Market Price Support	11 162	127 648	140 446	120 111	122 388
Negative Market Price Support	-3 833	-1 690	-1 718	-1 761	-1 590
Payments based on output	0	4 533	4 511	4 167	4 920
Payments based on input use	5 684	22 406	22 336	22 890	21 992
Based on variable input use	1 414	5 083	4 350	5 568	5 331
with input constraints	0	0	0	0	0
Based on fixed capital formation	3 026	14 605	15 011	14 675	14 127
with input constraints	0	0	0	0	0
Based on on-farm services	1 244	2 719	2 975	2 647	2 534
with input constraints	0	0	0	0	0
Payments based on current A/An/R/I, production required	533	25 722	25 747	26 217	25 203
Based on Receipts / Income	533	2 064	2 051	2 116	2 026
Based on Area planted / Animal numbers	0	23 658	23 696	24 101	23 177
with input constraints	0	0	0	0	0
Payments based on non-current A/An/R/I, production required	0	0	0	0	0
Payments based on non-current A/An/R/I, production not required	370	10 557	9 642	11 254	10 775
With variable payment rates	0	0	0	0	0
with commodity exceptions	0	0	0	0	0
With fixed payment rates	370	10 557	9 642	11 254	10 775
with commodity exceptions	0	0	0	0	0
Payments based on non-commodity criteria	438	2 300	2 350	2 324	2 225
Based on long-term resource retirement	438	2 300	2 350	2 324	2 225
Based on a specific non-commodity output	0	0	0	0	0
Based on other non-commodity criteria	0	0	0	0	0
Miscellaneous payments	0	0	0	0	0
Percentage PSE (%)	**5.2**	**13.3**	**15.0**	**13.0**	**12.1**
Producer NPC (coeff.)	**1.03**	**1.11**	**1.13**	**1.11**	**1.10**
Producer NAC (coeff.)	**1.05**	**1.15**	**1.18**	**1.15**	**1.14**
General Services Support Estimate (GSSE)	**11 861**	**36 138**	**38 282**	**35 829**	**34 302**
Agricultural knowledge and innovation system	1 347	7 539	7 952	7 492	7 173
Inspection and control	349	2 068	2 085	2 104	2 015
Development and maintenance of infrastructure	3 424	8 469	9 060	8 351	7 995
Marketing and promotion	0	391	429	380	364
Cost of public stockholding	6 741	17 670	18 755	17 501	16 755
Miscellaneous	0	0	0	0	0
Percentage GSSE (% of TSE)	**45.0**	**15.9**	**15.8**	**16.2**	**15.6**
Consumer Support Estimate (CSE)	**-8 512**	**-143 347**	**-152 174**	**-133 115**	**-144 753**
Transfers to producers from consumers	-8 688	-132 521	-142 917	-127 344	-127 304
Other transfers from consumers	-1 119	-18 194	-16 435	-14 136	-24 010
Transfers to consumers from taxpayers	128	0	0	0	0
Excess feed cost	1 167	7 368	7 178	8 365	6 561
Percentage CSE (%)	**-3.0**	**-9.9**	**-11.2**	**-9.4**	**-9.2**
Consumer NPC (coeff.)	**1.04**	**1.12**	**1.13**	**1.11**	**1.11**
Consumer NAC (coeff.)	**1.03**	**1.11**	**1.13**	**1.10**	**1.10**
Total Support Estimate (TSE)	**26 343**	**227 614**	**241 597**	**221 032**	**220 215**
Transfers from consumers	9 807	150 715	159 352	141 480	151 314
Transfers from taxpayers	17 655	95 093	98 680	93 688	92 911
Budget revenues	-1 119	-18 194	-16 435	-14 136	-24 010
Percentage TSE (% of GDP)	**2.0**	**1.7**	**2.0**	**1.6**	**1.6**
Total Budgetary Support Estimate (TBSE)	**19 014**	**101 656**	**102 868**	**102 681**	**99 417**
Percentage TBSE (% of GDP)	**1.4**	**0.8**	**0.8**	**0.8**	**0.7**
GDP deflator (2000-02=100)	**100**	**182**	**177**	**183**	**185**
Exchange rate (national currency per USD)	**8.28**	**6.76**	**6.76**	**6.62**	**6.91**

Note: p: provisional. NPC: Nominal Protection Coefficient. NAC: Nominal Assistance Coefficient.
A/An/R/I: Area planted/Animal numbers/Receipts/Income.
1. Market Price Support (MPS) is net of producer levies and excess feed cost. MPS commodities for China are: wheat, maize, rice, rapeseed, soybean, sugar, milk, beef and veal, sheep meat, pig meat, poultry, eggs, cotton, apples, groundnuts, exported fruit and vegetables, and imported fruit and vegetables.

Source: OECD (2020), "Producer and Consumer Support Estimates", *OECD Agriculture statistics* (database), http://dx.doi.org/10.1787/agr-pcse-data-en.

Contextual information

China has the world's largest population and the second largest land area. It is an upper-middle income economy, with a GDP per capita – adjusted by PPP – close to 76% of the average of countries covered by this report (Table 8.2). However, while counting almost 20% of the world's population, it has only 7% of the world's potable water and 10% of the world's agricultural land. China is thus a resource scarce country, which results in severe competition between agriculture and other users of land and water resources.

Agriculture still accounts for 26.8% of employment, but its 8.2% share in GDP indicates that labour productivity is significantly lower than in the rest of the economy. Even if rural incomes are growing at high rates, they remain at around one-third of those in urban areas.

Crop production represents 68% of total agricultural output and its composition has changed significantly over the last decades, driven by the shift towards higher value-added agricultural products such as fruit and vegetables. While the average farm size remains less than one hectare, large-scale production has been developing rapidly, including co-operative and corporate farms. North and northeast provinces have seen more rapid farm consolidation than other regions, as increased labour mobility and transfer of land among farmers over the past three decades have led to adjustments in the farm structure Livestock production originates mostly from larger-scale commercial units (OECD, 2018[24]).

Table 8.2. China: Contextual indicators

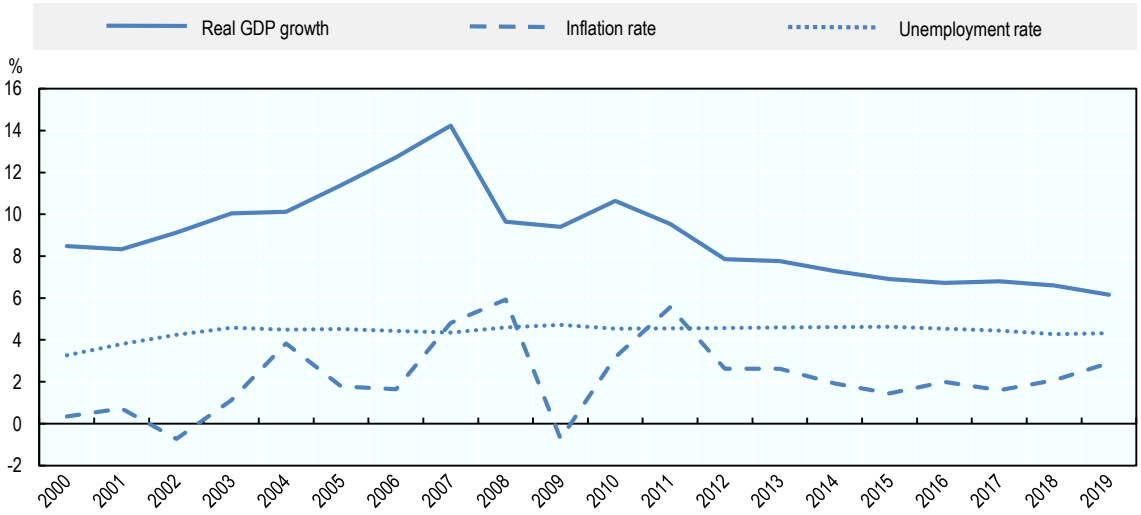
	China		International comparison	
	2000*	2018*	2000*	2018*
Economic context			**Share in total of all countries**	
GDP (billion USD in PPPs)	3 707	25 362	9.3%	22.5%
Population (million)	1 291	1 428	30.0%	27.7%
Land area (thousand km²)	9 425	9 425	11.6%	11.4%
Agricultural area (AA) (thousand ha)	522 861	528 531	17.4%	17.6%
			All countries[1]	
Population density (inhabitants/km²)	138	152	53	62
GDP per capita (USD in PPPs)	2 925	16 738	9 275	21 924
Trade as % of GDP	19	16	12.4	15.3
Agriculture in the economy			**All countries[1]**	
Agriculture in GDP (%)	14.9	8.2	3.1	3.6
Agriculture share in employment (%)	50.0	26.8	-	-
Agro-food exports (% of total exports)	4.8	2.3	6.2	7.3
Agro-food imports (% of total imports)	4.7	6.3	5.5	6.3
Characteristics of the agricultural sector			**All countries[1]**	
Crop in total agricultural production (%)	65	68	-	-
Livestock in total agricultural production (%)	35	32	-	-
Share of arable land in AA (%)	23	23	32	33

Notes: *or closest available year. 1. Average of all countries covered in this report. EU treated as one.
Sources: OECD statistical databases; UN Comtrade; World Bank, WDI and national data.

With real GDP growth averaging 6.5% in 2017-19, China continued to experience a gradual slowdown in economic growth. Its growth trajectory is not only increasingly dependent on the pace and nature of structural reforms, but is also under severe uncertainty in the aftermath of the COVID-19 outbreak. Unemployment nevertheless remained stable at 4.4% over the same period. The inflation rate increased to 3% in 2019, with food inflation largely driven by higher pig meat prices following the African swine fever outbreak (Figure 8.4).

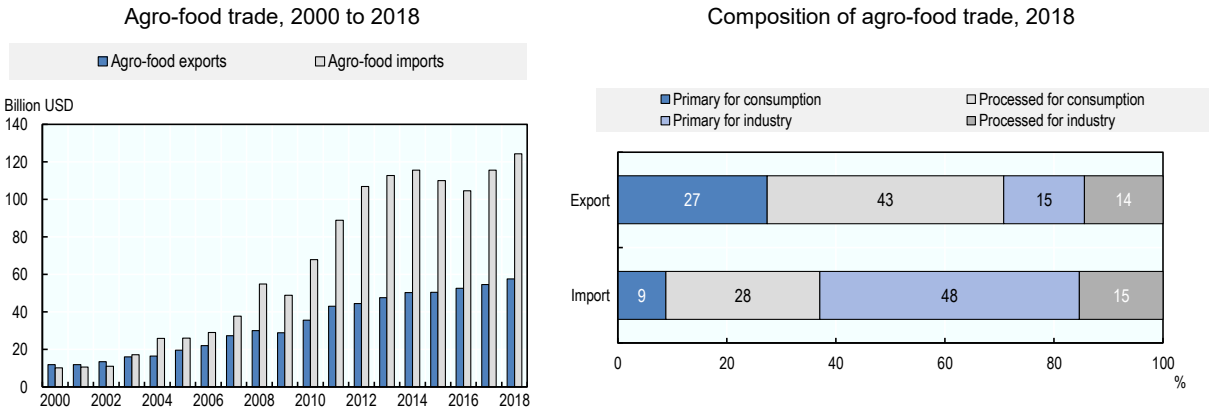
China has consistently been a net agro-food importer since 2003, but agro-food exports have been steadily growing over the last two decades. Primary products used as inputs in the domestic food industry dominate China's agro-food imports, representing around half of the total in 2018. In turn, primary and processed products for final consumption are key export categories, accounting for 70% of total agro-food exports (Figure 8.5).

Figure 8.4. China: Main economic indicators, 2000 to 2019



Sources: OECD statistical databases; World Bank, WDI and ILO estimates and projections.

Figure 8.5. China: Agro-food trade



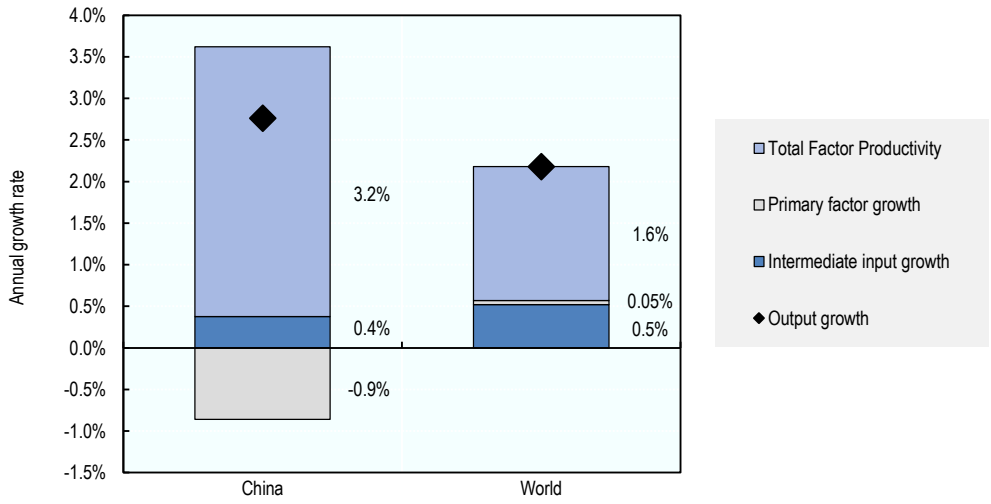
Note: Numbers may not add up to 100 due to rounding.
Source: UN Comtrade Database.

Agricultural output growth in China averaged 2.8% in 2007-16, almost one-third above the world average (Figure 8.6). This has been driven by strong growth in total factor productivity (TFP) at 3.2% per year, twice the global average. TFP growth can be largely attributed to farm consolidation and increased mechanisation of production.

However, the rapid and sustained growth in agricultural output has been exerting mounting pressures on natural resources, most notably on land and water. This is reflected in the high nutrient surplus intensities for nitrogen and phosphorus (Table 8.3). Agriculture remains the key user of water, accounting for 61.4%

of total water consumption, well above the OECD average (Table 8.3). Water stress is twice as high as the OECD average.

Figure 8.6. China: Composition of agricultural output growth, 2007-16



Note: Primary factors comprise labour, land, livestock and machinery.
Source: USDA Economic Research Service Agricultural Productivity database.

Table 8.3. China: Productivity and environmental indicators

	China		International comparison	
	1991-2000	2007-2016	1991-2000	2007-2016
			World	
TFP annual growth rate (%)	4.2%	3.2%	1.6%	1.6%
			OECD average	
Environmental indicators	**2000***	**2018***	**2000***	**2018***
Nitrogen balance, kg/ha	49.2	43.4	33.3	29.1
Phosphorus balance, kg/ha	9.7	10.9	3.3	2.3
Agriculture share of total energy use (%)	2.4	2.2	1.7	2.0
Agriculture share of GHG emissions (%)	11.0	7.9	8.1	8.9
Share of irrigated land in AA (%)	10.3	12.8	-	-
Share of agriculture in water abstractions (%)	68.8	61.4	46.0	49.0
Water stress indicator	19.4	21.3	9.9	8.9

Note: * or closest available year.
Sources: USDA Economic Research Service, Agricultural Productivity database; OECD statistical databases; FAO database and national data.

Description of policy developments

Main policy instruments

The 13th Five-Year Plan sets out the key orientations of agricultural policy for 2016-20. The 2016-20 Plan focuses on "agricultural modernisation" across several dimensions, including: improving the quality and safety of agricultural products; supporting the development of new types of agribusiness; and strengthening the adoption and use of information technologies. Policy frameworks and specific areas for

action are further developed in the annual "Policy Document No.1", which for the last 17 years has set agriculture and rural development as top priority.

The ambition for self-sufficiency in key grains has been an important driver behind China's agricultural policies over the past two decades. However, the scope of grains covered has evolved since the mid-1990s. The most recent editions of "Policy Document No.1" stress the importance of developing a competitive and sustainable agricultural sector and of continuing supply-side reforms, while reiterating the importance of guaranteeing the necessary grains production for food security purposes (mainly wheat and rice).

Market price support is the main channel for providing support to Chinese farmers. It is provided through both domestic policies – such as the minimum purchase prices for rice and wheat – and trade policies, including tariffs, tariff rate quotas (TRQ) and state trading.

The **minimum purchase prices** for wheat and rice are set every year by the National Development and Reform Commission (NDRC) in consultation with the Ministry of Agriculture and Rural Affairs (MARA) and other government institutions. Their application is limited to major wheat and rice producing provinces. They differ by type of grain, are announced before sowing seasons, and only apply for a fixed period limited to several months after the harvest. The central government mandates the state-owned China Grain Reserves Corporation (Sinograin) and other state-owned companies to undertake intervention purchases in the case market prices fall below the respective minimum prices. Only grain of national grade 3[3] or higher can be purchased at minimum prices since 2018. However, in situations with large volumes of grain below grade 3, such as in cases of extreme weather events, provincial authorities can purchase these under "temporary reserves". In addition, minimum price procurement can begin only when the market price has fallen below the minimum price announced by the government for three days in a row and must be suspended when the market price rises above the minimum for three days.

The government-led temporary purchase and storage policy at pre-determined prices – mostly intended to stabilise market prices and to ensure adequate supplies – was discontinued in 2014-15 for cotton, soybeans, and rapeseed, and in 2016 for maize. For cotton, this was replaced by compensation payments covering the difference between pre-determined target prices and actual market prices. For soybeans and maize, it was replaced by **direct payments** based on area planted.

Budgetary transfers to producers have increased consistently since the end of the 1990s. Most of these are provided through four key programmes: (i) the "agricultural support and protection subsidy", combining direct payments for grain producers, subsidies for agricultural inputs, and subsidies for improved seed variety, all paid on per unit of land basis; (ii) subsidies for purchases of agricultural machinery; (iii) subsidies for land consolidation; and (iv) subsidies for farmland irrigation construction. Subsidised agricultural insurance schemes have also grown in importance in recent years. The geographic coverage of payments destined to return farmland to forests and to exclude degraded grassland from grazing has been gradually extended, reflecting increasing environmental concerns.

Public stockholding of grains and programmes supporting the development of agricultural infrastructure – including irrigation and drainage facilities – represent the most important categories of **general services**. Expenditures related to agricultural knowledge and innovation are also sizable.

In the Adjusted Scenario of the Outline of the National Overall Planning on Land Use 2006-20, issued in 2016, a "red line" on arable land was set at no less than 124.3 million hectares. The conversion of farmland for non-agricultural use is strictly controlled. With about 40% of land suffering from various forms of degradation, the Outline calls for the prevention of land degradation and for the treatment of affected land.

China ratified the **Paris Agreement on Climate Change** on 3 September 2016. Its Nationally Determined Contributions (NDCs) include several commitments, such as: to peak CO_2 emissions by 2030 at the latest; to lower the carbon intensity of GDP by 60-65% below 2005 levels by 2030; to increase the share of non-fossil energy carriers of the total primary energy supply to around 20% by 2030; and to increase its forest

stock volume by 4.5 billion m^3 compared to 2005 levels. While the NDC explicitly mentions agriculture, land-use change and forestry, among other sectors, no specific net-emission target has yet been set for the agricultural sector. The only specific quantitative target set for agriculture relates to achieving zero growth in fertiliser and pesticide utilisation by 2020, which MARA reported as already achieved in April 2018. Other broad objectives concern controlling methane emissions from rice fields and nitrous oxide emissions from farmland, promoting comprehensive utilisation of straw or reutilisation of agricultural waste (UNFCC, 2015[25]; Climate Action Tracker, 2018[26]).

The National Agricultural Sustainable Development Plan (2015-2030) sets the goals and paths for China's sustainable agricultural development in terms of natural resources protection, improved farming practices that are protective of the environment, and a focus on quality and efficiency of production. It sets targeted priorities for different areas by taking into account the capacity of agricultural production, resource endowments, ecological characteristics and other factors (MOA, 2015[27]).

The State Council released its 13th Five-Year Work Plan to Control GHG Emissions in October 2016, looking to strengthen policies controlling for GHG emissions beyond CO_2, such as methane and hydrofluorocarbons (HFCs). The plan includes mentions of reducing methane emissions in the agricultural sector and in municipal waste and sewage treatment (NDRC, 2017[28]).

Domestic policy developments in 2019-20

Developments in the policy and legal frameworks

In October 2019, the State Council issued a white paper on **food security** ("Food Security in China"). The document stresses the importance for China to remain self-sufficient in grains by ensuring domestic production capacity while allowing for "moderate" imports that would support the "need for variety" (without quantifying those imports, however). The white paper also emphasises the need to continue the reform of the grain purchase and storage system while adapting to WTO rules and preventing low grain prices from affecting farmers. An additional Notice by the State Council released on 16 October 2019 reinforces the objectives in the white paper on promoting the development of the food industry within the global agro-food landscape (State Council Information Office, 2019[29]; Xinhua, 2019[30]; State Council, 2019[31]).

According to the 2019 Urbanisation Plan issued on 8 April 2019 by the National Development and Reform Commission (NDRC), China aims to increase urbanisation by relaxing *hukou* (household registration) residency restrictions in big cities with a population between 1 and 3 million as well as in all small and medium-sized sized cities (China Briefing, 2019[32]). An amended Land Administration Law – adopted on 26 August 2019 – took effect in 2020. The amendments focus on speeding up **rural revitalisation** and enhancing urban-rural integrated development through more transparent and efficient land transactions. Land auctions, tenders, and listings are now executed through the recently launched online Public Resources Transactions Platform, which is yet to incorporate rural land contracts (MARA, 2019[33]; International Monetary Fund, 2019[34]).

The Central Committee of the Communist Party of China (CPC) and the State Council, in November 2019, issued guidelines to maintain rural land contracts across the country "stable and unchanged on a long-term basis". As a result, once the current arrangements expire, the existing round of contracts will be extended for a further 30 years[4] (CGTN, 2019[35]; CGTN, 2019[36]).

The 2020 Policy Document No. 1[5] – issued in February 2020 – stresses the fight against poverty as the top rural policy priority for 2020 in order to achieve building a "moderately prosperous society in all respects". In this sense, the Document underlines the improvement in public services delivery in rural areas – through better rural infrastructure and water supply, sanitation and housing, education, health care and social insurance – as key towards eliminating poverty. Other priorities concern the stability of grains supply, increasing farmers' incomes (including through the improvement of the minimum price policy for rice and

wheat), strengthening governance in rural areas, and restoring pig meat production to the same levels prior to the African swine fever outbreak in 2018. It also emphasises the importance of promoting agro-food entrepreneurship and marketing through e-commerce (CGTN, 2020[37]).

Domestic price support policies

In April 2019, the Guangxi provincial government discontinued its sugar cane purchase floor price by mills (RMB 490 (USD 73) per tonne in 2019). This implies that farmers and sugar mills in Guangxi province now have the opportunity to freely establish contract parameters such as prices or volumes (Agriculture Strategies, 2019[38]; Caixin, 2019[39]; GAIN-CH0132, 2019[40]).

Stockholding policies

On 12 October 2019, the NDRC fixed for the first time a ceiling on the volume of wheat procured at the minimum purchase price at 37 million tonnes for 2020,[6] estimated to be about 65% higher than wheat procurement in 2019. However, procurement has been increasing in recent years due to higher supplies meeting minimum grading standards (Cngrain, 2019[41]; GAIN-CH0179, 2019[42]).

On 28 February 2020, the National Food and Strategic Reserves Administration (NFSRA) introduced a ceiling on the volume of rice procured at the minimum purchase price at 50 million tonnes[7] (more specifically, 20 million tonnes for indica rice and 30 million tonnes for japonica rice) (NFSRA, 2020[43]). This is estimated to be more than three times higher than rice procured in 2019.

The destocking of grains from central reserves slowed in 2019 due to a good harvest, weak demand and downward pressure on farm gate prices. The minimum purchase price programme for wheat and rice was activated in 2019 slightly later than in previous years to provide more time for private sector entities to purchase grains, but the degree of market intervention appears to have remained significant. Overall, available estimates indicate that the central government purchased 22.3 million tonnes of wheat and 15.2 million tonnes of rice at minimum prices, in total 41% higher than in 2018 (Cngrain, 2020[44]). This translated into higher grains marketing financing provided through loans from the Agricultural Development Bank of China[8] (Agricultural Development Bank of China, 2019[45]).

In May 2019, the National Grain Trade Centre started auction sales of state-owned wheat inventories at an average reserve price of RMB 2 290 (USD 341) per tonne, about RMB 60 to RMB 120 (USD 9 to USD 18) lower than 2018 with pricing determined by the production year of the wheat auctioned. Overall, available estimates indicate that about 2.6 million tonnes of wheat held in reserves were sold through actions in 2019 (Cngrain, 2019[41]; GAIN-CH19060, 2019[46]; GAIN-CH19036, 2019[47]).

During 2019, China continued auctions of older crop rice reserves. Auction lots from the 2013-14 and 2014-15 marketing years are estimated at about 12.5 million tonnes (Cngrain, 2020[44]; GAIN-CH19060, 2019[46]).

Maize auctions slowed in 2019 and are estimated to have decreased by more than 78% in 2019 compared to 2018 (22 million tonnes in 2019 from 101 million tonnes in 2018). This was primarily motivated by food security concerns following a sharp decrease in stocks in previous years driven by the removal of the minimum purchase price for maize in 2016. Additional market and structural drivers for the slower maize auctions include lower domestic feed demand in the context of the African swine fever (ASF) outbreak and concerns over the quality of reserves. Concerns around food security would also explain why there was no announcement to continue the maize processor subsidies in 2019, which the provincial governments of Heilongjiang, Jilin, Liaoning and Inner Mongolia had been providing since 2018 to feed millers and industrial processors to promote the use of maize from state reserves. In parallel, maize stocks are estimated to have increased by 12 million tonnes in 2018-19, backed by a larger domestic output. Provincial procurement programmes also remained active (for instance, Heilongjiang province is estimated

to have purchased 0.3 million tonnes of maize for provincial reserves) (Cngrain, 2020[44]; GAIN-CH19022, 2019[48]; GAIN-CH19060, 2019[46]).

Driven by the ongoing concerns over the quality of grains in state-owned inventories, a national grain quality and safety inspection and monitoring network was established in 2019. This is composed of 6 national-level, 32 provincial-level, 305 municipal-level and 960 county-level quality inspection institutions, with the key role of monitoring quality parameters for grain reserves stored in warehouses (State Council Information Office, 2019[29]).

In response to the decrease in pig meat supply and increasing consumer prices, the central government released frozen pig meat from state reserves, particularly to address shortages before the main holiday periods in January and October 2019. Provincial governments also tapped into local reserves at different moments throughout 2019, but estimates of quantities released at local or central level are not available (Reuters, 2019[49]).

Input subsidies

On 14 October 2019, a circular issued jointly by the Ministry of Finance (MOF), MARA, the Banking and Insurance Regulatory Commission and the National Forestry and Grassland Administration announced the expansion of **insurance** risk premium coverage for rice, wheat and maize to over 70% by 2022. The subsidy for agricultural insurance premiums launched in 2007 has become one of the key programmes to support producers in China. The central government currently subsidises insurance premiums for 15 products, including all the major crop and livestock commodities, at rates of 47.5% of the premium in central and western provinces and 42.5% in the eastern provinces (AMIS, 2019[50]; Xinhua, 2019[51]; OECD, 2018[24]).

Payments to producers

Payments to producers targeting the expansion of soybeans production continued to vary between provinces in 2019. In Heilongjiang these were up to RMB 255 per mu[9] (USD 552 per ha), while in Jilin and Liaoning they were set up to RMB 265 per mu (USD 574 per ha) and RMB 276 per mu (USD 598 per ha), respectively (Heilongjiang Finance Department, 2019[52]; Jilin Finance Department, 2019[53]; Cheng, Zhu and Xiaohong, 2020[54]).

The Guangxi provincial government has introduced payments up to RMB 30 (USD 4.5) per tonne for sugar cane farmers planting designated varieties (GAIN-CH19006, 2019[55]).

Changes in the regulatory environment

On 1 April 2019, China lowered the **value added tax** (VAT) on sales (including imports) of agricultural products from 10% to 9%. This is the third consecutive cut since 2017 (when the VAT for agricultural products was 13%) (GAIN-CH0145, 2019[56]).

In July 2019, MARA issued Announcement No. 194 that calls for stopping the production, import, and inclusion of sub-therapeutic growth-promoting antibiotics in livestock feed in 2020. Production and import of such drugs is suspended as of 1 January 2020 and production of feed additive products containing growth-promoting antibiotics must stop by 1 July 2020. Feed products that have already been produced can be marketed until 31 December 2020. MARA is in the process of revising standards and designing a regulatory system with the objective of removing growth-promoting antibiotics from use in feed, while allowing antibiotics use for disease prevention (MARA, 2019[57]). The ban has been motivated by concerns about drug residues in animal-sourced food and bacteria resistance. Feed manufacturers anticipate an increase in feed costs once the ban takes effect, ranging around 1% to 3% for compound feed and less than 1% for feed additives (Feed Trade, 2019[58]).

On 15 August 2019, the National Health Commission, MARA and the State Administration of Market Regulation (SAMR) jointly released the National Food Safety Standard for **Maximum Residue Limits** for Pesticides in Foods to be implemented as of 15 February 2020. The standard sets 7 107 maximum limits of 483 pesticides in 256 categories of food products (GAIN-CH0170, 2019[59]).

On 30 August 2019, the SAMR and the Standardization Administration of China (SAC) introduced a national standard on organic products covering mandatory requirements for production, processing and labelling. These concern aspects of inputs processing and production, such as adding microbial preparations for the control and prevention of animal diseases, adding detergents and disinfectants in plant operations, adding requirements for packaging materials for feed products, or adjusting lists of food additives. The new standard and the accompanying certification regulations were classified as voluntary. However, for any products marketed in China as organic, compliance with this standard and accompanying regulations is mandatory (SAMR, 2019[60]).

The Regulation on the Implementation of the **Food Safety** Law published by the State Council entered into force on 1 December 2019. The regulation clarifies the responsibilities of producers and other businesses in the agro-food supply chain as regards food safety standards, storage and transportation, as well as exporting or importing. The regulation also underscores the need for tougher supervision, requiring local governments above county levels to establish a uniform and authoritative supervision mechanism and to enhance regulatory capacity building. It also establishes the penalties system for food safety violations (State Council, 2019[61]; Xinhua, 2019[62]).

On 21 January 2020, MARA issued the first biosafety certificates for domestically grown, **genetically modified (GM)** maize and soybean traits. These are the first GM crops to receive such certificates, which constitutes a first step towards commercialisation. The certificates will be valid for five years starting 2 December 2019 (CNBC, 2020[63]). So far, GM maize and soybeans have been allowed only as imported livestock feed.

Policy responses to animal and plant disease threats as well as to other outbreaks

African swine fever outbreak

MARA confirmed the first outbreak of the **African swine fever** (ASF) in Liaoning province in August 2018. The disease then spread to 32 provinces, reducing the pig herd inventory by 27.5% (or 310 million heads less) and the pig meat output by 21.3% in 2018-19, according to the China National Bureau of Statistics (NBS) January 2020 estimates[10] (National Bureau of Statistics, 2020[64]). NBS also reported that pig meat retail prices doubled in December 2019 from the previous year, accounting for 2.3 percentage points of the 4.5% year-on-year increase in the Consumer Price Index. In this context, central and provincial government responses to the ASF outbreak focused on policy measures to contain and prevent the spread of the virus, to compensate producers as well as to rebuild the pig herd and enhance pig meat production.

In April 2019, MARA requested pig meat processors to test for the presence of ASF in raw meat handled, starting 1 May 2019. Processors require certificates confirming that purchased pig products, including imported meat, do not carry the virus (Reuters, 2019[65]).

On 4 December 2019, MARA issued a Notice outlining the “Three-year Action Plan to Accelerate the Recovery and Development of Pig Production” (MARA, 2019[66]). The Notice includes several areas for action as regards containment and prevention of the virus, requesting local administrations to:

- encourage farmers in purchasing automated feeding and waste treatment equipment using the agricultural machinery and equipment subsidy programme;
- encourage farmers to inspect animals and promptly report the presence of the disease;
- punish concealment and intentional delays in reporting, or false reports;

- set up province- and city-level animal disease administration, strengthen city and county veterinary laboratories capacity, carry out a special employment plan for disease prevention personnel;
- create a system of collection points for the safe disposal of carcasses of pigs carrying the virus;
- shift slaughter enterprises to major production regions in the northeast, the Huang-Huai region, and the south-central provinces to avoid the movement of animals, as well as to ensure that slaughter facilities have on-site veterinary inspectors;
- strengthen research and development efforts for an ASF vaccine and enhance extension services to farmers.

On 21 August 2019, the central government confirmed that farmers would be provided a compensation of RMB 1 200 (USD 170) for every pig culled to stop the spread of the disease (Reuters, 2019[67]).

Several other measures were initiated with the objective of restoring the pig herd and further stabilising domestic pig meat supply. In September 2019, the NDRC and MARA announced one-off subsidies for large pig farms ranging between RMB 0.5 million and RMB 5 million (USD 70 570 and USD 0.7 million). The support should be used for the construction of facilities and relocation projects for farms and should not exceed 30% of the total project investment (Xinhua, 2019[68]). Recent estimates available highlight that China's pig herd increased by 2.2% between November and December 2019, but efforts to rebuild the herd are currently being hampered by disruptions in supply chains linked to the Covid-19 outbreak (South China Morning Post, 2020[69]; Financial Times, 2020[70]).

The 4 December Notice by MARA foresees loosening bans on using certain farmland to build pig farms and simplifying approvals for setting up facilities. It also encourages local authorities to relax the application of local environmental bans on livestock farms. Farms of at least 5 000 pigs can start operating without having to wait for a final approval. Pig meat deficit cities and coastal regions are asked to form direct co-ordinated links with production regions in order to fill the deficits, as well as to use a pilot electronic system for transmitting animal inspection certificates and collecting statistics monitoring inter-province pig transportation (MARA, 2019[66]).

Almost all provincial-level administrative units also set up action plans at local levels to reinforce the application of measures designed at the central level. For instance, Guangdong and Tianjin provinces presented plans providing subsidies for breeding farms, low-interest loans and improved insurance policies (China Daily, 2019[71]).

Fall armyworm invasion

Fall armyworm was first detected in the South-western province of Yunnan in January 2019 and ultimately affected 16.9 million mu of farmland (1.1 million ha or 0.01% of China's arable land area) in 26 provinces by the end of 2019. It mainly affected crops of maize, wheat, ginger, sugar cane and sorghum, but did not reach the North-eastern grain producing provinces. Central and provincial government responses to the fall armyworm invasion focused on policy measures to control and prevent its spread. At the end of 2019, the National Agriculture Technology Extension Service Centre (NATESC) in MARA averted that the fall armyworm could spread in the maize belt across north-eastern provinces in 2020 (Reuters, 2019[72]).

On 21 June 2019, MARA issued the 2019 Fall Armyworm Prevention and Control Plan, requesting as part of the measures crop rotation across more than 30% of the affected area. In addition, MARA and the Chinese Academy of Agricultural Sciences (CAAS) researchers collaborated with companies to revise labelling requirements for crop protection chemicals that proved to effectively control the fall armyworm spread by enabling farmers to access and comply more easily with China's regulations for pesticide use (MARA, 2019[73]) (GAIN-CH19033, 2019[74]). In addition, on 5 June 2019, MARA recommended a list of 25 pesticides for emergency use against the fall armyworm until December 2020 (AMIS, 2019[75]).

On 21 February 2020, MARA issued the 2020 Fall Armyworm Prevention and Control Plan. Estimating that the fall armyworm would affect 100 million mu (7 million ha) in 2020, MARA plans to focus on upgrading the monitoring architecture by reinforcing county-level plant protection agencies and conducting systematic observations every three days in fields (MARA, 2020[76]).

Agri-environmental measures

The **Soil Pollution** Prevention and Control Law entered into force in January 2019. The Law establishes systems for agricultural land classification management according to pollution levels and identified risks. The primary responsibility for supervising and administering the actions against soil pollution lies with the MEE, with MARA and the Ministry of Natural Resources playing a supporting role. The Law requires them to establish a soil environmental information platform, to include soil pollution prevention and control in their economic development and environmental protection plans, and to establish a soil environmental monitoring system with regular soil examinations. The Law specifically grants local governments the enforcement responsibility in controlling and regulating soil pollution. Land use rights holders must investigate and assess soil conditions upon the transfer of management rights or in the incidence of a pollution event. However, when no party responsible for the pollution can be identified, central and provincial governments are to establish pollution clean-up funds (MEE, 2018[77]) (Global Compliance News, 2019[78]; Asia Society Policy Insitute, 2019[79]).

A first list of 40 national green agricultural development pilot zones was identified in 2019 under the National Agricultural Sustainable Development Plan 2015-20. In addition, a budget of RMB 1.7 billion (USD 0.25 billion) was allocated to reconvert 20 000 hectares of farmland into wetland (Ministry of Foreign Affairs, 2019[80]).

On 28 March 2019, the Ministry of Ecology and Environment (MEE) together with MARA, the Ministry of Natural Resources, the Ministry of Housing and Urban-Rural Development and the Ministry of Water Resources released jointly the Notice on “Issuing the Implementation Plan for **Groundwater Pollution** Prevention and Control”. The Notice established a roadmap for the implementation by the end of 2020 of a law on groundwater pollution control and a national groundwater environmental monitoring system (China Council for International Cooperation on Environment and Development, 2019[81]).

On 17 January 2020, the MEE announced that over the next five years it would restrict farming that encroaches on major rivers while accounting for food security concerns. MEE will set such areas under “ecological protection red lines” with the objective of contributing to the restoration of contaminated water supplies (Reuters, 2020[82]).

On 8 January 2020, the NDRC suspended its plan to implement this year a nationwide blending mandate of 10% ethanol (E10) in transportation. The motivation for this appears to have been twofold. First, maize stocks declined more sharply than anticipated between 2016 and 2018. Second, the production capacity of biofuels seems to remain limited in spite of the expansion in maize processing and ethanol operations in Jilin and Liaoning provinces initiated by the China National Cereals, Oils and Foodstuffs Corporation (COFCO) (China’s largest state-owned food processor) in 2018-19 (Reuters, 2020[83]; South China Morning Post, 2020[84]).[11]

Technology and digital in agriculture

Jiangsu province launched in June 2019 a **traceability** platform for agricultural products. Consumers can scan the QR codes on products using their mobile phones and obtain details on producers and the production process. More than 3 800 agro-food producers in the province registered with the platform in 2019 (Xinhua, 2019[85]).

Trade policy developments in 2019-20

Changes to import tariffs

On 23 December 2019, the State Council approved most favoured nation (MFN) **tariff** reductions for 850 products, which have been applied since 1 January 2020. This includes an MFN tariff reduction for frozen pig meat products from 12% to 8% and for avocados from 30% to 7% (South China Morning Post, 2019[86]).

The State Council Tariff Commission (SCTC) implemented additional retaliatory tariffs in 2019 on agricultural products from the United States, following the several rounds already imposed during 2018. On 13 May 2019, the SCTC first applied additional tariffs between 5% and 10% on wheat, maize and soybeans-related products from the United States (AMIS, 2019[87]). On 1 June 2019, the SCTC then levied an additional 25% tariff on other selected US goods, including dairy products and fresh fruit. Last, on 1 September, the SCTC introduced additional tariffs of 10% on US fresh fruit and of 5% on several cheeses (GAIN-CH19062, 2019[88]). The "Phase One Deal" Agreement concluded between China and the United States on 13 December 2019 does not foresee a timetable for their removal (see also section on Free Trade Agreements and other economic partnerships). However, in the context of supply chain disruptions caused by the coronavirus outbreak in January 2019, the SCTC halved, on 14 February 2020, the additional tariffs introduced on 1 September 2019 on US goods, including on certain fresh fruit and cheeses (Financial Times, 2020[89]).

There were also several tariff waivers and exclusions implemented by China on agricultural products originating in the United States. For instance, on 22 October 2019 – as part of the 2019 China-United States trade discussions – China waived the additional tariffs on imports for about 10 million tonnes of soybeans of US origin if imported by major processing operators (AMIS, 2019[50]).

On 15 April 2019, MOFCOM initiated a review of its anti-dumping tariffs on imports of distiller's grains from the United States that it would complete within a year. From January 2017, the anti-dumping duties have been raised to between 42.2% and 53.7%, while anti-subsidy tariffs have ranged between 11.2% and 12% (AMIS, 2019[90]).

Import quotas

In May 2019, an additional import quota of 0.8 million tonnes was issued for cotton. Moreover, the central government implemented a more flexible application process for the annual WTO-required import quota of 894 000 tonnes (subject to 1% import duty). The application process for the 2020 quota was opened in late October 2019 to a widened pool of applicants (GAIN-CH0157, 2019[91]).

In August 2019, MOFCOM removed soybean oil, rapeseed oil and palm oil from its import tariff quota management (CGTN, 2019[92]).

Measures relating to sanitary and phytosanitary aspects

In March 2019, China lifted the import ban on poultry and related products from France, which had been in place since 2015 following an outbreak of avian influenza. Prior to the ban, France was a major supplier of breeding stock for China's white-feathered broiler chicken producers who have faced challenges replenishing their stock in recent years due to bird flu-related bans on several countries (Reuters, 2019[93]). In November 2019, China lifted the ban on poultry imports from Spain and the Slovak Republic, which had been in place since 2016 (Reuters, 2019[94]). Also in November 2019, China lifted the restrictions on poultry imports from the United States. China had banned the import of poultry and related products from the United States after avian influenza outbreaks occurred in some parts of the United States in 2013-14 (China Daily, 2019[95]).

In October 2019, China finalised the agreement with the United Kingdom lifting the twenty-year old import ban on beef imports, which had been removed through an initial protocol in June 2018. Through the finalised agreement, Chinese authorities cleared in 2019 four beef producing sites for export in a first instance, with further sites still under review. In addition, in 2019 China also approved beef imports from several meat processing plants in Argentina and Brazil (Global Meat News, 2019[96]).

Following the "Phase One Deal" Agreement with the United States (see section on *Free Trade Agreements and other economic partnerships*), China drew up in February 2020 food safety standards on residue limits of growth hormones in beef. Maximum residue limits (MRLs) for zearanol and trenbolone acetate in beef muscle are set at 2 micrograms per kg, while for melengestrol acetate at 1 microgram per kg. MRLs are in line with those used by Codex Alimentarius and will apply to all beef exporters to China (Reuters, 2020[97]). China also eliminated cattle age requirements for the importation of US beef and beef products. In March 2020, the USDA Animal and Plant Health Inspection Service signed with China a "poultry regionalisation agreement" allowing producers in areas of a country unaffected by a disease outbreak to continue to export even if avian diseases are detected in other parts of that country (Inside U.S. Trade, 2020[98]).

Restrictions on pig and beef meat imports from Canada were in place from June to November 2019 after Chinese border authorities reported the detection of residues from a restricted feed additive (*ractopamine*) in a batch of Canadian pig meat products as well as erroneous export certificates for Canadian pig and beef meat (Financial Times, 2019[99]).

In July 2019, the General Administration of China Customs (GACC) approved 24 dairy establishments from Brazil for exporting to China, covering dairy products such as milk powder, cheese, yoghurt, and cream products. This is the first time China has granted dairy market access to Brazil (GAIN-CH0127, 2019[100]).

In February 2019, China approved market access for maize and barley imported from Uruguay (GAIN-CH19022, 2019[48]). In July 2019, GACC also approved wheat imports from the Russian Federation region of Kurgan, as well as soybeans and barley imports from all regions of the Russian Federation (see also section on *Free Trade Agreements and other economic partnerships*) (Reuters, 2019[101]).

In March 2019, China suspended imports from certain Canadian rapeseed exporters after reports of border inspections detecting hazardous pests in several shipments. The exporters were removed from the GACC list of authorised shippers (World Grain, 2019[102]).

Free Trade Agreements and other economic partnerships

As part of the negotiations for Phase-II Protocol of the China-Pakistan Free Trade Agreement (FTA), which was concluded on 28 April 2020 and entered into force on 1 January 2020, China eliminated tariffs on a range of agricultural products, including selected fresh and frozen meat, fresh and dried fruit, groundnuts, and vegetable fats and oils (China Briefing, 2019[103]).

In November 2019, China and New Zealand concluded negotiations on upgrading the China-New Zealand FTA, which has been in force since 2008. The upgraded Agreement includes a number of provisions with a direct impact on agro-food products. This concerns areas such as certificates of origin (introducing the option for 'approved exporters' to self-declare the origin of their goods) as well as simplifying administrative processes and trade documentation for goods in transit. Further operational improvements cover expedited six-hour clearance times for perishable products, release of such goods outside normal business hours, and appropriate storage. The upgraded Agreement is foreseen to enter into force following its signature and ratification by parties in 2020, the exact timing of which is still to be defined (New Zealand Ministry of Foreign Affairs and Trade, 2019[104]).

On 6 November 2019, China and the European Union (EU) concluded negotiations on a China-EU Geographical Indications (GI) Agreement – China's first comprehensive bilateral GI Agreement – with each

party agreeing to protect 100 of the other's GI products. The protected EU GIs include dairy products, beer, wine, and spirits, while the list of Chinese products includes Pixian bean paste, Anji white tea, Panjin rice and Anqiu ginger. After proceeding with internal procedures, China and the European Union should finalise and sign the Agreement before the end of 2020, with exact timelines still pending. The Agreement is subject to ratification by the two parties. Four years after the Agreement enters into force, it will be expanded to protect an additional 175 GIs from both sides, which will undergo the same registration procedure as for the first 200 protected GIs (European Commission, 2019[105]).

In June 2019, China signed a Memorandum of Understanding with Myanmar allowing the latter to export as much as 100 000 tonnes of rice during one year. In turn, Myanmar will import an equivalent value of rice milling and processing equipment from China (GAIN-CH19036, 2019[47]). Also in June 2019, China signed an agreement with Cambodia to enhance storage capacity in Cambodia for exports of paddy and milled rice to China (AMIS, 2019[75]).

In June 2019, China and the Russian Federation concluded a strategic partnership ("New Age Comprehensive Strategic Collaboration Partnership") which includes a specific provision to promote soybeans production by the Russian Federation's Far East and Baikal Regions and exports to China's north-eastern provinces (Xinhua, 2019[106]).

On 13 December 2019, China and the United States reached a "Phase One Deal" Agreement ("Economic and Trade Agreement between the United States and the People's Republic of China"), which includes several chapters with a direct link to agriculture. The Agreement was signed on 15 January 2020 and entered into force on 14 February 2020. Chapter 3 ("Trade in Food and Agricultural Products") addresses non-tariff measures aspects for several agro-food products, including rice, horticultural products, animal feed and feed additives, meat products, dairy, infant formula, and products of agriculture biotechnology. China and the United States agreed to not implement food safety regulations – or require actions of each other's regulatory authorities – that are not science- or risk-based and to apply regulations and require such actions only to the extent necessary to protect human life or health. In addition, the GACC will work with the US Department of Agriculture (USDA) to finalise the technical requirements for – and to implement – an electronic and automated system for China to access USDA Food Safety and Inspection Service (FSIS) export certificates accompanying US exports to China of meat and poultry products (USTR, 2020[107]).

The same Chapter 3 also covers issues with respect to the application of China's TRQ system for wheat, rice and maize. The Agreement requires for TRQ eligibility, allocation, return, reallocation and penalties not to discriminate between State Trading Enterprises (STEs) and non-STEs. Section F in Chapter 1 ('Intellectual Property') of the Agreement covers 'Geographical Indications', while the 'Expanding Trade' Chapter 6 includes commitments from China to import various goods and services from the United States over the next two years by a minimum of USD 200 billion over China's annual level of imports for those goods and services in 2017. For the agricultural goods identified in Annex 6.1 (oilseeds, meat, cereals, cotton, and other agricultural commodities[12]), the Agreement commits China to purchase and import no less than USD 12.5 billion in 2020 and no less than USD 19.5 billion in 2021 over its baseline purchases in 2017 (USTR, 2020[107]).[13] In January 2020, MARA reported that China will not increase its annual low-tariff (1%) import quotas for rice, wheat and maize in order to accommodate some of these purchases (Caixin, 2020[108]).

Other trade-related developments

A WTO dispute panel circulated its report on 28 February 2019 in response to the request for consultations initiated by the United States on 13 September 2016 regarding certain measures of China's support in favour of producers of wheat, rice and maize during 2012-15. The panel determined that in each of the years 2012-15, China exceeded its 8.5% *de minimis* level of support for rice and wheat. On that basis, the panel recommended for China to bring such measures into conformity with its obligations under the

Agreement on Agriculture. On 10 June 2019, the United States and China informed the Dispute Settlement Body (DSB) they had agreed that the reasonable period of time for China to implement the DSB's recommendations and rulings would be 11 months and 5 days (therefore, until 31 March 2020) (WTO, 2019[109]). Regarding the date by which China must implement the WTO ruling on its allocation of agricultural TRQs, the United States and China agreed in March 2020 to extend the date to 29 May 2020 (Inside U.S. Trade, 2020[98]).

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Notes

[1] An early rice crop can be planted in early spring, harvested in mid-summer and followed by a second crop harvested in the late autumn. The early rice harvest is usually destined for government reserves, animal feed, and food processing. Over the past decades, either this policy has been encouraged or discouraged taking into consideration parameters such as grains output outlook and stock levels.

[2] Procurement of mid-late indica rice occurs from September to January and of japonica rice from November to February.

[3] The quality grade standard is divided into five grades plus a sub-standard category.

[4] In 2014, the land use right was separated into the "contract right" and the "management right" in order for farmers to retain the contract right over their allotted land and only transfer the management right if they choose to lease the land to others, mortgage it to banks or invest it in a co-operative in exchange for shares.

[5] The full title of the document is "Opinions of the Central Committee of the Communist Party of China and the State Council on Working Hard on Priority Areas of Issues Related to Agriculture, Rural Residents and Rural Areas to Build a Moderately Prosperous Society in All Respects as Scheduled".

[6] "Notice on Improving Wheat Minimum Purchase Price Policy" also issued on 12 October 2019.

[7] The NFSRA Notice did not specify whether the limit would be based on the calendar year or the marketing year.

[8] Grains marketing financing through the Agricultural Development Bank of China – for both state-owned companies such as Sinograin as well as private entities – increased by 87% in 2019.

[9] 1 mu = 1/15 ha.

[10] Earlier estimates from MARA in October 2019 situated the reduction in the pig herd inventory at 40% from a year earlier (Reuters, 2019[110]).

[11] The 2017 plan for a national blending mandate by 2020 had also called for an ambitious shift by 2025 from conventional renewable fuel production to commercial-scale cellulosic fuel production.

[12] Covers all other agricultural products, including alfalfa, citrus, dairy, dietary supplements, distilled spirits, dried distiller grains, essential oils, ethanol, fresh baby carrots, fruits and vegetables, ginseng, pet food, processed foods, tree nuts, and wine.

[13] The Agreement also states "the Parties acknowledge that purchases will be made at market prices based on commercial considerations and that market conditions, particularly in the case of agricultural goods, may dictate the timing of purchases within any given year".

9 Colombia

Support to agriculture

Colombia's level of support to producers expressed as a share of gross farm revenues (%PSE) averaged 11.5% over the period 2017-19, which is below the OECD average. Market price support (MPS) is the main component of the PSE, accounting for 90% over the period 2017-19. MPS is mostly driven by the use of border measures for several agricultural products including rice, maize, poultry, milk, sugar, and pig meat. Budgetary transfers to farmers accounted for 10% of the PSE, during the same period; these were mostly payments based on variable input use, notably seeds and fertilisers. Budgetary allocations to general services to the sector as a whole (GSSE) have been relatively small, accounting on average for only 2.7% of the agricultural value added. Support for general services focuses on agricultural research and knowledge transfer; infrastructure, particularly in irrigation; and farm restructuring (e.g. land formalisation, rights and access).

Main policy changes

In 2019, the government implemented a major new policy on contract farming. This programme seeks to promote a long-term linkage between small-scale producers and markets, through the execution of various policy instruments that promote inclusive business schemes between companies and smallholders. Specific policy instruments for this programme include sector-specific marketing strategies; alliances between the agricultural and the industrial sector; comprehensive technical assistance to farmers (e.g. entrepreneurial and marketing training); creation of produce fairs for farmers and processors for better linking supply and demand; development of rural supply by increasing agricultural production.

In 2019, sanitary and phyto-sanitary (SPS) measures were removed for accessing a number of export markets, including soursop fruit (Guatemala), in-vitro spread material of bananas (Egypt), avian flour (Peru), polished and split rice (Ecuador), salted leathers (Egypt), hass avocados (People's Republic of China and Japan), orchid plants rooted bare without substrate (Mexico), live guinea pigs (Ecuador), Tahiti acid lime (Peru), and beef (Argentina). Furthermore, in 2019 the World Organisation for Animal Health (OIE) declared Colombia food and mouth disease (FMD) free with vaccination.

Total public expenditures in the agricultural sector were reduced from 2018 to 2019 and several programmes were dismantled. However, twenty-two new programmes were created directed to general services, mostly on land restructuring (land registration and rights) and extension services, but funding for these new programmes was limited.

Assessment and recommendations

- Investments in general services to agriculture have been low during the last two decades, while the Colombian agricultural sector continues to face numerous structural challenges. Short-term responses to the problems faced by agricultural producers, mainly in the form of input subsidies, have diverted scarce economic resources from developing the enabling environment for the sustainable growth of the sector.
- Policy efforts should focus on strategic investments such as off-farm irrigation works; transport infrastructure; R&D and innovation capacity of the sector; animal and plant health protection and control services; promotion of sustainable use of natural resources; investments in a national and functional extension/training and technical assistance system that fosters technology adoption. Adequate investment in these areas should contribute to further improve productivity and competitiveness, and to ensure the sustainable development of the sector. A re-orientation of support from input subsidies to general services would also help foster a more inclusive and sustainable agricultural growth.
- An inclusive land access policy framework, while politically complex, is necessary to promote rural and sectoral development. Colombia faces the twin challenges of high concentration of land ownership and the under-exploitation of arable land, and 40% of land ownership continues to be informal. Upgrading the cadastre system and accelerating the registration of land rights are crucial for the sector. Improved land rights contribute to long-term growth in the agricultural sector as well as to promoting rural development.
- A review and impact assessment of the wide array of policy instruments, and programmes to support agriculture would be important. The majority of current programmes cover very broad and different areas and are implemented through a bundle of policy instruments with unclear impact. The review should redefine and reorganise policy instruments based on evidence of costs and benefits.
- On climate change, in its Nationally Determined Contributions (NDCs), Colombia committed to reduce its greenhouse gas (GHG) emissions by 20% with respect to the projected Business-as-Usual Scenario (BAU) by 2030. While agriculture is not targeted explicitly, this commitment will have many implications on the agricultural sector as major emissions contributor. Moreover, the country needs to keep addressing in a more systematic way sustainability aspects such as biodiversity, water use, and deforestation.

Policy responses in relation to the COVID-19 outbreak

Agricultural policies

Decree 486 of 2020 provides an economic incentive of COP 80 000 (USD 20) to rural and agricultural workers and producers who are older than 70 years. Preferential interest rates from the National Development Bank (FINDETER) are given to agricultural producers to ensure the continued functioning of agricultural products supply and food security throughout the national territory, within the State of Economic, Social and Ecological National Emergency.

Decree 523 of 2020 decreases tariffs to 0% for imports of yellow maize, sorghum, soybeans and soybean flour until 30 June 2020, with a possibility of renewal of three more months.

Agro-food supply chain policies

Decree 482 of 2020 provides measures on the provision of the public transport service and its infrastructure, within the State of Economic, Social and Ecological National Emergency. The Logistics and Transport Centre was created to facilitate the movement of agro-food products in the country. This Centre is composed by the Minister of Agriculture and Rural Development.

Decree 465 of 2020 empowers the Rural Development Agency (ADR) to allow cities to use water stored in the irrigation districts of Ranchería, Tolima Triangle, and Tesalia-Paicol.

Consumer policies

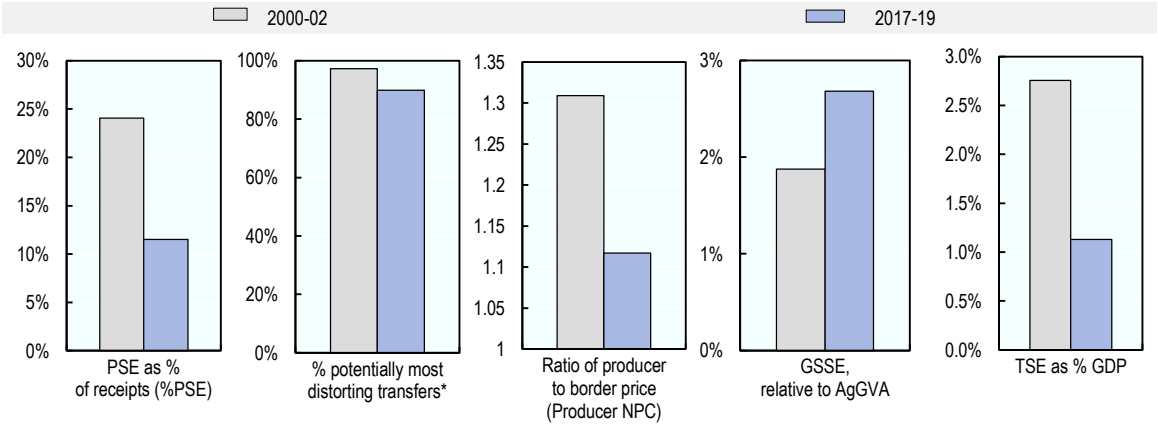
Decree 507 of 2020 creates, for the most vulnerable households, a price monitoring and inspection mechanism for the basic basket products, medicines and medical devices, within the framework of the State of Economic, Social and Ecological National Emergency.

Decree 470 of 2020 ensures the continuity of lunches for the families with children belonging to the Food School Programme (PAE), but who cannot attend school due to the lockdown.

Other

Colombia has been in a state of economic, social, ecological emergency since 25 March with restrictions on people's mobility and isolation obligations, with a foreseen date for lifting the emergency on 27 April 2020.

Figure 9.1. Colombia: Development of support to agriculture

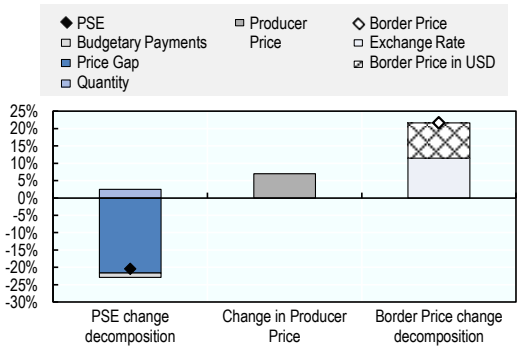


Note: * Share of potentially most distorting transfers in cumulated gross producer transfers.
Source: OECD (2020), "Producer and Consumer Support Estimates", OECD Agriculture statistics (database), http://dx.doi.org/10.1787/agr-pcse-data-en.

StatLink https://doi.org/10.1787/888934143964

Support to producers (%PSE) has fallen significantly since the early 2000s. The PSE for 2017-19 was 11.5% of gross farm receipts. The share of potentially most distorting transfers has slightly decreased over time, but around 90% of transfers are still linked to market price support alone (Figure 9.1). Prices received by farmers, on average, are estimated to be 12% higher than those observed in the world markets. Expenditures for general services were equivalent to 2.7% of the agricultural value added in 2017-19, larger than the 1.9% previously seen in 2000-02 but well below the OECD average. Products with particularly high levels of Single Commodities Transfers (SCTs) included rice (45% of commodity gross farm receipts), maize (34.6%), milk (25.4%) and pig meat (21.5%) – virtually all of the SCTs were created through MPS. Colombia's PSE fell significantly in 2019. This was mainly driven by a drop in the MPS, due to smaller price gap as reference prices rose more than domestic ones. (Figures 9.2 and 9.3).

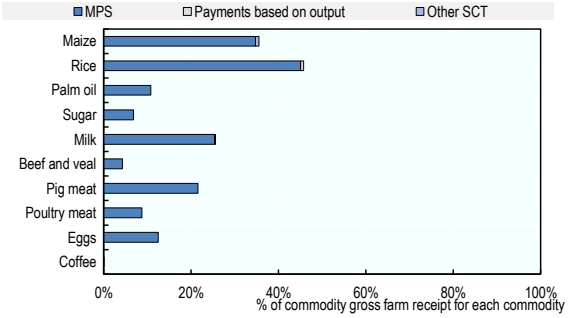
Figure 9.2. Colombia: Drivers of the change in PSE, 2018 to 2019



Source: OECD (2020), "Producer and Consumer Support Estimates", OECD Agriculture statistics (database), http://dx.doi.org/10.1787/agr-pcse-data-en.

StatLink https://doi.org/10.1787/888934143983

Figure 9.3. Colombia: Transfer to specific commodities (SCT), 2017-19



Source: OECD (2020), "Producer and Consumer Support Estimates", OECD Agriculture statistics (database), http://dx.doi.org/10.1787/agr-pcse-data-en.

StatLink https://doi.org/10.1787/888934144002

Table 9.1. Colombia: Estimates of support to agriculture

Million USD

	2000-02	2017-19	2017	2018	2019p
Total value of production (at farm gate)	**10 565**	**26 741**	**27 554**	**28 036**	**24 634**
***of which:** share of MPS commodities (%)*	80.7	74.8	72.4	71.1	81.0
Total value of consumption (at farm gate)	**7 938**	**21 284**	**23 176**	**21 237**	**19 439**
Producer Support Estimate (PSE)	**2 546**	**3 131**	**2 940**	**3 758**	**2 695**
Support based on commodity output	2 460	2 775	2 497	3 420	2 408
Market Price Support[1]	2 460	2 758	2 475	3 391	2 408
Positive Market Price Support	2 466	2 763	2 490	3 391	2 408
Negative Market Price Support	-6	-5	-15	0	0
Payments based on output	0	17	22	29	0
Payments based on input use	86	356	443	338	287
Based on variable input use	53	206	247	185	185
with input constraints	36	164	183	138	173
Based on fixed capital formation	16	98	132	110	53
with input constraints	3	56	67	63	38
Based on on-farm services	17	52	65	43	50
with input constraints	5	21	18	8	36
Payments based on current A/An/R/I, production required	0	0	0	0	0
Based on Receipts / Income	0	0	0	0	0
Based on Area planted / Animal numbers	0	0	0	0	0
with input constraints	0	0	0	0	0
Payments based on non-current A/An/R/I, production required	0	0	0	0	0
Payments based on non-current A/An/R/I, production not required	0	0	0	0	0
With variable payment rates	0	0	0	0	0
with commodity exceptions	0	0	0	0	0
With fixed payment rates	0	0	0	0	0
with commodity exceptions	0	0	0	0	0
Payments based on non-commodity criteria	0	0	0	0	0
Based on long-term resource retirement	0	0	0	0	0
Based on a specific non-commodity output	0	0	0	0	0
Based on other non-commodity criteria	0	0	0	0	0
Miscellaneous payments	0	0	0	0	0
Percentage PSE (%)	**24.1**	**11.5**	**10.5**	**13.2**	**10.8**
Producer NPC (coeff.)	**1.31**	**1.12**	**1.10**	**1.14**	**1.11**
Producer NAC (coeff.)	**1.32**	**1.13**	**1.12**	**1.15**	**1.12**
General Services Support Estimate (GSSE)	**154**	**520**	**539**	**566**	**455**
Agricultural knowledge and innovation system	49	251	315	262	176
Inspection and control	9	45	40	52	45
Development and maintenance of infrastructure	95	201	164	230	209
Marketing and promotion	0	22	21	22	25
Cost of public stockholding	0	0	0	0	0
Miscellaneous	1	0	0	0	0
Percentage GSSE (% of TSE)	**5.7**	**14.2**	**15.5**	**13.1**	**14.4**
Consumer Support Estimate (CSE)	**-2 234**	**-3 348**	**-3 292**	**-3 767**	**-2 986**
Transfers to producers from consumers	-2 003	-2 501	-2 453	-2 625	-2 425
Other transfers from consumers	-248	-878	-876	-1 181	-579
Transfers to consumers from taxpayers	0	0	0	0	0
Excess feed cost	16	31	37	39	19
Percentage CSE (%)	**-28.3**	**-15.7**	**-14.2**	**-17.7**	**-15.4**
Consumer NPC (coeff.)	**1.40**	**1.19**	**1.17**	**1.22**	**1.18**
Consumer NAC (coeff.)	**1.39**	**1.19**	**1.17**	**1.22**	**1.18**
Total Support Estimate (TSE)	**2 700**	**3 651**	**3 480**	**4 323**	**3 150**
Transfers from consumers	2 251	3 379	3 329	3 805	3 004
Transfers from taxpayers	697	1 150	1 027	1 698	724
Budget revenues	-248	-878	-876	-1 181	-579
Percentage TSE (% of GDP)	**2.8**	**1.1**	**1.1**	**1.3**	**1.0**
Total Budgetary Support Estimate (TBSE)	**240**	**893**	**1 004**	**932**	**742**
Percentage TBSE (% of GDP)	**0.2**	**0.3**	**0.3**	**0.3**	**0.2**
GDP deflator (2000-02=100)	**100**	**237**	**228**	**236**	**246**
Exchange rate (national currency per USD)	**2 297.17**	**3 063.08**	**2 951.29**	**2 956.90**	**3 281.07**

Note: p: provisional. NPC: Nominal Protection Coefficient. NAC: Nominal Assistance Coefficient.
A/An/R/I: Area planted/Animal numbers/Receipts/Income.
1. Market Price Support (MPS) is net of producer levies and excess feed cost. MPS commodities for Colombia are: maize, rice, sugar, milk, beef and veal, pig meat, poultry, eggs, bananas, plantains, coffee, palm oil and flowers.

Source: OECD (2020), "Producer and Consumer Support Estimates", *OECD Agriculture statistics* (database), http://dx.doi.org/10.1787/agr-pcse-data-en.

Contextual information

Colombia is the fifth largest country in Latin America, with a surface of 1.1 million km^2; it is the only South American country that borders both the Atlantic and Pacific Oceans. Colombia has abundant agricultural land and fresh water, is very biodiverse and is rich in natural minerals and fossil fuels. Agriculture continues to be an important sector for the economy – accounting for more than 16% of employment and 6% of GDP in 2018. Colombia has a dualistic distribution of land ownership where traditional subsistence smallholders co-exist with large-scale commercial farms. Even when the relative weight of agro-food exports in total exports have declined over the years, the sector continues to make a significant contribution to the country's exports, with agro-food exports accounting for 17% of all exports in 2018 (Table 9.2).

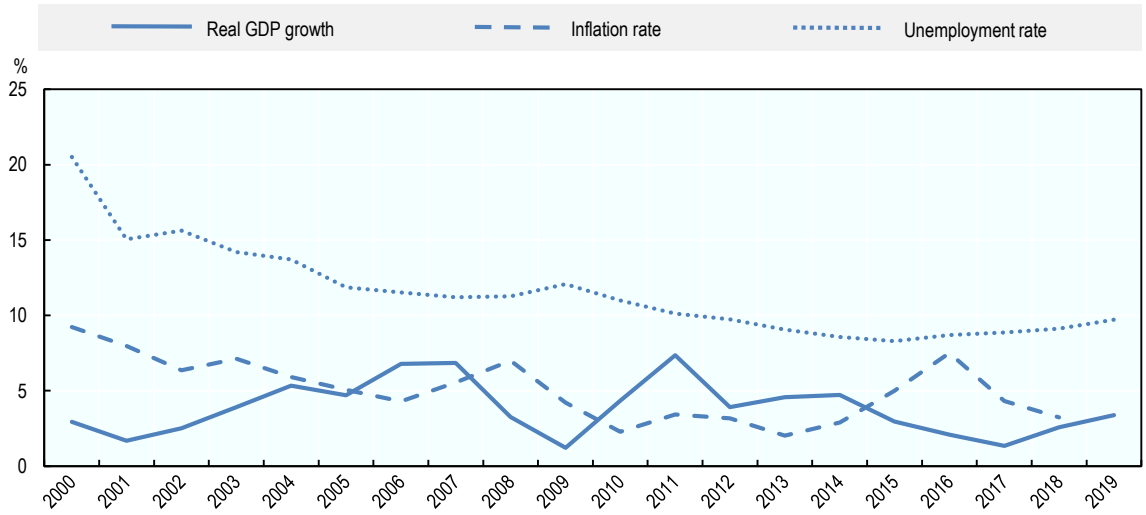
Table 9.2. Colombia: Contextual indicators

	Colombia		International comparison	
	2000*	2018*	2000*	2018*
Economic context			**Share in total of all countries**	
GDP (billion USD in PPPs)	265	745	0.7%	0.7%
Population (million)	40	50	0.9%	1.0%
Land area (thousand km^2)	1 110	1 110	1.4%	1.3%
Agricultural area (AA) (thousand ha)	44 859	44 692	1.5%	1.5%
			All countries[1]	
Population density (inhabitants/km^2)	36	45	53	62
GDP per capita (USD in PPPs)	6 695	15 013	9 275	21 924
Trade as % of GDP	12	14	12.4	15.3
Agriculture in the economy			**All countries[1]**	
Agriculture in GDP (%)	8.3	6.3	3.1	3.6
Agriculture share in employment (%)	22.4	16.4	-	-
Agro-food exports (% of total exports)	22.3	17.1	6.2	7.3
Agro-food imports (% of total imports)	12.8	12.4	5.5	6.3
Characteristics of the agricultural sector			**All countries[1]**	
Crop in total agricultural production (%)	59	65	-	-
Livestock in total agricultural production (%)	41	35	-	-
Share of arable land in AA (%)	6	4	32	33

Notes: *or closest available year. 1. Average of all countries covered in this report. EU treated as one.
Sources: OECD statistical databases; UN Comtrade; World Bank, WDI and national data.

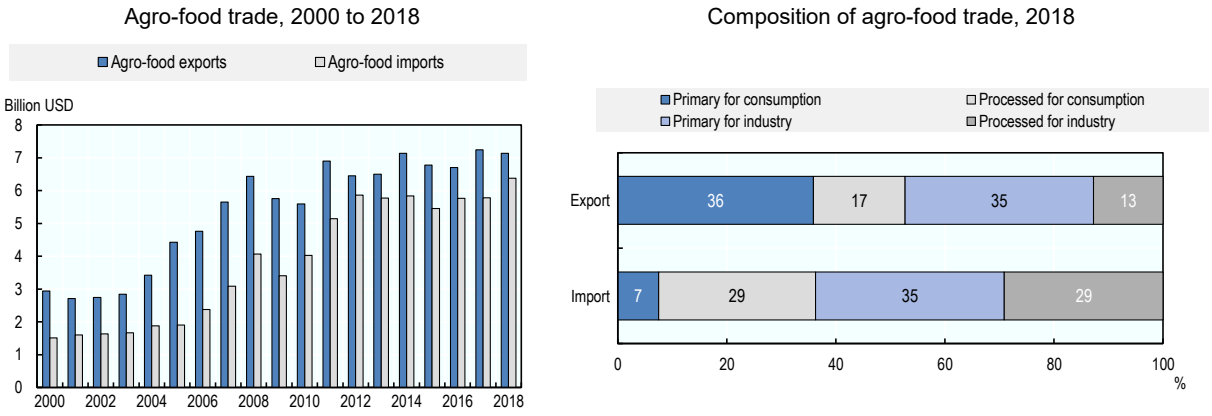
Colombia has had a real GDP growth of 3.5%, on average, over the last decade (2009-19), and is a consistent net exporter of agricultural and food products with a net surplus of USD 1 billion in 2018. Colombia's agro-food exports are almost equally split between those destined for final consumption (53%) and those that are sold as intermediate inputs (48%) for use in manufacturing sectors in foreign markets. In either case, these are dominated by primary products. In contrast, the majority of agro-food imports (64%) are in the form of intermediates for further processing in the country.

Figure 9.4. Colombia: Main economic indicators, 2000 to 2019



Sources: OECD statistical databases; World Bank, WDI and ILO estimates and projections.

Figure 9.5. Colombia: Agro-food trade

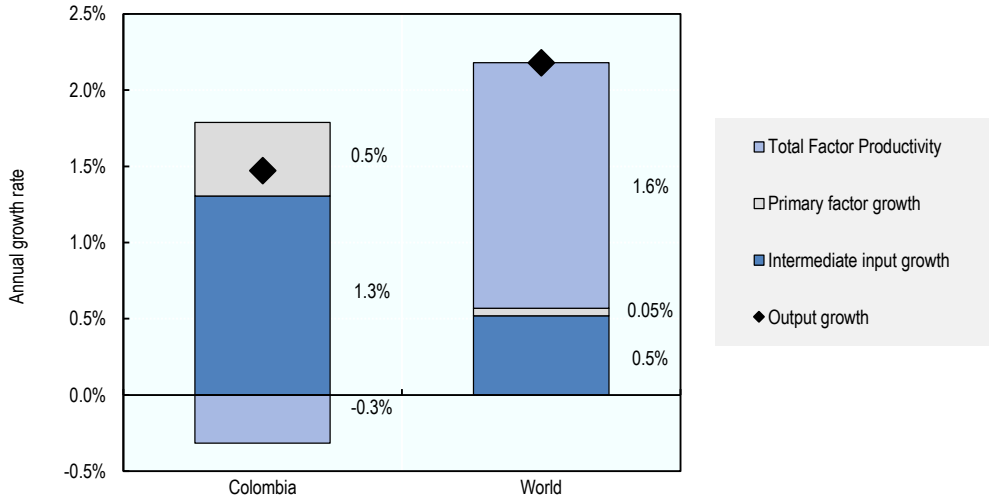


Note: Numbers may not add up to 100 due to rounding.
Source: UN Comtrade Database.

Low productivity undermines the sector's competitiveness, largely driven by infrastructure deficiencies, unequal access to land and land use conflicts. The growth rate of the Total Factor Productivity (TFP) was -0.3% over the period 2007-16, far below the world average.

Agriculture is the main water user with a share of 59.6% total water use, above the OECD average. Furthermore, in 2016 agriculture contributed with 28.7% of greenhouse gas (GHG) emissions. In contrast, nutrient balances are comparatively low and have slightly fallen since the early 2000s.

Figure 9.6. Colombia: Composition of agricultural output growth, 2007-16



Note: Primary factors comprise labour, land, livestock and machinery.
Source: USDA Economic Research Service Agricultural Productivity database.

Table 9.3. Colombia: Productivity and environmental indicators

	Colombia		International comparison	
	1991-2000	2007-2016	1991-2000	2007-2016
			World	
TFP annual growth rate (%)	1.6%	-0.3%	1.6%	1.6%
			OECD average	
Environmental indicators	**2000***	**2018***	**2000***	**2018***
Nitrogen balance, kg/ha	14.1	10.9	33.3	29.1
Phosphorus balance, kg/ha	5.8	5.6	3.3	2.3
Agriculture share of total energy use (%)[1]	5.9	1.0	1.7	2.0
Agriculture share of GHG emissions (%)	34.1	28.7	8.1	8.9
Share of irrigated land in AA (%)	..	2.6	-	-
Share of agriculture in water abstractions (%)	0.0	59.6	46.0	49.0
Water stress indicator	..	..	9.9	8.9

Notes: * or closest available year. 1. Data are not directly comparable between time periods due to change in methodology in 2013.
Sources: USDA Economic Research Service, Agricultural Productivity database; OECD statistical databases; FAO database and national data.

Description of policy developments

Main policy instruments

The policy objective of the Colombian agricultural policy is to promote the competitive, equitable and sustainable development of agricultural, forestry, fisheries and rural development activities, prioritising decentralisation, consultation and stakeholders' participation that contribute to improving the level and quality of life of the population. The implementation of this objective continues under the auspices of the Ministry of Agriculture and Rural Development and its affiliated and linked agencies.

Colombia applies the Andean Price Band System (SAFP). The SAFP aims to stabilise import prices for 13 commodities and their related first-stage processed products: rice, barley, yellow maize, white maize,

soya beans, wheat, unrefined soya bean oil, unrefined palm oil, unrefined sugar, refined sugar, milk, chicken cuts and pig meat.

In addition, the commodity Price Stabilisation Funds (FEPs) financed and administered by producer associations, cover seven commodities: cotton, cocoa, palm oil, sugar, coffee (incorporated in 2019), beef and milk. FEPs make payments (originally financed by public funds and nowadays entirely financed by farmers' contributions, without involving the public budget) to producers when the selling price of a product falls below a minimum (floor) price. When the sales price of a product is higher than an established maximum (ceiling) price, producers contribute to the FEPs. The ceiling and floor prices are established based on international prices for each product, while the transfers and compensations take into account a reference indicator at which the products reach the market. A committee, composed of representatives of the Ministry of Agriculture, the Ministry of Trade, producers' associations, and sellers and exporters, determines the source of international prices, establishes the price range and reference prices to assure the necessary funding for the compensations without the use of public funding.

Several programmes provide different types of input support. Key measures include subsidies for the purchase of seeds and fertilisers, and investment subsidies for drainage and irrigation infrastructure, among others. The country also subsidises credit interest rates, debt rescheduling, sporadic write-offs and insurance programmes.

Colombia has gradually directed more public expenditures to key services to the sector overall. In particular, this includes investments in agricultural research and extension services, such as those directed to the agricultural innovation institution (former CORPOICA and now AGROSAVIA).

Domestic policy developments in 2019-20

In 2019, the government implemented a major new policy on contract farming. This programme seeks to promote a sustainable linkage between small-scale producers and markets, through the execution of various policy instruments that promote inclusive business schemes between companies and smallholders.

The contract farming policy has the following strategic objectives: 1) reduce uncertainty and risks in agricultural marketing by the advance selling of products to industry and final markets or consumers; 2) generate a stable supply of raw materials and agricultural products, with the characteristics and conditions required by industry and final markets or consumers; 3) promote more efficient, cost-effective agricultural production processes and products with higher quality and safety for the consumer; 4) encourage the formalisation of trade relations between agricultural buyers and sellers, by reducing the volatility of agricultural prices; and 5) contribute to the better use of land (zoning) for agricultural production, and thus to greater sectoral competitiveness.

Specific policy instruments for achieving these objectives include sector-specific marketing strategies; alliances between the agricultural and the industrial sector; comprehensive technical assistance to farmers (e.g. entrepreneurial and marketing training); creation of produce fairs for farmers and processors for better linking supply and demand; and development of rural supply by increasing agricultural production.

In 2019, the government implemented a strategy to increase market diversification. The strategy has two fronts: a Health Eligibility and Sanitary Eligibility for agricultural products. The initiative defines a short-and-medium-term roadmap focusing on the efficiency of sanitary and phyto-sanitary processes to access international markets for several agricultural products such as livestock. It tries to make better use of the several existing free trade agreements (FTA), and to enhance trade by improving the relationships with countries with which there has been an increase in trade flows outside of existing free trade agreements.

In 2019, SPS-related barriers were removed for accessing a number of export markets, including soursop fruit (Guatemala), in-vitro spread material of bananas (Egypt), avian flour (Peru), polished and split rice

(Ecuador), salted leathers (Egypt), hass avocados (China and Japan), orchid plants rooted bare without substrate (Mexico), live guinea pigs (Ecuador), Tahiti acid lime (Peru), and beef (Argentina). Furthermore, in 2019 Colombia was declared FMD free with vaccination by the OIE.

Total public expenditures on agriculture were reduced from 2018 to 2019 and several programmes were dismantled. However, twenty-two new programmes were created directed to general services, mostly on land restructuring (land rights and access) and extension services, but funding for these new programmes was limited.

Trade policy developments in 2019-20

In the context of Brexit, in 2019 Colombia finished trade negotiations with the United Kingdom, which are expected to materialise once Brexit takes place in January 2021. Negotiations continue with Japan and Turkey for the establishment of new trade agreements. Negotiations also continue with Singapore, Canada, New Zealand and Australia, in order to deepen the current trade agreements with those countries; these negotiations involve deeper provisions in terms of market access, sanitary and phyto-sanitary measures, and trade facilitation.

10 Costa Rica

Support to agriculture

Costa Rica's policies to support agricultural producers averaged 5.8% of gross farm receipts (%PSE) in 2017-19, lower than the OECD average. This support is almost entirely (92%) based on Market Price Support (MPS) – one of the most trade and production distorting forms of support – and is generated through border measures (tariffs) and minimum domestic prices. Products most supported through such policies include rice, poultry, pig meat and sugar. The remaining of the PSE is provided through subsidies for agricultural equipment and machinery, payments for environmental services, and other types of subsidies. Expenditures on general services (GSSE) accounted for 2.4% of agricultural value added, and were allocated to three main areas: agricultural knowledge and innovation system, particularly extension services; development and maintenance of irrigation and rural roads infrastructure; and inspection and control.

Main policy changes

In May 2019, the government issued the Ministerial Directive DE 049 MAG-MCEE, instructing state banks to provide support to agricultural and fisheries producers who incurred credit defaults due to climatic and pests disasters. This support was provided, among others, through direct payments, debt rescheduling, extended grace periods, and further lowering interest rates for farmers.

At the end of 2019, the Molecular Biology Laboratory of the Agricultural Technology Research and Transfer Institute, INTA, was modernised with new equipment and instruments for the genetic improvement of crops. During 2019, INTA announced the Agro-ecological Zoning (ZAE) initiative for four cantons of the country. This project generated zoning maps of selected crops and maps for soil use and soil fertility. Training for farmers for the use of this zoning tool was made available. Furthermore, a training programme for farmers on measures for climate change adaptation was created. This initiative seeks to help farmers take better decisions for the sustainability and resilience of their production systems, as well as to improve water and soil resources management.

The DESCUBRE Programme – an initiative linking farmers to markets – was created in 2019 as a public-private alliance between the Ministry of Agriculture (MAG), Ministry of Trade (COMEX), the export promotion agency PROCOMER, the Development Banking System (SBD), the Investment Promotion Agency (CINDE), academia, and the private sector. In July 2019, the Regional Wholesale Market was opened in the province of Guanacaste.

Assessment and recommendations

- Costa Rica's producer support is still predominantly provided through border protection for several products, namely poultry, pig meat, milk, and sugar and through minimum reference prices for rice. This support continues to distort both domestic markets and trade, constrains competition and, hence, productivity and competitiveness.
- Limited agricultural infrastructure is a significant bottleneck, preventing the sector from becoming more efficient and more responsive to market signals. Major investments are required both to enhance productivity (e.g. through irrigation and drainage) and to facilitate the access to markets (e.g. through transportation, distribution, cold-chain facilities, etc.).
- Increased efforts to improve the effectiveness and efficiency of Costa Rica's extension services, where 21% of the total public expenditures to the sector are allocated, should be initiated, given the importance of these services to the sector.
- Small-scale producers still have low productivity levels and suffer from poor access to credit and financial tools. In addition, stringent requirements impede small-scale farms from taking advantage of available credit sources, as private commercial banks lack incentives to provide loans to small-scale farmers. While care needs to be taken to avoid generating moral hazard, existing credit programmes provided by the national development bank and agricultural organisations could be expanded as a first step to improve the financial infrastructure for smallholders in particular.
- In 2019, Costa Rica outlined its plan to achieve net-zero emissions by 2050. This plan includes strategies for all sectors, including agriculture, through actions such as improving farming practices and reducing food waste. Further scope exists to reinforce these efforts.

Policy responses in relation to the COVID-19 outbreak

Agricultural policies

Costa Rica created a task force under the Minister of Agriculture and the directors of main agricultural centralised and decentralised entities that will monitor the evolution of the outbreak and take measures to respond to the crisis.

To reduce the spreading of COVID-19, brochures with sanitary measures are being distributed to farmers, farmer organisations, and stakeholders of the sector. Moreover, strict sanitary measures contained in SENASA's circular DG384-2020 have to be implemented in cattle auctions.

The Ministry of Agriculture (MAG) regional offices suspended face-to-face procedures, now they are carried out online.

SFE (plant health entity) is applying a temporary suspension of sampling for analysis of agrochemical residues in low risk vegetal products, so that import sampling will be suspended, reducing the time required to import food.

SFE and SENASA (animal health entity) have increased protection for the animal and plant health control workers and passengers in airports and borders. They are also allowing the entry of goods with digitalised documentation, which was not the case before. Finally, SFE has created an online system for real time consultations on phyto-sanitary certificates for exported products.

MAG, SFE and SENASA have extended expiration dates of certifications and registrations for agricultural producers. Pest inspections are maintained without exception. INDER (rural development entity) approved a four-month moratorium on rural credits, starting in March 2020.

The agricultural sector has negotiated with the national banking system the reduction of interest rates, extensions of credit terms, extensions in payments, based on Presidential Decree No. 75-H.

The Ministry of Finance (Law No. 9830) granted a moratorium for VAT payments and VAT exemption on commercial leases, including those in the agricultural sector, during April, May and June 2020.

INDER is buying inputs such as seeds and fertiliser to supply to small-scale farmers. INDER and CNP signed an agreement to buy beans in the northern region of the country. This initiative is taking part within the broader institutional supply programme by CNP.

Agro-food supply chain policies

Farmers' Fairs are still in operation but are being supervised by the National Board of Fairs to comply with sanitary measures stated by the Ministry of Health.

PIMA (the wholesale market) disinfects and cleans the facilities between each shopping plaza and restricts access to people with symptoms of a cold or COVID-19.

Consumer policies

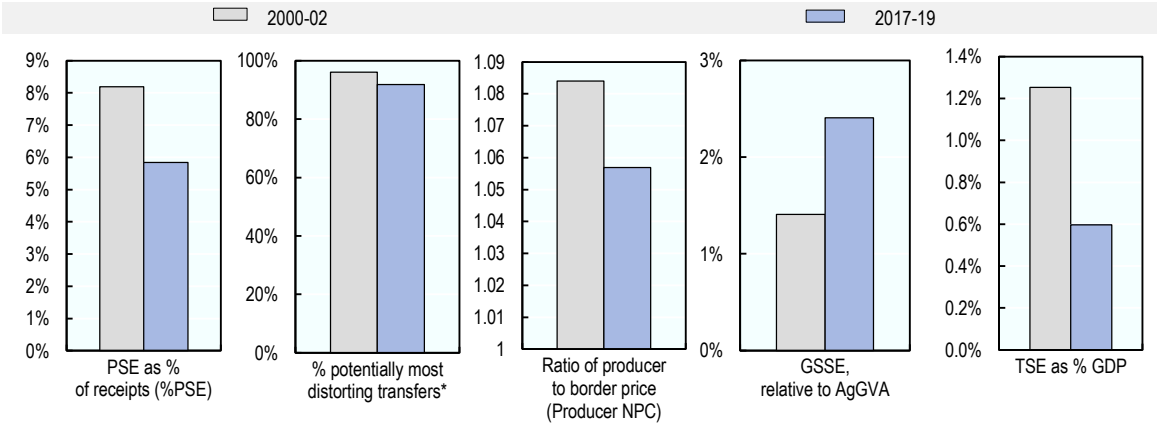
CNP (National Production Council/public food procurement entity) in co-ordination with the Ministry of Education is providing food baskets to families with schoolchildren.

Following decreased exports, INCOPESCA (Fisheries entity), is carrying out a campaign to increase the consumption of fishery products. In addition, with the support of private companies, it is providing food to poor fishing families.

Other

The National Sugarcane Liquor Factory (FANAL), owned by the State, is producing alcohol and alcohol-based antiseptic solution for national hospitals and makes home deliveries to individuals, through an alliance with Costa Rica postal service.

Figure 10.1. Costa Rica: Development of support to agriculture

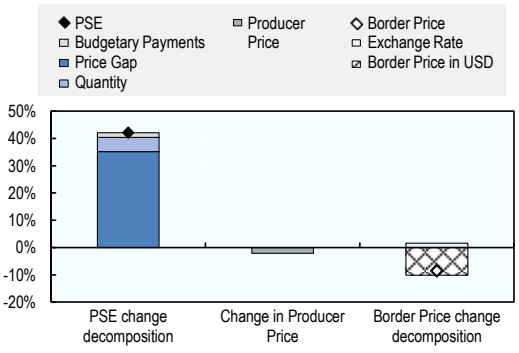


Note: * Share of potentially most distorting transfers in cumulated gross producer transfers.
Source: OECD (2020), "Producer and Consumer Support Estimates", OECD Agriculture statistics (database), http://dx.doi.org/10.1787/agr-pcse-data-en.

StatLink https://doi.org/10.1787/888934144021

Support to producers, as measured by the %PSE has decreased from 8.2% in 2000-02 to 5.8% in 2017-19, remaining well below the OECD average. Potentially most production and trade distorting support, in the form of market price support (MPS), continues to dominate and represented 92%% of the PSE in 2017-19. Border protection and price interventions resulted in producer prices 6% higher than international prices in 2017-19, on average. Spending on general services to the sector (GSSE) represented 2.4% of the total agricultural value added (Figure 10.1). Total Support Estimate to the sector represented only 0.6% of the GDP. Producer support increased significantly in 2019 compared to 2018, mainly due to rising price gaps driven by lower prices on world markets (Figure 10.2). Single Commodity Transfers (SCT) are particularly important for rice (53.4% of gross farm receipts), pig meat (31.5%), poultry (26.7%) and sugar (23%) (Figure 10.3).

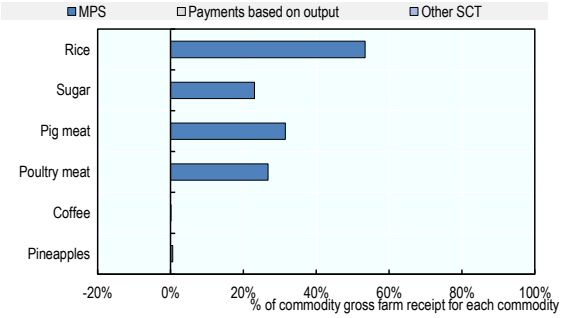
Figure 10.2. Costa Rica: Drivers of the change in PSE, 2018 to 2019



Source: OECD (2020), "Producer and Consumer Support Estimates", OECD Agriculture statistics (database), http://dx.doi.org/10.1787/agr-pcse-data-en.

StatLink https://doi.org/10.1787/888934144040

Figure 10.3. Costa Rica: Transfer to specific commodities (SCT), 2017-19



Source: OECD (2020), "Producer and Consumer Support Estimates", OECD Agriculture statistics (database), http://dx.doi.org/10.1787/agr-pcse-data-en.

StatLink https://doi.org/10.1787/888934144059

Table 10.1. Costa Rica: Estimates of support to agriculture

Million USD

	2000-02	2017-19	2017	2018	2019p
Total value of production (at farm gate)	**2 155**	**4 902**	**5 049**	**5 033**	**4 624**
of which: *share of MPS commodities (%)*	80.5	88.2	88.5	88.6	87.5
Total value of consumption (at farm gate)	**1 067**	**2 435**	**2 481**	**2 305**	**2 519**
Producer Support Estimate (PSE)	**177**	**287**	**255**	**253**	**353**
Support based on commodity output	167	263	234	229	326
Market Price Support[1]	167	263	234	229	326
Positive Market Price Support	167	263	234	229	326
Negative Market Price Support	0	0	0	0	0
Payments based on output	0	0	0	0	0
Payments based on input use	9	22	20	21	25
Based on variable input use	4	15	12	14	19
with input constraints	1	14	11	14	18
Based on fixed capital formation	1	6	6	6	5
with input constraints	0	3	4	3	2
Based on on-farm services	4	1	1	1	1
with input constraints	3	0	0	0	0
Payments based on current A/An/R/I, production required	0	0	0	0	0
Based on Receipts / Income	0	0	0	0	0
Based on Area planted / Animal numbers	0	0	0	0	0
with input constraints	0	0	0	0	0
Payments based on non-current A/An/R/I, production required	0	0	0	0	0
Payments based on non-current A/An/R/I, production not required	0	0	0	0	0
With variable payment rates	0	0	0	0	0
with commodity exceptions	0	0	0	0	0
With fixed payment rates	0	0	0	0	0
with commodity exceptions	0	0	0	0	0
Payments based on non-commodity criteria	1	2	2	2	3
Based on long-term resource retirement	0	2	2	2	3
Based on a specific non-commodity output	0	0	0	0	0
Based on other non-commodity criteria	1	0	0	0	0
Miscellaneous payments	0	0	0	0	0
Percentage PSE (%)	**8.2**	**5.8**	**5.0**	**5.0**	**7.6**
Producer NPC (coeff.)	**1.08**	**1.06**	**1.05**	**1.05**	**1.08**
Producer NAC (coeff.)	**1.09**	**1.06**	**1.05**	**1.05**	**1.08**
General Services Support Estimate (GSSE)	**21**	**71**	**74**	**72**	**69**
Agricultural knowledge and innovation system	10	30	30	29	30
Inspection and control	4	16	16	16	16
Development and maintenance of infrastructure	7	24	26	24	21
Marketing and promotion	0	1	1	2	2
Cost of public stockholding	0	0	0	0	0
Miscellaneous	0	0	0	0	0
Percentage GSSE (% of TSE)	**10.8**	**19.9**	**22.4**	**22.1**	**16.3**
Consumer Support Estimate (CSE)	**-157**	**-281**	**-274**	**-255**	**-312**
Transfers to producers from consumers	-151	-238	-227	-219	-269
Other transfers from consumers	-5	-42	-47	-37	-44
Transfers to consumers from taxpayers	0	0	0	0	0
Excess feed cost	0	0	0	0	0
Percentage CSE (%)	**-14.7**	**-11.5**	**-11.0**	**-11.1**	**-12.4**
Consumer NPC (coeff.)	**1.17**	**1.13**	**1.12**	**1.12**	**1.14**
Consumer NAC (coeff.)	**1.17**	**1.13**	**1.12**	**1.12**	**1.14**
Total Support Estimate (TSE)	**198**	**358**	**329**	**324**	**422**
Transfers from consumers	157	281	274	255	312
Transfers from taxpayers	47	120	101	106	153
Budget revenues	-5	-42	-47	-37	-44
Percentage TSE (% of GDP)	**1.3**	**0.6**	**0.6**	**0.5**	**0.7**
Total Budgetary Support Estimate (TBSE)	**31**	**95**	**95**	**95**	**96**
Percentage TBSE (% of GDP)	**0.2**	**0.2**	**0.2**	**0.2**	**0.2**
GDP deflator (2000-02=100)	**100**	**339**	**331**	**339**	**347**
Exchange rate (national currency per USD)	**331.77**	**577.33**	**567.78**	**577.19**	**587.02**

Note: p: provisional. NPC: Nominal Protection Coefficient. NAC: Nominal Assistance Coefficient.
A/An/R/I: Area planted/Animal numbers/Receipts/Income.
1. Market Price Support (MPS) is net of producer levies and excess feed cost. MPS commodities for Costa Rica are: rice, sugar, milk, beef and veal, pig meat, poultry, bananas, coffee, palm oil and pineapple.

Source: OECD (2020), "Producer and Consumer Support Estimates", *OECD Agriculture statistics* (database), http://dx.doi.org/10.1787/agr-pcse-data-en.

Contextual information

Costa Rica is a small country with a population of 5 million in 2018. The country's long democratic tradition and political stability have underpinned its important economic progress – including the development of its agricultural sector. Agriculture still plays a relatively strong role in the economy, contributing 4.6% to the country's GDP and employing 12.5% of its work force. Costa Rica has achieved higher standards of living and lower poverty rates than other countries in the region, with a per capita income of USD 17 671 (PPP) in 2018 (Table 10.2).

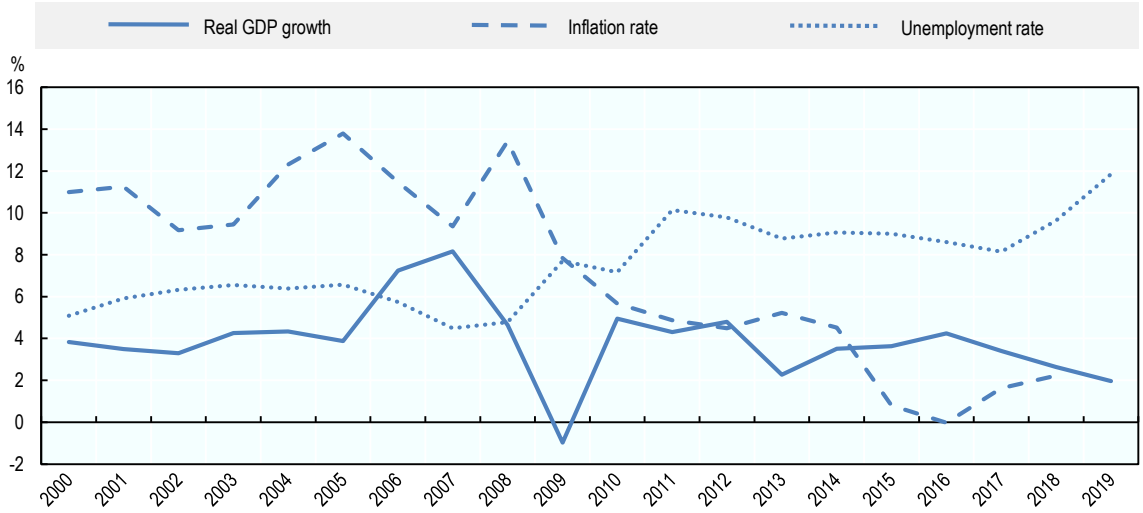
Table 10.2. Costa Rica: Contextual indicators

	Costa Rica		International comparison	
	2000*	2018*	2000*	2018*
Economic context			**Share in total of all countries**	
GDP (billion USD in PPPs)	31	84	0.08%	0.07%
Population (million)	4	5	0.09%	0.10%
Land area (thousand km²)	51	51	0.06%	0.06%
Agricultural area (AA) (thousand ha)	1 840	1 770	0.06%	0.06%
			All countries[1]	
Population density (inhabitants/km²)	78	98	53	62
GDP per capita (USD in PPPs)	7 787	17 671	9 275	21 924
Trade as % of GDP	38	23	12.4	15.3
Agriculture in the economy			**All countries[1]**	
Agriculture in GDP (%)	10.3	4.6	3.1	3.6
Agriculture share in employment (%)	15.8	12.5	-	-
Agro-food exports (% of total exports)	31.0	41.5	6.2	7.3
Agro-food imports (% of total imports)	7.6	12.3	5.5	6.3
Characteristics of the agricultural sector			**All countries[1]**	
Crop in total agricultural production (%)	75	74	-	-
Livestock in total agricultural production (%)	25	26	-	-
Share of arable land in AA (%)	11	14	32	33

Notes: *or closest available year. 1. Average of all countries covered in this report. EU treated as one.
Sources: OECD statistical databases; UN Comtrade; World Bank, WDI and national data.

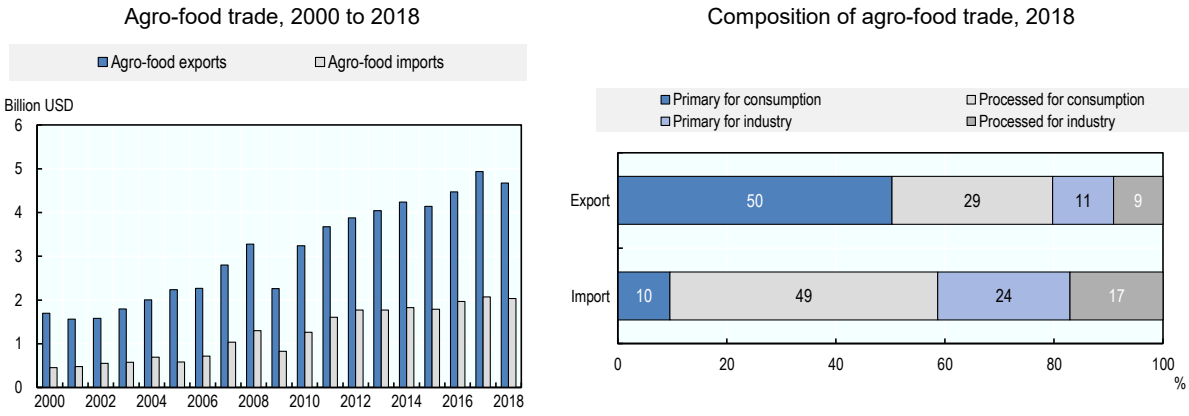
Despite slowing growth in recent years, the economy has grown by around 4% per year on average since 2000, exceeding the average growth of a number of other economies in the region. Inflation has significantly declined since 2005 (Figure 10.4). Costa Rica has developed a successful and dynamic agricultural export sector in recent decades. The country is a net agro-food exporter, with a share of agro-food exports in total exports of 41.5% in 2018. Half of Costa Rica's agricultural exports are primary crops for final consumption, such as bananas and pineapples (Figure 10.5). The country is also an important exporter of processed products for final consumption, such as pineapple juice. Half of agro-food imports are processed products for final consumption.

Figure 10.4. Costa Rica: Main economic indicators, 2000 to 2019



Sources: OECD statistical databases; World Bank, WDI and ILO estimates and projections.

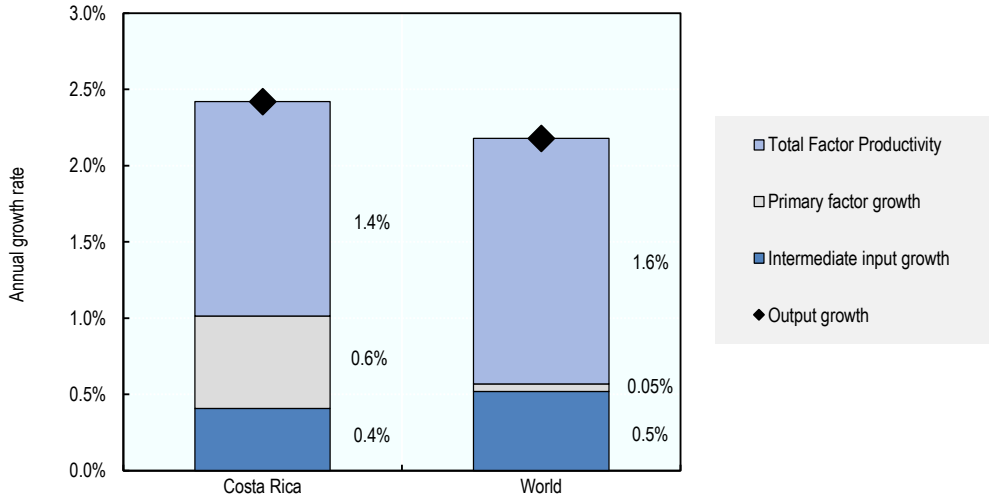
Figure 10.5. Costa Rica: Agro-food trade



Note: Numbers may not add up to 100 due to rounding.
Source: UN Comtrade Database.

Total Factor Productivity (TFP) growth has decreased from the 2000s and has been slightly below the world average over the last decade (Figure 10.6). Area expansion into less productive land, ongoing farm fragmentation and limited financial and physical infrastructure were among the key contributing factors to this decline. Agriculture is the main user of water resources with a share of 68% of water abstractions (Table 10.3). Environmental regulations have led to the reforestation of large parts of the country, and 25% of Costa Rican territory is now under some form of environmental protection. Available data suggest, however, a high and only slowly falling phosphorous surplus, and a quarter of the country's GHG emissions are caused by agriculture.

Figure 10.6. Costa Rica: Composition of agricultural output growth, 2007-16



Note: Primary factors comprise labour, land, livestock and machinery.
Source: USDA Economic Research Service Agricultural Productivity database.

Table 10.3. Costa Rica: Productivity and environmental indicators

	Costa Rica		International comparison	
	1991-2000	2007-2016	1991-2000	2007-2016
			World	
TFP annual growth rate (%)	3.0%	1.4%	1.6%	1.6%
			OECD average	
Environmental indicators	**2000***	**2018***	**2000***	**2018***
Nitrogen balance, kg/ha	41.1	29.5	33.3	29.1
Phosphorus balance, kg/ha	12.1	10.4	3.3	2.3
Agriculture share of total energy use (%)	6.6	2.2	1.7	2.0
Agriculture share of GHG emissions (%)	27.2	24.1	8.1	8.9
Share of irrigated land in AA (%)	0.8	4.1	-	-
Share of agriculture in water abstractions (%)	33.1	68.6	46.0	49.0
Water stress indicator	0.3	2.6	9.9	8.9

Notes: * or closest available year.
Sources: USDA Economic Research Service, Agricultural Productivity database; OECD statistical databases; FAO database and national data.

Description of policy developments

Main policy instruments

Costa Rica has the overarching policy guideline: “Policy Guidelines 2019-2022 of the Agricultural, Rural, and Fisheries Sector”. This guideline is under the umbrella of the long-term strategy, created in 2010, for the agricultural sector 2010-21 “State Policy for the Agrifood Sector and Rural Development 2010-2021”, that aims to achieve a mechanised, competitive, inclusive and sustainable agriculture with responsive, modern and co-ordinated public institutions.

Costa Rica maintains important border measures, in particular tariffs for several agricultural products (rice, poultry, pig meat, milk, sugar, etc.). Moreover, the country maintains a minimum reference price for rice.

This reference price is based on the analysis of domestic production costs, processing costs, international prices, carried out by the National Rice Corporation (CONARROZ). The institution in charge of supervising the minimum prices for rice is the Ministry of Economy, Industry and Commerce (MEIC). This minimum reference price is imposing a significant burden on consumers (final consumer), especially the poorest, as Costa Rica has one of the highest domestic rice prices in the world, and low income households allocate a significant part of their income to purchase this staple at prices higher than in the international market.

Budgetary policy instruments are predominantly focused on providing essential services to agriculture, including extension services, research and development (R&D), and plant and animal health services with a significant emphasis on environmental protection.

The Agricultural Technology Research and Transfers Institute (INTA) is the public institution managing agricultural R&D and innovation. INTA also operates the services of technology transfer and extension services to farmers. The National Animal and Health Service (SENASA) and the National Phyto-sanitary Service (SFE), are the two agencies in charge of animal and plant health services.

The country also provides minor subsidies like payments for environmental services such as the use of green or living fences and terraces, organic production or soil condition improvements, implicit subsidies through credit at preferential interest rates to all loans, and some subsidies for fixed capital formation that are mostly directed to small-scale farmers.

Domestic policy developments in 2019-20

In May 2019, the government issued the Ministerial Directive DE 049 MAG-MCEE, instructing state banks to provide support to agricultural and fisheries producers who incurred credit defaults due to climatic and pests disasters. This support was provided through partial payments, debt rescheduling, extended grace periods, further lowering interest rates for farmers, among others. Resources would be provided through the National Development Trust Lines for Emergency Programs, FINADE. This initiative also includes trainings for financial education and insurance use for farmers.

At the end of 2019, INTA's molecular biology laboratories were modernised with new equipment and instruments for the genetic improvement of crops. These laboratories are responsible for the R&D for seeds and germplasm. This new technology should reduce the time and costs in the validation processes of new varieties, and improve the quality control of materials and varieties that are introduced to the country.

During 2019, INTA announced the Agro-ecological Zoning (ZAE) initiative for four cantons of the country. This project generated zoning maps of selected crops and maps for soil use and soil fertility. Training for farmers for the use of this zoning tool was made available. Furthermore, a training programme for farmers on measures for climate change adaptation was created.[1] This initiative seeks to help farmers take better decisions for the sustainability and resilience of their production systems, as well as to improve water and soil resources management.

During 2019, the Ministry of Agriculture strengthened the sectorial office for climate actions and decarbonisation by formalising it and allocating more personnel. The office is formed by experts of the ministry, who incorporate aspects of adaptation and mitigation to public agricultural projects.

The Special System for Agriculture and Livestock or REA (*Régimen Especial Agropecuario)*, implemented on 1 October 2019, consists in the application of value added tax on agricultural and fishing activities. Law 9635 "Strengthening Public Finance" states that from June 2020, producers engaged in agricultural and fishing activities must pay (1) a 1% tax on imports of any supplies, raw materials, machinery and equipment used in agricultural activities; (2) sales tax or value added tax (VAT) of 1% when selling agricultural products that are included in the Basic Tax Basket, which is paid by the final consumer; and

(3) for products that are not included in the Basic Tax Basket, producers must charge 13% VAT to final consumers. Prior to Law 9635, agricultural and fisheries products were tax-exempt.

The DESCUBRE Programme – an initiative linking farmers to markets – was created in 2019 as a public-private alliance between the Ministry of Agriculture (MAG), the Ministry of Trade (COMEX), the promotion agency PROCOMER, the Development Banking System (SBD), the Investment Promotion Agency (CINDE), academia, and the private sector. The DESCUBRE programme focuses on improvements and adjustments to the products' quality, certification, post-harvest innovation, logistics, and other features, required for better access to export markets. DESCUBRE is managed by MAG-COMEX-PROCOMER. Its Executive Committee is composed of members from MAG, COMEX, PROCOMER and the SBD, while representatives of the product commerce chambers, universities and entrepreneurs provide strategic guidance and validation through an advisory council of the private sector.

In July 2019, the Regional Wholesale Market was opened in the province of Guanacaste, allowing around 6 500 farmers to market their products directly to hotels, restaurants and companies. This new market infrastructure is open for all types of agricultural, livestock and fish products.

Trade policy developments in 2019-20

There were no major developments in agricultural trade in 2019-20. However, in July 2019, the Association Agreement between Central America and the United Kingdom of Great Britain and Northern Ireland (AACRU) was signed by the Legislative Assembly of Costa Rica. This meets the same trading and investment conditions negotiated in the Agreement of Association between Central America and the European Union (AACUE) and is to enter into force once the United Kingdom has fully left the European Union.

Costa Rica and Mexico have had a trade dispute on avocados since 2015. Costa Rica banned imports of fresh avocados from Mexico, with the aim to protect itself from sunblotch disease (G/SPS/N/CRI/160 and G/SPS/N/CRI/162). The two parties continued their consultations under the WTO Dispute Settlement Mechanism, and on 16 May 2019 the Panel, within the panel and appellate body proceedings of the WTO was composed and is expected to issue its final report to the parties by the second half of 2020.

Note

[1] This training is a self-learning course downloadable at www.platicar.go.cr.

11 European Union

Support to agriculture

Support to agriculture in the European Union has declined gradually since the 1990s. Support to producers as a share of gross farm receipts (%PSE) has stabilised at around 19% since 2010. Although support in the form of price distortions has been reduced substantially, trade protection measures (including import and export licensing, Tariff Rate Quotas (TRQs) and special safeguards) remain in effect for a number of sectors. Overall levels of market price support declined in 2019, as the gap between domestic and world prices narrowed for some of the most protected products.

Production distortions from payments have also declined since the early 2000s and most payments today do not require production. Payments not requiring production accounted for 41% of support on average in 2017-19. At the same time, more payments are contingent upon environmental compliance – more than 60% of payments to producers are conditional on mandatory environmental constraints, and an additional 14% of payments to producers come from voluntary agri-environmental schemes with conditions that go beyond the mandatory requirements.

The greatest share of overall support to the agricultural sector (TSE) goes to producers (89% in 2017-19). Public expenditure for general services to the sector at large (GSSE) relative to total support was 10% in 2017-19, similar to the 9% in 2000-02. However, the composition of GSSE has evolved. Agricultural knowledge and innovation accounts for 56% of the GSSE, up from 42% in 2000-02. Expenditures for both infrastructure and public stockholding have declined over the period, falling respectively from 27% and 15% in 2000-02 to 15% and 1% in 2017-19.

Main policy changes

Much of the policy discussion in 2019 and early 2020[1] was dedicated to shaping the next iteration of the Common Agricultural Policy (CAP). In that vein, the first tranche of transitional regulations needed to bridge the gap between the current CAP and the future one was approved by parliament in December 2019, with the new CAP not expected to enter into force before January 2022. In addition, EU rules on state aid for Member States were revised in 2019. The Commission raised the maximum amount of support that individual farmers can receive to EUR 20 000 (USD 22 388) per farm over three years without the need for prior approval by the European Commission.

Various regulatory changes outside of the CAP, but with implications for the agricultural sector, went into effect in 2019. These included new rules that banned certain unfair trading practices in the agricultural industry, strengthened food inspections, harmonised rules on the sale of fertiliser, and established harmonised risk indicators for pesticides across Member States in order to facilitate the monitoring of trends in pesticide risk reduction at Union level.

At the Member State level, a host of policy changes focused on the agri-environment and climate. Countries implemented new regulations aiming to improve air quality and reduce ammonia emissions,

improve water availability and quality, improve soil conditions, strengthen the circular economy, and achieve national climate targets.

Assessment and recommendations

- Policy reforms undertaken over the past three decades have substantially reduced the level of support to the sector and shifted the composition of support to less production and trade-distorting measures. In spite of substantial progress, relatively significant support continues for some products – particularly for beef and veal, poultry meat and rice – and potentially most distorting forms of support still represent nearly a quarter of support to producers,
- While market access for agricultural products has improved through bilateral agreements and the reduction of applied tariffs, import and export licensing, tariff rate quotas (TRQs) and special safeguards continue to apply to a number of products.
- Climate change plans, activities, and emissions reduction targets are being implemented both at the EU level and within individual Member States, with the goal of achieving carbon neutrality by 2050. The effectiveness of these initiatives may be constrained by both support to fossil fuel consumption through fuel tax rebates for agricultural use in some Member States, and continued product-specific support which has been associated with higher greenhouse gas (GHG) emissions. A more coherent commitment to sustainability goals would involve a phase-out of these types of measures.
- Support to general services has fallen in both absolute and relative terms in the past five years, and is less than the OECD average. At the same time, the sector faces increasing uncertainty due to climate change and other unknown risks. In order to ensure that the sector has access to advances in technology and practices that will allow farmers to manage on-farm risks more effectively, both the European Union and individual Member States should consider additional investments in innovation generally, and in science-based research, development, technology transfer and extension services in particular.

Policy responses in relation to the COVID-19 outbreak

Agricultural policies

Policy measures are being deployed at both EU and Member State level in order to mitigate the impact of the COVID-19 pandemic on the agricultural sector.[2] At EU level, policy measures taken specifically related to the agricultural sector[3] include direct support measures, certain time-bound derogations from competition rules, and administrative flexibilities (EC, 2020[1]). Several of the announced direct support measures were part of the Commission's Coronavirus Response Investment Initiative plus (CRII+),[4] which sought to increase flexibility around the utilisation of European Structural Investment Funds (ESIF), including the European Agricultural Fund for Rural Development (EAFRD)[5] (EC, 2020[2]). This funding flexibility under CRII+ included making available loans or guarantees of up to EUR 200 000 for farmers or other rural development (RD) beneficiaries at favourable terms. In addition, CRII+ also permitted Member States to allocate remaining, non-committed RD funds to help farmers and other agri-food sector actors cope with the impacts of COVID-19, including by supporting supply chain adjustment to direct sales, advisory services, or investments in food marketing and packaging. The Commission estimates that roughly EUR 6 billion is still available under rural development programmes (RDPs), with the sum rising to EUR 17 billion if amounts under pending calls for application are also considered (EC, 2020[3]). Outside of CRII+, the Commission released a Temporary Framework for state aid measures on 19 March, which relaxed state aid rules, including some specificities for agriculture. Under the framework, Member States

are allowed to provide direct grants of up to EUR 100 000 per farm for producers of primary agricultural products, provided that the aid is not based on the price or quantity of product sold (EC, 2020[4]). This quantity can be topped up with EUR 20 000 in "de minimis" aid, which does not require prior approval from the Commission, such that farmers can receive total state aid of up to EUR 120 000. The framework also permits aid up to EUR 800 000 for food processing and marketing firms.

Various administrative flexibilities were also introduced in the context of the CAP. On 6 April 2020, the Commission extended the CAP payment application deadline for both direct payments and RD payments from 15 May 2020 to 15 June 2020 (EC, 2020[5]). While the extension has been granted for all Member States, the final decision on whether to extend the deadline lies with each individual Member State. The *Czech Republic*, *France*, *Greece*, *Luxembourg*, *Portugal* and *Spain* have announced that they will apply the extended deadline. Second, payment advances will be raised to ease farmer cash flow constraints, with advances (available from mid-October) increased from 50% to 70% for direct payments, and advances for some RD payments increased from 75% to 85%. *Croatia*, *Greece*, *Italy*, *Luxembourg* and *Portugal* have all announced that they will advance CAP payments accordingly. Reduced on-farm spot checks were also announced as a means to minimise physical contact and reduce administrative burden (EC, 2020[1]).

In addition, on 22 April the Commission announced three exceptional measures. First, the Commission proposed a private storage aid scheme as authorised in the Common Market Organisation (CMO) Regulation for certain dairy (butter, cheese and skimmed milk powder) and meat products (beef, goat and sheep meat), which would temporarily withdraw some supplies of these products from the market for a period, depending on the product, of between 2 to 3 and 5 to 6 months. Second, the Commission would introduce further flexibility into existing market support programmes for apiculture, fruits and vegetables, olive oil, wine and school schemes to allow the programmes to reorient funding toward crisis management. Finally, the proposal includes an exceptional derogation from EU competition rules for the milk, flowers and potatoes sectors to allow operators to collectively adopt self-organised market measures to stabilise markets, with the provision that such measures remain in place for a maximum of six months (EC, 2020[6]).

At the Member State level, the response measures applied or announced vary, but typically fall into a few broad categories: administrative or regulatory flexibilities, general economy-wide support measures applicable to the agricultural sector, targeted agriculture and agri-food sector support, specific commodity sector support and labour measures. In the realm of **administrative and regulatory flexibilities**, some Member States have temporarily halted or delayed on-farm compliance inspections (*Estonia*, *Finland*, *Ireland*, *Luxembourg* and *Portugal*) or other compliance activities (compliance for animal husbandry subsidies in *Hungary*, or organic farming checks in *Portugal*). In *Finland* in particular, the government has strongly encouraged inspection activities to be carried out using digital document checks and remote interactions where possible. Several countries announced that they would temporarily relax conditionality, cross-compliance or greening mandates (*Hungary*, *Ireland*, and *Portugal*). *Ireland* announced that they would also defer application dates and extend regulatory compliance deadlines for several programmes, including their Young Farmer scheme, Targeted Agricultural Modernisation Scheme and National Reserve scheme. Other countries instituted more targeted flexibilities. For example, *France* issued an exceptional authorisation on the remote sale of plants without a plant passport. In *Germany*, the government announced that they would delay the full application of the amended "Fertiliser Application Ordinance" until January 2021. The government of *Portugal* adapted certain livestock biosecurity measures, including extending the validity of health certificates for livestock, and extending the deadlines for livestock identification. In *Spain*, the enrolment period for agricultural insurance contracts was extended, and the government also relaxed documentation requirements for the transport of animals. Several Member States also specified either extended deadlines for completion of RD projects (*Portugal* and *Romania*) or extended reporting deadlines related to project execution (*Romania*).

Most countries instituted some type of **economy-wide support measures**,[6] some of which could be applied to farms, processing plants, or other firms in agri-food value chains. Some countries offered direct support for certain affected businesses (*France*, *Germany*, *Greece*, *Luxembourg* and *Spain*) or to

freelancers and the self-employed (*Austria*, *Belgium*, *Denmark*, *Germany*, *Luxembourg* and *Slovakia*). Wage compensation, either for employers or employees, was also common (*Croatia*, *Czech Republic*, *Denmark*, *Estonia*, *France*, *Ireland*, *the Netherlands* and *Slovakia*). Many Member States provided support through tax concessions, with some offering tax deferrals or rebates, including for income taxes or VAT (*Austria*, *Belgium*, *Croatia*, *Denmark*, *Estonia*, *France*, *Germany*, *Italy*, *Latvia*, *Lithuania*, *Luxembourg*, *the Netherlands* and *Slovakia*); deferred or suspended social contributions for some or all firms (*Belgium*, *Croatia*, *Estonia, France*, *Hungary*, *Italy*, *Luxembourg*, *Poland*, *Slovakia* and *Spain*); or late tax payment penalty suspensions or late payment waivers (*Czech Republic*, *Estonia*, *Lithuania* and *the Netherlands*). Other measures targeted access to finance, with some countries offering credit guarantees (*Austria*, *Belgium*, *Denmark*, *Estonia*, *France*, *Greece*, *Ireland*, *Italy*, *Latvia* and *Spain*); improved access to investment or business loans, including at concessional rates (*Austria*, *Czech Republic*, *Denmark, Estonia*, *Germany*, *Ireland*, *Italy*, *Latvia* and *Portugal*); or increased access to or state guarantees for export credit (*Denmark* and *Portugal*). Other less common measures included economic support for high-risk employees and reduced working hour requirements for senior employees (*Denmark)*; delayed payments for rent, water, gas and electric bills (*France*); access to mediation for credit issues and business conflicts (*France*); and loss carryback on income tax for 2020 for corporate and personal income taxpayers (*Poland*).

In addition, several Member States announced **targeted support to the agriculture and agri-food sectors**. These interventions were largely of two basic types: establishing emergency support funds or support payments for producers or agricultural firms experiencing severe reductions in income or substantial increases in labour costs (*Austria*, *Belgian* region of Flanders, *Czech Republic*, *Finland*, *Greece*, *Latvia*, and *Slovenia*), or offering special financing options like loan guarantees, designated credit lines, waving or reduction of loan fees, or loan repayment holidays (*Belgian* region of Flanders, *Croatia*, *Czech Republic*, *Estonia*, *Finland*, *Germany*, *Hungary*, *Italy*, *Latvia*, *Lithuania*, *the Netherlands*, *Poland*, and *Portugal*). Other countries offered temporary exemptions or delays on contributions to retirement, health or disability pensions for farmers (*Poland*, and *Slovenia*); VAT reimbursements or accelerated VAT refunding for farms and agricultural businesses (*Hungary*); deferment of agricultural insurance premium payments (*Greece*); compensation for school schemes suppliers in the face of school closures (*Latvia*); land sale and leaseback schemes for owners of arable land, to alleviate serious liquidity issues caused by COVID-19 (*Estonia*); or postponements of rent and fee payments due for land owned by the government (*Croatia*).

Some Member States have announced support measures for **specific agricultural commodity sectors** that have been particularly affected by either supply chain disruptions or collapsing demand. In the *Belgian* region of Flanders, compensation was offered to growers in certain sectors whose fresh products (including flowers and ornamental plants) could not be sold due to the pandemic. *Croatia* instituted assistance measures for several sectors, including a support programme of HRK 53 million (EUR 7 million) to maintain production and employment for smallholder farms in various sectors (fruit and vegetables, flowers, seeds, plant reproductive material, beef, pigs, equines, sheep, goats and poultry); temporary measures to assist smallholder dairies by arranging government purchase of their products and distributing them for food donation; and through the delay of contractual commitments under the country's wine sector programme. *Italy* announced measures for several sectors, including allocating EUR 29.5 million for supply chain competitiveness funds for maize, legumes, soy and wheat; EUR 40 million for durum wheat through the grains fund; EUR 7.5 million for sheep meat and lambs; EUR 2 million for buffalo milk; and EUR 5 million for the national pig fund. In *Latvia*, EUR 19 million of the national emergency fund was specifically designated for the livestock sector. The *Netherlands* has announced a EUR 600 million compensation scheme for horticultural producers who have experienced severe losses due to declining demand (particularly floriculture growers), with the state compensating up to 70% of losses. An additional programme of EUR 50 million was announced to compensate Dutch French fry potato growers experiencing cascading demand effects from shuttered restaurant and food service businesses. In *Portugal*, sector support was offered to the wine industry (including reimbursement for expenses occurred

for cancelled international promotional events) and the fruit and vegetable sectors. *Spain* offered direct aid for the lamb and kid sectors of up to EUR 30 per animal.

Access to sufficient agricultural **labour** was a primary concern in many countries, and a host of initiatives were introduced to that end. Regulations related to eligibility of foreign workers (including extending seasonal work permits or temporary worker visa eligibility days, or permitting temporary employment of foreigners without work permits as seasonal workers in agriculture) were relaxed in *Austria*, *Estonia*, the Belgian region of *Flanders*, *Finland, Germany* and *Poland*. Similarly, exceptions were granted to border entry restrictions in *Finland* and *Germany*[7] to allow seasonal workers to enter from abroad. Though not specifically oriented toward foreign workers, special provisions were made to ensure that state border crossings of farmers and agricultural employees, along with agricultural machinery, would continue to be permitted in the *Czech Republic* and *Poland* in the face of general movement restrictions. Other member states mounted specific campaigns to recruit atypical workers (such as the recently laid-off, students and refugees) as temporary agricultural labourers (*Czech Republic*, *France*, *Finland*, *Germany*, and the *United Kingdom*[8]). Web-based platforms were established to link agricultural producers and food processors in need of seasonal labour with available workers in *Austria*, *France*, *Germany*, *Hungary*, *Luxembourg*, and the *United Kingdom*. Similarly, the *Irish* Agriculture and Food Development Authority (Teagasc), in conjunction with Farm Relief Services and farming organisations, established a Regional Farm Labour Database to link farming families with available relief workers in the event that a farmer contracts COVID-19 and is unable to work. The government of *Estonia* increased funding for farmers' back-up service support, to ensure that affected farmers in both the livestock and plant production sectors would be able to access replacement labour if the farmer contracts COVID-19. In *France* and *Spain*, specific allowances were made to permit unemployed persons to engage in temporary agricultural labour – in *Spain*, the unemployed can continue to receive their unemployment benefits while also working as agricultural labourers. *Italy* and *Spain* also specified certain safety measures for agricultural workers, with *Spain* announcing provisions limiting the number of agricultural workers allowed to be transported per vehicle, and also allowing tourism accommodations to be used to house agricultural workers. Farmers in the *Czech Republic* and *Poland* were granted eligibility for a specific daily allowance for self-employed workers who stay home and care for children or disabled persons. In *Italy*, specific support was made available for agricultural workers only – any agricultural worker who carried out at least 50 days of agrarian work in 2019 is eligible for compensation of EUR 600 for the month of March.

Agro-food supply chain policies

COVID-19 posed specific challenges to the region's agro-food supply chains, as movement restrictions posed by EU Member States to contain the disease also blocked transportation routes, resulted in long queues at border checks, and exacerbated the shortage of seasonal farm workers. In response, the Commission worked with Member States to create "Green Lanes" through which shipments of goods (including food and livestock) are able to cross borders in 15 minutes or less, including any checks or health screenings. Provisions of the "Green Lane" guidelines include striving to conduct checks without drivers leaving their vehicles, and accepting the electronic submission of documents (EC, 2020[7]). The Commission also designated seasonal agricultural workers as "critical". This included the publication of guidelines allowing free movement of seasonal and cross-border agricultural workers within the European Union, and a derogation allowing the entry of seasonal agricultural workers originating from third countries (EC, 2020[1]).

As an additional means of easing supply chain disruptions, the Commission also instituted a two-month temporary regulation (EU 2020/466) relaxing EU rules on food inspections. Under the regulation, inspections of animals, feed, food or plants may be carried out by other specifically authorised persons if a representative of the competent inspection authority is not able to be present, and testing or diagnoses can be performed by designated laboratories in lieu of official laboratories. Additionally, the regulation

allows for the exceptional acceptance of electronic documents, provided that a paper copy be provided as soon as feasible (EC, 2020[8]).

As part of an ongoing evolution, the European Union is making use of its existing EU market observatories to closely monitor conditions in agricultural markets, including trade in food products. Additionally, the Commission is supporting greater information sharing and global market transparency through its AMIS chairmanship.

Member States have also allowed some flexibility in regulations applied to the greater agri-food value chain. Several countries issued temporary derogations on laws defining mandatory rest periods for drivers transporting goods (*Latvia*, *Portugal*, *Spain*, and the *United Kingdom*). *Cyprus*[9] temporarily amended the existing law on animal slaughtering practices to allow kosher slaughtering to facilitate sheep and goat meat exports to Israel amid current market disruptions. In the *Czech Republic*, the relevant ministries issued an exception allowing distilleries to produce disinfectants from denatured alcohol. In *Denmark*, the government has decreed flexibility in extending the working hours for slaughterhouses in order to maintain meat production levels while also protecting the health of workers. The government of *Lithuania* has permitted online trading in non-food horticultural and other agricultural goods for delivery and pickup. *Portugal* announced that physical inspections on border checks would be temporarily reduced or suspended. In the *United Kingdom*, competition law was temporarily suspended to allow supermarkets to share data with each other on stock levels, and to co-operate to keep shops open and share distribution depots and delivery vans.

Other governments made overtures for improving demand for domestic agri-food goods either through market promotion or by helping farmers or firms identify alternative distribution channels. The government of *Bulgaria* mandated that all retailers with at least 10 stores provide Bulgarian food products within the categories of food products already for sale, further mandating that Bulgarian-origin milk represent 90% of retailer dairy offerings. *Italy* opted to dedicate additional resources to the promotion of domestic agricultural goods, adding EUR 150 million in funding to the country's "Made in Italy" campaign. The government of *Portugal* encouraged the consumption of local products through the expansion of sales channels and the promotion of alternative channels for reaching consumers. Online platforms intended to facilitate the linking of agricultural producers direct to consumers were set up in *Austria*, *Bulgaria*, and *Romania*. In *Ireland*, Bord Bia (the Irish Food Board) launched a EUR 1 million marketing grant scheme under their "Navigating Change" COVID-19 response programme to assist food producers and manufacturers in accelerating e-commerce operations and expanding marketing activities in the context of rapidly changing market conditions.

Some countries announced initiatives to bring together stakeholders across the agri-food value chain to proactively confront any issues impeding functioning food markets. In *Denmark*, a Government and Business Corona Unit was established to improve the collaboration between business and labour organisations to address potential sectoral economic distress. Similarly, *Portugal* established a "Monitoring and Assessing the Conditions for Supplying Goods in the Agri-Food and Retail Sectors" group, which includes stakeholders and business association in the retail, distribution and logistics sectors.

Consumer policies

Consumer-oriented policies are, at the present time, largely limited to the Member State level. The government of *Portugal* announced enhanced enforcement of laws against price speculation, and the government of *Romania* announced that the Consumer Protection Office and the Competition Council would be making unannounced visits to retailers to verify price conformity and prevent price gouging. Other countries opted to intervene very directly in agri-food markets. The government of *Croatia* imposed a price freeze on flour, milk, eggs, pasta, meat, fish, fruits, vegetables and baby food. In *Poland*, relevant ministers were authorised to institute, in certain cases, maximum sales prices and official retail margins for foodstuffs. Similarly, the government of *Slovenia* announced the possibility of regulating prices of individual

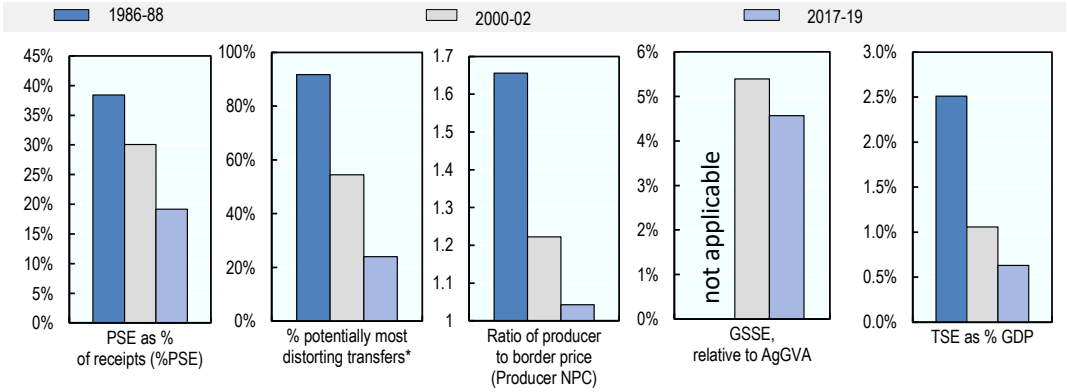
foodstuffs in accordance with that country's Emergency Act on Agriculture. In addition, Slovenia announced an expansion of state food reserves, with the government also making allowances for the temporary erection of food storage warehouses. *Slovenia's* legislation on emergency intervention measures for agriculture, forestry and food also included a host of provisions intended to ensure sufficient food supplies on the domestic market, including the possibility of restricting the circulation of agricultural products, foodstuffs or animals intended for human consumption.

Actions targeting vulnerable populations were undertaken at both the EU and Member State levels. The regulation on the EU's Fund for European Aid to the Most Deprived (FEAD) – which provides food and/or basic material assistance to those in need – was amended on 23 April (EU 2020/559) with a set of measures designed to address the COVID-19 crisis, including allowing for alternative schemes of delivery like electronic cards or vouchers, enabling the purchase of protective equipment for those delivering aid, and providing flexibility in complying with monitoring and control requirements in order to reduce administrative burden and avoid disrupting delivery of support. In the Member States, *Italy* instituted some measures to facilitate food provision to the poor, including an additional EUR 300 million allocated to the country's fund for the indigent. In the *Czech Republic*, food that was originally destined for the country's fruit, vegetable and milk school schemes were instead distributed to food banks, in the wake of school closures. The government of *Portugal* announced support for the distribution of fruits and vegetables through social solidarity NGOs and the national food bank network. Food parcels were delivered directly to vulnerable citizens in the *United Kingdom*, and digital supermarket vouchers were provided to low-income families with children in lieu of free school meals from closed schools.

Other

Outside of specific measures and regulations, movement restrictions and stay-at-home orders due to the COVID-19 outbreak have impacted some policy processes relevant to the sector. In particular, the outbreak delayed the release of the European Commission's "Farm to Fork" strategy, which had originally been scheduled for late March. Negotiations around the next multi-annual financial framework and the Common Agricultural Policy were also delayed.

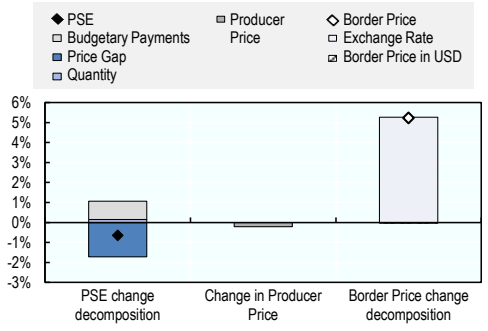
Figure 11.1. European Union: Development of support to agriculture



Note: * Share of potentially most distorting transfers in cumulated gross producer transfers.
Source: OECD (2020), "Producer and Consumer Support Estimates", OECD Agriculture statistics (database), http://dx.doi.org/10.1787/agr-pcse-data-en.
StatLink https://doi.org/10.1787/888934144078

Support to producers (%PSE) in the European Union declined substantially from the 1980s through the early 2000s, but has stabilised around 19% since 2010, varying only slightly from year to year based on individual commodity market conditions. In 2017-19, support was 19% of gross farm receipts – slightly above the OECD average. The share of **most distorting support** decreased over the same period, driven largely by declining market price support (MPS), and is now half of the OECD average (Figure 11.1). Support declined slightly in 2019, with a small increase in budgetary payments more than offset by a decline in MPS. This reduction in MPS indicates that the gap between prices received by EU farmers and world reference prices narrowed, almost entirely due to exchange rate fluctuations, as movements in both producer prices and border prices denominated in USD were negligible (Figure 11.2). For products that received the highest levels of support relative to gross farm receipts (beef and veal, poultry meat, rice and sugar), MPS was the dominant component of their single commodity transfers (SCT), while commodity payments accounted for the bulk of the SCT for sheep meat (Figure 11.3). The vast majority of support – 89% in 2017-19 – is captured by individual farmers, with most of the remainder designated for **general services** (GSSE) to the sector (Table 11.1). GSSE relative to agriculture value added was 4.6% in 2017-19, less than the overall OECD average of 5.7%. More than half of GSSE spending is devoted to knowledge and innovation systems. **Total support to agriculture** as a share of GDP has declined significantly over time, as has the share of the sector in the economy.

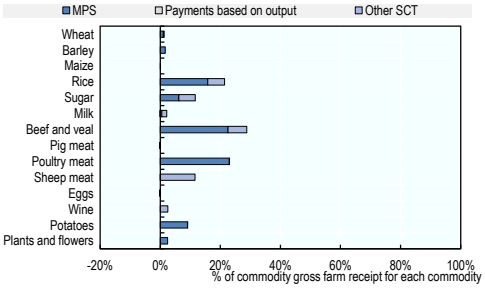
Figure 11.2. European Union: Drivers of the change in PSE, 2018 to 2019



Source: OECD (2020), "Producer and Consumer Support Estimates", OECD Agriculture statistics (database), http://dx.doi.org/10.1787/agr-pcse-data-en.

StatLink https://doi.org/10.1787/888934144097

Figure 11.3. European Union: Transfer to specific commodities (SCT), 2017-19



Source: OECD (2020), "Producer and Consumer Support Estimates", OECD Agriculture statistics (database), http://dx.doi.org/10.1787/agr-pcse-data-en.

StatLink https://doi.org/10.1787/888934144116

Table 11.1. European Union: Estimates of support to agriculture

Million USD

	1986-88	2000-02	2017-19	2017	2018	2019p
Total value of production (at farm gate)	**233 558**	**225 093**	**450 445**	**439 889**	**462 632**	**448 815**
***of which:** share of MPS commodities (%)*	75.0	73.3	73.8	73.8	73.9	73.9
Total value of consumption (at farm gate)	**212 900**	**226 789**	**439 074**	**422 905**	**461 897**	**432 419**
Producer Support Estimate (PSE)	**95 385**	**80 915**	**102 483**	**98 748**	**107 449**	**101 252**
Support based on commodity output	86 308	40 997	18 263	16 263	20 591	17 935
Market Price Support[1]	80 672	37 067	17 890	15 760	20 275	17 635
Positive Market Price Support	81 784	37 067	18 040	16 001	20 350	17 768
Negative Market Price Support	-1 112	0	-150	-241	-75	-133
Payments based on output	5 637	3 930	373	504	316	300
Payments based on input use	5 056	6 833	13 650	12 512	14 456	13 982
Based on variable input use	960	3 047	6 075	5 819	6 341	6 064
with input constraints	0	0	31	22	31	42
Based on fixed capital formation	2 986	2 259	5 630	4 611	6 259	6 019
with input constraints	0	94	101	85	108	109
Based on on-farm services	1 109	1 527	1 945	2 082	1 855	1 899
with input constraints	90	274	54	21	65	76
Payments based on current A/An/R/I, production required	3 587	32 331	28 489	27 871	29 297	28 299
Based on Receipts / Income	147	99	190	184	204	183
Based on Area planted / Animal numbers	3 440	32 231	28 299	27 687	29 093	28 116
with input constraints	940	15 087	23 500	22 646	24 249	23 605
Payments based on non-current A/An/R/I, production required	0	0	3	4	3	3
Payments based on non-current A/An/R/I, production not required	0	10	40 988	41 184	41 932	39 849
With variable payment rates	0	0	0	0	0	0
with commodity exceptions	0	0	0	0	0	0
With fixed payment rates	0	10	40 988	41 184	41 932	39 849
with commodity exceptions	0	0	3	8	0	0
Payments based on non-commodity criteria	478	1 078	927	761	1 001	1 019
Based on long-term resource retirement	476	846	206	204	220	194
Based on a specific non-commodity output	2	176	670	506	729	775
Based on other non-commodity criteria	0	57	52	51	53	50
Miscellaneous payments	-43	-334	161	152	168	164
Percentage PSE (%)	**38.4**	**30.1**	**19.1**	**18.9**	**19.5**	**19.0**
Producer NPC (coeff.)	**1.66**	**1.22**	**1.04**	**1.04**	**1.05**	**1.04**
Producer NAC (coeff.)	**1.62**	**1.43**	**1.24**	**1.23**	**1.24**	**1.23**
General Services Support Estimate (GSSE)	**9 118**	**8 355**	**11 826**	**11 627**	**12 162**	**11 690**
Agricultural knowledge and innovation system	1 788	3 492	6 622	6 369	6 832	6 665
Inspection and control	194	281	1 008	972	1 082	970
Development and maintenance of infrastructure	1 331	2 222	1 763	1 854	1 746	1 688
Marketing and promotion	1 210	996	2 329	2 195	2 461	2 331
Cost of public stockholding	4 571	1 294	86	219	22	18
Miscellaneous	24	69	17	17	18	18
Percentage GSSE (% of TSE)	**8.3**	**9.0**	**10.3**	**10.5**	**10.1**	**10.3**
Consumer Support Estimate (CSE)	**-69 408**	**-33 000**	**-16 742**	**-14 387**	**-19 312**	**-16 528**
Transfers to producers from consumers	-80 268	-36 084	-17 273	-15 081	-19 800	-16 938
Other transfers from consumers	-1 699	-717	-113	-94	-89	-157
Transfers to consumers from taxpayers	4 992	3 537	417	416	455	381
Excess feed cost	7 567	264	227	372	122	186
Percentage CSE (%)	**-33.4**	**-14.8**	**-3.8**	**-3.4**	**-4.2**	**-3.8**
Consumer NPC (coeff.)	**1.63**	**1.19**	**1.04**	**1.04**	**1.05**	**1.04**
Consumer NAC (coeff.)	**1.50**	**1.17**	**1.04**	**1.04**	**1.04**	**1.04**
Total Support Estimate (TSE)	**109 495**	**92 807**	**114 726**	**110 791**	**120 065**	**113 322**
Transfers from consumers	81 967	36 801	17 386	15 175	19 888	17 094
Transfers from taxpayers	29 228	56 723	97 453	95 709	100 265	96 384
Budget revenues	-1 699	-717	-113	-94	-89	-157
Percentage TSE (% of GDP)	**2.5**	**1.1**	**0.6**	**0.6**	**0.6**	**0.6**
Total Budgetary Support Estimate (TBSE)	**28 824**	**55 740**	**96 836**	**95 031**	**99 790**	**95 687**
Percentage TBSE (% of GDP)	**0.7**	**0.6**	**0.5**	**0.5**	**0.5**	**0.5**
GDP deflator (1986-88=100)	**100**	**152**	**187**	**186**	**188**	**..**
Exchange rate (national currency per USD)	**0.91**	**1.09**	**0.88**	**0.89**	**0.85**	**0.89**

.. Not available

Note: p: provisional. NPC: Nominal Protection Coefficient. NAC: Nominal Assistance Coefficient.
A/An/R/I: Area planted/Animal numbers/Receipts/Income.
EU12 for 1986-88; EU15 for 2000-02; and EU28 from 2017 when available.
1. Market Price Support (MPS) is net of producer levies and excess feed cost. MPS commodities for the European Union are: wheat, maize, barley, oats, rice, rapeseed, sunflower, soybean, sugar, milk, beef and veal, sheep meat, pig meat, poultry, eggs, potatoes, tomatoes, plants and flowers, and wine.

Source: OECD (2020), "Producer and Consumer Support Estimates", *OECD Agriculture statistics* (database), http://dx.doi.org/10.1787/agr-pcse-data-en.

Contextual information

The European Union is the largest economic region covered in this report, accounting for 20% of the economic activity of all countries covered herein. While the contribution of agriculture to both GDP and employment has declined since 2000, the share of agriculture in the region's exports increased (Table 11.2). Close to half of the region's landmass is dedicated to agriculture, with nearly 60% of agricultural area categorised as arable. Crops (including cereals, oilseeds, fresh fruit and vegetables, and plants and flowers) predominate in agricultural output, accounting for 57% of total production. Livestock products – including dairy, beef and veal, pig meat, sheep meat, poultry and eggs – account for the remainder.

Table 11.2. European Union: Contextual indicators

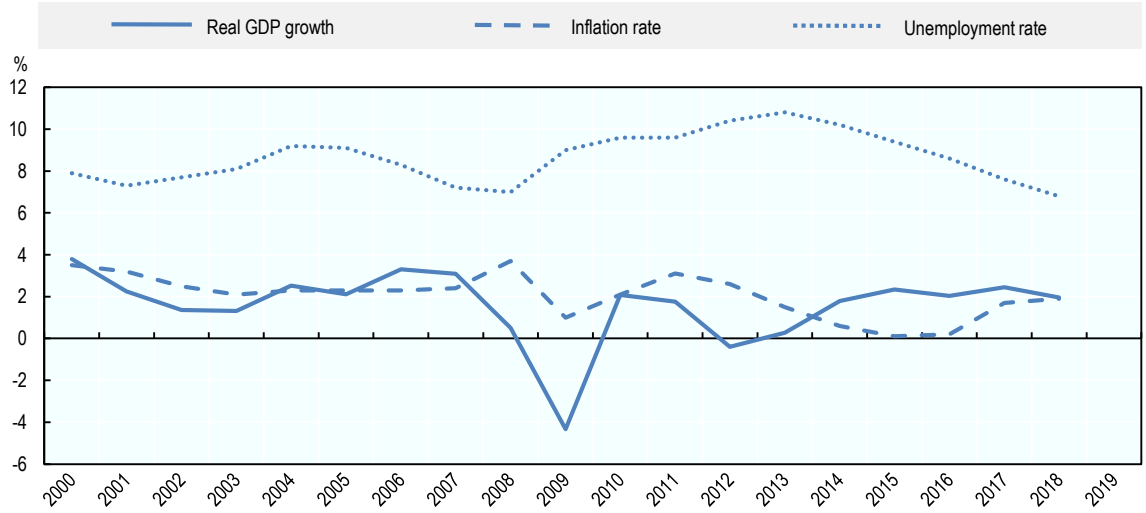
	European Union		International comparison	
	2000*	2018*	2000*	2018*
Economic context			**Share in total of all countries**	
GDP (billion USD in PPPs)	9 926	22 931	24.8%	20.3%
Population (million)	378	512	8.8%	9.9%
Land area (thousand km^2)	3 127	4 238	3.8%	5.1%
Agricultural area (AA) (thousand ha)	140 572	181 646	4.7%	6.1%
			All countries[1]	
Population density (inhabitants/km^2)	114	116	53	62
GDP per capita (USD in PPPs)	26 283	44 650	9 275	21 924
Trade as % of GDP	11	13	12.4	15.3
Agriculture in the economy			**All countries[1]**	
Agriculture in GDP (%)	1.8	1.5	3.1	3.6
Agriculture share in employment (%)	4.3	4.0	-	-
Agro-food exports (% of total exports)	6.0	6.8	6.2	7.3
Agro-food imports (% of total imports)	5.8	5.6	5.5	6.3
Characteristics of the agricultural sector			**All countries[1]**	
Crop in total agricultural production (%)	54	57	-	-
Livestock in total agricultural production (%)	43	43	-	-
Share of arable land in AA (%)	53	58	32	33

Notes: *or closest available year. EU15 for 2000 and EU28 for the most recent year. 1. Average of all countries covered in this report. EU treated as one.
Sources: OECD statistical databases; UN Comtrade; World Bank, WDI and national data.

GDP growth in the region has been positive since 2013, fluctuating around 2% since 2015 (Figure 11.4). The unemployment rate has declined steadily over that time period, falling from a high of 11% in 2013 to 7% in 2018. Inflation has remained under 2% since 2013. In spite of these positive aggregate indicators, economic conditions vary widely among the different Member States.

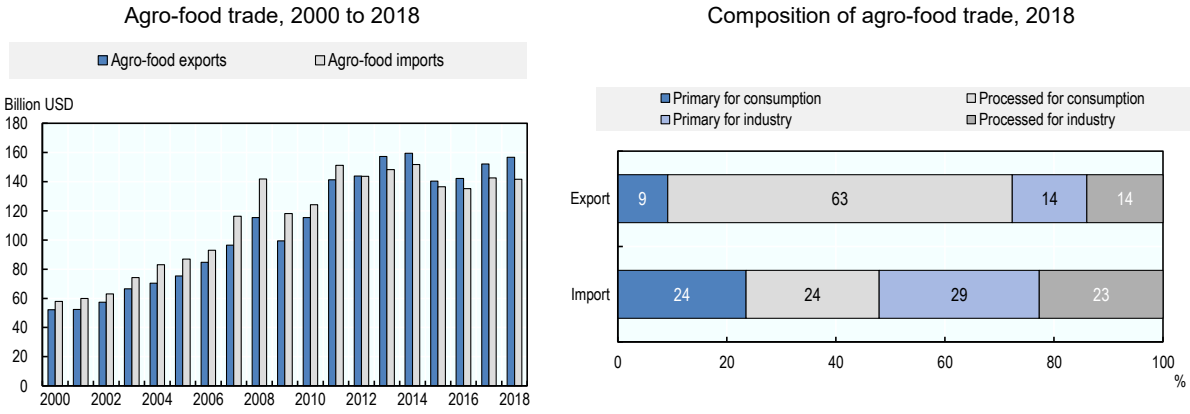
The European Union has been the world's largest agro-food exporter since 2013, and remains one of the largest importers as well (Figure 11.5). The region is a net food exporter, with agro-food products accounting for 6.8% of all EU exports and 5.6% of all EU imports. The region's agro-food exports are overwhelmingly comprised of processed goods for final consumption (63%), while imports are more evenly distributed among the four categories, with processed goods for industry accounting for the largest share of imports (29%).

Figure 11.4. European Union: Main economic indicators, 2000 to 2019



Note: EU28.
Sources: OECD statistical databases; World Bank, WDI and ILO estimates and projections.

Figure 11.5. European Union: Agro-food trade

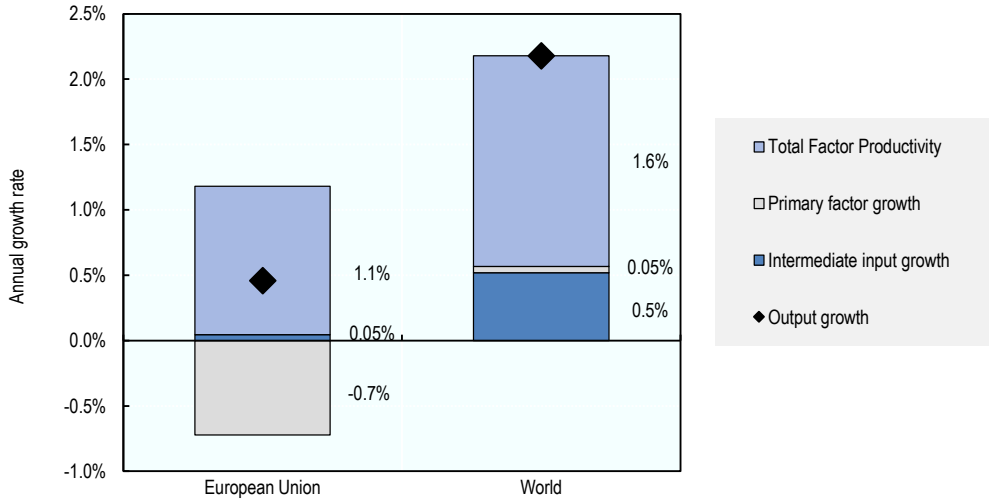


Note: Numbers may not add up to 100 due to rounding.
Source: UN Comtrade Database. Extra-EU trade: EU15 for 2000-2003; EU25 for 2004-06; EU27 for 2007-13 and EU28 from 2014.

At 0.5%, agricultural output growth in the European Union over the period 2007-16 was far below the world average of 2.2% (Figure 11.6). Total Factor Productivity (TFP) grew over the period by 1.1% on average, driven by a reduction in primary factor inputs including labour, land, livestock and machinery.

Rising TFP has been achieved in the sector along with a reduction of environmental pressures as shown in various environmental indicators (Table 11.3). From 2000 to 2018, the region's nitrogen balance fell by one-third, the phosphorous balance declined nearly 90%, and the share of agriculture in water abstractions fell by 35%. At the same time, agriculture's contribution to greenhouse gas (GHG) emissions rose by 13%.

Figure 11.6. European Union: Composition of agricultural output growth, 2007-16



Note: Primary factors comprise labour, land, livestock and machinery. EU28.
Source: USDA Economic Research Service Agricultural Productivity database.

Table 11.3. European Union: Productivity and environmental indicators

	European Union		International comparison	
	1991-2000	2007-2016	1991-2000	2007-2016
			World	
TFP annual growth rate (%)	0.8%	1.1%	1.6%	1.6%
			OECD average	
Environmental indicators	**2000***	**2018***	**2000***	**2018***
Nitrogen balance, kg/ha	74.0	49.1	33.3	29.1
Phosphorus balance, kg/ha	7.3	0.9	3.3	2.3
Agriculture share of total energy use (%)	2.0	2.6	1.7	2.0
Agriculture share of GHG emissions (%)	9.0	10.1	8.1	8.9
Share of irrigated land in AA (%)	..	..	-	-
Share of agriculture in water abstractions (%)	41.3	27.0	46.0	49.0
Water stress indicator	..	..	9.9	8.9

Note: * or closest available year. TFP annual growth rate: EU28. Environmental indicators: EU15 for 2000 and EU28 for the most recent year.
Sources: USDA Economic Research Service, Agricultural Productivity database; OECD statistical databases; FAO database and national data.

Description of policy developments

Main policy instruments

The Common Agricultural Policy (CAP) is the main agricultural policy framework of the European Union. In addition to the CAP, Member States may implement measures funded from national or sub-national budgets that target specific sectors (including agriculture) or objectives, as long as they comply with the European Union's state aid rules and do not distort competition within the common market (OECD, 2017[9]).

The CAP typically covers a seven-year period, currently 2014-20. It is composed of two pillars: the European Agricultural Guarantee Fund (EAGF) finances Pillar 1, and measures under Pillar 2 are based on Rural Development Programmes (RDP) co-financed by the European Agricultural Fund for Rural

Development (EAFRD) and EU Member States.[10] Member State RDPs are deployed over the seven year CAP programming period. The CAP 2014-20, while in many ways the continuation of the CAP 2007-13, offers a number of novel features (OECD, 2017[9]).

The implementation of the CAP 2014-20 started in 2014 with the first measures under Pillar 1, followed in 2016 by the implementation of 118 national and regional Pillar 2 Rural Development Programmes (RDP)[11] in the Member States. Later in 2018, the CAP simplification took place within the revision of the EU financial rules, also known as the Omnibus regulation (OECD, 2018[10]). Furthermore, the CAP had provided for opportunities at set times during implementation when Member States could review and notify adjusted decisions with regard to several choice measures.

The overall budget for the CAP over the 2014-20 period was set at EUR 408 billion (USD 457 billion), of which initially 76% were allocated to Pillar 1 (covering market related expenditure and direct payments), and the remaining 24% to Pillar 2 (rural development spending, including agri-environmental payments). The CAP 2014-20 allows Member States to transfer up to 15% of each envelope[12] between the two pillars. Over the period, twelve Member States transferred funds from Pillar 1 to Pillar 2, while five Member States transferred funds from Pillar 2 to Pillar 1; with a net overall result of EUR 3.76 billion (USD 4.21 billion) transferred from Pillar 1 to Pillar 2 over the period (EC, 2019[11]).[13]

Pillar 1 defines and funds **market measures** under the common market organisation, as well as **direct payments** – mostly per hectare payments that do not require production (see next paragraph). To this end, entitlements to direct payments were assessed and allocated for the entire period of the CAP 2014-20 to those deemed to be active farmers through the exclusion of a number of activities and businesses, known as the negative list. More flexibility was introduced in the active farmer condition in 2018. Most Member States abandoned the negative list, while some country specific alternative criteria were used to prove farming activity in those that continue to apply it.

The Basic Payment Scheme (**BPS**) and the Single Area Payment Scheme (**SAPS**) – the BPS equivalent that offers a uniform per hectare payment rate in all but three Member States which joined the European Union after 2000[14] – make up 51% of the EU direct payments envelope on average in 2019 and 2020 (Table 11.4). Wide variations across Member States are observed that reflect Member States' spending choices on optional measures under Pillar 1. Both the BPS and the SAPS are conditional to cross-compliance requirements, although exceptions apply. Additional conditions are attached to the per-hectare **Greening** payment that accounts for 29% of the Pillar 1 direct payments budget. As of 2017, farmers who do not comply with all the requirements of greening may be subject to new greening administrative penalties (equivalent to 20% of the farmer's greening payment in 2017, and raised to 25% from 2018 onward) in addition to forfeiting a share of the greening payment on the non-compliant area.

Table 11.4. Direct payments budget under Pillar 1, 2019

	Budget 2020 (EUR million)	Share in direct payments	Share in decoupled direct payments
Direct payments; of which:	40 621		
Decoupled direct payments, of which:	34 502	85%	
Basic Payment Scheme (BPS)	16 189	40%	47%
Single Area Payment Scheme (SAPS)	4 376	11%	13%
Greening	11 819	29%	34%
Voluntary Coupled Support	4 084	10%	

Note: Other decoupled payments represent about 6% of direct payments under Pillar 1. The 2020 EU fiscal year (November to October) is attributed to year 2019 in the PSE system.
Source: OECD calculations based on European Commission, EUR-Lex budget 2020.

In the ten Member States that apply the SAPS, commodity-specific payments may be granted from national budgets within limited envelopes. The **Transitional National Aid** (TNA) can be disbursed as decoupled payments while a fixed share may be spent on current production. They may apply on a per area basis to arable land, hop and starch potatoes; on a volume basis to milk; and on a headage basis to other livestock. Member States may review TNA budgets and supported commodities on an annual basis. The maximum TNA payments allowed decreases gradually from 75% of the 2013-level of SAPS aid in 2015 to 50% in 2020.

As the CAP 2014-20 is implemented, the gap in per-hectare payment rates of the BPS and the SAPS is set to narrow, both between countries (**external convergence**) and between regions within countries (**internal convergence**[15]). Internal convergence applies to the regionalised BPS while, under the SAPS, a uniform payment rate at national level already applies to each hectare.

In the CAP 2014-20, Member States may choose to allocate part of their direct payments envelope to commodity specific payments within defined ceilings (up to 13%) and under defined conditions. The **voluntary coupled support** (VCS) expands the coupled support scheme under Article 68 of the previous CAP 2007-13 and offers Member States the choice to allocate a larger envelope to more sectors or regions and under a wider set of specific conditions. Such support may be granted to create an incentive to maintain current levels of production in the sectors or regions concerned. Choices of Member States on the take-up of the VCS vary greatly, both in terms of the level of support and the commodities supported. On several occasions, Member States have reviewed VCS budgets and commodity attributions, making some minor adjustments. All Member States, except Germany, have chosen to offer VCS, using 10% of the EU direct payments budget on average. This compares to the 3% that was spent previously under Article 68 coupled support, as reported in the European Union's general budgets.

A top-up payment to young farmers, in addition to the BPS and SAPS, applies in all Member States. In 2019, this payment accounts for 1.4% of the European Union's direct payments envelope, as reported in the general budget. Member States have chosen to implement this measure in different ways. Some offer recipients a flat payment rate on a limited number of hectares, while others apply a payment proportional to the BPS or SAPS received. In addition to this compulsory young farmer scheme, 25 Member States have chosen to attribute a portion of their rural development envelopes to support young farmers, representing 4.5% of total rural development expenditures (ENRD, 2016[12]). The bulk of this spending is directed toward business development and investments.

Fifteen Member States have chosen to offer small farms simplified payment attribution conditions – the Small Farmers Scheme – that waives the requirements attached to the greening payment and cross-compliance. The payment cannot exceed EUR 1 250 (USD 1 399) per farm and, depending on the method chosen by the Member State, the overall envelope may be limited to 10% of national direct payments.[16]

Denmark and Slovenia implement the Pillar 1 direct payment to **Areas with Natural Constraints** (ANC). Under this payment, the ANC are defined based on eight biophysical criteria.[17] Denmark uses 0.3% and Slovenia 1.6% of their national direct payments envelope for ANC payments (EC, 2019[11]). A payment targeted to areas with natural or other specific constraints can also be budgeted under the RDP, labelled as the Less Favoured Areas payment in the previous CAP. It is implemented in 25 Member States using 21% and 19% of Pillar 2 public expenditure funds (including Member States' contributions from national budgets) in 2018 and 2019, respectively. In the past, Member States used up to 140 different criteria for assessing ANC status for Pillar 2 payments. However, these have been consolidated into the same set of eight biophysical criteria that applies to Pillar 1 ANC payments.

Ten Member States or regions have chosen to grant higher payments to the first hectares[18] under the so-called **redistributive payment**, using 4.1% of the European Union's direct payments envelope as reported in European Union's general budget.

Member States that implement the redistributive payment may choose to opt-out from so-called "degressivity" and six Member States and regions have chosen to do so.[19] Under **degressivity**, BPS amounts above EUR 150 000 (USD 167 908) per recipient are reduced by a minimum of 5%. Funds deducted under this provision are transferred to Pillar 2 and used to fund the Member State's RDPs. Fourteen Member States[20] have chosen to apply the minimum reduction. Ten Member States have used the possibility to increase the amount that is exempt from the 5% reduction by the value of salaries paid. Ten Member States have chosen to apply a full cap on the BPS at levels varying from EUR 150 000 (USD 167 908) to EUR 600 000 (USD 671 630).

A **Crisis reserve** is earmarked to be used in case of emergency situations. It is funded from the Pillar 1 direct payments budget. If it is not used in the current year, the envelope is reverted for distribution as Pillar 1 direct payments in the same year. The crisis reserve is renewed each year and has not been used up to now as an emergency fund.

The **POSEI scheme** (*Programmes d'Options Spécifiques à l'Eloignement et à l'Insularité*) supports farming in the European Union's outermost regions by using production-related payments. The scheme supports access to food, feed and inputs for local communities, and also the development of local agricultural production with 1.1% of the direct payments envelope in 2019.

Pillar 1 also funds measures that support **commodity markets**, representing 4.4% of the overall agriculture and rural development budget in 2019. Prices paid to EU domestic producers averaged 4% above world market prices in 2017-19.

While the possibility exists for public intervention for cereals (namely common and durum wheat, barley and maize), it has not been applied in recent years. Purchase at the cereal intervention price is limited to 3 million tonnes of common wheat, beyond which purchase is by tender. Public intervention for durum wheat, barley and maize can be opened under special circumstances by means of tendering. Public intervention also applies to paddy rice. Until 30 September 2017, sugar was supported through production quotas, coupled with a minimum price for sugar beets. After the end of the sugar quota regime, existing provisions for agreements between sugar factories and growers have been maintained, and white sugar remained eligible for private storage aid. The support regime for cereals and sugar also includes trade protection through tariffs and tariff rate quotas (TRQs). No export refunds have been granted since July 2013. Furthermore, since the WTO Ministerial conference in Nairobi in December 2015, the European Union has committed not to resort to export subsidies. The CAP Reform proposal includes the elimination of the legal base for the European Union to grant export refund/subsidies in any sector.

Fruits and vegetables are eligible for voluntary coupled support and commodity specific payments; they are also supported through various market measures. These include crisis intervention measures that may be managed by producer organisations, an entry price system (minimum import price) for some products, and ad valorem duties, but no export subsidies. Support co-financed by Member States also applies to the fruit and vegetables sector as well as the olive oil and table olives sectors. These support a wide range of actions from production planning, quality measures, market withdrawal and harvest insurance to training, promotion and communication. Some of these measures apply at farm level while others are provided to producer organisations or to the sector at large. Private storage may also be activated as an optional scheme for olive oil and flax fibre. In the CAP 2014-20 the rules on recognition of producer organisations and inter-branch organisations are expanded beyond fruits and vegetables. Compensation may be greater when producers claim support via producer groups, as was the case with compensation payments related to the Russian Federation's embargo on imports.

Also targeting the fruit and vegetables sector, a consumer support system directed toward schoolchildren covers the consumption of fresh fruits and vegetables, processed fruits and vegetables, and banana products. The scheme's budget has grown rapidly from EUR 29 million (USD 32 million) when it was first implemented in 2010 to EUR 117 million (USD 131 million) in 2016. A similar scheme supported milk consumption for schoolchildren, with a budget of EUR 64 million (USD 72 million) in 2016. In August 2017

both schemes were merged under the title “School Schemes” and the budgets combined into EUR 215 million (USD 241 million) in 2019.

In the dairy sector, intervention prices are used for butter and skimmed milk powder, together with import protection. Intervention purchases at fixed price cannot exceed 50 000 tonnes for butter, and 109 000 tonnes for skimmed milk powder (SMP), representing 2% and 7% of production, respectively, in 2019. Above those limits, purchase is made by tender. No intervention buying-in took place in 2019.

The beef market is supported by floor prices, tariffs and TRQs. Support for pig meat is provided by import protection. For sheep meat, the market support regime is comprised of tariffs and TRQs, with most country-specific TRQs subject to a zero customs duty. TRQs also support the poultry and eggs markets. Private storage may be activated as an optional scheme for butter, SMP, certain cheeses, beef, pig meat, sheep meat and goat meat. Furthermore, specific provisions are made for milk and milk products.

The wine sector is supported through a system of authorisations for new vine planting. Since January 2016, new vine planting is authorised, but is limited to 1% of the planted vine areas per year. Authorisations would be automatically granted to producers to replace grubbing of an existing vine area. Member States have up to 31 December 2020 to transition to the new system. The sector is also supported through promotional measures, both in the European Union and in third countries, restructuring and conversion of vineyards, compensation for green harvesting, setting up mutual funds, investment in tangible and intangible capital, income insurance, development of new products, processes and technologies, and distillation of by-products.

Rural Development is part of the EU-level Common Strategic Framework covering all support from European Structural and Investment (ESI) funds (the EAFRD, ERDF, Cohesion Fund, ESF and EMFF) in Member States through partnership agreements. The EAFRD uses Pillar 2 of the CAP 2014-20 to serve six priority areas: 1) fostering knowledge transfer and innovation; 2) enhancing competitiveness of all types of agriculture and the sustainable management of forests; 3) promoting food chain organisation, including processing and marketing, and risk management; 4) restoring, preserving and enhancing ecosystems; 5) promoting resource efficiency and the transition to a low-carbon economy; and 6) promoting social inclusion, poverty reduction and economic development in rural areas (Table 11.5). Pillar 2 funds are implemented through national (or regional) Rural Development Programmes (**RDP**). RDPs also support projects that use the “**LEADER** approach” (*Liaison Entre Actions de Développement de l’Économie Rurale*) – i.e. relying on a multi-sectoral approach and local partnerships to address specific local problems; and technical assistance for the implementation of Pillar 2 measures.

The implementation of RDP 2014-20 had a delayed start and by 2018, most payments for programmes within the RDP 2007-13 had been terminated. At the same time, payments for farm restructuring under CAP 2007-13 were prolonged, including early retirement, conversion of arable land into grassland, and afforestation of agricultural land.

Member States participate in the funding of Pillar 2 payments (also called co-financing) in accordance with the RDPs that cover the entire duration of the CAP cycle. In their plans, Member States can choose from a menu of 19 measures to meet the six priority areas of Pillar 2. Two conditions apply: a minimum 30% of rural development funding from the EU budget must be spent on measures related to the environment and climate change adaptation, including forestry and investments in physical assets; and another 5% must be spent on the LEADER approach.

On average and at EU28 level, the greatest share of the new RDP budget is allocated to three measures: Investments, Agri-environment and Climate, and Areas with Natural Constraints. While Member States’ choices vary, investment is one of the top three measures receiving the highest shares of expenditure for the period 2014-19 in all but four Member States.[21]

The launch of the European Innovation Partnership for Agricultural productivity and Sustainability (EIP-AGRI) in 2012 was followed by integrating the Horizon 2020 programmes specific to research and

innovation in agriculture into the CAP 2014-20. The focus of the Horizon 2020 programmes relevant to agriculture is on securing sufficient supplies of safe and high quality food and other bio-based products. The Horizon 2020 budget under the agriculture and rural development title has increased substantially since it was initiated in 2013 from EUR 1 million (USD 1.1 million) to EUR 257 million (USD 288 million) in 2019. A total of EUR 3.8 billion (USD 4.3 billion) is available for the period.

Programming for CAP 2014-20 was originally set to conclude this year. However, the next iteration of the CAP is still under negotiation (see "Domestic policy developments in 2019-20").

Table 11.5. CAP expenditure by source and use (estimated 2019)

CAP expenditure (EU funding), of which:	Share in EU funding:
Administrative expenditure	0.2%
Interventions in agricultural markets CMO	4.4%
Direct Payments	70.9%
Rural Development – EU funding	22.9%
Research and innovation – Horizon 2020	0.5%
Rural Development (total public expenditure) of which:	Share in total public expenditure:
Rural Development EU funding	*66%*
Rural Development national funding	*34%*
Priority 1: knowledge	*Allocated through other priorities*
Priority 2: competitiveness	*19.4%*
Priority 3: food chain organisations	*10.3%*
Priority 4: ecosystems	*51.6%*
Priority 5: resource efficiency	*5.1%*
Priority 6: social inclusion	*13.6%*

Source: OECD calculations based on European Commission, EUR-Lex budget 2020 (for EU funding) and EAFRD financial execution (for Rural Development and allocation to priorities). Total public expenditure comprises EU funding and Member States national funding of Rural Development.

Domestic policy developments in 2019-20

Overall spending

At EUR 57 billion (USD 64 billion) in 2019, the EU budget for agriculture and rural development under Title 05 Agriculture and Rural Development was mostly unchanged from 2018 levels. The proportion of spending directed towards major budget priorities also varied little from 2018 – about 4% of spending went to market intervention measures, 71% to direct payments under Pillar 1 and 23% to rural development measures under Pillar 2.

CAP transitional regulations

Much of the policy discussion at the EU-wide level in 2019 was dedicated to shaping the next version of the CAP. Negotiations continued throughout 2019, but new legislation was not in place by the January 2020 deadline required to shift to the next CAP in 2021. Instead, a transitional period is to bridge the gap between the old and the new CAP, which will not come into force before January 2022. The first tranche of regulations required for this transition package – an extension of the financial discipline provisions along with an extension of the possibility to shift funding between the two pillars – was approved by Parliament on 18 December 2019 (European Parliament, 2019[13]). The second part of the package, which is to provide details on how funds will be spent in 2021, has not yet been finalised by the Council.

Markets and sector support

In June 2019, the last of the intervention stocks of **skimmed milk powder** (SMP) were sold into the market. Public intervention stocks were built between 2015 and 2017 (reaching about 380 000 tonnes) following a substantial fall in prices for SMP.

Provisions for private **storage aid for olive oil** were approved on 11 November 2019 under the CAP's CMO Regulation. A large olive harvest in 2018/19 in several Member States contributed to excess supply, high stock levels, and low prices, particularly in *Spain*, *Portugal* and *Greece*. To be eligible for the aid, bulk quantities of at least 50 tonnes of olive oil must be stored for a minimum of 180 days in any olive-oil producing Member State. The first tender was opened on 21 November 2019.

Other sector-specific initiatives focused on improving supply chain efficiency. In *Italy*, following a decline in prices in the **sheep milk sector**, the government established a fund of EUR 10 million (USD 12 million) in order to encourage quality and competitiveness through supply chain contracts, and to facilitate improved management of supply measures.

In July 2019, the Commission announced that it would provide EUR 50 million (USD 56 million) in aid to *Irish* **beef producers** through the Beef Exceptional Aid Measure (BEAM) programme (regulation EU 2019/1132). This aid was matched by national funds, for a total of EUR 100 million (USD 112 million) in assistance. Under the programme, producers could apply for aid of up to EUR 100 (USD 112) per finished[22] animal up to a maximum of 100 such animals per herd, or for aid up EUR 40 (USD 45) per suckler cow, up to a maximum of 40 such animals per herd. In order to be eligible for the aid, producers were required to commit to reducing their production of nitrogen from bovine livestock manure on the holding by 5%.[23] *Ireland* implemented an additional beef sector-specific programme in 2019 that aimed to improve both the economic and the environmental efficiency of beef production on suckler farms, called the Beef Environmental Efficiency Pilot (BEEP) programme. EUR 20 million (USD 23 million) was made available for the scheme in 2019, which included measuring the weaning efficiency of suckler cows and calves, the provision of detailed feedback on the performance of individual animals to participating farmers, and integration of this data into Ireland's cattle breeding database.

In June 2019, exceptional support of EUR 350 000 (USD 391 784) was approved for **French breeders of laying hens** affected by contamination from the insecticide Fipronil in 2017.

In July 2019, exceptional support was granted for **Italian egg and poultry** producers in response to the outbreak of avian influenza there in 2017 and 2018. EUR 32 million (USD 36 million) in aid will be provided from EU funds, which will be matched by Italian national funds for a total of EUR 64 million (USD 72 million).

A variety of initiatives were introduced at the national level to further support for **organic production** in 2019. In the *Czech Republic*, a new national payment scheme was introduced to support the conversion of orchards to organic farming. In July in *France*, new rules for organic greenhouse production were agreed upon by relevant partners, including no marketing by French producers of summer vegetables between 21 December and 20 April, and that new greenhouses producing summer vegetables will be required to use only renewable energy sources beginning in January 2020, while existing greenhouses will be required to utilise renewable energy from January 2025. In *Luxembourg*, the government is drawing up a national organic action plan, which aims to achieve conversion of 20% of the country's utilised agricultural area to organic production by 2025. The plan will also include an adjustment of the support provided to organic production and conversion of farmland to organic beginning with the 2020/21 crop year.

Several initiatives were undertaken in 2019 with the objective of improving **market information and transparency** in agri-food markets and supply chains. In June 2019, the Council endorsed regulation EU 2019/1381, updating the EU General Food Law EU 178/2002 and amending portions of eight other sector-specific regulations (EC, 2019[14]). The update mandates that the European Food Safety Authority (EFSA) publish industry studies related to product risk assessments, and to provide more transparent, public

explanations for how risk management decisions are reached. The regulation was published in September 2019, and will apply from March 2021. Then in October 2019, the regulation on the reporting of agricultural prices (EU 2017/1185) was amended (EU 2019/1746) (EC, 2019[15]). While current EU law requires the reporting of prices for primary production and a few processed products, this amendment extends reporting requirements to other levels of the supply chain, including further to processors, as well as for wholesalers, traders and retailers. The new rules take effect on 1 January 2021, and will apply to the cereals, dairy, fruit and vegetable, meat, oilseeds, olive oil and wine markets. Aside from these new regulations, the European Commission inaugurated two new market observatories in 2019 – one for fruit and vegetables in October, and one for wine in November – with the goal of improving transparency and short-term market analysis of these sectors. The observatories will provide market data, analysis, short-term outlook reports and medium-term prospects. In conjunction with the observatories, periodic meetings of market experts will be convened to discuss and analyse current market conditions. While the fruit and vegetable observatory will focus on pip fruit, citrus fruit, stone fruit, and tomatoes, the wine observatory will cover all types of wine, including protected geographical indications.

A variety of **food labelling laws** were either drafted or came into effect in 2019. In *Bulgaria*, the Ministry of Agriculture introduced a new voluntary logo for agricultural products produced in mountainous regions. In July 2019 in *France*, the government submitted a draft decree to the European Commission on new requirements for the labelling of country of origin for honey. While the Commission determined that the decree in its current form was in violation of EU rules, the government of France is working to revise the draft to be in compliance with EU law. In September 2019, *Germany* decided to introduce, on a voluntary basis, the Nutri-Score food labelling system, which has already been used in France, Spain, Belgium and Portugal. The label provides an aggregate signal to consumers, based on the content of sugar, fat and salt, but also that of vegetables, fibres and proteins.

Support for **quality products** continues to be a priority for Member States and the European Union as a whole. In November 2019, the European Commission announced the programme of work and funding levels for initiatives dedicated to marketing and consumer awareness for quality EU agri-food products like geographical indications or organic products, allocating EUR 200.9 million (USD 225 million) for 2020, with the potential for additional co-financing from Member States. The programme of work for 2020 dedicates the bulk of this funding to expanding markets in non-EU countries with the greatest potential for growth in demand, including Canada, the People's Republic of China (hereafter "China"), Japan and the United States. The European Commission also launched the new eAmbrosia platform for geographical indications in April 2019. This single online database consolidated the three separate existing online registries of geographical indications for agri-food products, wine, and spirit drinks into a single online database. The consolidation was completed on 10 January 2020. At the country level, controls for existing quality product schemes were strengthened in *Italy* in 2019, through the addition of new staff at the Ministry of Agriculture, Food and Forestry's Control Body.

Agri-environment and climate

Various agri-environmental activities were undertaken in the European Union in 2019, intended to improve the condition of air, soil, water and biodiversity; to apply stronger regulations to agrichemical products; to draft or implement new national strategies on the bioeconomy or circular economy, including initiatives to reduce food waste; or to reduce emissions in order to contribute to climate change mitigation.

In December 2019, the European Commission presented their first proposal on the **European Green Deal** to Parliament, Council and various related committees (EC, 2019[16]). The proposal lays down a strategy to help the European Union become the world's first climate neutral territory by 2050, improve the efficient use of resources by moving to a more circular economy, restore biodiversity and cut pollution through targeted actions in a number of areas (Box 11.1). Most directly related to agriculture are the "Farm to Fork" and Biodiversity strategies, which are set to be presented to the Commission in the spring of 2020.

Box 11.1. Agriculture in the European Green Deal

Seeking to ensure that the future growth of the region also considers environmental quality and sustainability, the European Green Deal lays out a multi-dimensional action plan for the future. The plan calls for three broad areas of action: transforming the EU's economy for a sustainable future, positioning the European Union as a global leader on climate change and environmental action, and the launching of a European Climate Pact to engage the public on climate action.

In order to transform the region's economy, the plan both acknowledges the importance of both designing a set of deeply transformative policies and mainstreaming sustainability in all EU policies. The policies to be designed cover a number of policy areas, including on climate, clean energy, circular economy, building standards, transportation and mobility, a "Farm to Fork" strategy for a healthy and environmentally-friendly food system, ecosystems and biodiversity, and a toxic-free environment. At the same time, sustainability will be mainstreamed into EU policy through the pursuit of green finance and investment, the greening of national budgets, the mobilisation of research and innovation, and the activation of education and training.

The agricultural sector will potentially be affected by a number of these policy areas, but actions under the "Farm to Fork" strategy are likely to be most relevant. As currently proposed, the strategy includes targets such as:

- Stipulating that at least 40% of CAP spending contribute to climate action
- Shifting the focus of payments from compliance to performance, rewarding producers for improved environmental and climate outcomes
- Seeking to significantly reduce the use of chemical products in agriculture
- Ensuring that actions are taken to improve the circular economy in the food value chain
- Stimulating sustainable food consumption and promoting healthy food.

In addition, the sector's future productivity growth and sustainability goals are likely to benefit from the enhanced focus on research, innovation education and training.

Proposals in these areas are scheduled to be rolled out in the coming months, and are likely to have an influence on the final design of the future CAP.

Source: (EC, 2019[16]).

Regarding **air quality**, in *Estonia*, the Estonian National Air Pollution Control Programme for 2020-30 was introduced in March 2019. For agriculture, the programme targets cutting ammonia emissions, largely through improved manure handling, covering of manure storage facilities, and injecting liquid manure into the soil. These activities are also supported through Estonia's 2014-20 Rural Development Plan, which contains provisions to support investments that improve manure storage and handling. In *Ireland*, a Code of Good Agricultural Practice for Reducing Ammonia Emissions from Agriculture was released, with the intention of helping farmers to identify appropriate measures for their individual farm enterprises that will reduce ammonia emissions. *Luxembourg* set a goal of reducing ammonia emissions by 22% by 2030. The government's plan is focused on reducing particulate ammonia emissions related to the spreading of liquid manure beginning from crop year 2019/2020. To accomplish this objective, they are offering higher aid levels for producers that use slurry injectors, and they are banning tablecloth and nozzle diffuser injectors from 2025.

The *Czech Republic* implemented new environmental regulations aimed at improving **soil conditions** on 1 January 2020, restricting the area permitted to be grown in continuous monoculture to a maximum of 30 hectares as set in the new country-specific Good Agricultural and Environmental Condition of Soil

standard. Compliance with this standard is required for the sowing of 2019 winter wheat. At present, these restrictions are applied only on fragile lands.

With respect to **water availability and quality**, on 18 December 2019, a provisional agreement was reached between the European Commission, the Council, and the Parliament on a new regulation outlining minimum requirements for water reuse. The goal of the new rules is to facilitate the use of treated wastewater for agricultural irrigation as one means of alleviating the risk of water shortages as climate conditions change. The rules introduce minimum water quality requirements for treated water, monitoring and control systems, and mandatory risk management plans for wastewater treatment plants. Formal adoption of these rules is expected in 2020. Different Member States also enacted various provisions related to water supply and quality in 2019. *Denmark* instituted a targeted regulation on nitrogen leaching in 2019, applying differentiated rules based on an area's water pollution risk, allowing for better cost-effectiveness by focusing efforts on the most vulnerable areas, in line with the EU Water Framework Directive and the EU Nitrates Directive. In November 2019, the Danish government increased the requirements under this targeted regulation for 2020, after finding that the load of nitrates measured in the sea did not decline as anticipated. Elsewhere, the *Estonian* parliament adopted a new Water Act on 30 January 2019, which entered into force on 1 October 2019. This act clarifies and simplifies several requirements for the agricultural sector, including specifying maximum nitrogen usage levels for certain crops.[24] In *Greece*, a joint ministerial declaration on the protection of water against pollution by nitrates from agricultural sources was signed in 2019, setting an action plan for nitrate use in vulnerable zones. Under the declaration, specific measures to address nitrate pollution are defined for each agricultural zone according to its particular soil and climate conditions, and a programme of controls and sanctions will be implemented to ensure compliance. The Parliament of *Hungary* adopted a new law on irrigation for agriculture in December 2019. Among other provisions, the new law codifies the legal conditions around irrigation authorisations and encourages the establishment of co-operative irrigation arrangements between farmers. *Ireland's* Department of Agriculture, Food and the Marine carried out a voluntary review of Ireland's Nitrates Derogation in 2019, and decided to make a number of changes, which included the adoption of a farm scale liming programme, mandatory use of low emission slurry spreading equipment and recording of grass production on farms. In *Luxembourg*, new regulations were introduced regarding the usage of certain inputs at a distance of less than 10 meters from the banks of natural watercourses.

Germany dedicated new resources to **biodiversity** with the approval of a new framework for the protection of insects in the agricultural landscape in December 2019. The country made available EUR 50 million (USD 56 million) in new funding (plus an additional EUR 33 million (USD 37 million) of co-funding from the Länders) for measures under the framework, including to promote the establishment of flowering areas, hedges, shrubs and orchards, and the extensive use of permanent grassland and organic farming. In addition, non-productive investments in nature conservation and measures taken by farmers within the framework of contractual nature conservation may also be eligible for support.

Several activities and policy changes were implemented in 2019 within the context of the EU Action Plan for the **Circular Economy** (see Box 11.2). At the Member State level, four countries reported the drafting or entry into force of national bioeconomy, circular economy or sustainability strategies for the coming years. In March 2019 in *Austria*, a federal level strategy on the bioeconomy was adopted, with the long-term goals of reducing fossil fuel and total energy consumption, and substituting renewable raw materials for non-renewables. In *Belgium*, the Flanders region updated their draft bio-economy plan in 2019 (within the context of their Vision 2050 plan) to further concretise the bioeconomy vision and align it with the update of the European bioeconomy strategy, including the development of additional biomass through improved landscape management, as well as increased focus on research and innovation to improve the bioeconomy within certain value chains. The *German* Federal Cabinet approved the National Strategy for the Bioeconomy in January 2020, with the objective of creating a sustainable, cycle-oriented and innovative German economy. Activities under the strategy include funding research on expanding biological knowledge and the use of biological processes and systems, supporting digitalisation and cutting-edge

technologies across various disciplines, making more biogenic raw materials available to industry, and creating new potential for a sustainable economy. In *Portugal*, the country's Action Plan for the Circular Economy went into effect in 2019, including activities focused on consolidating governance and objectives from the country's Commitment to Green Growth strategy, as well as policies for air quality and climate change.

Many EU Member States also took actions in the agricultural sector to contribute to **national climate targets** in 2019, including the finalisation of national action plans in the *Belgian* region of Flanders, the *Belgian* region of Wallonia, *Germany*, *Greece*, *Ireland*, *Luxembourg* and *Portugal* (Table 11.6). Of particular note, *Ireland's* Climate Action Plan sets out a decarbonisation pathway to 2030, which is consistent with the adoption of a net zero emission target by 2050. The plan targets cumulative CH_4 and N_2O emission reductions of 16.5 $MtCO_2eq$ to 18.5 $MtCO_2eq$ from the agricultural sector between 2021 and 2030. These reductions account for 17% of total emission reductions set by this plan over this period. In annual terms, they represent between 8-9% of the projected 21 Mt of absolute emissions from agriculture in 2030. The Climate Action Plan also targets emissions abatement of 26.8 $MtCO_2eq$ through LULUCF actions primarily related to forestry over the period 2021 to 2030. Agricultural landholders are expected to play an important role in delivering these LULUCF emission reductions, primarily through afforestation and by reducing the management intensity of peatland.

Other countries implemented specific activities designed to reduce emissions. The government of *Denmark* in 2019 allocated funds for a pilot project that focuses on the provision of multiple ecosystem services of arable land, which will combine agricultural production with greenhouse gas reduction, climate adaptation, nitrogen reduction and biodiversity. The project is intended to provide experience and evidence that can be used to achieve national climate goals, including on how peatland set aside can be used for GHG reduction on a larger scale. In *Finland*, the government has announced plans to become carbon neutral by 2035, including by sourcing 30% of aviation fuel from biofuels and by strengthening the carbon sequestration properties of agricultural land. In *France*, the Ministry of Agriculture and Food earmarked up to EUR 500 000 (USD 559 692) to fund new anaerobic digestion projects on farms in April, with a view to reducing methane emissions. This move was followed in September by approval of two new digestates derived from methanisation to be used as fertilisers. *Ireland* established EUR 10 million (USD 11 million) in renewable energy grants for farmers under their Targeted Agricultural Modernisation Scheme, aiming to improve farm-level energy efficiency and reduce electricity use on farms by supporting investments in solar PV installation on farms, as well as the installation of LED lighting. *Italy* is providing investment incentives for farmers of up to EUR 25 million (USD 28 million) for biogas plants up to 300 KW that are powered at least 80% by waste produced by farms and no more than 20% by second harvest crops. The government of *Spain* implemented their Plan Renove in 2019, dedicating EUR 5 million (USD 6 million) to assist farmers in purchasing new machinery with lower emissions in order to contribute to reaching national climate targets. At present, more than half of agricultural machinery in Spain is more than 18 years old, and requests for aid under the programme exceeded available funds in 2019.

Box 11.2. Food Waste and the EU's Circular Economy Action Plan

European Union activities on the Circular Economy are outlined in the Commission's 2015 action plan for the Circular Economy. The action plan aims to ensure that the value of products is maintained where possible throughout the supply chain, and to minimise the generation of waste with a view toward developing a more sustainable, resource efficient, and competitive economy.

The plan also contains an Annex, prescribing a timetable for implementing the list of relevant actions. These actions are spread across different themes, including production, consumption, waste management and innovation. Most relevant for the agricultural sector are activities targeting the reduction of food waste, both at the EU-wide level and within individual Member States. In September,

the Commission published a common EU methodology to measure food waste. Using this methodology, Member States will begin to collect data on food waste beginning in 2020, and start to report on national food waste levels beginning in 2022, with the goal of halving food waste levels by 2030 (the target noted in SDG 12.3). In conjunction with these new measurement standards, in December 2019 the EU Platform on Food Losses and Food Waste published new "Recommendations for Action in Food Waste Prevention", including the development of national food loss and waste strategies, integrating food loss and waste reduction into food policy or climate action strategies, raising awareness on food waste prevention for consumers, and strengthening the capacity for innovation related to food loss and waste.

At the Member State level, programmes within broader national food waste reduction strategies and frameworks were either instituted or advanced in the *Belgian* region of Flanders, the *Belgian* region of Wallonia, *Germany*, *Luxembourg*, and *Spain.* In addition, in order to move toward compliance with the 2018 revised EU waste legislation and earlier guidelines on food donations, various Member States implemented new rules or regulations intended to facilitate food donations, including *France*, *Latvia*, and *Slovakia*.

Sources: (EC, 2015[17]); (EC, 2018[18]); (EC, 2019[19]); (EU Platform on Food Losses and Food Waste, 2019[20]); (EC, 2018[18]); (EC, 2017[21]).

Table 11.6. Member State climate plans and strategies

	Strategy	Targets	Main Activities or objectives
Flanders (Belgium)	VEKP Climate Plan	35% reduction in emissions by 2030 compared with 2005 levels	• Increased support for energy efficiency and renewables • Promotion of precision fertilisation and guidelines for farmers • Implementation of an agreement on enteric emissions for cattle • Adaptation of fertilization practices • Adaptation of animal feed
Wallonia (Belgium)	Air-Climate-Energy Plan (PACE)	40% reduction in emissions by 2030 compared with 1990 levels	• Sustainable management of inputs (including • Promotion and use of more climate neutral fuels • Improved territorial management • More efficient energy consumption by agricultural holdings
Germany	Climate Protection Programme	Climate mitigation goal: Reduction in emissions to 55% of 1990 levels by 2030; greenhouse gas emissions neutrality by 2050; reduce agricultural sector emissions by 14% by 2030 compared to 2020 levels	• Reduce the nitrogen surplus • Derive energy production from organic residuals in biogas production • Extend organic agriculture • Reduce emissions in livestock production • Increase the energy efficiency of agro-technology • Maintain or build up humus/soil organic matter levels in arable land • Reduce food waste • Conservation and sustainable management of forests and timber use • Protect permanent grassland • Protect peatlands/organic soils and reduce the use of peat in growing media
Greece	National Plan for Energy and Climate	16% reduction in emissions by 2030 compared with 2005 levels	• Agricultural and livestock waste management • Development of advanced biofuels • Promotion and use of renewable energy sources • Actions targeting energy efficiency improvement, including restrictions on importing used cotton harvesting machines manufactured before 2002
Ireland	Agriculture, Forest and Seafood Climate Change Sectoral Adaptation Plan	Build resilience to the effects of climate change in these sectors	• Ensure a joined up approach to adaptation planning • Raise awareness of the impacts of climate change in these sectors • Reduce the vulnerability of these sectors • Embed adaptation planning into agriculture, forest and seafood sectoral policies

Ireland	Climate Action Plan	8-15% reduction in emissions by 2030 compared with 2017	• Establish a Climate Action Delivery Board to ensure compliance • Set specific decarbonisation targets for different sectors, including power generation, waste, transport and agriculture • Achieve annual reduction of 8-9% of projected agricultural GHG emissions in 2030
Luxembourg	National Energy and Climate Plan	40% reduction in emissions by 2030 compared with 2050 levels	• Measures to reduce GHGs, including methane from the agricultural sector
Portugal	Climate Change Adaptation Programme of Action	Improve agricultural water use efficiency by 80% by 2030, e.g.	• Sets out nine action lines to reduce the main climate change impacts and vulnerabilities • Prioritises adaptation measures • Suggests indicators • Advises on potential sources of funding

Source: Individual Member State submissions.

Animal health and welfare

Measures at both the Europe-wide and individual country level sought to enhance **animal health and welfare** in 2019. First, following the publication of a report on the status of animal welfare in the European Union by the European Court of Auditors in November 2018, the European Commission in May 2019 announced that they would conduct an evaluation of their current animal welfare strategy. At the country level, in the *Czech Republic*, a new programme was introduced that provides aid to farmers to improve the welfare of suckler cows. The government of *Estonia* put into place their action plan to reduce microbial antibiotic resistance in veterinary medicine for 2019-23, which includes treatment guidelines for veterinarians and the creation of training, monitoring, surveillance and research plans. In September in *Germany*, the Federal Cabinet approved the introduction of an animal welfare label.

Apiculture

In June 2019, the European Commission announced that they would raise the amount of funding available for national **apiculture** programmes to EUR 120 million (USD 134 million) over the 2020-22 programming period, up from EUR 108 million (USD 121 million) over 2017-19 (EC, 2019[22]). This amount will be matched by Member State funds, and can be used to support education, research, honey quality improvement, business support, or fighting hive-damaging parasites. Accordingly, several Member States initiated new apiculture programmes in 2019. *Bulgaria* reported that the European Commission approved their national apiculture programme for 2020-22 in June 2019. Their programme includes support for mobile beekeeping expenditures, training, funding for trade fairs, inspections for pesticide residues, and research on combatting certain diseases affecting bees. Similarly, *Estonia's* national apiculture programme for 2020-22 was approved in July 2019. Estonia's programme focuses on preserving biodiversity and crop yields, and includes measures to register beehives in the national register of farm animals, as well as a new apiculture market monitoring initiative.

Digitalisation

EU Member States reported using digital technologies to help achieve policy objectives in a number of areas in 2019 (Box 11.3). With respect to digital-focused policy changes, however, the only policy development of 2019 was the approval of a new strategy for the digitalisation of the agro-food, forestry and rural sectors in *Spain*. The strategy's objective is to reduce the urban-rural digital gap through two primary mechanisms: training and technical assistance, and improving the interoperability of data from the administration, research and private sectors.

Box 11.3. Applications of digital technologies for agriculture in the European Union

Digital technologies hold many potential applications for agricultural policy, including by enabling new data-driven monitoring and compliance systems, allowing the design of highly differentiated and targeted policies, improving the measurement of risk and management of uncertainty, and enabling a better understanding of the environmental impacts of agriculture in order to formulate policy objectives which more holistically capture these impacts. EU Member States indicated their dedication to using digital technologies in agriculture with the signing of a declaration of co-operation on "A smart and sustainable digital future for European agriculture and rural areas" on the EU's 2019 "Digital Day" on 9 April 2019. The declaration recognised the potential of digital technologies for confronting many of the challenges faced by the EU's agro-food sector, pledged to strengthen support for research on applications of digital technologies in agriculture, set the goals of creating a Europe-wide infrastructure for innovation on smart food applications and a European dataspace for smart agro-food applications, and resolved to maximise the impact of European support in achieving policy objectives by better utilising digital technologies.

A number of specific initiatives undertaken in 2019 provide some examples of how digital technologies are increasingly being utilised in EU Member States.

- The Belgian region of Wallonia tested a pilot procedure to evaluate compliance for basic payments, crop diversification and the maintenance of fallow land using data obtained from the Sentinel Copernicus Satellites, as a replacement to in-person checks. The pilot project covered 15% of Wallonian territory, and 2 666 producers.
- The Belgian region of Flanders used a digital monitoring control system in 2019 for the whole region to assess basic payment eligibility, exemptions for greening and support for young farmers.
- The Ministry of Agriculture in Bulgaria began an upgrade of its electronic animal registration, identification and traceability system (VetIs), after onsite verifications early in 2019 indicated that there were major discrepancies between existing records and the situation on farms.
- As part of their country's action plan to reduce antimicrobial resistance in veterinary medicine, the government of Estonia will create an e-database for reporting antibiotic use by animal species by 2023.
- In September 2019, lawmakers in the Sicilian Regional Assembly in Italy voted to approve a blockchain platform to improve the traceability of food and agricultural products.

Sources: (OECD, 2019[23]) (EC, 2019[24]).

Natural hazard response

EU rules for responding to adverse events under state aid provisions were revised in 2019, with the Commission raising the maximum amount of support that individual farmers can receive to EUR 20 000 (USD 22 388) per farm over three years, without the need for prior approval by the European Commission. Keeping these new limits in mind, national aid was approved in 2019 for producers facing a variety of circumstances. **Adverse weather and natural hazards** resulted in ad hoc payments or other forms of relief to producers in several member states. Primarily in response to hot and dry conditions, in August, Member States and the Commission agreed to a series of support measures, including advancing CAP payments and providing derogations on certain greening obligations in order to allow farmers to produce sufficient fodder for animals. In *Austria*, the federal and regional governments provided EUR 22 million (USD 25 million) in support in the form of direct aid and interest subsidies in 2019 for drought-related

income losses in 2018. For farmers in *Bulgaria*, EUR 2 million (USD 2 million) in compensation was made available from the Bulgarian state agricultural fund after a March frost heavily damaged apricot and strawberry production. Farmers in the *Czech Republic* received around EUR 80 million (USD 90 million) in compensation in 2019 for damaged incurred during the drought of 2018. Furthermore, additional compensation of EUR 2.0 million (USD 2.2 million) was approved for the compensation of fruit farmers whose production was damaged by 2019 spring frosts. Compensation for impacts of the 2018 drought was also made available in Finland, where EUR 20 million (USD 22 million) in national support was paid out for the event during the spring of 2019. In *France* in August 2019, producers in 69 departments received approval for derogations to use fallow land to feed livestock. A programme in *Hungary* provided compensation for producers whose means of production were damaged by tornadoes and severe thunderstorms in the summer of 2019. In *Italy*, EUR 20 million (USD 22 million) in 2019 was allocated to help producers recover from various natural hazards. In response to drought conditions in 2018, farmers in *Latvia* received EUR 4.4 million (USD 5 million) in 2019. In *Romania*, support specific to beekeepers affected by extreme weather events during March-May 2019 was announced, with up to EUR 20 000 (USD 22 388) available per beneficiary. Two temporary support programmes were implemented for the beekeeping and hops sectors in 2019 in *Slovenia*, where EUR 0.5 million (USD 0.6 million) was provided to beekeepers to compensate for losses due to adverse weather conditions. *Sweden* provided SEK 1.08 billion (EUR 102 million, USD 114 million) in crisis support to primary producers in 2019 for damages incurred during the 2018 drought. An additional SEK 30 million (EUR 2.8 million, USD 3.2 million) was made available for development projects specifically in the horticultural sector as a means of alleviate the effects of the 2018 drought.

Support to specific groups of farmers

Several EU initiatives were undertaken in 2019 with the goal of assisting **young farmers**. In April 2019, the European Investment Bank (EIB) launched a loan package of EUR 1 billion (USD 1.1 billion) earmarked for agriculture and the bioeconomy, targeting largely small and medium agricultural enterprises, as well as young farmers. These loans will be channelled through partner financial institutions, who will match the EU financing. The EIB package is comprised of three separate programmes: a EUR 700 million (USD 783.6 million) programme targeting agricultural small and medium enterprises for which 10% of loans are earmarked for farmers under the age of 41, a pilot loan of EUR 75 million (USD 84 million) designated solely for young farmers and a EUR 200 million (USD 224 million) pilot loan programme for agriculture and climate action. By December 2019, 95% of the financing had already been approved for lending. At the Member State level, in *Romania*, the government announced that it would offer financial support for operations employing young people in agriculture, and also released guidelines on promoting the employment of young persons in the agriculture, aquaculture and food sectors. Support to young farmers in *Spain* nearly tripled from EUR 18.9 million (USD 22.3 million) in 2018 to EUR 53.6 million (USD 60 million) in 2019 thanks to the application of the Omnibus Regulation, and the country also established a new programme to help provide capacity building through internships of young farmers to more experienced farms.

Other country level programmes targeted different, specific groups of farmers. In *Portugal*, new support measures were launched for **small scale, family farmers,**[25] including providing a lump sum assistance for weekly market trips and providing investment assistance for the modernisation of equipment. In *Spain*, the Ministry of Agriculture sought to strengthen the role of **women in agriculture** through the implementation of a new law on shared ownership of farms, the provision of EUR 785 000 (USD 878 717) support to women farmers' organisations, and through the organisation of a competition for innovation excellence for women. The eleven winners of the competition were each awarded a prize of EUR 150 000 (USD 167 908).

Fuel tax relief

The government of the *Czech Republic* continued to increase expenditures on fuel tax relief. In 2018, fuel tax relief was extended to fuel used in livestock production, and in 2019 this support was extended to fuel used in fruit, vegetable and wine production.[26] In October 2019, *Romania* extended its list of institutions eligible to receive compensation on fuel excise duties to include research and development institutes in the agricultural sector. The *Slovak Republic* reinstituted their fuel tax reimbursement scheme for farmers – the programme had previously been abolished in 2011. In *Sweden*, the CO_2 tax rate applied to diesel fuel used in agricultural machinery was reduced to SEK 1 930 (EUR 182, USD 204) per cubic meter beginning from July 2019, with a tax rate of SEK 2 430 (EUR 229, USD 257) per cubic meter set to apply from July 2019 to December 2019.

Regulations

Various regulations were implemented in 2019 with a view toward improving the competitiveness, traceability and transparency of EU agricultural supply chains. In April 2019, a new directive banning **unfair trading practices** in the agricultural industry (EU 2019/633) was released, with the new rules set to take effect from 2021. The rules are intended to protect smaller suppliers with limited market power against larger buyers with greater resources. Practices banned under the new rules include payment delays beyond 30 days for perishable goods and 60 days for other products, cancelling orders for perishable products on short notice such that suppliers cannot find an alternative outlet, requiring the supplier to pay for product deterioration or loss that occurs on the buyer's premises and the misuse of trade secrets by buyers.

New rules intended to thwart **food fraud** and strengthen food inspections came into force on 14 December 2019, consolidating a dozen existing laws. These rules, laid down in the Official Controls Regulation published in 2017 (EU 2017/625) , establish a system of risk-based controls along the supply chain, authorising national authorities to perform inspections at all segments of the supply chain for all animal, plant, feed and food products. Some of the features of the regulation include creating an integrated system of border controls, establishing EU reference laboratories, improving co-operation between Member States, requiring countries to carry out unannounced inspections in order to detect fraudulent or deceptive practices, and improving transparency by periodically publishing the results of said inspections.

New EU rules for **wine-making practices** were finalised in April 2019 as part of the implementing regulation for EU 1308/2013 (EC, 2019[25]). These new rules were meant to simplify rules on authorised wine-making practices in the bloc, bring them into line with oenological practices advocated by the International Organisation of Vine and Wine and ensure that EU regulations on wine are in compliance with obligations under the Lisbon Treaty.

In July 2019, new regulations on **fertiliser** entered into force, following their publication in the Official Journal in June (EU 2019/1009). This new regulation harmonises rules and standards on the sale of fertilisers made from phosphates, organic, and secondary raw materials inside the European Union. Among other provisions, the law limits allowable ranges of certain contaminants, such as cadmium, in mineral fertilisers. These new rules for fertiliser were drafted in the context of the European Union's strategy on the circular economy, with the intention that waste products can be transformed into nutrients that can be utilised for crop production.

A variety of rules and regulations on the use of **agrichemical products** also came into effect in 2019. First, a new Commission Directive (2019/782) was adopted in May 2019 establishing harmonised risk indicators for pesticides to facilitate the estimation of trends in risk from pesticide use. The risk indicators laid out in the Directive will facilitate Member State compliance with Directive 2009/128 on the sustainable use of pesticides, allowing Member States to calculate the indicators, identify trends in the use of certain active substances, identify areas where interventions may be needed, and make the results of the analyses

and evaluations publicly available. In December 2019, approvals for insecticide products chlorpyrifos and chlorpyrifos-methyl were not renewed, with the decision published in the Official Journal in January 2020 (EC, 2020[26]). Use of the products is set to be phased out by April 2020. Approvals were also not renewed for desmedipham (EC, 2019[27]) and dimethoate (EC, 2019[28]) (products used primarily for sugar beets), which are scheduled to be phased out by July 2020. At the country level, the government of *Estonia* approved their national action plan for the sustainable use of pesticides for 2019-23 in May 2019. Among other measures, the plan focuses on the implementation of integrated pest management practices, and aims to ensure that chemical plant protection products are used only in cases where alternative control methods are not available. *France* began deploying its Ecophyto II + plan, through which the country aims to halve agrochemical use by 2025. Measures in place under the plan include improved transparency via publishing monitoring indicators earlier each year and the imposition of safety distances ending the spraying of products close to schools and nursing homes. France also announced a decision to ban two products that function similarly to neonicotinoids – flupyradiforone and sulfoxaflor – by the end of 2019. In *Greece*, a ministerial declaration was signed in 2019 on a National Action Plan for the Sustainable Use of Pesticides, with the goal of improving the control and sanction system on the use of professional pesticide equipment. An emergency ordinance establishing an institutional framework for the sustainable use of pesticides was approved in September 2019 in *Romania*. The ordinance sought to bring Romania in line with EU Directive 2019/782 (outlined above), by establishing harmonised risk indicators for pesticides as a means of achieving long-term goals of reducing the risks and effects for pesticide use on human health and the environment.

Additional Member States have moved to phase out or restrict the use of **glyphosate**. In July, members of the *Austrian* parliament voted for a glyphosate ban. However, the law did not come into force due to a breach of the European Union's notification directive. The government of *France* has pledged to phase out glyphosate by the end of 2020 for uses for which non-chemical alternatives exist. In that vein, in December 2019, the French health and environment agency, ANSES, announced that it would withdraw market licenses for 36 glyphosate-based products (accounting for almost three-quarters of the glyphosate products sold in France), such that their use would not be permitted after the end of 2020. The government of *Germany* also enacted a plan to phase out glyphosate by December 2023, as part of an action programme on insecticides. Glyphosate will be banned in *Luxembourg* beginning in January 2021, with the government there introducing an additional per hectare payment starting in November 2019 to all holdings who stop using the product for the 2019/2020 crop year.

Risk management

Several Member States made changes to their risk management policies in 2019. In response to drought events in 2018, the government of *Austria* further developed its crop and livestock insurances, with an increase of insurance subsidies up to 55% of premiums. In *Estonia*, the government chose to implement for the first time rural development measure 17.1, which provides for financial contributions to premiums for insurance. The government provided EUR 1 million (USD 1.1 million) for the programme, which covers a variety of crops and commodities, but compensation was only paid out for cattle in 2019. In August, the government of *France* announced that it would pay higher indemnities for damage to animal herds due to large predators, with compensation to be provided for both direct losses (animals killed) and indirect losses (e.g. animal weight loss due to stress). In *Slovenia*, the insurance subsidy rate for field crops was raised to 50% in 2019, up from 40% in 2018, while the rate for livestock was raised to 30%, up from 20% in 2018. Subsidies for permanent crops like olives, grapes and hops was left unchanged at 50%.

Response to animal and plant disease threats

In response to animal and plant disease threats, Member States implemented both preventative and compensatory measures in 2019. At the beginning of 2019, the European Commission committed EUR 154 million (USD 172 million) for the surveillance, control and eradication of serious animal and plant

diseases, including African Swine Fever (ASF), bovine tuberculosis, salmonellosis, and *Xylella fastidiosa*. Preventative measures included activities intended to both monitor disease incidence, as well as to prevent disease spread. In January 2020, Member States supported a European Commission proposal that consolidated preventative actions in countries affected by an outbreak of H5N8 avian flu. Prior to that, in the spring of 2019, authorities in *Belgium* took actions to contain an outbreak of H3N1 avian flu in the Flemish poultry sector. Various measures were taken to prevent the spread of the virus and to mitigate economic consequences, including the culling of animals on affected farms.

Countries have continued to take measures to prevent, contain, or compensate producers for the consequences of **African Swine Fever** (ASF). In *Belgium*, the government provided investment support for hygiene infrastructure and the installation of double fences in lieu of providing exceptional support to the pig sector as a result of low prices experienced in Wallonia due to ASF. The government of *Bulgaria* took a range of actions in an attempt to contain ASF, including the culling of large numbers of animals. In July, authorities established 20 km buffer zones around all commercial pig farms, and called for the voluntary slaughter of animals located on small farms without adequate biosecurity within that buffer zone, offering compensation for culled animals. They also allocated additional funding to border checks, depopulation of wild boars, stricter epizootic controls, and disinfection. In January 2020, all animal movements between pig farms and slaughterhouses was halted so that official checks could be carried out and appropriate disease control measures put into place. In *Estonia*, eligibility for support for investments in processing and marketing of agricultural products was extended to persons with hunting rights as a means of ensuring the development of facilities to manage and process game, helping to control wild boar populations and limit the spread of ASF. In *Luxembourg*, preventative measures included the construction of a fence near the Belgian border, the establishment of a new surveillance zone, and the launching of an information campaign to remind hunters and farmers to respect biosecurity rules. With respect to compensatory measures, the *Czech Republic* announced a new scheme to aid in the cost of the control and eradication of ASF, as well as to provide assistance to pig farmers whose herds have been affected by the disease. In addition, the country announced in February 2019 that it had succeeded in eradicating ASF in its territory.

Measures to control and respond to plant disease were also taken in 2019. First, European-wide emergency measures to prevent the introduction of citrus black spot disease were extended in February, requiring special import rules for citrus fruit from countries reporting the disease, including Argentina, Brazil, Uruguay and South Africa. At the country level, in *Italy*, EUR 5 million (USD 6 million) in assistance was made available to the olive oil sector as a response to the *Xylella* crisis as mortgage assistance for affected farms. An additional EUR 300 million (USD 336 million) has also been designated to assist farms for recovery. These measures followed the January 2019 decree that required the felling of all infected trees. In *Slovenia*, EUR 1.7 million (USD 1.8 million) in assistance was allocated to growers of hops for the prevention and management of a viroid disease affecting production.

Tax

Various Member States made changes to their tax regimes in 2019 in ways that impacted the agricultural sector. In *Austria*, the country's tax reform is planned to lower the minimum social security contribution base for small farmers, abolish the sparkling wine tax, and introduce a tax measure for risk management in the form of a multiannual accounting period for the taxation of agricultural income. An income averaging scheme was put into place in *Ireland*, allowing producers there to pay tax based on the average of the previous five years of farming profits and losses. In *Italy*, the excise tax for beer was reduced from EUR 3.00/hl (USD 3.4/hl) to EUR 2.99/hl (USD 3.3/hl), and excise duties on beer produced in breweries with production of 10 000 hl or less were reduced by an additional 40%. Also in Italy, certain fiscal provisions were extended to additional family members who actively work on the farm.

Institutional changes and strategic plans

EU Member States made several **institutional changes** in 2019 to change programme delivery, bring together existing institutions or establish new ones. In the *Czech Republic*, from January 2020 an agreement between the Ministry of Agriculture and the State Agricultural Intervention Fund (SAIF) will result in SAIF processing payments for programmes financed from national funding sources in addition to its original mandate of administering funds from EU sources. In addition, the agreement designates SAIF the responsible organisation for statistical data collection for harvests, as well as having some responsibilities for emergency management in the aftermath of floods or droughts. *Estonia* announced that its Veterinary and Food Board would be combined with their Agricultural Board beginning on 1 January 2021. In *France*, on 1 January 2020, the new National Research Institute for Agriculture, Food and the Environment (INRAE) was created through a merger between the National Institute of Agricultural Research (INRA) and the National Research Institute of Science and Technology for Environment and Agriculture (IRSTEA). The mandate of the new INRAE is to support a transformation in French agriculture to become more sustainable, low-carbon, and resource efficient by producing research, innovation, education and support for more effective policies in this area. In *Hungary*, the Ministry of Agriculture established a new agency dedicated to irrigation in July 2019 – the General Department of Irrigation Development. Organised under the National Centre for Agriculture, this new department will be responsible for organising the demand of producers for water, and will operate as the agency in charge of irrigation administration. Finally, in September 2019, the government of *Romania* approved the establishment of a new Plant Genetic Resources Bank for vegetables, flowers, aromatic and medicinal plants. The Bank will be located in Buzau, and will be under the supervision of the Ministry of Agriculture.

A number of **strategic plans** covering a variety of topics were also developed in 2019. *Austria* developed new codes of behaviour for visitors to alpine pastures, as well as standards for livestock farmers. The government of *Estonia* approved their Programme for Plant Breeding 2020-30 on 10 December 2019. This programme describes the most pressing issues facing Estonian agricultural crop cultivation, and sets the objectives of the programme and the activities required to achieve them. A new National Programme on Food and Nutrition was launched in *France* in September, which includes goals such as the reduction of salt in foods, and the launch of a promotional campaign to encourage healthier behaviours. The government of *Spain* approved a National Strategy for the Demographic Challenge in March 2019, which focuses on reversing the depopulation of rural areas.

Trade policy developments in 2019-20

The European Union's simple average **MFN applied tariff** rate for agricultural products was 12% in 2018, up from 10.8% in 2017 (WTO, 2019[29]). This higher average MFN applied tariff rate was the result of a more detailed wine nomenclature due to the HS 2017 revisions, as no changes were made in EU MFN applied rates in 2018. This applied tariff rate for agricultural products remains nearly three times the average applied tariff rate for non-agricultural products, calculated at 4.2%. This higher average for agriculture is partially a result of applied duties above 15% for a number of product categories, including for animal products, dairy, sugars and confectionary, and beverages and tobacco. EU import duties for durum wheat, common wheat, rye, maize and grain sorghum are based on reference prices. Duties on these products have been set at 0% since 3 March 2018 (EC, 2018[30]).

During the marketing year 2018/19, the European Union also administered 60 **import tariff rate quotas** (TRQs). During that time period, 12 were filled at 80-100%, including those for certain cuts of beef, certain cuts of chicken and poultry, millet, and biscuits. However, half of TRQs had a fill rate of less than 10% (WTO, 2019[31]).[27]

The price-based **special safeguard system** was operationalised in marketing year 2018/19 for certain frozen chicken carcasses, boneless chicken cuts, frozen boneless turkey cuts, dried eggs not in shell, and some preparations of poultry meat. During the same period, the volume-based special safeguard action

was not invoked. However, the system was made operational at the level of calculation of figures for the trigger volumes for some fruit and vegetable products, including tomatoes, cucumbers, artichokes, oranges, clementines, lemons, table grapes, apples, peaches, plums and cherries (WTO, 2019[32]).

In January 2019, the European Union instated **new tariffs on Indica rice** imported from Cambodia and Myanmar. The measure followed a 2018 safeguard investigation that determined that duty-free rice imports from the two nations under the European Union's "Everything But Arms" tariff preference regime, caused economic damage to the rice sector in Europe. Tariffs were set at EUR 175 (USD 196) per tonne in the first year, dropping to EUR 150 (USD 168) in the second year and EUR 125 (USD 140) in the third year (EC, 2019[33]).

In March 2019, in accordance with Commission Regulation No. 1549/2004 regarding the arrangements for importing rice, EU imports of 264 000 tonnes of rice triggered the doubling of **import duties on husked rice** from EUR 30 to EUR 65 per tonne (USD 34 to USD 73 per tonne). The tariff levels had not been revised since March 2012. Imports of husked rice from September 2019 to February 2020 fell to a level requiring a further revision in import duties, and from 9 March 2020, duties were set at EUR 42.50 per tonne (USD 47.60 per tonne).[28]

In April 2020, in accordance with Commission Regulation No. 642/2010 on rules of application for cereal sector import duties, **import duties on maize, sorghum and rye** were raised from EUR 0 per tonne to EUR 5.27 per tonne (USD 5.9 per tonne).[29] Regulation EU 642/2010 stipulates that duties on these three cereals is based on the difference between a European reference price and the world benchmark price for maize. The benchmark price – the US maize price, c.i.f. Rotterdam – fell substantially in the preceding weeks, leading to the revised duty. Duties for these three products had been set to EUR 0 since 3 March 2018.

In June 2019, the European Union and the United States reached an agreement regarding the administration of the EU's **hormone-free beef quota**. In 2009, the two trading partners reached a memorandum of understanding under which the European Union opened a 45 000 tonne quota of non-hormone treated beef to qualifying suppliers, including the United States. However, no provisions for partner-specific quotas were included in the original agreement, leading the United States to contend that the agreement did not provide sufficient market access. In response, the European Union agreed to reserve 35 000 tonnes of the quota for the United States, phased in over a 7-year period. Other major supplier countries (including Australia, Argentina and Uruguay) have not challenged the new allocation. Members of the European Parliament agreed to the deal on 28 November 2019, with the new quotas set to take effect in 2020.

Free Trade Agreements

In October 2019, the European Union released its third annual report on the **implementation of EU Free Trade Agreements** (EC, 2019[34]). The report noted that, in 2018, EU agro-food trade with FTA partner countries represented more than 40% of total agro-food imports, and 30% of total EU agro-food exports. Moreover, data indicate that EU agro-food exports under FTAs grew 2.2% from 2017 to 2018, while imports fell less than 1%. The report also indicated that recently-concluded FTAs have increased the legal recognition of EU GIs in third countries, and negotiations have also provided a forum for discussing and addressing trade barriers due to sanitary and phytosanitary measures. The bloc currently has 33 agreements in force, and negotiations are underway with additional trading partners.

The **European Union–Japan Economic Partnership Agreement** entered into force on 1 February 2019. The agreement substantially reduces tariffs and trade barriers for both partners. The European Union is scheduled to eliminate duties on 99% of tariff lines from Japan. Tariffs on beef, tea, alcoholic beverages and other priority products are to be eliminated (most upon the agreement's entry into force). Once fully in place after 21 years, the agreement is set to liberalise tariffs on 85% of the EU's agro-food products exported to Japan including the elimination of duties on 90% of agricultural products (EC, 2017[35]; EC,

2017[36]). Duties on most remaining products will be reduced over time, while Japan has opened TRQs for others. Aside from market access, the agreement establishes recognition of more than 200 EU Geographical Indications (GIs), as well as more than 50 Japanese GIs for wine, spirits and agricultural products.

The **European Union–Singapore Free Trade Agreement** came into force on 21 November 2019. Most agro-food imports already enter Singapore duty-free. However, the agreement will eliminate Singapore's remaining import tariffs for agro-food products – notably beer, stout and samsu – on the agreement's entry into force. The European Union will eliminate duties on most agro-food imports on the agreement's entry into force, and duties on most remaining products – including certain fruits and vegetables, duck meat and pork – will be gradually eliminated in four or six stages. Duties on imports of some products will not be reduced, however, including for fructose sugar, certain sugar confectionaries and prepared or preserved sweetcorn. Aside from market access, the agreement indicates that Singapore will set up a system to register GIs, and once registered, around 190 EU products will enjoy enhanced protection there.

On 30 June 2019, the **European Union and Viet Nam** signed a bilateral free trade agreement, the EU-Viet Nam Free Trade Agreement. This agreement is pending the approval of the Vietnamese National Assembly, after the European Parliament ratified the agreement in February 2020. The agreement includes improved market access for Vietnamese agricultural commodities with the progressive reduction of duties over a maximum period of seven years. The European Union is set to open duty-free Tariff Rate Quotas for 30 000 tonnes of milled rice; 20 000 tonnes of husked rice and 30 000 tonnes of fragrant rice, as well as quotas for sugar, baby corn, garlic, mushrooms, manioc starch and eggs. The tariff on broken rice will be phased out over five years, starting with a 50% cut. Viet Nam will progressively eliminate duties for EU products over a period of ten years, including for chicken, dairy, beef, wine, spirits, chocolates, pastas, apples, wheat, and olive oil. At the end of the implementation period, an average tariff of 1.1% will apply to agricultural goods originating in Viet Nam and 2.1% to processed agricultural products while the average tariff for EU agricultural exports will be 2.6%. Viet Nam will also recognise and protect 169 EU GIs, at a comparable level to that of EU legislation. Vietnamese GIs will also be recognised as such in the European Union, and the agreement will allow new GIs to be added in the future.

After more than 20 years of negotiations, in June 2019 negotiators reached a political agreement on a **European Union–Mercosur** (comprised of Argentina, Brazil, Paraguay and Uruguay) free trade agreement. The text must still undergo a legal revision before being incorporated into the wider EU-Mercosur Association agreement, and the package still requires approval by the European Parliament and Council, in addition to ratification by the Mercosur member parliaments. Under the terms of the agreement, the members of Mercosur will gradually eliminate duties on 93% of agro-food products imported from the European Union, while the European Union is set to gradually eliminate duties on 82% of agro-food products. The European Union will also provide duty-free access quotas for some goods, including a 99 000 tonne carcass-weight equivalent quota for beef, 180 000 tonnes for poultry, 25 000 tonnes for pork, 60 000 tonnes for rice, 45 000 tonnes for honey and 1 000 tonnes for sweetcorn, all to be phased-in over six stages. In addition, the European Union will eliminate the in-quota tariff rate for the existing 180 000 tonne quota for Brazilian sugar for refining. Both blocs will open reciprocal TRQs for cheese (30 000 tonnes), milk powders (10 000 tonnes) and infant formula (5 000 tonnes). The agreement also establishes legal protection for more than 350 EU GIs, while 220 GIs from Mercosur will gain protection in the European Union.

After 47 years of membership, on 31 January 2020, the United Kingdom officially left the European Union. The departure of the United Kingdom – dubbed "**Brexit**" – has been negotiated under a Withdrawal Agreement. The two have entered into a transition period, slated to last until 31 December 2020, under which EU law will continue to apply in the United Kingdom. The future nature of the partnership between the United Kingdom and the European Union (with respect to areas such as regulatory harmonisation, trade in goods and services, and movement of people) has yet to be jointly agreed, with negotiations continuing during the transition period.

International Agreements on Geographical Indications

Two international agreements limited to geographical indications were also signed in 2019. The European Union and China reached a **bilateral agreement on GIs** on 6 November 2019, with each party agreeing to protect 100 of the other's GI products. European products gaining protection under the agreement include Champagne, Feta, Irish whiskey, and Prosciutto di Parma, while the list of Chinese products includes Pixian Bean Paste, Anji White Tea, Panjin rice and Anqiu Ginger. The agreement is pending the approval of the European Parliament and Council, and is expected to enter into force in late 2020. On 26 November 2019, the European Union deposited official documents at the World Intellectual Property Organisation (WIPO) in Geneva to become a member of the **multilateral Geneva Act of the Lisbon Agreement on Appellations of Origin and on geographical indications** (GIs). The Geneva Act modernises the 1958 Lisbon Agreement for the Protection of Appellations of Origin and their International Registration by extending the scope of protection from solely appellations of origin to all GIs, and also permits membership by international organisations – such as the European Union – and not solely individual countries. Through the European Union's membership in the Geneva Act, all EU GIs will now be eligible for protection in other countries party to the Act. The European Union became a member upon entry into force of the Geneva Act on 26 February 2020.

Disputes

The European Union requested consultations with the United States on 29 January 2019 concerning the imposition of countervailing and anti-dumping duties on ripe olives from Spain, as well as the legislation that was the basis for the imposition of those duties. On 16 May 2019, the European Union requested the establishment of a panel, which was composed on 18 October 2019 (WTO, 2019[37]).

On 1 April 2019, an agreement in the form of an Exchange of Letters between the European Union and China regarding tariff concessions on certain poultry meat products was approved by the Council, in connection with WTO dispute DS 492 (EC, 2019[38]). The agreement granted specific market access rights to China for two TRQs for processed poultry products, and entered into force on 1 April 2019 (WTO, 2019[39]).

The European Union requested consultations with Colombia on 15 November 2019 as a result of the anti-dumping duties that Colombia had imposed on imports of certain preserved or frozen potatoes originating in Belgium, the Netherlands and Germany (WTO, 2019[40]). On 18 February 2020, the European Union requested that a panel be established in the dispute.

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Notes

[1] This chapter covers policy developments through April 2020. As such, it was not possible to include more recent policy developments, such as the European Commission's May release of the Biodiversity and Farm to Fork strategies.

[2] This section covers measures taken on or before 28 April 2020.

[3] Firms in the agriculture and agri-food sectors may also benefit from a variety of other programmes implemented at EU level, including financial assistance provided to Member States to cover the costs of short-term work schemes (under the Support mitigating Unemployment Risks in Emergency programme), direct support for small and medium-sized businesses, and EUR 40 billion in increased financing availability from the European Investment Bank Group to be directed toward bridging loans, credit holidays, or other measures to alleviate capital market constraints.

[4] Additional non-financial measures contained under CRII+ included postponement of Member State annual report submissions for Rural Development Programmes, and waving the requirement to amend Rural Development partnership agreements in cases where national RDPs were modified.

[5] EAFRD is the source of funding for payments under CAP's Pillar 2.

[6] This paragraph should not be interpreted as an exhaustive list of which measures were taken in individual countries.

[7] A joint agreement of the German Federal Ministry of Food and Agriculture and the Federal Ministry of the Interior, Building and Community provides exceptions on COVID-19 related entry restrictions to allow up to 40 000 seasonal workers to travel from abroad to Germany in both April and May, provided that the travel is by air and only from designated airports. The expenses for the transportation (including flights), health checks, accommodation and additional costs are to be covered by employers.

[8] Although the United Kingdom is no longer a member of the European Union, it was still a member in 2019, and is thus covered in the ensuing chapter on the European Union. As there is no stand-alone chapter for the United Kingdom, response measures for that country have been covered here.

[9] *Note by Turkey*: The information in this document with reference to "Cyprus" relates to the southern part of the Island. There is no single authority representing both Turkish and Greek Cypriot people on the Island. Turkey recognises the Turkish Republic of Northern Cyprus (TRNC). Until a lasting and equitable solution is found within the context of the United Nations, Turkey shall preserve its position concerning the "Cyprus issue".
Note by all the European Union Member States of the OECD and the European Union: The Republic of Cyprus is recognised by all members of the United Nations with the exception of Turkey. The information in this document relates to the area under the effective control of the Government of the Republic of Cyprus.

[10] Co-financing rates vary by measure and by Member State.

[11] Member States commonly have one RDP, while Belgium and Finland each have 2, France has 30, Germany has 15, Italy has 33, Portugal has 3, Spain has 19 and the United Kingdom has 4.

[12] Member States with average direct payment per hectare below 90% of the EU average can transfer up to 25% of rural development fund to direct payments.

[13] The following Member States have opted for transfers of funds from Pillar 1 to Pillar 2 throughout the CAP 2014-20 exercise: Belgium, the Czech Republic, Denmark, Estonia, France, Germany, Greece, Latvia, Lithuania, the Netherlands, Romania and the United Kingdom. In turn, Croatia, Malta, Hungary, Poland and the Slovak Republic chose to transfer funds from Pillar 2 to Pillar 1.

[14] The SAPS is applied all Member States joining since 2004 but Slovenia, Malta, and Croatia, which implement the BPS in addition to the EU15.

[15] The BPS is "regionalised" in five Member States [Greece (3 regions), Spain (50 regions), France (2 regions), Finland (2 regions), United Kingdom (separate regions within Scotland and England)], meaning that a different payment rate per hectare applies depending on the region.

[16] Member States can choose their preferred method to calculate their SFS payments – lump-sum payment (an equal amount is paid to all farmers in the scheme), payment due each year (individual farmers receive a single payment equivalent to what they would have been due under other payment schemes), and payment due in 2015 (individual farmers receive a single payment which depends on the amount they would have been due in 2015). Member States that opt for the "payment due each year" method are not subject to the 10% maximum, provided they do not round up lower payment amounts to EUR 500. For more information, see (DG Agri, 2017[41]).

[17] These criteria are: low temperature, dryness, excess soil moisture, limited soil drainage, unfavourable texture and stoniness, shallow rooting depth, poor chemical properties and slope.

[18] Payments are granted on a maximum number of hectares, which varies by implementing country or region: Belgium (Wallonia): 30 ha; Bulgaria: 30 ha; Croatia: 20 ha; France: 52 ha; Germany: 46 ha with a higher per hectare payment rate for the first 30 ha; Lithuania: 30 ha; Poland: no payment below 3 ha, from 3 to 30 ha; Portugal (as from claim year 2017): 5 ha; Romania:30 ha with a smaller per hectare payment rate for the first 5 ha; and United Kingdom (Wales): 54 ha.

[19] Belgium (Wallonia), Croatia, France, Germany, Portugal and Romania.

[20] The Czech Republic, Denmark, Cyprus, Estonia, Finland, Latvia, Luxemburg, Malta, the Netherlands, Slovenia, Slovakia, Spain, Sweden and the United Kingdom (England).

[21] Austria, Germany, Finland and Sweden.

[22] That is, an animal that has been fattened and is ready for market.

[23] This reduction can be achieved either through reduced stocking levels, or through herd restructuring, as laid out in Annex 3 under the programme's Terms and Conditions. This 5% reduction would be measured over the period 1 July 2020 to 30 June 2021 compared to baseline levels over the period 1 July 2018 to 30 June 2019.

[24] As one example, farmers outside of nitrate sensitive areas are allowed to use more than 170 kg of manure nitrogen to fertilise crops with higher needs for fertilisation, such as maize and herbaceous grasses.

[25] In 2018, Portugal introduced a Family Farming Statute, defining "family" farms as those for which the operator is at least aged 18, has taxable income of no more than the fourth bracket for personal income tax (corresponding to annual taxable income between EUR 20 261 and EUR 25 000 (USD 23 912 and USD 29 505) in 2018), may not receive more than EUR 5 000 (USD 5 597) from CAP aid, and must also be in charge of a farm whose buildings are "rustic or mixed". In addition, at least 50% of labour for the operation must be provided by family members.

[26] Tax relief support is provided ex post – producers fill a declaration on the amount of compensation to be paid according to their structure of production and some official declared normative of fuel consumption. In this manner, the support can be differentiated by product.

[27] From 1 January 2018, results of import and export tariff quota allocation are published on the European Commission's website. See: https://ec.europa.eu/info/food-farming-fisheries/key-policies/common-agricultural-policy/market-measures/trqs_en.

[28] See Implementing Regulations (EU) 2019/371 and (EU) 2020/383.

[29] See Implementing Regulation (EU) 2020/573.

12 Iceland

Support to agriculture

In Iceland, reforms of agricultural policies have been limited and the level of support remains among the highest within the OECD. At 57% of gross farm receipts, the PSE was more than three times the OECD average in 2017-19. Total support to agriculture (TSE) has averaged 1% of the country's GDP in recent years, with support to farmers (PSE) being the dominant component (a share of 96%). The remaining part of TSE is financing general services (GSSE), with almost half comprised of expenditures for inspection, and public stockholding expenditures responsible for much of the remainder.

Most agricultural support continues to be provided through market price support measures, principally through high tariffs that help to maintain high domestic prices relative to world prices, and therefore lead to a large transfer from consumers to agriculture producers. Market price support is complemented with a payment entitlements system, which is directly or indirectly coupled with production factors. Market price support accounted for 55% of the support to farmers in 2017-19. Output payments for milk producers and largely decoupled payments to sheep meat producers represent most of the remaining support to farmers. Consequently, 73% of farm support is provided in forms that are potentially the most distorting to production and trade.

Main policy changes

The main policy changes of 2019 included revisions of the agreements on the operating environment for sheep farmers and cattle farmers. For sheep farming, the revision entails the introduction of voluntary financial support for up to four years to help sheep farmers to diversify their operations to other activities, while for cattle farming, the milk-quota system remains unchanged. Revisions of agreements on horticulture and the framework agreement (horizontal support) of agriculture are expected to be finished in 2020. All revised changes of existing agreements entered into force on 1 January 2020. Negotiations between EFTA and MERCOSUR were concluded in 2019.

Assessment and recommendations

- Within the continued application of the multi-year agreements between the government of Iceland and the Farmer's Association, changes to overall agricultural policy are limited, and Iceland's support to farmers remains well above that of most other OECD countries. Moreover, most of the support to farmers continues to be provided in forms that are potentially most production and trade distorting and contribute to environmental degradation, in particular soil erosion. The revisions of the agreements on the operating environment for sheep farmers and cattle farmers maintain the *status quo*, hindering the reform process to make Iceland's agricultural sector more responsive to market forces.
- Support to producers is only partly conditional on meeting environmental performance standards. Greenhouse gas emissions from agriculture are high, reflecting the important role of sheep raising

within the sector. Overgrazing also contributes to soil erosion on half of the country's surface, damaging biodiversity and weakening flood control. Agricultural subsidies are economically distorting and contribute to environmental degradation, in particular soil erosion. Producer support should be decoupled from agricultural production and moved towards less economically distorting and environmentally damaging forms, essentially by linking subsidies to sustainable land management and the production of environmental amenities.

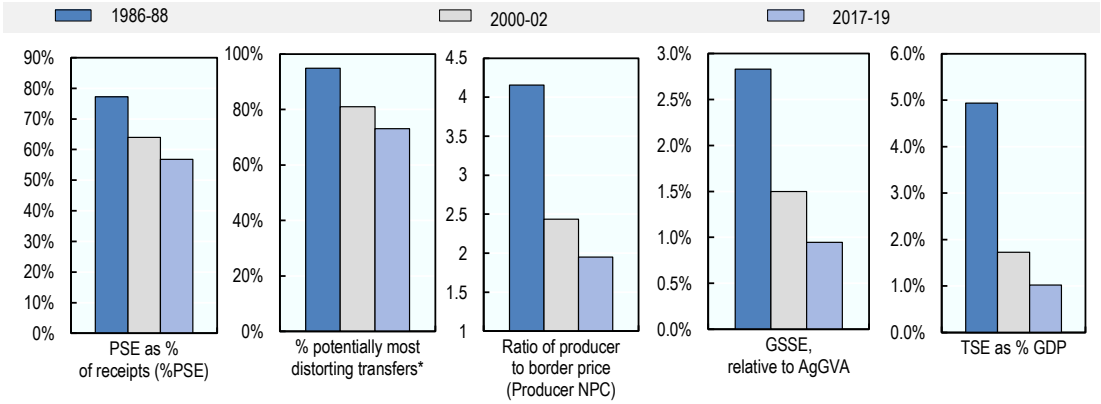
- Despite progress in reducing border protection of some agricultural products, tariffs on several agricultural product groups – particularly meat, dairy, plants and flowers – remain high, and are often applied in the form of complex non-*ad valorem* duties. Slow progress in this area would perpetuate the burden to consumers and the distortions to markets associated with border protection.
- Further progress is needed in supporting innovation, including by encouraging a well-functioning agricultural knowledge and information system, for which public expenditures have been declining over the past decade.
- The effects of climate change could be favourable for agriculture in Iceland, although pests such as invasive insects may become a greater threat, introducing new challenges to the sector. Measures advocated in the new Climate Change Strategy, such as phasing out fossils fuels in transport and increasing carbon sequestration in land use, are a welcome shift towards a low-carbon economy and could contribute to increased efficiency in the use of natural resources. Consideration should also be given to broadening the environmental tax base for the country's carbon tax by expanding it to cover agriculture.

Policy responses in relation to the COVID-19 outbreak

On 11 March 2020, the government presented an ISK 230 billion (8% GDP) response package to the COVID-19 outbreak. Key measures to support households and firms include tax cuts, tax deferrals, increased unemployment benefits, one-off child allowances, support to companies whose employees have been quarantined, and state-guaranteed bridge loans to companies. Most of the larger measures presented by the government are applicable to the agro-food sector as well as other sectors.

More specific measures related to the agro-food sector include more emphasis on supporting horticulture, increased advisory services due to COVID-19, documentation of loss of produce, ensuring salaries for temporary workers if farmers get sick and a dashboard of statistics for the agro-food sector.

Figure 12.1. Iceland: Development of support to agriculture

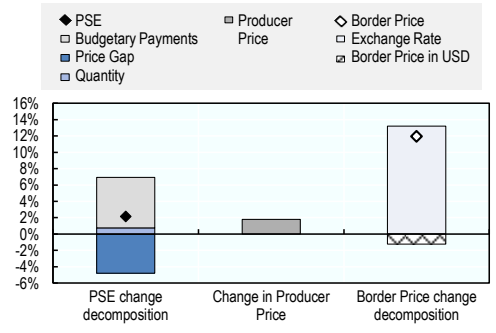


Note: * Share of potentially most distorting transfers in cumulated gross producer transfers.
Source: OECD (2020), "Producer and Consumer Support Estimates", OECD Agriculture statistics (database), http://dx.doi.org/10.1787/agr-pcse-data-en.

StatLink https://doi.org/10.1787/888934144135

Support to producers (%PSE) has declined since md-1980s. But at 57% of gross farm receipts in 2017-19, it is still three times higher than the OECD average. Transfers considered as the potentially **most distorting support** represent 73% of the total PSE (Figure 12.1). The level of support in local currency increased in 2019 mainly due to an increase in budgetary payments, which more than offset the decrease in the price gap between domestic and border prices. The decrease in the price gap stemmed primarily from the devaluation of the ISK against the USD: the resulting increase in reference prices in national currency more than offset the increase in average producer prices (Figure 12.2). Effective prices received by farmers, on average, have declined over time, but still remained almost twice as high as those in the world markets. The sectors with the largest divergence between domestic and world prices in 2017-19 are poultry, eggs and wool. Market price support accounts for more than 70% of Single Commodity Transfers (SCT) for poultry and eggs (Figure 12.3). Overall, SCT represent 97% of the total PSE. The expenditures for **general services** relative to agricultural value added decreased from around 3% in 1986-88 to 1% in 2017-19; half of these expenditures are for inspection and control. **Total support to agriculture** as a share of GDP has declined significantly over time.

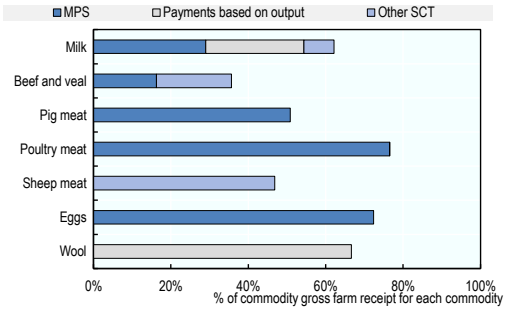
Figure 12.2. Iceland: Drivers of the change in PSE, 2018 to 2019



Source: OECD (2020), "Producer and Consumer Support Estimates", OECD Agriculture statistics (database), http://dx.doi.org/10.1787/agr-pcse-data-en.

StatLink https://doi.org/10.1787/888934144154

Figure 12.3. Iceland: Transfer to specific commodities (SCT), 2017-19



Source: OECD (2020), "Producer and Consumer Support Estimates", OECD Agriculture statistics (database), http://dx.doi.org/10.1787/agr-pcse-data-en.

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Table 12.1. Iceland: Estimates of support to agriculture

Million USD

	1986-88	2000-02	2017-19	2017	2018	2019p
Total value of production (at farm gate)	**236**	**150**	**311**	**316**	**321**	**296**
***of which:** share of MPS commodities (%)*	80.3	82.1	84.2	83.7	84.2	84.8
Total value of consumption (at farm gate)	**205**	**136**	**277**	**284**	**284**	**262**
Producer Support Estimate (PSE)	**193**	**139**	**244**	**260**	**248**	**223**
Support based on commodity output	180	113	176	193	183	151
Market Price Support[1]	179	72	127	135	135	110
Positive Market Price Support	179	72	127	135	135	110
Negative Market Price Support	0	0	0	0	0	0
Payments based on output	2	40	49	58	48	41
Payments based on input use	13	4	20	17	16	28
Based on variable input use	3	0	2	3	3	2
with input constraints	0	0	0	0	0	0
Based on fixed capital formation	6	2	13	9	8	21
with input constraints	0	0	0	0	0	0
Based on on-farm services	4	2	5	6	5	5
with input constraints	0	0	0	0	0	0
Payments based on current A/An/R/I, production required	-1	-3	12	12	13	12
Based on Receipts / Income	-1	-3	0	0	0	0
Based on Area planted / Animal numbers	0	0	12	12	13	12
with input constraints	0	0	0	0	0	0
Payments based on non-current A/An/R/I, production required	0	20	35	37	36	32
Payments based on non-current A/An/R/I, production not required	1	5	0	0	0	0
With variable payment rates	0	0	0	0	0	0
with commodity exceptions	0	0	0	0	0	0
With fixed payment rates	1	5	0	0	0	0
with commodity exceptions	1	5	0	0	0	0
Payments based on non-commodity criteria	0	0	0	0	0	0
Based on long-term resource retirement	0	0	0	0	0	0
Based on a specific non-commodity output	0	0	0	0	0	0
Based on other non-commodity criteria	0	0	0	0	0	0
Miscellaneous payments	0	0	0	0	0	0
Percentage PSE (%)	**77.2**	**64.0**	**56.8**	**59.0**	**57.0**	**54.6**
Producer NPC (coeff.)	**4.16**	**2.44**	**1.95**	**2.07**	**1.98**	**1.82**
Producer NAC (coeff.)	**4.38**	**2.78**	**2.32**	**2.44**	**2.33**	**2.20**
General Services Support Estimate (GSSE)	**18**	**11**	**11**	**11**	**11**	**10**
Agricultural knowledge and innovation system	5	5	1	1	1	1
Inspection and control	1	2	5	5	6	5
Development and maintenance of infrastructure	2	1	0	0	1	0
Marketing and promotion	1	1	0	1	0	0
Cost of public stockholding	9	2	4	4	4	3
Miscellaneous	0	0	0	0	0	0
Percentage GSSE (% of TSE)	**6.9**	**7.4**	**4.3**	**4.2**	**4.4**	**4.4**
Consumer Support Estimate (CSE)	**-112**	**-65**	**-120**	**-128**	**-127**	**-105**
Transfers to producers from consumers	-157	-66	-120	-128	-127	-105
Other transfers from consumers	-1	-2	0	0	0	-1
Transfers to consumers from taxpayers	46	3	0	1	0	0
Excess feed cost	0	0	0	0	0	0
Percentage CSE (%)	**-70.4**	**-48.3**	**-43.2**	**-45.1**	**-44.7**	**-40.2**
Consumer NPC (coeff.)	**4.38**	**1.98**	**1.76**	**1.82**	**1.81**	**1.67**
Consumer NAC (coeff.)	**3.38**	**1.93**	**1.76**	**1.82**	**1.81**	**1.67**
Total Support Estimate (TSE)	**257**	**153**	**255**	**272**	**259**	**234**
Transfers from consumers	158	68	120	128	127	105
Transfers from taxpayers	100	87	135	144	132	129
Budget revenues	-1	-2	0	0	0	-1
Percentage TSE (% of GDP)	**4.9**	**1.7**	**1.0**	**1.1**	**1.0**	**1.0**
Total Budgetary Support Estimate (TBSE)	**78**	**81**	**128**	**137**	**124**	**123**
Percentage TBSE (% of GDP)	**1.5**	**0.9**	**0.5**	**0.6**	**0.5**	**0.5**
GDP deflator (1986-88=100)	**100**	**263**	**560**	**542**	**556**	**582**
Exchange rate (national currency per USD)	**40.94**	**89.37**	**112.58**	**106.82**	**108.27**	**122.64**

Note: p: provisional. NPC: Nominal Protection Coefficient. NAC: Nominal Assistance Coefficient.
A/An/R/I: Area planted/Animal numbers/Receipts/Income.
1. Market Price Support (MPS) is net of producer levies and excess feed cost. MPS commodities for Iceland are: milk, beef and veal, sheep meat, wool, pig meat, poultry and eggs.

Source: OECD (2020), "Producer and Consumer Support Estimates", *OECD Agriculture statistics* (database), http://dx.doi.org/10.1787/agr-pcse-data-en.

Contextual information

Iceland is a small, sparsely populated economy with a GDP per capita above the OECD average. Agriculture (excluding fish) is a relatively small part of the economy, representing 1% of GDP and of employment, and it remains small compared to fishing and aquaculture. Approximately one-fifth of the total land area of Iceland is agricultural land, mostly suitable for fodder production and livestock raising. Only around 6% of this area is arable land.

Livestock-rearing is the main farm activity, with milk and sheep meat being the most important products. Traditional livestock production is grassland-based and most farm animals are native breeds. The main crops are hay, cereals for animal feed and vegetables – the latter are cultivated primarily in greenhouses heated with geothermal energy. The main agricultural exports are pure-bred horses for breeding, sheep meat products and fur skins. Iceland is a net importer of agricultural products (excluding fishery goods), mainly for final consumption. Imports are more diversified than exports, and have increased steadily in recent years.

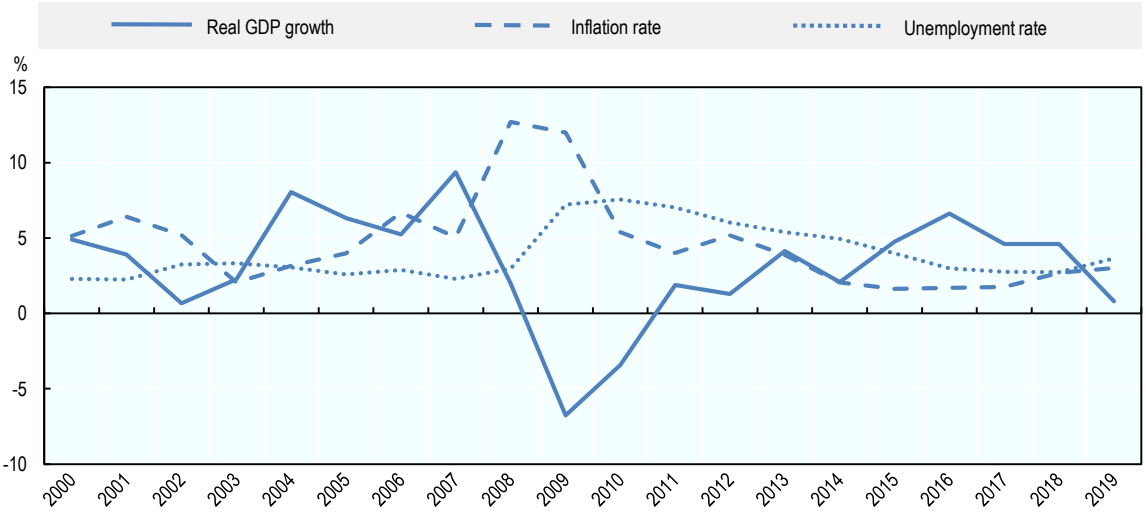
Table 12.2. Iceland: Contextual indicators

	Iceland		International comparison	
	2000*	2018*	2000*	2018*
Economic context			**Share in total of all countries**	
GDP (billion USD in PPPs)	8	20	0.02%	0.02%
Population (million)	0.3	0.4	0.01%	0.01%
Land area (thousand km²)	100	100	0.12%	0.12%
Agricultural area (AA) (thousand ha)	1 889	1 872	0.06%	0.06%
			All countries	
Population density (inhabitants/km²)	3	3	53	62
GDP per capita (USD in PPPs)	29 718	58 070	9 275	21 924
Trade as % of GDP	25	26	12.4	15.3
Agriculture in the economy			**All countries**	
Agriculture in GDP (%)	8.3	5.2	3.1	3.6
Agriculture share in employment (%)	8.3	4.0	-	-
Agro-food exports (% of total exports)	7.9	6.2	6.2	7.3
Agro-food imports (% of total imports)	7.3	8.4	5.5	6.3
Characteristics of the agricultural sector			**All countries**	
Crop in total agricultural production (%)	13	15	-	-
Livestock in total agricultural production (%)	87	85	-	-
Share of arable land in AA (%)	7	6	32	33

Notes: *or closest available year. 1. Average of all countries covered in this report. EU treated as one.
Sources: OECD statistical databases; UN Comtrade; World Bank, WDI and national data.

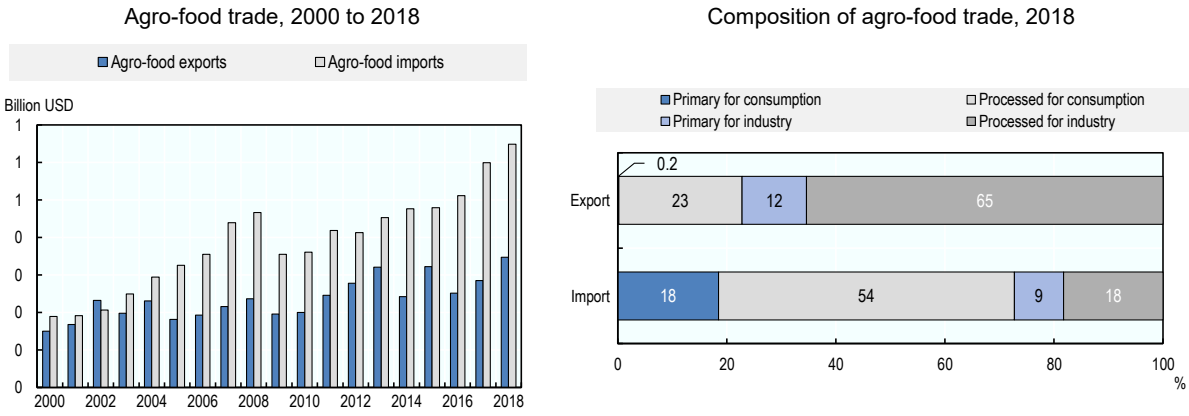
Iceland's economy continues to grow, and the country's living standards and well-being are high (OECD, 2019[1]).[1] The unemployment rate remains low, at around 3%, and the country is one of the most egalitarian economies of the OECD. Historically, Iceland's prosperity has been built on the sustainable management of its abundant natural resources, including the comprehensive fisheries management system based on individual transferable quotas, renewable energy (geothermal and hydro) and carbon sequestration opportunities (afforestation, revegetation). The government plans to make the economy largely carbon neutral by 2040.

Figure 12.4. Iceland: Main economic indicators, 2000 to 2019



Sources: OECD statistical databases; World Bank, WDI and ILO estimates and projections.

Figure 12.5. Iceland: Agro-food trade

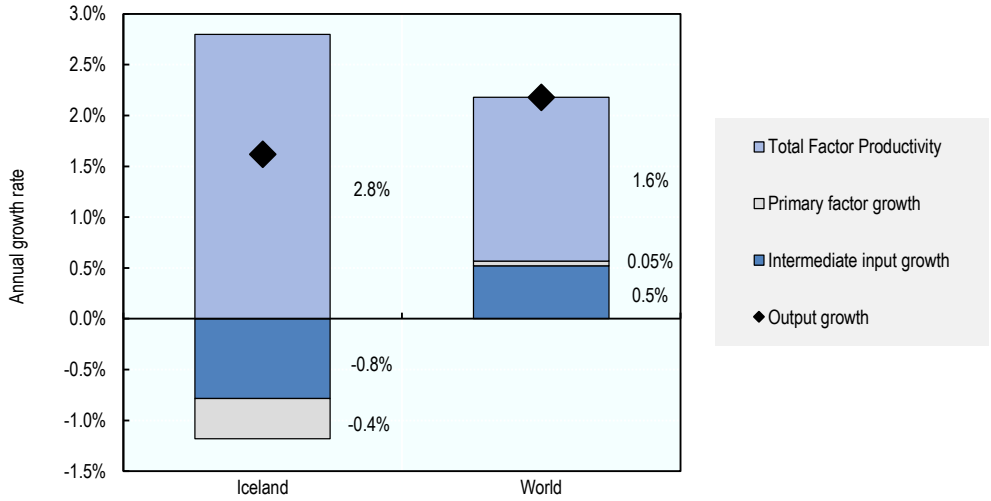


Note: Numbers may not add up to 100 due to rounding.
Source: UN Comtrade Database.

While output growth in agriculture has been below the global average over the 2007-16 period, according to the estimates, agricultural total factor productivity has grown by 2.8% per year – higher than the global average rate of 1.6%. A harsh climate, lack of suitable land, small average farm size, and the narrow genetic base for traditional livestock present significant constraints to the sector. Due to relatively low livestock densities, Iceland's nutrient balances show a comparatively low surplus of both nitrogen and phosphorous. Iceland has the lowest pesticide sales per hectare in the OECD area and the sector's use of energy has fallen over time. Agriculture continues to represent a significant share in the country's total GHG emissions – well above the OECD average – mainly due to the importance of the livestock sector. Emissions of CH_4 and N_2O have historically accounted for over 99% of the total emissions from agriculture, with less than 1% arising from CO_2.

The sector's share in water consumption has increased over the past twenty years and is higher than the OECD average. The water stress indicator has also increased, but is substantially lower than the OECD average. Water shortage is not a major concern and policy issue.

Figure 12.6. Iceland: Composition of agricultural output growth, 2007-16



Note: Primary factors comprise labour, land, livestock and machinery.
Source: USDA Economic Research Service Agricultural Productivity database.

Table 12.3. Iceland: Productivity and environmental indicators

	Iceland		International comparison	
	1991-2000	2007-2016	1991-2000	2007-2016
			World	
TFP annual growth rate (%)	0.1%	2.8%	1.6%	1.6%
			OECD average	
Environmental indicators	**2000***	**2018***	**2000***	**2018***
Nitrogen balance, kg/ha	8.0	7.7	33.3	29.1
Phosphorus balance, kg/ha	1.8	1.8	3.3	2.3
Agriculture share of total energy use (%)	1.9	1.4	1.7	2.0
Agriculture share of GHG emissions (%)	13.7	12.2	8.1	8.9
Share of irrigated land in AA (%)	0.0	0.0	-	-
Share of agriculture in water abstractions (%)	42.9	46.2	46.0	49.0
Water stress indicator	0.1	0.9	9.9	8.9

Note: * or closest available year.
Sources: USDA Economic Research Service, Agricultural Productivity database; OECD statistical databases; FAO database and national data.

Description of policy developments

Main policy instruments

The strategic objective of Iceland's agricultural policy is to maintain and strengthen a diverse agricultural sector, to the extent that physical and marketing conditions allow. The key goals of policy are: to meet domestic demand where realistically possible; to maintain sustainable production of high quality and healthy products; to improve efficiency and competitiveness; to improve farmers' incomes; to improve creativity and create job opportunities; and to sustain livelihoods in rural areas.

Agricultural policies in Iceland are based on two main legal acts: i) Act No. 99/1993 on the Production, Pricing and Sale of Agricultural Products (known as the "Act on Agricultural Produce"), which lays down

the policy framework as well as provisions for production control, provisions for slaughter and processing, market measures and producer support; and ii) Act No. 70/1998 on Agriculture, which provides the legal basis for development projects, extension services and livestock improvements.

Under these Acts, there are a number of **renewable multi-year agreements** between the government and the Farmer's Association, which provide the general framework for support and production control for farmers in the cattle, sheep and horticultural sectors. There is also an agreement on so-called horizontal support, such as advisory services, breeding, animal welfare, environmental protection, sustainable land management, organic farming and land cultivation. Furthermore, through the Agricultural Productivity Fund, funds are allocated for development projects in the horticultural, cattle and sheep sectors, as well as for increasing employment in rural areas.

The agreements currently in force cover the ten-year period from 2017 to 2026, with extensive reviews scheduled in 2019 and 2023. In 2019, the agreements for sheep farming and cattle were revised and changes entered into force in 1 January 2020. Revision for the agreements on horticulture and horizontal support are both underway and expected to be completed in 2020.

Iceland's agricultural support is provided through price support (maintained by border measures) and through direct payments, which are based on payment entitlements that are coupled with production factors. Price support is provided for all livestock products and some horticultural products. Direct payments are provided to cattle (mainly dairy) and sheep producers, and on a smaller scale, to certain greenhouse producers.

For dairy, direct payments are based on the size of a producer's quota and the current number of animals. Headage payments are provided for up to 180 dairy cows and 260 beef cows per farm, with full payment for each of the first 50 dairy cows and 200 beef cows, then at a declining rate for each additional cow. There is a national dairy production quota, which is set each year by the Ministry of Fisheries and Agriculture and is divided among producers based on their annual quotas. Annual quotas also determine the entitlements for direct payments. Production in excess of quotas is permitted, provided all such production is for exports only. Wholesale prices are regulated for approximately half of all dairy products. A government-chaired committee, representing both the Farmers' Association and the labour union (which in this instance acts on behalf of consumers), determines guaranteed minimum prices for milk delivered within production quotas on an annual basis. Trade in support entitlements (basic payments to all active dairy and cattle farmers) between entitlement holders is allowed with quantity limitations, and takes place in a market operated by the government. Dairy producers also benefit from support for breeding, land cultivation and development programmes.

For sheep, direct payments are linked to payment entitlements that were originally based on historical production. Keeping a minimum number of winter-fed sheep on the farm, in relation to the entitlements is, however, required for eligibility to receive full payments. Additional payments to sheep farmers are related to a quality control scheme for lamb meat, based on animal welfare, product quality, traceability and sustainability criteria. Different premium payments are provided at the wholesale level for purchasers of wool, and to farmers to co-operate in order to increase added value for sheep products.

Imports of meat, dairy products, and some vegetables that compete with domestic production, are subject to tariffs, which are often compound duties with an *ad valorem* component of 30% and a specific duty component that varies from ISK 5/kg (USD 0.04/kg) to ISK 1 462/kg (USD 2/kg). However, products originating in partner countries of the European Economic Area (EEA), or in one of the 41 countries with which Iceland has free trade agreements, may carry lower tariffs. The agreement for the cattle sector included a provision to change the specific duties for certain cheese and milk powder products based on changes to the SDR/ISK exchange rate from 1995 to 2016 effective from 1 March. Since then the specific component (ISK/kg) was adjusted annually by the 12-month development of SDR/ISK. Export subsidies for agricultural products have not been provided since the early 1990s.

Concerning Iceland's climate change commitments under the Paris Agreement on Climate Change, according to its Nationally Determined Contributions (NDCs) submitted to the UNFCCC, Iceland aims to be part of a collective delivery by European countries to reach a target of 40% reduction in GHG emissions by 2030 compared to 1990 levels. A precise commitment for Iceland within this collective delivery is yet to be determined and is dependent upon an agreement with the European Union and other countries. Iceland's participation in the EU Emissions Trading System will be key in that regard, considering that almost half of Iceland's emissions would be regulated through this scheme.

Iceland is a member of the European Economic Area (EEA) and of the European Free Trade Association (EFTA). While the EEA Agreement does not apply to most trade in agricultural goods, it opens trade in a number of processed agricultural products and encourages bilateral agreements on primary commodities.

As a member of EFTA, Iceland is also party to several additional free trade agreements, including with countries in Southeast Europe, North Africa and the Middle East, Latin America, and Asia, as well as with the South African Customs Union. In addition to agreements under the FTA, Iceland has bilateral Free Trade Agreements with the Faroe Islands, Greenland and the People's Republic of China.

Domestic policy developments in 2019-20

In 2019, the government of Iceland and the Farmer's Association reached an agreement on a revision of both the agreements on the operating environment for sheep farmers and cattle farmers. For **sheep farming**, a key element of the revision is the introduction of voluntary financial support for up to four years to help sheep farmers to diversify their operations to other activities. Following the revision of the agreement, a headage payment to sheep will not be introduced – as originally expected – in 2020.

For **cattle farming**, the revised agreement retains the existing milk-quota system. As a result of the revision process, three temporary committees were established to work on proposals for future developments within the cattle and dairy industry. These committees consist of representatives from the government, farmers, consumers and the dairy industry. They are mandated to examine issues concerning: mitigation measures to make the sector carbon neutral by 2040; changes in the arrangement of dairy wholesale pricing and the guaranteed minimum prices to farmers for milk delivered within production quotas; and promoting competition for the dairy market.

The milk production quota was set at 145 million litres in 2019 and remains at that level in 2020. Production in excess of the quota must be exported. Payments to farmers are made in equal monthly payments of one-twelfth of the annual quota. In 2019, the minimum price paid by dairies for milk delivered within the production quota was set at ISK 92.7 (USD 0.76) per litre.

Revisions of the agreement on the operating environment for **horticultural** producers and the agricultural framework agreement are underway, and are expected to be finalised in 2020.

The **Climate Strategy** launched in 2018 aims for the country to be carbon neutral before 2040. The strategy consists of 34 measures ranging from the phasing out of fossil fuels in transport to measures aiming to increase carbon sequestration in land use (including afforestation and revegetation). The government also supports efforts to reclaim drained wetlands, which in recent years have been shown to be a significant source of carbon emissions. For agriculture, two measures are currently planned with the objective of reducing GHG emissions: reducing the use of non-organic fertilisers, and improving manure management. In addition, the Icelandic Sheep Farmers' Association has plans for sheep farming to become carbon neutral by the year 2027. A collaboration between the Ministry for the Environment and Natural Resources, the Ministry of Industries and Innovation, the Icelandic Agricultural Advisory Centre, the Icelandic Forest Service and the Soil Conservation Service of Iceland is underway to define the actions to be undertaken. As of February 2020, no final plan of action has been agreed upon.

In October 2019, the European Union, Iceland and Norway formally agreed to extend, for the period 2021-30, the climate co-operation by including the Effort Sharing Regulation and the Regulation on greenhouse gas emissions and removals from land use, land use change and forestry (the LULUCF-regulation), into the EEA Agreement. According to the agreement, Iceland is to fulfil its respective greenhouse gas emission reduction target for the period 1 January 2021 to 31 December 2030 in accordance with the ETS-directive, LULUCF-Regulation and the Effort Sharing Regulation.

Trade policy developments in 2019-20

Following the new EEA Agreement on trade in agricultural products and the gradually increasing tariff quotas, the Minister of Fisheries and Agriculture appointed a committee to work on proposals for changes of the regulatory framework for agricultural trade in order to reduce costs for importers of agricultural products and to simplify the system. As a result, several legal changes – mainly in the system of tariff quotas allocation and the elimination of tariff duties on certain vegetables, flowers, wild game and fertile eggs for the year or a certain period during the year – took effect in the beginning of 2020 which reduce import costs and increase transparency with regards to imports of agricultural products.

As a member of EFTA, Iceland is currently engaged in negotiations with several countries regarding free trade agreements; negotiations between EFTA and MERCOSUR were concluded in 2019. The Agreement provides for tariff concessions such as the gradual elimination of duties, tariff preferences and tariff rate quotas (TRQs) on both basic and processed agricultural products. Agricultural exports to benefit from the Agreement include cheese, coffee, chocolate, lamb meat, spirits, sweets, waters, energy drinks and wines. In return, EFTA States offer concessions for agricultural imports of high importance to Mercosur. According to the new legislation that entered into force 1 January 2020 on the protection against animal diseases, imports of fresh meat and meat products, raw eggs and raw egg products, and unpasteurised milk and dairy products processed from unpasteurised milk from EEA States, do not require the permission of the Food and Veterinary Authority.

References

OECD (2019), *OECD Economic Surveys: Iceland 2019*, OECD Publishing, Paris, https://dx.doi.org/10.1787/c362e536-en. [1]

Note

[1] http://www.oecdbetterlifeindex.org/countries/iceland/.

13 India

Support to agriculture

Support to producers in India is composed of budgetary spending corresponding to 7.8% of gross farm receipts, positive market price support (MPS) of +2.0% of gross farm receipts among those commodities which are supported, and negative MPS of -14.8% among those which are implicitly taxed. Overall, this leads to negative net support of -5.0% of gross farm receipts (%PSE) in 2017-19. The negative value of the PSE reflects that domestic producers, overall, continue to be implicitly taxed, as budgetary payments to farmers do not offset the price-depressing effect of complex domestic regulations and trade policy measures. Budgetary transfers to agricultural producers are dominated by subsidies for variable input use, such as fertilisers, electricity, and irrigation water. In turn, public expenditures financing general services to the sector (GSSE), principally for infrastructure-related investments, correspond to just half of the subsidies for variable input use. Total budgetary support (TBSE) is estimated at 2.5% of GDP in 2017-19.

Mirroring the farm price-depressing effect on producers, the policies provide implicit support to consumers. Policies that affect farm prices, along with food subsidies under the Targeted Public Distribution System, reduced consumption expenditure by 21.4% (%CSE) on average across all commodities in 2017-19.

Main policy changes

Minimum support prices (MSPs) were increased in July 2019 for all *kharif* crops (summer planted) and in October 2019 for all *rabi* crops (winter planted).

The application of the direct income transfer scheme *Pradhan Mantri Kisan Samman Nidhi* (PM-KISAN) – providing an annual payment of INR 6 000 (USD 84) per farm household – was extended from small-scale farmers (with landholdings up to 2 hectares) to all farmers with land titles. Investments in Farmer Producer Organisations (FPOs) were also stepped up in the 2019-20 and 2020-21 Union Budgets, including through new schemes in specific sectors such as vegetables (tomatoes, onions, potatoes) and dairy.

After an increase in both fertiliser and food subsidies in the 2019-20 Union Budget, the budgetary allocations for these were lowered in the 2020-21 Union Budget by 10.8% and 37%, respectively.

In September 2019, export restrictions – including minimum export prices followed by an export ban – were introduced on onions. In addition, the central government introduced limits on stocks held by private traders.

Assessment and recommendations

- The measurement of support related to agricultural policies (PSE) highlights one of the fundamental issues in Indian agriculture: that for many products and over most of the period reviewed Indian farmers have been receiving prices that are lower than the prices prevailing on international markets. The central government should continue the initiatives to reduce domestic

marketing inefficiencies and work closer with states and Union Territories (UTs) to thoroughly reform regulations and to foster more efficient and competitive markets, including through initiatives such as the electronic National Agricultural Market (e-NAM). Marketing provisions should be adopted in a harmonised and consistent way across states and should be synchronised with any Minimum Support Price (MSP) system reforms through coherent plans.

- India is an important agro-food exporter in a number of commodities. The Agricultural Export Policy (AEP) framework adopted in 2018 has set an important step towards reducing uncertainty and transaction costs throughout supply chains by engaging to avoid the application of export restrictions for organic and processed agricultural products. However, the recent application of export restrictions on onions directly affected India's reliability as a supplier and exacerbated farm revenue losses – an extension of the AEP to avoid applying export restrictions on any agro-food products should therefore be considered to create a stable and predictable market environment.
- Reducing tariffs and relaxing other import restrictions is also key for a predictable market environment and for exploiting into the potential of imports to contribute to diversification of diets and improve food security across all its dimensions. Together with domestic marketing reforms, moving away from export and import restrictions has the potential to provide farmers and private traders with improved incentives to invest in supply chains.
- The large share of employment in agriculture compared to its GDP contribution reflects the persistent productivity gap with other sectors, which translates into low farm incomes. In the short to medium-term, direct cash transfers targeting the incomes of poorest farmers can support their livelihoods in current market conditions. In the long-term, significant structural adjustments need to occur in India involving the transition of farm labour to other activities and a process of consolidation towards farm operations sufficiently large to benefit from economies of scale. In this sense, continued reforms in land regulations need to be complemented by investments in key public services to the sector (such as education, training, infrastructure) and the broader enabling environment (including financial services).
- India's Nationally Determined Contributions (NDCs) include an economy-wide emission intensity reduction target, but no sector-specific targets have been set. Policy efforts for mitigating GHG emissions have concentrated around pilot projects for lower methane emission rice production, increased fertiliser efficiency, and soil health improvement. Generating savings by continuing to scale back variable input subsidies can be used to train farmers in an efficient and sustainable use of such inputs, by ensuring extension systems focus more on climate change, sustainability, and digital skills. Continued investments in the agricultural knowledge system and knowledge transfer through FPOs are important to ensure sustained and sustainable productivity growth.
- India has made significant progress in recent years in eliminating waste and inefficiencies in the food distribution system and these efforts should continue. The Government of India should continue the experimental replacement of physical grain distributions by direct cash transfers, and expand and adjust in light of experiences gained.

Policy responses in relation to the COVID-19 outbreak

Agricultural policies

In order to limit disruptions in farm operations, the government relaxed lockdown norms for agriculture-related activities under the nation-wide lockdown in the context of COVID-19. This concerns farm work in the field, agencies engaged in the procurement of agriculture products, *mandis* markets operating under the Agricultural Product Marketing Committee (APMC) or notified by state and Union Territories (UTs) governments, Custom Hiring Centres (CHCs) for farm machinery, as well as packaging facilities for fertilisers, pesticides, or seeds (Times of India, 2020[1]).

The government decided in March 2020 to frontload to the first week of April the first instalment of INR 2 000 (USD 26) within the direct income transfer scheme *Pradhan Mantri Kisan Samman Nidhi* (PM-KISAN) covering all farmers with land titles (Outlook India, 2020[2]).

The central government will grant the 3% prompt repayment incentive (PRI) to all farmers for all short-term crop loans of maximum INR 300 000 (USD 3 938) which are due up to 31 May 2020, even if farmers fail to repay loans until this date (Government of India, 2020[3]).

On 11 April 2020, the government announced that the procurement of wheat will be carried out in three stages from mid-April to the end of June 2020 in order to reduce congestion in markets. The central government has advised state governments to increase the number of procurement centres and find additional platforms for procurement in addition to APMC *mandis* markets, as well as to issue tokens to farmers that can ensure an orderly activity in markets (Times of India, 2020[4]).

In April 2020, the government encouraged farmers to use the federally-developed application *Kisan Suvidha* in order to obtain information on weather or market prices during lockdown (Hindustan Times, 2020[5]).

Agro-food supply chain policies

On 24 March 2020, the Ministry of Agriculture and Farmers' Welfare (MAFW) launched new features of the electronic National Agriculture Market (e-NAM) platform in order to reduce the need to physically travel to APMC *mandis* markets for selling crops. The new features include: (i) a warehouse-based trading module to facilitate trade directly from warehouses based on e-Negotiable Warehouse Receipts (e-NWR); and (ii) a Farmer Producer Organisation (FPO) trading module whereby FPOs can trade their produce from their respective collection centre without bringing the produce to APMC markets (Government of India, 2020[6]).

Several measures were aimed at limiting transportation disruptions and delays in supply chains. On 25 March 2020, the Ministry of Home Affairs issued a notice information to states and UTs that transportation of animal feed and fodder was considered an essential service and would thus be exempted from any inter-state restriction under the 2005 Disaster Management Act (Government of India, 2020[7]). The relaxed norms for agriculture-related activities under the lockdown also allow for the inter-state movement of harvesting and sowing machinery (Times of India, 2020[1]). In addition, Indian Railways set up special railway parcel trains for the transportation of essential items, including food products, in small parcel sizes (Government of India, 2020[8]).

Several states – such as Delhi, Karnataka, Kerala, Maharashtra, Telangana, and West Bengal – issued curfew passes and created task forces headed by senior policemen to ensure smooth inter-state movement of goods (The Straits Times, 2020[9]).

The Ministry of Shipping issued specific guidelines to main ports applying from 22 March to 14 April 2020 on exemptions and reductions of penalties, demurrages charges, and other port fees for traders in relation to any potential delay in cargo port operations (Government of India, 2020[10]). At the same time, port protocols have been adjusted, ranging from quarantine measures to additional documentation requirements and examinations, while at the end of March 2020 ports were advised by the Ministry of Shipping that they may consider the COVID-19 pandemic as grounds for invoking 'force majeure', a clause absolving companies from meeting their contractual commitments for reasons beyond their control (Bloomberg, 2020[11]).

Central and state level governments have been making efforts to maintain the operation of distribution channels for fruit and vegetables. During the last week of March 2020, almost 1 900 vegetable *mandis* markets retook their operations in order to ensure a smooth supply of fruit and vegetables (Economic Times, 2020[12]). States such as Odisha have set up "vegetable counters" as an alternative channel of

distribution in addition to providing support to small farmers for selling their produce in district and urban centres (Deccan Herald, 2020[13]).

India's National Dairy Development Board (NDDB) urged all milk co-operatives to ensure supply of milk and milk products, against the background of co-operatives such as the Karnataka Cooperative Milk Federation stopping sales of milk to neighbouring states (Dairy Global, 2020[14]).

Consumer policies

On 18 March 2020, the government of India decided to distribute a six-month quota of subsidised food grains in one-go to beneficiaries under the PDS, with the objective to prevent eventual panic buying under the COVID-19 lockdown and potential price increases (Economic Times, 2020[15]). In addition, on 25 March 2020, the central government increased the monthly allocation of subsidised food grains by 2 kg to 7 kg per person, aiming to ensure a sufficient supply of food grains during the COVID-19 lockdown (Economic Times, 2020[16]). Then, on 26 March 2020, the government approved the free distribution of an additional 5 kg of food grains per person and 1 kg of pulses per household (according to regional preferences) for three months under the COVID-19 economic package PM *Garib Kalyan Ann Yojana* targeting urban and rural poor, including migrant workers (Government of India, 2020[17]) (Economic Times, 2020[18]).

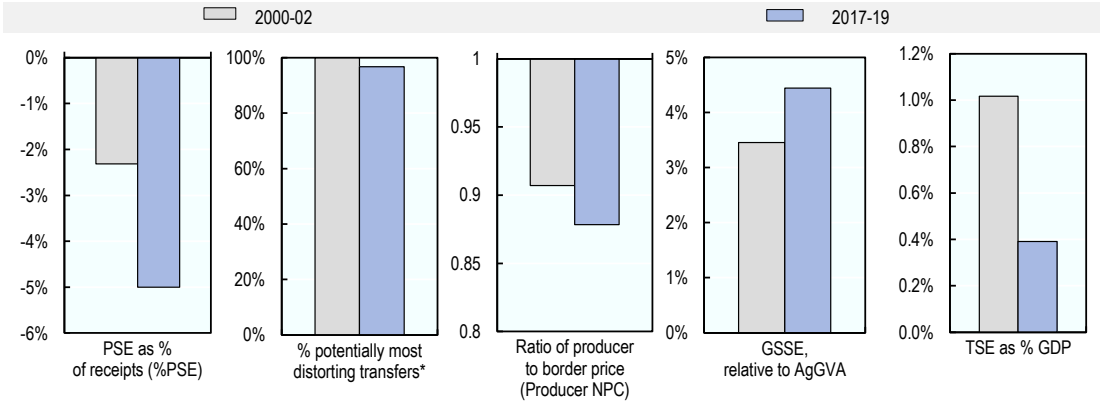
In addition, specific state- or UT-level initiatives also target distribution of grains and other food products. Some of these include the following (IFPRI, 2020[19]):

- States including Andhra Pradesh, Chhattisgarh, Delhi, Gujarat, Karnataka, Maharashtra, Manipur, Odisha, Punjab, Uttar Pradesh, Tamil Nadu, Telangana, and West Bengal are providing additional quantities of wheat and rice (between 1 kg and 10 kg per month for varying periods and for different categories of households).
- States including Andhra Pradesh, Gujarat, Haryana, Karnataka, Odisha, Punjab, and Tamil Nadu are also providing other agro-food products like pulses, oil, salt, or sugar.

Other

Amidst the COVID-19 outbreak and the subsequent national lockdown, the central government decided on 27 March 2020 to extend the current Foreign Trade Policy 2015-20 for six more months until 30 September 2020, as it was due to expire at the end of March and be replaced by the Foreign Trade Policy 2020-25. Consequently, all the existing schemes under the current policy will be extended over this period (Business Standard, 2020[20]).

Figure 13.1. India: Development of support to agriculture

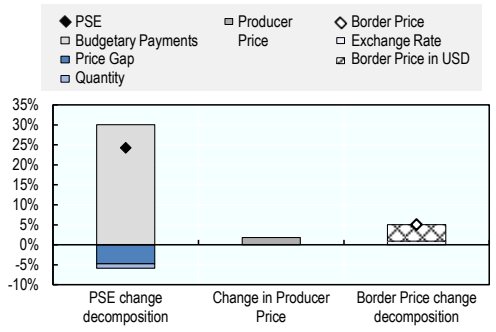


Note: * Share of potentially most distorting transfers in cumulated gross producer transfers.
Source: OECD (2020), "Producer and Consumer Support Estimates", OECD Agriculture statistics (database), http://dx.doi.org/10.1787/agr-pcse-data-en.

StatLink https://doi.org/10.1787/888934144192

Support to producers (%PSE) remained negative throughout the last two decades, but fluctuated markedly over this period. It averaged -5% in 2017-19. A positive MPS for wheat, maize, sugar, chick peas, other pulses and poultry meat, together with large input subsidies, only partly compensate the large negative MPS for the majority of exported products in 2017-19, worth 14.8% of gross farm receipts. Policies for these commodities over the period covered – whether impeding exports or depressing producer prices through domestic marketing regulations – led to prices received on average by farmers 12% lower than reference prices in 2017-19 (Figure 13.1). Virtually all gross producer transfers (whether positive or negative, i.e. expressed in absolute terms) are implemented in forms that are potentially most production and trade distorting, a consistent pattern since 2000-02. Absolute levels of producer support increased year-on-year (i.e. became less negative), driven by higher budgetary allocations to the direct income transfer programme PM-KISAN (Figure 13.2). Single commodity transfers (SCTs) mirror the MPS pattern, with most commodities being implicitly taxed in the range between 0.2% and 87% of commodity receipts (Figure 13.3). At 4.4% in 2017-19, expenditure for general services (GSSE) relative to agriculture value added increased compared to 2000-02, contributing to an overall positive total support estimate (TSE) of 0.4% of GDP.

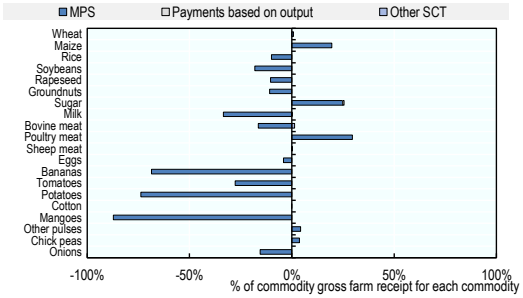
Figure 13.2. India: Drivers of the change in PSE, 2018 to 2019



Source: OECD (2020), "Producer and Consumer Support Estimates", OECD Agriculture statistics (database), http://dx.doi.org/10.1787/agr-pcse-data-en.

StatLink https://doi.org/10.1787/888934144211

Figure 13.3. India: Transfer to specific commodities (SCT), 2017-19



Source: OECD (2020), "Producer and Consumer Support Estimates", OECD Agriculture statistics (database), http://dx.doi.org/10.1787/agr-pcse-data-en.

StatLink https://doi.org/10.1787/888934144230

Table 13.1. India: Estimates of support to agriculture

Million USD

	2000-02	2017-19	2017	2018	2019p
Total value of production (at farm gate)	**112 282**	**431 884**	**450 306**	**423 236**	**422 109**
***of which:** share of MPS commodities (%)*	64.8	72.8	69.0	72.2	77.1
Total value of consumption (at farm gate)	**109 060**	**367 669**	**403 818**	**362 006**	**337 183**
Producer Support Estimate (PSE)	**-2 709**	**-23 226**	**-15 835**	**-30 752**	**-23 092**
Support based on commodity output	-11 243	-59 221	-48 164	-64 265	-65 235
Market Price Support[1]	-11 243	-59 337	-48 164	-64 319	-65 527
Positive Market Price Support	3 583	9 208	9 196	6 934	11 493
Negative Market Price Support	-14 827	-68 545	-57 361	-71 253	-77 020
Payments based on output	0	116	0	54	293
Payments based on input use	8 519	32 879	32 191	32 413	34 033
Based on variable input use	8 519	32 412	31 805	31 855	33 575
with input constraints	0	0	0	0	0
Based on fixed capital formation	0	409	356	450	420
with input constraints	0	0	0	0	0
Based on on-farm services	0	58	29	107	38
with input constraints	0	0	0	0	0
Payments based on current A/An/R/I, production required	0	0	0	0	0
Based on Receipts / Income	0	0	0	0	0
Based on Area planted / Animal numbers	0	0	0	0	0
with input constraints	0	0	0	0	0
Payments based on non-current A/An/R/I, production required	0	0	0	0	0
Payments based on non-current A/An/R/I, production not required	0	2 640	0	178	7 743
With variable payment rates	0	0	0	0	0
with commodity exceptions	0	0	0	0	0
With fixed payment rates	0	2 640	0	178	7 743
with commodity exceptions	0	0	0	0	0
Payments based on non-commodity criteria	0	0	0	0	0
Based on long-term resource retirement	0	0	0	0	0
Based on a specific non-commodity output	0	0	0	0	0
Based on other non-commodity criteria	0	0	0	0	0
Miscellaneous payments	15	476	139	923	366
Percentage PSE (%)	**-2.3**	**-5.0**	**-3.3**	**-6.7**	**-5.0**
Producer NPC (coeff.)	**0.91**	**0.88**	**0.90**	**0.87**	**0.87**
Producer NAC (coeff.)	**0.98**	**0.95**	**0.97**	**0.94**	**0.95**
General Services Support Estimate (GSSE)	**3 526**	**17 151**	**15 700**	**18 485**	**17 267**
Agricultural knowledge and innovation system	402	1 320	1 319	1 326	1 314
Inspection and control	25	352	354	340	361
Development and maintenance of infrastructure	2 021	14 347	12 830	15 741	14 469
Marketing and promotion	14	93	126	85	67
Cost of public stockholding	1 044	1 035	1 065	989	1 052
Miscellaneous	21	5	6	4	4
Percentage GSSE (% of TSE)	**70.9**	**..**	**90.9**	**..**	**..**
Consumer Support Estimate (CSE)	**14 692**	**74 464**	**65 143**	**78 394**	**79 855**
Transfers to producers from consumers	10 856	56 323	47 482	59 928	61 559
Other transfers from consumers	-224	1 289	1 029	2 169	670
Transfers to consumers from taxpayers	4 222	17 031	17 399	16 362	17 333
Excess feed cost	-163	-179	-766	-65	293
Percentage CSE (%)	**14.1**	**21.4**	**16.9**	**22.7**	**25.0**
Consumer NPC (coeff.)	**0.91**	**0.86**	**0.89**	**0.85**	**0.84**
Consumer NAC (coeff.)	**0.88**	**0.82**	**0.86**	**0.82**	**0.80**
Total Support Estimate (TSE)	**5 040**	**10 956**	**17 264**	**4 095**	**11 509**
Transfers from consumers	-10 632	-57 612	-48 510	-62 097	-62 229
Transfers from taxpayers	15 896	67 279	64 746	64 023	73 067
Budget revenues	-224	1 289	1 029	2 169	670
Percentage TSE (% of GDP)	**1.0**	**0.4**	**0.7**	**0.2**	**0.4**
Total Budgetary Support Estimate (TBSE)	**16 283**	**70 293**	**65 428**	**68 414**	**77 036**
Percentage TBSE (% of GDP)	**3.3**	**2.5**	**2.5**	**2.5**	**2.6**
GDP deflator (2000-02=100)	**100**	**264**	**254**	**265**	**273**
Exchange rate (national currency per USD)	**47.26**	**68.48**	**65.12**	**69.85**	**70.48**

.. Not available

Note: p: provisional. NPC: Nominal Protection Coefficient. NAC: Nominal Assistance Coefficient.
A/An/R/I: Area planted/Animal numbers/Receipts/Income.
1. Market Price Support (MPS) is net of producer levies and excess feed cost. MPS commodities for India are: wheat, maize, rice, soybean, rapeseed, groundnuts, chick pea, other pulses, potatoes, onion, tomatoes, mango, bananas, sugar, cotton, milk, bovine meat, sheep meat, poultry and eggs.

Source: OECD (2020), "Producer and Consumer Support Estimates", *OECD Agriculture statistics* (database), http://dx.doi.org/10.1787/agr-pcse-data-en.

Contextual information

India is the seventh largest country by land area and the second most populous after the People's Republic of China with over 1.3 billion people (Table 13.2). While the share of urban population continued to increase over the past decade, about two-thirds of the population still live in rural areas. At just 0.15 ha per capita, agricultural land is very scarce.

Agriculture accounts for an estimated 43.9% of employment, but its 14.6% share in GDP indicates that labour productivity remains significantly lower than in the rest of the economy. The productivity gap is also reflected in the evolution of farm incomes, which correspond to less than one-third of non-agricultural income. The share of value added from agriculture has been gradually reduced, but mostly in favour of services rather than manufacturing. Services led economic growth over the last 15 years, playing a more important role in India's economic development than in most other major emerging economies.

Indian agriculture is continuing to diversify towards livestock and away from grain crops. While grains and milk remain dominant, there has been a gradual change in the composition of production to other crops – such as sugar cane, cotton, fruit and vegetables – as well as certain meat sub-sectors. Livestock output growth has been faster and less volatile than crop production. The sector continues to be dominated by a large number of small-scale farmers, as the national average operational holding size has been in steady decline.

Table 13.2. India: Contextual indicators

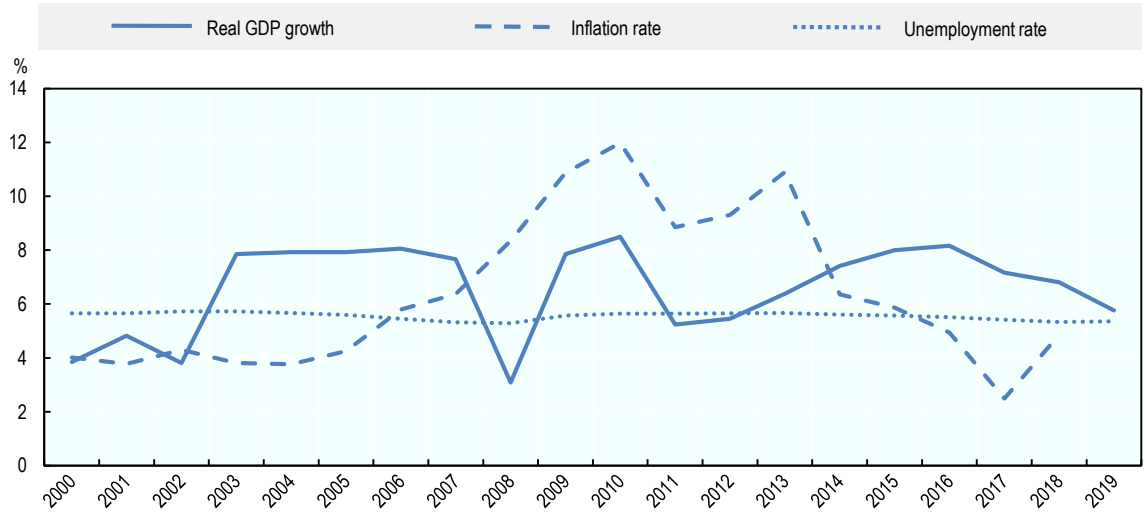
	India		International comparison	
	2000*	2018*	2000*	2018*
Economic context			**Share in total of all countries**	
GDP (billion USD in PPPs)	2 279	10 500	5.7%	9.3%
Population (million)	1 057	1 353	24.5%	26.3%
Land area (thousand km²)	2 973	2 973	3.6%	3.6%
Agricultural area (AA) (thousand ha)	180 975	179 721	6.0%	6.0%
			All countries[1]	
Population density (inhabitants/km²)	355	455	53	62
GDP per capita (USD in PPPs)	2 157	7 763	9 275	21 924
Trade as % of GDP	10	17	12.4	15.3
Agriculture in the economy			**All countries[1]**	
Agriculture in GDP (%)	21.6	14.6	3.1	3.6
Agriculture share in employment (%)	59.6	43.9	-	-
Agro-food exports (% of total exports)	10.9	9.9	6.2	7.3
Agro-food imports (% of total imports)	5.6	4.4	5.5	6.3
Characteristics of the agricultural sector			**All countries[1]**	
Crop in total agricultural production (%)	73	64	-	-
Livestock in total agricultural production (%)	27	36	-	-
Share of arable land in AA (%)	89	87	32	33

Notes: *or closest available year. 1. Average of all countries covered in this report. EU treated as one.
Sources: OECD statistical databases; UN Comtrade; World Bank, WDI and national data.

Real GDP growth has been decelerating since 2016 and reached 5.8% in 2019, highlighting remaining structural bottlenecks in areas such as labour markets or the business environment. In this sense, the low unemployment figures (average of 5.4% in 2017-19) hide significant degrees of informal employment. Against the background of higher prices for selected food items, inflation increased to 4.9% in 2018-19 (Figure 13.4).

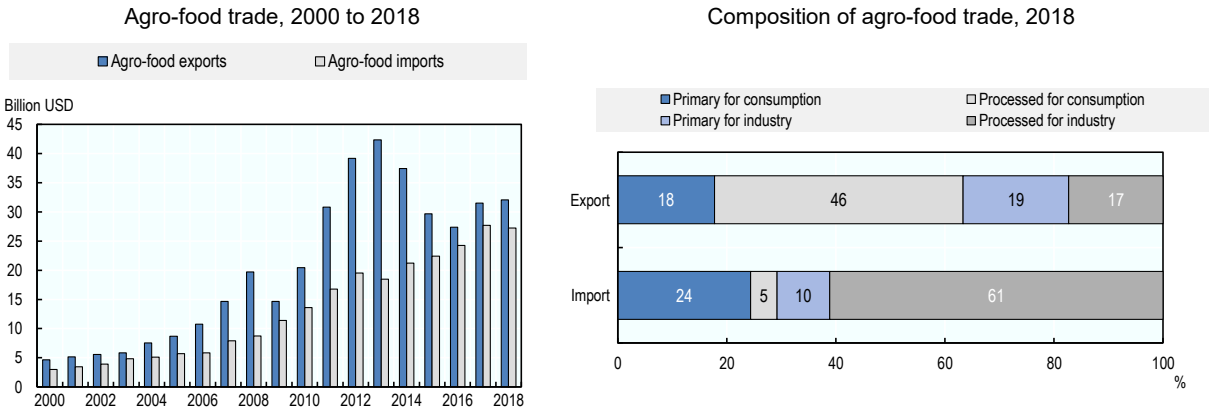
India has consistently been a net agro-food exporter over the last two decades, but agro-food imports have been increasing since 2007, while exports trends have declined from the peak of 2013. Products for direct consumption – of low value, raw or semi-processed, and marketed in bulk – dominate agro-food exports, representing 64% of the total in 2018. Processed products for further processing by domestic industry are the main import category, accounting for 61% of total agro-food imports (Figure 13.5).

Figure 13.4. India: Main economic indicators, 2000 to 2019



Sources: OECD statistical databases; World Bank, WDI and ILO estimates and projections.

Figure 13.5. India: Agro-food trade



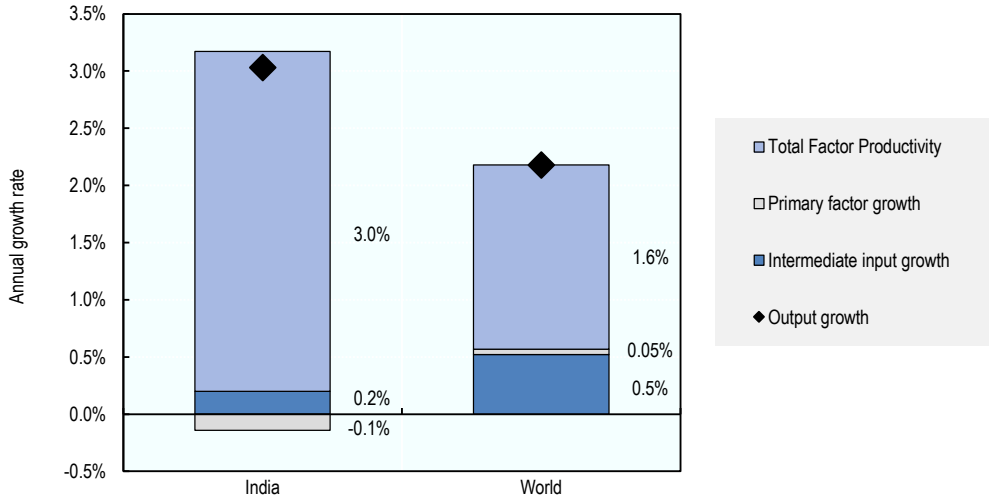
Note: Numbers may not add up to 100 due to rounding.
Source: UN Comtrade Database.

Agricultural output growth in India averaged 3% in 2006-15, more than one-third above the world average (Figure 13.6). This has been driven mainly by an important increase in total factor productivity (TFP) at 3% per year, backed by technological progress in the form of improved seeds and better infrastructure (including irrigation coverage, road density, and electricity supply).

However, the sustained growth in agricultural output has been exerting mounting pressures on natural resources, particularly land and water. This is reflected in the nutrient surplus intensities at the national level, which are much higher than the average for OECD countries. The share of agriculture in total

greenhouse gas (GHG) emissions is also higher than the OECD average, but is in direct link as well to the size of the agricultural sector in the Indian economy. Livestock rearing is the main source of GHGs (Table 13.3).

Figure 13.6. India: Composition of agricultural output growth, 2007-16



Note: Primary factors comprise labour, land, livestock and machinery.
Source: USDA Economic Research Service Agricultural Productivity database.

Table 13.3. India: Productivity and environmental indicators

	India		International comparison	
	1991-2000	2007-2016	1991-2000	2007-2016
			World	
TFP annual growth rate (%)	1.0%	3.0%	1.6%	1.6%
			OECD average	
Environmental indicators	**2000***	**2018***	**2000***	**2018***
Nitrogen balance, kg/ha	103.8	129.7	33.3	29.1
Phosphorus balance, kg/ha	20.7	23.7	3.3	2.3
Agriculture share of total energy use (%)	4.9	4.8	1.7	2.0
Agriculture share of GHG emissions (%)	23.3	18.6	8.1	8.9
Share of irrigated land in AA (%)	34.3	39.2	-	-
Share of agriculture in water abstractions (%)	91.5	..	46.0	49.0
Water stress indicator	..	..	9.9	8.9

Notes: * or closest available year.
Sources: USDA Economic Research Service, Agricultural Productivity database; OECD statistical databases; FAO database and national data.

Description of policy developments

Main policy instruments

Over the past several decades, agricultural policies have sought to achieve food security, often interpreted in India as self-sufficiency: seeking to ensure that farmers receive "remunerative" prices, while at the same time safeguarding the interest of consumers by making food available at affordable prices. The set of policies directly relating to agriculture and food in India consist of six major categories: i) managing the

prices and marketing channels for many farm products; ii) making variable farm inputs available at government-subsidised prices; iii) providing general services for the agriculture sector as a whole; iv) making certain food staples available to selected groups of the population at government-subsidised prices; v) regulating border transactions through trade policy; and vi) more recently, a farmer welfare focus through the income support scheme PM-KISAN. In addition, environmental measures concerning agriculture have been gaining prominence (OECD/ICRIER, 2018[21]; ICRIER, 2020[22]; Gulati, Kapur and Bouton, 2020[23]).

In India, states have constitutional responsibility for many aspects of agriculture, but the central government plays an important role by developing national approaches to policy and providing the necessary funds for implementation at the state level. The broad policy guidelines are currently set within a framework of three-year action agendas, prepared by the National Institution for Transforming India (NITI Aayog, a policy think tank of the government of India).[1] The central government (Union Cabinet) is responsible for some key policy areas, notably for international trade policies and for overseeing the implementation of the National Food Security Act (NFSA) of 2013. In 2016, the central government set the target of doubling farmers' income by 2022-23, identifying seven sources of income growth key to driving the design and implementation of agricultural policies: improvement in crop and livestock productivity; resource use efficiency; increase in the cropping intensity; diversification towards high-value crops; improvement in real prices received by farmers; and shift from farm to non-farm occupations.

Policies that govern the **marketing of agricultural commodities** in India – from the producer level to downstream levels in the food chain – include the Essential Commodities Act (ECA) and the Agricultural Produce Market Committee (APMC) Acts. Through these acts, producer prices are affected by regulations influencing pricing, procuring, stocking, and trading of commodities. Differences exist among states in the status of their respective APMC Acts and in how these acts are implemented. The electronic portal (electronic National Agricultural Market, e-NAM) initiated in 2016, and the 2017 model Agricultural Produce and Livestock Marketing (Promotion and Facilitation) Act – shared with state governments as a recommendation for adoption – aim to gradually encourage a single national agricultural market. Agriculture marketing also covers the futures market governed by the Securities and Exchange Board of India (SEBI), with the largest value of agricultural commodity trade taking place through the National Commodity Derivative Exchange (NCDEX). In addition, the Negotiable Warehouse Receipt System (NWRS) – established under the Warehousing Development and Regulatory Authority (WDRA) – aims to support farmers with storing produce in warehouses.

Based on the recommendations of the Commission for Agricultural Costs and Prices (CACP), the central government establishes a set of **minimum support prices (MSPs)** for 24 crops each year. The CACP recommends the MSPs based on the costs of production at two levels: the costs of variable inputs such as seeds, manure, chemicals, fuel, irrigation, rent paid for leased land as well as interest on working capital (A2) and the estimated value of family labour (FL). The CACP does not include in its recommendation the imputed rent of owned land and the imputed interest on owned capital (C2). State governments can also provide a bonus payable above and over the MSP for some crops. The national and state-level agencies operating on behalf of the Food Corporation of India (FCI) buy wheat, rice and coarse grains through open-ended procurement at MSP. A number of other agencies can buy pulses, oilseeds and cotton at MSP - including through the *Pradhan Mantri Annadata Aay Sanrakshan Yojna* (PM-AASHA) programme introduced in 2018 – and some perishable agricultural and horticultural commodities without MSP are also procured. However, procurement under the price support scheme has been effectively operating mainly for wheat, rice and cotton and only in a few states.

The only payments based on output concern the sugar sector and were introduced in 2018. The payments support sugar mills to clear sugar cane arrears and are directly paid to sugar cane farmers.

On the input side, major policies enable agricultural producers to obtain farm inputs at low prices. The largest **input subsidies** are provided through policies governing the supply of fertilisers, electricity, and

water. Other inputs are also supplied at subsidised prices, including seeds, machinery, credit, and crop insurance. In recent years, state-level loan debt waivers increased significantly, with local governments compensating lending institutions for forgiving debt to farmers. About two-thirds of agricultural loans are from financial institutions such as commercial banks, with the rest stemming from non-institutional sources (e.g. moneylenders) (Reserve Bank of India, 2019[24]).

The *Pradhan Mantri Kisan Samman Nidhi* (PM-KISAN) scheme provides an annual **direct income transfer** of INR 6 000 (USD 84) to all farmers with land titles. The unconditional payment does not require farmers to produce and targets farmers' broad needs, which can include everything from the purchase of inputs to any other non-farming related needs.

In the area of **general services**, expenditures are dominated by the development and maintenance of infrastructure, particularly related to irrigation. Public expenditures for public stockholding and related to the agricultural knowledge and innovation system are also significant.

Public distribution of food grains operates under the joint responsibility of the central and state governments. The Targeted Public Distribution System (TPDS) operates under the NFSA in all states and Union Territories (UTs). A set of Other Welfare Schemes (OWS) also operate under the NFSA. The central government allocates food grains to the state governments and the FCI transports food grains from surplus states to deficit states. The state governments are then responsible for distributing the food grain entitlements, i.e. allocating supplies within the state, identifying eligible families, issuing ration cards, and distributing food grains mainly through Fair Price Shops.

India's **Foreign Trade Policy** – formulated and implemented by the Directorate General of Foreign Trade (DGFT) – is announced every five years, but it is reviewed and adjusted annually in consultation with relevant agencies. The current policy applies until 2020. India's Basic Customs Duty (BCD) (also known as the "statutory rate") is agreed at the time of approving the annual budget.

India has managed for several decades its agricultural exports through a combination of **export restrictions**, including export prohibitions, export licensing requirements, export quotas, export duties, minimum export prices, and state trading requirements. The application or elimination of such restrictions could be changed several times per year, taking into account concerns about domestic supplies and prices.

Regarding export subsidisation in agriculture, the Agricultural and Processed Food Products Export Development Authority (APEDA) – under the responsibility of the Ministry of Commerce and Industry (MOCI) – has in recent years provided financial assistance to exporters in the form of transport support.[2]

The **Agriculture Export Policy** framework – approved in December 2018 – has as main objectives doubling agricultural exports by 2022-23 and boosting the value added of agricultural exports. The policy document also includes three main areas for action that could support the above objectives under "a stable trade policy regime". First, ensuring that processed agricultural products and organic products would not be subject to export restrictions. Second, initiating consultations among stakeholders and Ministries in order to identify the "essential" food security commodities on which export restrictions could still be applied under specific market conditions. Third, reducing import barriers applied to agricultural products for processing and re-exporting.

India ratified the **Paris Agreement on Climate Change** on 2 October 2016, with its Intended Nationally Determined Contribution (INDC) submitted a year earlier becoming its NDC. The NDC includes a commitment to reduce the emissions intensity of GDP by 33-35% by 2030 below 2005 levels, but specifies that this commitment does not bind India to any sector specific mitigation obligation or action (Climate Action Tracker, 2018[25]).

With regard to agriculture, India's NDC has a strong focus on climate change adaptation, as addressed in several of the central government's main programmes for agriculture (entitled "missions"). These include, among others, the National Mission for Sustainable Agriculture; the *Paramparagat Krishi Vikas Yojana*

mission promoting organic farming practices; the *Pradhan Mantri Krishi Sinchayee Yojana* mission promoting efficient irrigation practices; or the National Mission on Agricultural Extension & Technology.

Domestic policy developments in 2019-20

Developments in the policy and legal frameworks

The 2019-20 Union Budget (of July 2019) and the 2020-21 Union Budget (of February 2020) both aimed paving the way towards achieving the central government's objective of doubling farmers' income by 2022-23 particularly through the increased allocations to the direct income transfer scheme PM-KISAN (see also section on *payments to producers*) (Gulati, 2019[26]; PRS India, 2019[27]). The trends in budgetary allocations for fertiliser and food subsidies are at opposite ends under the two budgets. While allocations for fertiliser and food subsidies increased between 2018 and 2019, both fertiliser and food subsidies were lowered for financial year (FY) 2020-21 (by 10.8% and 37%, respectively) (Economic Times, 2020[28]; The Print, 2020[29]). In the 2020-21 budget the central government has nevertheless been deferring important amounts of both fertiliser and food subsidies. First, a significant part of the allocation due to the fertiliser industry as per the provisions of the fertiliser subsidy scheme was not committed. Second, the central government has also not allocated for the entire food subsidy expense incurred by the Food Corporation of India (FCI) in a year for procurement, storage, transportation and distribution of wheat and rice to states. The FCI has thus been covering the gap through various types of loans from sources such as the National Small Savings Fund (NSSF) or shorts term loans, bonds, and cash credit limits from banks[3] (ICRIER, 2020[22]).

In July 2019, the Prime Minister set up a High Powered Committee of Chief Ministers for the "Transformation of Indian Agriculture". The current tasks of the Committee include identifying: i) approaches to reforming agricultural marketing regulations at the level of each state; ii) adjustments to the Essential Commodities Act (ECA) to attract private investments in agricultural marketing and infrastructure; and iii) mechanisms for linking marketing reforms with the electronic National Agricultural Market (e-NAM) (Government of India, 2019[30]). Through the 2020-21 Union Budget, the Ministry of Finance outlined a new 16-point agenda for Indian agriculture, primarily focused on improving the cold storage chain and agri-warehousing as well as encouraging states to adopt the agri-marketing model act (LiveMint, 2020[31]).

A group of seven ministers was set up in December 2019 to review the *Pradhan Mantri Fasal Bima Yojana* (PMFBY) **crop insurance scheme** introduced by the central government in 2016 (Economic Times, 2019[32]). The states of Andhra Pradesh, Bihar and West Bengal exited from the central scheme due to low claim ratios (i.e. claims paid against the premiums) and launched their own crop insurance scheme in 2019. Several insurance companies also left the scheme claiming very high costs of reinsurance and a sharp increase in claims caused by recent weather events (Economic Times, 2019[33]; LiveMint, 2019[34]).

Institutional rearrangements

A new Ministry of Fisheries, Animal Husbandry and Dairying was created in May 2019 from the department with the same name under the Ministry of Agriculture and Farmers Welfare (MAFW). The separate ministry was set up with the objective to reflect the increasing importance of the livestock and fisheries sub-sectors in the value of agricultural production, but also to better address issues such as low productivity or animal health (The Indian Express, 2019[35]).

Domestic price support policies

On 3 July 2019, the Cabinet Committee on Economic Affairs (CCEA) approved increases in **minimum support prices (MSPs)** for all *kharif* crops (summer planted). This included a raise by 3.5% (INR 60) to

INR 1 760 per quintal (USD 248 per tonne) for maize; by 3.6% (INR 65) to INR 1 815 per quintal (USD 256 per tonne) for non-basmati rice; by 2% (INR 105) to INR 5 255 per quintal (USD 741 per tonne) for cotton; and by 2.2% (INR 125) to INR 5 800 per quintal (USD 819 per tonne) for pulses such as pigeon pea (*tur*). According to the CCEA's estimates, the MSPs introduced for *kharif* crops provide a return that is at least 50% above the all-India weighted average cost of production for the respective crops (CACP, 2020[36]).

The increase in *kharif* crops MSPs was followed by an increase in the MSPs for *rabi* crops (winter planted) that is to be harvested and marketed during the 2020-21 marketing year, announced by the CCEA on 23 October 2019. With the exception of safflower, the CCEA estimates that the proposed 2019 MSPs increases for *rabi* crops provide returns more than 50% higher of the all-India weighted average cost of production for the respective crops. For example, the CCEA announcement introduced an increase by 4.4% (INR 85) to INR 1 925 per quintal (USD 272 per tonne) for wheat (return over weighted average cost of 109%); by 5.2% (INR 255) to INR 4 875 per quintal (USD 647 per tonne) for chick peas (*gram*) (74%); by 6.8% (INR 325) to INR 4 800 (USD 637 per tonne) for lentils (76%); and by 5.3% (INR 225) to INR 4 425 per quintal (USD 588 per tonne) for rapeseed and mustard (90%) (CACP, 2020[36]).

In July 2019, the CCEA decided to maintain the Fair and Remunerative Price (FRP) for sugar cane unchanged at INR 275 per quintal (USD 39 per tonne) for the marketing year 2019-20. The CCEA also approved a premium of INR 2.75 per quintal (USD 0.4 per tonne) for higher productivity[4] (The Hindu Business Line, 2019[37]; GAIN-IN0091, 2019[38]). In parallel, the Ministry of Consumer Affairs, Food and Public Distribution increased in February 2019 the minimum selling price for sugar from INR 29 (USD 0.41) per kg to INR 31 (USD 0.44) per kg (MCAFPD, 2019[39]).

Stockholding policies

On 31 July 2019, the Ministry of Consumer Affairs, Food and Public Distribution announced that the annual sugar buffer stock would be 4 million tonnes for the period August 2019 to July 2020, 1 million tonnes higher than in 2018-19. As in 2018, instead of buying sugar from mills, the government would finance the cost of storage at mill-owned warehouses (The Hindu Business Line, 2019[37]; GAIN-IN0091, 2019[38]).

Due to the increase in the MSPs, the FCI announced an increase in the reserve price for wheat from government stocks auctioned to private traders under the open market sale scheme (OMSS). On 30 April 2019, the FCI announced the reserve price for wheat for sale under OMSS for the first quarter of the 2019-20 marketing year at INR 20 800 (USD 301) per tonne, with an increment of INR 550 (USD 8) per tonne in the subsequent three quarters (GAIN-IN0095, 2019[40]).

Input subsidies

The only state announcing an additional **farm loan waiver** scheme in 2019 was Maharashtra (*Mahatma Jyotirao Phule* loan waiver), waiving up to INR 0.2 million (USD 2 700) for about 8.9 million farmers holding non-defaulting loans, in addition to the INR 254.8 billion (USD 3.4 billion) programme already introduced in 2017. According to the Reserve Bank of India (RBI), several other states disbursed outstanding payments in 2019 under the programmes initiated since 2014: Andhra Pradesh, Tamil Nadu, Uttar Pradesh, Punjab, Karnataka, Rajasthan, Madhya Pradesh, and Chhattisgarh, with an estimated total of INR 369 billion (USD 5.2 billion) allocated for loan waivers in 2019-20. However, available estimates indicate that by March 2020 the selected states only allotted two-thirds of the overall amounts announced at the outset of the programmes (Reserve Bank of India, 2019[24]).

Payments to producers

The 2020-21 Union Budget allocated INR 750 billion (USD 10.6 billion) for the **direct income transfer scheme** *Pradhan Mantri Kisan Samman Nidhi* (PM-KISAN) in FY 2020-21. The scheme was introduced through the 2019-20 interim Union Budget in February 2019. Initially covering small-scale farmers

operating a land area up to 2 hectares, the PM-KISAN scheme has been extended to all farmers with land titles (ICRIER, 2020[22]; MAFW, 2020[41]; Economic Times, 2019[42]).

Other support to producers

The central government prioritised in 2019 the strengthening of **farm producer associations** (FPOs). In this sense, the 2019-20 Union Budget of July 2019 provided support for the creation of 10 000 new farm producer organisations, 80 livelihood business incubators (LBIs), and 20 technology business incubators (TBIs) assisting 75 000 entrepreneurs in the agro-food sector in rural areas (Ministry of Finance, 2019[43]). In addition, the budget allocation for the specific scheme supporting dairy cooperatives and FPOs in the dairy sector was increased thirtyfold (ICRIER, 2020[22]). In early 2019, the central government also designated 24 "production clusters"[5] for tomatoes, onions and potatoes (TOP) under the scheme "Operation Greens", launched by the Ministry of Food Processing Industries (MOFPI) at the end of 2018 to stabilise the supply and prices of TOP by promoting farmer producers organisations, agri-logistics, processing facilities and management skills. Under this programme, the Ministry is setting up a "trade map" for these three vegetables that would cover varieties, price trends, buyers, sellers and processors across the identified states to help link farmers with domestic and international markets (Times of India, 2019[44]).

The 2019-20 Union Budget introduced the *Pradhan Mantri Kisan Pension Yojana* programme, a voluntary and contributory pension scheme for small-scale farmers. The scheme is to provide a minimum monthly pension of INR 3 000 (USD 42) on attainment of 60 years of age, with an entry age of 18 to 40 years. The government of India co-finances the scheme[6] with an approved budget of INR 108 billion (USD 1.4 billion) until March 2022, by then aiming to cover 50 million farmers (Ministry of Finance, 2019[43]).

The National Mission for Vegetable Oils was set up in May 2019 and aims to increase the domestic production of oilseeds. Support is to focus on farm inputs, higher minimum support prices for oilseeds, and increased procurement through state-run agencies (Cogedis, 2019[45]).

The Dairy Processing and Infrastructure Development Fund (DPIDF) scheme introduced in 2019 focuses on setting up chilling and processing infrastructure as well as milk adulteration electronic testing equipment. The scheme is co-funded by the government of India together with the National Bank of Agriculture and Rural Development (NABARD), the National Dairy Development Board (NDDB), and the National Cooperative Development Corporation (NCDC) (ICRIER, 2020[22]).

The Animal Husbandry Infrastructure Development Fund (AHIDF) scheme introduced in 2019 focuses on setting up processing infrastructure in the livestock sector. The government of India supports the implementation of the scheme through NABARD for interest subvention (ICRIER, 2020[22]).

The government has also extended the *Kisan Credit Card* (KCC) scheme – which has been providing subsidised interest rates for short-term formal **credit** to crop farmers – to farmers in the livestock and fisheries sectors (ICRIER, 2020[22]).

The National Animal Disease Control Programme for Foot and Mouth Disease (FMD) and Brucellosis, introduced in 2019, is a scheme fully funded by the union government that supports the vaccination of cattle, sheep and pigs as well as primary vaccination in calves (4-5 months of age) by 2025. The scheme covers the set-up of cold chain infrastructure for vaccines as well as extension services (ICRIER, 2020[22]).

The 2020-21 Union Budget introduced two new schemes supporting the cold chain and **marketing** of agro-food perishable goods. These include the *Kisan Rail* ('Farmer rail') that is to be funded by public-private partnerships – under the co-ordination of the Ministry of Railways – for transporting agro-food products by rail, and *Krishi Udaan* ('Farmer flight') that is to be co-ordinated by the Ministry of Civil Aviation for transporting such goods by plane domestically and internationally (The Print, 2020[29]).

Support to processors

In March 2019, CCEA announced subsidised interest rates amounting to INR 27.9 billion (USD 370 million) for loans to sugar mills under the new scheme providing financial assistance for the enhancement of ethanol production capacity (ICRIER, 2020[22]). In November 2019, the Union Cabinet extended the 18-month moratorium period (i.e. the time period during the loan term when the borrower is not required to make any repayment) by six more months for all existing loans to sugar mills supporting them to clear cane arrears with farmers and set up ethanol processing facilities (India Today, 2019[46]).

Agri-environmental linkages

The 2019-20 Union Budget allocated 0.1% of the agriculture budget for further pilots of 'Zero Budget Natural Farming' (ZBNF) across different parts of India that would allow gathering information on its viability and assessing the opportunities for scaling up its application. ZBNF is a method of chemical-free agricultural production drawing from traditional Indian practices,[7] but there is a lack of evidence on the impacts of ZBNF across different Indian agro-ecological zones. In the 2020-21 Union Budget, envisaged steps on ZBNF are not defined, while the existing soil, water and organic farming schemes which would be equipped to respond to agri-environmental challenges and could be scaled up receive insufficient push forward (Ministry of Finance, 2019[43]; The Hindu, 2019[47]).

In spite of a proposal by the Ministry of Environment, Forest and Climate Change (MEFCC) Expert Committee to include farmers with landholdings above five hectares and to introduce a "water credit" for users who conserve groundwater above a certain threshold, the agriculture sector was excluded from the levy of a Groundwater Conservation Fee (GWCF) introduced on 1 June 2019, to be paid by industry and domestic users for consumption beyond a certain limit (The Hindu Business Line, 2019[48]; The Times of India, 2019[49]). The MAFW has nevertheless presented in early January 2020 a five-year action plan aimed at lowering rice procurement from areas where rice cultivation contributed to severe groundwater levels depletion (The Print, 2020[50]).

Food subsidy and other support to consumers

In October 2020, the Ministry of Consumer Affairs, Food and Public Distribution set a deadline of 30 June 2020 for the full implementation of the "**One nation, one ration card**" programme under the Public Distribution System. This aims to address the problem of migrant beneficiaries who often cannot access the subsidised food grain quota due to the change in residence for employment purposes (ICRIER, 2020[22]).

The central government introduced the distribution of pulses to states/Union Territories (UTs) under the existing welfare schemes. The scheme would dispose pulses procured at MSP under PSS with a subsidy of INR 15 (USD 0.2) per kg over the issue price. The scheme is to be in place for either 12 months from the date of the first supply or until the present stock of 3.5 million tonnes is completely disposed of, whichever occurs earlier. The distribution of stocks shall be for utilisation under various welfare schemes such as mid-day meal, Integrated Child development services, Public Distribution System, etc. (ICRIER, 2020[22]).

Changes in food safety and labelling regulations

The Food Safety and Standards Authority of India (FSSAI) introduced new regulations in June 2019 with respect to specific labelling requirements. These concern more specifically the listing on food products of nutritional information, food ingredients and food additives (FSSAI, 2019[51]).

In August 2019, the FSSAI introduced amendments for a number of sections of the 2018 draft **Food Safety** and Standards (Licensing and Registration of Food Businesses) Regulations. Through some of the key

amendments, the FSSAI aims to bring e-commerce food business operators (FBOs) under the purview of the licensing regulations. Other amendments introduced include the rationalisation of the fee structure charged for licences and registrations, as well as the simplification of the application processes for registration and licensing (FSSAI, 2019[52]).

Trade policy developments in 2019-20

Changes to tariff measures and other taxes on imports

On 26 April 2019, the Ministry of Finance (MOF) issued a Notification raising the most favoured nation (MFN) **tariff** for wheat from 30% to 40% (Ministry of Finance, 2019[53]). On 15 June 2019, the MOF raised the MFN tariff for lentils (*masur*) from 33% to 50% (Ministry of Finance, 2019[54]).

On 4 September 2019, and for a period of 180 days, the government of India introduced a 5% safeguard duty on palm oil originating in Malaysia and imported under the India-Malaysia Economic Comprehensive Agreement. The government notification refers to an increase in imports having "led to idling of significant capacities of the domestic industry during the period of [safeguard] investigation" (Ministry of Finance, 2019[55]).

On 15 June 2019, the MOF announced the implementation of the previously postponed increase in **tariffs** for 28 goods imported from the United States. In addition to non-agricultural products, these include shelled and in-shell almonds, in-shell walnuts, fresh apples and pulses, for which applied tariffs vary between 70% and 120% (Ministry of Finance, 2019[56]; LiveMint, 2019[57]).

In August 2019, the MAFW proposed the introduction of an additional 5% tax on edible oils imports that would finance a new Oilseeds Development Fund to support oilseeds producers, including through the National Mission for Vegetable Oils (see also section on "Other support to producers") (Live Mint, 2019[58]).

Tariff Rate Quotas (TRQs)

On 9 July 2019, the Ministry of Commerce and Industry (MOCI) announced an additional Tariff Rate Quota (TRQ) of 0.4 million tonnes of feed grade maize for poultry producers (MOCI, 2019[59]).

Export measures

Driven by a doubling of onion retail prices between July and September 2019 after severe floods in the states of Maharashtra and Karnataka, in mid-September 2019 the government of India initially introduced a **minimum export price (MEP)**[8] for onions at USD 850 Free on Board (FOB) per tonne, followed at the end of September 2019 by an **export ban** on onions applied until 15 March 2020. In addition, the central government introduced limits on stocks held by private traders: retail traders across India were allowed to keep a maximum of 10 quintals (10 tonnes) in stocks, while wholesale traders were allowed to keep up to 500 quintals (50 tonnes) of onions (ICRIER, 2020[22]; Gulati and Wardhan, 2019[60]; Economic Times, 2019[61]; Economic Times, 2019[62]).

The CCEA approved on 28 August 2019 a sugar export subsidy of INR 10 448 (USD 141) per tonne to sugar mills starting in October 2019. The subsidy would support sugar mills liquidate surplus and clear sugar cane arrears to farmers. The subsidy is transferred directly to the farmers' accounts on behalf of the mills against cane price dues, while mills have to provide transactions details to the government for transferring the money in proportion to the cane bought from farmers. The total budget allocated for the programme in marketing year 2019-20 is INR 62.7 billion (USD 876.7 million) (Economic Times, 2019[63]). The maximum admissible export quantity (MAEQ) allocated for sugar mills for the 2019-20 marketing season is of 6 million tonnes (ICRIER, 2020[22]).

On 31 October 2019, the World Trade Organization (WTO) ruled that the export subsidy programme Merchandise Exports from India Scheme (MEIS) violated provisions under the WTO's Agreement on Subsidies and Countervailing Measures (SCM). The ruling mainly concerned manufacturing goods. However, under the 2015-20 MEIS the Directorate General of Foreign Trade (DGFT) had introduced a 7% export subsidy for chickpeas (between April and June 2018) and a 5% export subsidy for non-basmati rice (between November 2018 and March 2019) based on the FOB value of the products. While India appealed the WTO ruling in November 2019, the Indian Ministry of Finance had already announced in August 2019 that it would replace the MEIS with the Scheme for Remission of Duties or Taxes on Export Product (RoDTEP). Its entry into force was approved in March 2020, but the RoDTEP rates will be decided following specific industry consultations until the end of 2020, while MEIS is being phased out (Economic Times, 2020[64]) (Economic Times, 2019[65]; The Hindu Business Line, 2019[66]).

Eight states[9] finalised action plans for the implementation of the **Agriculture Export Policy** (AEP) framework adopted by the government of India in December 2018. The eight state-level action plans finalised so far focus primarily on the exports-enhancing dimension of AEP through roadmaps for production clusters development, capacity building, and infrastructure and logistics. State-level monitoring committees were formed to oversee the implementation of AEP (Business Standard, 2020[67]).

Under the AEP, the Agricultural and Processed Food Products Export Development Authority (APEDA) set up a Farmer Connect Portal to provide a platform linking Farm Producer Organisations (FPOs) to exporters. In addition, a Memorandum of Understanding was concluded with the National Cooperative Development Corporation to provide co-operatives with an active role in implementing the AEP (Business Standard, 2020[67]).

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Notes

[1] These replaced the former five-year plans prepared by the erstwhile Planning Commission of India (the 12th Five Year Plan 2012-17 was the last of these plans).

[2] A Ministerial Decision on Export Competition at the WTO Ministerial Conference held in Nairobi in 2015 has put an end to the subsidisation of agricultural exports, which for India would occur at the end of 2023 (https://www.wto.org/english/thewto_e/minist_e/mc10_e/l980_e.htm).

[3] As per the Union Budget 2020-21, the cumulative loans from all sources at the end of 2019-20 stand at INR 33 trillion (Gulati and Banerjee, 2020[68]).

[4] INR 2.75 per quintal (USD 0.39 per tonne) for every 0.1% increase above the basic 10% recovery rate (i.e. defined by the CCEA as the amount of sugar produced by crushing a given amount of sugarcane by weight).

[5] Here, a 'production cluster' represents a geographic concentration of small-scale farmers joined through an association in order to receive financial support under the programme.

[6] Participating farmers are to contribute between INR 55 to INR 200 (USD 0.8 to USD 2.8) depending on the age of entry.

[7] ZBNF was originally promoted by Subhash Palekar, who developed it in the mid-1990s as an alternative to the Green Revolution's methods driven by chemical fertilisers and pesticides and intensive irrigation. He argued that the rising cost of these inputs was a leading cause of farmer indebtedness and suicide, while the impact of chemicals on the environment was devastating. He thus considered that without the need to spend money on these inputs – or take loans to buy them – the cost of production could be reduced and farming transformed into a 'zero budget' exercise.

[8] This represents the price below which exporters are not allowed to export a specific commodity. It is set taking into consideration concerns about the domestic prices and supply of that specific commodity.

[9] Assam, Karnataka, Kerala, Maharashtra, Nagaland, Punjab, Tamil Nadu, and Uttar Pradesh.

14 Indonesia

Support to agriculture

Indonesia's main agricultural policies are framed in the 2012 Food Law, which establishes the objectives of food sovereignty and self-reliance. In practice, these objectives have led to programmes aimed at achieving self-sufficiency in a number of staple products (rice, maize, soybeans, sugar and beef). As a consequence, the most important component of agricultural support in Indonesia is market price support to producers, including some negative support to palm oil. There is also a food assistance programme (BPNT) to support poor consumers.

Producer support to agriculture increased significantly in the 2000s from 7% of gross farm receipts to 24%, but has remained stable around that level over the past decade. Expenditures on general services for the sector (GSSE) are small compared to producer support, representing 5.5% of the Total Support Estimate (TSE). Total support amounts to around 3.2% of GDP.

Main policy changes

During 2015-19, Indonesia maintained the main features of its agricultural policy settings that were adopted in 2012. Market price support delivered through domestic and trade policy settings, along with budgetary transfers for variable inputs (mainly in the form of subsidies to fertiliser, seeds, credit, and grants for equipment) have been the main form of support provided to producers. The government minimum purchase prices for sugar, soybeans and paddy rice have remained constant in nominal terms since 2015. Similarly, Indonesia has maintained its export tax arrangements related to palm oil and cocoa, but since 2015, the government has also collected an export levy for crude palm oil to the amount of USD 50/tonne. In 2019, the government announced an increase in the biofuels mandate to blend 30% palm biodiesel, up from 15%.

Fertiliser subsidies remain the most significant component of budgetary outlays provided to the sector. Funding for these subsidies has increased, with some of the savings generated by reforms to the country's fuel subsidy arrangements being channelled into this policy area. Government investment in irrigation infrastructure has continued to grow since 2015, targeted to rice production.

BULOG (the Indonesian National Logistic Agency) maintains its market operations and purchasing functions for rice. Market price support schemes for rice remain the most important contributor to agricultural support. To compensate for some of these price effects, BULOG has continued to distribute rice within the RASTRA programme that replaced RASKIN, which operated from 2012 to May 2019. In June 2019 the programme was transformed into an electronic food voucher programme called BPNT and co-ordinated by the Ministry of Social Affairs. In 2018 and 2019, budgetary transfers to support the system amounted to IDR 20.8 trillion (USD 1.5 billion), compared to IDR 21.8 trillion spent in 2015 (USD 1.7 billion). In addition, a regulation establishes a maximum retail price for medium quality rice since August 2017.

Assessment and recommendations

- The focus of Indonesian agricultural policy has not significantly changed in the last five years. There are large price gaps between domestic and international markets of imported products such as rice, maize and poultry. The policy focus has been on self-sufficiency and the corresponding trade measures as a tool to achieve food self-reliance. However, the observed impact on incentives and prices are likely to be working against some of the main objectives that underpin the Food Law of 2012, in particular affordable prices for consumers and diversification in production and diet.
- The ongoing reform of the food assistance programmes is in line with OECD recommendations (OECD, 2015[1]; OECD, 2016[2]), and gradually shifting from the *Rastra* physical distribution system to the BPNT electronic food voucher system is an important step to improve effectiveness. Its completion should allow for better policy targeting and improved food security.
- Fertiliser subsidies are costly and the extent to which benefits accrue to farmers has been questioned. An application of fertilisers that is not adapted to the local soil and production conditions can also have negative environmental effects. A more efficient scheme would be to convert these subsidies into less coupled payments per unit of land, allowing for a more efficient allocation of inputs in production, in line with what has been progressively implemented in other countries, including in China.
- A greater focus should be placed on policies that improve the competitiveness of agriculture and of rural areas, stimulating domestic productivity through investments in infrastructure, the innovation system and through easing constraints on private investment in agriculture. Budgetary savings from reduced input subsidies could be re-allocated to reinforce Indonesia's Agricultural Innovation System and improve farmers' skills to manage production and natural resources on their farms and, hence, contribute to long-term agricultural productivity growth and poverty reduction.
- Indonesia applies a growing number of administrative requirements on agro-food imports related to food safety, quarantine, product standards and labelling. The combination of these requirements, uneven enforcement and lack of transparency from changing rules is adding to trade costs. Ensuring that requirements are set on a scientific basis, and improving transparency and consistency in application should help ease these growing costs. The recent implementation of an online system for import permits and requirements could contribute to improve transparency.
- Indonesia has no specific target for agricultural GHG emissions reductions in its Nationally Determined Contributions (NDCs). The National Plan to Reduce GHG emissions includes a set of targets to be achieved by 2020, including the management of agricultural land without burning and reforestation. Based on a systematic assessment of the performance of current measures, Indonesia could improve the contribution of agriculture forestry and land use to climate change mitigation.

Policy responses in relation to the COVID-19 outbreak

Agricultural policies

The government has relaxed the requirements to access Kredit Usaha Rakyat (People Enterprise Credit) and Ultra Micro Credit for SMEs, including in the agro-food sector. These measures include the relaxation of some administrative requirements for new loans such as business permits, tax register numbers and additional collateral documents. For existing loans, a 6-months delay on interest and debt payment was established. This policy has been funded with additional resources of IDR 6.1 trillion (USD 386.3 million).

The government has introduced tax measures, including corporate tax allowances and income tax reductions granted to processing industry workers up to a maximum income. The process of value added tax restitution for 19 identified sectors, including agro-food, has been accelerated.

Other measures focus on reducing tariffs and taxes, simplifying and reducing export and import restrictions on certain commodities including those supporting the manufacturing, food and medical industry. For instance, import certification requirements have been eliminated on imports of onions and garlic. Export and import processes have also been accelerated including through the export-import services provided by the National Logistic Ecosystem (NLE).

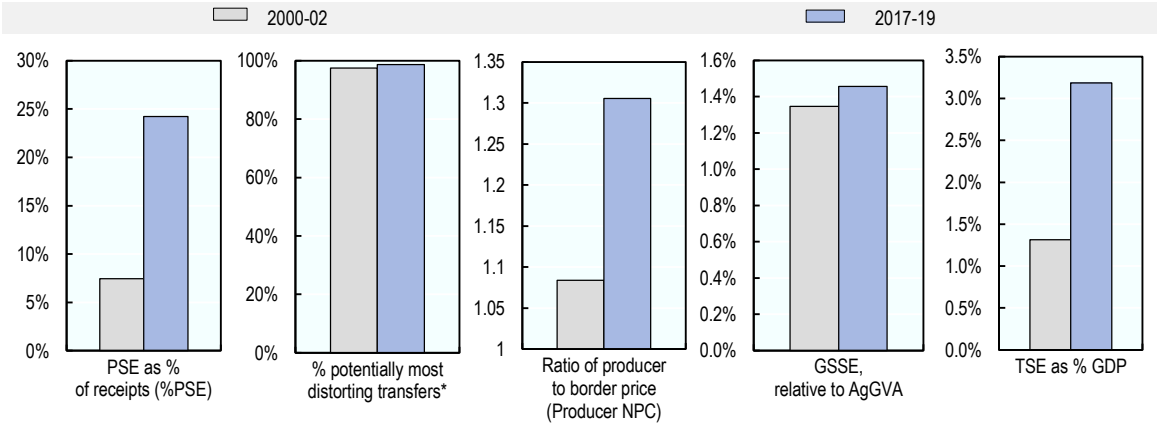
A stimulus package has been approved to increase government expenditures across the economy, including agro-food. It includes additional support to the industries and enterprises (IDR 220 trillion or USD 14 billion) for the economic recovery programme.

Consumer policies

An additional social safety net programme (IDR 65 trillion or USD 4.12 billion) comes in the form of a welfare programme support for essential goods, including free electricity, housing support, essential goods and education.

On 16 March, the Head of the National Task Force on Food issued a letter on limitations on the purchase of staple food to prevent panic buying in the areas affected by the COVID-19 outbreak. However on 18 March the letter was withdrawn as stocks of staple food were considered sufficiently secure.

Figure 14.1. Indonesia: Development of support to agriculture



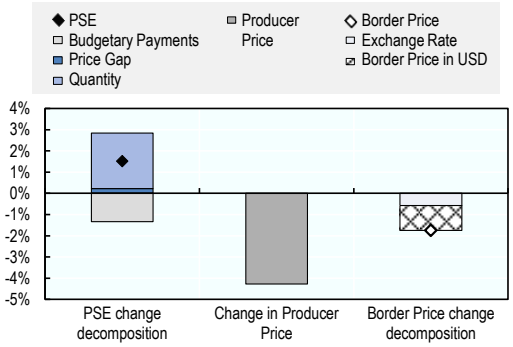
Note: * Share of potentially most distorting transfers in cumulated gross producer transfers.

Source: OECD (2020), "Producer and Consumer Support Estimates", OECD Agriculture statistics (database), http://dx.doi.org/10.1787/agr-pcse-data-en.

StatLink https://doi.org/10.1787/888934144249

Support to producers (%PSE) increased significantly in the 2000s from 7% of gross farm receipts to 24%, but has remained stable around that level over the past decade. Almost all producer transfers are **potentially most distorting**, mainly market price support (including negative price support for palm oil), but also payments based on variable input use (Figure 14.1). The level of support increased from 2018 to 2019 by less than 2%, driven by price support partially offset by reduced budgetary payments (Figure 14.2). Prices received by farmers, on average, were 30% higher than world prices with large differences between commodities. Sugar, cocoa, maize and rice were the commodities with the highest shares of single commodity transfers (STC) in gross farm receipts, all about or above 40%. The expenditures for **general services** (GSSE) measured relative to agricultural value added were 1.4%, well below the OECD average. **Total support to agriculture** as a share of GDP has increased in the last two decades from 1.3% to 3.1%, mainly driven by additional support to individual producers (PSE).

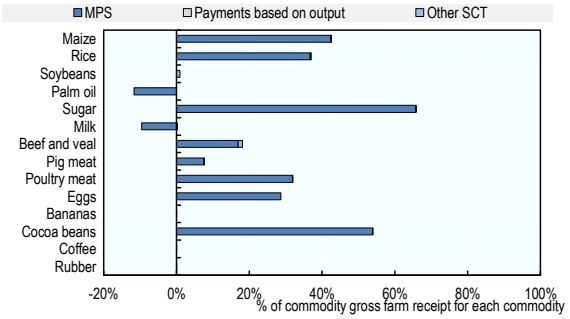
Figure 14.2. Indonesia: Drivers of the change in PSE, 2018 to 2019



Source: OECD (2020), "Producer and Consumer Support Estimates", OECD Agriculture statistics (database), http://dx.doi.org/10.1787/agr-pcse-data-en.

StatLink https://doi.org/10.1787/888934144268

Figure 14.3. Indonesia: Transfer to specific commodities (SCT), 2017-19



Source: OECD (2020), "Producer and Consumer Support Estimates", OECD Agriculture statistics (database), http://dx.doi.org/10.1787/agr-pcse-data-en.

StatLink https://doi.org/10.1787/888934144287

Table 14.1. Indonesia: Estimates of support to agriculture

Million USD

	2000-02	2017-19	2017	2018	2019p
Total value of production (at farm gate)	**23 813**	**120 673**	**120 162**	**118 043**	**123 813**
***of which:** share of MPS commodities (%)*	72.0	77.0	76.8	77.1	77.2
Total value of consumption (at farm gate)	**22 684**	**79 452**	**80 632**	**77 469**	**80 255**
Producer Support Estimate (PSE)	**1 800**	**29 927**	**31 614**	**28 781**	**29 387**
Support based on commodity output	1 707	27 142	28 795	25 829	26 803
Market Price Support[1]	1 707	27 142	28 795	25 829	26 803
Positive Market Price Support	2 309	29 158	30 588	27 937	28 949
Negative Market Price Support	-602	-2 015	-1 792	-2 108	-2 146
Payments based on output	0	0	0	0	0
Payments based on input use	82	2 769	2 802	2 935	2 570
Based on variable input use	19	2 328	2 275	2 515	2 195
with input constraints	0	0	0	0	0
Based on fixed capital formation	59	429	519	403	367
with input constraints	1	0	0	0	0
Based on on-farm services	4	11	9	17	8
with input constraints	0	0	0	0	0
Payments based on current A/An/R/I, production required	11	16	16	17	14
Based on Receipts / Income	11	16	16	17	14
Based on Area planted / Animal numbers	0	0	0	0	0
with input constraints	0	0	0	0	0
Payments based on non-current A/An/R/I, production required	0	0	0	0	0
Payments based on non-current A/An/R/I, production not required	0	0	0	0	0
With variable payment rates	0	0	0	0	0
with commodity exceptions	0	0	0	0	0
With fixed payment rates	0	0	0	0	0
with commodity exceptions	0	0	0	0	0
Payments based on non-commodity criteria	0	0	0	0	0
Based on long-term resource retirement	0	0	0	0	0
Based on a specific non-commodity output	0	0	0	0	0
Based on other non-commodity criteria	0	0	0	0	0
Miscellaneous payments	0	0	0	0	0
Percentage PSE (%)	**7.4**	**24.2**	**25.7**	**23.8**	**23.2**
Producer NPC (coeff.)	**1.08**	**1.31**	**1.33**	**1.30**	**1.29**
Producer NAC (coeff.)	**1.08**	**1.32**	**1.35**	**1.31**	**1.30**
General Services Support Estimate (GSSE)	**382**	**1 882**	**2 506**	**1 060**	**2 082**
Agricultural knowledge and innovation system	45	81	84	74	84
Inspection and control	14	46	50	48	41
Development and maintenance of infrastructure	323	906	901	871	947
Marketing and promotion	0	5	8	2	5
Cost of public stockholding	0	844	1 463	65	1 005
Miscellaneous	0	0	0	0	0
Percentage GSSE (% of TSE)	**15.8**	**5.5**	**6.7**	**3.4**	**6.3**
Consumer Support Estimate (CSE)	**-2 067**	**-21 152**	**-21 282**	**-20 312**	**-21 861**
Transfers to producers from consumers	-2 108	-23 857	-25 233	-22 288	-24 051
Other transfers from consumers	-309	-541	-528	-658	-436
Transfers to consumers from taxpayers	328	2 014	3 262	1 349	1 432
Excess feed cost	22	1 232	1 217	1 284	1 195
Percentage CSE (%)	**-9.2**	**-27.3**	**-27.5**	**-26.7**	**-27.7**
Consumer NPC (coeff.)	**1.12**	**1.44**	**1.47**	**1.42**	**1.44**
Consumer NAC (coeff.)	**1.10**	**1.38**	**1.38**	**1.36**	**1.38**
Total Support Estimate (TSE)	**2 511**	**33 824**	**37 381**	**31 190**	**32 901**
Transfers from consumers	2 417	24 398	25 761	22 946	24 487
Transfers from taxpayers	403	9 966	12 148	8 902	8 849
Budget revenues	-309	-541	-528	-658	-436
Percentage TSE (% of GDP)	**1.3**	**3.2**	**3.7**	**3.0**	**2.9**
Total Budgetary Support Estimate (TBSE)	**803**	**6 681**	**8 586**	**5 361**	**6 097**
Percentage TBSE (% of GDP)	**0.4**	**0.6**	**0.8**	**0.5**	**0.5**
GDP deflator (2000-02=100)	**272**	**930**	**902**	**936**	**953**
Exchange rate (national currency per USD)	**9 322.08**	**13 921.55**	**13 381.48**	**14 232.88**	**14 150.28**

Note: p: provisional. NPC: Nominal Protection Coefficient. NAC: Nominal Assistance Coefficient.
A/An/R/I: Area planted/Animal numbers/Receipts/Income.
1. Market Price Support (MPS) is net of producer levies and excess feed cost. MPS commodities for Indonesia are: : maize, rice, soybean, sugar, milk, beef and veal, pig meat, poultry, eggs, bananas, cassava, cocoa beans, coffee, palm oil and rubber.

Source: OECD (2020), "Producer and Consumer Support Estimates", *OECD Agriculture statistics* (database), http://dx.doi.org/10.1787/agr-pcse-data-en.

Contextual information

Indonesia's population is growing rapidly, representing the fourth largest in the world with 262 million people and a high population density of 148 inhabitants per km^2. Indonesia is also one of the largest agricultural producers. The share of agriculture in GDP has been falling in the last two decades but still represents almost 13% of GDP. The reduction in the share of agriculture in employment has been proportionally much larger, declining from 45% in 2000 to 35% in 2018, with a significant increase in the average production per employed person in the sector.

Indonesia is a net agro-food exporter and an increasing share of its total exports come from the sector (18.8% in 2018). Nonetheless, the country is also a large importer. Total agricultural area in Indonesia has increased by 32% in the last two decades and currently represents 2.1% of the agricultural land in all countries in this report. While food crop production is based on small family farms, there are large commercial farms producing perennial crops, in particular palm oil.

Table 14.2. Indonesia: Contextual indicators

	Indonesia		International comparison	
	2000*	2018*	2000*	2018*
Economic context			**Share in total of all countries**	
GDP (billion USD in PPPs)	1 069	3 495	2.7%	3.1%
Population (million)	205	262	4.8%	5.1%
Land area (thousand km^2)	1 812	1 878	2.2%	2.3%
Agricultural area (AA) (thousand ha)	47 177	62 300	1.6%	2.1%
			All countries[1]	
Population density (inhabitants/km^2)	117	148	53	62
GDP per capita (USD in PPPs)	5 213	12 408	9 275	21 924
Trade as % of GDP	26	18	12.4	15.3
Agriculture in the economy			**All countries[1]**	
Agriculture in GDP (%)	15.6	12.8	3.1	3.6
Agriculture share in employment (%)	45.3	30.5	-	-
Agro-food exports (% of total exports)	6.8	18.8	6.2	7.3
Agro-food imports (% of total imports)	12.7	11.5	5.5	6.3
Characteristics of the agricultural sector			**All countries[1]**	
Crop in total agricultural production (%)	84	81		
Livestock in total agricultural production (%)	16	19		
Share of arable land in AA (%)	43	42	32	33

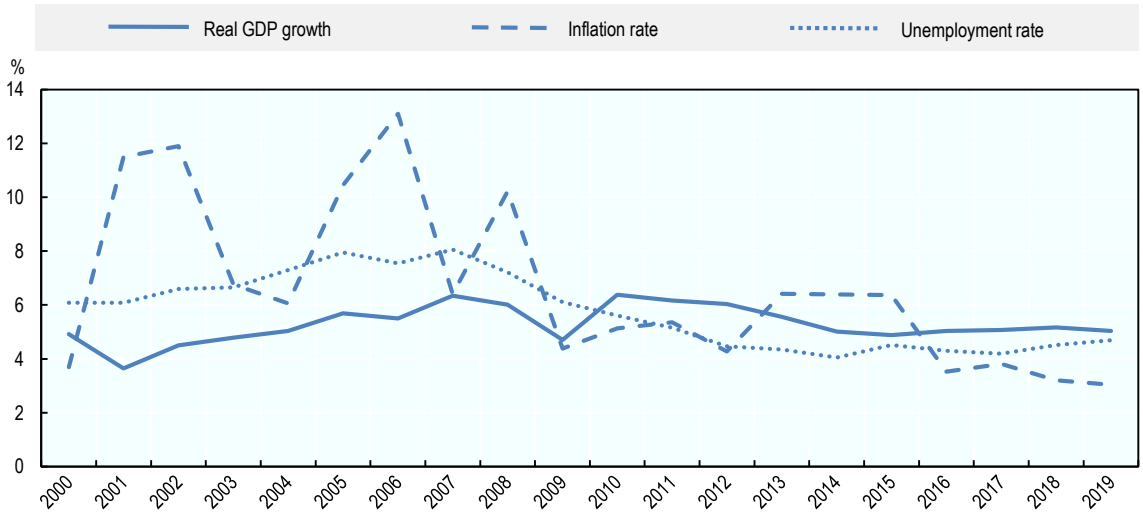
Note: *or closest available year. 1. Average of all countries covered in this report. EU treated as one.
Sources: OECD statistical databases; UN Comtrade; World Bank, WDI and national data.

Indonesia has a solid growth record, at around 5% per year since 2000, including after the financial crisis. Real income per capita is around double its level in 2000. Indonesia has succeeded in reducing the prevalence of poverty significantly; it ranged at 9.8% in 2018 by national standards and at 5.7% according to the headcount ratio under the international poverty line (USD 1.9). Inflation has been stable at around 4% in the last four years and consistently below 6% in the last decade, while the rate of unemployment is below 5%.

The volume of agro-food exports and imports has remained relatively stable since 2011, with USD 34 billion of exports and USD 22 billion of imports in 2018. Palm oil and rubber account for more than 60% of agro-food exports and contribute to a significant surplus in Indonesia's agro-food trade. As a consequence, around 75% of agro-food exports are processed products to be further transformed by

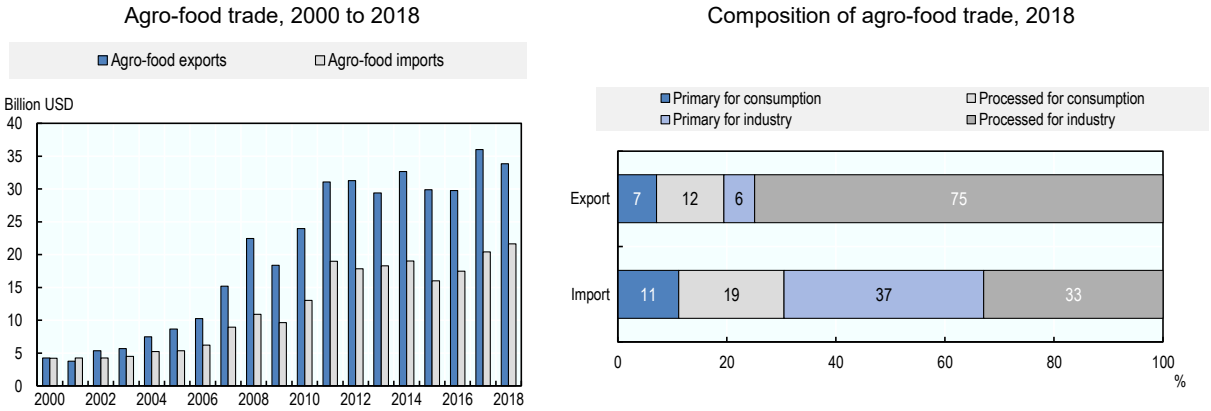
industries in other countries, while a significant share of agro-food imports (37%) are primary products for further processing in Indonesia.

Figure 14.4. Indonesia: Main economic indicators, 2000 to 2019



Sources: OECD statistical databases; World Bank, WDI and ILO estimates and projections.

Figure 14.5. Indonesia: Agro-food trade

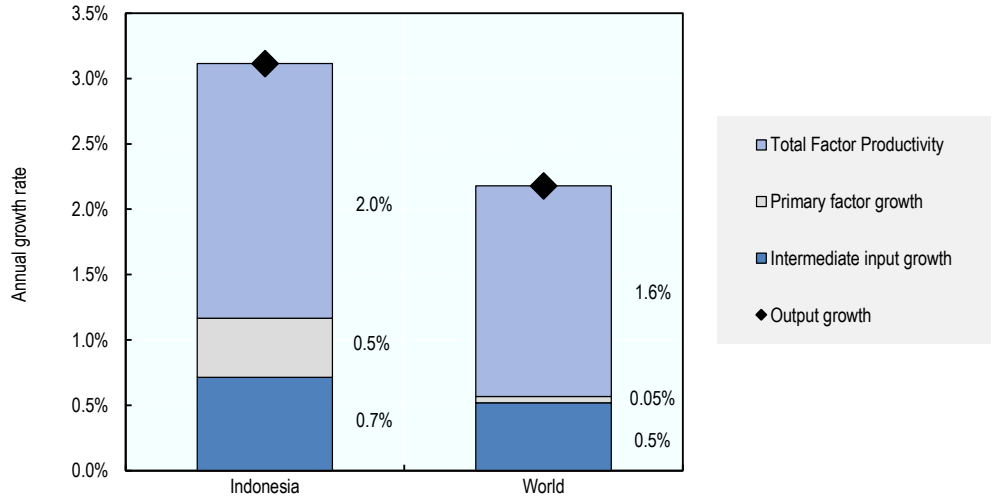


Note: Numbers may not add up to 100 due to rounding.
Source: UN Comtrade Database.

Indonesia's agricultural production has increased at an annual rate of 3.2% in 2007-16. Most of this growth is productivity-driven: Total Factor Productivity (TFP) has increased by 2% per year, representing improvements in the technologies applied to combine different production factors. Additional primary factors, including land, and intermediate inputs have contributed an additional 0.5 and 0.7 percentage points to the production growth, respectively. Unlike in the 1990s, Indonesia's growth in output and TFP has outperformed the global averages during the last 10 years.

Indonesian agriculture accounts for an increasing share of water extractions, which was 85% in 2007-16. However, the sector's shares of energy used (1.4%) and greenhouse gas (GHG) emissions (13%) have been reduced compared to the 1990s. Phosphorous balance has increased while nitrogen balance has steadily decreased into negative values.

Figure 14.6. Indonesia: Composition of agricultural output growth, 2007-16



Note: Primary factors comprise labour, land, livestock and machinery.
Source: USDA Economic Research Service Agricultural Productivity database.

Table 14.3. Indonesia: Productivity and environmental indicators

	Indonesia		International comparison	
	1991-2000	2007-2016	1991-2000	2007-2016
			World	
TFP annual growth rate (%)	1.1%	2.0%	1.6%	1.6%
			OECD average	
Environmental indicators	**2000***	**2018***	**2000***	**2018***
Nitrogen balance, kg/ha	31.6	-9.8	33.3	29.1
Phosphorus balance, kg/ha	1.5	3.1	3.3	2.3
Agriculture share of total energy use (%)	2.4	1.4	1.7	2.0
Agriculture share of GHG emissions (%)	19.8	13.3	8.1	8.9
Share of irrigated land in AA (%)	10.3	..		
Share of agriculture in water abstractions (%)	81.9	85.2	46.0	49.0
Water stress indicator	..	..	9.9	8.9

Notes: * or closest available year.
Sources: USDA Economic Research Service, Agricultural Productivity database; OECD statistical databases; FAO database and national data.

Description of policy developments

Main policy instruments

The **Food Law** of 2012 shapes Indonesia's agricultural policy and its set of core objectives. The food law sets out the principles of food sovereignty (*kedaulatanpangan*) and food self-reliance (*kemandirianpangan*) as the approach to food security. These objectives are confirmed in the Strategic Plan of the Ministry of Agriculture from 2015-19: achieving self-sufficiency in the production of selected staple-food commodities (rice, maize, soybeans, sugar and beef) to assure food security; ensuring food prices are affordable for consumers across the archipelago; diversifying production and consumption away from carbohydrates (rice and wheat) towards animal-based products, and fruits and vegetables (particularly root vegetables);

raising the competitiveness of agricultural production and value-added processing; increase the availability of raw material for bio-industry and bioenergy; and improving the welfare of farmers through higher incomes as a way to reduce the level of rural poverty (OECD, 2012[3]). The law specifically stipulates that domestic food demand can be fulfilled by imports if local food sources are insufficient (GAIN ID1841, 2019[4]).

Indonesia's policy objectives are pursued through both domestic and trade policy measures. Domestic policy measures include the use of minimum purchase prices for rice and sugar, substantial budgetary allocations for inputs, and payments for the provision of services to agriculture generally, in particular for irrigation; research and development; and marketing and promotion.

BULOG manages the **public interventions in the domestic market** and imports, and has the responsibility of undertaking market operations aimed at stabilising domestic prices, and to manage the government rice reserve. BULOG can only buy paddy or rice from farmers when the market price is lower than or equal to the minimum price and is required to maintain a minimum year-end stock of 2 million tonnes, about 2.5% of annual consumption in Indonesia (GAIN ID1904, 2019[5]). Only BULOG can import medium quality rice with a maximum 25% broken grains; however, private companies can import specialty rice such as jasmine rice and basmati rice (GAIN ID1808, 2018[6]). In 2017, Indonesia introduced ceiling prices on medium and premium quality rice at the retail level, which vary across regions. In the event that the retail rice price exceeds the ceiling level, BULOG also releases the rice stock to the market.

To ensure the **supply of affordable rice to poor consumers**, a social programme *Rastra* (RASKIN before 2012) has been used to distribute rice at low prices. The *Rastra* programme, and its required distribution system, has allowed the government to keep minimum prices for rice producers while ameliorating some of the price impact on poor consumers. This, however, has come at the cost of increasing budgetary expenditure to finance the programme. Under Rastra, BULOG distributed rice to consumers: 10 kg of rice per family per month. In early 2017, Indonesia started the large-scale pilot programme that provided an electronic food voucher (BantuanPangan Non Tunai, BPNT) as an alternative to physically distributing rice under the Rastra programme. In May 2019, the Rastra programme was terminated and replaced by the BPNT, which is co-ordinated by the Ministry of Social Affairs (Ministry of Social Affairs (Kementerian Sosial), 2019[7]). Under the BPNT, eligible households receive IDR 110 000 (USD 8.2) per month on a purchasing card that can be used to buy rice at the market price from selected retailers.

A wide range of **input subsidies** on fertilisers, seeds and credit are used to support agricultural producers. The percentage of subsidy varies across fertiliser types, with urea receiving the highest subsidy at 67.2% of the market price (Sudaryanto, 2018[8]). The subsidy is given indirectly to fertiliser manufacturers, which then sell the fertilisers to the farmers at a reduced price. Before the beginning of the planting season, the MoA issues a decree on the estimated demand for different types of fertilisers by provinces along with the reference price of fertilisers at the retail level. Based on this information, the governors of the corresponding provinces break down the demands for fertiliser in every district. The decree also serves as a reference for the fertiliser companies to distribute fertilisers in the corresponding regions. In addition to the fertiliser subsidy, the Ministry of Agriculture also directly distributes fertiliser to food crop farmers in selected regions.

The government of Indonesia invests in **irrigation infrastructure**. According to the Indonesian Ministry of Public Works (MPW), approximately 84% of Indonesian harvested rice area is irrigated, while the remaining 16% is rain fed (GAIN ID1904, 2019[5]). Supported through savings from fuel subsidies, the government of Indonesia has continued its push to improve the country's irrigation infrastructure. Much of this is targeted towards rice production. The investments in infrastructure are in addition to the current exemptions in place on water transportation costs: farmers are not charged for the cost of delivering water from the source to the tertiary system via primary and secondary canals.

Indonesia **restricts the importation of strategic commodities** (those associated with self-sufficiency targets: rice, maize, soybeans, sugar and beef) and also imposes taxes on some of its major exports — such as for crude palm oil (CPO) and cocoa. The food law sets out the principles that underpin food trade.

It contains provisions restricting staple food exports and imports such as "state food export can only be implemented after fulfilling National Food Reserve and staple food consumption necessity" and "food import can only be implemented if domestic food production is not sufficient or cannot be produced domestically" (Articles 34 and 36). Trade policy measures include both tariff and non-tariff measures. The average applied MFN **import tariff on agro-food products**, excluding alcoholic beverages and spirits, is low at just over 5% in 2017. Rice and sugar have higher specific tariffs. Import monopolies, licensing requirements and export restrictions on agricultural products were removed in 1997-98. However, in the 2000s quantitative import restrictions and licensing were reintroduced, notably for rice, sugar and beef. Import requirements imposed for food safety, SPS and cultural reasons are becoming more stringent. A variable **export tax regime** was introduced on crude palm oil and derived products, and more recently on cocoa (OECD, 2012[3]). The MFN tariff schedule is updated every five years by the Ministry of Finance (BukuTarif danKepabeanan Indonesia, BTKI). The latest BTKI was released in 2017.

Since 2008, companies must be approved by the Ministry of Trade as **registered importers** to import a range of processed products manufactured from meat, cereal, sugar and cocoa. Similar restrictions were placed on animals and animal products in 2011. In line with the Ministry of Trade regulation on the Import and Export of Animals and Animal Products issued in September 2011, imports of these products can only be done by a registered importer and can only be carried out if the domestic production and supply are not sufficient to meet consumer demand at an affordable price level.

Indonesia is a member of the **Association of Southeast Asian Nations (ASEAN)**, Asia-Pacific Economic Cooperation (APEC), and World Trade Organisation (WTO). It participates in trade liberalisation between ASEAN members and their major trading partners in the region, including ***China***, ***Japan, India, Korea, Australia*** and ***New Zealand***. The ASEAN economies committed in 2015 to complete the formation of the ASEAN Economic Community by 2025. This is intended to develop: a single market and production base; a highly competitive economic region; a region of equitable economic development; and a region fully integrated into the global economy (ASEAN Secretariat, 2017[9]).

Domestic policy developments in 2016-20

The new **Law Number 22/2019 on sustainable agricultural systems** aims to further improve production sustainability. The law mandates that the achievement of food sovereignty should take into account the carrying capacity of ecosystems, mitigation of GHG emissions and adaptation to climate change. The main environmental sustainability aspects covered by the law are: land use, seeds and planting, water quantity and quality, harvest and post-harvest losses, and research and development. Furthermore, the midterm national development plan (RPJM) for 2020-24 emphasises strengthening economic resilience (including food and agriculture) for quality and "fair growth" (Bappenas, 2020[10]).

During 2015-19, the government of Indonesia has maintained its commitment and continued its efforts to achieve **self-sufficiency**. The government sets targets for five key staples (rice, maize, soybeans, sugar and beef). Originally the target dates for achieving self-sufficiency targets were the end of 2017 for rice, maize and soybeans and the end of 2019 for beef and sugar. Along with the five key staples, policy measures have been introduced to promote production of other strategic commodities such as chilies, shallots, potatoes and cocoa. However, the target dates have been revised several times, and in 2019 full self-sufficiency had been achieved only for rice, maize, shallots, and chilies.

Under the Presidency of Joko Widodo, the budget of the MoA has increased from an average of IDR 16.70 trillion (USD 1.56 billion) per year in 2012-14 to IDR 23.25 trillion (USD 1.67 billion) per year in 2017-19. However, the budget has decreased in more recent years, from IDR 32.8 trillion (USD 2.45 billion) in 2015 to IDR 21.7 trillion (USD 1.53 billion) in 2019. The total budget for food security across all ministries is larger than that of the Ministry of Agriculture and it has decreased from IDR 125.9 trillion (USD 8.40 billion) in 2015 to IDR 96.2 trillion (USD 6.80 billion) in 2019.

To promote the development of beef cattle, the MoA has implemented the *Sapi Indukan Wajib Bunting, (SIWAB)* programme or *Mother Cattle Must Pregnant,* which provides inputs, infrastructure assistance, and technical guidance to produce calves. Another strategic activity is the *Bedah Kemiskinan Rakyat Sejahtera (Bekerja)* programme which aims to alleviate poverty by providing poor families with day-old native chickens, animal shelter, feed, and other inputs. The MoA has also implemented a **pilot project of crop insurance** for flood and drought since 2015. In 2018, the total area covered by pilot projects was 806 000 ha, with a premium subsidy of IDR 144 000 (USD 10.09) per hectare. In addition, the MoA has implemented a pilot project of beef cattle insurance since 2016 for a total of 88 673 heads of cattle insured, with a government subsidy of IDR 160 000 (USD 11.20) per head. The total budget on insurance amounted to IDR 14.19 billion (USD 0.99 million) in 2018.

Minimum purchase prices for rice have remained constant in nominal terms since 2015, at IDR 4 650/kg (USD 347/tonne) for paddy rice and IDR 7 300/kg (USD 545/tonne) for milled rice. The market price support schemes for rice remain the most important contributor to the longer run level of support in Indonesia. Producers of sugar and soybeans benefit from minimum purchase prices**,** set for soybeans by BULOG (since 2013) and for sugar cane by millers and traders. In 2017 the minimum sugar price increased to IDR 9 100/kg (USD 682/tonne) from IDR 8 900/kg (USD 667/tonne) (GAIN ID1904, 2019[5]). Minimum prices for soybean were set at IDR 7 700/kg (USD 575/tonne) in 2015, up from at IDR 7 000/kg (USD 523/tonne) in 2013. In September 2018, the Ministry of Trade set the minimum buying price of corn with 15% moisture content at the farm level at IDR 3 150/kg (USD 221/tonne) (Regulation No. 96/2018 on Reference Price).

In addition to establishing a fixed price for government procurement, the regulation by the Ministry of Trade on "**Maximum Retail Prices (MRP) of Rice**" of 24 August 2017 caps the retail price of medium quality rice at an average of IDR 9 450/kg (USD 348/tonne) and premium quality rice at an average of IDR 12 800/kg (USD 899/tonne). Following a stipulation in the regulation, the Indonesian police formed the so-called "*Satgas Pangan*" or Food Task Force, to enforce the regulation and to maintain a stable price of rice and other staple commodities (GAIN ID1904, 2019[5]). This policy has been debated widely because of the reduced margin of rice traders and rice millers (Sudaryanto, 2018[8]).

To protect poor consumers, BULOG has continued to distribute rice within the **Rastra** (prosperous rice; prior to 2016 called Raskin – rice for the poor) programme. While eligible households received 15 kg rice/month with 87.8% subsidy under the former programme, each family under the regular Rastra programme receives 10 kg of rice for free. The volume of rice distributed under Rastra was 3.2 million tonnes in 2015 and decreased to 2.7 million tonnes in 2016, and then reduced every year to only 354 825 tonnes in 2019. In early 2017, Indonesia started the large scale pilot programme of electronic food vouchers (BantuanPangan Non Tunai, BPNT) as an alternative to the Rastra programme, and since May 2019 replaced Rastra almost entirely. BPNT is co-ordinated by the Ministry of Social Affairs. Under BPNT, eligible households receive a total value of IDR 110 000 (USD 8.2) per month onto a purchasing card that can be used to buy rice and eggs at the selected retail stores. The transformation of Rasta into an e-voucher system aims to improve the targeting to poor households, give more choices and provide better access to nutritious food, and save costs in the government's budget (Alderman, Gentilini and Yemtsov, 2017[11]). Under the BPNT scheme, BULOG does not have any specific role, because the recipients of the programme may buy rice and other food necessities from any retailer available in the village. As a consequence of the new system, rice accumulated under the price support programme no longer has any outlet as was the case under the Raskin or Rastra programme. In 2018, the card recipients who resided in 44 pilot project cities could already use their cards at selected stores and receive 10 kg of rice and 2 kg of sugar; in the same year, the government disbursed Rastra to 14.3 million households and BPNT to 1.2 million households (Jakarta Post, 2018[12]). The e-voucher system was gradually expanded to more cities and districts throughout 2017–19 and is to be scaled up nationally by 2020. However, a Rastra scheme is still in use in selected remote regions where the e-voucher is not yet functional.

Subsidies for fertilisers and other inputs increased significantly over the period 2015-19. Overall, fertiliser subsidies remain by far the most important programme through which the government provides budgetary support to agriculture. The increase in this was possible due to some redirection of funds formerly spent on fuel subsidies. The value of the fertiliser subsidy increased from IDR 30 trillion (USD 2.2 billion) in 2015 to IDR 37.3 trillion (USD 2.64 billion) in 2019 with the total volume of subsidised fertiliser of approximately 8.88 million tonnes. In total, fertiliser subsidies account for 30.7% of total budgetary expenditures provided to support agriculture in 2019. In 2018/19, the MoA continued to target corn self-sufficiency by providing subsidised seed and fertiliser covering 3 million hectares (GAIN ID1904, 2019[5]).

The MoA also provides **agricultural machinery** to farmers' groups. In 2018, a total of 70 309 units of machinery worth IDR 3.68 trillion (USD 255 million) were distributed, which consisted of tractors, water pumps, transplanters, cultivators, excavators, and sprayers. This figure is reported to have increased by 2000% compared to its procurement in 2015. There has been some concern on the financial sustainability of this grant programme in the medium term and the consequences after the support is terminated (Sudaryanto, 2018[8]).

Trade policy developments in 2016-20

For palm oil, under MoF regulation 136/2015, the export tax depends on CPO reference prices. There is zero export tax on CPO for prices below USD 750 per tonne. When reference prices exceed this level, the tax is imposed on a sliding scale between USD 3 and USD 200 per tonne. Since 2015 the government also collects an export levy for palm oil in the amount of USD 50/tonne managed by the Palm Oil Fund management board. This Fund finances subsidies supporting biodiesel, infrastructure, R&D projects on palm oil, replanting in small farms, promotion and human resource development. In 2013 a number of steps were made to regulate soybean imports. Soybeans can only be imported by BULOG, other state owned enterprises, co-operatives or private sectors participating in the programme of fixed wholesale selling prices.

Indonesia restricts corn imports for use as poultry and livestock feed. On 10 January 2018 the Minister of Trade issued a regulation establishing that corn can be imported to fulfil food, feed, and industrial raw material demand, and that this demand will be determined through an inter-ministerial co-ordination meeting (Regulation 20/2016). This regulation also established the state-owned trading company BULOG as the sole importer of feed corn, while any private company holding a producer importer identification number can import corn for food or industrial raw materials (GAIN ID1808, 2018[6]). Only countries with approved aflatoxin laboratory facilities are eligible to export to Indonesia (GAIN ID1841, 2019[4]).

Indonesia has maintained its **quota for the importation of beef** as part of its self-sufficiency targets for this commodity. A quota is set separately for live cattle and boxed beef and is based on the estimated shortfall between domestic supply and demand. For live cattle, import quotas are released quarterly. During 2015 quota announcements changed significantly between quarters leading to domestic price fluctuations. After initial tightening, quotas were expanded in the second half of 2015 to ease pressure on domestic beef prices. Moreover, Indonesia restricts live feeder cattle imports. In early 2017, the government introduced revised regulations on the weight and age limits of imported feeder cattle. The revised average weight limit for feeder cattle is 450 kg, with a maximum age of 48 months (Meat & Livestock Australia, 2018[13]). In 2018, to meet an increasing domestic demand and stabilise meat prices, the Ministry of Trade issued a permit to import 100 000 tonnes of buffalo meat from India. The permit was awarded to BULOG for the period of one year. Furthermore, in December 2019, the Ministry of Trade also issued a permit to import 50 000 tonnes of meat from Brazil. The import was awarded to three state owned enterprises, namely BULOG (30 000 tonnes), PT Perusahaan Perdagangan Indonesia (10 000 tonnes), and PT Berdikari (10 000 tonnes).

Import requirements for **food safety, quarantine, and standards and labelling purposes**, for a range of products such as horticultural and animal products, are becoming more stringent. Processed food imports require both product registration and import approval from the Ministry of Health. Similarly, imports of animal based products must have MoA import approval, be accompanied by a *halal* certificate and derive from a processing facility that has been inspected by the MoA.

Indonesia maintains the **import licensing requirements for horticultural products**, in which importers must first obtain Import Recommendations (IRs) from MoA, and then obtain the Import Permits (IPs) from MoT. In 2019, Indonesia revised a regulation regarding conditions for issuing IRs for horticultural products. The new regulations revoked using "harvest periods" requirements as a basis to restrict issuance of IRs and imports, and gives the Director General (DG) for Horticulture new and expanded authority to consider the "domestic horticultural production" when issuing IRs (GAIN ID 1819, 2018[14]). In the same year, Indonesia also revised the regulation which required importers to own warehouse space; importers are now required to prove that they control it in some way (GAIN ID1817, 2018[15]). Based on the Minister of Agriculture Decree (Permentan) number 46/2019, a private importer of garlic is obliged to produce a quantity in the country equivalent to at least 5% of the proposed import volume.

However, despite some moves towards isolating producers from international trade in the recent past, there are some moves towards a more open trade policy regime. Currently, Indonesia is intensifying the process of deepening the Economic Partnership Agreement with the European Union signed in 2009. On 4 March 2019 Australia and Indonesia signed the **Indonesia-Australia Comprehensive Economic Partnership Agreement (IA-CEPA). IA-CEPA** builds on an existing free trade agreement, the ASEAN-Australia-New Zealand Free Trade Agreement (AANZFTA), further reducing tariffs and providing additional mechanisms to guarantee automatic issue of import permits for key product such as live cattle, frozen beef, sheep meat, feed grains, citrus products, carrots and potatoes (Australian Government Department of Foreign Affairs and Trade, 2019[16]). However, importers are still obliged to meet some import requirements.

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15 Israel

Support to agriculture

Despite continued efforts to introduce market-oriented reforms, total support to agriculture in Israel continued to increase from 2017 to 2019, which reflects mostly the persistence of regulations, price controls and border protection targeting specific commodities.

The share of producer support in gross farm receipts (%PSE) reached 16.7% in 2017-19, close to the OECD average. At the same time, the share of potentially most market-distorting forms of support in Israel (91%) is much higher than the OECD average. This can be explained by the persistence of domestic price support and border measures in favour of several meat and dairy products and of selected fruits and vegetables. Poultry and milk producers still benefit from the largest share of market price support, accounting for 33% of the total PSE in 2017-19. Total support for agriculture (TSE) remained stable at 0.4% of GDP.

The share of General Services Support Estimates (GSSE) in total support in 2017-19 represented 13% of TSE and 5% of agriculture value-added, the latter being below the OECD average. Public spending to finance general services increased 7% in 2019 due to additional expenditures for the development and maintenance of infrastructure, and for the agricultural knowledge and innovation system.

Main policy changes

Due to two inconclusive elections in April and September 2019, Israel was governed by a transitional government for most of the year, which prevented substantial changes in policy, including progress on initiated reforms in the dairy and egg sectors.

Following higher annual precipitation, the Water Authority increased the water quota for agriculture in the national system and the northern region. At the same time the water pricing reform for agriculture, which aims towards a convergence of water prices, continued to be implemented, with producers affected by rising prices being compensated with grants and contribution to water investments.

Building on past and ongoing efforts to support the future viability of agriculture, the government established a National Centre for the Application and Development of Genome Editing Technologies in Agriculture and launched a new programme to encourage interactions between public research and the industry.

Efforts to improve nutrition continued with a programme to educate children on the consumption of vegetables and fruits and the implementation, on 1 January 2020, of a mandatory nutritional labelling scheme providing warning labels on packaged food to signal excessive sugar, sodium and saturated fat levels.

Assessment and recommendations

- The level of support to agriculture in Israel has continued to increase as selected commodities are insulated from international markets. The focus on price support effectively raises market distortions and taxes for consumers, and can be harmful for the environment and impede adaptation to climate change.
- The electoral standstill in 2019 should not discourage the Israel government from finalising its needed reforms in the milk and egg sectors. Even with the expected progress they may achieve, and the gradual tariff reform of the beef sector, other commodities remain subject to high border protection. Israel maintains high tariffs for goods such as poultry meat, sheep meat and certain fruits and vegetables that could be gradually removed and, if necessary, replaced temporarily by direct payments. The tariff system for agriculture should also be simplified, avoiding non-*ad valorem* tariffs.
- Israel should continue and intensify its ongoing efforts to diminish the regulatory burden and improve transparency and competition in the agro-food chain. Progress made in these areas would not only reduce trade costs and encourage trade flows, but would also diminish costs for the processing industry and prices for the final consumers of agro-food products.
- Expenditures on agricultural knowledge and innovation systems have been continuously increasing, following the trend of the OECD average, which should help the country remain at the cutting edge of new agriculture technologies.
- Israel's skilled farmers and comprehensive water management system has enabled the country to sustain a productive agricultural sector under very intense water stress and contributes to the sector's adaptation to future water risks. Still, the system's flexibility could be improved by facilitating further trading in water allocations among irrigating farmers or with other water users, and the use of optional compensations for unused water quotas.
- Due to agriculture's limited share of the country's total greenhouse gas (GHG) emissions (less than 3%), Israel has not developed GHG mitigation policies that are specific to the agricultural sector. It should ensure that GHG emissions generated by the sector's energy and water needs are fully accounted for in its mitigation efforts.
- More generally, the government should accelerate its efforts to reduce the sector's negative environmental impacts. Improvements should be sought, in particular, to reduce the high and increasing nitrogen surplus associated with agriculture production. Reforming agriculture policies that encourage production would contribute to that effort. Regional agri-environmental programmes should also be bolstered and complemented by targeted policies and regulations geared towards higher environmental performance.

Policy responses in relation to the COVID-19 outbreak

Following the spread of the COVID-19 the government of Israel issued emergency regulations, including various restrictions, on commercial activities in order to reduce the infection and the virus spread. Agricultural production and related industry and services (such as carcass clearances, veterinarians, or agricultural machinery manufacturers) are considered essential and are therefore excluded from these regulations.

Agricultural policies

To reduce the activities of government ministries and their autonomous units, a limited number of "essential" employees have been allowed to continue their work activities. In the Ministry of Agriculture and

Rural Development (MARD), as in the majority of the public sector, 33% of employees were originally considered essential, a proportion that gradually climbed to 51% in late April. Services in farms and ports of entry, such as plant protection inspectors and veterinarians, have continued, even if teleworking and focusing on urgent work were encouraged.

MARD has conducted daily assessment of the availability of fresh agricultural produce, to identify missing items and allow their importation when needed. For example, WTO quotas have been increased to import onions, cucumbers and eggs. The plant protection and inspection services (PPIS) and veterinary and animal health services (IVSAH) have also facilitated imports by accepting official and scanned copies of original phytosanitary or health certificates, as well as e-certifications that can be verified, for specific products and under certain conditions.

Due to the spread of the epidemic, the entry of foreign workers and Palestinian workers into the State of Israel has been restricted, and the following measures have been taken:

- *Foreign workers*. MARD has applied to the Population Authority to extend the work visa to Thai workers whose visas are about to expire and who cannot be replaced in the near future. The Population Authority has also issued a special mobility procedure for the overall crisis period, so that, with his or her consent, a worker can be moved for a short period of less than one month to another farm without the need for prior approval, even if the movement is not carried out within the same village. This flexibility was introduced as some industries, such as the flower sector, reduced their activity significantly while other industries greatly increased their need for workers, due to unavailable workers or increased consumer demand.
- *Activating volunteers*. In agreement with the Ministry of Finance, a special fund of ILS 6 million (USD 1.7 million) was granted to support public institutions recruiting volunteers to replace absent agricultural workers. The procedure only supports the logistical expenses associated with volunteer workers, such as transportation, food, accommodation and management of the recruiting system.

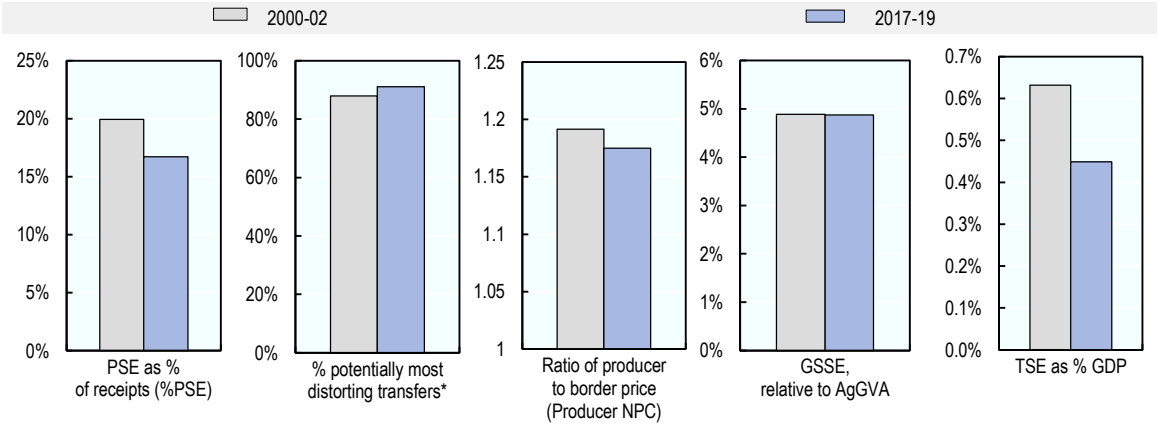
Agro-food supply chain policies

The outbreak of the epidemic and the isolation guidelines have accelerated the launching of e-commerce platforms, under the auspices of MARD and the Innovation Authority.

Consumer policies

The Economy Ministry is taking action against business owners who have taken advantage of the coronavirus crisis to raise the cost of foods above government fixed prices (just before Passover holidays), with increased enforcement followed consumer complaints. Criminal fines of up to tens of thousands of Israeli shekels are given to business owners found to have broken the law by raising the cost of these specific foods. As of 7 April infractions had been found concerning eggs, milk, cheese, and challah bread (Jean, 2020[1]).

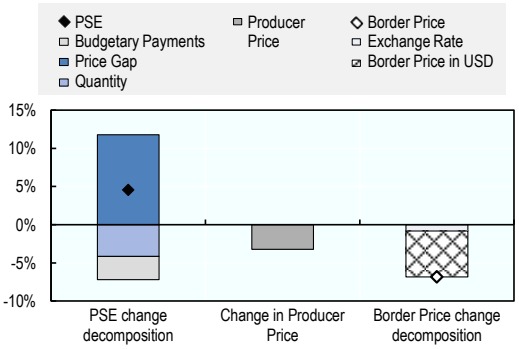
Figure 15.1. Israel: Development of support to agriculture



Note: * Share of potentially most distorting transfers in cumulated gross producer transfers.
Source: OECD (2020), "Producer and Consumer Support Estimates", OECD Agriculture statistics (database), http://dx.doi.org/10.1787/agr-pcse-data-en.
StatLink https://doi.org/10.1787/888934144306

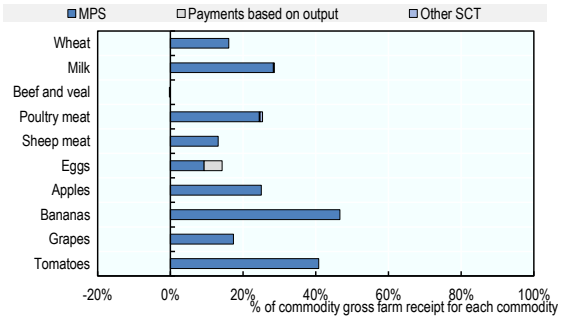
Support to producers (%PSE) has moderately declined between 2000-02 and 2017-19. At the same time, the share of potentially most distorting transfers remains high in the last two decades due to high market price support (MPS) and continued border protection (Figure 15.1). From 2018 to 2019, the level of support rose by 4.6%, due to an increase in price distorting measures (Figure 15.2). Effective average prices received by farmers declined by 3% but remain 19% higher than world prices, with large differences between commodities. MPS is the main component of Single Commodity Transfers (SCT): bananas, tomatoes, milk and poultry have the highest share of SCT in commodity gross farm receipts (Figure 15.3). Overall, SCT represent 88% of the total PSE. The expenditures for general services (GSSE), mainly on knowledge and infrastructure, have slightly declined relative to agriculture value added between 2000-02 and 2017-19.

Figure 15.2. Israel: Drivers of the change in PSE, 2018 to 2019



Source: OECD (2020), "Producer and Consumer Support Estimates", OECD Agriculture statistics (database), http://dx.doi.org/10.1787/agr-pcse-data-en.
StatLink https://doi.org/10.1787/888934144325

Figure 15.3. Israel: Transfer to specific commodities (SCT), 2017-19



Source: OECD (2020), "Producer and Consumer Support Estimates", OECD Agriculture statistics (database), http://dx.doi.org/10.1787/agr-pcse-data-en.
StatLink https://doi.org/10.1787/888934144344

Table 15.1. Israel: Estimates of support to agriculture

Million USD

	2000-02	2017-19	2017	2018	2019p
Total value of production (at farm gate)	**3 337**	**8 416**	**8 301**	**8 461**	**8 485**
***of which:** share of MPS commodities (%)*	55.3	54.3	54.4	54.6	53.7
Total value of consumption (at farm gate)	**3 666**	**10 521**	**9 757**	**11 431**	**10 374**
Producer Support Estimate (PSE)	**714**	**1 445**	**1 384**	**1 436**	**1 515**
Support based on commodity output	519	1 227	1 146	1 208	1 328
Market Price Support[1]	509	1 211	1 130	1 191	1 312
Positive Market Price Support	522	1 212	1 131	1 193	1 313
Negative Market Price Support	-14	-1	-1	-2	-1
Payments based on output	10	16	16	17	16
Payments based on input use	160	127	154	116	110
Based on variable input use	106	89	105	84	79
with input constraints	0	0	0	0	0
Based on fixed capital formation	42	20	26	17	18
with input constraints	0	0	0	0	0
Based on on-farm services	12	18	24	15	14
with input constraints	0	0	0	0	0
Payments based on current A/An/R/I, production required	25	82	76	97	72
Based on Receipts / Income	21	63	60	77	52
Based on Area planted / Animal numbers	4	19	16	20	20
with input constraints	0	0	0	0	0
Payments based on non-current A/An/R/I, production required	0	0	0	0	0
Payments based on non-current A/An/R/I, production not required	8	9	8	14	5
With variable payment rates	5	9	8	14	5
with commodity exceptions	0	0	0	0	0
With fixed payment rates	2	0	0	0	0
with commodity exceptions	0	0	0	0	0
Payments based on non-commodity criteria	0	0	0	0	0
Based on long-term resource retirement	0	0	0	0	0
Based on a specific non-commodity output	0	0	0	0	0
Based on other non-commodity criteria	0	0	0	0	0
Miscellaneous payments	1	0	0	0	0
Percentage PSE (%)	**19.9**	**16.7**	**16.2**	**16.5**	**17.4**
Producer NPC (coeff.)	**1.19**	**1.17**	**1.16**	**1.17**	**1.19**
Producer NAC (coeff.)	**1.25**	**1.20**	**1.19**	**1.20**	**1.21**
General Services Support Estimate (GSSE)	**100**	**224**	**206**	**226**	**241**
Agricultural knowledge and innovation system	51	97	88	99	103
Inspection and control	16	27	31	24	25
Development and maintenance of infrastructure	10	83	70	82	96
Marketing and promotion	11	1	1	1	1
Cost of public stockholding	12	11	12	11	9
Miscellaneous	0	6	3	8	7
Percentage GSSE (% of TSE)	**12.4**	**13.4**	**13.0**	**13.6**	**13.7**
Consumer Support Estimate (CSE)	**-648**	**-1 762**	**-1 477**	**-2 070**	**-1 739**
Transfers to producers from consumers	-473	-1 202	-1 109	-1 216	-1 281
Other transfers from consumers	-180	-563	-371	-858	-459
Transfers to consumers from taxpayers	0	0	0	0	0
Excess feed cost	5	3	2	4	2
Percentage CSE (%)	**-17.4**	**-16.7**	**-15.1**	**-18.1**	**-16.8**
Consumer NPC (coeff.)	**1.21**	**1.20**	**1.18**	**1.22**	**1.20**
Consumer NAC (coeff.)	**1.21**	**1.20**	**1.18**	**1.22**	**1.20**
Total Support Estimate (TSE)	**814**	**1 669**	**1 590**	**1 662**	**1 756**
Transfers from consumers	653	1 765	1 480	2 073	1 741
Transfers from taxpayers	341	468	482	446	475
Budget revenues	-180	-563	-371	-858	-459
Percentage TSE (% of GDP)	**0.6**	**0.4**	**0.5**	**0.4**	**0.4**
Total Budgetary Support Estimate (TBSE)	**305**	**458**	**460**	**470**	**444**
Percentage TBSE (% of GDP)	**0.2**	**0.1**	**0.1**	**0.1**	**0.1**
GDP deflator (2000-02=100)	**100**	**134**	**132**	**133**	**136**
Exchange rate (national currency per USD)	**4.34**	**3.59**	**3.60**	**3.60**	**3.56**

Note: p: provisional. NPC: Nominal Protection Coefficient. NAC: Nominal Assistance Coefficient.
A/An/R/I: Area planted/Animal numbers/Receipts/Income.
The statistical data for Israel are supplied by and under the responsibility of the relevant Israeli authorities. The use of such data by the OECD is without prejudice to the status of the Golan Heights, East Jerusalem and Israeli settlements in the West Bank under the terms of international law.
1. Market Price Support (MPS) is net of producer levies and excess feed cost. MPS commodities for Israel are: wheat, cotton, groundnuts, tomatoes, peppers, potatoes, avocados, bananas, oranges, grapefruit, grapes, apples, milk, beef and veal, sheep meat, poultry and eggs.

Source: OECD (2020), "Producer and Consumer Support Estimates", *OECD Agriculture statistics* (database) http://dx.doi.org/10.1787/agr-pcse-data-en.

Contextual information

Israel's economy is relatively small but has been growing rapidly and its GDP per capita almost doubled over the last two decades, even as the population increased by 50%. The share of agriculture in total employment and in GDP has fallen to around 1%. Israel is unique among developed countries in that land and water resources are nearly all state-owned. Jewish rural communities, principally the kibbutz and moshav, dominate agricultural production, accounting for about 80% of agricultural output. Partly due to this structure, total agricultural area has moderately increased over the past twenty years, despite the country's continued development. While the agricultural sector is relatively diversified, most of the value of production and exports is generated by high value fruits and vegetables.

Table 15.2. Israel: Contextual indicators

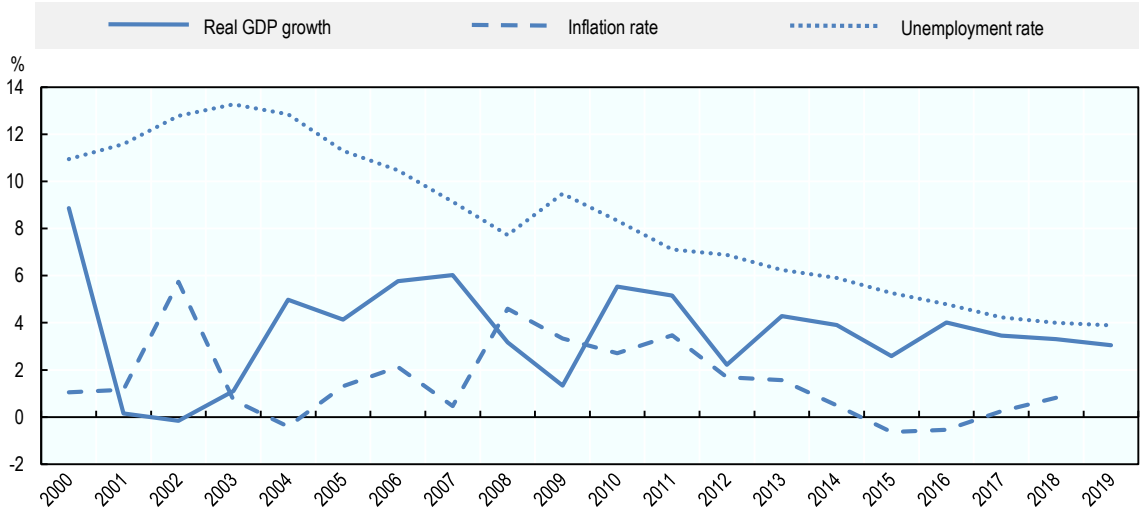
	Israel		International comparison	
	2000*	2018*	2000*	2018*
Economic context			**Share in total of all countries**	
GDP (billion USD in PPPs)	157	358	0.4%	0.3%
Population (million)	6	9	0.1%	0.2%
Land area (thousand km^2)	22	22	0.03%	0.03%
Agricultural area (AA) (thousand ha)	566	623	0.02%	0.02%
			All countries[1]	
Population density (inhabitants/km^2)	290	407	53	62
GDP per capita (USD in PPPs)	24 870	40 269	9 275	21 924
Trade as % of GDP	25	19	12.4	15.3
Agriculture in the economy			**All countries[1]**	
Agriculture in GDP (%)	1.4	1.3	3.1	3.6
Agriculture share in employment (%)	2.2	0.9	-	-
Agro-food exports (% of total exports)	3.1	3.6	6.2	7.3
Agro-food imports (% of total imports)	5.3	7.8	5.5	6.3
Characteristics of the agricultural sector			**All countries[1]**	
Crop in total agricultural production (%)	55	59	-	-
Livestock in total agricultural production (%)	45	41	-	-
Share of arable land in AA (%)	60	62	32	33

Notes: *or closest available year. 1. Average of all countries covered in this report. EU treated as one.
Sources: OECD statistical databases; UN Comtrade; World Bank, WDI and national data.

Israel maintains a highly performing economy among OECD countries, with robust GDP growth, exceeding 3% per year and close to full employment in 2018-19. After two years of deflationary pressure, moderate inflation started again in 2017-18 (Figure 15.4).

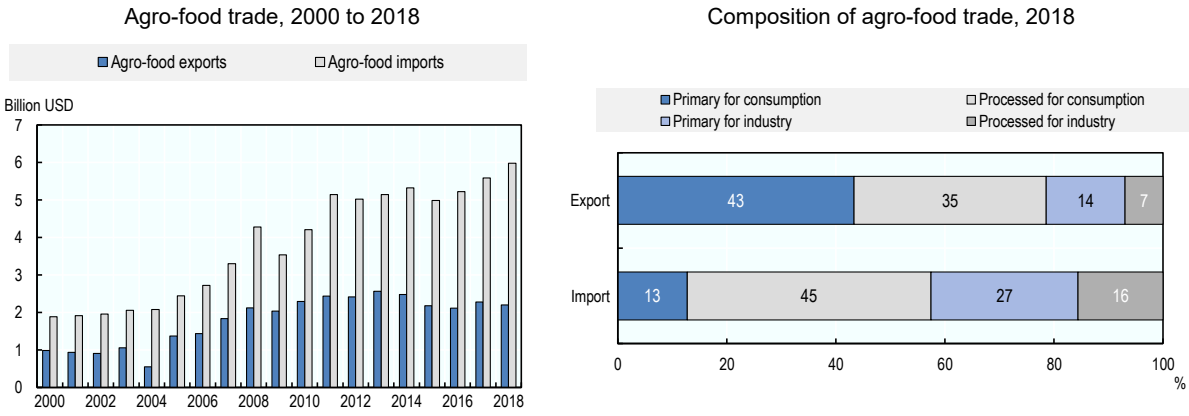
The agriculture trade balance of Israel continued to decline in 2018, with the value of imports of mostly processed food products exceeding the value of exports of mainly primary commodities (Figure 15.5). This gradual shift may partly reflect the relative appreciation of the Israeli currency compared to the US dollar and the Euro since 2015.

Figure 15.4. Israel: Main economic indicators, 2000 to 2019



Sources: OECD statistical databases; World Bank, WDI and ILO estimates and projections.

Figure 15.5. Israel: Agro-food trade

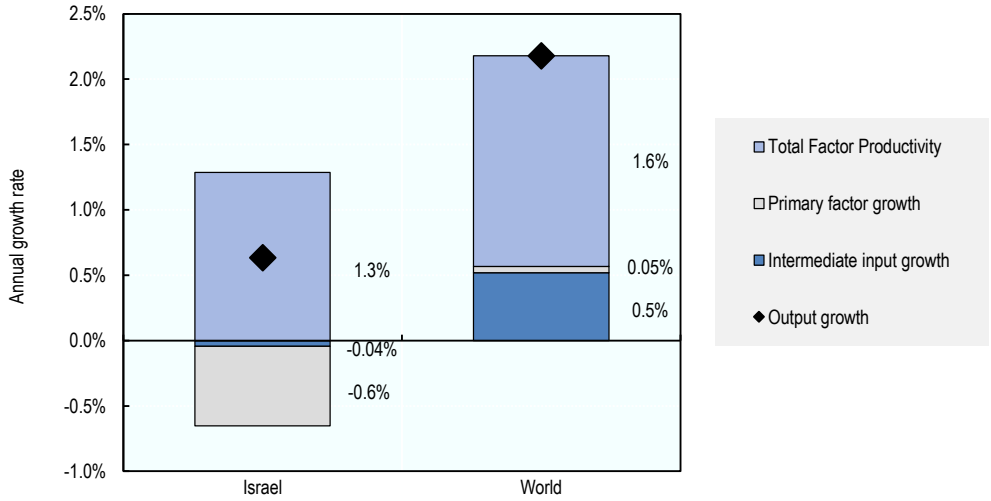


Note: Numbers may not add up to 100 due to rounding.
Source: UN Comtrade Database.

The productivity of Israeli agriculture is generally high but its increase has been slowing in recent years. The relatively low estimated growth rate in agriculture total factor productivity (TFP) in 2007-16 may be partially attributed to the moderate increase in the value of output.

While agriculture's resource use has improved, the environmental performance of Israel's agriculture has degraded since 2000. During 2000-18, agriculture's share of freshwater abstraction has halved, largely due to changes in water management. At the same time, nutrient surpluses have grown significantly, with nitrogen balances increasing by 25% to reach a level seven times above the OECD average level.

Figure 15.6. Israel: Composition of agricultural output growth, 2007-16



Note: Primary factors comprise labour, land, livestock and machinery.
Source: USDA Economic Research Service Agricultural Productivity database.

Table 15.3. Israel: Productivity and environmental indicators

	Israel		International comparison	
	1991-2000	2007-2016	1991-2000	2007-2016
			World	
TFP annual growth rate (%)	3.5%	1.3%	1.6%	1.6%
			OECD average	
Environmental indicators	2000*	2018*	2000*	2018*
Nitrogen balance, kg/ha	188.8	236.2	33.3	29.1
Phosphorus balance, kg/ha	65.7	68.9	3.3	2.3
Agriculture share of total energy use (%)	1.2	1.6	1.7	2.0
Agriculture share of GHG emissions (%)	3.3	2.6	8.1	8.9
Share of irrigated land in AA (%)	43.4	..	-	-
Share of agriculture in water abstractions (%)[1]	64.0	32.0	46.0	49.0
Water stress indicator	61.0	42.1	9.9	8.9

Notes: * or closest available year. 1. Share of agriculture fresh water abstraction in total fresh water abstraction.
Sources: USDA Economic Research Service, Agricultural Productivity database; OECD statistical databases; FAO database and national data.

Description of policy developments

Main policy instruments

Over the past thirty years, Israel has implemented a number of **reforms** related to the provision of subsidies, central planning of agricultural industries, and the allocation of production quotas, price controls and import protection. The government continues to be involved in the allocation of key factors of production such as land, water and foreign workers. Land and water resources are almost entirely state-owned. Land is allocated to farmers for a nominal fee and is not tradeable. Water is allocated to farmers through a quota system; all water consumption is metered and charged. The government also applies a yearly quota of foreign workers with permits to work in agriculture. Both the overall quota and the allocation of workers to individual farmers are strictly regulated.

Some commodities continue to be supported by **guaranteed prices and production quotas**. Guaranteed prices for milk are based on the average cost of production and while they are updated regularly, they diverge considerably from the level and evolution of prices on international markets. Minimum prices are also guaranteed for wheat, based on the Chicago market price, adjusted for quality and transportation costs. Egg production quotas and recommended prices, which serve as the basis for calculating the maximum retail prices are applied as an instrument to provide price support to producers. On the other hand, consumer price controls are applied for a range of basic food products, including bread, milk and dairy products, eggs and salt. Egg and poultry producers in "peripheral areas" at the northern border receive payments, based on output levels for egg, and encompassing a mixture of payments decoupled from production and output payments for poultry producers (OECD, 2010[2]).

Support to investments is provided by capital grants. Farmers who participate in the **investment support** scheme are also entitled to income tax exemptions and accelerated depreciation. Since 2009, an investment support programme has been implemented to partly replace foreign workers in the agricultural sector, but budgetary allocations for this programme declined strongly in recent years.

Insurance schemes provided by the Insurance Fund for Natural Risks in Agriculture (Kanat) are subsidised. The share of the support in the total insurance premium is 80% in the case of the multi-risk insurance schemes and 35% in the case of the insurance schemes against natural hazards. Since 2010, revenue insurance has been applied for rain-fed crops to protect against a loss of revenue caused by price decrease, low yields or a combination of both.

In 2015, a **credit fund** was launched with the goal of helping establish or expand small farms that specialise in crop production. The government serves as the loan guarantor for bank loans with 85% guarantee, to ensure small farms with insufficient collateral can access loans.

Israel's economy is supported by a transparent and open **trade regime** overall. However, border tariff protection on agri-food products remains an important tool in supporting agricultural producers. Israel's average applied MFN tariff on agricultural goods (WTO definition) amounted to 19.1% in 2018, down from 27.7% in 2012, but still much higher than the 3% average for non-agricultural goods (WTO, 2018[3]). Israel has tariff rate quotas (TRQs) for wheat, fats and oils, walnuts, prunes, maize, citrus juices, beef and sheep meat and various dairy products. Most of Israel's preferential trade agreements also include tariff-quota commitments for agricultural products, often with reduced out-of-quota tariffs. In total, Israel implements 258 preferential TRQs for agricultural goods (WTO, 2018[3]).

Despite certain reforms that began in 2014, Israel's **tariff profile** for agricultural products remains highly uneven, with high – sometimes prohibitive – tariffs for goods such as dairy products, eggs and certain fruits and vegetables, and low, sometimes zero, tariffs for other commodities such as specific coarse grains, sugar, oilseed and frozen beef. The tariff system on agriculture is also complicated, involving specific, compound or mixed duties (WTO, 2018[3]); 20% of imported agricultural products are subjected to non-*ad valorem* rates, compared to 3.8% for all goods (Ibid.). At the same time, some 55.6% of agriculture imports entered Israel duty-free, mostly through MFN duty-free access and under preferential agreements (the most important ones are with the European Union and the United States) (WTO/ITC/UNCTAD, 2019[4]). With the exception of beef, poultry (including turkey), and mutton and products thereof, there is no legal requirement for imported food and agricultural products to be kosher, although imported, non-kosher agro-food products are rarely accepted by local marketing channels.

Budgetary allocations for **Research and Development** have regularly increased and have accounted for over 20% of the total agriculture-related budget in recent years. During 2017-19, ILS 344 million (USD 96 million) were allocated annually to agriculture research and development, of which almost ILS 73 million (USD 20 million) were used for a competitive research fund each year. This, together with an effective transmission of innovations to the farm level through a public extension service, has allowed Israel to become a world leader in agricultural technology, particularly for farming in arid and desert conditions.

Israel has not developed sector-specific policy measures for **greenhouse gas (GHG) mitigation in agriculture**, given that agriculture accounts for a limited share of the country's total greenhouse gas emissions (2.7% in 2018). However, the government has introduced and applied a number of programmes to support **climate change adaptation**. In addition to its forward-looking water resource management, in which irrigation largely relies on recycled wastewater, the government supports research and development programmes on improved agronomic practices, breeding, soil conservation and efficient use of resources and maintains the Israel Plant Gene Bank to conserve indigenous plant species. Efforts to develop a national quantitative assessment of climate change risks for agriculture are ongoing (OECD, 2019[5]).

Domestic policy developments in 2019-20

Israel held two successive general elections in April and September 2019, which did not lead to the formation of a government. As a result, Israel was governed for most of 2019 by a transitional government, putting on hold any substantial changes in government policy, including in agriculture, until a government is formed.

In particular, **reforms of support for animal production,** which had been initiated in 2018 or earlier, remained at a standstill. At the end of October 2018, an outline for a new reform was signed between the government and the representatives of the **dairy** farmers. The outline of the reform included a reduction of target prices, a reduction of customs tariff, subsidies for increasing the efficiency of dairy farms, and support for dairy farmers leaving dairy production. The reform process aims to lead to structural change in the sector, increasing the average size and enhancing the efficiency of dairy operations. However, the reform agreement requires a change in legislation to be implemented; a memorandum of law was issued on the subject but the examination of the law was postponed until after the March 2020 general elections.

Similarly, the **reform programme for the table egg sector** was put on hold until the formation of a new government. In the meantime, the Ministry of Agriculture and Rural Development (MARD) has increased enforcement of sanitary conditions in poultry houses, and extended a call for proposals and tenders for constructing poultry house complexes for a budget of ILS 50 million (USD 13 million). In 2019, grant applications were submitted, and the evaluation of the applications and their approval is nearly complete. At the same time, the Galilee Law, which was introduced in 1988 to support holders of egg production quotas or broiler in the Galilee region, with the intention to be phased out in 2017, was renewed in 2018 and continued in 2019.

A reform was initiated to **simplify and reduce the administrative costs** of setting maximum consumer price for some **dairy products**. The joint price committee of the Finance and Agricultural Ministries determines maximum wholesale prices of specific dairy products as well as maximum consumer prices. The recommended prices then have to be signed by the Finance and Agriculture Ministers to come into effect. In order to simplify the price update procedure and to reduce its regulatory cost, MARD initiated a reform that will establish an automatic professional process to update the regulated maximum prices, with the objective of establishing more transparency and certainty for dairies.

The government also continued to **improve the agriculture marketing system for fresh fruits and vegetables** to reduce costs and possible consumer price pressures. In 2017, MARD conducted a regulatory impact assessment (RIA) of unfair trade practices to evaluate alternatives for improving commercial relations between farmers and wholesalers/retailers of fresh fruit and vegetables. The results of this RIA prompted MARD to develop a draft voluntary code of conduct in 2018. This code of conduct was finalised in the first half of 2019 and published in June 2019. The effectiveness of the code is to be evaluated during the coming years, and if necessary, the code will be transformed into a binding regulation.

Despite intended efforts to reduce food prices, the **guaranteed price** of eggs continued to increase nominally by an average of 7% from 2018 to 2019. Milk target prices declined by 2% from 2018. Still, the national producer price for milk remained significantly higher than international prices. Milk accounts for

18% of the total market price support measured for the Israeli agriculture in 2018 and hence still contributes significantly to the relatively high level of Israel's farm support.

In the last few years, the Plants Production and Marketing Board has been promoting a special programme for **encouraging young people to consume vegetables and fruits**. The scheme is being carried out in co-operation with MARD (with a budget of ILS 225 000 – USD 63 000 – in 2019) and the approval of the Ministry of Education. This programme is taking place at 200 elementary schools all around Israel. It emphasises the importance of eating fresh fruits and vegetables every day. During 2019, the PPIS (the Israeli Plant Protection and Inspection Services) joined the programme, aiming to educate children to avoid non-inspected fresh produce arriving from abroad, in order to prevent the entry of pests and diseases that would damage domestic plants and harm the environment.

The 2017 regulation on **nutritional labelling** entered into force on 1 January 2020 (USDA FAS, 2018[6]). This regulation requires red labels on the front of packaged food to signal high levels of sugar, sodium, and saturated fat. In the first phase of implementation, during 2020, only products exceeding 500 mg of sodium, 13.5 g of sugar or 5 g of saturated fats per 100 g of product will be labelled. These threshold levels for labelling will decrease in 2021 (Ibid.).

In 2019, the six-year long drought ended and **precipitations exceeded the long-term average**,[1] rising water levels in the Sea of Galilee above the lower red line,[2] although aquifers level remained low. The Water Authority **increased the water quota for agriculture** in the national system and the northern region. The allocation in the national system was 305 million cubic meters. As the forecast for 2020 is slightly below the long-term average, the Water Authority will again reduce the allocation for agriculture with an initial quota of 272 million cubic meters in the national system. If the amount of rainfall exceeds the perennial average, a larger allocation will be approved (up to 325 million cubic meters). In the North, the allocation remains the same as in 2019. Despite increasing its water levels, the salinity of the Sea of Galilee remained high, endangering the ecological stability of the lake. The implementation of the 2018 plan for connecting the Sea of Galilee to the national system to cope with this problem has begun (OECD, 2019[5]). The government is also considering the possibility of connecting the Upper Galilee region to the national system. Work on the additional desalination plant in Sorek is advancing and a tender was sent out to select the company building and managing the future plant.

In parallel, the government continued to implement the 2017 reform of the **agriculture water pricing system**, which aims for a convergence in water prices nationally for equity purposes (OECD, 2018[7]). Water prices for private producers were raised for a third time, while water prices for all consumers of the national company Mekorot declined to ILS 1.54/m^3 (USD 0.43/m^3) for areas lacking alternative water sources and to ILS 1.84/m^3 (USD 0.52/m^3) for the rest of the country. Financial support continued to be allocated to private producers in the Hula Valley area to ensure that the peatlands are irrigated for ecological reasons. Other producers considered eligible have started to receive their compensation in 2019, comprising of 20% as grants and 80% as participation in water investments.

The government also continued to invest in the **future viability of its agricultural sector** through innovation from research to application. In 2019, MARD and the Israel Innovation Authority (IIA) provided ILS 23 million (USD 6.4 million) of cost-share grants, with a participation of 30-60% of the eligible costs to support **agriculture technology start-ups**. Three types of grants were offered: R&D grants to companies, grants supporting the co-operation between regional R&D Centres and private companies, and those supporting the development of new products (prototypes). To promote emerging agro-tech industry MARD also established a pool of outstanding start-ups in a competitive process, and selected the top 32 companies offering the best products (using a budget of ILS 1.6 million- USD 0.4 million).

MARD also established the National Centre for the Application and Development of **Genome Editing Technologies in Agriculture** in Israel (for a budget of ILS 58 million – USD 16 million). The Centre aims to develop the bio-technological capacity of the country, and at the same time develop valuable crop varieties or animal breeds that can contribute directly or indirectly to food security. This includes

innovations intended (a) to increase agricultural production, through the genetic improvement of fish and pest-resistant crops; (b) to improve the competitiveness of farms and the income of farmers and other actors in the food sector via quality improvement and the reduction of marketing costs; and (c) to improve food safety and food quality, by adding value to traditional local products.

A new government programme was initiated in 2019 to encourage further **interactions between public research and industry**. The ILS 14 million (USD 4 million) cost-share fund entitled "Noah's Ark" Channel (with state covering 70% of eligible costs) is set to encourage pairing academy and industry to create research foundations in various fields in order to invigorate applied R&D activities that will contribute to bolster science, economy and industry nationally and internationally in the short to medium term. Applicants are asked to conduct innovative research and to develop the short-term commercial application of the research findings. In the agriculture field, a wide number of topics are eligible for funded collaboration, including on agriculture inputs and machinery, digital agriculture innovation, precision agriculture technologies, plant protection, post-harvest improvement, food processing, food quality and food safety.

In preparation for the religious **sabbatical year** (*Jewish Shmita*), which will take place from September 2021 to September 2022, MARD and the Ministry of Finance signed an agreement whereby they offered to triple participating farmers' savings in order for them to cope with the loss of income during the year. About 650 applications were submitted in 2019, and preliminary estimates indicate that the total demand may exceed the planned budgetary allocation (ILS 81 million – USD 23 million – for 2018-21, ibid.). A notice regarding the need to increase and adjust the budget, in order to meet needs and demand, has been forwarded to the Ministry of Finance and other involved parties.

Trade policy developments in 2019-20

The September 2016 reform agreement on the **beef sector** will reach a milestone in 2020. The agreement involves partial conversion of farm support programmes for beef producers from indirect support, by means of tariff rate quotas and tariffs, to a system of payments. The quotas for duty free fresh and chilled beef imports increased gradually from 6 000 tonnes in 2015 to its ceiling of 17 500 tonnes in 2020 and the MFN customs rates for out-of-quota beef imports decreased gradually from 12% and ILS 13/kg (USD 3.9/kg) in 2015 to 12% and zero ILS/kg in 2020 (WTO, 2018[3]). This partial opening of the beef market is accompanied by compensation for cattle farmers, paid on top of the existing seven-year support programme agreed in 2014. This additional support amounted to ILS 14 million (USD 4 million) in 2019 and will reach ILS 16 million (USD 4.5 million) in 2021 and then remain at this level until 2024 (Ibid.). Payments are to be made per unit of pasture area.

A revised **free trade agreements** (FTA) was signed with the European Free Trade Association (EFTA) in 2018 and a new FTA was signed with Ukraine in January 2019, but both have still to be ratified. The revised FTA with Canada was ratified in 2018 and tariff concession tables were revised in September 2019. A new FTA with Panama signed on May 2018 has been ratified and came into force in January 2020. Negotiations on new FTAs with Korea were concluded in 2019. Negotiations on new FTAs with the People's Republic of China, Viet Nam and the Eurasian Economic Union (EAEU), are at varying stages of progress. A revised United States–Israel Agreement on Trade in Agricultural Products (ATAP) is also under negotiation.

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Notes

[1] Heavy rainfalls actually contributed to the reduction of citrus production, due to harvesting difficulties and quality impairments (USDA FAS, 2019[8]).

[2] The lower red line for the Sea of Galilee, a hydrological limit to define a level below which the lake is threatened, preventing pumping, is defined by regulations as -213 meters below sea level. The upper red line, equal to -209 meters below sea level, defined a level above which flooding may occur (and triggering the opening of the Deganya dam) (Israel Ministry of Environmental Protection, 2020[9]). Because rainfalls in 2019 were above the average, the water level of the Sea of Galilee exceeded the lower red line.

16 Japan

Support to agriculture

Over the past decade, Japan has reduced its support to agriculture, but more recently the change in support levels has been moderate. Support to producers (PSE) remains high as a share on gross farm receipts (41% in 2017-19) and is almost 2.4 times above the OECD average. The total support estimate to agriculture (TSE) represented 0.9% of Japan's GDP in 2017-19, most of which went to direct support to producers (PSE).

Market price support (MPS) remains to be the main element of the PSE, accounting for about 80% in 2017-19. It is largely sustained by border measures, in particular for rice, pork and milk. Payments to producers decreased between 2018 and 2019. Budgetary support to producers is mostly delivered as payments based on area and income.

The share of expenditures for general services provided to agriculture (GSSE) relative to TSE is 20%, which is higher than the OECD average but has decreased since the 1990s. The majority of the GSSE financed the development and maintenance of agricultural infrastructure, representing more than four-fifths of the GSSE in 2017-19.

Main policy changes

The Basic Plan for Food, Agriculture and Rural Areas, which sets Japan's comprehensive agricultural policy direction for the next 10 years, was revised in March 2020. In response to challenges such as the decrease of farming population and the implementation of new large-scale trade agreements, the plan aims to strengthen the agricultural production base regardless of farm size or its hilly and mountainous condition. Emphasis is also placed on sustaining rural areas. Finally, the Basic Plan addresses responses related to the COVID-19.

A series of large-scale natural disasters, including typhoons and heavy rains, hit Japan in 2019, causing major damages to the agricultural sector. The damages in the agricultural, forestry and fisheries sectors are reported at JPY 460.2 billion (USD 4.2 billion). The government earmarked supplementary budget funds of JPY 105.4 billion (USD 1 billion) for the restoration of these sectors, mostly used for the recovery of agricultural facilities and farmland as well as landslides and road destruction in mountains.

Japan raised its consumption tax rate for most goods and services from 8% to 10% in October 2019. However, the consumption tax rate for food and beverages, other than liquor and eating-out services, is set at 8% in order to lessen the burden especially on lower income households.

The Japan-US Agreement came into effect on 1 January 2020. Under the agreement, Japan eliminates or lowers custom duties for certain US agricultural products and provides preferential US-specific quotas for others. The United States eliminates or reduces custom duties on 42 agricultural products.

Assessment and recommendations

- Japan has made some progress towards agricultural policy reforms since the early 2000s and has implemented programmes that are steps towards a more market-oriented sector. But support to producers remains more than twice the OECD average as a percentage of gross farm receipts, and continues to be dominated by market price support (MPS), which is among the potentially most distorting form of support. Further improvements are possible to reduce MPS and eliminate measures impeding market signals.
- The implementation of the Comprehensive and Progressive Agreement for Trans-Pacific Partnership and the Japan-EU Economic Partnership Agreement decreased the border measures for agricultural commodities imported under these agreements. With the bilateral agreement with the United States entering into force, some US agricultural products will benefit from improved market access. Increased competition in the domestic market may also contribute to structural change and further productivity growth in Japanese agriculture. But the exclusion from trade barrier reduction of certain key products such as rice limits the benefits to be reaped.
- The continued support provided for crop diversification is likely to help reduce abandonment of paddy fields. However, other policies should be aligned with the ambition to reallocate rice area to other crops, implying in particular a reduction of high market price support for rice.
- Large scale natural disasters continued to occur in 2019, causing significant income loss to the agricultural sector. The funds needed to restore damaged infrastructure, both at regional and farm level, put substantial pressure on the national and local public budgets. Having a safety-net for farmers, such as a revenue insurance programme, is one step towards mitigating the risk and damage. However, as climate-related disasters are expected to become more frequent and intense, the government should strengthen efforts to prepare comprehensive programmes to build the sector's resilience.
- There is significant room to improve the environmental performance of agriculture. Japan has one of the highest nutrient surpluses among OECD countries. Moreover, though GHG emissions from agriculture were the lowest among OECD countries, the sector accounts for more than three-quarters of total methane emissions and half of the national nitrous oxide emissions. Japan has set a Nationally Determined Contributions (NDCs) target of 26% emissions below 2013 by 2030 but no specific target for the agricultural sector. Several environmental programmes have been implemented but agricultural policy programmes should provide consistent incentives to adopt sustainable production practices. An integrated agri-environmental policy framework with quantitative targets in which all farmers commit to improving their environmental performance should be developed.
- Although the share of expenditures for general services provided to agriculture relative to total support is higher than the OECD average, the level has decreased since the 1990s. Moreover, most of these expenditures were programmed for infrastructure development and maintenance. Further progress is needed in supporting agricultural knowledge and innovation to enhance the sector's productivity and sustainability.

Policy responses in relation to the COVID-19 outbreak

Agricultural policies

Japan[1] announced a JPY 108.2 trillion (USD 992 billion) stimulus package in April 2020, equivalent to about 20% of its GDP. The package includes the following measures for the agriculture and food sector.

- Agricultural producers who have difficulty continuing their business operation benefit from access to increased loan limits, interest concessions and low interest credit of long-term funds financed by the Japan Finance Corporation.
- To mitigate the impact of reduced milk consumption due to schools being closed, JPY 2.3 billion (USD 21.5 million) programme supports dairy farmers and processors for excess milk diverted to further processing and non-fat dry milk diverted to animal feed.
- Producers and vendors who were planning to deliver their food and agricultural products for school meals could receive supports to find alternative sales channels. Producers and vendors could also donate these remaining products to food banks with transportation costs compensated.

The government provides a subsidy to employers within the agriculture and food sector who grant special paid leave in addition to statutory annual paid leave to their employees, whether on fixed-term or permanent contracts, when they need to take leave to care for their children whose school or childcare provider is temporarily closed as a COVID-19 emergency response.

The Ministry of Agriculture, Forestry and Fisheries (MAFF) extended the premium payment deadlines for agricultural mutual aid and revenue insurance programme.

Measures for COVID-19 were included in the Basic Plan for Food, Agriculture and Rural Area (the Basic Plan), which Japan revised in March 2020. The Basic Plan, which sets Japan's comprehensive agricultural policy direction for the next 10 years, addresses stimulating demand for domestic agricultural products, securing agricultural labour, and providing relevant information to consumers on food supply.

Agro-food supply chain policies

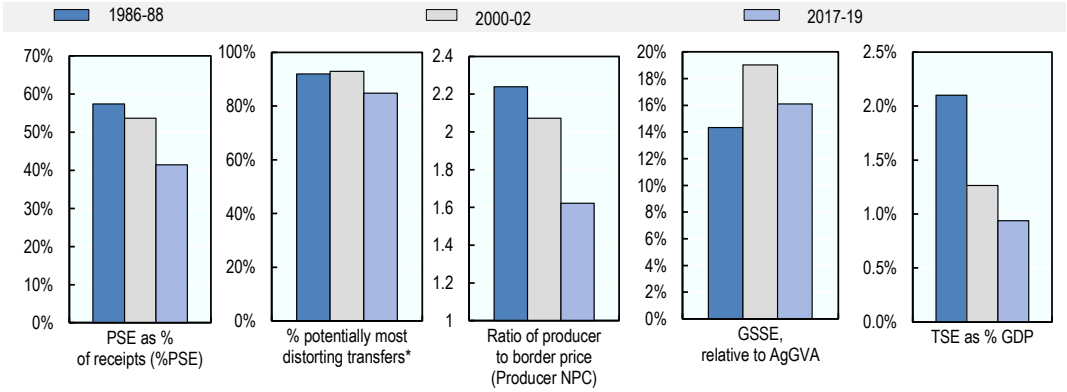
As short-term demand for domestic agricultural products (e.g. beef, dairy, vegetables, cut-flowers) continues to fall, MAFF has attempted to stimulate demand for agricultural products through press conferences, websites and social media.

MAFF published basic operation guidelines for farmers and food business operators in case of workers becoming infected by COVID-19. The guidelines were made available online.

Consumer policies

The government has monitored food supply chains for any food shortages. MAFF provides information on food availability to the public and also ensures that staple food (rice and wheat) has been stocked. The government has also called on citizens to avoid panic buying.

Figure 16.1. Japan: Development of support to agriculture

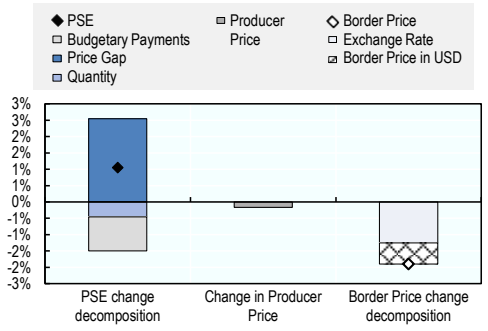


Note: * Share of potentially most distorting transfers in cumulated gross producer transfers.
Source: OECD (2020), "Producer and Consumer Support Estimates", OECD Agriculture statistics (database), http://dx.doi.org/10.1787/agr-pcse-data-en.

StatLink https://doi.org/10.1787/888934144363

Support to producers (%PSE) has declined gradually over the long term. During 2017-19, it represented around 41% of gross farm receipts (Figure 16.1). This is down from 57% thirty years ago (1986-88) but remains 2.4 times higher than the OECD average. The share of potentially most distorting support (mainly MPS) has decreased only moderately and still accounts for about 80% of the PSE, meaning it continues to be the main element of that support. Producer support increased slightly in 2019 as larger MPS more than offset some reductions in budgetary support. On average, price gaps widened as lower border prices were not transmitted to domestic prices (Figure 16.2). Prices received by producers were on average 62% higher than world market prices in 2017-19. The level of support varies by commodities but MPS is often the main component of support based on individual commodities (Single Commodity Transfers, SCT). The highest price gap and thus the highest share of SCT in commodity gross farm receipts are seen in rice, followed by barley, grapes, sugar, milk, and cabbage (all above 50%) (Figure 16.3). Expenditures for GSSE were equivalent to 16% of agriculture value added in 2017-19 and were mainly used on the development and maintenance of irrigation and drainage facilities as well as natural disaster prevention. Total Support to Agriculture (TSE) as a share of GDP was 0.9 %, and has declined over time from 2.1% in 1987-89.

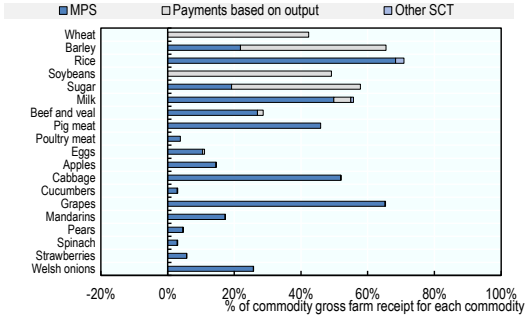
Figure 16.2. Japan: Drivers of the change in PSE, 2018 to 2019



Source: OECD (2020), "Producer and Consumer Support Estimates", OECD Agriculture statistics (database), http://dx.doi.org/10.1787/agr-pcse-data-en.

StatLink https://doi.org/10.1787/888934144382

Figure 16.3. Japan: Transfer to specific commodities (SCT), 2017-19



Source: OECD (2020), "Producer and Consumer Support Estimates", OECD Agriculture statistics (database), http://dx.doi.org/10.1787/agr-pcse-data-en.

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Table 16.1. Japan: Estimates of support to agriculture

Million USD

	1986-88	2000-02	2017-19	2017	2018	2019p
Total value of production (at farm gate)	**72 767**	**76 354**	**82 944**	**82 670**	**81 999**	**84 162**
of which: *share of MPS commodities (%)*	68.4	63.8	66.6	66.4	67.0	66.3
Total value of consumption (at farm gate)	**94 458**	**107 904**	**118 244**	**117 050**	**118 381**	**119 300**
Producer Support Estimate (PSE)	**44 611**	**43 955**	**37 403**	**37 780**	**36 785**	**37 645**
Support based on commodity output	40 996	40 828	31 692	31 610	31 213	32 252
Market Price Support[1]	39 458	38 471	30 101	30 134	29 508	30 661
Positive Market Price Support	39 458	38 471	30 101	30 134	29 508	30 661
Negative Market Price Support	0	0	0	0	0	0
Payments based on output	1 539	2 358	1 591	1 476	1 705	1 591
Payments based on input use	1 434	976	852	937	879	740
Based on variable input use	403	85	10	11	10	10
with input constraints	403	85	0	0	0	0
Based on fixed capital formation	890	724	580	667	611	463
with input constraints	403	85	0	0	0	0
Based on on-farm services	142	167	262	260	258	267
with input constraints	0	0	0	0	0	0
Payments based on current A/An/R/I, production required	621	613	2 089	2 437	1 950	1 879
Based on Receipts / Income	0	0	201	119	261	222
Based on Area planted / Animal numbers	621	613	1 888	2 318	1 689	1 658
with input constraints	0	0	1 225	1 243	1 235	1 198
Payments based on non-current A/An/R/I, production required	0	0	0	0	0	0
Payments based on non-current A/An/R/I, production not required	1 560	1 538	2 770	2 795	2 743	2 773
With variable payment rates	0	0	0	0	0	0
with commodity exceptions	0	0	0	0	0	0
With fixed payment rates	1 560	1 538	2 770	2 795	2 743	2 773
with commodity exceptions	1 560	1 257	2 536	2 566	2 510	2 532
Payments based on non-commodity criteria	0	0	0	0	0	0
Based on long-term resource retirement	0	0	0	0	0	0
Based on a specific non-commodity output	0	0	0	0	0	0
Based on other non-commodity criteria	0	0	0	0	0	0
Miscellaneous payments	0	0	0	0	0	0
Percentage PSE (%)	**57.4**	**53.6**	**41.4**	**41.8**	**41.2**	**41.3**
Producer NPC (coeff.)	**2.24**	**2.07**	**1.62**	**1.63**	**1.62**	**1.62**
Producer NAC (coeff.)	**2.35**	**2.16**	**1.71**	**1.72**	**1.70**	**1.70**
General Services Support Estimate (GSSE)	**8 769**	**12 141**	**9 228**	**9 452**	**9 144**	**9 088**
Agricultural knowledge and innovation system	514	861	987	986	984	990
Inspection and control	55	66	93	68	73	138
Development and maintenance of infrastructure	7 747	10 620	7 893	8 184	7 827	7 668
Marketing and promotion	152	248	134	98	143	160
Cost of public stockholding	301	345	121	116	116	132
Miscellaneous	0	0	0	0	0	0
Percentage GSSE (% of TSE)	**16.3**	**21.7**	**19.8**	**20.0**	**19.9**	**19.4**
Consumer Support Estimate (CSE)	**-53 525**	**-49 474**	**-43 181**	**-42 720**	**-42 857**	**-43 967**
Transfers to producers from consumers	-38 964	-38 460	-30 824	-30 964	-30 195	-31 312
Other transfers from consumers	-14 520	-11 100	-12 979	-12 470	-13 264	-13 202
Transfers to consumers from taxpayers	-108	35	6	5	5	6
Excess feed cost	68	51	615	709	597	540
Percentage CSE (%)	**-56.7**	**-45.8**	**-36.5**	**-36.5**	**-36.2**	**-36.9**
Consumer NPC (coeff.)	**2.31**	**1.85**	**1.59**	**1.59**	**1.58**	**1.60**
Consumer NAC (coeff.)	**2.31**	**1.85**	**1.58**	**1.57**	**1.57**	**1.58**
Total Support Estimate (TSE)	**53 272**	**56 130**	**46 637**	**47 237**	**45 934**	**46 739**
Transfers from consumers	53 485	49 559	43 802	43 434	43 459	44 514
Transfers from taxpayers	14 308	17 670	15 813	16 272	15 739	15 427
Budget revenues	-14 520	-11 100	-12 979	-12 470	-13 264	-13 202
Percentage TSE (% of GDP)	**2.1**	**1.3**	**0.9**	**1.0**	**0.9**	**0.9**
Total Budgetary Support Estimate (TBSE)	**13 814**	**17 659**	**16 535**	**17 102**	**16 426**	**16 078**
Percentage TBSE (% of GDP)	**0.5**	**0.4**	**0.3**	**0.4**	**0.3**	**0.3**
GDP deflator (1986-88=100)	**100**	**105**	**96**	**96**	**96**	**96**
Exchange rate (national currency per USD)	**147.09**	**118.19**	**110.56**	**112.18**	**110.44**	**109.05**

Note: p: provisional. NPC: Nominal Protection Coefficient. NAC: Nominal Assistance Coefficient.
A/An/R/I: Area planted/Animal numbers/Receipts/Income.
1. Market Price Support (MPS) is net of producer levies and excess feed cost. MPS commodities for Japan are: wheat, barley, soybean, rice, sugar, milk, beef and veal, pig meat, poultry, eggs, apples, cabbage, cucumbers, grapes, mandarins, pears, spinach, strawberries and Welsh onions.

Source: OECD (2020), "Producer and Consumer Support Estimates", *OECD Agriculture statistics* (database), http://dx.doi.org/10.1787/agr-pcse-data-en.

Contextual information

Japan is the world's third largest economy after the United States and the People's Republic of China (hereafter "China") with relatively small land area and high population density. The country has experienced slow economic growth and a low inflation rate for most of the past decade, but the unemployment rate is one of the lowest in OECD countries (Figure 16.4). Agriculture constitutes a small share in the economy (1.2% of GDP and 3.2% of employment in 2018) (Table 16.2). The agricultural output had a long downward trend but has been gradually increasing since 2014.

Due largely to the country's mountainous topography, the agricultural area only represents 11.8% of total land, more than half of which is rice paddy fields (MAFF, 2019[1]). The average farm size remains much smaller than that in other OECD countries, but increased from 1.1 hectares to 2.5 hectares between 1987 and 2019 (MAFF, 2020[2]).

The average age of farmers is 66.8 years and more than 80% of farmers in Japan are over 60 years old (MAFF, 2019[3]). In 2015, farms with more than JPY 30 million (USD 0.25 million) of sales accounted for 3% of all farms, but for 53% of total output (OECD, 2019[4]).

Table 16.2. Japan: Contextual indicators

	Japan		International comparison	
	2000*	2018*	2000*	2018*
Economic context			**Share in total of all countries**	
GDP (billion USD in PPPs)	3 404	5 248	8.5%	4.6%
Population (million)	127	126	2.9%	2.5%
Land area (thousand km²)	365	365	0.4%	0.4%
Agricultural area (AA) (thousand ha)	4 830	4 444	0.2%	0.1%
			All countries[1]	
Population density (inhabitants/km²)	340	339	53	62
GDP per capita (USD in PPPs)	26 841	41 502	9 275	21 924
Trade as % of GDP	9	15	12.4	15.3
Agriculture in the economy			**All countries[1]**	
Agriculture in GDP (%)	1.5	1.2	3.1	3.6
Agriculture share in employment (%)	5.0	3.2	-	-
Agro-food exports (% of total exports)	0.3	0.7	6.2	7.3
Agro-food imports (% of total imports)	9.7	8.0	5.5	6.3
Characteristics of the agricultural sector			**All countries[1]**	
Crop in total agricultural production (%)	72	64	-	-
Livestock in total agricultural production (%)	25	35	-	-
Share of arable land in AA (%)	93	94	32	33

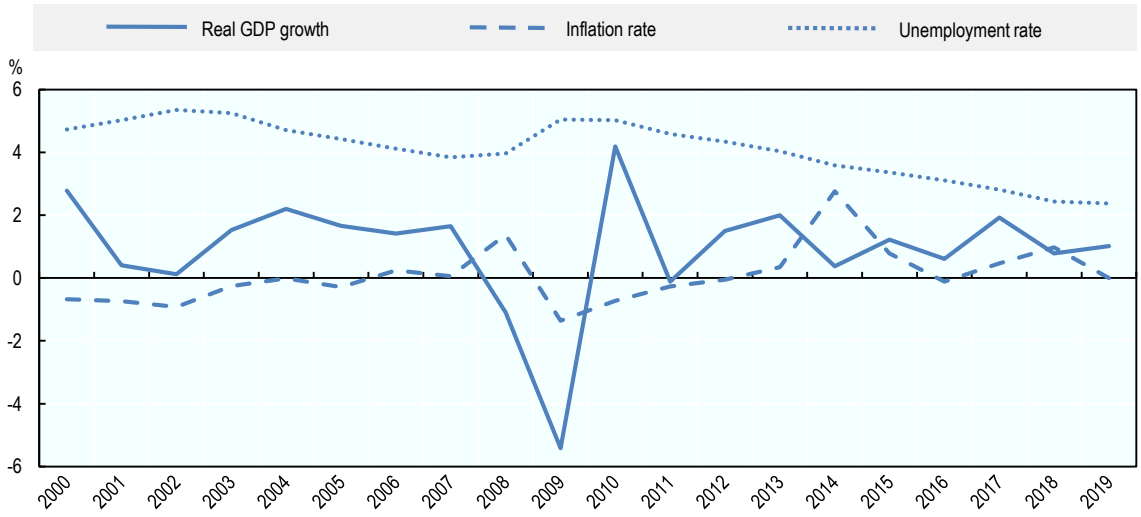
Notes: *or closest available year. 1. Average of all countries covered in this report. EU treated as one.
Sources: OECD statistical databases; UN Comtrade; World Bank, WDI and national data.

The food self-sufficiency rate was 37% in 2018 on a calorie basis (MAFF, 2019[5]), the lowest in recorded history, meaning that more than 60% of Japanese calorie supply depended on imports. Japan is one of the world's largest importers of agro-food products and the United States is the biggest source of agricultural imports (FAO, 2020[6]). Forty-five per cent of imports are processed products for consumption (Figure 16.5).

The share of agricultural exports in total exports, on the other hand, constitutes only 0.7%. Most Japanese agricultural exports are directed at final consumers (Figure 16.5). Processed food products such as alcohol

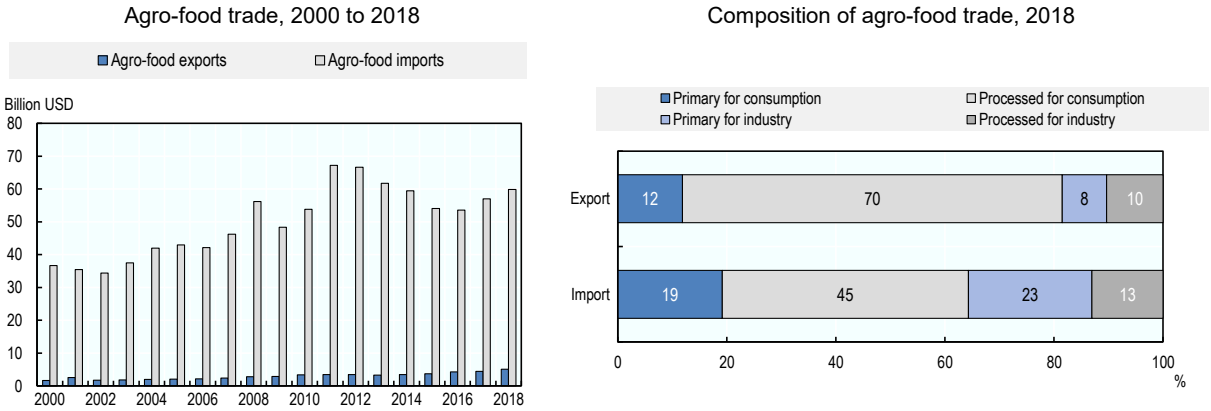
and beverages, snacks, sauces and seasonings account for the majority of Japan's agro-food exports. Among the unprocessed products, apples and beef are the most exported products.

Figure 16.4. Japan: Main economic indicators, 2000 to 2019



Sources: OECD statistical databases; World Bank, WDI and ILO estimates and projections.

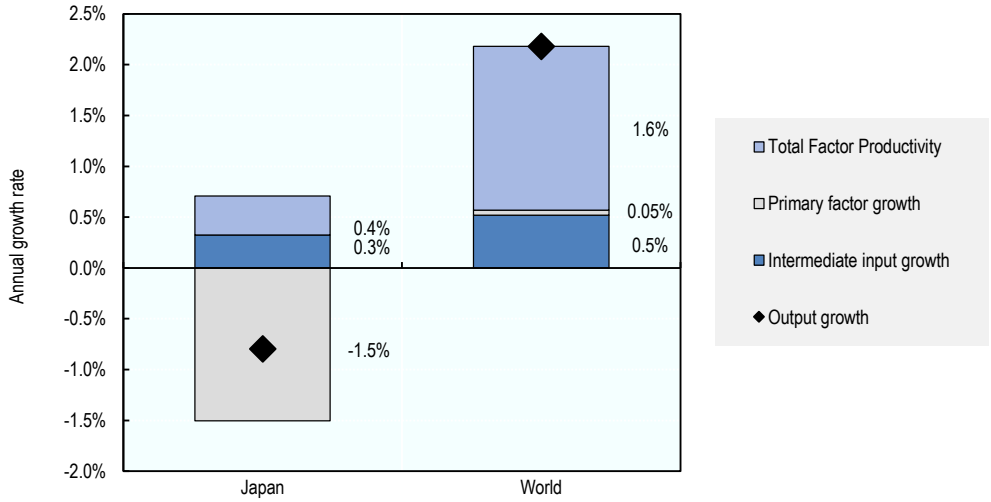
Figure 16.5. Japan: Agro-food trade



Note: Numbers may not add up to 100 due to rounding.
Source: UN Comtrade Database.

Output growth was negative during 2007-16, as the decline in primary factor growth (land and labour) was larger than the increase in total factor productivity (Figure 16.6). This can be explained by the abandonment of farmland and conversion to non-farm uses (e.g. residential or commercial uses), causing agricultural land area to decrease by 27.6% in the past 60 years (MAFF, 2019[7]).Moreover, the number of commercial farm households is 1.13 million, decreased by more than 50% since 1990.

Figure 16.6. Japan: Composition of agricultural output growth, 2007-16



Note: Primary factors comprise labour, land, livestock and machinery.
Source: USDA Economic Research Service Agricultural Productivity database.

Japan's nitrogen and phosphorus balances are among the highest in OECD countries (Table 16.3). The nitrogen balance in 2018 was 179.3 kg per hectare, increasing from 2000, derived from a high degree of fertiliser use and livestock production, combined with a low share of pastureland (Shindo, 2012[8]). The phosphorus balance in 2018 is 57.3 kg per hectare in comparison to 2.3 kg per hectare for the OECD average, and it is in part linked to soil-type related fertilisation needs identified in the past. That is, the reaction of soil in Japan, particularly Andosols, with inorganic phosphate render the phosphate almost insoluble and unavailable for uptake by plants, requiring more intensive phosphorus use by the agricultural sector (FAO, 2015[9]).

In line with its small role in the economy, agriculture's share in total energy use, 1.2% in 2018, is well below the OECD average. Greenhouse gas (GHG) emissions from agriculture were 2.6% of the total emissions in Japan — the lowest among OECD countries. However, breaking down the type of GHGs in Japan, in 2017, the agricultural sector is responsible for more than three-quarters of total methane emissions, mainly coming from livestock enteric fermentation and rice cultivation. Almost half of the national Nitrous Oxide (N2O) emissions are from manure and fertiliser application (GIO, 2019[10]).

The volume of agricultural water use remains stable for the past few decades. In 2018, the Japanese agricultural sector used 67.6% of water of which 94% was directed for paddy field irrigation (MLIT, 2019[11]).

Table 16.3. Japan: Productivity and environmental indicators

	Japan		International comparison	
	1991-2000	2007-2016	1991-2000	2007-2016
			World	
TFP annual growth rate (%)	0.8%	0.4%	1.6%	1.6%
			OECD average	
Environmental indicators	**2000***	**2018***	**2000***	**2018***
Nitrogen balance, kg/ha	170.8	179.3	33.3	29.1
Phosphorus balance, kg/ha	72.0	57.3	3.3	2.3
Agriculture share of total energy use (%)	1.3	1.2	1.7	2.0
Agriculture share of GHG emissions (%)	2.6	2.6	8.1	8.9
Share of irrigated land in AA (%)	54.7	54.4	-	-
Share of agriculture in water abstractions (%)	65.8	67.6	46.0	49.0
Water stress indicator	21.0	19.3	9.9	8.9

Note: * or closest available year.
Sources: USDA Economic Research Service, Agricultural Productivity database; OECD statistical databases; FAO database and national data.

Description of policy developments

Main policy instruments

Japan maintains a system of high border protection and domestic price support for key agricultural products. In general, Japanese **tariffs** on agricultural products are higher than those on non-agricultural products. On average, they amounted to 15.7% in 2018,[2] compared to 2.5% for non-agricultural products. However, agricultural tariffs vary considerably among products with over 35.7% of tariff lines duty free and 2.9% above 100% (*ad valorem* equivalent); 13.2% of agricultural tariff lines are non-*ad valorem* (WTO, 2019[12]). **Tariff-rate quotas** (TRQs) with high out-of-quota tariffs are applied to some commodities such as rice, wheat, barley and dairy products.

Rice import is conducted through **state trading** fulfilling Japan's minimum-access commitment under the WTO Agreement on Agriculture. A TRQ of 682 200 tonnes (milled) is applied. The maximum **mark-up** (price differences collected by the government when importing and selling) for rice imports is set at JPY 292 (USD 2.7) per kg and the out-of-quota tariff-rate is JPY 341 (USD 3.0) per kg.

A **crop diversification payment** is paid to farmers who switch their use of paddy fields from table rice production to other crops (wheat, soybeans, rice for feed and flour). This payment is area based (output is also considered for rice for feed and flour). In addition, a payment is provided to municipal government making unique efforts such as using high-yield variety rice for feed and flour, or cultivating buckwheat or rapeseed.

The **direct support payment** is provided for upland crops (wheat, barley, soybean, sugar beet, starch potato, buckwheat and rapeseed) based on area and output. The area-based payments are based on current planting, while the output-based payments are based on the volume of sales and the quality. Subsidy rates for both payments vary by quality and variety.

The **revenue based payment** is available for certain crops (rice, wheat, barley, soybean, sugar beet and starch potato) in case the revenue drops below the past average revenue, 90% of the difference between the current revenue and the past average is compensated by the government (75%) and the farmers' reserve fund (25%).

The Livestock Stabilization Programme for **Beef**, known as Beef Cattle Marukin, provides support payments to beef cattle producers when the standard sales price falls below the standard production cost.

The payments cover 90% of the difference between costs and sales prices. A quarter of the grant payments is paid from the fund filled by cattle producers. A similar programme is applied for **hog** producers. Additionally, the compensation is paid to producers of milk used for processing.

The **revenue insurance programme** launched in January 2019 provides a safety net for farmers. The programme is revenue-based and compensates the loss of farm revenue stemming from various factors including market and natural causalities, relative to a benchmark based on the previous five years' revenues. Government supports 50% of the insurance premium and 75% of the reserve fund.

Commodity insurance mainly covers yield losses and damage of production equipment due to natural disasters, but degradation of crop quality is also insured for some commodities (rice, wheat, barley, and fruit). This voluntary programme is available for a range of commodities (rice, wheat, barley, livestock animal, fruit, and field crops). Government support covers around 50% of the insurance premium. In principle, farmers can participate in either revenue insurance programme or commodity insurance to avoid duplicated payments by the government programmes.

To foster well-qualified agricultural entities, the government has set up a **certified farmer programme**. The programme grants certified status to farmers (both individuals and corporations) with a management plan approved by national or local municipal authorities. The certified farmers receive several benefits such as income support payments and tax breaks.

To attract younger farmers, Japan offers three types of support programmes. First, a payment is available to new **young farmers** during a training period (maximum of two years). Second, another payment is granted during the initial operation period (maximum of five years). Up to JPY 1.5 million (USD 13 756) is paid annually to eligible trainees and farmers. Third, the government also provides funding for a maximum of JPY 1.2 million (USD 11 005) to subsidise the training cost of young farmers for a maximum period of two years for agricultural co-operation.

The **Farmland Banks**[3] were established in 2014 to facilitate the consolidation of farmland. These intermediary institutions are found in each prefecture, and some manage large areas of farmland in their regions. The Farmland Banks improve farmland conditions and infrastructure if necessary, and then lease the consolidated farmland to business farmers (e.g. corporations, large-scale family farmers, new farmers). Subsidies are provided to land owners and regional authorities that lease farmland under their responsibility to the Farmland Banks.

Public investment has long been one of the core policies to be implemented for improving rural infrastructure, such as farmland (e.g. enlargement of land plot), agricultural roads, and irrigation and drainage facilities. The government also invests in the prevention and restoration of farm infrastructure from natural disaster, as well as public health facilities construction in rural areas.

Hilly and mountainous areas represent about 40% of total agricultural land and of total agricultural output in Japan. Direct payments are provided to farmers in these areas with the aim to compensate for the production disadvantage (e.g. steep slope and smaller cultivation area), avert the abandonment of agricultural land, and contribute to environmental protection and landscape preservation.

Direct payments for environmentally-friendly agriculture are provided to farmers who conduct activities which are effective in preventing global warming or conserving biodiversity together with reducing the use of synthetic fertilisers and pesticides by more than half relative to conventional farming practices in the region. Examples of supported activities include cover crop planting, compost application and organic farming. Farmers are required to comply with Good Agricultural Practices (GAP) to receive the payments.

Having ratified the **Paris Agreement on Climate Change**, Japan plans to decrease GHG emissions from the agricultural sector in several ways: reducing fuel consumption for horticultural facilities and agricultural machinery to reduce CO_2 emissions, disseminating water management methods for paddy fields to lower

methane emissions, and improving fertiliser use efficiency to reduce N_2O. On **climate change adaptation**, the agricultural adaptation plan, with a road map until 2025, looks at managing climate risk (e.g. new variety development, infrastructure against increasing natural disasters) but also envisions taking advantage of positive opportunities that may arise.

Japan has seventeen **Economic Partnership Agreements (EPAs)** in force, covering Singapore, Mexico, Malaysia, Chile, Thailand, Indonesia, Brunei Darussalam, the Association of Southeast Asian Nations (ASEAN), Philippines, Switzerland, Viet Nam, India, Peru, Australia, Mongolia, the Comprehensive and Progressive Agreement for Trans-Pacific Partnership (CPTPP), and the European Union.[4] These EPAs have accelerated structural reforms in the agricultural sector to counter market competitions. Such efforts include the implementation of "the Comprehensive TPP related Policy Framework", which provides various programmes to increase productivity of the sector. Japan is engaged in several other EPA negotiations including with Colombia and Turkey, and plurilateral negotiations such as the FTA among China, Japan and Korea, and the Regional Comprehensive Economic Partnership (RCEP).

Domestic policy developments in 2019-20

The Basic Plan for Food, Agriculture and Rural Areas, which sets Japan's agricultural policy direction for the next 10 years, was revised in March 2020. Facing a multitude of challenges such as the decrease of farming population and the new trade environments by the implementation of large-scale trade agreements, the plan aims to strengthen the agricultural production base regardless of farm size or its hilly and mountainous condition. The emphasis is also placed on sustaining rural areas. The Basic Plan maintains its goal of increasing the country's calorie-based food self-sufficiency rate to 45% by fiscal year 2030. Additionally, the Basic Plan addresses responses related to the COVID-19, such as boosting domestic demands for agricultural products and providing necessary information to consumers.

Across all of the sectors, Japan accelerates the practical application of labour-saving technology using artificial intelligence and robots to resolve the growing labour shortage. The agricultural sector also benefits from advances in these technologies. Aiming to enable almost all business-oriented farmers to utilise data in their workflow by 2025, the government began supporting the incorporation of current leading technologies into agricultural production. With the involvement of producers, municipal governments, the national agriculture research institute, and private sector actors, 121 production sites conduct this **smart agriculture** project.

In 2019, the government formulated a new programme to promote the implementation of new technologies at agricultural production sites, aiming to further advance the utilisation of smart agriculture technologies. In particular, the programme conducts research and development (R&D) on smart agriculture technologies in various farming fields and builds a consultation system for farmers on smart agriculture so that these technologies can be sufficiently implemented.

The Agricultural, Forestry and Fishery Products and Food Export Facilitation Act came into force in April 2020. With the new Act, the government aims to facilitate the **exports** of agricultural, food, forestry and fishery products. Previously, multiple ministries oversaw export policies for these products – e.g. the Ministry of Health, and Labour and Welfare issued a sanitary certificate necessary for export, while the Ministry of Agriculture, Forestry and Fisheries (MAFF) negotiated food safety requirements set by import countries. The new Act streamlines and centralises the management of the operations related to these exports at the headquarters established within MAFF. The new structure seeks to clarify the responsibilities within government agencies and expedite the administrative process of export.

A series of **large-scale natural disasters** hit Japan in 2019. Typhoons, heavy rains, flooding, landslides, and earthquakes all caused major damages to the agricultural sector. The damages in the agricultural, forestry and fisheries sectors from these disasters are reported at JPY 460.2 billion (USD 4.2 billion). The government earmarked supplementary budgets of JPY 105.4 billion (USD 1 billion) for the restoration of

these sectors, mostly used for the recovery of farmland and agricultural facilities as well as landslides and road destructions in the mountains.

Japan amended the **Fertilizer Regulation Act** in 2019. This amendment allows the production and sales of fertilisers that combine chemical fertilisers with compost of livestock manure or soil improvement additives. It also provides standards for raw materials to be used for producing fertilisers. These standards promote the utilisation of industrial by-products and compost in fertilisers, and also aim to improve the safety of these fertilisers. Furthermore, while previous labelling standards were focusing only on indicating raw materials and the nutrient contents, the amendment provides for additional labelling standards on the effects and features of fertilisers. The amended act aims to enable farmers to attain efficient management of soil and to contribute to the improvement of soil fertility.

The **Act on the Promotion of Food Loss and Waste Reduction** came into force on 1 October 2019. The main purpose of the Act is to promote food loss and waste reduction as a national movement through the collaboration of various entities, including the national and local governments, businesses, and consumers. The Act prescribes the responsibilities of the national and local governments to raise public awareness on food loss and waste, and support food-related business operators and related entities. In particular, the Act obligates the national government to establish a basic policy (by Cabinet decision) on reducing food loss and waste, and local governments are obliged to make their best efforts to establish their basic plans, based on the basic policy. In addition, the Act declares October as a promotion month for reducing food loss and waste to enhance understanding and interest among the public.

In October 2019, Japan raised its **consumption tax** for the first time in five and a half years. The tax rate was increased from 8% to 10% to secure stable revenue for the national social security system that benefits. For the first time, the government also introduced a reduced tax rate system. While most goods and services are subject to the increased tax rate, the consumption tax rate for food and beverages other than liquor and eating-out services, is set at 8% in order to lessen the burden especially on lower income households.

Trade policy developments in 2019-20

Japan's tariff-rate-quotas continued to be under-filled in fiscal year (FY) 2019 (April 2019-March 2020) for some products, including butter and butter oil, prepared whey for infant formula, and skimmed milk powder for school lunches. Japan issued special safeguard measures in FY 2019 for some products, including butter and inulin. Japan decided to import up to 20 000 tonnes of butter under state trading in FY 2020 in order to meet domestic demand.

The **Japan–European Union Economic Partnership Agreement** entered into force on 1 February 2019 after more than four years of negotiations. The agreement substantially reduces tariffs and trade barriers for both parties. Overall, Japan eliminates duties on about 94%[5] of imports from the European Union and the European Union liberalises 99% of tariff lines once fully in place after 21 years. The agreement is set to eliminate tariffs on about 82% of the EU's agro-food products exported to Japan. Duties on most remaining products are to be reduced over time, while Japan has opened TRQs for others. EU's tariffs on beef, tea, alcoholic beverages and other priority products from Japan are to be eliminated, most upon the agreement's entry into force. Tariffs for rice remained unchanged for both parties. Aside from market access, the agreement establishes rules on the protection of more than 50 Japanese Geographical Indications (GIs) for wines, spirits and agricultural products in the EU, and 200 EU GIs in Japan.

About five months into the negotiations, Japan and the United States reached a bilateral trade agreement in September 2019 and the agreement entered into force in January 2020. Under the **Trade Agreement between Japan and the United States of America**, Japan sets to eliminate or reduce customs duties and mark-ups on main agricultural imports from the United States including beef, pork and wheat, while maintaining tariffs for its rice. The United States eliminates or reduces customs duties on 42 agricultural

products such as cut flowers and yams (nagaimo) which Japan has an interest to export into the United States.

Specifically, Japan provides staged tariff reductions on US beef from 38.5% to 9% in fifteen years. On pork, Japan eliminates the 4.3% *ad valorem* duty, and reduces the specific duty (from JPY 482 to JPY 50 (USD 4.4 to USD 0.5) per kilo) both over nine years. The mark-up (price differences collected by the government when importing and selling) on US wheat is reduced by 45% by 2026, and a US specific quota is set at 120 000 tonnes increased to 150 000 tonnes in five years. The agreement provides for the use of safeguards for surges in imports of beef, pork, processed pork, whey, oranges and race horses.

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Notes

[1] Source of the information on policy responses relative to the COVID-19 outbreak: (MAFF, 2020[13]).

[2] Simple average MFN applied.

[3] Public Corporations for Farmland Consolidation to Core Farmers through Renting and Subleasing.

[4] Order according to the effectuation date of agreements.

[5] Based on the number of liberalised tariff lines.

17 Kazakhstan

Support to agriculture

The share of producer support in gross farm income (%PSE) was 3% in 2017-19. In 2019, domestic producer prices remained on average below world levels although to a lesser extent than in 2018, leading to a negative aggregate price support and an implicit transfer from farmers to consumers as measured by the Consumer Support Estimate (CSE). Support to fixed capital formation accounts for the majority of budgetary transfers to producers. General services to the sector accounted for a quarter of the budgetary expenditure for agriculture in 2017-19, of which spending on inspection and control made up close to 50%, and spending on infrastructure 35%.

Overall, total budgetary support to agriculture has increased relative to the size of the economy, now representing about 1% of GDP.

Main policy changes

The main changes were amendments to agricultural legislation and an update of the 2021 State Programme. The policy focus is now to orient agriculture to import substitution and to develop exports of high value-added products.

The process of rationalising production subsidies continues and the transparency of farmers' access to credit has been improved. The transformation of KazAgro continued and is to be completed.

The mandatory crop insurance system was transformed to a voluntary insurance scheme with a view to expand crop insurance markets in the country. The new subsidy would cover insurance premiums instead of provide indemnities.

Investment subsidies were rationalised and focused primarily on the renewal of agricultural machinery and equipment, modernisation and creation of new agricultural enterprises, import-substitution, and the realisation of export potential.

Assessment and recommendations

- Ongoing efforts to streamline support to fewer measures, and the creation of a national digital cadastre database for agriculture, increase transparency and should be continued.
- While total support to agriculture is small relative to the overall economy, most of producer support is provided in highly distorting forms and is hence likely to influence farm management decisions, increase pressure on natural resources and distort markets.
- The shift of policy focus towards import substitution should be reassessed as it would raise prices, weaken exposure of producers to international competition and could divert resources to rent-seeking activities.

- The ban on exports of wheat, wheat flour and other key food products amid the COVID-19 pandemic, despite ample domestic stocks, could affect international food supplies and have a particularly strong impact on its trading partners, particularly in Central Asia. It also risks undermining Kazakhstan's reputation as a reliable supplier to international markets.
- The continuation of subsidies for inorganic fertiliser and chemical inputs and for the use of industrial feed should be re-assessed in light of their potential negative environmental impact.
- The reform of the crop insurance system is welcome and should increase the role of private insurers.
- Efforts towards establishing secure property rights for land, including simplification of procedures for land acquisition, are necessary steps towards improving the economic incentives for sustainable resource management. Farm decision-making could be further improved by incorporating environmental concerns into agricultural policies.
- A number of investment projects are underway that have the potential to reduce weaknesses in the transport and market infrastructure, facilitate farmers' access to domestic and international markets, improve water and land management and increase productivity. Integrating environmental and social impacts in infrastructure project evaluation and prioritisation, through the systematic use of Environmental Impact Assessment would support sustainable agricultural development.
- Agriculture is by far the biggest user of water resources. Approximately two-thirds of the abstracted water is used by agriculture for irrigation and about 11–15% of the abstracted water is lost during transport, mostly due to the obsolete irrigation infrastructure and to the low cost of water supply. Water use efficiency in agriculture should be improved by promoting sustainable irrigation techniques, ensuring systemic provision of extension services to farmers and by establishing cost recovery irrigation tariffs.
- The negative trend of nutrient balances could in the long term lead to a decline in soil fertility and productivity growth. Ensuring well-functioning markets and sufficient supplies of crop nutrients should be looked at carefully.
- Organic agriculture is recognised by the government as one of the most promising agricultural sub-sectors. Yet, legislation for setting the national standards, certification and labelling of organic products are not yet adopted.
- Agriculture is the second biggest emitter of greenhouse gases (GHGs), after the energy sector, and Kazakhstan should specify to what degree and how agricultural emissions are to be reduced in order to meet the country's emission reduction commitments. Moreover, the lack of a co-ordinated and systemic approach hinders the country's ability to increase its resilience to the effects of climate change and steps should be taken to enhance agriculture's adaptation to the impacts of climate change.

Policy responses in relation to the COVID-19 outbreak

Agricultural policies

In order to help carrying out spring sowing in a timely manner, KZT 170 billion (more than USD 380 million) worth of loans will be allocated for farmers. Credit will be repayable at rates of 5-6% per annum, as opposed to the 13-15% rates usually available on the open market. Growers will additionally be provided 15% discounts on diesel fuel. In addition, the government has pledged to buy the output of agricultural producers six months in advance.

Subsidised lending will be provided under the state programme ("Economy of Simple Things", KZT 1 trillion), along with actions to help small and medium-sized enterprises (SMEs) finance their working capital (KZT 600 billion). An additional KZT 1 trillion will be allocated to support employment under an "Employment Roadmap" program. SMEs and individual entrepreneurs are also eligible for new tax incentives.

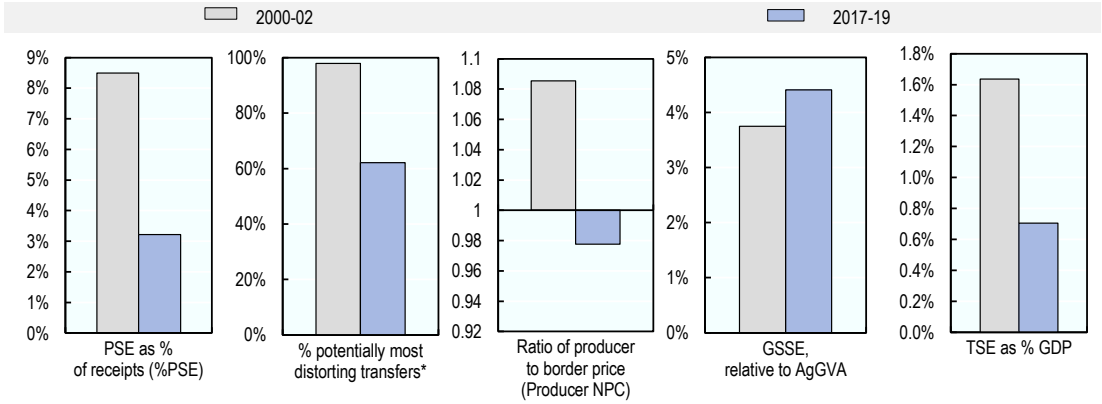
On 1 April 2020, Kazakhstan introduced export quotas for wheat (200 000 tonnes a month) and all types of wheat flour (70 000 tonnes a month) for all countries, including the Eurasian Economic Union (EAEU) members (Armenia, Belarus, Kyrgyz Republic and the Russian Federation).

Kazakhstan, and other members of the EAEU have announced a ban on exports of a number of food products outside of the EAEU from 10 April to 30 June 2020. Exports of buckwheat, wheat, rye, including flours and sugar, potatoes, carrots, turnips, beets, onions, cabbages, sunflower seeds and oil were banned from 22 March to 15 April 2020.

Consumer policies

The anti-crisis package of KZT 4.4 trillion (USD 10 billion or over 6% of GDP), approved on 23 March 2020, includes, *inter alia*, a lower VAT rate for food.

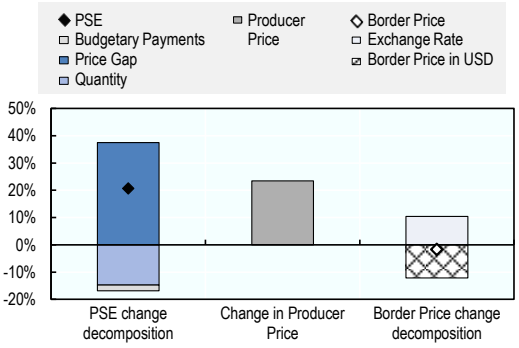
Figure 17.1. Kazakhstan: Development of support to agriculture



Note: * Share of potentially most distorting transfers in cumulated gross producer transfers.
Source: OECD (2020), "Producer and Consumer Support Estimates", OECD Agriculture statistics (database), http://dx.doi.org/10.1787/agr-pcse-data-en.
StatLink https://doi.org/10.1787/888934144420

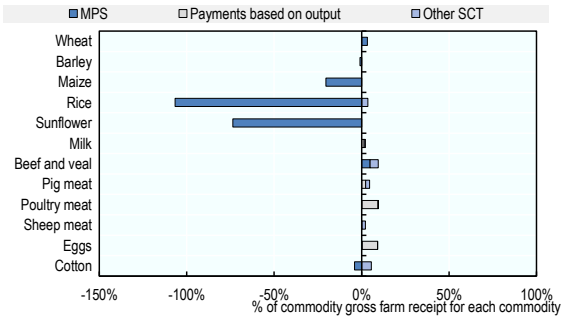
Support to producers (%PSE) as measured by the %PSE was estimated at 3% of gross farm receipts (GFR) on average in 2017-19. The share of gross producer transfers (whether positive or negative (i.e. expressed in absolute terms) arising from potentially **most distorting** measures (support based on output and variable input use – without input constraints) has gone down from 98% in the early 2000s to 69% on average in 2017-19. Domestic prices were lower than world prices for several crops, with negative MPS corresponding to -4% of GFR, but slightly higher than world prices for livestock commodities. Overall, the average prices received by farmers were 3% below world prices. **Support to general services** (GSSE) accounts for 25% of the budgetary expenditure for agriculture in 2017-19, mainly focussing on inspection and control and on infrastructure. **Total support to agriculture** (TSE) as % of GDP declined to 0.7%, but the corresponding share of **Total Budgetary Support Estimate** (TBSE) increased to 1%. The share of GSSE in TSE increased from 19% in 2000-02 to 24% in 2017-19. In 2019, the MPS was less negative than in 2018, driven by price changes on domestic and world markets. Reflecting individual commodity price gaps, SCTs were negative for rice, sunflower, maize and cotton and slightly positive for livestock products.

Figure 17.2. Kazakhstan: Drivers of the change in PSE, 2018 to 2019



Source: OECD (2020), "Producer and Consumer Support Estimates", OECD Agriculture statistics (database), http://dx.doi.org/10.1787/agr-pcse-data-en.
StatLink https://doi.org/10.1787/888934144439

Figure 17.3. Kazakhstan: Transfer to specific commodities (SCT), 2017-19



Source: OECD (2020), "Producer and Consumer Support Estimates", OECD Agriculture statistics (database), http://dx.doi.org/10.1787/agr-pcse-data-en
StatLink https://doi.org/10.1787/888934144458

Table 17.1. Kazakhstan: Estimates of support to agriculture

Million USD

	2000-02	2017-19	2017	2018	2019p
Total value of production (at farm gate)	**3 367**	**13 007**	**12 481**	**12 944**	**13 595**
of which: *share of MPS commodities (%)*	76.6	60.8	59.9	61.0	61.5
Total value of consumption (at farm gate)	**2 933**	**11 446**	**11 180**	**11 785**	**11 374**
Producer Support Estimate (PSE)	**286**	**443**	**388**	**451**	**490**
Support based on commodity output	268	-304	-385	-342	-186
Market Price Support[1]	268	-394	-466	-426	-291
Positive Market Price Support	369	147	92	166	182
Negative Market Price Support	-101	-541	-558	-592	-474
Payments based on output	0	90	81	84	105
Payments based on input use	18	678	688	729	617
Based on variable input use	8	169	173	189	146
with input constraints	0	0	0	0	0
Based on fixed capital formation	10	504	511	534	466
with input constraints	0	0	0	0	0
Based on on-farm services	0	5	5	6	5
with input constraints	0	0	0	0	0
Payments based on current A/An/R/I, production required	0	62	77	57	52
Based on Receipts / Income	0	0	0	0	0
Based on Area planted / Animal numbers	0	62	77	57	52
with input constraints	0	0	0	0	0
Payments based on non-current A/An/R/I, production required	0	0	0	0	0
Payments based on non-current A/An/R/I, production not required	0	0	0	0	0
With variable payment rates	0	0	0	0	0
with commodity exceptions	0	0	0	0	0
With fixed payment rates	0	0	0	0	0
with commodity exceptions	0	0	0	0	0
Payments based on non-commodity criteria	0	0	0	0	0
Based on long-term resource retirement	0	0	0	0	0
Based on a specific non-commodity output	0	0	0	0	0
Based on other non-commodity criteria	0	0	0	0	0
Miscellaneous payments	0	7	8	7	6
Percentage PSE (%)	**8.5**	**3.2**	**2.9**	**3.3**	**3.4**
Producer NPC (coeff.)	**1.09**	**0.98**	**0.97**	**0.97**	**0.99**
Producer NAC (coeff.)	**1.09**	**1.03**	**1.03**	**1.03**	**1.04**
General Services Support Estimate (GSSE)	**67**	**306**	**290**	**313**	**313**
Agricultural knowledge and innovation system	3	37	34	39	39
Inspection and control	29	150	144	155	153
Development and maintenance of infrastructure	28	107	101	108	111
Marketing and promotion	0	4	5	4	4
Cost of public stockholding	5	0	0	0	0
Miscellaneous	1	7	6	7	7
Percentage GSSE (% of TSE)	**19.0**	**24.1**	**25.2**	**24.3**	**23.2**
Consumer Support Estimate (CSE)	**-313**	**764**	**786**	**791**	**714**
Transfers to producers from consumers	-288	251	296	285	173
Other transfers from consumers	-21	-3	1	-4	-5
Transfers to consumers from taxpayers	0	516	475	525	550
Excess feed cost	-4	-2	14	-15	-4
Percentage CSE (%)	**-10.7**	**7.0**	**7.3**	**7.0**	**6.6**
Consumer NPC (coeff.)	**1.12**	**0.98**	**0.97**	**0.98**	**0.99**
Consumer NAC (coeff.)	**1.12**	**0.93**	**0.93**	**0.93**	**0.94**
Total Support Estimate (TSE)	**353**	**1 265**	**1 153**	**1 289**	**1 353**
Transfers from consumers	309	-249	-297	-282	-168
Transfers from taxpayers	65	1 517	1 449	1 574	1 526
Budget revenues	-21	-3	1	-4	-5
Percentage TSE (% of GDP)	**1.6**	**0.7**	**0.7**	**0.7**	**..**
Total Budgetary Support Estimate (TBSE)	**85**	**1 660**	**1 619**	**1 715**	**1 644**
Percentage TBSE (% of GDP)	**0.4**	**1.0**	**1.0**	**1.0**	**..**
GDP deflator (2000-02=100)	**100**	**685**	**655**	**715**	**..**
Exchange rate (national currency per USD)	**147.38**	**350.92**	**325.30**	**344.71**	**382.75**

.. Not available

Note: p: provisional. NPC: Nominal Protection Coefficient. NAC: Nominal Assistance Coefficient.
A/An/R/I: Area planted/Animal numbers/Receipts/Income.
1. Market Price Support (MPS) is net of producer levies and excess feed cost. MPS commodities for Kazakhstan are: wheat, rice, maize, barley, sunflower, potatoes, cotton, milk, beef and veal, pig meat, sheep meat, poultry and eggs.

Source: OECD (2020), "Producer and Consumer Support Estimates", *OECD Agriculture statistics* (database), http://dx.doi.org/10.1787/agr-pcse-data-en.

Contextual information

Kazakhstan has the ninth largest land area in the world and is one of the least densely populated countries. It has the second-highest per-capita availability of arable land in the world. The country is an upper middle-income economy and the richest country in Central Asia, but its economy remains highly dependent on fluctuations in the oil and commodity markets. An important bottleneck to Kazakhstan's economic development is the state of infrastructure systems, particularly in transport. GDP growth remained stable at 4.1% in 2018, while unemployment has decreased slightly to 4.6% in 2019 (4.8% in 2018).

The share of trade in GDP (26%) is substantially higher than the corresponding value for all countries analysed in the report. Agriculture contributes about 4% of GDP and employs 15% of the country's working age population. The farm structure is dualistic: large-scale and often highly integrated operations dominate the grain sector, while rural households produce the majority of beef and milk. Kazakhstan's agriculture and mining sectors are particularly vulnerable to the effects of climate change, as increasingly frequent hot weather and severe droughts threaten the availability of water.

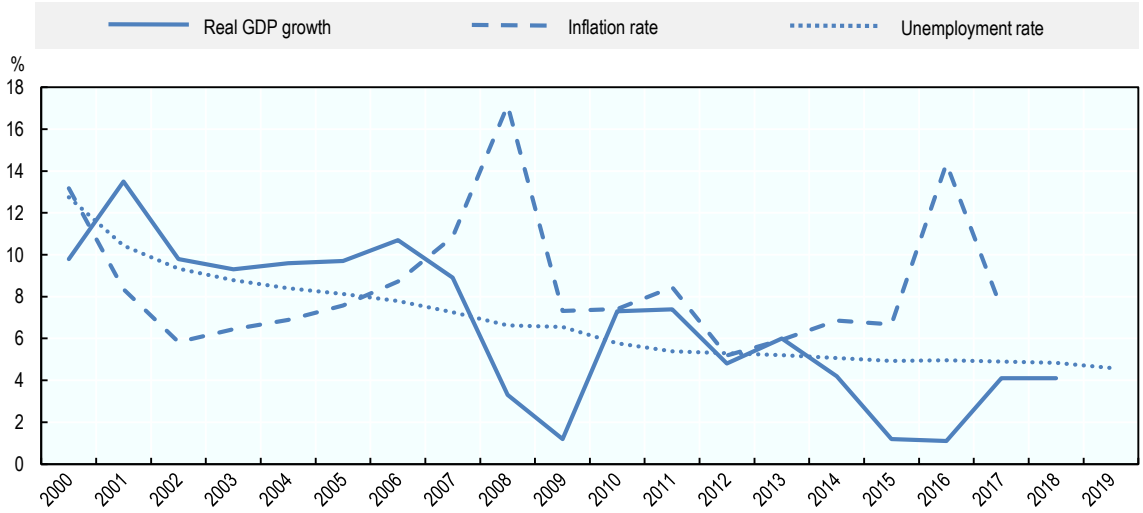
Table 17.2. Kazakhstan: Contextual indicators

	Kazakhstan		International comparison	
	2000*	2018*	2000*	2018*
Economic context			**Share in total of all countries**	
GDP (billion USD in PPPs)	118	510	0.3%	0.5%
Population (million)	15	18	0.3%	0.4%
Land area (thousand km^2)	2 700	2 700	3.3%	3.3%
Agricultural area (AA) (thousand ha)	215 393	216 992	7.2%	7.2%
			All countries[1]	
Population density (inhabitants/km^2)	6	7	53	62
GDP per capita (USD in PPPs)	7 919	27 880	9 275	21 924
Trade as % of GDP	37	26	12.4	15.3
Agriculture in the economy			**All countries[1]**	
Agriculture in GDP (%)	8.1	4.4	3.1	3.6
Agriculture share in employment (%)	35.8	15.0	-	-
Agro-food exports (% of total exports)	2.0	5.1	6.2	7.3
Agro-food imports (% of total imports)	0.7	10.6	5.5	6.3
Characteristics of the agricultural sector			**All countries[1]**	
Crop in total agricultural production (%)			-	-
Livestock in total agricultural production (%)			-	-
Share of arable land in AA (%)	14	14	32	33

Notes: *or closest available year. 1. Average of all countries covered in this report. EU treated as one.
Sources: OECD statistical databases; UN Comtrade; World Bank, WDI and national data.

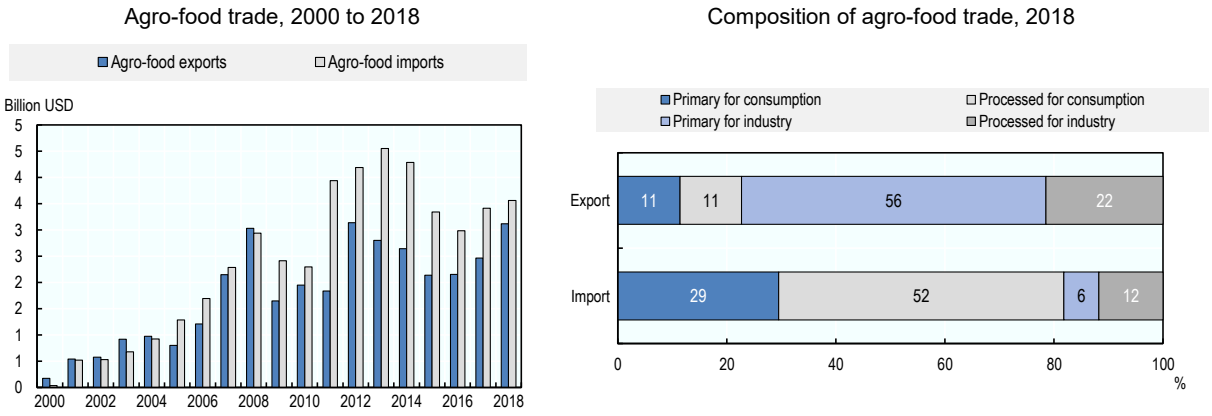
Kazakhstan has been a net agro-food importer since the mid-2000s, yet is one of the world's largest wheat exporters. More than 60% of agro-food exports are in primary commodities, most of which go to processing. More than 60% of agro-food imports are in processed commodities, the bulk of which are for final consumption.

Figure 17.4. Kazakhstan: Main economic indicators, 2000 to 2019



Sources: OECD statistical databases; World Bank, WDI and ILO estimates and projections.

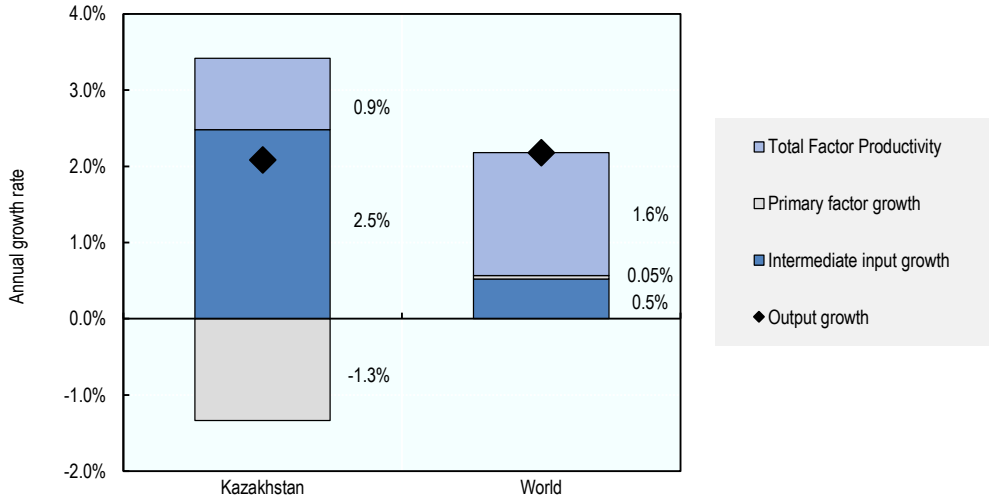
Figure 17.5. Kazakhstan: Agro-food trade



Note: Numbers may not add up to 100 due to rounding.
Source: UN Comtrade Database.

The average annual TFP growth rate of 0.9% between 2007 and 2016, underscores the remaining gap to achieve productivity growth rates similar to the world average. Output grew by 2.5% per year. The intermediate input grew faster than the output, but the reduction of primary factor led to a positive TFP growth. Moreover, the negative average nutrient balances suggests that in the long term such trend could lead to a decline in both soil fertility and productivity growth. Agriculture's share of energy use declined considerably between 1991-2000 and 2007-16. Agriculture's share of GHG emissions remained unchanged during the period and above the OECD average, a comparison that should be qualified by the higher contribution of agriculture to the country's GDP than the OECD average. The share of irrigated land remains low at 0.9%. The share of agriculture in abstracted water has declined, but still remains much higher than the OECD average.

Figure 17.6. Kazakhstan: Composition of agricultural output growth, 2007-16



Note: Primary factors comprise labour, land, livestock and machinery.
Source: USDA Economic Research Service Agricultural Productivity database.

Table 17.3. Kazakhstan: Productivity and environmental indicators

	Kazakhstan		International comparison	
	1991-2000	2007-2016	1991-2000	2007-2016
			World	
TFP annual growth rate (%)	6.1%	0.9%	1.6%	1.6%
			OECD average	
Environmental indicators	**2000***	**2018***	**2000***	**2018***
Nitrogen balance, kg/ha	-14.4	-13.7	33.3	29.1
Phosphorus balance, kg/ha	-2.5	-2.0	3.3	2.3
Agriculture share of total energy use (%)	4.0	2.0	1.7	2.0
Agriculture share of GHG emissions (%)	9.5	9.7	8.1	8.9
Share of irrigated land in AA (%)	0.9	..	-	-
Share of agriculture in water abstractions (%)	75.1	66.7	46.0	49.0
Water stress indicator	..	..	9.9	8.9

Notes: * or closest available year.
Sources: USDA Economic Research Service, Agricultural Productivity database; OECD statistical databases; FAO database and national data.

Description of policy developments

Main policy instruments

The State Programme of Agro Industrial Complex Development for 2017-2021 (hereafter, the 2021 State Programme) provides the agricultural policy framework in Kazakhstan. Although maintaining the principles of the previous framework (Agribusiness-2020 Programme), the 2021 State Programme puts a stronger emphasis on the development of, and support to, individual household plots and small farms, agricultural producer co-operatives and agriculture supporting services and infrastructure. In addition, some input subsidies including on seed, fertiliser and pesticides are to be increased.

Kazakhstan applies a range of border and domestic price intervention instruments. Border measures are in large part implemented within the Customs Union of the Eurasian Economic Union (EAEU) and include Tariff Rate Quotas (TRQs) and non-tariff measures. TRQs apply to imports of beef of lower grade and poultry products.

Intervention on domestic markets is twofold. The State Commission for the Modernisation of the Economy decides intervention purchases of grains to support domestic producer prices. At the same time, a system of consumption price stabilisation is in place for 29 commodities. Purchase occurs after harvest at market prices and commodities are stored before they are released at below market prices later in the year.

The government's crop diversification policy aims to reduce the area planted in wheat and increase the area planted in "priority" crops, including forage crops, oilseed crops, barley and corn. Higher subsidies are offered for "priority" crops. Area payments are provided to fodder crops and vegetables in the protected grounds, while per tonne payments are granted to oilseeds, rice, sugar beet and cotton to be used for processing.

The livestock sector is supported by headage and output payments. Large commercial livestock producers receive most of the output payments. Other forms of support to livestock are silage and fodder subsidies, support to artificial insemination and to the purchase of young cattle for feedlots.

The purchase of mineral fertiliser and of high quality seeds is subsidised. Administered prices below market prices apply to diesel fuel sold to agricultural producers; total volumes to be supplied at these prices during the sowing and harvesting periods are pre-determined as well.

Investment subsidies, together with concessional credit, represent the principal forms of support to agriculture. Concessional credit is delivered through numerous channels. Loans are provided at reduced interest rates by several credit agencies under the umbrella of the state company KazAgro Holding. Interest rates on agricultural loans and leasing contracts are subsidised and concessional credits are granted both for short-term and investment loans. Primary producers also benefit from concessional leasing of machinery. Along with agricultural producers, food processors benefit from concessional credit and leasing of machinery and equipment from credit agencies of KazAgro Holding.

Investment support is provided through a complex approval system. It applies to 39 "priority groups" conditioned on compliance with a number of technical specifications and regulatory rules and has to be approved by regional authorities and in some circumstances also by the Ministry of Agriculture.

Agricultural enterprises and individual farms benefit from special tax regimes with substantial concessions. For example, corporate and family farms enjoy a 70% discount on all the business taxes applied in the country (property tax, social tax, VAT, profit tax and tax on vehicles). A practice of a 100% subsidisation of VAT to primary processors and procurement organisations on agricultural products procured from individual farms is in place since January 2016.

The land tax has been applied since 2015. Individual farms of less than 3 500 hectares are eligible for a Single Land Tax, which is set as a percentage of the cadastre value of land owned or used and replaces the land tax and the five business taxes mentioned above. Since 2015, individual farms have to pay a 10% income tax for physical persons on the income above KZT 150 million (USD 0.4 million).

Harnessing Information Technologies is part of Kazakhstan's longer-term strategy to simplify, facilitate control over, and improve the transparency and effectiveness of government support to agriculture. An electronic system of subsidy payments is applied to most subsidy programmes. Applicants to KazAgro credit and leasing can apply electronically.

The process of changes in the organisation and structure of the state company KazAgro Holding continues according to the Comprehensive Privatisation Plan for 2016-20: i) the partial privatisation of three KazAgro subsidiary companies; and ii) modifications to the holding structure and specialisation of its subsidiary companies on the provision of specific support programmes. The Agricultural Credit Corporation (ACC)

would specialise in funding commercial banks, credit co-operatives, micro-finance organisations and leasing companies, the Fund of Financial Support of Agriculture (FFSA) would serve small and medium agribusiness and agricultural co-operation, and KazAgroFinance would focus on the leasing of machinery and equipment and no longer provide credits.

The President's Edict dated 6 May 2016 imposes a moratorium until 31 December 2021 on the foreseen introduction of private ownership of agricultural land and on the extension of the maximum period of agricultural land rent to foreign entities from 10 to 25 years.

Kazakhstan is a party to the Paris Agreement on Climate Change. Through its Intended Nationally Determined Contribution, Kazakhstan set an economy-wide target to reduce its total GHG emissions by 15% in 2030 compared to 1990, over a period starting in 2021. This target covers all emissions, including those from agriculture. Specific targets or reduction plans for the agricultural sector have not been defined.

Kazakhstan, together with Armenia, Belarus, Kyrgyzstan and the Russian Federation, is a member of the Treaty on the Eurasian Economic Union (EAEU) since its establishment in 2015. Kazakhstan's border measures are implemented within the Customs Union of the EAEU and a number of national competences in the area of custom regulations are transferred to the EAEU, including SPS and technical regulations.

Domestic policy developments in 2019-20

The main changes were amendments to agricultural legislation and an update of the 2021 State Programme. The principal focus and priorities of the updated 2021 State Programme include: explicit focus on import substitution and export development; sustainable land use conditions in provision of concessional credit; revision of the focus of investment support and a shift in priorities; continued organisational reform of KazAgroHolding; focus on bringing land into productive use; establishment of land cadastre, land evaluation, preparations for changing considerably land taxation, including increased taxes for unused land.

The process to rationalise production subsidies continues. In order to improve transparency of farmers' access to finance, their applications for subsidies are to be made publicly available.

The subsidies on seeds, fertilisers and plant protection chemicals are to remain. The process of eliminating product-specific subsidies, started three years ago, is continuing. Released funds are to be redistributed to priority areas such as the purchase of breeding stock, as well as subsidies only for import-dependent items – milk, poultry and sugar beets. These changes were implemented in 2019 for the crop production sector, and in 2020 for the livestock sector.

In 2019, a new seed subsidisation mechanism was introduced, which covers 100% of farmers' expenses for purchasing quality seeds. In return, the farmers are required to return 30% of the subsidies to the Seed Development Fund, which finances the acquisition and modernisation of machinery and equipment for certified seed producers at preferential interest rates.

In 2019, investment subsidies were primarily focused on the renewal of agricultural machines and tractors, modernisation and creation of new agricultural enterprises, import-substitution, and the realisation of export potential. Subsidised areas of the industry were reviewed and investment support for elevators and for egg-poultry farms were abolished. Moreover, the subsidy rate for wells for the irrigation of pasture land was reduced from 80% to 25%. The released funds of these improvements, about KZT 20 billion (USD 52 million), were redistributed to other priority areas, such as the renewal of agricultural machinery and equipment, dairy and meat factories, poultry farms, orchards, greenhouses, and the storage infrastructure for fruits and vegetables.

In the context of the government's efforts to shift away from subsidising credit to a credit guarantee system, the Fund for Financial Support of Agriculture JSC (FFCA) is involved in the guarantee system since the private financial organisations expressed low interest in guaranteeing loans for farmers. Based on the

FFCA, a system of compensation for guaranteeing loans from the state budget is to be created. The KazagroGarant, a KazAgro subsidiary, which was operating warehouse receipts for grain and cotton, is to be liquidated. In 2019, small and medium-sized businesses with insufficient collateral could receive a guarantee for up to 30% of the loan for development projects in agricultural priority areas.

New regulation of agricultural insurance was introduced in 2019 to change the mandatory crop insurance system to a voluntary insurance scheme with a view to expand crop insurance markets in Kazakhstan. The new subsidy would cover insurance premium instead of indemnity. To empower the insurance agents to develop insurance products, an electronic platform is planned to monitor fields based on remote sensing data.

Within the framework of updating the 2021 State Programme, changes in the organisation and structure of the state company KazAgro Holding are to be completed in 2020. These entail: i) the partial privatisation of three KazAgro subsidiary companies; and ii) amendments of the holding structure and specialisation. The Agricultural Credit Corporation (ACC) would specialise in funding commercial banks, credit co-operatives, micro-finance organisations and leasing companies; the Fund of Financial Support of Agriculture (FFSA) would serve small and medium agribusiness and agricultural co-operation, and KazAgroFinance would focus on the leasing of machinery and equipment and no longer provide credits.

In 2019, a number of amendments were made to the law on agricultural regulation, including in particular the following: restriction of transfers of land of specially protected natural territories; improving the mechanism of monitoring the use of agricultural land; a ban on the provision of sales of agricultural land located in zones close to the state border to foreigners, stateless persons, foreign legal entities, as well as Kazakh legal entities with foreign participation.

In 2019, the Ministry of Agriculture carried out activities to bring unused agricultural land into production: i) the Ministry of Agriculture and local authorities identified 2.2 million hectares of unused agricultural land; ii) the government began a process to assess the quality of agricultural land parcels and expects to conduct a soil quality assessment on 33 million hectares by 2021.

The Ministry of Agriculture and the Ministry of Digital Development, as well as the Defence and Aerospace Industries, are working on the creation of the National Spatial Data Infrastructure project, which includes a section on agricultural land.

The Law on the Regulation of the Agro-Industrial Complex, signed in October 2019 by the President, allows using the results of space monitoring in state control to identify unused lands and to return them to state property. A digital cadastre for agricultural land was compiled at the level of arable, pasture, garden, and hay fields. So far, 26 million hectares of arable land and 56 million hectares of pastureland have been digitised, including 291 000 plots of arable land and 132 000 plots of pasture owned by 130 000 land users.

With this, the Ministry of Agriculture hopes to have timely and comprehensive information for future decisions, allowing it to quickly respond to changes on the ground and to make realistic forecasts for the development of agriculture.

The regulation on unused land is being significantly updated. In 2019, draft legislation was developed and entered into the approval procedure. The draft provides for: an accelerated process for returning unused agricultural land; a 20-fold increase of base tax rates on unused agricultural land; and the introduction of preventive monitoring of land use based on satellite data and remote sensing. So far, unused land can be seized only through the courts and the procedure takes between two and three years. The Ministry of Agriculture is proposing that lease contracts for unused land could be terminated unilaterally.

The update of the 2021 State Programme also provides for the development of irrigated agriculture. The State Programme originally planned to bring the total area of irrigated land to 2 million hectares. Within the framework of the relevant long-term sectoral programme, it is now planned to additionally introduce 1.5 million hectares of newly irrigated land, bringing the area to 3.5 million hectares in total.

In 2019, the Committee of Water Resources of Kazakhstan developed the Concept of the Kazakhstan Water Resources Management Programme for 2020-30. Within the framework of the Concept, the following problems of the Kazakhstan water sector were identified: poor water quality, outdated infrastructure, significant water losses in the irrigation system, inefficient tariff setting mechanism, shortage of qualified personnel, and insufficient cross-country co-operation in the water sector. The Concept defines the main objectives of the water management programme as follows: i) updating the legal framework. The set of laws to be adopted includes, among others, the Water Code, the law on the safety of hydro-technical structures, the law on irrigation and drainage, the law on drinking water supply and sanitation, and the law on water user associations; ii) modernisation and reconstruction of water infrastructure; iii) digitalisation of the water supply; and iv) development of public–private partnerships for the construction and maintenance of water infrastructure, the transfer of state property to trust management , and an increased attractiveness of investments in water infrastructure.

In order to develop organic agriculture, in November 2019, the Ministry of Agriculture approved a pilot programme to support export-oriented organic farming in the Almaty and Zhambyl regions.

The rules for the operation of stabilisation funds (food stocks) were simplified, and a new mechanism to control the prices of socially important food products was introduced. The new mechanism focusses on concessional loans for business entities covenanting to sell key food products at fixed, reduced prices. In 2019, following the decline in cereal production due to unfavourable weather conditions, the Food Corporation JCC purchased 350 000 tonnes of wheat in order to stabilise bread prices.

Trade policy developments in 2019-20

In 2019, Kazakhstan, as an EAEU member, signed a number of Free Trade Agreements. Meat imports from non-CIS countries into the EAEU area are subject to **tariff rate quotas** (TRQs) which are allocated to each EAEU member.

On 1 October 2019, Kazakhstan – as an EAEU member – joined the **Framework Agreement on Comprehensive Economic Cooperation** and the **Free Trade Agreement** between the EAEU and the ***Republic of Singapore***. On 25 October 2019, the EAEU signed a **Free Trade Agreement** with the ***Republic of Serbia***. The agreement provides for certain exemptions from the free trade regime. Within the agricultural group, sugar and certain alcoholic beverages imported into Serbia from the EAEU area would pay MFN import duties, and tariff rate quotas are to be opened for specific processed cheese, spirits from grape wine, and cigarettes. Serbian poultry meat, specified processed cheese, sparkling wine, ethyl alcohol and tobacco products entering the EAEU are to pay EAEU common tariffs, and tariff rate quotas are to be applied to specified cheese, alcohol, and cigarettes containing tobacco (EAEU, 2019[1]).

An Interim Agreement Leading to Formation of a **Free Trade Area** between the EAEU and its member states and the ***Islamic Republic of Iran*** entered into force on 27 October 2019. In its part related to agriculture this agreement foresees a reduction from 25% to 100% of EAEU import duties on a broad range of products imported from Iran, notably, certain fish products, vegetables and fresh and dried fruits. The EAEU benefits from 20% to 75% tariff reductions on products such as beef and veal, butter, certain confectionery and chocolate, mineral waters, oil and fat products (EAEU, 2018[2]).

The EAEU actively promoted economic and trade relations also with other countries. In 2019, memoranda of co-operation and memoranda of understanding were signed with Indonesia, the African Union, Bangladesh, Argentina, Thailand, MERCOSUR, and ASEAN. These documents aim at increasing economic co-operation, bilateral trade and investments, and among other issues, cover agriculture.

As a member of the EAEU, efforts are on-going to harmonise **veterinary and phytosanitary** standards with several export destinations, including the People's Republic of China, Iran and Saudi Arabia. Veterinary requirements are being harmonised for beef, sheep and camels, various varieties of honey, and

fish. In turn, work on phytosanitary requirements concerns flax, beans, peas, safflower, melon seeds, alfalfa and oil cake.

References

EAEU (2019), *Free trade agreement between the Eurasian Economic Union and its Member States, of the one part, and the Republic of Serbia, of the other part*, Eurasion Economic Commission, http://www.eurasiancommission.org/ru/act/trade/dotp/sogl_torg/Documents/%d0%a1%d0%b5%d1%80%d0%b1%d0%b8%d1%8f/Agreement.pdf. [1]

EAEU (2018), *Interim Agreement leading to formation of a free trade area between the Eurasian Economic Union and its Member States, of the one part, and the Islamic Republic of Iran, of the other part*, Eurasian Economic Commission, http://www.eurasiancommission.org/en/. [2]

18 Korea

Support to agriculture

Korea's level of support to agricultural producers gradually decreased during the last two decades due to continued efforts towards market-oriented reforms, but in spite of these reductions, support levels remain well above the OECD average and potentially most distorting forms of support predominate. Producer support as a share of gross farm receipts (%PSE) decreased from 60.9% in 2000-02 to 47.9% in 2017-19, compared to an OECD average of 17.6% In the context of reforms, a range of direct payment programmes and an agricultural insurance scheme were introduced in the late 1990s and in 2005, respectively. Since the rice tariffication in 2015, all import restrictions on agricultural products have been applied in the form of tariffs and tariff rate quotas (TRQs). Market Price Support (MPS) is the dominant component of the PSE, accounting for 89% of PSE over the period 2017-19, maintained mainly through tariff rate quotas with high out-of-quota tariffs.

Budgetary payments to general services directed at the sector as a whole (GSSE) averaged 14% of total support to the agricultural sector (TSE) in 2017-19. The main elements are expenditure on infrastructure, representing 62% of the GSSE, while government funding for the agricultural knowledge and innovation system accounts for 18%.

Main policy changes

A new direct payment programme, integrating payments for rice, upland crops and less favoured areas, is to be implemented in 2020. The new scheme aims to further decouple payments from production and reinforce cross-compliance of farmers. As a method to alleviate the current high dependence on rice direct payments, the government continues to offer incentives for crop diversification in the form of support to drainage, seeds and agricultural machines. The subsidised agricultural insurance programme increases its commodity coverage to 83 agricultural products in 2020.

To improve the sustainability of agriculture, the second version of the Climate Change Response Plan (2020-40) was released in October 2019, in line with the Paris Agreement on Climate Change and the National Roadmap for the reduction of greenhouse gas (GHG) emissions. The new version of the basic plan covers a reduction target to decrease GHG emission by 37% from the business-as-usual (BAU) level by 2030, which is 24% lower than the 2017 level, and action plans across all economic sectors, including agriculture. The agricultural sector was tasked with reducing GHG emissions by 7.9% from the BAU level by 2030.

The government increased its investment in the Smart Agriculture Project with the aim to promote the application of information and communication technology at the farm level, while attracting young innovative farmers. The project also includes the construction of agro-food complexes that cover the entire value chain from research and development institutions to agro-food firms.

Assessment and recommendations

- Although Korea has made progress in agricultural policy reforms, producer support remains high and policy measures linked to individual commodity production, notably border protection, still dominate agricultural support. To enhance long-term productivity and sustainability in the sector, the policy mix should be re-balanced to allow farmers more freedom to make production decisions and to put a stronger focus on general services that enable the sector to improve its productivity, sustainability and resilience.
- In this context, current reforms of direct payment programmes will play a key role in changing agricultural policy schemes and reallocating public resources. Careful planning and implementation is needed to make reforms socially acceptable, and the government should provide consistent signals to stakeholders during the reforms.
- The success of the Smart Agriculture Project depends on the development of applicable Information and Communication Technology (ICT) solutions to meet the demands of producers and markets. To facilitate the adoption of ICT along the value chain, demand-driven technologies should be developed based on partnership and collaboration among producers, retailers, research and development (R&D) institutions and ICT industries.
- Limited employment opportunity and lack of rural infrastructure have led young and skilled labour to leave the sector. To attract more people and investments to agriculture and rural areas, the remaining restrictions on investments should be reduced and living conditions need to be improved. Decentralised extension services could help to improve livelihoods in rural areas.
- The agricultural insurance system has increased its coverage over the last two decades, but a considerable part of the scheme continues to be financed by government subsidies. Insurance subsidies impede on-farm risk management, in turn transferring a part of risks from farmers to taxpayers. For private insurance providers to develop market-based solutions, the government should facilitate better access to data, and gradually reduce subsidy rates.
- To establish a solid framework for agri-environmental policies, a wide set of measures to promote environmentally-friendly agricultural production need to be considered. Given the new Climate Change Response Plan released in 2019, specific policy instruments to achieve a GHG emission reduction target, including enhancing water and animal waste management, should be implemented, especially for the main agricultural activities such as rice cultivation and livestock.
- Despite continued efforts to promote private R&D investment in the agricultural sector, the contribution of private R&D in the sector remains relatively low. The high intensity of public investment in agricultural R&D may crowd out innovation initiatives in the private sector. Public R&D should increasingly focus on basic and long-term research or on areas of public interest, complementary to private R&D.

Policy responses in relation to the COVID-19 outbreak

Agricultural policies

The government provided emergency funds to farming households to address liquidity problems. Within this initiative, farming households were able to benefit from low interest loans at favourable payment schedules. Leasing fees for agricultural machinery and equipment were also temporarily decreased. In particular for farmers and wholesalers in horticulture and floriculture, one of the most affected sectors, additional budgetary support is expected to be provided to lower wholesale transaction fees or rents, and to increase public procurement (Korean Government, 2020[1]).

To address shortages of migrant seasonal workers caused by the restriction on movement, the government implemented several policy measures to increase the sector's attractiveness and reduce short-term mismatch of labour force in the sector. Visa regulations were temporarily alleviated to allow foreign visitors or migrant workers from other industries to work in the agricultural sector. In efforts to attract seasonal workers and volunteer workers, the government also increased the number of agriculture job-matching centres.

Both public and private sectors made additional efforts to recover the consumption level of horticultural and floricultural products. Promotion campaigns have been rolled out at the national level, and large companies, governments (including the central and local governments), and public institutions increased their purchase of flowers and pot plants to decorate offices.

With regards to exports, the government is strengthening market monitoring, and trying to help finding alternative export markets. It is also actively supporting export promotions and maintaining access to logistics services given current constrained air freight services.

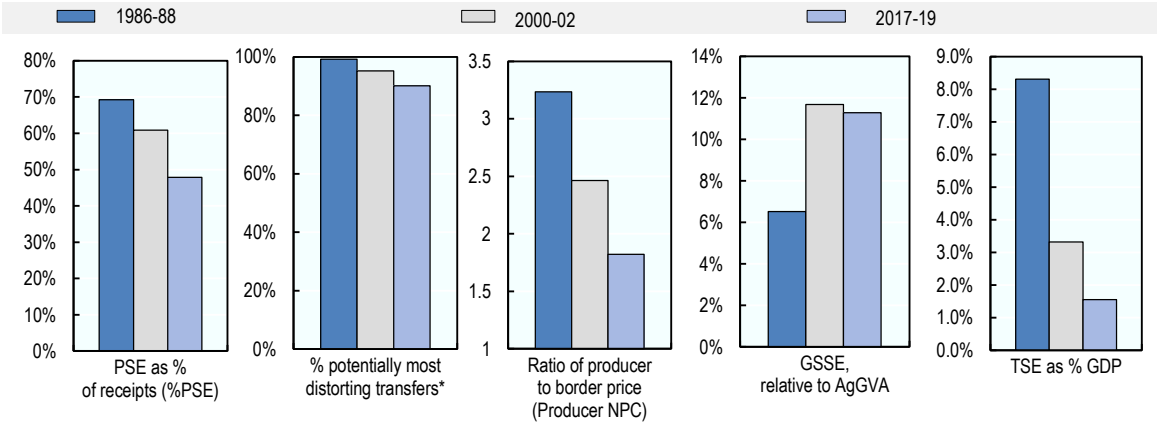
Agro-food supply chain policies

Food service providers and catering companies are severely affected by movement restriction, social distancing and school closures. To facilitate the purchase of agro-food products and ease companies' liquidity constraints, the government expanded funds for these companies and further lowered interest rates. Considering that public catering companies were key consumers of organic products, finding alternative distribution channels is being encouraged. Companies are making efforts to sell directly to final consumers via online and other promotions, through active co-operation with local governments and agricultural co-operatives.

Consumer policies

The government is closely monitoring food stocks in domestic markets, and ensuring food accessibility for low income households. Emergency food supplies will be prepared through discussion with agro-food firms if necessary.

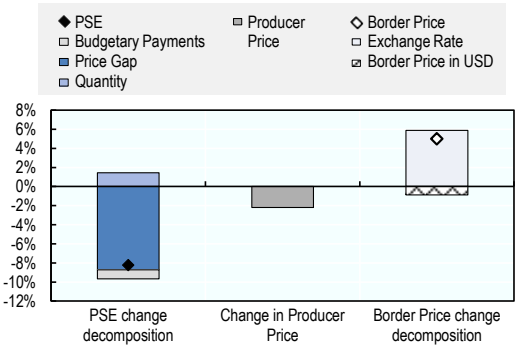
Figure 18.1. Korea: Development of support to agriculture



Note: * Share of potentially most distorting transfers in cumulated gross producer transfers.
Source: OECD (2020), "Producer and Consumer Support Estimate", OECD Agriculture statistics (database), http://dx.doi.org/10.1787/agr-pcse-data-en.
StatLink https://doi.org/10.1787/888934144477

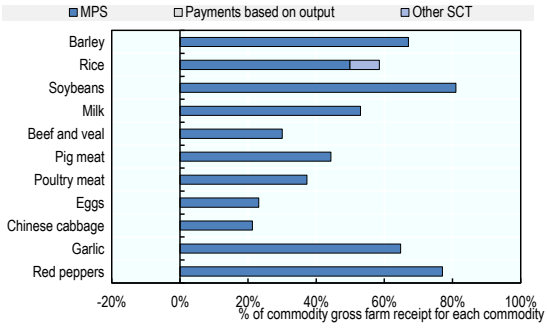
Support to producers (%PSE) has declined from 60.9% of gross farm receipts in 2000-02 to 47.9% in 2017-19, 2.7 times higher than the OECD average. The share of potentially most distorting transfers, mostly in the form of MPS, dominated at 90% of total PSE in 2017-19 (Figure 18.1). In 2019, the level of support fell by 8.2% compared to 2018, mainly driven by a reduced gap between domestic and border prices. This decrease was due to exchange rate movement and reduction in domestic prices for some products such as soybeans, poultry meat and garlic (Figure 18.2). Prices received by farmers in 2017-19, on average, were 80% higher than those observed in world markets. Transfers to specific commodities represented 93% of total support to farms in 2017-19. Soybeans, red peppers, barley and garlic had the highest share of the Single Commodity Transfers (SCT) in commodity gross farm receipts (Figure 18.3). Expenditures for general services (GSSE) were equivalent to 11.3% of agricultural value added in 2017-19, slightly down from 11.7% in 2000-02. Total support to agriculture (TSE) as a share of GDP has declined significantly from 8.3% in 1986-88 to 1.6% in 2017-19, but it still remains 2.5 times higher than the OECD average.

Figure 18.2. Korea: Drivers of the change in PSE, 2018 to 2019



Source: OECD (2020), "Producer and Consumer Support Estimate", OECD Agriculture statistics (database), http://dx.doi.org/10.1787/agr-pcse-data-en.
StatLink https://doi.org/10.1787/888934144496

Figure 18.3. Korea: Transfer to specific commodities (SCT), 2017-19



Source: OECD (2020), "Producer and Consumer Support Estimate", OECD Agriculture statistics (database), http://dx.doi.org/10.1787/agr-pcse-data-en.
StatLink https://doi.org/10.1787/888934144515

Table 18.1. Korea: Estimates of support to agriculture

Million USD

	1986-88	2000-02	2017-19	2017	2018	2019p
Total value of production (at farm gate)	**16 985**	**26 360**	**43 784**	**42 605**	**45 493**	**43 253**
***of which:** share of MPS commodities (%)*	73.0	63.1	60.0	60.3	59.7	59.9
Total value of consumption (at farm gate)	**17 667**	**31 381**	**59 869**	**54 907**	**64 066**	**60 635**
Producer Support Estimate (PSE)	**11 908**	**16 694**	**22 124**	**21 498**	**24 043**	**20 831**
Support based on commodity output	11 788	15 733	19 766	18 583	21 794	18 920
Market Price Support[1]	11 788	15 733	19 766	18 583	21 794	18 920
Positive Market Price Support	11 788	15 733	19 766	18 583	21 794	18 920
Negative Market Price Support	0	0	0	0	0	0
Payments based on output	0	0	0	0	0	0
Payments based on input use	90	470	610	545	651	634
Based on variable input use	29	207	220	188	278	193
with input constraints	4	34	47	51	46	44
Based on fixed capital formation	57	246	188	180	185	198
with input constraints	0	18	37	39	34	37
Based on on-farm services	4	17	203	178	189	242
with input constraints	0	0	0	0	0	0
Payments based on current A/An/R/I, production required	29	490	984	1 596	813	542
Based on Receipts / Income	29	292	71	64	70	78
Based on Area planted / Animal numbers	0	198	913	1 531	743	465
with input constraints	0	160	39	38	41	40
Payments based on non-current A/An/R/I, production required	0	0	0	0	0	0
Payments based on non-current A/An/R/I, production not required	0	0	765	774	785	736
With variable payment rates	0	0	0	0	0	0
with commodity exceptions	0	0	0	0	0	0
With fixed payment rates	0	0	765	774	785	736
with commodity exceptions	0	0	0	0	0	0
Payments based on non-commodity criteria	0	1	0	0	0	0
Based on long-term resource retirement	0	1	0	0	0	0
Based on a specific non-commodity output	0	0	0	0	0	0
Based on other non-commodity criteria	0	0	0	0	0	0
Miscellaneous payments	0	0	0	0	0	0
Percentage PSE (%)	**69.3**	**60.9**	**47.9**	**47.2**	**50.4**	**46.1**
Producer NPC (coeff.)	**3.23**	**2.46**	**1.82**	**1.77**	**1.92**	**1.78**
Producer NAC (coeff.)	**3.26**	**2.56**	**1.92**	**1.90**	**2.01**	**1.86**
General Services Support Estimate (GSSE)	**1 066**	**2 676**	**3 667**	**3 571**	**3 768**	**3 661**
Agricultural knowledge and innovation system	67	243	649	646	683	617
Inspection and control	26	126	321	290	355	318
Development and maintenance of infrastructure	467	1 811	2 280	2 290	2 327	2 221
Marketing and promotion	0	26	38	38	40	37
Cost of public stockholding	505	471	379	306	364	467
Miscellaneous	0	0	0	0	0	0
Percentage GSSE (% of TSE)	**8.1**	**13.8**	**14.2**	**14.2**	**13.5**	**14.9**
Consumer Support Estimate (CSE)	**-11 656**	**-17 342**	**-26 607**	**-23 654**	**-29 692**	**-26 474**
Transfers to producers from consumers	-11 511	-15 342	-19 191	-17 831	-21 329	-18 412
Other transfers from consumers	-218	-2 093	-7 452	-5 859	-8 400	-8 097
Transfers to consumers from taxpayers	73	93	36	35	37	35
Excess feed cost	0	0	0	0	0	0
Percentage CSE (%)	**-66.1**	**-55.1**	**-44.4**	**-43.1**	**-46.4**	**-43.7**
Consumer NPC (coeff.)	**2.97**	**2.23**	**1.80**	**1.76**	**1.87**	**1.78**
Consumer NAC (coeff.)	**2.95**	**2.23**	**1.80**	**1.76**	**1.86**	**1.78**
Total Support Estimate (TSE)	**13 047**	**19 464**	**25 827**	**25 105**	**27 849**	**24 528**
Transfers from consumers	11 729	17 435	26 643	23 689	29 730	26 509
Transfers from taxpayers	1 536	4 121	6 637	7 274	6 520	6 116
Budget revenues	-218	-2 093	-7 452	-5 859	-8 400	-8 097
Percentage TSE (% of GDP)	**8.3**	**3.3**	**1.6**	**1.5**	**1.6**	**1.5**
Total Budgetary Support Estimate (TBSE)	**1 258**	**3 731**	**6 061**	**6 521**	**6 055**	**5 608**
Percentage TBSE (% of GDP)	**0.8**	**0.6**	**0.4**	**0.4**	**0.4**	**0.3**
GDP deflator (1986-88=100)	**100**	**211**	**295**	**294**	**296**	**294**
Exchange rate (national currency per USD)	**812.03**	**1 224.03**	**1 132.04**	**1 130.64**	**1 100.19**	**1 165.29**

Note: p: provisional. NPC: Nominal Protection Coefficient. NAC: Nominal Assistance Coefficient.
A/An/R/I: Area planted/Animal numbers/Receipts/Income.
1. Market Price Support (MPS) is net of producer levies and excess feed cost. MPS commodities for Korea are: barley, garlic, red pepper, Chinese cabbage, rice, soybean, milk, beef and veal, pig meat, poultry and eggs.

Source: OECD (2020), "Producer and Consumer Support Estimates", *OECD Agriculture statistics* (database), http://dx.doi.org/10.1787/agr-pcse-data-en.

Contextual information

Korea achieved the fastest growing per capita income among OECD member countries over the past 25 years (OECD, 2018[2]). The level of GDP per capita increased by 27% during 2000-18. The economic growth was significantly led by a strong trade focus: in 2018, trade accounted for 33% of GDP, more than twice the average of all countries covered in this report. The weight of agriculture within the economy is relatively small, accounting for 2% of GDP and 5% of employment in 2018. Agro-food products accounted for just over 1% of all exports in the same year. Arable land per capita was 0.03 hectare in 2018, one of the smallest among OECD countries.

Over the past two decades, the Korean agricultural sector continued to diversify towards livestock, due to a rapid change of dietary patterns. Crops represented 61% of the total value of agricultural production in 2018, down from three-quarters in 2000 (Table 18.2). Rice still dominates crop production, even though its share in total crop production has declined.

Table 18.2. Korea: Contextual indicators

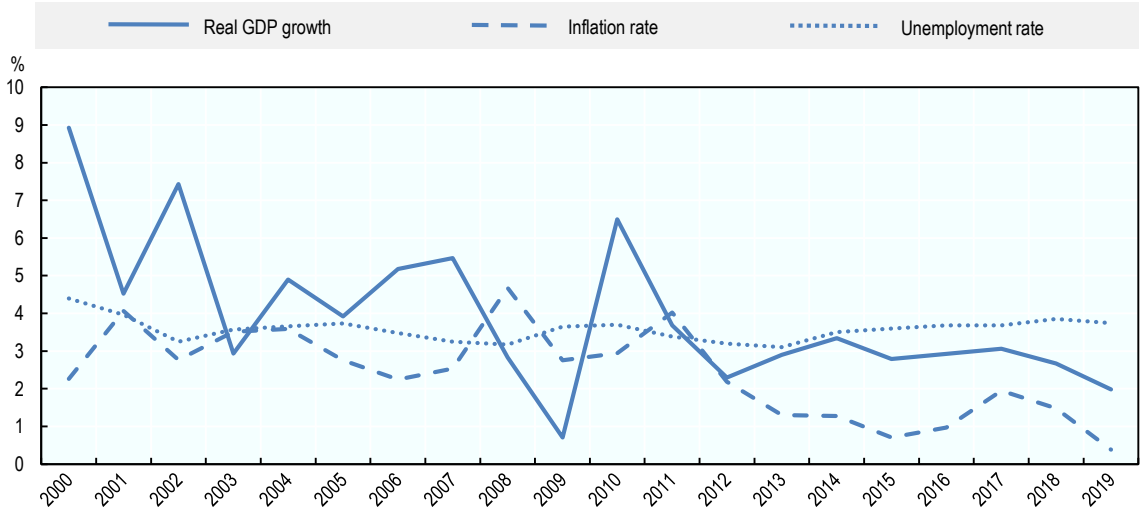
	Korea		International comparison	
	2000*	2018*	2000*	2018*
Economic context			**Share in total of all countries**	
GDP (billion USD in PPPs)	872	2 175	2.2%	1.9%
Population (million)	47	52	1.1%	1.0%
Land area (thousand km²)	96	98	0.1%	0.1%
Agricultural area (AA) (thousand ha)	1 973	1 677	0.1%	0.1%
			All countries[1]	
Population density (inhabitants/km²)	473	519	53	62
GDP per capita (USD in PPPs)	18 551	42 136	9 275	21 924
Trade as % of GDP	29	33	12.4	15.3
Agriculture in the economy			**All countries[1]**	
Agriculture in GDP (%)	4.3	2.0	3.1	3.6
Agriculture share in employment (%)	10.6	5.0	-	-
Agro-food exports (% of total exports)	0.9	1.1	6.2	7.3
Agro-food imports (% of total imports)	5.2	5.2	5.5	6.3
Characteristics of the agricultural sector			**All countries[1]**	
Crop in total agricultural production (%)	75	61	-	-
Livestock in total agricultural production (%)	25	40	-	-
Share of arable land in AA (%)	87	83	32	33

Notes: *or closest available year. 1. Average of all countries covered in this report. EU treated as one.
Sources: OECD statistical databases; UN Comtrade; World Bank, WDI and national data.

Output growth slowed down in recent years, while there was a slight economic upturn in 2017 led by business investment and a continuing boom in construction (OECD, 2018[3]). Inflation rates have declined to levels below 2% since 2013, and reached the lowest level in 2019 at 0.38% (Figure 18.4).

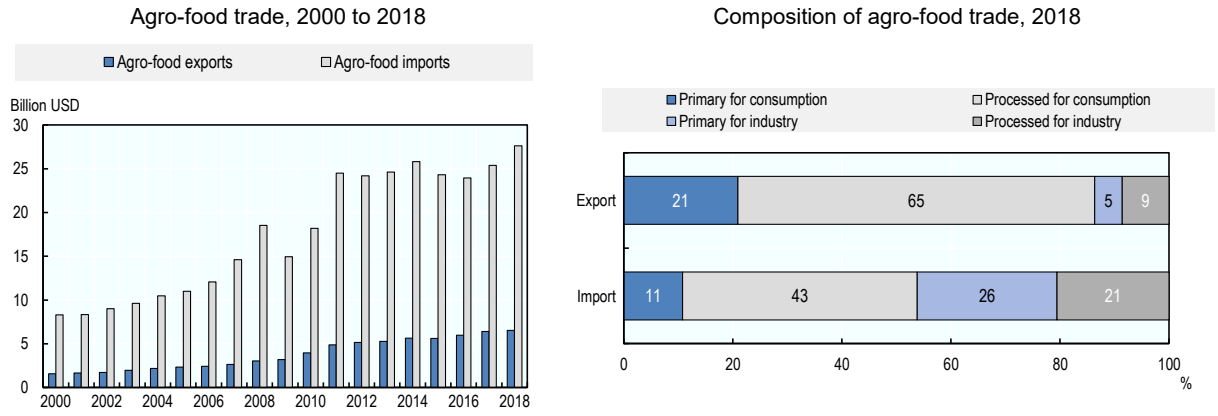
Korea is a net importer of agro-food products, and one of the largest importers in the world. Agro-food exports slightly grew in 2018 but the agro-food trade deficit worsened (Figure 18.5). Key imported agricultural commodities are maize, soybeans, and potatoes, and key exported commodities are red ginseng, strawberries, grapes, and pears. Over 85% of agro-food exports are products for final consumption, notably processed food products and fruit, and less than half of imports are for further processing by Korean industry.

Figure 18.4. Korea: Main economic indicators, 2000 to 2019



Sources: OECD statistical databases; World Bank, WDI and ILO estimates and projections.

Figure 18.5. Korea: Agro-food trade

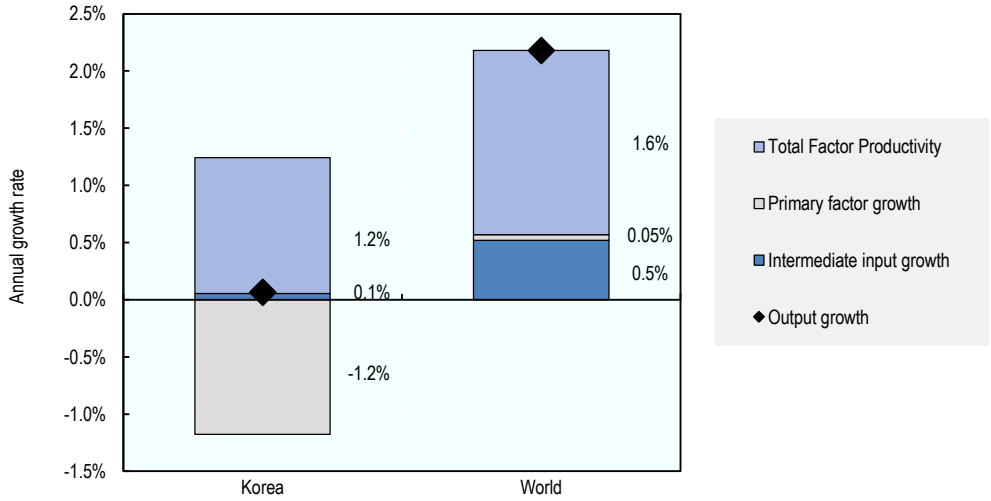


Note: Numbers may not add up to 100 due to rounding.
Source: UN Comtrade Database.

Both agricultural output growth and total factor productivity (TFP) are below the global averages. TFP growth made up for the declining use of primary factors, resulting in output growth of less than 0.1% (Figure 18.6). TFP growth averaged 1.2% per year over the period 2007-16, slowed down compared to the period 1991-2000 (Table 18.3).

Although pressure from agriculture on the environment has declined over the last decade, nutrient surpluses for nitrogen and phosphorus are still well above the OECD averages, resulting from high fertiliser use and intensive livestock production linked to land scarcity. Agriculture accounts for more than half of the country's water use, due to the high portion of rice paddy fields. The sector's shares in energy use and GHG emissions have decreased since the 1990s.

Figure 18.6. Korea: Composition of agricultural output growth, 2007-16



Note: Primary factors comprise labour, land, livestock and machinery.
Source: USDA Economic Research Service Agricultural Productivity database.

Table 18.3. Korea: Productivity and environmental indicators

	Korea		International comparison	
	1991-2000	2007-2016	1991-2000	2007-2016
			World	
TFP annual growth rate (%)	3.5%	1.2%	1.6%	1.6%
			OECD average	
Environmental indicators	**2000***	**2018***	**2000***	**2018***
Nitrogen balance, kg/ha	254.0	212.2	33.3	29.1
Phosphorus balance, kg/ha	50.3	45.9	3.3	2.3
Agriculture share of total energy use (%)	2.9	0.8	1.7	2.0
Agriculture share of GHG emissions (%)	4.3	3.1	8.1	8.9
Share of irrigated land in AA (%)	4.5	5.7	-	-
Share of agriculture in water abstractions (%)	53.4	52.8	46.0	49.0
Water stress indicator	27.1	34.7	9.9	8.9

Note: * or closest available year.
Sources: USDA Economic Research Service, Agricultural Productivity database; OECD statistical databases; FAO database and national data.

Description of policy developments

Main policy instruments

Tariffs and tariff rate quotas (TRQs) continue to be the main policy instruments for market access and related market price support which accounted for 89% of the producer support estimate in 2019. In-quota rates range from 0% to 50% while out of quota rates are between 9% and 887%. In line with the conclusion of the Uruguay Round, trade restriction measures on all agricultural products, except rice, were converted to tariffs. From 1 January 2015, non-tariff measures on rice were also replaced by a tariff scheme, with a tariff rate of 513% applied on imported rice. A TRQ volume of 408 700 tonnes (around 11% of total domestic consumption) is maintained at a 5% tariff rate.

The 2007 Framework Act on Agriculture, Rural Community and Food Industry laid out the principal policy framework for agriculture, on which five-year strategic plans were established. The plan for 2018-22 has four main policy targets: strengthening the income safety net; promoting innovation for sustainable agriculture; enhancing food safety in the supply chain; and improving rural welfare. The main policy instruments to pursue these objectives are presented in Box 18.1. The plan also aims to strengthen a bottom-up approach in agricultural policy.

A public stockholding scheme for rice, also known as the "Public Storage System for Emergencies", was established in 2005. One of the main objectives for this scheme is to guarantee food security in times of natural disasters or a temporary shortage due to a mismatch between supply and demand. Under this scheme, the government purchases rice from farmers at the market price during the harvest season and releases the stocks at the market prices when necessary. The government purchase programme for soybeans, with similar objectives as for rice, dates back to 1968.

Direct payment programmes have been implemented since 1997. The current programmes include early retirement payments, a rice income compensation, and payments for the promotion of environmentally-friendly modes of production, for maintaining agriculture in less favoured areas, and for rural landscape conservation.

The most important direct payment programme is the rice income compensation scheme introduced in 2005. The scheme consists of fixed and variable payments. While the fixed payment is a decoupled income support, the variable payment is determined according to the difference between a target price and each year's harvest-period price. If the harvest-period price is lower than the target price, farmers receive 85% of the difference, after deduction of the fixed payment. The target price is adjusted every five years reflecting the five-year price change.

The direct payment programme has undergone a comprehensive reform, decoupling from production of a specific commodity and enhancing environmental cross-compliance of farmers. In 2019, the government revised the laws and regulations related to the implementation of the new direct payment programme.

The agricultural disaster insurance scheme to protect against losses in yield, initially launched for apples and pears in 2001, has been gradually extended to other commodities. Overall, its coverage increased to 67 crops and 16 livestock commodities. The government subsidises 50% of the insurance premium. A pilot project of an agricultural revenue insurance scheme, introduced for onions, soybeans and grapes in 2015, has been extended to cover garlic, potatoes, sweet potatoes, and cabbage in 2018.

Box 18.1. Korea: Agriculture and Rural Community and Food Industry Development Plan for 2018-22

1. Strengthening income safety net

- Reduction of rice paddy field areas by providing incentives for other crops such as support to drainage, seeds and agricultural machines
- Reform of rice direct payment scheme to be further decoupled from production
- Strengthened environmental cross-compliance in the direct payment scheme
- Expansion of crop insurance programmes
- Diversification of rural income sources by generating non-farm income (i.e. food industry, tourism) for farmer households

2. Promoting innovation for sustainable agriculture

- Support for young start-up farmers

- Integration of digital technology into agriculture in production, distribution and risk management
- Promotion of renewable energy production on farms, including photovoltaic, biomass and geothermal heat

3. Enhancing food safety in supply chain

- Development of a bio-security system focusing on animal disease prevention
- Support for environmentally-friendly livestock industry practices
- Development of a comprehensive animal-welfare roadmap to provide standards for facilities, maintenance and rearing density
- Development of a labelling system, not only for consumer information but also for animal welfare and health
- Improvement of the pesticide registration and traceability management system

4. Improving rural welfare

- Enhanced direct payment and pension schemes for retirement, encouraging aged or low-income farmers to retire from production
- Support for infrastructure in rural areas (i.e. housing, transport and medical facilities)
- Affordable transportation for the elderly and the financially disadvantaged
- Support for rural rental housing with energy saving facilities and barrier-free design
- Development of a medical outreach service for health check-ups

5. Using a more bottom-up policy approach

- Agricultural governance reflecting local and regional characteristics
- Policy design, based on various opinions of farmers and other stakeholders

Source: Korean Government.

The Promotion Plan for Environmentally-friendly Agriculture (2016-20) aims to increase the share of pesticide-free cultivation areas (including organic production) and, more generally to reduce inputs of chemical fertilisers and pesticides in crop production. Several measures, including adjustments of direct payments towards environmentally-friendly agriculture and support for organic production, were implemented for this plan.

The government has increased investment in “Smart farms”, using smartphones and remote control to check the crop growth information in real-time. At the same time, a range of policies were offered to attract the younger population to rural areas, with an emphasis on the application of information and communication technology at the farm level.

Regulation for livestock facility management has been tightened in recent years to prevent animal diseases as well as to enhance food safety and pollution treatment. These stricter rules will be immediately applied to new farms, while grace periods will be given to existing farms. The policy efforts involving central and local governments continue to be made to facilitate farmers to get an authorisation, aiming to reinforce long-term sustainability of the livestock sector.

To promote rural development and sustain livelihoods in rural areas, the government has been providing support to people who move to farm villages and join the agricultural industry. This policy covers not only an advisory service on relocation or housing, but also provides education and training programmes on farming and marketing skills.

Korea has sixteen bilateral and regional Free Trade Agreements (FTAs) in force. Rice is excluded from tariff concessions in the existing FTAs, but significant tariff concessions for livestock and fruit products are

included in some of the FTAs. Tariffs on beef imported from the United States, Australia and Canada are scheduled to be completely eliminated over a period of 15 years after the respective bilateral FTAs have entered into force (March 2012 with the United States, December 2014 with Australia, and January 2015 with Canada). It is also agreed that tariffs on pork meat from the European Union, the United States and Chile would be phased out over 10 years, and from Canada over 13 years in the respective FTAs. Tariffs on chicken meat originating from the United States and the European Union are to be abolished by items (tariff lines) over a period of 10 to 13 years after the respective FTAs have come into effect.

Domestic policy developments in 2019-20

A new direct payment programme, which combines the direct payments for rice, upland crops and less favoured areas into one scheme, is to be implemented in 2020. In 2019-20, preparations for a new programme began, discussing with stakeholders and revising laws and regulations. The reform aims to further decouple payments from production of a specific commodity (especially rice), and reinforce farmers' adoption of agri-environmental practices. At the same time, to mitigate the dependence of rice farmers on direct payments, the government has provided incentives for **crop diversification** since 2018, in the form of support to drainage, seeds and agricultural machines.

In response to the first domestic outbreak of **African Swine Fever (ASF)** near the border with North Korea in September 2019, measures to block further spread of the disease were deployed, which include pig culling within affected areas, restrictions on transportation of pig and excreta, extensive disinfection, strengthened inspection of pig farms, and nationwide informational campaigns. In addition, R&D initiatives for future control and prevention of the disease were introduced at the end of 2019.

To encourage on-farm risk management, **agricultural insurance** has increased its commodity coverage to 78 products in 2019 and to 83 products in 2020, by adding walnuts, red beans, barley, spinach, and apricots. The government has made efforts to expand the subscription of farmers, by developing more market-based services reflecting structural changes in agriculture.

To promote **the Smart Agriculture Project**, the government selected four sites in 2018-19 for the construction of smart farm complexes, "Innovation valleys", focusing mainly on the horticultural sector. In order to create and exploit synergies, the complexes cover the entire value chain from young startups, research and development institutions to agro-food firms. The project is aimed at promoting high technologies in agricultural production, while attracting young innovative farmers.

In line with the Paris Agreement on Climate Change and the National Roadmap for the reduction of greenhouse gas (GHG) emissions, the second version of the **Climate Change Response Plan (2020-40)** was released in October 2019. This plan sets a target to reduce the GHG emissions by 37% from the BAU level by 2030, which is 24% lower than the 2017 level, and also contains action plans across all economic sectors, including agriculture; developing GHG monitoring and forecasting mechanisms, improving the current emissions trading system, and investing in infrastructures to adapt to climate change. The agricultural sector was tasked with reducing GHG emissions by 7.9% from the BAU level by 2030, including through enhancing water and animal waste management (Korean Government, 2019[4]).

From January 2019, the regulation on pesticide use has been converted to a positive list system[1] and set a maximum residue level (0.01mg/kg) of unauthorised pesticides to prevent overuse or misuse of pesticides. Since its launch, both domestic production and use of unregistered pesticides decreased in 2019.

Exports of fresh products, as well as processed foods, have continuously increased, but are concentrated on a small set of destinations, such as the People's Republic of China (hereafter "China") and Japan. The government continues to make efforts for export diversification by facilitating access to overseas markets, providing market information and supporting marketing related activities. In addition, export promotion programmes focus more on commodities with export competitiveness such as strawberries and grapes.

Trade policy developments in 2019-20

The WTO verification procedures with member countries regarding the **tariffication on rice** was finalised in January 2020. Tariffication on rice was deferred twice based on the results of the Uruguay Round and rice negotiation at the WTO in 2004. Since 2015, tariffication with the rate of 513% (in-quota 5% for a TRQ of 408 700 tonnes) has been implemented; however, the WTO had been undertaking the verification process during the period 2015-19. The rice TRQ is managed by a state trading enterprise, Korea Agro-Fisheries and Food Trade Corporation.

Korea concluded negotiations for three FTAs in 2019, with Israel, the United Kingdom and Indonesia. Korea-RCEP,[2] Korea-Mercosur, Korea-India FTA negotiations are ongoing, and negotiations for FTAs with Malaysia, and the Philippines were launched in 2019.

In May 2019, Korea lifted import restrictions on beef and beef products from the Netherlands and Denmark. These restrictions had been in place since 2001 in response to the outbreak of bovine spongiform encephalopathy (BSE) in the European Union. Applications from additional EU Member States[3] concerning the lifting of these restrictions are being reviewed.

References

Korean Government (2020), *The effects of COVID-19 on agro-food industries and policy responses*. [1]

Korean Government (2019), *National Climate Change Adaptation Basic Plan 2020-40*. [4]

OECD (2018), *Innovation, Agricultural Productivity and Sustainability in Korea*, OECD Publishing, Paris, https://doi.org/10.1787/9789264307773-en. [2]

OECD (2018), *OECD Economic Surveys: Korea 2018*, OECD Publishing, Paris, https://doi.org/10.1787/eco_surveys-kor-2018-en. [3]

Notes

[1] Only pesticides registered on the list are allowed for use, and the use of unregistered pesticides is prohibited.

[2] Regional Comprehensive Economic Partnership is a proposed FTA between the member states of the ASEAN countries and its FTA partners (Australia, China, India, Japan, New Zealand and South Korea).

[3] France, Ireland, Germany, Poland, Sweden, Spain, Austria, Italy, Belgium, Hungary, and the United Kingdom.

19 Mexico

Support to agriculture

The PSE average in 2017-19 was 9.4% of gross farm receipts, about half of the OECD average. The majority of transfers to producers (60%) were in the form of market price support (MPS). Other important forms of support were those based on electricity use, the purchase of machinery and equipment and direct payments based on area. Sugar is the commodity with the highest MPS and represents 30% of total MPS. While trade liberalisation and domestic policy reforms in the 1990s led to a considerable reduction in the most production and trade distorting support, such as that based on output (including the MPS) and unconstrained use of variable inputs, those forms of support have increased since 2015.

General services (GSSE) expenditures represented 1.4% of agriculture's value added and 9% of the TSE, lower than the OECD average. Most of those expenditures are directed to agricultural technical institutes and vocational agricultural schools (50%), and inspection and control activities (20%).

Total support to agriculture in Mexico as a percentage of GDP was 0.5% in 2017-19, similar to the OECD average. Taxpayers provide 60% of these transfers, the remaining 40% coming from consumers. Consumers' contribution to agricultural support is due to agricultural prices supported above international levels via price regulations and border measures.

Main policy changes

A new government, that took office in December 2018, shifted the focus of its support programmes towards small-scale farmers living in poor areas (i.e. farmers with less than 20 hectares), and created three new support programmes targeting these groups of producers: (1) guaranteed minimum prices for producers of maize, beans, wheat, milk and rice; (2) cattle (in-kind) loans at zero nominal interest rate to bovine producers, with no collateral demanded; and (3) a fertiliser programme that distributes fertiliser to agricultural producers.

The emblematic programme of payments based on area, originally called PROCAMPO followed by PROAGRO and now Production for Wellbeing, was substantially modified: the scheme now only targets producers with less than 20 hectares and those in highly marginalised indigenous communities in the south-eastern states of the country. Coffee and sugar cane producers were also included in the programme's register. The level of support remained at levels similar to previous years.

The Secretariat of Agriculture and Rural Development (SADER) is also working with the International Maize and Wheat Improvement Center (CIMMYT) and agricultural producers, to provide agricultural producers with information on weather forecasts and the most appropriate adaptation practices to minimise the impact of climate change.

A regulation that specifies labelling guidelines for food was amended making it mandatory to include information on sugar, sodium, fats, and caloric content per portion. After being approved by both legislative chambers and fought in tribunals due to an appeal by the food industry, the regulation is finally ready to be published in the Mexican Official Diary.

In December 2019, the Mexican Senate approved the Mexico-United States-Canada Agreement (called *Tratado entre Mexico, Estados Unidos y Canada* - T-MEC - in Mexico), to replace the former NAFTA from 1994.

Assessment and recommendations

- Although Mexico's PSE remains relatively low (8.5% in 2019), it is composed of the most distorting forms of support, in particular market price support. Recent shifts towards unconstrained input-based, output-based and market price support, have partially offset progress made in reducing potentially most distorting forms of support since the 1990s. Consequently, this share is now at 63%.
- The majority of the new programmes —in-kind loans to livestock producers, guaranteed minimum prices for small-scale producers and transfers to consume fertilisers— are intended to target poor farmers. These risk becoming costly and inefficient measures for helping small-scale and poor farmers. Distributing fertiliser without consideration of soil needs can threaten water and air quality if applied beyond what is required. These forms of support can also crowd out private activity and may be difficult to phase-out.
- Transitioning from those new schemes to schemes that promote agrobiodiversity by utilising local plant genetic resources, one of the main ecosystem services that Mexican small-scale farmers in poor areas provide, could be a more cost-effective mechanism for helping poor farmers, and could, at the same time, increase the resilience of agricultural systems and the genetic diversity of plants.
- Investments in general services and infrastructure remain at low levels (1.4% of agriculture's value added). In contrast, input-linked support, such as that provided for on-farm consumption of electricity, remains at high levels, distorting markets and threatening scarce water resources. Input-linked support should be redirected towards the provision of public goods like electricity and road infrastructures particularly deficient in the South and South-eastern regions, price and weather information systems, agricultural knowledge transfer and research and development. Support for the promotion of producer associations, market promotion and access for small-scale and poor farmers could also help to overcome some of the barriers they face related to scale. Strengthening the conditional cash transfers programme (now called *Becas Benito Juarez*) can also help to improve living conditions of poor farmers.
- The modifications made to the scheme of payments based on area, Production for Wellbeing, to focus on producers with less than 20 hectares and those in highly marginalised indigenous communities in the South-eastern states of the country, are a useful step towards an improved targeting of the programme.
- The environmental impacts of the sector could be reduced by conditioning payments to the implementation of sustainable farming practices and by removing input subsidies, such as the electricity subsidy that incentivises unsustainable irrigation.
- While the share of agricultural greenhouse gas (GHG) emissions to total GHG emissions has decreased in Mexico since 2000, the share of these emissions is still large relative to other OECD countries. Mexico's agriculture GHG emissions target (-8% below a business as usual scenario in 2030, compared to an overall target of -25%) can help to improve the sector´s environmental performance and to global mitigation efforts; however, support and financing for the main strategies to achieve the target, such as increased use of biodigesters in livestock farms as well as conserving and restoring grasslands, have been reduced since 2018.

Policy responses in relation to the COVID-19 outbreak

Agricultural policies

Support programmes of the Secretariat of Agriculture and Rural Development (SADER) will be maintained during the contingency and the National Water Commission in collaboration with SADER are working to making sure programmes related to the conservation and restoration of water infrastructure in the agricultural sector are also maintained during the sanitary emergency.

The programme “Sembrando Vida” that distributes plants and inputs for agroforestry projects to producers with incomes below the poverty line, will be expanded to include 200 000 more recipients.

Agro-food supply chain policies

SADER works in collaboration with the members of productive chains to make sure food supply, inventories and distribution are not disrupted. Particular attention is put on key productive chains such as grains, horticulture, poultry, beef, fisheries and aquaculture.

Digitalisation services have been expanded for speeding up food imports. Up to 60% of the administrative import processes are now done remotely by the Centre for Documentation and Judgement (CDD) of the National Service for Health, Safety and Agri-food Quality (SENASICA).

The government has recommended reinforcing hygiene inspection systems in food production units and is encouraging consumers to follow hygiene practices when handling and preparing food.

The agricultural ministries of Honduras, El Salvador, Costa Rica, Guatemala, Mexico, Nicaragua, Panama, the Dominican Republic, as well as members of the Inter-American Institute for Cooperation in Agriculture (IICA), proposed to create an inventory of products ready to be exported and food transportation protocols for making sure food is distributed where it is lacking.

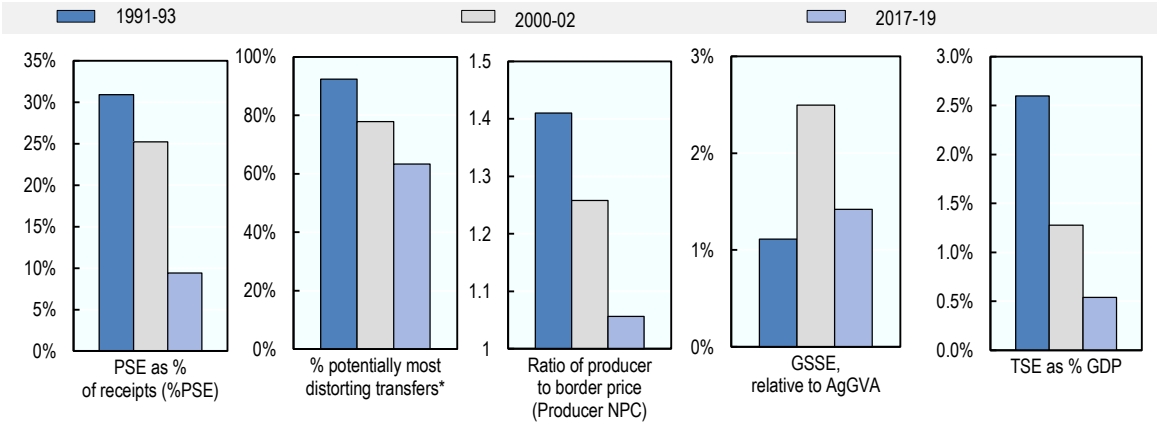
Agricultural ministries of 25 Latin American countries have signed a ministerial declaration where they committed to the provision of technical and financial assistance for producers; make sure wholesale markets work properly; implementing emergency programmes to prevent food waste and the well-functioning of food banks; monitoring logistic chains, particularly those that involve several countries; introduce and encourage the use of e-commerce; make sure fiscal and trade policies put in place by governments do not disrupt trade flows and maintain “real-time” monitoring of markets in association with the private sector to co-ordinate “real-time” responses.

Meetings with the agricultural ministries of Colombia, Chile, Peru, Bolivia and Ecuador have been held to share sanitary protocols, measures and experiences to mitigate the impacts of COVID-19 in the agri-food sector.

Other

The government has committed to not increase fuel prices. VAT refunds will be provided in advance.

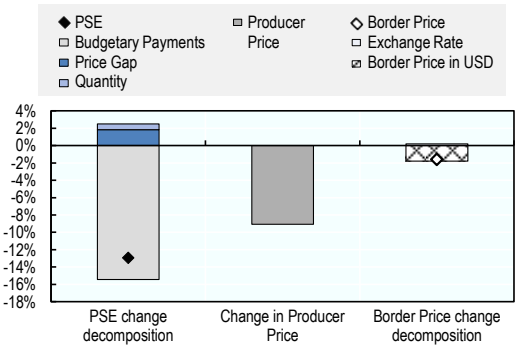
Figure 19.1. Mexico: Development of support to agriculture



Note: * Share of potentially most distorting transfers in cumulated gross producer transfers.
Source: OECD (2020), "Producer and Consumer Support Estimates", OECD Agriculture statistics (database), http://dx.doi.org/10.1787/agr-pcse-data-en.
StatLink https://doi.org/10.1787/888934144534

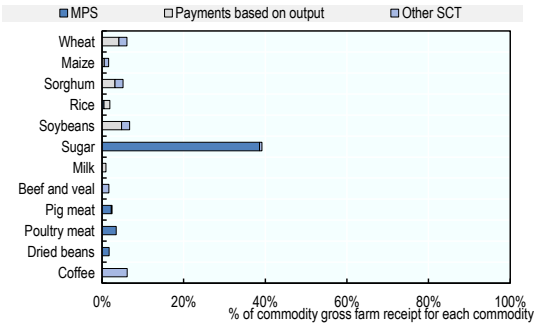
Support to producers (%PSE) has declined considerably over the long term. During 2017-19, farm support was around 9% of gross farm receipts, less than half the OECD average. The share of potentially most distorting transfers has also decreased over time due to lower market price support (MPS), but given the increased importance of support based on output and unconstrained variable inputs in recent years, the share is still high at 63% (Figure 19.1). Relative to 2018, the level of support decreased in 2019 due to lower budgetary support (Figure 19.2). Prices received by farmers, on average, were some 9% higher than world prices; particularly large differences between sugar and other commodities persist with domestic prices for raw sugar substantially above international reference prices. MPS is the main component of Single Commodity Transfers (SCT) for sugar, dried beans, pig meat and poultry meat. Support based on output is particularly relevant for wheat, maize, sorghum, rice, soybeans and milk. Sugar has by far the highest share of SCT in commodity gross farm receipts (Figure 19.3). The expenditures for general services (GSSE) relative to agricultural value added were substantially lower than the OECD average.

Figure 19.2. Mexico: Drivers of the change in PSE, 2018 to 2019



Source: OECD (2020), "Producer and Consumer Support Estimates", OECD Agriculture statistics (database), http://dx.doi.org/10.1787/agr-pcse-data-en.
StatLink https://doi.org/10.1787/888934144553

Figure 19.3. Mexico: Transfer to specific commodities (SCT), 2017-19



Source: OECD (2020), "Producer and Consumer Support Estimates", OECD Agriculture statistics (database), http://dx.doi.org/10.1787/agr-pcse-data-en.
StatLink https://doi.org/10.1787/888934144572

Table 19.1. Mexico: Estimates of support to agriculture

Million USD

	1991-93	2000-02	2017-19	2017	2018	2019p
Total value of production (at farm gate)	**28 112**	**31 345**	**56 955**	**53 536**	**56 971**	**60 358**
***of which:** share of MPS commodities (%)*	68.3	66.3	61.7	62.8	62.0	60.4
Total value of consumption (at farm gate)	**28 196**	**34 362**	**64 886**	**63 699**	**66 599**	**64 360**
Producer Support Estimate (PSE)	**9 144**	**8 539**	**5 625**	**5 377**	**6 152**	**5 344**
Support based on commodity output	7 698	6 282	2 963	2 439	3 069	3 382
Market Price Support[1]	7 646	5 967	2 835	2 392	2 982	3 129
Positive Market Price Support	7 693	5 999	2 835	2 392	2 982	3 129
Negative Market Price Support	-47	-32	0	0	0	0
Payments based on output	52	315	129	47	86	253
Payments based on input use	1 443	953	1 898	2 103	2 287	1 305
Based on variable input use	746	349	599	621	565	611
with input constraints	0	0	1	0	0	3
Based on fixed capital formation	545	362	1 012	1 146	1 411	479
with input constraints	0	4	409	495	611	122
Based on on-farm services	152	241	287	336	311	215
with input constraints	0	0	0	0	0	0
Payments based on current A/An/R/I, production required	3	137	204	266	266	81
Based on Receipts / Income	0	59	0	0	0	0
Based on Area planted / Animal numbers	3	78	204	266	266	81
with input constraints	0	0	60	94	84	3
Payments based on non-current A/An/R/I, production required	0	0	559	570	531	577
Payments based on non-current A/An/R/I, production not required	0	1 167	0	0	0	0
With variable payment rates	0	0	0	0	0	0
with commodity exceptions	0	0	0	0	0	0
With fixed payment rates	0	1 167	0	0	0	0
with commodity exceptions	0	0	0	0	0	0
Payments based on non-commodity criteria	0	0	0	0	0	0
Based on long-term resource retirement	0	0	0	0	0	0
Based on a specific non-commodity output	0	0	0	0	0	0
Based on other non-commodity criteria	0	0	0	0	0	0
Miscellaneous payments	0	0	0	0	0	0
Percentage PSE (%)	**30.9**	**25.2**	**9.4**	**9.5**	**10.2**	**8.5**
Producer NPC (coeff.)	**1.41**	**1.26**	**1.06**	**1.05**	**1.06**	**1.06**
Producer NAC (coeff.)	**1.45**	**1.34**	**1.10**	**1.11**	**1.11**	**1.09**
General Services Support Estimate (GSSE)	**1 048**	**621**	**548**	**573**	**535**	**537**
Agricultural knowledge and innovation system	288	304	355	353	359	355
Inspection and control	0	102	109	110	108	110
Development and maintenance of infrastructure	284	112	70	98	44	67
Marketing and promotion	83	103	14	13	25	5
Cost of public stockholding	392	0	0	0	0	0
Miscellaneous	0	0	0	0	0	0
Percentage GSSE (% of TSE)	**9.5**	**6.5**	**8.3**	**8.9**	**7.5**	**8.7**
Consumer Support Estimate (CSE)	**-7 013**	**-5 520**	**-1 655**	**-1 328**	**-1 657**	**-1 981**
Transfers to producers from consumers	-7 668	-5 893	-2 067	-1 809	-2 138	-2 254
Other transfers from consumers	-396	-124	0	0	0	-1
Transfers to consumers from taxpayers	852	348	413	481	481	275
Excess feed cost	199	149	0	0	0	0
Percentage CSE (%)	**-25.6**	**-16.3**	**-2.6**	**-2.1**	**-2.5**	**-3.1**
Consumer NPC (coeff.)	**1.40**	**1.21**	**1.03**	**1.03**	**1.03**	**1.04**
Consumer NAC (coeff.)	**1.35**	**1.19**	**1.03**	**1.02**	**1.03**	**1.03**
Total Support Estimate (TSE)	**11 044**	**9 508**	**6 586**	**6 432**	**7 169**	**6 156**
Transfers from consumers	8 064	6 017	2 068	1 809	2 138	2 256
Transfers from taxpayers	3 376	3 616	4 518	4 623	5 030	3 902
Budget revenues	-396	-124	0	0	0	-1
Percentage TSE (% of GDP)	**2.6**	**1.3**	**0.5**	**0.6**	**0.6**	**0.5**
Total Budgetary Support Estimate (TBSE)	**3 398**	**3 541**	**3 751**	**4 040**	**4 186**	**3 027**
Percentage TBSE (% of GDP)	**0.8**	**0.5**	**0.3**	**0.3**	**0.3**	**0.2**
GDP deflator (1991-93=100)	**100**	**396**	**912**	**871**	**917**	**949**
Exchange rate (national currency per USD)	**3.08**	**9.49**	**19.09**	**18.87**	**19.18**	**19.22**

Note: p: provisional. NPC: Nominal Protection Coefficient. NAC: Nominal Assistance Coefficient.
A/An/R/I: Area planted/Animal numbers/Receipts/Income.
1. Market Price Support (MPS) is net of producer levies and excess feed cost. MPS commodities for Mexico are: wheat, maize, barley, sorghum, coffee, dried beans, tomatoes, rice, soybean, sugar, milk, beef and veal, pig meat, poultry and eggs.

Source: OECD (2020), "Producer and Consumer Support Estimates", *OECD Agriculture statistics* (database), http://dx.doi.org/10.1787/agr-pcse-data-en.

Contextual information

Mexico has a population of 125 million, ranks as the 11th largest world economy and has a per capita GDP just below the average of all countries covered in this report. Agriculture's GDP share has remained stable at 3% since 2000. In contrast, its role in the national employment has declined over the past two decades: while agriculture employed more than 17% of the labour force in 2000, it represented less than 13% in 2018. Trade is an important driver of Mexico's economy: it represents 37% of GDP and has grown 13 percentage points since 2000. Agro-food trade is an important fraction of total trade, both in terms of exports and imports, representing 7.4% and 5.9% of each, respectively. While the crop sector still dominates in terms of its contribution to total value of production (58%), the participation of the livestock sector is important (42%).

Since 2015, Mexico has registered a positive and growing net agro-food balance. Whereas most agro-food exports are primary and processed for final consumption, more than half of agro-food imports are intermediate products for further processing.

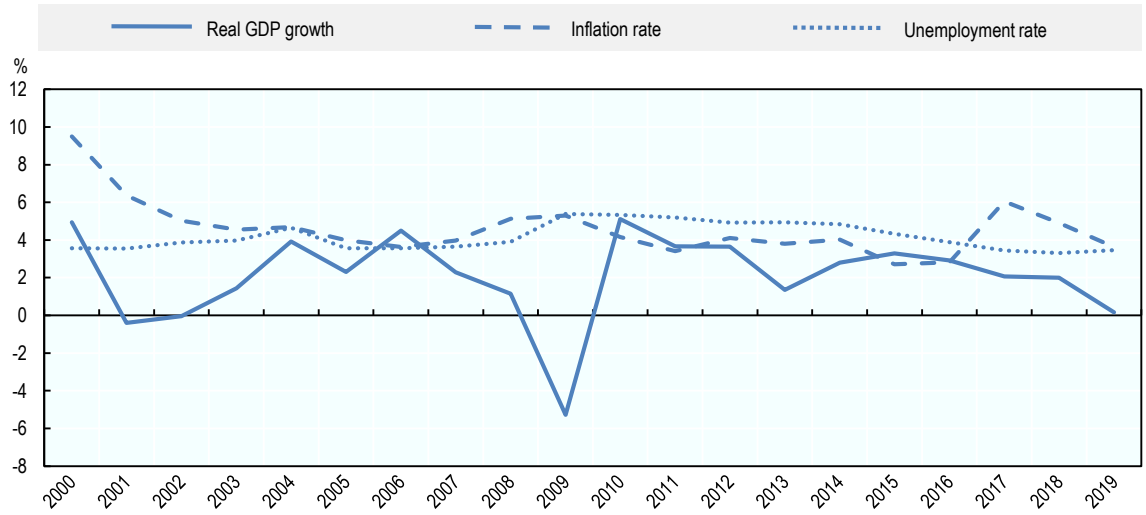
Table 19.2. Mexico: Contextual indicators

	Mexico		International comparison	
	2000*	2018*	2000*	2018*
Economic context			**Share in total of all countries**	
GDP (billion USD in PPPs)	1 097	2 580	2.7%	2.3%
Population (million)	101	125	2.3%	2.4%
Land area (thousand km²)	1 944	1 944	2.4%	2.3%
Agricultural area (AA) (thousand ha)	106 330	106 964	3.5%	3.6%
			All countries[1]	
Population density (inhabitants/km²)	52	63	53	62
GDP per capita (USD in PPPs)	10 870	20 660	9 275	21 924
Trade as % of GDP	24	37	12.4	15.3
Agriculture in the economy			**All countries[1]**	
Agriculture in GDP (%)	3.3	3.4	3.1	3.6
Agriculture share in employment (%)	17.3	12.8	-	-
Agro-food exports (% of total exports)	4.6	7.4	6.2	7.3
Agro-food imports (% of total imports)	5.5	5.9	5.5	6.3
Characteristics of the agricultural sector			**All countries[1]**	
Crop in total agricultural production (%)	57	58	-	-
Livestock in total agricultural production (%)	43	42	-	-
Share of arable land in AA (%)	22	22	32	33

Notes: *or closest available year. 1. Average of all countries covered in this report. EU treated as one.
Sources: OECD statistical databases; UN Comtrade; World Bank, WDI and national data.

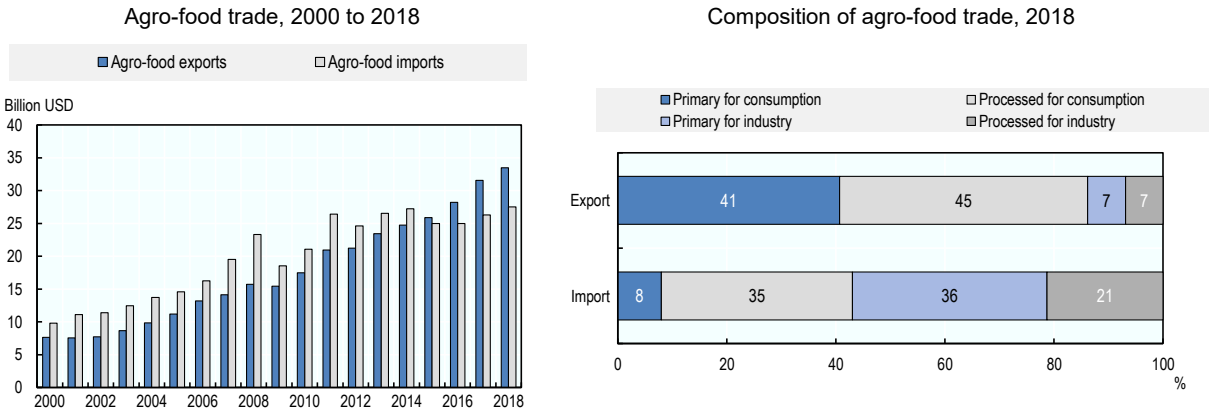
Economic growth slowed down since 2015 and was almost 0% in 2019. The inflation rate has declined since its most recent peak in 2017. The unemployment rate has remained stable at around 3% a year, although informal employment remains elevated at more than 50% of total employment.

Figure 19.4. Mexico: Main economic indicators, 2000 to 2019



Sources: OECD statistical databases; World Bank, WDI and ILO estimates and projections.

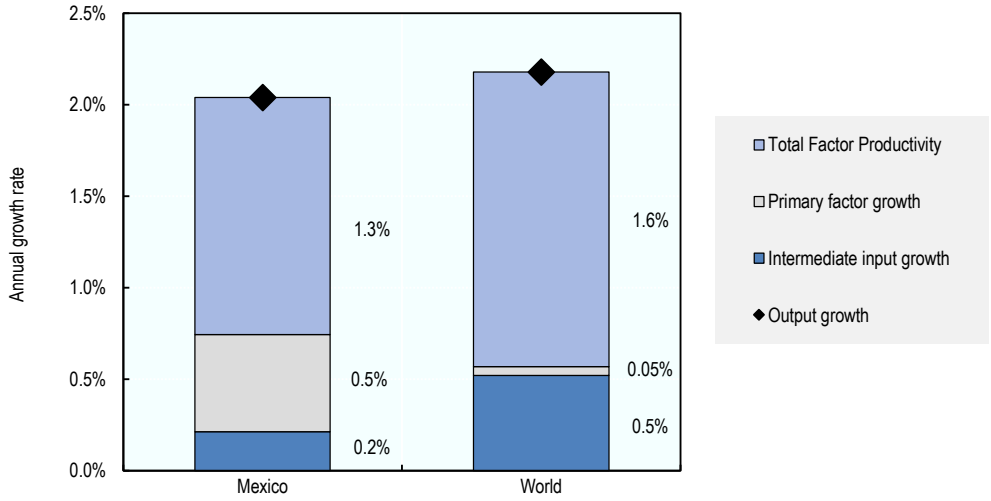
Figure 19.5. Mexico: Agro-food trade



Note: Numbers may not add up to 100 due to rounding.
Source: UN Comtrade Database.

Agricultural output in Mexico has been increasing predominantly due to Total Factor Productivity (TFP) growth, and to a limited extent to growth in primary factors and more use of intermediate inputs (fertiliser and feed). TFP growth between 2007 and 2016 is estimated slightly below the global average, and much less dynamic than during the 1990s. In contrast to the trend observed in the OECD area, nutrient balances have increased in the last decade, potentially impacting water and air quality. Greenhouse gas (GHG) emissions represent 15% of total GHG emissions, a figure that is almost double the OECD average. Water stress is well above the OECD average, and agriculture is partly responsible for this pressure due to its share on total water abstractions.

Figure 19.6. Mexico: Composition of agricultural output growth, 2007-16



Note: Primary factors comprise labour, land, livestock and machinery.
Source: USDA Economic Research Service Agricultural Productivity database.

Table 19.3. Mexico: Productivity and environmental indicators

	Mexico		International comparison	
	1991-2000	2007-2016	1991-2000	2007-2016
			World	
TFP annual growth rate (%)	3.0%	1.3%	1.6%	1.6%
			OECD average	
Environmental indicators	**2000***	**2018***	**2000***	**2018***
Nitrogen balance, kg/ha	24.7	25.6	33.3	29.1
Phosphorus balance, kg/ha	1.6	2.4	3.3	2.3
Agriculture share of total energy use (%)	3.0	3.5	1.7	2.0
Agriculture share of GHG emissions (%)	17.3	14.6	8.1	8.9
Share of irrigated land in AA (%)	4.5	5.7	-	-
Share of agriculture in water abstractions (%)	82.0	76.0	46.0	49.0
Water stress indicator	15.6	19.5	9.9	8.9

Note: * or closest available year.
Sources: USDA Economic Research Service, Agricultural Productivity database; OECD statistical databases; FAO database and national data.

Description of policy developments

Main policy instruments

Agricultural support policies in Mexico are guided by five-year sectoral programmes. The new Sectoral Programme for Agriculture and Rural Development (2019-2024) is currently being drafted although many of the specific support programmes are already functioning.

Since 2019, agricultural policy focuses on four main programmes: (1) in-kind livestock credits with no collateral, (2) guaranteed prices for small-scale farmers, (3) payments based on area, and (4) a fertiliser programme. Except for payments based on area, the rest of the programmes are new and covered in the section on Domestic Policy Developments 2019-20.

The “Production for Wellbeing” programme focuses mostly on area based payments which target small and medium producers, including producers from indigenous communities. Payment rates are decreasing with farm size. Producers with no more than 0.2 irrigable hectares or 5 rain-fed hectares or those located in marginalised and highly marginalised indigenous communities receive MXN 1 600 (USD 85) per hectare per growing season. Producers with land holdings of between 0.2 irrigated hectares and 5 irrigated areas or holdings between 5 and 20 rain-fed hectares receive MXN 1 000 (USD 53) per hectare per growing season. In contrast, coffee producers and sugar cane producers receive yearly payments of MXN 5 000 and MXN 7 300 (USD 265 and USD 387), respectively, irrespective of the plot size.

Two other relevant support programmes include the Agriculture Development Programme and the Livestock Development Programme. Both provide investment assistance to cover part of the cost for purchases of on-farm machinery, inputs and infrastructure for crop and livestock production and cultivation of horticultural crops in greenhouses. The Agriculture Development Programme focuses on small and medium size farming operations while the Livestock Development Programme is open for all registered livestock operations. The Livestock Development Programme provides support for the maintenance and reconversion of meadows and rangelands as well as for the control, handling and use of animal excreta in livestock operations.

Additional support is provided for on-farm consumption of electricity and for coping with market volatility. Support for managing market volatility and improving market access is directed to small and medium size producers for:

- financing price risk management instruments
- promoting contracts in agriculture
- complementing producers’ target income
- promoting quality certification
- acquiring training and technical assistance
- financing the construction and rehabilitation of grain and oilseed storage systems
- financing the development of organisational, administrative, business, commercial, operational and financial capacities.

Food consumer subsidies remain as an important poverty alleviation instrument in Mexico. Poor families obtain basic staples through DICONSA rural shops, while the LICONSA programme sells milk at prices below market levels.

Mexico’s climate pledge to the Paris Climate Conference in December 2015 includes both unconditional and conditional targets. Mexico has committed to unconditionally lower GHG emissions by 25% by 2030. Reductions excluding black carbon will come from transport (-18%); electricity generation (-31%); residential and commercial electricity consumption (-18%); oil and gas (-14%); industry (-5%); agriculture (-8%) and waste (-28%). Depending on international support, the GHG target could increase to as much as 40%. In order to achieve such targets, the general strategy for the agricultural sector promotes the adoption of technologies that improve the sustainability of the sector, and the use of biodigesters in livestock farms as well as conserving and restoring grasslands. The strategy also considers adaptation measures to protect communities from adverse impacts of climate change, such as extreme hydro meteorological hazards (e.g. tropical cyclones, thunderstorms, floods, drought, heatwaves and others), as well as to enhance the resilience of infrastructure and biodiversity-rich ecosystems. To do this, the government aims at strengthening the adaptive capacity of at least 50% of municipalities “most vulnerable” to climate change, establish early warning systems and risk management systems at every level of government (local, state, national) and reach a 0% net deforestation rate by 2030.

Domestic policy developments in 2019-20

The Mexican Government is currently drafting the new Sectoral Programme for Agriculture and Rural Development 2019-2024, which is to guide the implementation of the National Development Plan for the period 2019-24 and replace the previous Sectoral Development Programme for Agriculture, Fisheries and Food 2013-2018. The strategic guidelines of the Sectoral Programme for Agriculture and Rural Development 2019-2024 will focus on three objectives: (1) improve agricultural productivity for food self-sufficiency, (2) bring down poverty rates in rural areas, and (3) increase small-scale agricultural producers' incomes. New support programmes include guaranteed minimum prices, in-kind livestock credits with no collateral and a fertiliser programme.

Guaranteed minimum prices are granted to maize, beans, wheat, milk and rice producers and are set at levels above market prices. The eligibility criteria vary for different commodities but are mainly intended to support small and medium size producers of maize (maize producers with no more than 5 hectares producer), beans (producers with no more than 20 rain-fed hectares or 5 irrigable hectares) and milk (milk producers owning 100 cows or less). The programme supports wheat and rice producers of any size, while supported milk producers must also sell their product to LICONSA, a state enterprise that purchases, processes and distributes milk at subsidised prices. In all cases, there are limits to the amount of support that a single farmer can receive. Under this programme, maize producers are also eligible for a transportation subsidy. SEGALMEX (Mexican Food Security), the institution in charge of the rural shops DICONSA (selling basic staples in poor localities) and LICONSA, purchase maize and beans directly from producers. In order to do that, it has been renting storage space to complement its storage infrastructure. For wheat and rice producers, SEGALMEX pays producers the price difference from the market price they obtain.

The Livestock Credit Programme with no collateral provides in-kind credits to bovine, ovine, caprine, porcine, and honey small producers. Producers receive a certain amount of animal units and pay back the same amount of animal units after four years. Bovine producers can borrow up to 10 heifers and 1 stud. Ovine and caprine producers can borrow up to 50 heads and 2 studs. Porcine producers can borrow up to 20 heads and 1 stud and honey producers can get up to 200 hives. While a national programme, it is focused in 13 states: Campeche, Chiapas, Guerrero, Jalisco, Nayarit, Michoacán, Oaxaca, Quintana Roo, Tabasco, Tamaulipas, Veracruz, Yucatán and Zacatecas. Producers who enter into this scheme can also obtain up to MXN 100 000 (USD 18 800) to invest in equipment and infrastructure, up to the same amount to invest in seeds, fertiliser and herbicides to rehabilitate pastures and forage production, and up to MXN 9 500 (USD 504) to invest in protein-rich feed. For honey producers, support for beekeeping equipment for protection, handling and extraction is capped at MXN 20 000 (USD 1 060) and support for feed is capped at MXN 40 000 (USD 2 120). Under this scheme, farmers can also apply for technical support, which is provided by a government-funded network of livestock experts. During 2019, the first year of operation, this programme granted support only to bovine producers.

The Fertiliser Programme grants support to producers of maize, beans or rice holding no more than three hectares located in highly marginalised localities in the state of Guerrero. Up to 450 kg of fertiliser per hectare can be granted per producer a year.

The emblematic scheme of payments based on area, Production for Wellbeing, was substantially modified: the scheme now targets producers with less than 20 hectares and those in highly marginalised indigenous communities in the south-eastern states of the country. Coffee and sugar cane producers were also included in the programme's register.

Congress is in the process of approving the new Law of the National Financing of Agricultural Development (Financiera Nacional de Desarrollo Agropecuario, FND, formerly Financiera Rural), which contemplates the merger of the latter with three other financial and insurance promotion entities of the sector: AGROASEMEX, FIRCO and FOCIR. This would integrate, in a single entity, the services of credit granting,

price insurance, crop and animal insurance, risk sharing and financing of projects to add value to primary products.

By the end of 2020 the Marketing Support Program of the Agency for Marketing Services and Market Development (ASERCA), which during 2019 operated under the name of Social and Sustainable Markets, is to be dismantled. Contractual agriculture schemes should then be in charge of the above-mentioned FND, with the ambition to link the price risk management systems with the granting of credit to the sector.

For 2020, the Agriculture Development Programme, the Livestock Development Programme and the Fisheries and Aquaculture Development Programme are to be merged and to face substantial budgetary cuts.

The administrative and institutional restructuring of the Secretariat (Ministry) continues in 2020. The approval of new regulations of the Secretariat of Agriculture and Rural Development (SADER) is still pending, but the Government expects the Under-Secretariats for Rural Development and Food and Competitiveness to be eliminated and to be replaced by an Under-Secretariat for Food Self-Sufficiency.

In January 2020, the regulation that specifies labelling guidelines for food was amended making it mandatory to include information on sugar, sodium, fats, and caloric content per portion. Processed food products will now follow the labelling guidelines.

One of the priority objectives of the current draft of the Sectoral Programme for Agriculture and Rural Development 2019-2024 is the “Transition to Sustainable Agriculture for Present and Future Well-being”. It aims to promote sustainable production, the restoration of ecosystems and adaptation to climate change, as well as the use of clean energy in the agricultural and aquaculture-fishing sector.

To prevent the expansion of agricultural land, support to agriculture does not include support in areas classified as non-agricultural. SADER, in collaboration with the Ministry of the Environment and Natural Resources (SEMARNAT), has designed a platform called “National System for Consultation on Concurrent Incentives” (SINECI), which is to help avoiding support for productive activities on properties located in Natural Protected Areas and in priority areas for conservation.

SADER is also in the process of designing the National Strategy for the Conservation and Sustainable Use of Pollinators (ENCUSP), which is to be released in the first half of 2020. SADER is also working with the International Maize and Wheat Improvement Center (CIMMYT) and agricultural producers, to provide information on weather forecasts and the most appropriate adaptation practices to minimise the impact of climate change.

Trade policy developments in 2019-20

In December 2019, the Mexican Senate approved the Mexico-United States-Canada Agreement (called *Tratado entre Mexico, Estados Unidos y Canada* - T-MEC - in Mexico), to replace the former NAFTA from 1994. The Agreement was approved by the US Senate in January 2020 and by the Canadian Senate in March 2020. Some of the differences with NAFTA, are that T-MEC establishes that grading standards for agricultural products will be non-discriminatory (they cannot be used to discriminate among products from member countries). There are new provisions that promote enhance the transparency of the basis used to set sanitary and phytosanitary measures for agricultural products. It also intends to boost agricultural biotechnology and gene editing trading, by promoting co-operation, information sharing and other trade rules in those areas. The United Kingdom and Mexico have started to engage in discussions with a view to signing a trade agreement.

20 New Zealand

Support to agriculture

Since the reform of its agricultural policies in the mid-1980s, production and trade distorting policies have almost disappeared in New Zealand, and the level of support to agricultural producers has been the lowest among OECD countries. Over the past decade, this support has consistently accounted for less than 1% of farm receipts, and practically all prices are aligned with world market prices. Exceptions are fresh poultry and table eggs (as well as some bee products) which cannot be imported to New Zealand due to the absence of Import Health Standards for these products (required for risk products to be allowed for imports). Some support for on-farm services mainly related to animal health, and for disaster relief, provide additional producer support to a small extent.

The main focus of agricultural policies in New Zealand is on animal disease control, relief payments in the event of natural disasters, and the agricultural knowledge and information system. The government also provides support to community-scale off-farm investments in irrigation systems. Over the past decades, the share of agricultural land under irrigation has significantly expanded. Overall, for most of the past two decades, more than 70% of all support was through general services, with the remainder benefitting producers individually.

Main policy changes

With the Zero Carbon Amendment Act passed in November 2019, New Zealand has set separate long-term emission reduction targets for biogenic methane and other greenhouse gas (GHG) emissions, including for nitrous oxide. Biogenic methane emissions are to be reduced by 10% by 2030 and by 24-47% by 2050, relative to 2017 levels, while other GHG emissions are to be reduced to net zero by 2050. New Zealand also announced the pricing of emissions from livestock at the farm gate and fertiliser emissions at the manufacturer and importer level from 2025.

Several medium-scale adverse events, including drought, wildfire and flooding events, have triggered government support for the Enhanced Task Force Green programmes and Rural Assistance Payments in 2019. These programmes provide funding for clean-up and recovery work, and relief to farmers in hardship, respectively.

Negotiations were concluded on upgrading the New Zealand-China FTA in late 2019. Key outcomes of the upgrade include, among others, the option for “approved exporters” to self-declare the origin of their goods (including agro-food products), improved procedures for handling “perishable goods”, and improved mechanisms for co-operation on non-tariff barriers, including in agriculture.

Assessment and recommendations

- New Zealand's open agricultural sector remains focused towards foreign markets and trade. Its export orientation, underlined by the country's consistently low level of producer support, is supported by New Zealand's engagement in a large number of free trade agreements, including the recent upgrading of the New Zealand-China FTA.
- New Zealand's Import Health Standards (IHS), a key tool to ensure the country's biosecurity vis-à-vis imported products, present an exception to this open-market principle. While required for all risk products to be importable, no IHS are in place for some livestock products, including eggs, fresh chicken meat and honey, and these products therefore cannot be imported into New Zealand. While representing only a small share of New Zealand's agricultural output, this deprives consumers of lower prices and larger choices. The development of relevant IHS would hence benefit consumers while ensuring required biosecurity standards.
- Kiwifruit exports to markets other than Australia by groups other than the main company, Zespri, continue to be regulated by requiring authorisation by Kiwifruit New Zealand. New Zealand should aim to change these restrictions as they burden the participation in kiwifruit exports by other firms wishing to do so and hence reduce competition and efficiency in kiwifruit trade.
- New Zealand's policy mix rightly focusses on key general services. In addition to pest and disease control, significant investments target the country's agricultural knowledge and innovation system, which should help improve agricultural productivity growth, estimated at comparatively low levels in recent years. Overall, public expenditures for general services are often complemented by mandatory funding from private investors, which can help to ensure effective allocation of general services investments.
- Almost half of all GHG emissions in New Zealand originate from the agricultural sector. With the passage of the 2019 Zero Carbon Amendment Act and the proposed pricing of livestock and fertiliser emissions from 2025, New Zealand is one of the first countries to bind its climate commitments into law and to include objectives for agriculture as an integral component. While details of the emission pricing system for agriculture still need to be worked out, this can be seen as a major step towards achieving the ambition to become a net zero GHG emission country by 2050, complementing the country's engagement in a number of related research activities at both national and international levels.
- Available data suggests that New Zealand's agricultural sector keeps facing large and, in the case of nitrogen, increasing nutrient surpluses potentially representing risks to soil, water and air quality. This is related to the importance of the country's large livestock sector and increased fertiliser use, and may require reinforced attention.

Policy responses in relation to the COVID-19 outbreak

Agricultural policies

Given the peak harvesting seasons for several key New Zealand fruits in March and April, and while almost all foreign travellers are restricted from entering New Zealand, travellers already in the country with a temporary visa due to expire between 1 April and 9 July 2020 will have their visas automatically extended to 25 September 2020.

In response to COVID-19 the New Zealand Government imposed a lockdown on the economy from 25 March 2020, initially for a period of four weeks. During this period only essential industries were allowed to operate; however almost all agricultural and food processing industries, and input providers critical to their operation, were classified as essential industries. The only agricultural industries that had to close

during the lockdown were the floriculture and wool industries. However sales outlets for food on the domestic market were restricted to supermarkets only with the closure of farmers markets, fruit and vegetable stores, retail butcheries and the food service sector. This resulted in limited sales options for pig producers, small wineries and some fruit and vegetable growers. From 28 April restrictions were eased allowing the floriculture and wool industries to resume production and providing other producers with the option to establish contactless delivery options to consumers.[1]

Agro-food supply chain policies

Sale yards have been be closed to limit the spread of COVID-19 and protect New Zealanders.

Technical changes have been made for a fixed period of time to the sensory evaluation guidelines for the export verification for wine.[2]

Export verification requirements for exporters of animal or plant products have been changed or deferred for a fixed period of time. Changes include efforts to reduce site visits and no requirement for verification if businesses closed due to the COVID-19.[3]

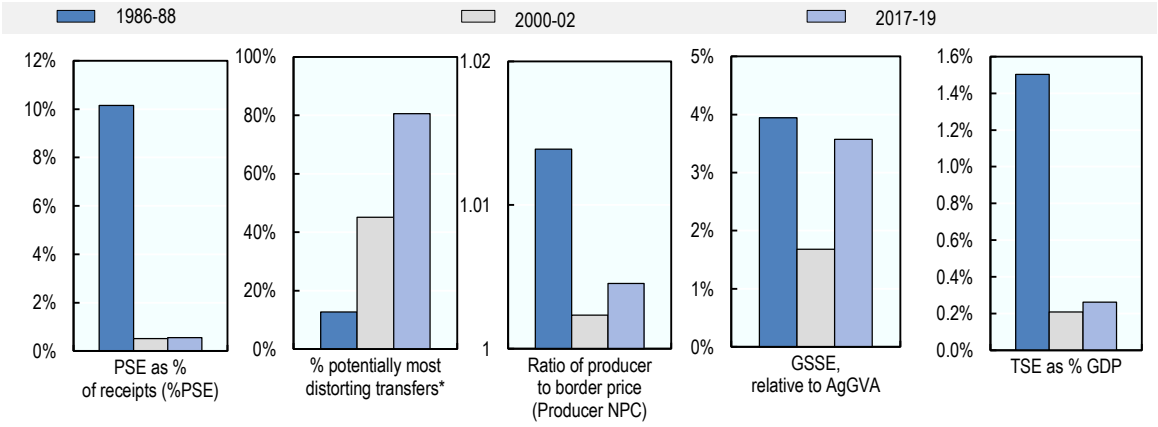
Up to NZD 330 million of the aviation support package will be allocated to ensuring air freight capacity is available on key routes for at least the next six months, and to dealing with immediate risks and opportunities as they arise in the aviation sector.[4]

Food processing is classified as an essential industry, but the COVID-19 protocols have significantly reduced capacity, which is having impacts on the industry.[5]

Other

There are no sectoral restrictions on the New Zealand fiscal stimulus package and so food producers are eligible together with other business to benefit from the package amounting to a total of NZD 17 billion (5.7% of GDP), more than half of which to be disbursed by mid-June. Among others, the package includes: wage subsidies for employers severely affected by the impact of COVID-19; and a change in business taxes to help cashflow. The government is expediting urgent work on new income support measures for all workers above and beyond the wage subsidy scheme.[6]

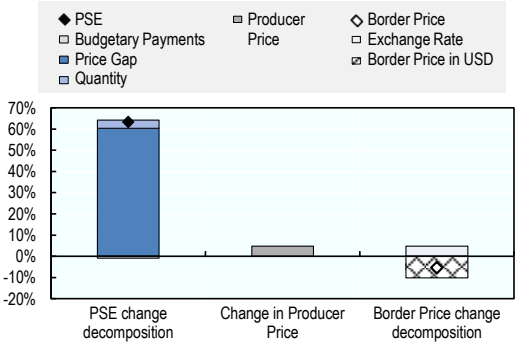
Figure 20.1. New Zealand: Development of support to agriculture



Note: * Share of potentially most distorting transfers in cumulated gross producer transfers.
Source: OECD (2020), "Producer and Consumer Support Estimates", OECD Agriculture statistics (database), http://dx.doi.org/10.1787/agr-pcse-data-en.
StatLink https://doi.org/10.1787/888934144591

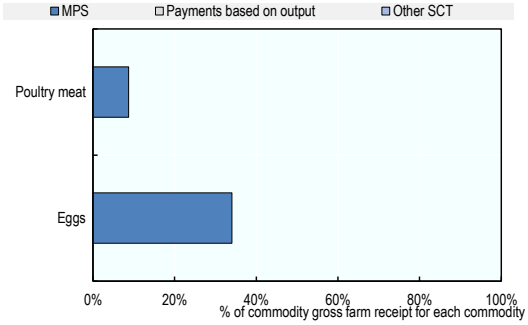
Support to producers (%PSE). For the past thirty years, support to producers has remained at levels below 2% of gross farm receipts (%PSE); it averaged 0.6% during 2017-19. Most of the (very low) support to producers is provided through market price support (MPS), one of the potentially most distorting forms of support and arising from SPS-related import restrictions (Figure 20.1). This creates some Single Commodity Transfers (SCT) for poultry meat and eggs, corresponding to 9% and 34% of commodity-specific gross farm receipts, respectively (Figure 20.3). Other than those, domestic prices are aligned with world prices, resulting in an average price ratio between domestic and reference levels (NPC) of less than 1.01. Overall, total support to agriculture (TSE) represents less than 0.3% of GDP. Most of the support is provided for general services, focusing mainly on the knowledge and information system and on biosecurity-related measures (Figure 20.1). In 2019, the low PSE increased as the price gaps in poultry and egg markets have widened due to both higher domestic and lower world prices (Figure 20.2).

Figure 20.2. New Zealand: Drivers of the change in PSE, 2018 to 2019



Source: OECD (2020), "Producer and Consumer Support Estimates", OECD Agriculture statistics (database), http://dx.doi.org/10.1787/agr-pcse-data-en.
StatLink https://doi.org/10.1787/888934144610

Figure 20.3. New Zealand: Transfer to specific commodities (SCT), 2017-19



Source: OECD (2020), "Producer and Consumer Support Estimates", OECD Agriculture statistics (database), http://dx.doi.org/10.1787/agr-pcse-data-en.
StatLink https://doi.org/10.1787/888934144629

Table 20.1. New Zealand: Estimates of support to agriculture

Million USD

	1986-88	2000-02	2017-19	2017	2018	2019p
Total value of production (at farm gate)	**4 067**	**6 371**	**19 930**	**19 352**	**20 541**	**19 898**
***of which:** share of MPS commodities (%)*	72.1	73.1	74.4	74.6	74.8	73.7
Total value of consumption (at farm gate)	**1 624**	**2 626**	**8 975**	**8 149**	**9 451**	**9 325**
Producer Support Estimate (PSE)	**424**	**33**	**112**	**105**	**90**	**140**
Support based on commodity output	54	15	90	80	69	120
Market Price Support[1]	53	15	90	80	69	120
Positive Market Price Support	53	15	90	80	69	120
Negative Market Price Support	0	0	0	0	0	0
Payments based on output	1	0	0	0	0	0
Payments based on input use	179	17	20	21	20	19
Based on variable input use	2	0	0	0	0	0
with input constraints	0	0	0	0	0	0
Based on fixed capital formation	154	0	0	0	0	0
with input constraints	0	0	0	0	0	0
Based on on-farm services	23	17	20	21	20	19
with input constraints	0	0	0	0	0	0
Payments based on current A/An/R/I, production required	26	1	2	3	1	0
Based on Receipts / Income	26	1	2	3	1	0
Based on Area planted / Animal numbers	0	0	0	0	0	0
with input constraints	0	0	0	0	0	0
Payments based on non-current A/An/R/I, production required	165	0	0	0	0	0
Payments based on non-current A/An/R/I, production not required	0	0	0	0	0	0
With variable payment rates	0	0	0	0	0	0
with commodity exceptions	0	0	0	0	0	0
With fixed payment rates	0	0	0	0	0	0
with commodity exceptions	0	0	0	0	0	0
Payments based on non-commodity criteria	0	0	0	0	0	0
Based on long-term resource retirement	0	0	0	0	0	0
Based on a specific non-commodity output	0	0	0	0	0	0
Based on other non-commodity criteria	0	0	0	0	0	0
Miscellaneous payments	0	0	0	0	0	0
Percentage PSE (%)	**10.2**	**0.5**	**0.6**	**0.5**	**0.4**	**0.7**
Producer NPC (coeff.)	**1.01**	**1.00**	**1.00**	**1.00**	**1.00**	**1.01**
Producer NAC (coeff.)	**1.11**	**1.01**	**1.01**	**1.01**	**1.00**	**1.01**
General Services Support Estimate (GSSE)	**119**	**85**	**417**	**395**	**390**	**464**
Agricultural knowledge and innovation system	60	46	191	183	170	221
Inspection and control	31	28	177	150	171	210
Development and maintenance of infrastructure	27	11	48	63	49	33
Marketing and promotion	0	0	0	0	0	0
Cost of public stockholding	0	0	0	0	0	0
Miscellaneous	0	0	0	0	0	0
Percentage GSSE (% of TSE)	**21.0**	**72.0**	**78.8**	**79.0**	**81.3**	**76.9**
Consumer Support Estimate (CSE)	**-53**	**-13**	**-84**	**-72**	**-66**	**-114**
Transfers to producers from consumers	-51	-13	-84	-72	-66	-114
Other transfers from consumers	-2	0	0	0	0	0
Transfers to consumers from taxpayers	0	0	0	0	0	0
Excess feed cost	0	0	0	0	0	0
Percentage CSE (%)	**-3.4**	**-0.5**	**-0.9**	**-0.9**	**-0.7**	**-1.2**
Consumer NPC (coeff.)	**1.03**	**1.01**	**1.01**	**1.01**	**1.01**	**1.01**
Consumer NAC (coeff.)	**1.03**	**1.01**	**1.01**	**1.01**	**1.01**	**1.01**
Total Support Estimate (TSE)	**542**	**118**	**528**	**500**	**480**	**604**
Transfers from consumers	53	13	84	72	66	114
Transfers from taxpayers	491	105	444	429	414	490
Budget revenues	-2	0	0	0	0	0
Percentage TSE (% of GDP)	**1.5**	**0.2**	**0.3**	**0.2**	**0.2**	**0.3**
Total Budgetary Support Estimate (TBSE)	**489**	**103**	**438**	**420**	**411**	**484**
Percentage TBSE (% of GDP)	**1.4**	**0.2**	**0.2**	**0.2**	**0.2**	**0.2**
GDP deflator (1986-88=100)	**100**	**140**	**205**	**202**	**204**	**208**
Exchange rate (national currency per USD)	**1.71**	**2.25**	**1.46**	**1.41**	**1.45**	**1.52**

Note: p: provisional. NPC: Nominal Protection Coefficient. NAC: Nominal Assistance Coefficient.
A/An/R/I: Area planted/Animal numbers/Receipts/Income.
1. Market Price Support (MPS) is net of producer levies and excess feed cost. MPS commodities for New Zealand are: wheat, maize, oats, barley, milk, beef and veal, sheep meat, wool, pig meat, poultry and eggs.

Source: OECD (2020), "Producer and Consumer Support Estimates", *OECD Agriculture statistics* (database), http://dx.doi.org/10.1787/agr-pcse-data-en.

Contextual information

New Zealand is a relatively small and thinly populated economy with per capita GDP slightly above the OECD average, but well above the average of all countries covered by the report. Its market openness is related to its high dependency on international trade. Agriculture has a comparatively high importance to the economy, as it accounts for some 7% of GDP and 6% of employment. Moreover, agro-food products account for close to two-thirds of New Zealand's total exports.

With little arable land, grass-fed livestock products represent the backbone of the agricultural sector. New Zealand is the world's largest exporter of sheep meat, and among the largest exporters of dairy products. Beef, fruit and horticultural products also contribute significantly to the country's agriculture and food exports.

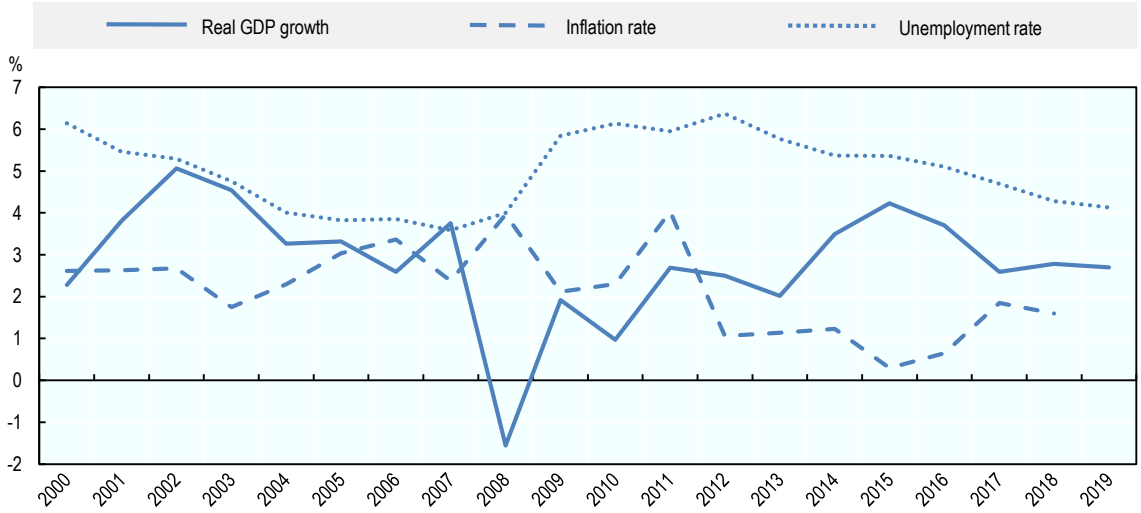
Table 20.2. New Zealand: Contextual indicators

	New Zealand		International comparison	
	2000*	2018*	2000*	2018*
Economic context			**Share in total of all countries**	
GDP (billion USD in PPPs)	83	204	0.2%	0.2%
Population (million)	4	5	0.1%	0.1%
Land area (thousand km²)	263	263	0.3%	0.3%
Agricultural area (AA) (thousand ha)	15 413	10 651	0.51%	0.36%
			All countries[1]	
Population density (inhabitants/km²)	15	18	53	62
GDP per capita (USD in PPPs)	21 478	41 491	9 275	21 924
Trade as % of GDP	25	20	12.4	15.3
Agriculture in the economy			**All countries[1]**	
Agriculture in GDP (%)	9.6	7.2	3.1	3.6
Agriculture share in employment (%)	8.5	5.8	-	-
Agro-food exports (% of total exports)	50.7	63.3	6.2	7.3
Agro-food imports (% of total imports)	7.9	11.4	5.5	6.3
Characteristics of the agricultural sector			**All countries[1]**	
Crop in total agricultural production (%)	18	21	-	-
Livestock in total agricultural production (%)	82	79	-	-
Share of arable land in AA (%)	10	5	32	33

Notes: *or closest available year. 1. Average of all countries covered in this report. EU treated as one.
Sources: OECD statistical databases; UN Comtrade; World Bank, WDI and national data.

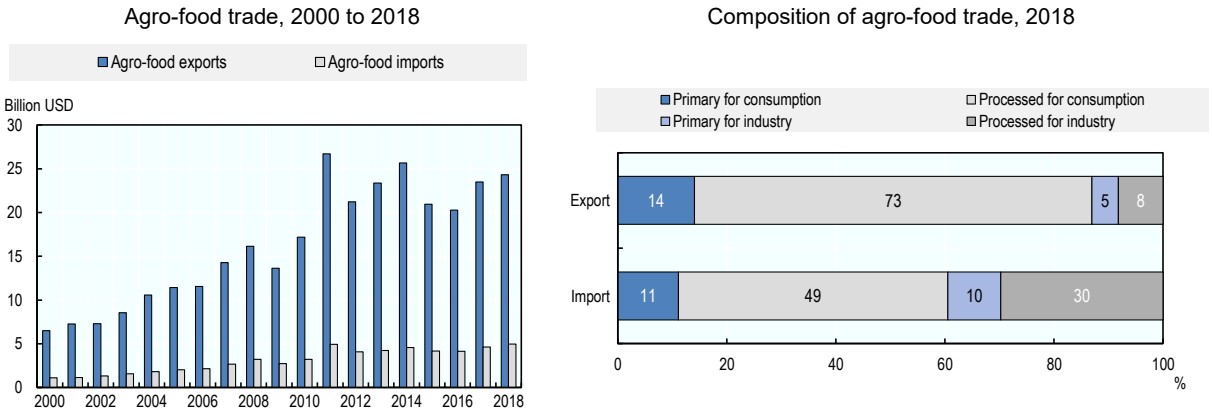
New Zealand has a stable economy having featured robust growth and a relatively low inflation rate for most of the past decade. It is a consistent and growing net exporter of agro-food products, which after some drops in 2015 and 2016 due to, among others, lower dairy prices, have picked up again since 2017. Most of New Zealand's agro-food trade, particularly of its exports, is processed food for final consumption. On the import side, however, intermediary products represent two-fifths of the trade basket.

Figure 20.4. New Zealand: Main economic indicators, 2000 to 2019



Sources: OECD statistical databases; World Bank, WDI and ILO estimates and projections.

Figure 20.5. New Zealand: Agro-food trade

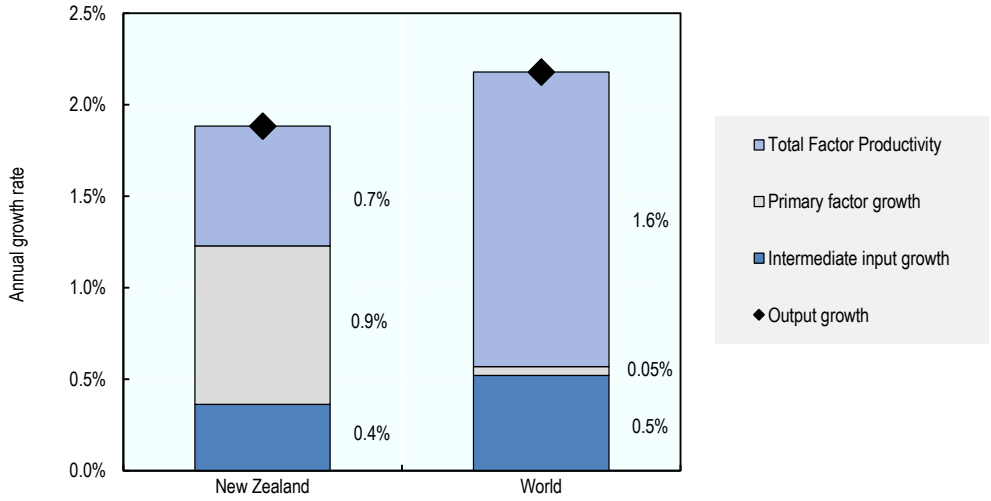


Note: Numbers may not add up to 100 due to rounding.
Source: UN Comtrade Database.

New Zealand's growth in agricultural output over the 2007-16 decade has been below global average, driven by relatively low productivity growth: at 0.7%, the estimated average growth in total factor productivity (TFP) is well below the global average and among the lowest of all countries covered by this report. It is also well below the TFP growth measured for the 1990s.

Given the dominant role of dairy and ruminant meat, agriculture is the main source of New Zealand's GHG emissions, and nutrient surpluses are well above the respective OECD averages. The sector is also the country's prime consumer of freshwater as irrigated land is expanded to respond to climate related uncertainties. Nonetheless, its overall level of water stress, while higher than in the 1990s, is rather limited.

Figure 20.6. New Zealand: Composition of agricultural output growth, 2007-16



Note: Primary factors comprise labour, land, livestock and machinery.
Source: USDA Economic Research Service Agricultural Productivity database.

Table 20.3. New Zealand: Productivity and environmental indicators

	New Zealand		International comparison	
	1991-2000	2007-2016	1991-2000	2007-2016
			World	
TFP annual growth rate (%)	1.7%	0.7%	1.6%	1.6%
			OECD average	
Environmental indicators	**2000***	**2018***	**2000***	**2018***
Nitrogen balance, kg/ha	36.7	63.9	33.3	29.1
Phosphorus balance, kg/ha	13.2	9.6	3.3	2.3
Agriculture share of total energy use (%)	3.5	4.5	1.7	2.0
Agriculture share of GHG emissions (%)	50.0	48.1	8.1	8.9
Share of irrigated land in AA (%)[1]	3.7	6.9	-	-
Share of agriculture in water abstractions (%)	..	61.7	46.0	49.0
Water stress indicator	0.7	2.2	9.9	8.9

Notes: * or closest available year. 1. Data are not comparable between time periods due to change in methodology.
Sources: USDA Economic Research Service, Agricultural Productivity database; OECD statistical databases; FAO database and national data.

Description of policy developments

Main policy instruments

New Zealand largely limits its agricultural support to expenditures on general services, such as agricultural research and biosecurity controls for pests and diseases. A significant share of the costs of regulatory and operational functions, including for border control, is charged to beneficiaries (primary sector businesses) or those who create risks (primary sector businesses and exporters).

Practically all of New Zealand's agricultural production and trade is free from economic regulations. Since the phasing out of restrictions for dairy exports to specific tariff quota markets by the end of 2010, such **export rights** are now allocated to dairy companies on the proportion of milk-solids collected. **Export**

regulations continue to exist for kiwifruit: the New Zealand company Zespri has the default, although not exclusive, right to export kiwifruit to all markets other than Australia. Other traders can export kiwifruit to markets other than Australia in collaboration with Zespri, subject to approval by Kiwifruit New Zealand, the relevant regulatory body. Kiwifruit exporters to Australia are required to hold an **export licence** under the **New Zealand Horticulture Export Authority Act 1987**, which provides for multiple exporters to that market.

The 2017 amendments to the **Kiwifruit Export Regulations 1999** allow Zespri shareholders to consider setting rules around maximum shareholding and eligibility for dividend payments; clarify the activities Zespri can undertake as a matter of core business; and enhance the independence and transparency of the industry regulator, Kiwifruit New Zealand.

The **Dairy Industry Restructuring Act 2001 (DIRA)** was established to promote the efficient operation of the New Zealand dairy industry. In particular, it aims at ensuring that dairy farmers can easily enter and exit the Fonterra Co-operative, and that other dairy processors can obtain raw milk necessary for them to compete in dairy markets. A review of the DIRA was launched in May 2018. A draft bill to amend DIRA, introduced in August 2019, proposes to remove regulatory requirements deemed no longer necessary such as the Herd Testing Regulations 1958; to support and encourage better environmental performance of the dairy industry; to provide Fonterra with more flexibility to manage some aspects of its operations such as the discretion to accept or reject an application to become a shareholder and to supply milk in circumstances where it is evident that the applicant would be unable to comply with Fonterra's terms of supply; and to provide increased clarity on aspects of the regulatory regime for Fonterra and other dairy industry stakeholders.

The **Food Act 2014** came into force on 1 March 2016. After a three-year transition period for businesses to the new regime, all business are now operating under the new law. The Food Act 2014 aligns the domestic food system with the risk-based approach of other New Zealand food statutes that have more of an export focus. In particular, New Zealand's food system aligns with international trends in food regulation that have shifted to using a risk-based approach that focuses on the outcome of providing safe and suitable food, rather than using prescriptive regulation.

Import Health Standards (IHS) are documents issued under the **Biosecurity Act 1993**. They state the requirements to be met before risk goods can be imported into New Zealand. Risk goods can only be imported if an IHS is in place for the product, and if all relevant IHS measures have been met. For some products (table eggs, uncooked chicken meat, and honey), no IHS is in place. These products therefore cannot be imported, leading to some market price support as their domestic prices are above the world market level.

"**Industry good**" activities[7] (such as research and development, forming and developing marketing strategies, and providing technical advice) previously undertaken by statutory marketing boards are now managed through producer levy-funded industry organisations under the **Commodity Levies Act 1990**. Under this legislation, levies can only be imposed if they are supported by producers, and producers themselves decide how levies are spent. With a limited number of exceptions, levy funds may not be spent on commercial or trading activities. As a provision for accountability to levy payers, the Act requires that the levying organisations must seek a new mandate to collect levies every six years through a referendum of levy payers.

The New Zealand government continues to engage with industry and stakeholders to build biosecurity readiness and response capability. The **Government Industry Agreement for Biosecurity Readiness and Response (GIA)** has established an integrated approach to preparing for and effectively responding to biosecurity risks, through voluntary partnerships between the government and primary industry sector groups. Signatories share decision making, costs and responsibility in preparing for and responding to biosecurity incursions. In 2019, Deer Industry New Zealand (DINZ) and Aquaculture New Zealand signed

the GIA deed, bringing to 20 the number of industry groups that have joined with the Ministry for Primary Industries under the GIA.

Overseer is a nutrient management tool used for setting and managing nutrients within environmental limits. Overseer estimates nutrient losses from farm systems, helping farmers and growers improve their productivity, reduce nutrient leaching into waterways, and reduce greenhouse gas emissions. The intellectual property is jointly owned by the Ministry for Primary Industries, AgResearch Limited, and the Fertiliser Association of New Zealand. Overseer is increasingly being used by regional councils that are implementing the National Policy Statement on Freshwater Management.

Pastoral Genomics is a New Zealand partnership-funded programme for forage improvement through biotechnology. It is funded by the Ministry of Business, Innovation and Employment (MBIE), DairyNZ, Beef+Lamb New Zealand, Grasslands Innovation, NZ Agriseeds, DEEResearch, AgResearch, and Dairy Australia. The partnership supports the private seeds company PGG Wrightson Seeds and Agriseeds in exploring the adoption of genomic selection (a non-regulated technology enabling more rapid uptake by partners and companies) to accelerate the improvement of ryegrass and clover. By applying the genomic selection tools developed in Pastoral Genomics to their breeding programmes, the seed companies aim to create ryegrass and clover cultivars that have desirable characteristics more quickly. These traits could include higher yielding plants, improved drought tolerance, higher metabolisable energy or greater phosphate use efficiency. The New Zealand Government is investing NZD 7.3 million (USD 4.8 million) between 2015 and 2020 through the MBIE partnerships scheme. This funding is being matched by industry co-funding.

Sustainable Food and Fibre Futures (SFF Futures) funds innovative projects that create more value and improved sustainability for the food and fibre industries. SFF Futures has a budget of NZD 40 million (USD 26 million) per year and provides a single gateway for farmers, growers, harvesters and industry to apply for investment in a range of projects that deliver economic, environmental and social benefits. Projects can range from small, one-off initiatives to long-running multi-million dollar partnerships. Community projects require co-investment from the partner organisation of at least 20% of costs. Commercially-driven projects require co-investment of at least 60% of costs.

Extension Services is an initiative to support and enable producers to improve environmental, social and wellbeing outcomes in their communities by driving their own solutions. Extension Services emphasises the partnering with farmers, regional stakeholders and agricultural professionals to ensure services are relevant to the needs and priorities of local communities. The programme has a budget of NZD 35 million (USD 23 million) over four years from July 2019 to support up to 2 200 producers across targeted catchments and regions.

The **One Billion Trees programme** aims to double the current planting rate (including re-planting following harvest and new planting) to plant one billion trees over the decade from 2018-28. The One Billion Trees programme is supported by direct government investment (such as the One Billion Trees Fund and joint ventures between Crown Forestry and private landowners), and adjustments to regulatory settings (such as the Emissions Trading Scheme) to encourage and support tree planting.

The **One Billion Trees Fund** was launched in November 2018 as one part of the One Billion Trees programme. The Fund provides NZD 118 million (USD 78 million) for tree planting grants to lower the barriers to tree planting faced by landowners, and to encourage indigenous tree planting and environment-focused planting (such as trees for erosion control, carbon sequestration, biodiversity, and regeneration of native bush). The Fund also aims to support the integration of trees into landscapes such as farms to help landowners get the best out of their less productive land, provide shade and shelter to stock, and improve environmental outcomes such as water quality. The Fund aims to plant 60 million trees over three years, approximately two-thirds of which will be indigenous trees. The Fund also provides NZD 120 million (USD 79 million) for partnership initiatives that underpin successful tree planting (such as workforce development, science and innovation, and ecological restoration).

The Ministry for Primary Industry's **Irrigation Acceleration Fund (IAF)** has closed. Existing projects have been completed and the fund is in the final processes of being wound-down. In recent years, funding through the IAF has supported strategic water management studies as well as the development of off-farm water management and infrastructure at community and regional scales. Funding support for irrigation-related projects may be considered against the criteria for investment within the Provincial Growth Fund, an economy-wide fund established in 2018.

Although no longer accepting new applications for financial support, **Crown Irrigation Investments Limited (CIIL)** continues to manage three investments under existing contracts: completion of Central Plains Water Stage 2 (Canterbury plains); construction of the Kurow-Duntroon scheme (Kurow, South Canterbury); and construction of the Waimea Community dam (Nelson/Tasman).

The **New Zealand Emissions Trading Scheme (NZ ETS)** is New Zealand's main policy tool to reduce greenhouse gas (GHG) emissions. It requires agro-food companies (e.g. meat processors, dairy processors, nitrogen fertiliser manufacturers and importers) to report on their agricultural emissions, however these companies are not required to pay for their emissions. The NZ ETS also imposes a cost on the emissions from transport fuels, electricity production, synthetic greenhouse gases, waste and industrial processes.

The New Zealand Government continues to research and develop mitigation technologies to reduce agricultural GHG emissions. It primarily does so through the **New Zealand Agricultural Greenhouse Gas Research Centre (NZAGRC)**, the **Pastoral Greenhouse Gas Research Consortium (PGgRc)**, and in co-ordination with the 61 member countries of the **Global Research Alliance on Agricultural Greenhouse Gases (GRA)**. The NZAGRC, funded by the Ministry for Primary Industries, brings together nine organisations that conduct research to reduce New Zealand's agricultural GHG emissions.[8] Research is focused on finding practical ways of reducing on-farm methane and nitrous oxide emissions while improving productivity and sequestering soil carbon. The PGgRc is a partnership, funded 50:50 by Government and industry,[9] that aims to provide livestock farmers with the information and means to mitigate their greenhouse gas emissions. The PGgRc mainly focuses on research to reduce methane emissions in ruminant animals.

The GRA was established in 2009. New Zealand hosts the Secretariat and GRA Special Representative, and leads its Livestock Research Group. The GRA member countries collaborate on the research, development and extension of technologies and practices that can deliver more climate-resilient food systems without growing GHG emissions. New Zealand has provided more than NZD 1 million (USD 659 000) in funding to support a scholarship programme which allows early career scientists from developing countries to undertake 4-6 month research exchanges at affiliated research institutions in GRA members and partners. The programme is a joint initiative of the GRA and the Climate Change, Agriculture and Food Security programme of the **Consultative Group on International Agricultural Research (CGIAR-CCAFS)**.

The **New Zealand Fund for Global Partnerships in Livestock Emissions Research (GPLER)** co-funds internationally collaborative research into how to mitigate GHG emissions from pastoral livestock farming. GPLER is an international research fund set up by the New Zealand Government in support of the GRA. It is aimed at accelerating global research in mitigating GHG emissions from pastoral livestock farming by seeking solutions to four research challenges: manipulating rumen function; reducing nitrous oxide emissions from soils; manipulating rates of soil carbon change; and improving tools and practices for minimising farm system-level GHG emissions intensity.

The Ministry for Primary Industries' General Export Requirements for Bee Products strengthen traceability across the supply chain and provide a scientific definition of **mānuka honey** that can be used to identify and authenticate mānuka honey from New Zealand. The definition is a combination of five attributes (comprising four chemicals and one DNA marker from mānuka pollen) required to separate mānuka honey

from other honey types. The requirements aim to give consumers and trading partners confidence that all mānuka honey exported is true to label.

The **Overseas Investment Amendment Act 2018**, in force since October 2018, brought residential and lifestyle land under the definition of "sensitive" land. The key change was replacing the large farm directive with a broader, rural land directive which applies to all rural land larger than five hectares, other than forestry. As a result, most New Zealand land is now "sensitive", meaning that the consent of the Overseas Investment Office is required for transactions of such land involving "overseas persons" as defined under the Act. The Amendment Act also places conditions on overseas investors – they must now demonstrate how their investment will benefit the country.

As a trade dependent economy geographically distant from export markets, New Zealand currently has ten **Free Trade Agreements** (FTAs) in force, which account for approximately two-thirds both of the value of New Zealand's total exports and of its agro-food exports. Three additional agreements are concluded but not yet in force – the Regional Comprehensive Economic Partnership (RCEP),[10] the New Zealand-Gulf Cooperation Council FTA (involving Bahrain, Kuwait, Oman, Qatar, Saudi Arabia and the United Arab Emirates), and the Anti-Counterfeiting Trade Agreement (ACTA).[11] Negotiations between New Zealand and the countries of the **Pacific Alliance**[12] and negotiations for a **New Zealand-European Union FTA** are ongoing.

Domestic policy developments in 2019-20

Farmers and growers faced five medium-scale adverse events in 2019, all in the South Island. These were drought and wildfire in Tasman, drought in Marlborough and Buller, two flooding events in Westland and flooding in South Canterbury. Across these events the agricultural sector was provided with recovery support, mainly through the Rural Support Trusts for psychosocial support and co-ordination services of up to NZD 210 000 (USD 138 000) funding from the New Zealand Government. A Mayoral Relief Fund for Tasman following the fire was established, including NZD 170 000 (USD 112 000) from the New Zealand Government.

Enhanced Task Force Green covers clean up support following adverse events for agriculture farms, forestry, *marae*[13] and public spaces. The New Zealand Government provided NZD 289 000 (USD 190 000) to support the clean-up from flooding of 31 rural properties at Fox River, Westland in March 2019.

Rural Assistance Payments (RAPs) were made available to be utilised as a result of the drought, wildfire, and flooding. RAPs are only available on a case-by-case basis to farmers in real hardship and cover essential living costs for those farmers whose income is severely impacted by a medium-scale (or greater) adverse event, and who have no other means of supporting their families.

The **Earthquake Advisory Services Fund** closed on 30 June 2019. It had been available to individual landowners and land managers affected by the 2016 Kaikoura-Hurunui Earthquake to access advisory services to help with long-term use planning and technical advice. NZD 560 000 (USD 369 000) was provided over the life of the fund.

In July 2017, following the discovery for the first time in New Zealand of the bacterial infection ***Mycoplasma bovis*** in cattle in South Canterbury, the Ministry for Primary Industries declared a biosecurity response. Government and agricultural sector leaders agreed to work to eradicate *Mycoplasma bovis* to protect the national herd and long-term productivity of the farming sector. In April 2019, the *Mycoplasma bovis* 2019 National Plan was released, setting out three goals to be achieved within a year: eradicate *Mycoplasma bovis*; reduce the impact of the eradication programme on farmers, families and communities; and further strengthen the biosecurity system. The eradication programme is ongoing, with compensation payments to farmers for slaughtered cattle in the year ended June 2019 estimated at around NZD 78 million (USD 51 million). In 2019, the **Mycoplasma bovis Recovery Advice Fund** provided

NZD 36 000 (USD 24 000) to eight farms to pay for business and technical advice on recovering from the effects of *Mycoplasma bovis.*

The **National Animal Identification and Tracing (NAIT) Amendment Bill (No. 2)** took effect on 14 December 2019. The new provisions include strengthening the requirements for tagging, incentivising compliance with the scheme, and making better use of NAIT data. These changes are part of a bigger programme of work to improve NAIT with respect to tag retention and the NAIT information system.

The **Farm Debt Mediation Act 2019** requires secured creditors to farm businesses to offer statutory mediation before taking any enforcement actions in relation to debt held over that business. It is to be fully operational from 1 July 2020. The Act aims to provide for fair, equitable and timely resolution of farm debt issues, thereby supporting the mental, emotional and financial wellbeing of farmers and farming families. The scheme applies to all secured lenders, including non-bank lenders.

The government committed NZD 12 million (USD 7.9 million) to ensuring Māori landowners and agribusinesses have the tools, support systems and information to use their land effectively. The **Māori Agribusiness: Pathway to Increased Productivity (MAPIP)** programme offers a one-on-one approach to achieving primary sector aspirations. The MAPIP framework supports Māori primary sector asset owners who seek to sustainably increase the productivity of their primary sector assets, including land, agriculture, horticulture, forestry, and seafood. The **Māori Agribusiness Extension Programme (MABx)** enables the Crown to partner with Māori (in a one-to-many approach) to achieve economic, environmental, social and cultural aspirations through sustainable development of primary sector assets.

New Zealand's primary industries are evolving, and a dynamic shift of the workforce is needed to meet future demands. The **Primary Sector Centre of Vocational Excellence** is to be the first of three prototype centres of excellence for vocational education to be established from mid-2020. The centre will be used to drive innovation and excellence in vocational education and improve links to industry and communities. Funding of NZD 18 million (USD 11.9 million) over four years has been committed to establish the three prototype centres. The Government is also investing a further NZD 4.7 million (USD 3.1 million) to enable the Southern Institute of Technology to operate the Telford farm campus in 2020 and 2021. The investment is to upgrade facilities and attract more trainees to enter the agricultural sector.

In November 2019, New Zealand passed the **Climate Change Response (Zero Carbon) Amendment Act (**or Zero Carbon Act, **ZCA)**. The Act sets separate long-term emission reduction targets for long-lived and short-lived GHGs, including a target for biogenic methane. In particular, the proposed emissions reduction targets set out in the ZCA aim to reduce all GHG emissions (except biogenic methane) to net zero by 2050; and reduce gross biogenic methane emissions by 10% by 2030 and by 24-47% by 2050 (below 2017 levels). These targets are consistent with the Paris Agreement's objective of limiting global warming temperature rise to 1.5°C above pre-industrial levels (Box 20.1).

Subsequent to a public consultation based on a document informed by the work of the **Interim Climate Change Committee (ICCC)**, the New Zealand government announced, in October 2019, that it would price emissions from livestock at the farm gate and fertiliser emissions at the manufacturer and importer level from 2025. A formal sector-government agreement, known as **He Waka Eke Noa**, is to establish a Joint Action Plan to build the necessary on-farm systems and capability to support farm-gate emissions pricing from 2025.

The **Sustainable Land Management Hill Country Erosion Programme (HCEP)** aims to protect New Zealand's estimated 1.4 million hectares of pastoral hill country classified as erosion prone. It provides funding to councils for the development of four-year erosion control projects. The government has approved a total of NZD 35.3 million (USD 23.3 million) for the period 2019-23.[14] Selected projects include: the development of whole farm plans to manage erosion on farms with highly erodible land, the development of agroforestry plans, wide-spaced planting of poplars and willows, land retirement from production to revert to native vegetation, and soil conservation and sustainable land management

programmes. Although the main purpose of the HCEP is to reduce erosion, it also contributes to the sequestration of carbon in small-scale forests and through planting of poplars and willows.

The **Sustainable Land Management and Climate Change (SLMCC) Research Programmes** help agricultural and forestry sectors with the challenges arising from climate change. The SLMCC Research Programme invests in targeted basic, applied and policy research on the impacts of, and adaptation to climate change; mitigation of agricultural and forestry GHGs; cross-cutting issues, including economic analysis, life-cycle analysis, farm, catchment and systems analysis and social impacts; and policy research to address targeted policy questions. In 2019, the government committed NZD 1.56 million (USD 1.03 million) for eight new projects, including NZD 500 000 to develop practical actions for farmers to adapt to climate change; NZD 150 000 for the New Zealand Agricultural Greenhouse Gas Research Centre (NZAGRC) to help rural advisors improve climate change knowledge; and NZD 140 000 to develop better tools to measure and assess drought conditions (USD 329 000, USD 99 000 and USD 92 000, respectively). In July 2019, SLMCC also funded the launch of a website which provides farmers with information, including videos, on the basics of climate change (www.AgMatters.nz).

Box 20.1. The Zero Carbon Act – implications for the agro-food sector

The Climate Change Response (Zero Carbon) Amendment Act (ZCA), passed in November 2019, makes New Zealand one of the first countries to bind its climate commitments into law including objectives for agriculture as an integral component. To help meet these commitments, the government has introduced another Bill, to price agricultural emissions and work with the agricultural sector to achieve the targets for agricultural emissions.

The ZCA sets dual national targets to reduce greenhouse gases (GHGs). They aim to reduce biogenic methane by 10% by 2030 and by between 24% and 47% by 2050, relative to 2017 levels, and to reduce all other GHG emissions to net zero by 2050.

Almost half of all GHG emissions in New Zealand originate from the agricultural sector, and more than a third are in the form of methane from the dairy, sheep and beef industries. Most of the remaining agricultural emissions are in the form of nitrous oxide linked to fertiliser use and urine patches on pasture. While emissions from agriculture have stabilised in recent years, they increased by 13.5% from 1990 to 2017. This period saw a 650% increase in the application of synthetic nitrogen fertiliser and a 60% expansion of the dairy herd (the increases were partially offset by a 53% reduction in the sheep flock and 21% reduction in the non-dairy cattle herd since 1990). With almost two-thirds of all New Zealand exports being agro-food products, originating to a large extent from the livestock sectors, trade-offs being considered in the development of the national mitigation policy are considerable for the economy as a whole and the rural economy.

The Interim Climate Change Committee (ICCC)[1] was established in 2018 to provide recommendations on ways to reduce emissions, including from agriculture. It concluded that on-farm emission reduction is most efficiently achieved through emissions pricing – pricing would drive innovation, reward farmers who significantly reduce emissions, and give them autonomy over actions on their farm. The ICCC noted that pricing should be part of a broader package that includes tools, support and advice to farmers (ICCC, 2019[1]). The ICCC noted that it would take until 2025 to implement a farm level pricing scheme and recommended that agricultural emissions be priced at the processor level in the interim.

Following the ICCC's recommendations and a proposal from primary industry organisations representing all farmers, the New Zealand government introduced, in October 2019, the Climate Change Response (Emissions Trading Reform) Bill (ETR) to price livestock emissions at a farm level, and fertiliser emissions at a processor level, from 2025. A pricing scheme is to be designed through a Joint Action Plan and in collaboration with a group of leading primary industry organisations. The Plan

should also include on-farm programmes to support farmers to be ready for emissions reporting and pricing by 2025. The system would grant farmers 95% of their emission credits for free with the remaining credits to be purchased. In the longer term, the share of emission credits to be purchased by farmers would increase, in line with the approach taken for other industries.

The Climate Change Commission is to monitor the progress being made under the Joint Action Plan and report back to the government in 2022. Should progress be considered inadequate, the government retains the option to impose pricing at processor level. The Minister for Climate Change is also to report back in 2022 on the details of a farm-level emissions pricing scheme, including details of an alternative pricing scheme to the New Zealand Emissions Trading Scheme.

Note: 1. As of December 2019, the Interim Climate Change Committee was disestablished and replaced by the independent Climate Change Commission, a government funded body set up under the Zero Carbon Bill to provide the government with advice on climate policy. The Commission is made up of a Chair and six Climate Change Commissioners who are experts in climate science, adaptation, agriculture economics and the Maori-Crown relationship.

Trade policy developments in 2019-20

In November 2019, New Zealand and China concluded negotiations on upgrading the **New Zealand-China FTA**. Key outcomes of the upgrade include, among others, the option for "approved exporters" to self-declare the origin of their goods (including agro-food products), improved procedures for handling "perishable goods" (including the introduction of expedited six-hour clearance times, release of such goods outside normal business hours and appropriate storage), and improved mechanisms for co-operation on non-tariff barriers, including in agriculture.

In 2019, New Zealand along with Costa Rica, Fiji, Iceland and Norway launched negotiations as part of the **Agreement on Climate Change, Trade and Sustainability** (ACCTS). The agreement aims to bring together some of the inter-related elements of the climate change, trade and sustainable development agendas.

The government established the **Trade for All Advisory Board (TFAAB)** in December 2018 to conduct an in-depth review of New Zealand's trade policy. The TFAAB published its independent report to the Government in November 2019, with recommendations on how to make international trade benefit all New Zealanders. Recommendations relevant to agro-food trade cover the following areas,: measures to address public confidence and trust, and to modernise trade policy; improving policy and foresight through better evaluation, assessment, and inclusion; advancing New Zealand's interests in an enhanced international system; and aligning trade policy with improving productivity and sustainability.

References

ICCC (2019), *Action on agricultural emissions*, Interim Climate Change Committee, http://www.iccc.mfe.govt.nz (accessed on 24 January 2020). [1]

NZIER (2007), *Productivity, profitability and industry good activities. Report to Dairy Insight*, New Zealand Institute of Economic Research, https://nzier.org.nz/static/media/filer_public/11/cb/11cb415e-a97b-4ac9-b86c-a0b238de9b61/productivity_profitability_and_industry_good_activities_feb_2007.pdf. [2]

Notes

[1] https://www.mpi.govt.nz/protection-and-response/coronavirus/.

[2] https://www.mpi.govt.nz/dmsdocument/77-wine-new-zealand-grape-wine-export-eligibility-requirements-notice.

[3] https://www.mpi.govt.nz/dmsdocument/11428-animal-products-notice-export-verification-requirements-2020.

[4] https://www.beehive.govt.nz/release/government-working-keep-air-freight-moving.

[5] https://beeflambnz.com/news-views/new-analysis-meat-processing-capacity-released.

[6] https://www.imf.org/en/Topics/imf-and-covid19/Policy-Responses-to-COVID-19#S.

[7] Activities "beneficial to the industry, but whose benefits cannot be captured by those who fund or provide the activity", or "long-term investments in the industry made with the expectation of accelerating delivery of better technology and products for the industry" (NZIER, 2007[2]).

[8] The seven member Crown research institutes and universities are: AgResearch, Landcare Research, Lincoln University, Massey University, National Institute of Water and Atmospheric Research, Plant Food Research and Scion. The two other organisations involved are DairyNZ and the Pastoral Greenhouse Gas Research Consortium.

[9] Industry partners are DairyNZ, Beef+Lamb New Zealand, DEEResearch and Fertiliser Research.

[10] RCEP comprises the ten countries that make up the Association of South East Asian Nations (ASEAN), Australia, the People's Republic of China, India, Japan, Korea, and New Zealand.

[11] Other ACTA signatories include Australia, Canada, the European Union and 22 of its Member States, Korea, Japan, Mexico, Morocco, Singapore, and the United States.

[12] Pacific Alliance countries are Chile, Colombia, Mexico and Peru.

[13] A *marae* is a fenced-in complex of carved buildings and grounds that belong to a particular Maori tribe or family.

[14] The HCEP existed before the One Billion Trees programme, but has received significant funding from it.

21 Norway

Support to agriculture

Norway's progress in reducing support levels has been modest; its farming sector continues to receive one of the highest levels of support in the OECD area. Market price support (MPS), mainly due to border protection, still remains the main component of support to producers. Area and headage payments are also important. While the share of support coming from the potentially most production and trade distorting measures has declined, such instruments still account for most of the support provided in recent years. Support to farmers (PSE) accounts for 59% of gross farm receipts, which is more than three times higher than the OECD average.

The Total Support Estimate to agriculture (TSE) was slightly less than 1% of GDP in recent years. Expenditures on general services for the sector as a whole (General Service Support Estimate – GSSE) are relatively small – around 4.7% of TSE – and have significantly declined relative to the size of the sector. Support to general services mostly finances the agricultural knowledge and innovation system.

Main policy changes

The political platform released by the coalition government, which was formed in January 2019, broadly follows the strategic orientations of the White Paper, released in December 2016. The government, *inter alia*, aims to enhance the efficiency and competitiveness of the sector, while maintaining the overall system of market regulation. An agreement was reached between the government and the two farmers' organisations involved in the agricultural negotiations concerning setting target prices and the budgetary framework for payments to farmers.

An Action Plan was developed for the implementation of the national bio-economy strategy and work on developing a strategy on circular economy is in progress. The government reported to the parliament according to provisions of the Climate Change Act and a climate agreement for agriculture with farmers' organisations was negotiated. All export subsidies are to be phased out by the end of 2020, at the latest. Negotiations between EFTA and MERCOSUR were concluded in 2019.

As a result of the abolition of export subsidies on cheese, milk production must be reduced by up to 100 million litres. The government and the Norwegian Farmers Union agreed on a scheme where quotas for up to 40 million litres of milk are removed from the market. The remaining overproduction is to be reduced by lower milk quotas on each farm. For 2020, the basic quotas were initially reduced by 4% in order to balance the market, but this might be revised during the year, depending on market conditions.

Assessment and recommendations

- Agricultural support remains concentrated on maintaining the *status quo* in terms of farming structures and has seen little reform compared with policies in other OECD countries. Moreover,

changes to the policy support system have often been through external pressure, rather than domestically driven.

- There is considerable scope for accelerating the pace of reforms in order to achieve stated goals at lower cost to taxpayers and consumers. Specifically, further policy actions should, *inter alia*, reduce the potentially most distorting support in order to increase exposure to market signals and eliminate output-related measures impeding structural shifts towards a more productive and environmentally-sustainable agricultural sector.
- Although climate change and agriculture rank high in the national agricultural policy debate, commodities that generate the highest greenhouse gas (GHG) emissions are those that are currently the most heavily supported. Current high levels of support are likely to become increasingly untenable over time. Norway's international commitments to decrease its import tariffs on agricultural imports are unlikely to attenuate, while domestically, the increasing policy orientation towards a more low-carbon sustainable economy, including its ambitions climate policy targets will put the agricultural support system under increasing scrutiny.
- The planned phasing out of export subsidies by the end of 2020 is a positive step and it should reduce market distortions.
- Although agri-environmental measures have become more targeted over time, payments based on non-commodity criteria account for only account for meagre 0.3% of producer support. Norway should advocate the implementation of performance-based policies that reflect the diversity of its agri-environment. Performance-based evaluation of policies and implementation of measurable indicators of performance should be encouraged. The new political platform for the government postulates limited reforms — such as increasing emphasis on R&D development and on measures for environmentally sustainable food production — that are steps towards enhancing the efficiency and reducing policy-related transaction costs and should be accelerated and deepened.
- Raising productivity growth while maintaining environmental protection and sustainable natural resource management could be pursued by re-orienting support towards general services, especially for the agricultural knowledge and innovation system.

Policy responses in relation to the COVID-19 outbreak

Agricultural Policies

Workers from the European Economic Area (EEA) in "critical sectors", which includes agricultural workers, are allowed to enter Norway subject to a 14-day quarantine period. Borders remain closed for seasonal workers from third countries. Foreign workers already in Norway can get their residency permits extended beyond 6 months.

A temporary scheme provides incentives for laid off Norwegians to take up jobs in agriculture. The scheme allows workers to report only half the hours worked to the employment authorities, despite being paid by the farmer for all hours. This responds to the disincentive arising from the fact that unemployment benefits per hour are often higher than hourly wages in agriculture.

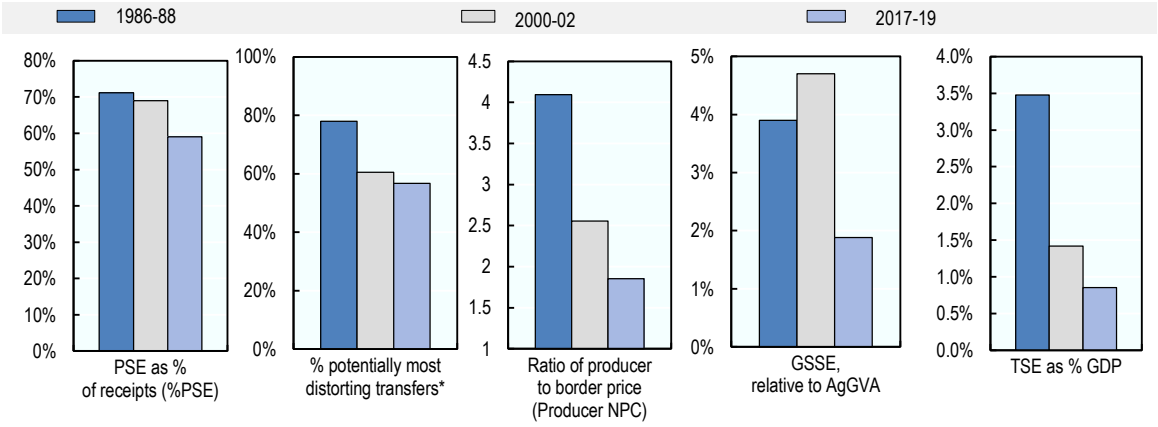
Farmers who are unable to harvest in 2020 due to lack of seasonal workers will be eligible for payment under the crop insurance compensation scheme.

Innovation Norway offers the opportunity to delay payment of loan instalments for one year, subject to application. As a result of the COVID-19 pandemic and falling NOK exchange rates, Innovation Norway was given legal basis to exceed existing ceilings for support for investment and business development in agriculture. Innovation Norway was also given increased flexibility in using the Development Programme for agricultural and reindeer husbandry-based growth and value creation, to meet the industry's short-term

challenges notably for local food, tourism and green care businesses, where sales have dropped significantly.

The state and the farmers unions are in an informal dialogue about how the agricultural negotiations can be handled as they cannot be conducted in the traditional way due to the extraordinary situation in 2020. This process is underway. But the ratio of available quota for cow's milk has already been raised from 0.96 to 1.01 for the quota year 2020. This will increase the production of milk.

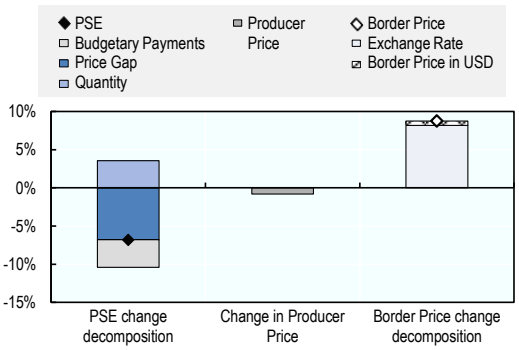
Figure 21.1. Norway: Development of support to agriculture



Note: * Share of potentially most distorting transfers in cumulated gross producer transfers.
Source: OECD (2020), "Producer and Consumer Support Estimates", OECD Agriculture statistics (database), http://dx.doi.org/10.1787/agr-pcse-data-en.
StatLink https://doi.org/10.1787/888934144648

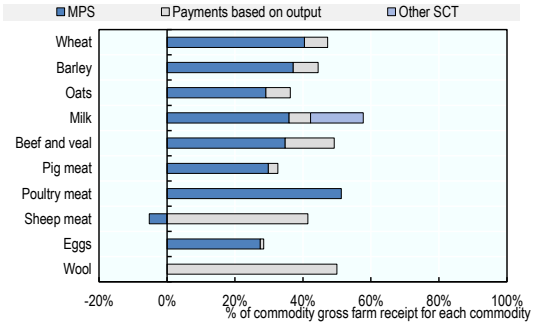
Support to producers (%PSE) has declined gradually since mid-1980s. In 2017-19, support has been around 59% of gross farm receipts, which is more than three times higher than the OECD average. The share of the potentially **most distorting support** has decreased, but it is still more than half of farmers support (Figure 21.1). Market price support is the main component of the most distorting support. The level of support in 2019 has declined mainly due to the decrease in budgetary payments from high levels due to significant drought relief measures provided in 2018 (Figure 21.2). The price gap also narrowed as average border prices increased. Effective prices received by farmers, on average, were 1.9 times higher than world prices in 2017-19. Single Commodity Transfers (SCT) accounted for 61% of the total PSE. The share of the SCT in the commodity gross receipts is around or higher than 30% for all commodities (Figure 21.3). The expenditures for **general services** (GSSE) relative to total support to agriculture were almost three times lower than the OECD average. **Total support to agriculture** as a share of GDP has declined significantly over time. About 93% of the total support is provided to individual farmers (PSE).

Figure 21.2. Norway: Drivers of the change in PSE, 2018 to 2019



Source: OECD (2020), "Producer and Consumer Support Estimates", OECD Agriculture statistics (database), http://dx.doi.org/10.1787/agr-pcse-data-en.
StatLink https://doi.org/10.1787/888934144667

Figure 21.3. Norway: Transfer to specific commodities (SCT), 2017-19



Source: OECD (2020), "Producer and Consumer Support Estimates", OECD Agriculture statistics (database), http://dx.doi.org/10.1787/agr-pcse-data-en.
StatLink https://doi.org/10.1787/888934144686

Table 21.1. Norway: Estimates of support to agriculture

Million USD

	1986-88	2000-02	2017-19	2017	2018	2019p
Total value of production (at farm gate)	**2 533**	**2 052**	**3 680**	**3 759**	**3 789**	**3 491**
***of which:** share of MPS commodities (%)*	73.3	80.8	74.1	75.2	71.6	75.6
Total value of consumption (at farm gate)	**2 667**	**2 084**	**3 924**	**3 812**	**4 591**	**3 371**
Producer Support Estimate (PSE)	**2 833**	**2 337**	**3 258**	**3 236**	**3 512**	**3 026**
Support based on commodity output	2 059	1 346	1 744	1 837	1 819	1 576
Market Price Support[1]	1 386	1 009	1 421	1 511	1 483	1 267
Positive Market Price Support	1 386	1 009	1 432	1 519	1 495	1 282
Negative Market Price Support	0	0	-12	-8	-12	-15
Payments based on output	673	337	324	326	336	309
Payments based on input use	250	117	179	176	181	180
Based on variable input use	149	71	95	97	97	90
with input constraints	0	0	0	0	0	0
Based on fixed capital formation	91	38	74	69	74	79
with input constraints	0	0	0	0	0	0
Based on on-farm services	11	8	10	10	10	10
with input constraints	0	0	0	0	0	0
Payments based on current A/An/R/I, production required	524	871	978	872	1 144	920
Based on Receipts / Income	0	49	81	88	80	74
Based on Area planted / Animal numbers	524	822	898	784	1 063	846
with input constraints	371	644	673	626	704	690
Payments based on non-current A/An/R/I, production required	0	0	348	342	358	342
Payments based on non-current A/An/R/I, production not required	0	0	0	0	0	0
With variable payment rates	0	0	0	0	0	0
with commodity exceptions	0	0	0	0	0	0
With fixed payment rates	0	0	0	0	0	0
with commodity exceptions	0	0	0	0	0	0
Payments based on non-commodity criteria	0	3	8	8	10	8
Based on long-term resource retirement	0	0	0	0	0	0
Based on a specific non-commodity output	0	3	8	8	10	8
Based on other non-commodity criteria	0	0	0	0	0	0
Miscellaneous payments	0	0	0	0	0	0
Percentage PSE (%)	**71.2**	**69.0**	**59.0**	**59.0**	**60.4**	**57.6**
Producer NPC (coeff.)	**4.09**	**2.56**	**1.85**	**1.92**	**1.88**	**1.77**
Producer NAC (coeff.)	**3.47**	**3.22**	**2.44**	**2.44**	**2.52**	**2.36**
General Services Support Estimate (GSSE)	**129**	**158**	**165**	**166**	**171**	**159**
Agricultural knowledge and innovation system	74	62	106	106	110	101
Inspection and control	5	25	36	37	38	34
Development and maintenance of infrastructure	29	54	14	14	14	14
Marketing and promotion	21	15	9	9	9	9
Cost of public stockholding	0	2	0	0	0	0
Miscellaneous	0	0	0	0	0	0
Percentage GSSE (% of TSE)	**4.1**	**6.2**	**4.7**	**4.7**	**4.6**	**4.8**
Consumer Support Estimate (CSE)	**-1 374**	**-1 034**	**-1 531**	**-1 510**	**-1 883**	**-1 200**
Transfers to producers from consumers	-1 671	-1 100	-1 476	-1 597	-1 545	-1 286
Other transfers from consumers	-167	-75	-194	-89	-457	-36
Transfers to consumers from taxpayers	220	71	94	103	77	103
Excess feed cost	244	70	45	73	42	19
Percentage CSE (%)	**-56.2**	**-51.1**	**-39.9**	**-40.7**	**-41.7**	**-36.7**
Consumer NPC (coeff.)	**3.22**	**2.28**	**1.74**	**1.79**	**1.77**	**1.64**
Consumer NAC (coeff.)	**2.28**	**2.04**	**1.66**	**1.69**	**1.72**	**1.58**
Total Support Estimate (TSE)	**3 182**	**2 566**	**3 517**	**3 505**	**3 760**	**3 287**
Transfers from consumers	1 838	1 175	1 670	1 686	2 002	1 321
Transfers from taxpayers	1 511	1 466	2 042	1 908	2 215	2 001
Budget revenues	-167	-75	-194	-89	-457	-36
Percentage TSE (% of GDP)	**3.5**	**1.4**	**0.9**	**0.9**	**0.9**	**0.8**
Total Budgetary Support Estimate (TBSE)	**1 796**	**1 557**	**2 097**	**1 994**	**2 277**	**2 020**
Percentage TBSE (% of GDP)	**2.0**	**0.9**	**0.5**	**0.5**	**0.5**	**0.5**
GDP deflator (1986-88=100)	**100**	**163**	**279**	**269**	**284**	**283**
Exchange rate (national currency per USD)	**6.88**	**8.59**	**8.40**	**8.27**	**8.13**	**8.80**

Note: p: provisional. NPC: Nominal Protection Coefficient. NAC: Nominal Assistance Coefficient.
A/An/R/I: Area planted/Animal numbers/Receipts/Income.
1. Market Price Support (MPS) is net of producer levies and excess feed cost. MPS commodities for Norway are: wheat, barley, oats, milk, beef and veal, sheep meat, wool, pig meat, poultry and eggs.

Source: OECD (2020), "Producer and Consumer Support Estimates", *OECD Agriculture statistics* (database), http://dx.doi.org/10.1787/agr-pcse-data-en.

Contextual information

Agriculture constitutes a relatively small share of the economy. Land most suitable for farming, around 3% of the territory, tends to be located in the most populous and rapidly growing regions. While the contribution of agriculture to GDP and employment is small, Norway has consistently stressed the importance of the sector for policy priorities such as achieving food security and maintaining population in rural areas.

Due to unfavourable climatic conditions, the agricultural sector produces a rather narrow range of commodities. In addition to sheep farming, the primary activity has traditionally been cattle (for milk and meat) and cereals (mainly used as animal feed). The farm structure is dominated by relatively small family farms, many of which are in remote locations.

Table 21.2. Norway: Contextual indicators

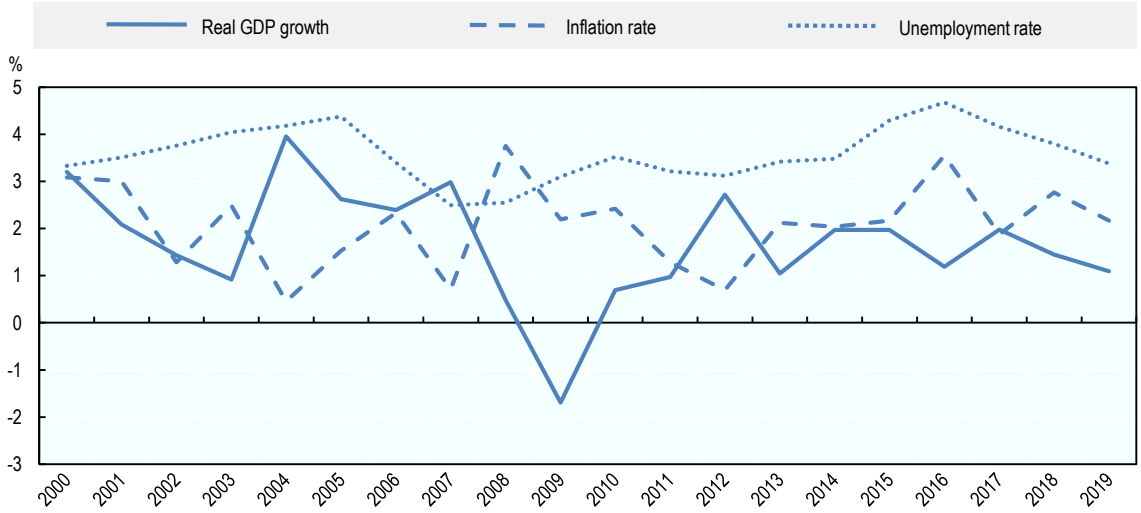
	Norway		International comparison	
	2000*	2018*	2000*	2018*
Economic context			**Share in total of all countries**	
GDP (billion USD in PPPs)	166	359	0.4%	0.3%
Population (million)	4	5	0.1%	0.1%
Land area (thousand km²)	365	365	0.4%	0.4%
Agricultural area (AA) (thousand ha)	1 042	985	0.03%	0.03%
			All countries[1]	
Population density (inhabitants/km²)	14	17	53	62
GDP per capita (USD in PPPs)	36 950	67 614	9 275	21 924
Trade as % of GDP	28	24	12.4	15.3
Agriculture in the economy			**All countries[1]**	
Agriculture in GDP (%)	2.1	2.1	3.1	3.6
Agriculture share in employment (%)	4.1	2.1	-	-
Agro-food exports (% of total exports)	0.8	1.0	6.2	7.3
Agro-food imports (% of total imports)	5.6	9.0	5.5	6.3
Characteristics of the agricultural sector			**All countries[1]**	
Crop in total agricultural production (%)	28.4	25.3	-	-
Livestock in total agricultural production (%)	71.6	74.7	-	-
Share of arable land in AA (%)	84	81	32	33

Notes: *or closest available year. 1. Average of all countries covered in this report. EU treated as one.
Sources: OECD statistical databases; UN Comtrade; World Bank, WDI and national data.

Sound management of natural resources and business dynamism has helped to boost Norway's per capita GDP, which is now one of the highest in the world. Combined with its "Nordic model" ensuring inclusiveness and low inequality, Norway exhibits impressive levels of well-being in many dimensions. Sustaining Norway's inclusive society will require successful economic diversification away from oil-related activities and continue seizing of opportunities from globalisation and digitalisation. Employment growth remains strong and the unemployment rate declined, and inflation remains low.

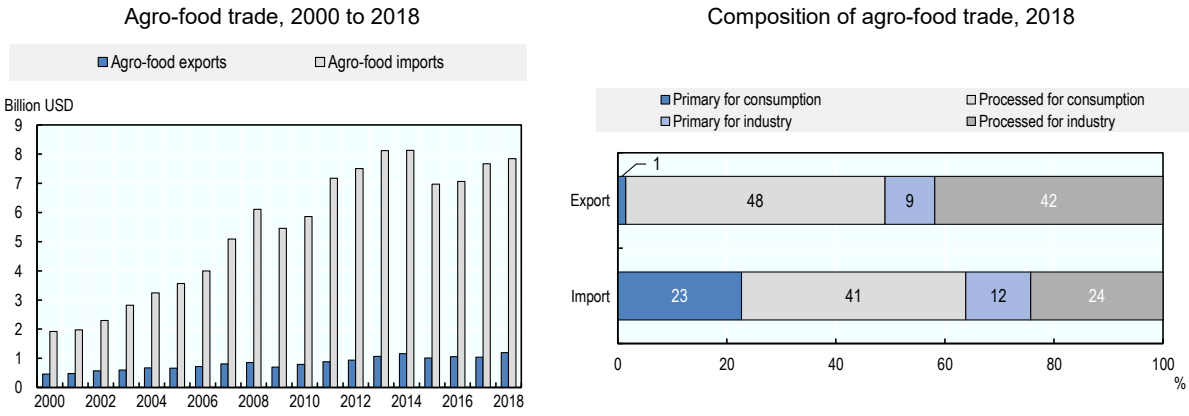
Norway is a net importer of agricultural products: agro-food imports represent around 9% of total imports, while agro-food exports represent 1% of total exports. The vast majority of Norway's agricultural production is consumed domestically. Imports of products mostly take place where domestic production does not meet demand. Most of the agro-food trade is for final consumption.

Figure 21.4. Norway: Main economic indicators, 2000 to 2019



Sources: OECD statistical databases; World Bank, WDI and ILO estimates and projections.

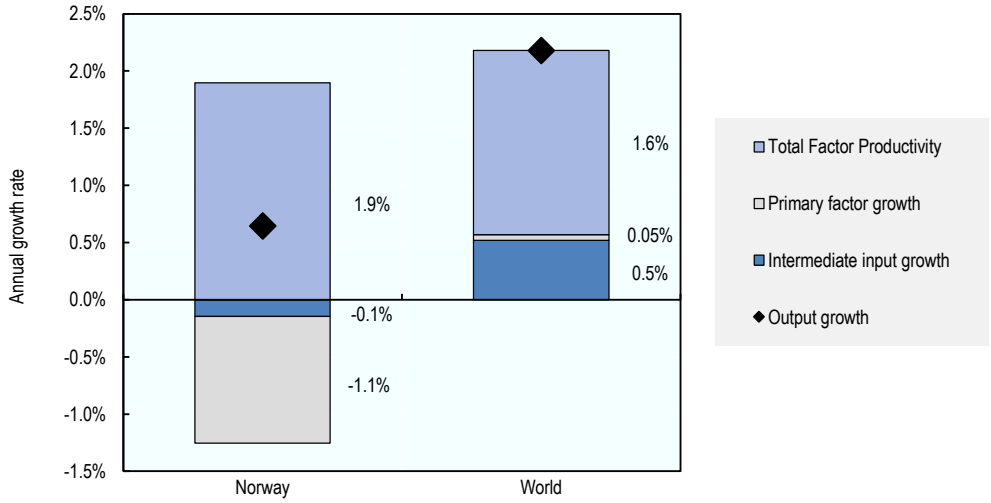
Figure 21.5. Norway: Agro-food trade



Note: Numbers may not add up to 100 due to rounding.
Source: UN Comtrade Database.

Over the 2007-16 period, agricultural output is estimated to have increased at a slow annual pace. Variable inputs and fixed factors of production have declined, while total factor productivity is estimated to have increased – at a rate that is slightly higher than the world average. Overall, pressures from agriculture on the environment have decreased, as shown by the decrease in nutrient surpluses per hectare, in air emissions and energy use from agriculture. The lowering of nutrient surpluses, though still high, has reduced environmental pressures on soil, water and air. This reflects both improvements in nutrient use efficiency by farmers and slow growth of agricultural production.

Figure 21.6. Norway: Composition of agricultural output growth, 2007-16



Note: Primary factors comprise labour, land, livestock and machinery.
Source: USDA Economic Research Service Agricultural Productivity database.

Table 21.3. Norway: Productivity and environmental indicators

	Norway		International comparison	
	1991-2000	2007-2016	1991-2000	2007-2016
			World	
TFP annual growth rate (%)	0.2%	1.9%	1.6%	1.6%
			OECD average	
Environmental indicators	2000*	2018*	2000*	2018*
Nitrogen balance, kg/ha	98.0	95.0	33.3	29.1
Phosphorus balance, kg/ha	12.0	11.0	3.3	2.3
Agriculture share of total energy use (%)	1.6	1.5	1.7	2.0
Agriculture share of GHG emissions (%)	8.2	8.5	8.1	8.9
Share of irrigated land in AA (%)	4.2	3.3	-	-
Share of agriculture in water abstractions (%)	32.8	..	46.0	49.0
Water stress indicator	0.6	..	9.9	8.9

Note: * or closest available year.
Sources: USDA Economic Research Service, Agricultural Productivity database; OECD statistical databases; FAO database and national data.

Description of policy developments

Main policy instruments

The strategic objectives of agricultural and food policies, as set out in the White Paper No. 11 (2016–17) "Change and development - A future-oriented agricultural production" are: food security; agriculture throughout the country; creating more added-value; and sustainable agriculture. The agricultural policy aims at the sustainable use of natural resources, developing know-how and contributing to the creation of employment and value added in farming and farm-based products throughout the country. Agricultural support policy is a component of Norway's regional and rural policies.

The principal policy instruments supporting agriculture include border measures, domestic market regulation, based on the Marketing Act, and budgetary payments. The Marketing Act covers certain types of meat (beef, mutton, pork and poultry); milk, butter and cheese; eggs; cereals and oilseeds; potatoes, vegetables, fruit and berries; and fur skins.

Target prices are provided for milk, pork, grains and some fruits and vegetables. Target prices and the budgetary framework for payments to farmers are negotiated annually between the government and farmers' organisations. Marketing fees are collected from producers to finance marketing activities dealing with surpluses (until 2020 also including export subsidies for livestock products). Milk production quotas were introduced in 1983 and a system of buying and selling quotas was introduced in 1997.

Various direct payments to farmers are provided, including area and headage payments as well as payments based on product quantities (meat). Many of these payments are differentiated by region and farm size in order to provide adequate income support across all type of farms and regions. Environmental levies on agricultural pesticides are applied.

The National Environmental Programme contains the main **agri-environmental measures.** The Acreage Cultural Landscape Support, payments to extensive grazing, payments for grazing animals, payments for organic agriculture, are country-wide schemes with wide objectives, contributing to an overall good environmental condition. Such schemes, *inter alia*, support continued use of resources that could otherwise be abandoned. Such support maintains the cultural landscape and disperses its benefits throughout the country. Regional Environmental Programmes (REP) and special environmental measures in agriculture are more targeted support schemes, organised on the regional and local level, and targeted at issues that cannot be adequately addressed in country-wide schemes. The programmes include, for example, payments to reduce water pollution from agricultural fields, environmentally-friendly spreading of manure, mowing small (abandoned) fields with high or special biodiversity in forest and mountain areas, grazing on islands, maintenance around heritage sites in the agricultural landscape, etc.

Norway has signed and ratified the Paris Agreement and a bilateral agreement with the European Union, under which it commits to reducing greenhouse gas (GHG) **emissions** by at least 40% by 2030 compared with the 1990 level. CO_2-emissions from fossil fuel in agriculture are subject to a carbon-dioxide tax similar to other sectors. Other GHG emissions from agriculture are neither subject to such taxation nor included in the European Trading System (ETS). Instead, a combination of regulatory, financial and advisory measures are used to reduce GHG emissions from agriculture.

In 2016, the government published the national strategy on **bio-economy**. This was a broad cross-sectoral strategy, developed by eight ministries, including the Norwegian Ministry of Agriculture and Food. The strategy points out three overarching objectives – increased value creation, reduction in GHG emissions, increased resource use efficiency and sustainability – and four focus areas: co-operation across sectors, industries and thematic areas; markets for renewable bio-based products; efficient use and profitable processing of renewable biological resources; and sustainable production and extraction of renewable biological resources.

Most of Norway's tariff-rate-quotas were eliminated in 2000 when the WTO-bound tariff rates became equal to the in-tariff quota rates. Tariffs for some products, particularly livestock products are set between 100-400% although there is a system of "open periods" for imports at reduced tariff rates when domestic prices rise above threshold levels.

As from 1 January 2015, Norway unilaterally eliminated import duties on 114 agricultural tariff lines. While these duties had been low (and not of significant importance for the protection of Norwegian agricultural production), their elimination resulted in reduction of customs procedures and administrative costs.

Article 19 of the European Economic Area (EEA) agreement concerning trade in basic agricultural products is reviewed periodically. The last round of these reviews was finalised in April 2017 and changes agreed entered into force in October 2018. Under the EEA, tariff rate quotas (TRQs) expanded on several

products, including meat, cheese, vegetables and certain products used in the food industry for producing processed agricultural products.

Domestic policy developments in 2019-20

The coalition government formed in January 2019 broadly supports the strategic orientations of the White paper No. 11 (2016-17). The government aims to enhance the efficiency and competitiveness of the sector, while maintaining the overall system of market regulation and border protection. Agricultural policy is to continue to build on four pillars: i) the system of annual agricultural negotiations and agreements; ii) a well-functioning border protection; iii) farmers' responsibility for balancing supply and demand on the domestic market through producer co-operatives; and iv) continuation of the property regulations in agriculture to protect the family-based ownership of farms. Other key elements of the political platform include: continuation of the milk quota system; introduction of the Act on Good Business Conduct during 2020; following up the soil protection strategy; stimulating organic farming; reinforcing the focus on animal welfare; strengthen R&D; and continuing the policy for low antibiotic use and low prevalence of antibiotic resistance in animal husbandry.

In May 2019, an agreement was reached between the government and the two farmers' organisations involved in the agricultural negotiations. The main changes in the agreement were: i) an increase in target prices with a total budgetary effect of NOK 249 million (USD 28 million) from 1 July 2019; ii) an increase in budgetary support of NOK 720 million (USD 81 million) from 2019 to 2020; iii) transfer of NOK 49 million (USD 5.6 million) from the 2018 budget and an increase in the tax relief on NOK 122 million (USD 14 million); iv) increased support for investments and development programme; v) increased support for areas with poor conditions for agricultural production; increased focus on R&D in production of fruit, vegetables, berries and flowers and the establishment of an advisory committee to design a long-term plan to strengthen innovation; and stimulate investments in buildings and land in sectors with potential for increased market share of Norwegian production.

Since 2017, farmers selling cow **milk quota** were allowed to sell up to 80% of their quota at a free price directly to other producers within a production region (mainly defined as the county), and a minimum of 20% had to be sold to the government at a fixed price. There are 14 production regions for quota redistribution. Each year the basic quotas are multiplied by a factor to fix the amount of milk each producer can deliver to a dairy (i.e. actual production possibility). Due to a reduction in the consumption of milk, the actual production possibilities in 2019 were set to 98% of the basic quota.

As a result of the abolition of export subsidies on cheese from 1 July 2020, milk production must be reduced by up to 100 million litres. The government and the Norwegian Farmers Union agreed on a scheme where up to 40 million litres of milk are purchased from the market. The government contributes NOK 200 million (USD 22.7 million), and the sales tax for milk covers the remaining expenditure for that purchase. The scheme was implemented on 1 January 2020. The remaining overproduction will be reduced by lower milk quotas on each farm.

For 2020, the basic quotas were initially reduced by 4% in order to balance the market, but this might be revised during the year, depending on market conditions. The reduced factor is a direct consequence of the elimination of export subsidies. The milk production prognosis is said to be just above 1 450 million litres (i.e. almost equal to domestic use).

Following the 2018 strategy on **organic** production, a programme was prepared to help prioritisation of the measures for organic production over the long-term, while the preparation of a programme on soil health and soil quality is in progress. Support to organic production was NOK 139.8 million (USD 16 million) in 2019. Support was also given to different projects on organic production and information on organic production and consumption, totalling NOK 33 million (USD 3.8 million) in 2019.

The budget for the **Regional Environmental Programmes** (REP) was increased by 7% to NOK 528.1 million (USD 60 million) for 2020. Payments under these programmes finance measures such as the reduction of run-off from agricultural fields, environmentally friendly spreading of manure, maintenance of fields with high or special biodiversity in the forest and mountains areas, grazing on islands, and maintenance around heritage sites in the agricultural landscape.

On **bio-economy**, the Research Council of Norway, Innovation Norway and Industrial Development Corporation of Norway (Siva) have developed a common Action Plan for the implementation of the recommendations of the strategy, which was published in February 2020. Work on developing a strategy on **circular economy** is in progress, with nine ministries involved in the process, including the Ministry of Agriculture and Food.

In 2019, the government reported to the parliament according to provisions in the recent **Climate Change Act**. The Climate Change Act establishes by law Norway's target of becoming a low-emission society by 2050. In October 2019, the European Union, Iceland and Norway formally agreed to extend, for the period 2021-30, the climate co-operation by including the Effort Sharing Regulation and the Regulation on greenhouse gas emissions and removals from land use, land use change and forestry (the LULUCF-regulation), into the EEA Agreement. According to the agreement, Norway is to fulfil its respective greenhouse gas emission reduction target for the period 1 January 2021 to 31 December 2030 in accordance with the ETS-Directive, LULUCF-Regulation and the Effort Sharing Regulation. In 2020, the government plans to present a White Paper on how to fulfil Norway's commitments. As part of this work, a group of agencies and institutions delivered an assessment in February 2020 that explored possible policies and measures for further emission cuts and increased uptake in the Effort Sharing sector and LULUCF sector in Norway until 2030. The study assessed possible measures to reduce the climate emissions, by at least 50% in the Effort Sharing-sectors, in 2030.

In June 2019, the government and farmers' organisations negotiated a climate agreement for agriculture. The agreement sets targets for the abatement of GHG emissions and uptake from agriculture over 2021-30. Improvement in on-farm livestock, manure and soil management will be key to reach these targets, alongside improvements in consumption and reduction in food losses and waste which will have an indirect effect on greenhouse gas emissions.

The **rural development** aspects of Norwegian agricultural policy include several programmes designed to stimulate innovation and the establishment of alternative businesses on farms and alternative employment in rural areas. Most of the funding is financed through the Agricultural Development Fund. For 2019, the total allocation of funds for rural development (within the Agricultural Agreement) was NOK 1 134 million (USD 129 million).

Trade policy developments in 2019-20

At the WTO Ministerial Meeting in Nairobi on 19 December 2015, the member states decided that if the developed countries (Norway, Canada and Switzerland) abolish export subsidies on products destined for the least developed countries, they would be permitted to provide export subsidies for processed products, dairy products and pig meat until the end of 2020. In 2018, Norway notified the WTO that all export subsidies for agricultural products would be phased out by the end of 2020.

As part of the European Free Trade Association (EFTA), Norway has negotiated 29 Free Trade Agreements (FTAs) with 40 partner countries. There are ongoing free trade negotiations between EFTA and India, Viet Nam and Malaysia. Negotiations with MERCOSUR were finalised in August 2019. The Agreement provides for tariff concessions on both basic and processed agricultural products. Among the EFTA states agricultural exports that will benefit from the Agreement, through the gradual elimination of duties, through tariff preferences or through tariff rate quotas (TRQs), are products such as cheese, coffee,

chocolate, lamb meat, spirits, sweets, waters, energy drinks and wines. In return, EFTA states offer concessions for agricultural imports of high importance to Mercosur.

EFTA has also started re-negotiations of free trade agreements with Chile and the Southern African Customs Union (SACU) (Botswana, Lesotho, Namibia, South Africa and Swaziland). These Free Trade Agreements and negotiations include processed agricultural products and a range of primary agricultural products. In 2019, Norway and the People's Republic of China continued bilateral negotiations on a trade agreement.

22 Philippines

Support to agriculture

The level of support to farmers, measured as a share of gross farm receipts (%PSE), averaged 27% in 2017-19. This is higher than the OECD average and one of the highest among all emerging economies covered by this report.

Market price support (MPS), which reflects the existing trade barriers (mainly tariffs and Tariff Rate Quotas – TRQs), is the dominant form of support to Philippine producers. Rice producers are the main beneficiaries of the price support policies. In addition to rice, substantial levels of support are provided to sugarcane, pig meat, and poultry, in particular through high import tariffs. The high level of MPS comes with an implicit taxation of primary consumers including the food processing industry.

Expenditures on general services (GSSE) as a ratio of agricultural value added have increased in recent years. Most of the expenditure on general services finances the development of infrastructure, in particular irrigation systems, and extension programmes. The overall cost of support to the Philippine agricultural sector was at 2.9% of GDP in 2017-19, one of the highest across all countries measured.

Main policy changes

The Philippines replaced quantitative restrictions (QRs) on rice imports with tariffs as of March 2019. There is a tariff rate quota system with applied MFN tariffs within and outside of the quota of 40% and 180%, respectively. For imports from ASEAN countries, a single tariff (35%) is applied. A special rice safeguard duty may be imposed to protect the industry from extreme or sudden price fluctuations.

There were important institutional modifications related to the changes in rice trade and related domestic market regulation: the National Food Authority (NFA) is no longer issuing permits, licenses, or registering trade and importation of rice. NFA's role will concentrate on interventions on domestic market by buying into buffer stocks at administered prices from domestic producers, and also selling from these stocks at subsidised release prices to consumers. The food safety regulatory function of the NFA was transferred to the Bureau of Plant Industry.

In order to offset the effect of the liberalisation of rice imports the government established a Rice Competitiveness Enhancement Fund (RCEF) with an annual PHP 10 billion (USD 192.3 million) appropriation over the next six years. In 2019, the expenditures are planned to be spent as follows: (i) PHP 5 billion (USD 96.5 million) for rice farm machinery and equipment; (ii) PHP 3 billion (USD 57.9 million) for rice seed development, propagation and promotion; (iii) PHP 1 billion (USD 19.3 million) for credit; and (iv) another PHP 1 billion (USD 19.3 million) for extension.

Assessment and recommendations

- The Philippines' key agricultural policy objectives focus on food security and poverty alleviation through guaranteeing a stable supply of staple food (rice) at affordable prices. The goal of self-sufficiency in rice has driven a range of policy measures supporting rice producers – as opposed to the regional trend toward the diversification into higher value commodities – while contributing to the undernourishment of poor households that are heavy rice consumers and effectively taxed by higher prices.
- An important institutional modification took place at the core of NFA, where its new role is to increase the country's emergency buffer stock. However, the implementation of these reserves effectively generates an "intervention stock" rather than an "emergency buffer stock" as it is supporting domestic prices through buying stocks at administered prices; and reducing consumer prices by selling those stocks at subsidised prices.
- In view of the Philippines' high susceptibility to typhoons, tropical storms and flooding, the government should adopt a holistic approach to risk management and mainstream adaptation policy objectives across programmes and institutions. Moreover, the effectiveness of current risk management tools should be assessed – in particular, the extent to which insurance and cash-transfer schemes encourage risk-reducing decision-making on the farm. Lastly, farmers' awareness should be increased by making information more readily available about local conditions, future projections and adaptive solutions.
- The agricultural sector's total factor productivity (TFP) growth is slower than the world average and slower than in most countries in the region. This is likely to be linked to decades of underinvestment, policy distortions, uncertainties linked with the implementation of agrarian reform and periodic extreme weather conditions. In 2017, the Philippines reallocated some funding from variable input subsidies to investment in infrastructure and through the re-orientation of agricultural knowledge systems. Continuing efforts to refocus budgetary support on long-term structural reform is key to promoting productivity growth.
- Agricultural policies in the Philippines are designed and implemented by a complex system of institutions. The government could strengthen institutional co-ordination between the Department of Agriculture and other relevant departments and institutions that develop and implement programmes supporting agriculture; strengthen transparency and accountability of publicly-funded programmes; accelerate efforts to build a solid policy-relevant statistical system; and integrate monitoring and evaluation mechanisms into the policy process.
- The Philippines is one of the countries particularly vulnerable to climate change. To improve the agricultural sector's capacity to adapt to climate change the government should make climate-adaptation policy objectives consistent across programmes and institutions.

Policy responses in relation to the COVID-19 outbreak

Agricultural policies

The government of the Philippines issues the provisions related to continue agriculture production as follows:[1] 1) all farming and fishing activities shall continue; 2) all farmers, farm workers, fisher folk and agribusiness personnel shall be exempted from home quarantine. Provided that they observe safety protocols and number is at a minimum; 3) all agricultural supply stores, outlets nationwide and animal clinics must be allowed to operate under a skeletal force; 4) essential farm personnel (including veterinarians, farm hands, farm and fisher folks) that works at production areas, bearing proper documentation, are also requested passage at quarantine checkpoints.

The Department of Agriculture (DA) is promoting backyard vegetable gardens or “survival gardens” as source of nutritious food during the enhanced quarantine period. Some Local Government Units (LGUs) are distributing vegetable seeds.

The National Food Authority (NFA) has completed the prepositioning of rice stocks in the country amid the enhanced community quarantine imposed in the entire Luzon, Philippine’s most populous island. Some Local Government Units (LGUs) have bought excess produce from the farmers in the local communities to be distributed as part of the relief packs to those in need. Others have already prepositioned food packs for distribution to its constituents. An LGU in Ifugao Province will be targeting indigent constituents for the distribution of family food packs.

Agro-food supply chain policies

The Department of Agriculture has been issuing food lane passes. All vehicles carrying essential food commodities, agro-fishery products and inputs bearing government-issued stickers must be allowed passage at quarantine checkpoints through these food lanes.

The National Police (PNP) designated a “Cargo Lane” for agriculture and fisheries inputs and food products transported through all forms of conveyance (air, water, and land), across all modes of deliveries. Priority for entry to cargo lanes shall be given to truckers/suppliers with Food Pass 2. Food pass accreditation is free of charge 3. DA accredits suppliers and trucks to use the “Food Lane” (Cargo Lane) 4.

The DA identifies a list of food items that must be allowed unhampered and unimpeded in all quarantine checkpoints: a) all vehicles carrying crop commodities, and fishery and other aquatic products with carriers must be allowed passage; b) live poultry and livestock, including meat and meat products, are allowed passage only with proper documentation as in DA MC No. 5 series of 2020; c) movement of products and services related to farm inputs is requested for unhampered passage on quarantine checkpoints.

The Inter-Agency Task Force on Emerging Infectious Diseases (IATF-EID) has approved the food resiliency protocol proposed by the Department of Agriculture (DA) to speed up the transport of major agro-fishery commodities to Metro Manila and other urban areas in Luzon.

The DA is co-ordinating with the LGUs to ensure that households affected by the enhanced community quarantine will have access to the food supply. The DA’s distribution and marketing system identifies drop-points where farmers can directly sell their goods at retail prices, and where people can buy major agricultural goods at reasonably low prices. This marketing strategy directly connects the food producers to consumers, thereby lessening the cost of food products. It links the LGU in urban centres to farmer-producers in the different parts of the country to ease the delivery and distribution of food supply.

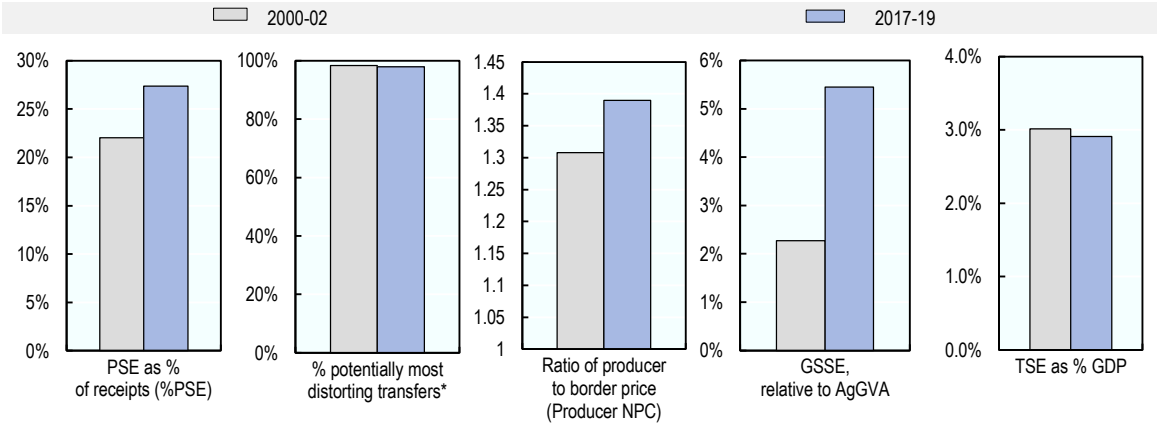
Consumer policies

The National Nutrition Council (NNC) issued their first Nutrition Cluster Advisory to support and remind the Local Government Units (LGUs) of useful guidelines that would prevent deterioration of nutrition. Government agencies continue to provide information and reminders on eating healthy at this time of crisis.

The Department of Social Welfare and Development (DSWD) provided official communication regarding the continuity of its major cash transfers programmes such as the Pantawid Pamilyang Pilipino Program (4Ps) and decided to do payouts earlier than scheduled.

The Department of Agriculture, Department of Trade and Industry (DTI), and the Department of Health (DOH) issued a joint memorandum circular imposing a 60-day price freeze for basic goods and agriculture products nationwide. Pricing is being monitored by DA (some spot-checks are being done jointly by DA and DTI) and information is released every two days.

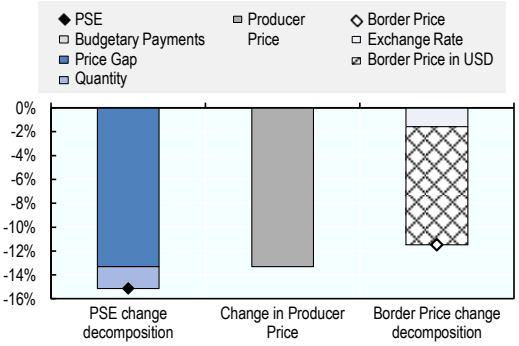
Figure 22.1. Philippines: Development of support to agriculture



Note: * Share of potentially most distorting transfers in cumulated gross producer transfers.
Source: OECD (2020), "Producer and Consumer Support Estimates", OECD Agriculture statistics (database), http://dx.doi.org/10.1787/agr-pcse-data-en.
StatLink https://doi.org/10.1787/888934144705

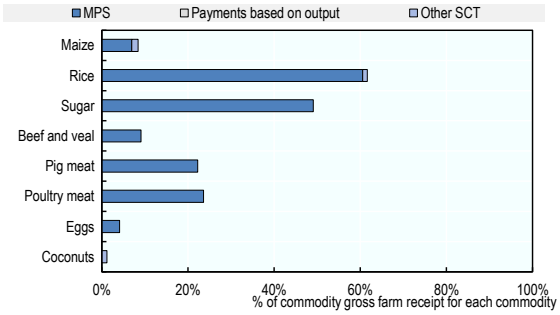
Support to producers (%PSE) was around 27% in 2017-19, a higher number than the levels observed in 2000-02 (Figure 22.1). However, PSE declined from 2018 to 2019 due to a smaller price gap between domestic prices and world prices (Figure 22.2). Almost all producer support is provided through market price support (MPS), with a strong focus on rice. MPS and input subsidies without input constraints, both considered as potentially most distorting forms of support, explain practically the total value of support to producers. On average, prices received by farmers were 39% higher than world prices in 2017-19 (compared to 31% in 2000-02). MPS is also the main component of Single Commodity Transfers (SCT): rice, sugar and poultry and pig meat had the highest share of SCT in commodity gross farm receipts in 2017-19 (Figure 22.3). Expenditures for general services (GSSE) relative to agricultural value added more than doubled from 2000-02 to 2017-19, driven largely by higher investments in irrigation systems (Figure 22.1).

Figure 22.2. Philippines: Drivers of the change in PSE, 2018 to 2019



Source: OECD (2020), "Producer and Consumer Support Estimates", OECD Agriculture statistics (database), http://dx.doi.org/10.1787/agr-pcse-data-en.
StatLink https://doi.org/10.1787/888934144724

Figure 22.3. Philippines: Transfer to specific commodities (SCT), 2017-19



Source: OECD (2020), "Producer and Consumer Support Estimates", OECD Agriculture statistics (database), http://dx.doi.org/10.1787/agr-pcse-data-en.
StatLink https://doi.org/10.1787/888934144743

Table 22.1. Philippines: Estimates of support to agriculture

Million USD

	2000-02	2017-19	2017	2018	2019p
Total value of production (at farm gate)	**9 727**	**27 635**	**27 846**	**28 333**	**26 727**
***of which:** share of MPS commodities (%)*	89.2	93.5	93.3	93.7	93.4
Total value of consumption (at farm gate)	**9 950**	**29 578**	**29 645**	**30 274**	**28 815**
Producer Support Estimate (PSE)	**2 167**	**7 635**	**7 088**	**8 491**	**7 327**
Support based on commodity output	2 094	7 330	6 831	8 165	6 995
Market Price Support[1]	2 094	7 330	6 831	8 165	6 995
Positive Market Price Support	2 134	7 332	6 837	8 165	6 995
Negative Market Price Support	-40	-2	-7	0	0
Payments based on output	0	0	0	0	0
Payments based on input use	69	297	254	316	321
Based on variable input use	36	147	117	161	163
with input constraints	0	0	0	0	0
Based on fixed capital formation	32	150	137	155	158
with input constraints	0	0	0	0	0
Based on on-farm services	0	0	0	0	0
with input constraints	0	0	0	0	0
Payments based on current A/An/R/I, production required	0	0	0	0	0
Based on Receipts / Income	0	0	0	0	0
Based on Area planted / Animal numbers	0	0	0	0	0
with input constraints	0	0	0	0	0
Payments based on non-current A/An/R/I, production required	0	0	0	0	0
Payments based on non-current A/An/R/I, production not required	0	0	0	0	0
With variable payment rates	0	0	0	0	0
with commodity exceptions	0	0	0	0	0
With fixed payment rates	0	0	0	0	0
with commodity exceptions	0	0	0	0	0
Payments based on non-commodity criteria	0	0	0	0	0
Based on long-term resource retirement	0	0	0	0	0
Based on a specific non-commodity output	0	0	0	0	0
Based on other non-commodity criteria	0	0	0	0	0
Miscellaneous payments	5	8	4	10	10
Percentage PSE (%)	**22.0**	**27.4**	**25.2**	**29.6**	**27.1**
Producer NPC (coeff.)	**1.31**	**1.39**	**1.34**	**1.45**	**1.38**
Producer NAC (coeff.)	**1.28**	**1.38**	**1.34**	**1.42**	**1.37**
General Services Support Estimate (GSSE)	**244**	**1 598**	**1 536**	**1 615**	**1 642**
Agricultural knowledge and innovation system	56	326	341	316	321
Inspection and control	14	60	55	62	63
Development and maintenance of infrastructure	155	1 013	951	1 036	1 053
Marketing and promotion	6	53	65	47	48
Cost of public stockholding	12	123	101	133	135
Miscellaneous	1	22	23	21	22
Percentage GSSE (% of TSE)	**10.1**	**17.3**	**17.8**	**16.0**	**18.3**
Consumer Support Estimate (CSE)	**-2 250**	**-7 831**	**-7 289**	**-8 633**	**-7 569**
Transfers to producers from consumers	-2 299	-7 553	-6 922	-8 473	-7 265
Other transfers from consumers	-152	-636	-614	-661	-634
Transfers to consumers from taxpayers	0	0	0	0	0
Excess feed cost	201	359	246	501	330
Percentage CSE (%)	**-22.5**	**-26.5**	**-24.6**	**-28.5**	**-26.3**
Consumer NPC (coeff.)	**1.32**	**1.38**	**1.34**	**1.43**	**1.38**
Consumer NAC (coeff.)	**1.29**	**1.36**	**1.33**	**1.40**	**1.36**
Total Support Estimate (TSE)	**2 411**	**9 233**	**8 625**	**10 105**	**8 969**
Transfers from consumers	2 451	8 189	7 535	9 134	7 899
Transfers from taxpayers	112	1 680	1 703	1 632	1 703
Budget revenues	-152	-636	-614	-661	-634
Percentage TSE (% of GDP)	**3.0**	**2.9**	**2.8**	**3.1**	**..**
Total Budgetary Support Estimate (TBSE)	**318**	**1 903**	**1 794**	**1 941**	**1 973**
Percentage TBSE (% of GDP)	**0.4**	**0.6**	**0.6**	**0.6**	**..**
GDP deflator (2000-02=100)	**100**	**177**	**173**	**180**	**..**
Exchange rate (national currency per USD)	**48.96**	**51.62**	**50.40**	**52.67**	**51.80**

.. Not available

Note: p: provisional. NPC: Nominal Protection Coefficient. NAC: Nominal Assistance Coefficient. A/An/R/I: Area planted/Animal numbers/Receipts/Income.

1. Market Price Support (MPS) is net of producer levies and excess feed cost. MPS commodities for Philippines are: maize, rice, sugar, beef and veal, pig meat, poultry, eggs, bananas, coconut, mango and pineapple.

Source: OECD (2020), "Producer and Consumer Support Estimates", *OECD Agriculture statistics* (database), http://dx.doi.org/10.1787/agr-pcse-data-en.

Contextual information

The Philippines is a mid-size country in terms of land area, but its population of 107 million makes it the world's 13th most populous country. At USD 8 951 in purchasing power parity (PPP), GDP per capita in the Philippines is less than half the average GDP per capita of all countries analysed in this report (Table 22.2). Agriculture is an important sector for the Philippines, accounting for a quarter of total employment and 9% of GDP (Table 22.2). Farms tend to be small-sized with the average landholding at just 1.3 hectare.

Since 2012, the Philippines has achieved relatively stable growth of around 6% annually, and reduced its rate of unemployment (Figure 22.4). Inflation has fallen to a low of less than 1% in 2015 before rising again. Overall, the Philippine economy, including its agro-food sector, integrates well in international markets – as measured by the ratio of trade to GDP at 28% in 2018.

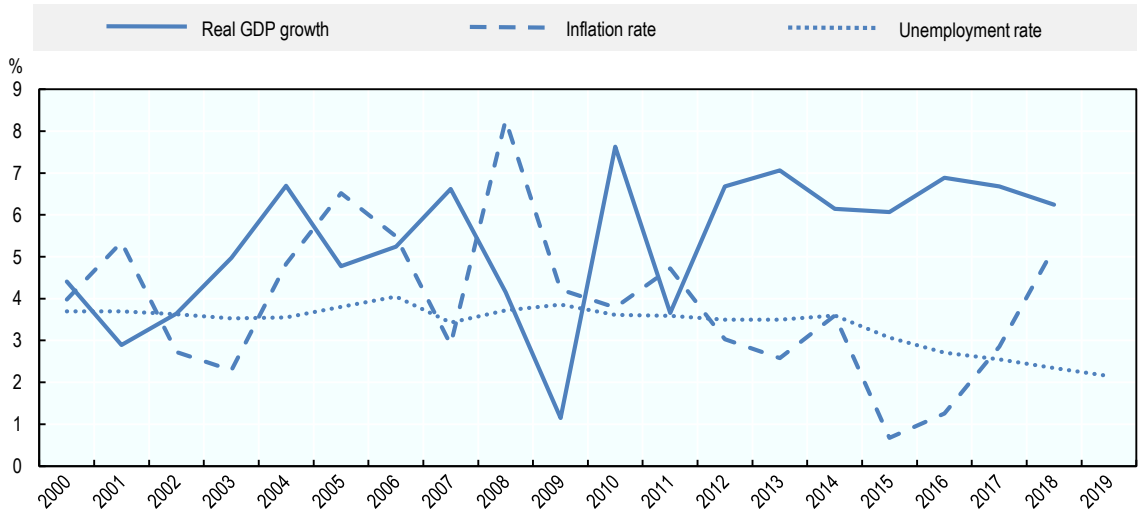
Table 22.2. Philippines: Contextual indicators

	Philippines		International comparison	
	2000*	2018*	2000*	2018*
Economic context			**Share in total of all countries**	
GDP (billion USD in PPPs)	262	955	0.7%	0.8%
Population (million)	78	107	1.8%	2.1%
Land area (thousand km²)	298	298	0.4%	0.4%
Agricultural area (AA) (thousand ha)	11 234	12 440	0.4%	0.4%
			All countries[1]	
Population density (inhabitants/km²)	262	358	53	62
GDP per capita (USD in PPPs)	3 361	8 951	9 275	21 924
Trade as % of GDP	46	28	12.4	15.3
Agriculture in the economy			**All countries[1]**	
Agriculture in GDP (%)	14.0	9.3	3.1	3.6
Agriculture share in employment (%)	37.1	25.2	-	-
Agro-food exports (% of total exports)	4.0	7.7	6.2	7.3
Agro-food imports (% of total imports)	7.3	11.3	5.5	6.3
Characteristics of the agricultural sector			**All countries[1]**	
Crop in total agricultural production (%)	63	59	-	-
Livestock in total agricultural production (%)	37	41	-	-
Share of arable land in AA (%)	45	45	32	33

Notes: *or closest available year. 1. Average of all countries covered in this report. EU treated as one.
Sources: OECD statistical databases; UN Comtrade; World Bank, WDI and national data.

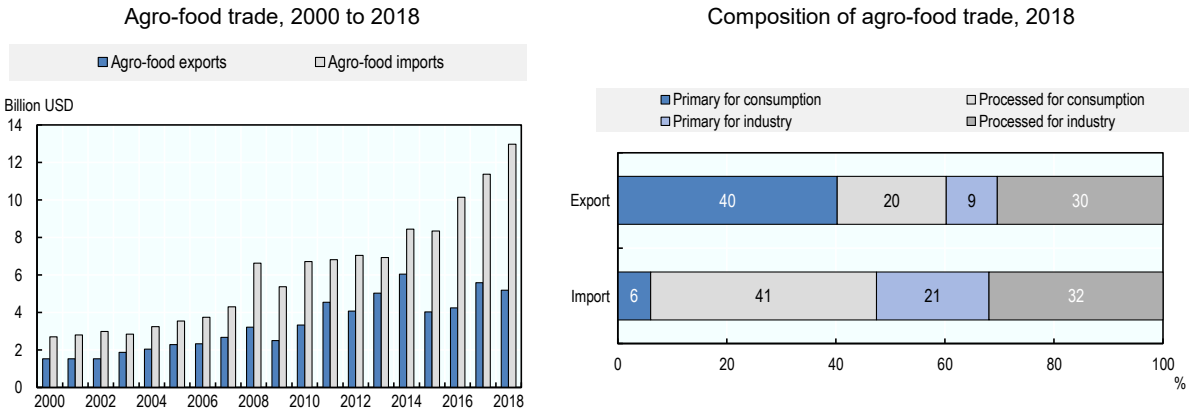
With limited land and a large population, the Philippines is a growing net importer of agro-food products. Of these imports, three-quarters are processed goods that are used directly for (final) consumption or as intermediate inputs by the processing industry. On the export side, 40% are exports of primary goods for consumption. Overall, half of all agro-food exports are going to final consumers (both primary and processed products), while the other half is further processed (Figure 22.5).

Figure 22.4. Philippines: Main economic indicators, 2000 to 2019



Sources: OECD statistical databases; World Bank, WDI and ILO estimates and projections.

Figure 22.5. Philippines: Agro-food trade

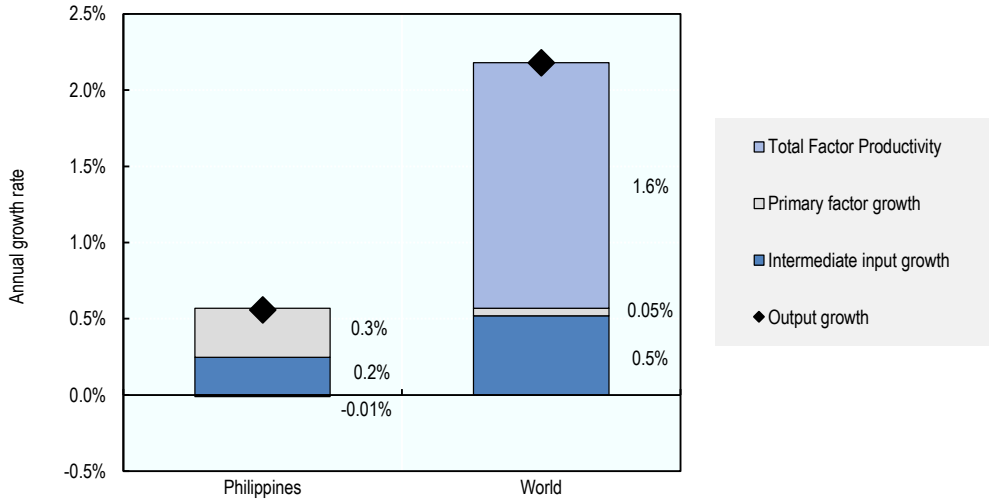


Note: Numbers may not add up to 100 due to rounding.
Source: UN Comtrade Database.

Total Factor Productivity (TFP) in agriculture is estimated to have stalled over the past ten years, down from already low TFP growth during the 1990s. Agricultural output growth has remained relatively weak and has averaged 0.5% per year, well below the world average (Figure 22.6). It has been driven entirely by increased use of both primary factors and intermediary inputs.

Agricultural land resources are under strain from frequent natural disasters, population growth and urbanisation. The Philippines has abundant water resources, of which the agricultural sector is the main user – accounting for almost 80% of total freshwater withdrawals (Table 22.3). Nonetheless, shortages can occur during the dry season in some regions. Agriculture share in total energy use has increased, but remains well below the OECD average. The Nitrogen balance has slightly increased, while that of Phosphorus has declined, but both remain well above the OECD average.

Figure 22.6. Philippines: Composition of agricultural output growth, 2007-16



Note: Primary factors comprise labour, land, livestock and machinery.
Source: USDA Economic Research Service Agricultural Productivity database.

Table 22.3. Philippines: Productivity and environmental indicators

	Philippines		International comparison	
	1991-2000	2007-2016	1991-2000	2007-2016
			World	
TFP annual growth rate (%)	0.80%	-0.01%	1.6%	1.6%
			OECD average	
Environmental indicators	**2000***	**2018***	**2000***	**2018***
Nitrogen balance, kg/ha	57.9	60.3	33.3	29.1
Phosphorus balance, kg/ha	7.4	5.2	3.3	2.3
Agriculture share of total energy use (%)	0.2	0.8	1.7	2.0
Agriculture share of GHG emissions (%)	29.2	..	8.1	8.9
Share of irrigated land in AA (%)	..	15.2	-	-
Share of agriculture in water abstractions (%)	83.1	79.6	46.0	49.0
Water stress indicator	..	..	9.9	8.9

Notes: * or closest available year.
Sources: USDA Economic Research Service, Agricultural Productivity database; OECD statistical databases; FAO database and national data.

Description of policy developments

Main policy instruments

Various measures provide price support to Philippine producers. Price support policies mainly focus on rice and sugar and comprise a combination of trade barriers and domestic market regulation. The system of quantitative restrictions for rice was abolished in March 2019. The rice price support policy is also implemented by the National Food Authority (NFA) through buying buffer stocks at administered prices from domestic producers, and selling these stocks at subsidised prices to consumers. Up to March 2019, the NFA also handled import restrictions. For sugar, production quotas and trade barriers are used for producer price support and market regulation.

Tariff protection remains the Philippines' main trade policy tool. Trade liberalisation has primarily occurred within regional trade agreements, particularly the ASEAN Free Trade Area. The simple average applied Most Favoured Nation tariff on agricultural products was 9.8% in 2016. All tariff lines applied are *ad valorem* and range from 0% to 65%.

Tariff rate quotas are applied for 14 agricultural products, with in-quota tariffs ranging from 30% to 50% and out-of-quota from 35% to 65%. Products covered include live swine, goats and poultry and meat thereof, potatoes, coffee, maize, rice, and sugar. However, for three agricultural products (live horses, live bovine animals and beef), the TRQs are not applied. For three others (poultry meat, potatoes and coffee), it is only applied to a specific range of tariff lines (WTO, 2018[1]). Import licensing is required for all regulated products (including those under TRQs) and is intended to safeguard public health, national security and welfare.

In order to offset the effect of the liberalisation of rice imports (see section on trade policy developments), the government established a Rice Competitiveness Enhancement Fund (RCEF) with an annual appropriation of PHP 10 billion (USD 192.3 million) over the next six years (see the domestic policy development section). Several agricultural commodities are subject to **export controls** and require permits in addition to agency approval, namely grains and grain products, and sugar.

Budgetary support to agricultural producers, both through payments provided to farmers individually and to the agricultural sector as a whole (general services), is small compared to the importance of price support. During the 2000s, the main focus of budgetary support to producers was on subsidising the use of variable inputs, including seed and fertiliser subsidies. However, investment subsidies have increased in recent years. In 2019, such support increased due to the introduction of additional payments to rice producers in the form of seed and investment subsidies, compensating the liberalisation of rice trade.

Expenditures for key services to the agricultural sector have increased significantly since the end of the 2000s. The most important item is the development and maintenance of infrastructure, of which a major share is devoted to off-farm investments in irrigation systems. Financing extension services is another and increasingly important element of public support for the sector.

Since 1988, the Philippines has been undertaking an ambitious **agrarian reform** that covered close to three-quarters of the country's total agricultural area. By end-2015, the redistribution of land was almost complete, but property rights remain to be settled. Almost half of the reform beneficiaries still have only collective ownership certificates instead of individual property rights. Various restrictions on land-market transactions and insecure property rights continue to limit on-farm investment and to weaken the potential economic benefits of the reform.

Domestic policy developments in 2019-20

Important institutional measures related to the changes in rice trade and related domestic market regulation were introduced by the Rice Tariffication and Liberalisation Law. The food safety regulatory function, and hence the responsibility for issuing permits, licenses, or registering trade and importation of rice has been transferred from the National Food Authority (NFA) to the Bureau of Plant Industry (BPI).

Today, the main role of the NFA consists of local paddy procurement from domestic producers and the management of buffer-stocks including sales to the domestic markets. In September 2019, the Department of Agriculture (DA) instructed the NFA to intervene on the domestic market by selling domestic rice from its buffers at PHP 27 (USD 0.52) per kg in order to lower consumer prices. In addition to the unloading of NFA rice stocks, the DA has instructed the agency to increase the buying price of rice into buffer (intervention) stocks from PHP 17 to PHP 19 (USD 0.33 to USD 0.37) per kg of rice (dried and cleaned). The President also ordered the NFA to increase the country's emergency buffer stock from 15 to 30 days by buying more rice from farmers and increase the turnover of the stocks. In reality, these stocks are playing more a role of an "intervention stock" rather than an "emergency buffer stock" with two functions:

(i) supporting domestic prices through buying stocks at administered prices; and (ii) reducing consumer prices in the market by releasing from stocks at subsidised prices.

In order to offset the effect of the liberalisation of rice imports the government established A Rice Competitiveness Enhancement Fund (RCEF) with an annual PHP 10 billion (USD 192.3 million) appropriation through the next six years. In 2019, the expenditures were planned to be spent as follows: (i) PHP 5 billion for rice farm machinery and equipment; (ii) PHP 3 billion for rice seed development, propagation and promotion; (iii) PHP 1 billion for credit to farmers; and (iv) another PHP 1 billion for extension.

In addition, PHP 3 billion (USD 57.9 million) were provided in the form of an unconditional cash transfer to benefit 600 000 small rice farmers (less than 2 hectares planted for rice). Another PHP 2.5 billion (USD 48.2 million) went to finance the Expanded Survival and Recovery Assistance (SURE Aid) programme, which provides a PHP 15 000 zero-interest loan, payable in eight years to farmers tilling one hectare or less of rice.

Trade policy developments in 2019-20

Since joining the WTO in 1995, the Philippines has been applying **quantitative restrictions (QRs) on rice imports,** as it benefited from a special treatment clause (Article 5 of the Agreement on Agriculture) which allowed QRs on rice imports to be maintained until 2012, on the basis of food security. In 2012, the Philippines requested a new extension of its special treatment for rice through a waiver until 2017. In order to comply with its WTO obligations, the Philippines replaced the quantitative restrictions (QRs) on rice imports with a tariff system as of March 2019, under the “Rice Tariffication and Liberalisation Law” (RA 1120). For imports from ASEAN countries, no quota is applied only a single tariff of 35%. For imports from non-ASEAN countries, a tariff rate quota (TRQ) is established. Applied MFN in-quota and out-of-quota tariffs for rice are set at 40% and 180%, respectively. The Minimum Access Volume (MAV) for rice reverted from 800 000 tonnes to the 2012 level of 350 000 tonnes. The export restrictions for rice were eliminated.

On 13 June 2019, the government issued Executive Order No. 82, reverting tariff rates for Mechanically Deboned or Mechanically Separated Poultry from 40% to 5%, while those for frozen whole turkey were reduced from 40% to 20%. These rates are set to remain at the lower tariff until 31 December 2020. Executive Order No. 20, issued in 2017, prescribes the Most Favoured Nation (MFN) tariff schedule until 31 December 2020. A new MFN tariff schedule, is expected to be released before the end of 2020, setting tariff rates for all products.

References

WTO (2018), *“Trade policy review of the Philippines”, WT/TPR/S/368, World Trade Organization*, https://www.wto.org/english/tratop_e/tpr_e/s368_e.pdf. [1]

Note

[1] Source of the information on policy responses relative to the COVID-19 outbreak: FAO (2020), Fapda - Food And Agriculture Policy Decision Analysis Tool.

23 Russian Federation

Support to agriculture

Around 78% of total support to agriculture (TSE) in 2017-19 was provided to producers individually, with the rest directed to general services for agriculture (20%) and to support agricultural commodity buyers (2%).

Support to producers fluctuated significantly over the long-term, but has stabilised somewhat since 2014 with levels between 9% and 13% of gross farm receipts (%PSE). The largest part of transfers to producers (73%) originates from the most distorting forms of support, such as subsidies based on output and variable input use and market price support. The aggregate market price support disguises strong variations in support across commodities: it represents a mix between the border protection for imported livestock products and sugar, and the implicit and explicit taxation of exported grains and oilseeds. Livestock producers additionally benefit from domestic grain prices being below the world levels. Within support to general services, the agricultural knowledge system, development and maintenance of infrastructure, and the inspection and control system absorb the largest shares of public funding.

Total support to agriculture (TSE) was equal to 0.7% of GDP in 2017-19. This percentage has been decreasing since the mid-1990s, largely reflecting GDP growth and the declining GDP share of the agricultural sector. Taxpayers provide 54% of total support transfers, the remaining 46% coming from consumers. Agricultural prices are supported at an average of 7% above the international levels (NPR).

Main policy changes

The State Programme for the Development of Agriculture is in its second phase of implementation from 2018 to 2025. Digital agriculture and agricultural export have been incorporated as separate projects of the Programme. The agricultural export component focusses on the development of export infrastructure, facilitation of access to foreign markets through phytosanitary improvements, and product promotion and positioning abroad. Greater emphasis is also given to family farming and rural co-operation. A change in the mechanism for providing direct product subsidies was announced for 2020, aiming to accelerate output growth. A self-standing State Programme on Integrated Development of Rural Territories was launched in early 2020 to boost investments in development of human resource capacity, rural infrastructure, and services in rural areas. The country became a fully-fledged participant of the Paris Agreement on Climate in 2019. The first national law on organic agriculture took effect on 1 January 2020.

In line with its WTO commitments, the Russian Federation has eliminated its tariff rate quota on pig meat. Pig meat imports are now subject to a flat *ad valorem* rate of 25%, less than half of the over-quota tariff rate previously applied. The ban on agro-food imports from a number of countries imposed in 2014 was extended until end-2020. As a member of the Eurasian Economic Union (EAEU), the Russian Federation was involved in the negotiation process of the Union's free trade agreements with Singapore and Serbia which were signed in 2019. An interim agreement leading to the formation of a free trade area between the EAEU and Iran entered into force in 2019. Among other components, these agreements include mutual concessions in agro-food trade.

Assessment and recommendations

- The State Programme for Development of Agriculture is aimed at boosting the agricultural production and agro-food import substitution. Most recently, the policy orientation was broadened to also include the development of agricultural export potential and accessing the markets of large agro-food importers.
- Although there has been some shift towards area and per head payments, the most distorting subsidies and import protection continue to dominate the support provided, in order to achieve the stated objectives of import substitution and export development.
- The farm sector's development could be supported more effectively through a greater focus on investments in the sector's long-term growth, such as infrastructure, technological innovation, and robust plant and livestock health systems.
- Research and development (R&D) and knowledge transfer is one more critical area to improve competitiveness and support long-term growth. This area is key to the most recent export development objective which requires knowledge and skills to seize new demand signals and external market opportunities. Apart from developing new methods and technologies, it is also important to foster their uptake by agricultural producers and agribusiness. This challenge goes beyond agricultural policy and requires improvements in the general environment for investment and doing business.
- Human capital is another key factor of long-term growth. Consecutive targeted programmes have directed resources for rural development. A substantial increase of such spending is foreseen within the new State Programme on Integrated Development of Rural Territories. This is a positive development, as much remains to be done to improve living conditions in rural areas and to secure skills and knowledge for rural economy.
- The agricultural sector could become one of the main beneficiaries of the State Programme for the Preservation of the Environment, through its effects of improved waste management, reduced water and air pollution, forest rehabilitation, and support for the best available technologies. The agricultural sector should use these opportunities to seize the potentially considerable demand for environmentally friendly products domestically and abroad.
- The success of the R&D, rural development, and environmental programmes will depend, among other things, on the consistency of actual funding with the initial financial targets. As these programmes significantly rely on sources other than the state budget, it is important to ensure that the planned activities and administration costs of these programmes are sufficiently attractive for commercial investors.
- The country has recently become a fully-fledged participant of the Paris Agreement on Climate and at present has not yet communicated its Nationally Determined Contributions (NDCs). A draft law on the regulation of greenhouse emissions has been prepared and is currently under a regulatory impact assessment. It outlines general regulatory principles and instruments but sets neither specific economy-wide or sectoral reduction targets, nor specific policy measures to achieve them.

Policy responses in relation to the COVID-19 outbreak

On 17 March 2020, the government announced a plan of urgent actions to support economy due to the spread of the new coronavirus (GRF, 2020[1]). This plan includes 54 specific actions grouped under the following issues: (i) ensuring supply of essential goods (food included) and aid to the population; (ii) support to the sectors in risk zone (such as tourism, transportation, catering, hotel, entertainment, and sport business and some other activities); (iii) support to small and medium enterprises (SMEs) and individual entrepreneurs (IEs); and (iv) general systemic measures. In addition to the March plan, a

separate assistance package is being prepared for “pivotal” businesses of national importance. Beyond these two packages, a number of additional measures have been also announced. The initiatives of particular relevance to the agriculture and food situation are presented below.

Agricultural policies

Imports of food products and other necessities are granted a customs regime of a “green corridor”. Import duties on vegetables, rye, rice, buckwheat, juices, baby food, and raw materials for baby food are lifted until 30 June 2020 (EEC, 2020[2]). Until the same date, a temporary ban is effective on the exports outside the EAEU area for onions, garlic, certain grains (rye, buckwheat, rice, and others), groats and whole meal flour (TASS, 2020[3]).

The Russian Federation has also introduced a quota for wheat, barley and maize exported outside the EAEC, effective for the period between 1 April and 30 June 2020 and amounting to 7 million tonnes in total (International Trade Centre, 2020[4]).

The majority of agricultural producers have the legal status of SMEs and IEs and are thus eligible for the assistance foreseen for such businesses in the government’s March plan. Fiscal aid is one area and includes: a moratorium on the collection of debt and penalties and a moratorium on bankruptcies; reduction of social security contributions from 30% to 15% on wages above minimal wage level and a six-months deferral of social contribution payments for micro-enterprises; deferral of rent payments for the objects rented from state and municipalities; and some other measures. SMEs and IEs can also benefit from a range of credit assistance measures, such as a possibility to make recourse to debt restructuring; deferral on principal debt repayment; access to credit at reduced interest and obtaining a zero-interest credit for wage payments; and other measures. SMEs and IEs will also benefit from a moratorium on all check-ups of businesses (except specific cases) until the end of 2020 and an automatic extension of licenses for six months (GRF, 2020[1]). Most recently, it has been announced that on top of the assistance included in the March plan, SMEs and IEs will receive grants to help them finance wage payments on the condition that they retain 90% of personnel.

As for the forthcoming assistance to large “pivotal” businesses, over one thousand companies of national importance are concerned, of which over a hundred are large agricultural enterprises, food processors and other agribusiness companies (Interfax, 2020). According to preliminary information, the measures for agricultural enterprises may include additional preferential credit and assistance for purchase of variable inputs (360tv.ru, 2020[5]).

Agro-food supply chain policies

The list of “pivotal” businesses also incorporates the leading fertiliser producers, such as Minudobrenia, Phosagro, Uralchem, Uralkali, as well as food wholesalers, retailers and caterers, such as Atak, Auchan, Billa, Vkus Vill, O’Key, Dixi Group, Lenta, and McDonalds. At the moment of writing, details on aid to these companies have not been announced, but it reportedly may also include credit assistance.

Consumer policies

The availability of food and other essential goods is made subject to operational monitoring at federal and regional levels, and a zero-interest credit for the formation of extra reserve stocks may be provided. Food retailers and wholesalers can benefit from subsidised loans to form stocks of goods. The transportation of food and other essential goods is freed from the restrictions on circulation of cargo transport within urban areas and weight control (GRF, 2020[1]). Administrative measures and anti-monopoly procedures can be used across the regions in the case of speculative food price rises.

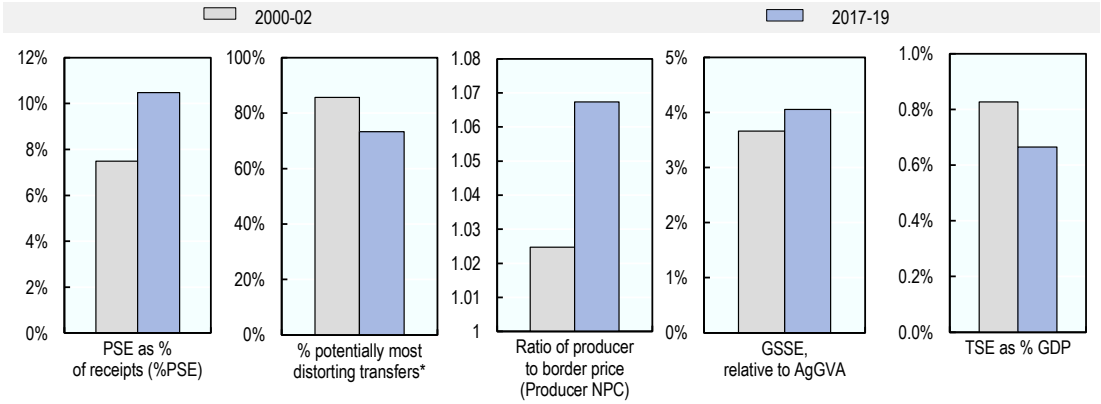
The Agriculture Ministry announced on 31 March that it will sell 1 million tonnes of grain from its state stockpile on the domestic market to ensure supplies and keep prices down amid the coronavirus pandemic (Reuters, 2020[6]).

A range of additional social payments were introduced for people in need, families with a large number of children and unemployed, helping to support consumption of these groups (MTSP, 2020[7]).

Other

Beyond the federal measures described above, regions can introduce their own measures complementing federal assistance. The government is to provide approximately RUB 200 billion (USD 2.5 billion) of federal subventions to the regions to help implement their measures.

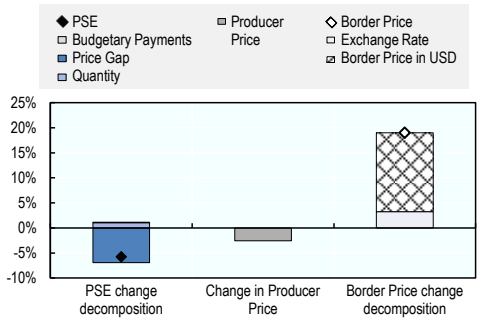
Figure 23.1. Russia: Development of support to agriculture



Note: * Share of potentially most distorting transfers in cumulated gross producer transfers.
Source: OECD (2020), "Producer and Consumer Support Estimates", OECD Agriculture statistics (database), http://dx.doi.org/10.1787/agr-pcse-data-en.
StatLink https://doi.org/10.1787/888934144762

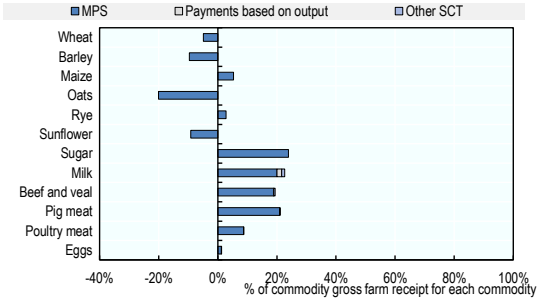
Support to producers (%PSE) was at 10% of producer gross receipts in 2017-19, below the OECD average but above the level observed in 2000-02 (7%). This total masks negative MPS measured for some commodities, equal to 1.6% of producer gross receipts in 2017-19. The share of gross producer transfers (whether positive or negative) provided in most potentially distorting forms declined from 86% in 2000-02 to 73% in 2017-19 (Figure 23.1). The total value of producer support in local currency fell by 6% in the most recent year, largely due to a decrease in the market price support as border prices rose on average, while domestic prices decreased (Figure 23.2). Prices received by farmers were on average 7% above those observed on world markets in 2017-19 (NPC), compared to 2% in 2000-02. This aggregate NPC disguises border protection for livestock products and sugar and taxation of grains and oilseeds. Products receiving the highest commodity-specific support relative to the value of gross farm receipts from those commodities (%SCT) are sugar (24%), milk (23%), pig meat (21%), and beef and veal (19%) (Figure 23.3). The share of Single Commodity Transfers (SCT) in the PSE was 62% in 2017-19. The expenditures for general services (GSSE) increased relative to the sector's value added – they were equivalent to 4.1% in 2017-19, compared to 3.7% in 2000-02, which partly reflects the growth of agricultural output value. Total support to agriculture (TSE) as a % of GDP decreased from 0.8% in 2000-02 to 0.7% in 2017-19, mostly being a result of the GDP growth.

Figure 23.2. Russia: Drivers of the change in PSE, 2018 to 2019



Source: OECD (2020), "Producer and Consumer Support Estimates", OECD Agriculture statistics (database), http://dx.doi.org/10.1787/agr-pcse-data-en.
StatLink https://doi.org/10.1787/888934144781

Figure 23.3. Russia: Transfer to specific commodities (SCT), 2017-19



Source: OECD (2020), "Producer and Consumer Support Estimates", OECD Agriculture statistics (database), http://dx.doi.org/10.1787/agr-pcse-data-en.
StatLink https://doi.org/10.1787/888934144800

Table 23.1. Russia: Estimates of support to agriculture

Million USD

	2000-02	2017-19	2017	2018	2019p
Total value of production (at farm gate)	**25 436**	**77 924**	**77 427**	**73 707**	**82 637**
***of which:** share of MPS commodities (%)*	81.7	77.1	78.1	78.2	75.0
Total value of consumption (at farm gate)	**30 143**	**77 149**	**78 424**	**74 473**	**78 550**
Producer Support Estimate (PSE)	**1 968**	**8 559**	**9 044**	**8 688**	**7 944**
Support based on commodity output	967	5 178	5 729	5 224	4 581
Market Price Support[1]	770	4 962	5 425	5 052	4 408
Positive Market Price Support	2 017	6 238	6 803	6 816	5 096
Negative Market Price Support	-1 247	-1 277	-1 378	-1 764	-688
Payments based on output	198	217	304	172	174
Payments based on input use	719	2 132	2 222	2 139	2 035
Based on variable input use	359	424	197	437	636
with input constraints	0	0	0	0	0
Based on fixed capital formation	318	1 631	1 961	1 624	1 309
with input constraints	0	0	0	0	0
Based on on-farm services	42	77	64	78	89
with input constraints	0	0	0	0	0
Payments based on current A/An/R/I, production required	0	687	579	732	752
Based on Receipts / Income	0	49	43	39	67
Based on Area planted / Animal numbers	0	638	536	693	685
with input constraints	0	0	0	0	0
Payments based on non-current A/An/R/I, production required	0	0	0	0	0
Payments based on non-current A/An/R/I, production not required	0	0	0	0	0
With variable payment rates	0	0	0	0	0
with commodity exceptions	0	0	0	0	0
With fixed payment rates	0	0	0	0	0
with commodity exceptions	0	0	0	0	0
Payments based on non-commodity criteria	0	0	0	0	0
Based on long-term resource retirement	0	0	0	0	0
Based on a specific non-commodity output	0	0	0	0	0
Based on other non-commodity criteria	0	0	0	0	0
Miscellaneous payments	282	561	514	592	576
Percentage PSE (%)	**7.5**	**10.5**	**11.2**	**11.2**	**9.2**
Producer NPC (coeff.)	**1.02**	**1.07**	**1.08**	**1.07**	**1.06**
Producer NAC (coeff.)	**1.08**	**1.12**	**1.13**	**1.13**	**1.10**
General Services Support Estimate (GSSE)	**684**	**2 144**	**1 901**	**2 353**	**2 178**
Agricultural knowledge and innovation system	175	655	588	709	668
Inspection and control	203	499	503	475	521
Development and maintenance of infrastructure	230	464	469	429	495
Marketing and promotion	2	61	39	54	90
Cost of public stockholding	1	101	102	130	72
Miscellaneous	73	362	200	556	332
Percentage GSSE (% of TSE)	**25.3**	**19.7**	**17.0**	**20.9**	**20.9**
Consumer Support Estimate (CSE)	**-1 471**	**-6 202**	**-7 053**	**-6 488**	**-5 064**
Transfers to producers from consumers	-477	-5 065	-5 590	-5 136	-4 470
Other transfers from consumers	-661	-1 261	-1 522	-1 283	-977
Transfers to consumers from taxpayers	25	244	232	211	289
Excess feed cost	-359	-119	-173	-280	95
Percentage CSE (%)	**-5.1**	**-8.0**	**-9.0**	**-8.7**	**-6.5**
Consumer NPC (coeff.)	**1.04**	**1.09**	**1.10**	**1.09**	**1.07**
Consumer NAC (coeff.)	**1.05**	**1.09**	**1.10**	**1.10**	**1.07**
Total Support Estimate (TSE)	**2 677**	**10 946**	**11 177**	**11 252**	**10 410**
Transfers from consumers	1 138	6 326	7 112	6 420	5 447
Transfers from taxpayers	2 201	5 881	5 587	6 116	5 940
Budget revenues	-661	-1 261	-1 522	-1 283	-977
Percentage TSE (% of GDP)	**0.8**	**0.7**	**0.7**	**0.7**	**0.6**
Total Budgetary Support Estimate (TBSE)	**1 908**	**5 985**	**5 752**	**6 200**	**6 002**
Percentage TBSE (% of GDP)	**0.6**	**0.4**	**0.4**	**0.4**	**0.4**
GDP deflator (2000-02=100)	**100**	**622**	**573**	**632**	**661**
Exchange rate (national currency per USD)	**29.56**	**61.95**	**58.33**	**62.81**	**64.71**

Note: p: provisional. NPC: Nominal Protection Coefficient. NAC: Nominal Assistance Coefficient.
A/An/R/I: Area planted/Animal numbers/Receipts/Income.
1. Market Price Support (MPS) is net of producer levies and excess feed cost. MPS commodities for Russia are: wheat, maize, rye, barley, oats, sunflower, sugar, potatoes, milk, beef and veal, pig meat, poultry and eggs.

Source: OECD (2020), "Producer and Consumer Support Estimates", *OECD Agriculture statistics* (database), http://dx.doi.org/10.1787/agr-pcse-data-en.

Contextual information

The Russian Federation has the largest land area in the world and is abundantly endowed with agricultural land. Natural, economic, and social conditions are highly diverse across the territory. The country is the world's sixth largest economy in purchasing power parity (PPP) terms. Agriculture contributes 3% of GDP and nearly 6% of employment, with both shares having significantly declined since the mid-1990s. In 2019, the country ranked as the second world's largest producer of barley, rye, sunflower seeds and sunflower oil and fourth largest producer of wheat; it is also among world's top ten producers of dairy products, pig meat, and poultry.

The farm structure is dualistic, where commercial operations of different sizes co-exist with household units. Commercial units generate nearly 70% of agricultural output and produce virtually all grain, oilseeds, and sugar beet, 82% of animals for slaughter, and 61% of milk. Households engage in agriculture mainly for own consumption and generate less than one-third of total output value. They grow two-thirds of potatoes and 52% of vegetables produced in the country. The rural population is 37.3 million (1 January 2019), or 25% of the total. Households allocated on average 35% of their final consumption expenditures to food (2018), this share ranging from 50% for the poorest to 26% for the richest 20% of the population.

Table 23.2. Russia: Contextual indicators

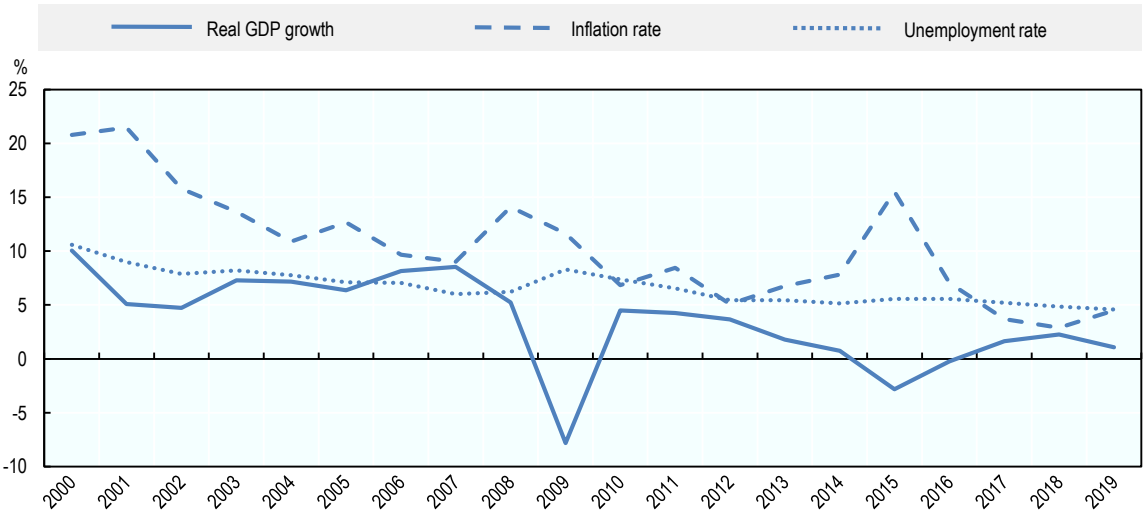
	Russia		International comparison	
	2000*	2018*	2000*	2018*
Economic context			**Share in total of all countries**	
GDP (billion USD in PPPs)	1 075	4 193	2.7%	3.7%
Population (million)	147	147	3.4%	2.9%
Land area (thousand km^2)	16 381	16 377	20.1%	19.8%
Agricultural area (AA) (thousand ha)	217 162	216 249	7.2%	7.2%
			All countries[1]	
Population density (inhabitants/km^2)	9	9	53	62
GDP per capita (USD in PPPs)	7 331	28 557	9 275	21 924
Trade as % of GDP	25	21	12.4	15.3
Agriculture in the economy			**All countries[1]**	
Agriculture in GDP (%)	5.8	3.1	3.1	3.6
Agriculture share in employment (%)	14.5	5.8	-	-
Agro-food exports (% of total exports)	1.1	4.6	6.2	7.3
Agro-food imports (% of total imports)	21.6	11.7	5.5	6.3
Characteristics of the agricultural sector			**All countries[1]**	
Crop in total agricultural production (%)	53	52	-	-
Livestock in total agricultural production (%)	47	49	-	-
Share of arable land in AA (%)	57	56	32	33

Notes: *or closest available year. 1. Average of all countries covered in this report. EU treated as one.
Sources: OECD statistical databases; UN Comtrade; World Bank, WDI and national data.

GDP continued to grow in 2019, after picking up in 2017 from the recession of the previous two years. Inflation accelerated, while the unemployment rate continued to decrease. According to preliminary estimates, agricultural output increased by 4% in 2019 compared to a 0.2% fall in 2018. In 2019, the Russian Federation was the largest exporter of wheat and barley, the fourth largest exporter of sunflower seeds and the fifth largest exporter of sunflower oil. The country is among the top five beef importers. Agro-food products account for a significant but declining share of total imports and for a smaller, but rising share in total exports. The negative agro-food trade balance has narrowed significantly since the beginning

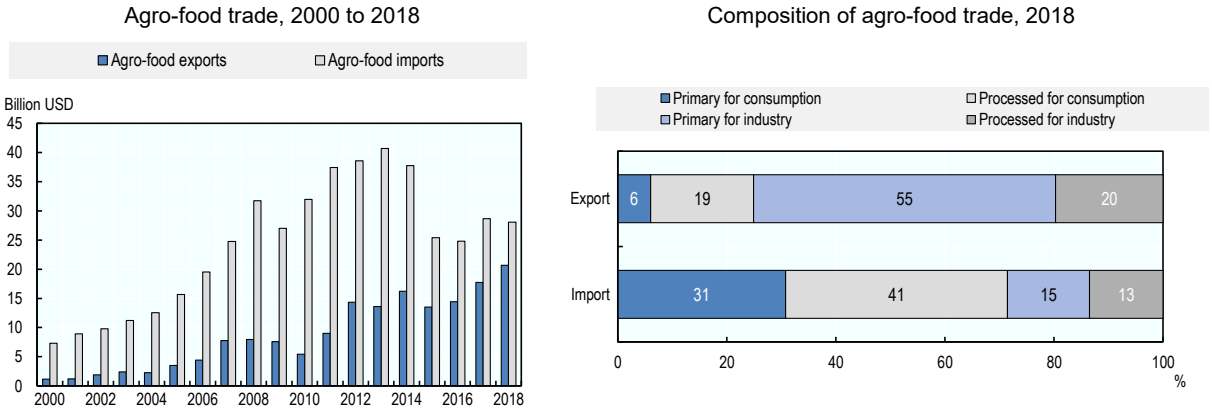
of the 2010s. The agro-food imports are focused on supplying domestic food consumption in primary and processed products, while exports are largely destined to agro-processors abroad.

Figure 23.4. Russia: Main economic indicators, 2000 to 2019



Sources: OECD statistical databases; World Bank, WDI and ILO estimates and projections.

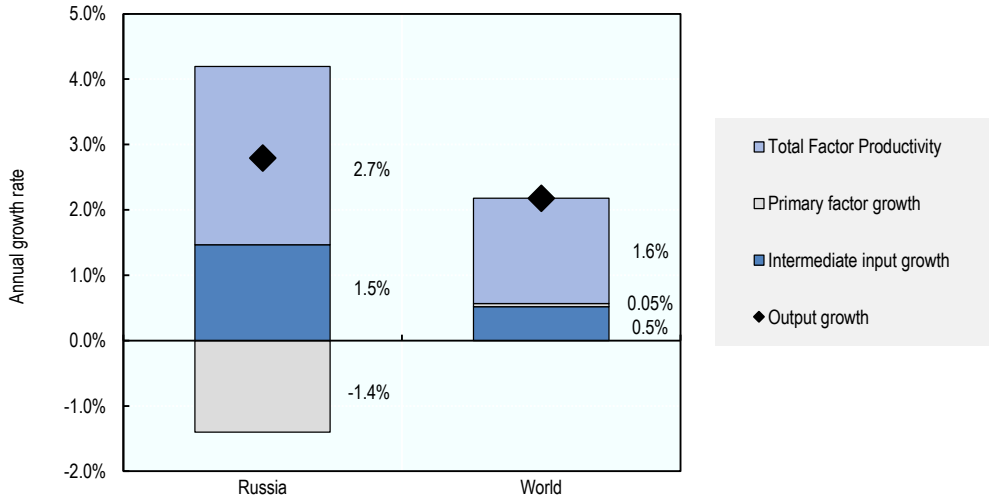
Figure 23.5. Russia: Agro-food trade



Note: Numbers may not add up to 100 due to rounding.
Source: UN Comtrade Database.

Agricultural output has been recovering from a deep recession in the 1990s. Output growth since 2006 has been driven mainly by the improvements in Total Factor Productivity (TFP), exceeding average global TFP growth. The higher use of intermediate inputs contributed to growth to a lesser degree, while the employment of primary factors, in particular of machinery and labour, has declined. The share of agriculture in total energy use decreased since the 2000s and was less than the OECD average in 2018, despite a greater importance of the sector in the economy than in OECD countries. Agriculture's contribution to greenhouse gas (GHG) emissions has also declined and remains below the OECD level. Compared to the OECD area, agriculture accounts for a relatively small share of total water abstractions. Aggregate indicators suggest that water stress is much less of a problem than in many OECD countries. However, preliminary estimates point to the existence of a negative phosphorous balance on average in 2007-16.

Figure 23.6. Russia: Composition of agricultural output growth, 2007-16



Note: Primary factors comprise labour, land, livestock and machinery.
Source: USDA Economic Research Service Agricultural Productivity database.

Table 23.3. Russia: Productivity and environmental indicators

	Russia		International comparison	
	1991-2000	2007-2016	1991-2000	2007-2016
			World	
TFP annual growth rate (%)	1.0%	2.7%	1.6%	1.6%
			OECD average	
Environmental indicators	**2000***	**2018***	**2000***	**2018***
Nitrogen balance, kg/ha	5.0	1.9	33.3	29.1
Phosphorus balance, kg/ha	0.6	-0.3	3.3	2.3
Agriculture share of total energy use (%)	3.3	1.8	1.7	2.0
Agriculture share of GHG emissions (%)	6.7	5.9	8.1	8.9
Share of irrigated land in AA (%)	..	1.7	-	-
Share of agriculture in water abstractions (%)	28.5	28.9	46.0	49.0
Water stress indicator	1.8	1.6	9.9	8.9

Notes: * or closest available year.
Sources: USDA Economic Research Service, Agricultural Productivity database; OECD statistical databases; FAO database and national data.

Description of policy developments

Main policy instruments

The Russian Federation applies a range of price policy instruments. The main one is **border protection**, including Tariff Rate Quotas (TRQs) and non-tariff measures. Since the accession to the World Trade Organisation (WTO) in July 2012, the Russian Federation's applied Most Favoured Nation (MFN) agricultural tariff has been reduced to 11.2% by 2018, or has been aligned with the average final bound agricultural tariff.[1] In 2018, the applied agricultural tariff was nearly twice the non-agricultural tariff (6.1%). Animal and dairy products, beverages and tobacco, sugar and confectionary face the highest average import duties within the agricultural group (WTO/ITC/UNCTAD, 2019[8]). Border measures are in large part implemented within the framework of the Customs Union of the Eurasian Economic Union (EAEU).

Domestic price regulation measures are also applied, such as grain interventions. The government can purchase or sell grain if the market prices move above or below the established price band. Prices at which market interventions are carried out, however, do not play the role of price guarantees. Restrictions on imports or exports can be imposed during the intervention periods.

Payments based on output for marketed livestock products are provided from regional budgets and there is also a national payment for milk, which is co-financed by the federal and regional governments. **Concessional credit** is one of the most important support instruments, with concessions taking the form of reduced interest rates fixed by the government, combined with a financial compensation to lending banks. For credit taken before 2017, concessions are also granted in the form of interest subsidies to borrowers. In addition, a range of subsidies for variable inputs are in place. Support is also provided through **investment co-financing** and **leasing** of machinery, equipment and pedigree livestock at preferential terms. **Area payments** for crop production began in 2013, replacing several previous nationwide input subsidies provided for sowing and harvesting campaigns. Agricultural producers also benefit from a number of tax preferences and from concessions on repayment of historical arrears on federal taxes and social contributions.

Most of the support measures described above are implemented within a multi-year **State Programme for the Development of Agriculture** (hereafter, State Programme) – the country's main agricultural policy framework. It is based on the principle that support measures be co-financed by federal and regional governments, with co-financing rates varying across the regions and individual measures. In addition to support included in the State Programme, regions implement and finance their own, strictly **regional support measures**.

The current State Programme has been undergoing amendments since its launch in 2013 in response to the significant changes in overall economic conditions. Its sub-programmes were reconfigured in 2015 and 2017. The Programme's initial budget targets were also adjusted in terms of the overall amounts of spending and shifts of funds within and between programme components. In 2018 and 2019, the State Programme underwent further changes in its structure, spending levels, administration, and implementation period (Mau et al., 2020[9]).

Some recently introduced State Programmes in other economic and social areas, such as **rural development** and **environment**, contribute to shaping the conditions for long-term development of agriculture.

Domestic policy developments in 2019-20

In 2019, the implementation period of the on-going State Programme was extended from 2020 to 2025. Food security based on import substitution remains the principal agricultural policy objective. However, export development and income growth of rural households are emphasised as additional objectives. The following growth targets in nominal terms are to be met by 2025 relative to 2017, the year ending the first phase of the State Programme: increase in agricultural production by 16.3%; increase in agricultural value added by RUB 2 079.6 billion (USD 32 billion)[2] to reach a total of RUB 5 774 billion (USD 89 billion); more than a doubling of exports; and increase of fixed capital investments in agriculture by 21.8% (GRF, 2019[10]).

The structure of the State Programme was again modified in 2019 and at present incorporates six projects and four programmes. Projects have a fixed timeframe, while programmes represent continuous processes. The State Programme's projects are: 1) development of the sub-sectors which ensure accelerated import substitution; 2) stimulation of investment activity; 3) technical modernisation; 4) export of products of the agro-industrial complex; 5) support systems for family farming and development of rural co-operation; and 6) digital agriculture. The four programmes are: a) development of land reclamation complex; b) ensuring general conditions of the functioning of the agro-industrial complex (covering market

interventions, assistance related to abnormal climate and animal disease events and some other measures); c) scientific and technological support for the development of the agro-industrial complex; and d) veterinary and phytosanitary surveillance. Digital agriculture and agricultural export are new components of the State Programme, introduced, respectively, in 2018 and 2019. The project on digital agriculture aims at supporting the sector's development through the introduction of digital technologies and platform solutions, including the creation, in 2020, of a Single Window sub-platform for collecting industry data from the national Digital Agriculture platform. Details on the agricultural export project are presented below in the section on trade policy.

The current version of the State Programme also emphasises family farming more explicitly. Thus, being previously scattered across other parts of the State Programme, measures related to support to family farms and rural co-operatives are now presented as one stand-alone project (project 5 above). Starting from 2020, the activity on rural development has been excluded from this State Programme and will be implemented as a separate, self-standing State Programme on integrated rural development (discussed below).

Apart from these new features, the current State Programme maintains the previous directions of support and the underlying measures. However, the project-and-programme approach is intended to improve the Programme's administration and efficiency of spending. Of the aggregate funding during the whole implementation period, around 40% are to be budgetary sources (federal and regional) and the remaining 60% are to be mobilised from extra-budgetary sources, which include profits from commercial activities of public institutions, investments from private businesses, non-governmental organisations, and other sources (GRF, 2019[10]).

According to preliminary information, the federal budget allocated RUB 311 billion (USD 4.8 billion) to the State Programme in 2019, which is 6% more than last year (MoA, 2019[11]; State Treasury, 2020[12]). Around 35% of this expenditure was directed to stimulation of investment activities (project 2 above) consisting of interest subsidies on bank loans and the co-financing of investment projects, and nearly 20% was spent on the development of the import-substituting subsectors (project 1 above) covering key production subsidies (State Treasury, 2020[12]). This federal spending was topped up by contributions from the regions across the components of the State Programme. In addition, regions provided strictly regional support beyond the State Programme.

The federal funding for the State Programme for 2020 is planned at nearly RUB 284 billion (USD 4.4 billion), which is below the corresponding budget target set for 2019 at the beginning of that year (FL, 2018[13]; FL, 2019[14]). The projects on stimulation of investment activities and development of import-substituting subsectors are to absorb around two-thirds of total federal funding for the State Programme in 2020.

Grain market interventions were not particularly active during the monitoring period. The government announced market price maximums for grains for the 2018/19 and 2019/20 seasons which, if prices rise, would trigger public grain sales. However, due to abundant supplies, relatively small sales from intervention stocks were made during the 2018/2019 season, while no grain purchases have been carried out since the 2016/17 season due to high public stocks. In the first half of 2018, the grain industry benefitted from reduced **transportation tariffs** on domestic grain shipments from several distant regions in Siberia to other country regions. This preference was renewed for the period between 9 April and 31 July 2019. This measure adds to the temporary waiver of wheat export duty in effect since September 2016 (see trade policy developments). In August 2019, the government approved a "Long-term Strategy for Development of the Grain Sector up to 2035" (GRF, 2019[15]). Among others, it states the goal to develop a technologically advanced, competitive, innovative and investor-attractive grain industry. The key activities to achieve this goal are improvements in crop selection and seed production, technologies and machinery, quality testing, phytosanitary work, and infrastructure and logistics. Grain export enhancement is an

important focus of the strategy, which, among other activities, foresees substantial private investments in export infrastructure.

Interest subsidies on short-term loans and investment credit, investment grants, leasing of machinery, equipment and livestock at preferential terms, and production subsidies in the form of the area payment and unified payment continued to constitute the bulk of producer support. The unified payment was introduced in 2017, integrating 27 previous individual subsidies across different components of the State Programme. This includes several subsidies for crop and livestock production, subsidies for insurance and interest on short-term credit, support of small-scale farmers, and the assistance provided within the previous component on "economically important regional programmes". The purpose of the unified payment had been to simplify the budgeting and transfer of funds from the federal centre to regions. Regions top-up this payment and continue to allocate it across individual supports included in the unified payment, with producers, as previously, receiving the assistance in the form of individual supports. Every year regions can select specific types of individual supports within the unified payment depending on regional priorities.

Some changes in the implementation of the **unified payment** and the **area payment** for crops were introduced reflecting the efforts to increase agricultural insurance. Insurance covered 5% of total area planted to annual and perennial crops in 2016 and 1.7% in 2018 (MoA, 2019[11]). Starting from 2019, crop and livestock insurance have separate budgetary earmarks within the unified payment and the area payment to ensure potential uptake of this support by the regions.

The Ministry of Agriculture announced further changes in the implementation of the unified payment, area payment, and milk payment. Starting from 2020, the federal contribution previously directed to these subsidies is to be provided in two parts: one part will be used for "compensatory" support and another one for "stimulative" support. At the regional level, both parts will be topped-up from the regional budgets and allocated to specific supports depending on regional priorities. The range of the support elements available for selection by the regions remains the same as before (around 30 specific payments, of which 27 could previously be sourced from the unified payment at the regional level). The funds of the "compensatory" support are to be used to subsidise production at current levels, while the funds for "stimulative" support are to be used to subsidise planned increases in production. The regions select the products whose output they plan to increase and which thus becomes eligible for the "stimulative" part of the federal funding. The Ministry foresees to increase gradually the share of "stimulative" part against that of "compensatory" part of support. The concrete modalities of the new mechanism have not been officially approved at the moment of writing. However, the overall intention of this initiative seems to be an increase of the output-boosting effect of production subsidies.

The launch in 2020 of the State Programme on "**Integrated Development of Rural Territories**" for the period of 2020-25 was an important development (GRF, 2019[16]; Serova et al., 2020[17]). It foresees a considerable increase of investments in rural development. The federal budget plan earmarked RUB 36 billion (USD 555 million) for 2020 for this Programme, which is three-fold the average level of annual investments in rural development in 2016-19. In addition to federal investments, the Programme foresees to attract funds from the regional budgets and extra-budgetary sources. Investments are to be focussed on housing, development of human resource capacity, rural infrastructure, and improved provision of services in rural areas. The Ministry of Agriculture is the main implementing body. Ministries responsible for economic development, construction, road building, transport, education, environment, health, sports, culture, communications, and development of specific regions also participate in the implementation of this Programme.

In the context of climate change and sustainability, the following policy frameworks and developments are of importance. On 6 October 2019, the Russian Federation became a fully-fledged participant of the **Paris Agreement on Climate** by ratifying the Agreement, which it signed in April 2016 (GRF, 2019[18]). In 2014, the government approved an action plan for the reduction of greenhouse emissions. It focuses on the

development of a regulatory and operational framework to achieve this goal, such as the systems for registration, evaluation and projection of emissions, as well as state regulation of emissions. As part of this plan, a draft law on the regulation of greenhouse emissions was prepared in 2018 and is currently under a regulatory impact assessment (GRF, 2018[19]). This document formulates general definitions, principles and instruments of state regulation of emissions, but at this stage does not contain any specific general or sectorial reduction targets. The other main national policy documents related to climate change are the "Climate Doctrine of the Russian Federation" (PRF, 2009[20]), and the "Comprehensive Plan for the Implementation of the Climate Doctrine of the Russian Federation for the period until 2020" (GRF, 2011[21]). The Climate Doctrine sets out a conceptual framework for the national activities on climate change, while the Comprehensive Plan formulates a unified state policy in that area. The latter spells out key actions assigned to the ministries and public agencies. In accordance with the Climate Doctrine and the Comprehensive Plan, the Ministry of Agriculture is tasked to promote climate adaptation practices such as adaptive landscape farming systems, sustainable water, air, and nutritional regimes, encourage the introduction of new agricultural crop varieties, and the optimisation of crop conditions based on long-term forecasts. Another policy document, the State Programme for the Development of Agriculture, as the main sectoral policy framework, has among its objectives the creation of favorable conditions for the efficient use of land; it also foresees investments in land reclamation and support of innovations for resource saving and energy efficiency. Beyond the long-term activities included in the framework policy documents mentioned above, policy measures have been emerging in the context of recurrent climatic disasters of the past years. Thus, attention has been given to creating a more formal regulatory basis for coping with the consequences of abnormal natural events. This includes the establishment of formal procedures for state support in respect of catastrophic weather events, such as the budgeting of the financial assistance through different administrative levels, and the assessment of damage and restoration costs (GRF, 2014[22]; MoA, 2015[23]).

The country's first law on **organic products** took effect on 1 January 2020 (FL, 2018[24]). It regulates production, storage, transportation, labelling, and marketing of organic products. The law formulates the basic terms, such as "organic products", "organic agriculture", "producers of organic products"; it introduces a graphical label for organic products; it defines the basic requirements for the production of organic products; it stipulates the maintenance of a unified state register of developers of organic products; and it provides for a voluntary confirmation of the conformity of the production of organic products by certification bodies accredited in the national accreditation system. This law, however, states that voluntary confirmation of conformity does not replace the obligatory confirmation of conformity of organic products in the cases when this is required by the legislation of the Eurasian Economic Union and the Russian Federation.[3] The country's organic food industry is in the early stages of development, so the government expects this new law to provide impetus to the evolution of this sector. According to the Ministry of Agriculture, about 100 certified producers of organic products operate in the country, and the value of the organic product market is estimated at more than EUR 180 million, or 0.2% of the world organic production (MoA, 2019[25]). Some estimates also indicate that imported organic products currently account for up to 80% of the Russian Federation's organic food market (USDA, 2019[26]).

The government sees a considerable growth potential for the demand for **environmentally clean products** in the Russian Federation both on domestic and foreign markets. The federal Ministry of Agriculture has prepared a draft law on agricultural products, raw materials and food with improved ecological characteristics which at the moment of writing has gone through public discussion, but has not yet been submitted to parliament. Currently, work is underway to create an appropriate regulatory framework, including a set of national standards (MoA, 2019[25]).

In November 2018, the amendments on **bioethanol** for fuel use were introduced to the 1995 Federal Law which regulates production and turnover of ethyl alcohol, alcoholic and alcohol-containing products (FL, 2018[27]).[4] The changes include a new clause containing the definition of bioethanol, exclusion of bioethanol from excise taxation and from the minimum price regulation for ethyl alcohol. Other amendments relate to

the licensing of production, storage and supply of bioethanol, requirements for the equipment used for bioethanol production, and other issues. The amended Law also stipulates a ban on the production of bioethanol from food raw materials to exclude the possibility of using it as a surrogate of alcoholic beverages.

The **State Programme "Preservation of the Environment"** was launched as a cross-sectoral framework in October 2018, with the implementation horizon currently set at up to 2024. Through this Programme, the Russian Federation intends to make its major contribution to the Paris Agreement and achieve other national goals of sustainable development. The Programme integrates specific components on areas of prime environmental importance, such as industrial and urban waste management; clean air; clean water; rehabilitation and preservation of unique water sources, including the Volga river and lake Baikal and others; preservation of biodiversity; preservation of forests; and adoption of the best available technologies with the focus on "green" technologies. Although none of these components specifically target agriculture, this sector can potentially be among the main beneficiaries of this State Programme through the effects of better waste management, reduced water and air pollution, forest rehabilitation, as well as the availability of support for the adoption of green technologies.

Trade policy developments in 2019-20

The Russian Federation, together with Belarus, Kazakhstan, Armenia and Kyrgyzstan, is a member of the Treaty on the **Eurasian Economic Union (EAEU).** Meat imports from the non-CIS area into the EAEU area are subject to **tariff rate quotas** (TRQs) which are allocated to each EAEU member. Until 2020, the Russian Federation had applied import quotas for beef, pig meat and pig trimmings, and poultry meat. In accordance with the country's WTO commitments, tariff quotas for pig meat and pig trimmings have been eliminated as of 1 January 2020, with a flat 25% import tariff applied to all imports of the items concerned. The quota volumes and import tariffs for beef and poultry meat remain unchanged, as foreseen by the country's WTO commitments.

The Russian Federation also participates in the EAEU's TRQ for rice imported from Viet Nam. A quota of 10 000 tonnes was opened in 2017 according to the Free Trade Agreement between the EAEU and Viet Nam. Before 2019, it had been allocated to Belarus and the Russian Federation. In 2019, the share of the Russian Federation was reduced to 8 776 tonnes from 9 039 tonnes in the previous year, as Armenia also joined the TRQ (150 tonnes), while the share of Belarus was increased from 961 tonnes to 1 074 tonnes.

In June 2019, the **ban on agro-food imports** from the European Union, the United States, Canada, Australia, Norway, Ukraine and several other countries was extended until 31 December 2020 with no changes in the list of products covered. This list includes live swine (except pure-bred animals for breeding), meat and certain meat by-products, milk products, fruits and vegetables, prepared foods, fish, and salt. The ban was initially introduced on 7 August 2014 for a period of one year after the imposition of sectoral sanctions on the Russian Federation in the context of developments related to Ukraine. Sanctions and counter-sanctions have since then been extended several times.

On the export policy side, **export development** is a growing policy priority. Beyond the longer-term growth in grain and oilseed exports, this re-orientation is also due to more recent increases in the production of other agricultural products, notably swine and poultry meat.

The Project "Export of Products of the Agro-Industrial Complex" has recently been included in the State Programme. It seeks to increase agro-food exports to USD 45 billion per year by the end of 2024, and formulates the following objectives: generation of additional volumes of exportable goods, development of export infrastructure, facilitation of access to foreign markets in the sanitary and phytosanitary area, and creation of an effective system of product positioning abroad.

The People's Republic of China, India and Southeast Asia are regarded as key markets for export development. In late 2018, the Federal Service for Veterinary and Phytosanitary Surveillance of the Russian Federation and Chinese customs authorities signed protocols on mutual supplies of poultry meat and milk products. As of early 2020, China had reportedly allowed poultry imports from 55 Russian companies and dairy imports from the first 10 Russian companies, and an additional list of 23 dairy suppliers was submitted for approval in February 2019 (Vesti Ekonomika, 2020[28]; USDA, 2019[29]). In 2019, the Russian Federation agreed veterinary certificates for exports of dairy products to Turkey and exports of processed pig meat products to Singapore. In October 2019, the Minister of Agriculture of the Russian Federation and his homologue from the Kingdom of Saudi Arabia signed a memorandum on mutual increase of agricultural exports. The Russian Federation expects to increase exports of all key agricultural products, such as grains, meats, feedstuffs and processed food.

Grain export remains a highly important area of export development. The Ministry of Agriculture of the Russian Federation announced plans to construct new grain transit points and grain terminals in the country's areas with the main exportable surplus production, including the Far East. As in the case of meat and dairy, China is also considered as a destination with high potential to further boost grain exports. Since mid-2010, Russian phytosanitary authorities have worked on phytosanitary aspects of exports to China and signed respective protocols on wheat, maize, rice, soybeans and rapeseeds. In February 2018, China allowed wheat imports from six Siberian and Far East regions in the Russian Federation. Further protocols on increasing exports to China were signed during the St. Petersburg International Economic Forum in June 2019. Thus, one additional large Siberian region was approved for wheat imports to China, and imports of soybeans from all Russian regions were allowed (previously, they were possible only from specified regions of the country). Protocols were also signed on the expansion of the list of allowed exports to China to include other grain and oilseed products, such as barley, and meals of oilseed and sugar beet (Agroinvestor, 2019[30]).

In 2019, the temporary reduction to zero of the **wheat export duty**, originally introduced in September 2016, was extended until 1 July 2021. The zero export duty applies to all wheat except durum wheat and planting seeds of other types of wheat.

On 1 October 2019, the Russian Federation, as an EAEU member, signed the **Framework Agreement on Comprehensive Economic Cooperation** and the **Free Trade Agreement** between the EAEU and the ***Republic of Singapore*** (EAEU, 2019[31]; EAEU, 2019[32]). Even though Singapore's import regime grants free entry to imports from all origins, the EAEU Commission considers the fixation of the duty-free regime between the parties in a formal trade agreement as an important step in view of possible changes in Singapore's import tariff regime: Singapore's WTO commitments give it the possibility to implement import duties on agricultural goods of up to 10%. Regarding the imports of agricultural goods from Singapore into the EAEU area, some key product groups, including meat, dairy and some others, are excluded from any tariff commitments. Other agricultural goods are to benefit from duty free entry immediately after the agreement takes effect, or to be subject to different schedules of duty reductions within a transition period of ten years.

On 25 October 2019, the Russian Federation, as an EAEU member, also signed a **Free Trade Agreement** with the ***Republic of Serbia***. The agreement provides for certain exemptions from an otherwise free trade regime. Within the agricultural group, sugar and certain alcoholic beverages imported into Serbia from the EAEU area remain subject to MFN import duties, while tariff rate quotas are established for specific processed cheese, spirits from grape wine, and cigarettes. Serbian poultry meat, specified processed cheese, sparkling wine, ethyl alcohol and tobacco products entering the EAEU continue to pay EAEU common tariffs, whereas tariff rate quotas are be applied to specified cheeses, alcohol, and cigarettes containing tobacco (EAEU, 2019[33]).

An interim agreement leading to the formation of a **Free Trade Area** between the EAEU and its member states and the ***Islamic Republic of Iran*** entered into force on 27 October 2019. In its agriculture chapter

this agreement foresees a reduction of between 25% and 100% of EAEU import duties on a broad range of products imported from Iran, notably certain fish products, vegetables, and fresh and dried fruits. The EAEU benefits from 20% to 75% tariff reductions on products such as beef and veal, butter, certain confectionery and chocolate, mineral waters, oil and fat products (EAEU, 2018[34]).

The EAEU also actively promotes economic and trade relations with other countries. In 2019, memoranda of co-operation and memoranda of understanding were signed with Indonesia, the African Union, Bangladesh, Argentina, and the Economic and Social Commission for Asia and the Pacific (ESCAP). These documents aim at increasing economic co-operation, bilateral trade and investments, and among other issues, cover those related to agriculture.

The Russian Federation, as an EAEU member, continued to participate in the development of the Union's regulatory base. Developments in the **phytosanitary and sanitary** area over the monitored period include the amendments to the EAEU unified veterinary requirements for goods subject to veterinary control and surveillance; unified veterinary certificate; amendments to unified quarantine phytosanitary requirements. In the area of **technical regulation,** amendments to EAEU technical regulations on food safety, and on the labelling of food products were introduced; an EAEU technical regulation on the safety of alcohol products was adopted; and the agreement on the mechanism of traceability of goods within the EAEU was signed. The EAEU also worked on specific issues of customs regulation, among other topics.

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Notes

[1] Agricultural tariff corresponds to the WTO definition and covers the HS-codes as specified in Annex 1 of WTO Agreement on Agriculture.

[2] All values in roubles for 2019 are converted into US dollars using average official exchange rates of the Central Bank of Russia for 2019. All values in roubles for 2020 are converted into US dollars using the official exchange rate of the Central Bank of Russia on 10 January 2020.

[3] The term "confirmation of conformity" refers to either a declaration of conformity by manufacturer or certification of conformity by a third party (voluntary or mandated by the legislation).

[4] This law does not apply to the production and turnover of automobile gasoline blended with ethyl alcohol or alcohol products, which is subject to specific technical regulation of the EAEU.

24 South Africa

Support to agriculture

South Africa reduced its support to agriculture during the reforms of the mid-1990s and support to farms has remained below 5% of gross farm receipts since 2010. In 2017-19, support to agriculture was around 4% of gross farm receipts. The total support estimate to agriculture (TSE) was around 0.3% of GDP in 2017-19, with direct support to farms (PSE) representing around 73% of the total support, and the remaining 27% financing general services to the sector (GSSE).

Market price support and payments based on input use are the most important components of support to farmers. However, the level of price distortions is low and domestic prices for most commodities are aligned with world price levels, except for sugar and to a lesser extent milk and wheat, mainly due to import tariffs. Direct payments, mainly in the form of investment subsidies, are mostly directed towards the small scale farming sector. As for the General Services Support Estimate (GSSE), the main elements are payments financing the agricultural knowledge and innovation system and expenditure on infrastructure. Most of the support in these two categories is targeted towards creating an enabling environment for the small scale farming sector that has emerged following land reform. Expenditures financing inspection and control are also an important element of the services provided to the sector.

Main policy changes

Overall, policies supporting farmers have remained unchanged both in terms of market price support and budgetary payments. Most of the policy measures and direct payments continue to target the smallholder sub-sector. The government provides post settlement assistance, including production loans to new and upcoming farmers (mostly operating on redistributed or restituted land). Most of government spending is financing general services to the sector.

In recent years, there were several policy changes targeted to enhance the redistribution of land within the land reform, such as legislation allowing compulsory purchase of land in public interest (“Strengthening the relative rights of people working the land”). In March 2018, the parliament voted for a bill that would allow for the expropriation without compensation of commercial farms (mostly owned by white farmers). In order to be applied in practice, however, this legislation requires a change in the Constitution and that legislative process was still on-going in 2019 and early 2020.

At the end of 2019, there was a reshuffle of government institutions merging the agenda of agriculture with that of land reform and rural development into the Department of Agriculture, Land Reform and Rural Development (DALRRD). This organisational reform brings the sensitive agenda of land reform under one heading with that of agriculture.

Assessment and recommendations

- The Carbon tax bill is an integral part of the system for implementing government policy on climate change, but in phase 1 of its implementation (2017-20) the carbon tax is not applied to agriculture. Primary agriculture is likely to be affected in this phase only indirectly through increased input costs, particularly for electricity, fertilisers and pesticides, as well as fuel and energy. Nonetheless, this should create incentives for farmers to look for ways to reduce use of some inputs and switch to alternative inputs or practices. To help encourage such good practices, numerous Carbon tax discounts are available. On the other hand, the applied fuel tax rebate on fuel used in agriculture is providing a counter incentive.
- The current relatively low level of Market Price Support for South African agriculture is the result of significant policy reforms implemented in the mid-1990s. These reforms reduced total support to agriculture (mainly price support) and its distortive effects on production and trade and have enhanced efficiency of the commercial farming sector and its integration with world markets.
- Since the reforms in the 1990s, increases in budgetary spending are financing the land reform process and supporting its beneficiaries (subsistence farmers, smallholders and commercial farmers). The main challenge continues to be implementing and effectively targeting support programmes that are tailored to the needs of emerging farmers.
- To strengthen the capacity and efficiency of programmes assisting incoming entrepreneurs into commercial farming, the involvement of experienced commercial farmers in the development of support programmes is key. Private-public partnerships are an efficient tool for engaging the available resources and addressing the current weaknesses in supporting programmes and services from public authorities. In this respect, the latest parliament decision to allow for expropriation of commercial farms, where most of the skill for commercial farming lies, compromises the declared goal of building a market oriented competitive farming sector and is a potential threat to the food security of the country.
- The pace of land reform should be closely linked to the development of the enabling environment for the beneficiaries of land reform (including education and training, adequate infrastructure, and marketing channels). Without those developments, land redistribution by itself cannot deliver the expected outcomes, such as improving the welfare of the black rural population, increasing food security in rural areas and developing a viable commercial sector.
- Very low, and in the case of nitrogen negative, nutrient balances across South Africa raise questions about the long-term effects on soil fertility in undersupplied parts of the country. Ensuring well-functioning markets and sufficient supplies of crop nutrients should be looked at carefully.

Policy responses in relation to the COVID-19 outbreak

Agricultural policies

The Department of Agriculture, Land Reform and Rural Development (DALRRD) has announced a number of interventions to assist the agricultural sector during the COVID-19 pandemic. DALRRD has made ZAR 1.2 billion (USD 83 million) in assistance available to address the effects of Coronavirus and ensure sustainable food production post the pandemic, mainly targeting financially distressed small-scale farmers. Of this, ZAR 400 million (USD 277 000) has been allocated for farmers within the Proactive Land Acquisition Strategy (PLAS) programme. The remainder is allocated to farmers in the poultry sector (to purchase day old chicks, point of lay chickens, feed, medication and sawdust); livestock sector (to purchase feed and medication); and vegetables sector (to purchase seedlings, fertiliser, pesticides, herbicides and for soil correction), with other commodity sectors to be targeted on a case-by-case basis.

A number of qualifying criteria apply and women, youth and people with disabilities are prioritised (DALRRD, 2020[1]). DALRRD has also made ZAR 100 million (USD 69 000) available to the Land Bank to assist farmers under distress.

Agro-food supply chain policies

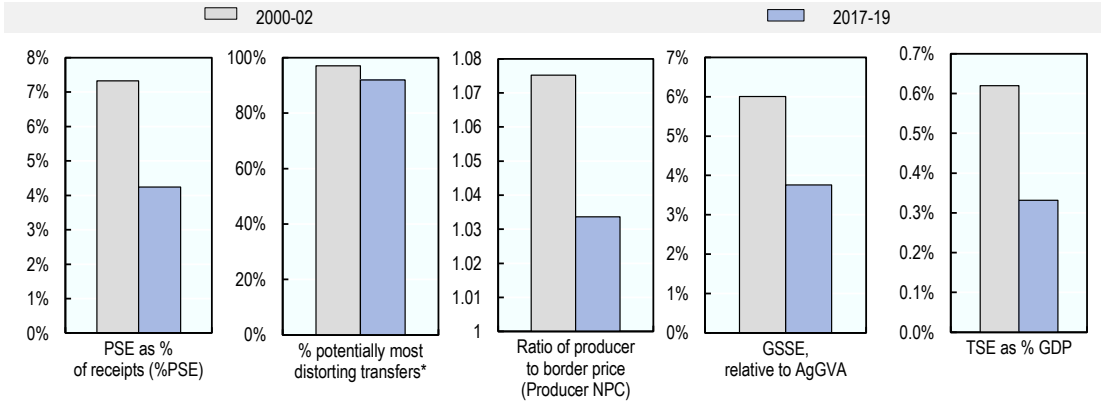
The President declared a national state of disaster on 15 March, leading to regulations that effectively shut down South African ports and halted exports from 27 March until 17 April.[1]

To ensure the functioning of the agro-food supply chain, the government has put in place a number of measures. The government is monitoring the availability and stability of food supply via an End-to-End Agricultural Value Chain Tracker. In the event that the security of supply of staple commodities is threatened, DALRRD will make a recommendation to the Department of Trade, Industry and Competition to impose export restrictions. DALRRD is also working to ensure that critical agricultural production activities such as harvesting continue uninterrupted under strict hygiene protocols (DALRRD, 2020[2]).

Consumer policies

The Department of Social Development, working with community-based organisations and the Solidarity Fund, is scaling up its food distribution programme for households in need. The South African Social Security Agency (Sassa) is providing food parcels and vouchers to temporary disability grant recipients whose grants expired in March and who could not reapply for the renewal of the grants because of the national lockdown. In March 2020, the Department of Basic Education provided instructions on the continuation of school meal programmes as part of an interim guidance sent to schools to prevent the spread of COVID-19 among learners and staff. Schools are to consider ways to distribute food to learners through the National School Nutrition Programme (NSNP) and, in the event of community spread of COVID-19, consider options such as “grab-and-go” bagged lunches or meal delivery in order to avoid meal distribution in settings where people might gather in groups.[2]

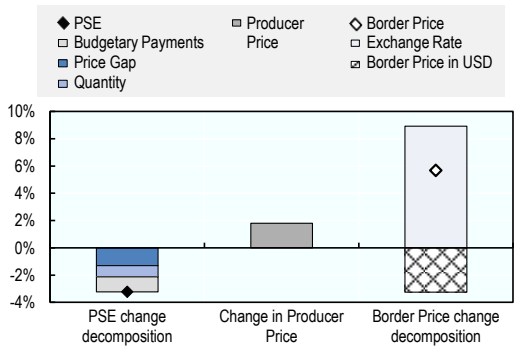
Figure 24.1. South Africa: Development of support to agriculture



Note: * Share of potentially most distorting transfers in cumulated gross producer transfers.
Source: OECD (2020), "Producer and Consumer Support Estimates", OECD Agriculture statistics (database), http://dx.doi.org/10.1787/agr-pcse-data-en.
StatLink https://doi.org/10.1787/888934144819

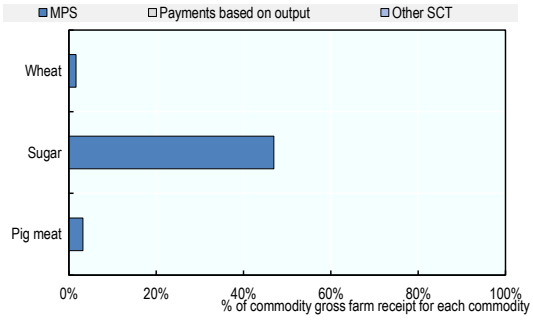
Support to producers (%PSE) declined in the second half of the 1990s and has remained low since then. In the most recent period support has been around 4% of gross farm receipts, well below the OECD average. The share of potentially **most distorting transfers** remains high, as most support is provided in the form of MPS and input subsidies (Figure 24.1). But this high share should be interpreted against the very low level of total support provided to farms. The level of support in the most recent year has decreased due to lower MPS following a decline in the price gap and in the quantity produced. The smaller price gap reflects domestic prices increasing less than world prices. The increase in the border price was mainly due to a depreciation of the South African Rand, which more than offset lower border prices in USD (Figure 24.2). Prices received by farmers were, on average, slightly above world prices. Prices for most products are aligned with world prices; however, the price gap is larger for sugar, being 88% above world prices. MPS is the main component of Single Commodity Transfers (SCT), with sugar having the highest share of SCT in commodity gross farm receipts (Figure 24.3). Overall, SCT represent 76% of the total PSE. The expenditures for **general services** (GSSE) relative to agriculture value added, mainly on knowledge and infrastructure, are in line with the OECD average. **Total support to agriculture** as a share of GDP has declined over time. Currently, around 73% of the total support is provided to individual farmers (PSE).

Figure 24.2. South Africa: Drivers of the change in PSE, 2018 to 2019



Source: OECD (2020), "Producer and Consumer Support Estimates", OECD Agriculture statistics (database), http://dx.doi.org/10.1787/agr-pcse-data-en.
StatLink https://doi.org/10.1787/888934144838

Figure 24.3. South Africa: Transfer to specific commodities (SCT), 2017-19



Source: OECD (2020), "Producer and Consumer Support Estimates", OECD Agriculture statistics (database), http://dx.doi.org/10.1787/agr-pcse-data-en.
StatLink https://doi.org/10.1787/888934144857

Table 24.1. South Africa: Estimates of support to agriculture

Million USD

	2000-02	2017-19	2017	2018	2019p
Total value of production (at farm gate)	**6 824**	**20 129**	**20 947**	**20 599**	**18 841**
***of which:** share of MPS commodities (%)*	74.8	75.0	74.7	75.1	75.0
Total value of consumption (at farm gate)	**6 000**	**18 286**	**18 360**	**19 257**	**17 241**
Producer Support Estimate (PSE)	**477**	**861**	**718**	**988**	**876**
Support based on commodity output	438	653	520	761	678
Market Price Support[1]	438	653	520	761	678
Positive Market Price Support	451	653	520	761	678
Negative Market Price Support	-13	0	0	0	0
Payments based on output	0	0	0	0	0
Payments based on input use	36	192	188	195	194
Based on variable input use	25	138	137	144	134
with input constraints	0	0	0	0	0
Based on fixed capital formation	11	52	50	50	58
with input constraints	0	0	0	0	0
Based on on-farm services	1	2	2	1	2
with input constraints	0	0	0	0	0
Payments based on current A/An/R/I, production required	3	16	10	32	4
Based on Receipts / Income	3	16	10	32	4
Based on Area planted / Animal numbers	0	0	0	0	0
with input constraints	0	0	0	0	0
Payments based on non-current A/An/R/I, production required	0	0	0	0	0
Payments based on non-current A/An/R/I, production not required	0	0	0	0	0
With variable payment rates	0	0	0	0	0
with commodity exceptions	0	0	0	0	0
With fixed payment rates	0	0	0	0	0
with commodity exceptions	0	0	0	0	0
Payments based on non-commodity criteria	0	0	0	0	0
Based on long-term resource retirement	0	0	0	0	0
Based on a specific non-commodity output	0	0	0	0	0
Based on other non-commodity criteria	0	0	0	0	0
Miscellaneous payments	0	0	0	0	0
Percentage PSE (%)	**7.3**	**4.2**	**3.4**	**4.7**	**4.6**
Producer NPC (coeff.)	**1.08**	**1.03**	**1.03**	**1.04**	**1.04**
Producer NAC (coeff.)	**1.08**	**1.04**	**1.04**	**1.05**	**1.05**
General Services Support Estimate (GSSE)	**264**	**321**	**320**	**328**	**315**
Agricultural knowledge and innovation system	146	137	134	141	135
Inspection and control	39	57	55	59	58
Development and maintenance of infrastructure	78	102	100	106	100
Marketing and promotion	0	25	31	22	21
Cost of public stockholding	0	0	0	0	0
Miscellaneous	0	0	0	0	0
Percentage GSSE (% of TSE)	**34.2**	**27.2**	**30.8**	**24.9**	**26.4**
Consumer Support Estimate (CSE)	**-350**	**-529**	**-319**	**-614**	**-653**
Transfers to producers from consumers	-347	-497	-319	-610	-563
Other transfers from consumers	-17	-31	0	-4	-89
Transfers to consumers from taxpayers	0	0	0	0	0
Excess feed cost	14	0	0	0	0
Percentage CSE (%)	**-6.0**	**-2.9**	**-1.7**	**-3.2**	**-3.8**
Consumer NPC (coeff.)	**1.07**	**1.03**	**1.02**	**1.03**	**1.04**
Consumer NAC (coeff.)	**1.06**	**1.03**	**1.02**	**1.03**	**1.04**
Total Support Estimate (TSE)	**741**	**1 182**	**1 038**	**1 316**	**1 191**
Transfers from consumers	364	529	319	614	653
Transfers from taxpayers	394	684	719	706	628
Budget revenues	-17	-31	0	-4	-89
Percentage TSE (% of GDP)	**0.6**	**0.3**	**0.3**	**0.4**	**0.3**
Total Budgetary Support Estimate (TBSE)	**304**	**529**	**519**	**555**	**513**
Percentage TBSE (% of GDP)	**0.2**	**0.1**	**0.1**	**0.2**	**0.1**
GDP deflator (2000-02=100)	**100**	**292**	**282**	**291**	**304**
Exchange rate (national currency per USD)	**8.69**	**13.67**	**13.31**	**13.25**	**14.45**

Note: p: provisional. NPC: Nominal Protection Coefficient. NAC: Nominal Assistance Coefficient.
A/An/R/I: Area planted/Animal numbers/Receipts/Income.
1. Market Price Support (MPS) is net of producer levies and excess feed cost. MPS commodities for South Africa are: wheat, maize, sunflower, sugar, milk, beef and veal, pig meat, sheep meat, poultry, eggs, groundnuts, grapes, oranges and apples.

Source: OECD (2020), "Producer and Consumer Support Estimates", *OECD Agriculture statistics* (database), http://dx.doi.org/10.1787/agr-pcse-data-en.

Contextual information

South Africa is the most industrialised and diversified economy in Africa, and the second largest economy (after Nigeria) on the African continent. With the largest GDP per capita of the continent, it ranks as an upper middle-income country. However, income inequality is high and poverty persists. South Africa has experienced a relatively moderate level of inflation —around 5-6% in recent years, with inflation targeting in the range of 3% to 6 %. But a persistently high rate of unemployment remains a challenge. The GDP growth rate has been declining since 2011 and came close to zero in 2019 (Figure 24.4).

The importance of agriculture in the economy is relatively low, at 2.4% of GDP, and 5% of employment (Table 24.2). Due to a large component of modern farming and processing industries, the backward and forward linkages in the agro-food complex are much larger than for the primary sector. South Africa has abundant agricultural land, but only 13% is arable, while the remaining agricultural area is mostly semi-arid pastures with extensive livestock production. There is a highly dualistic farm structure, with a well-developed and market oriented sector of large-scale commercial farms and a large number of smallholder and subsistence farms.

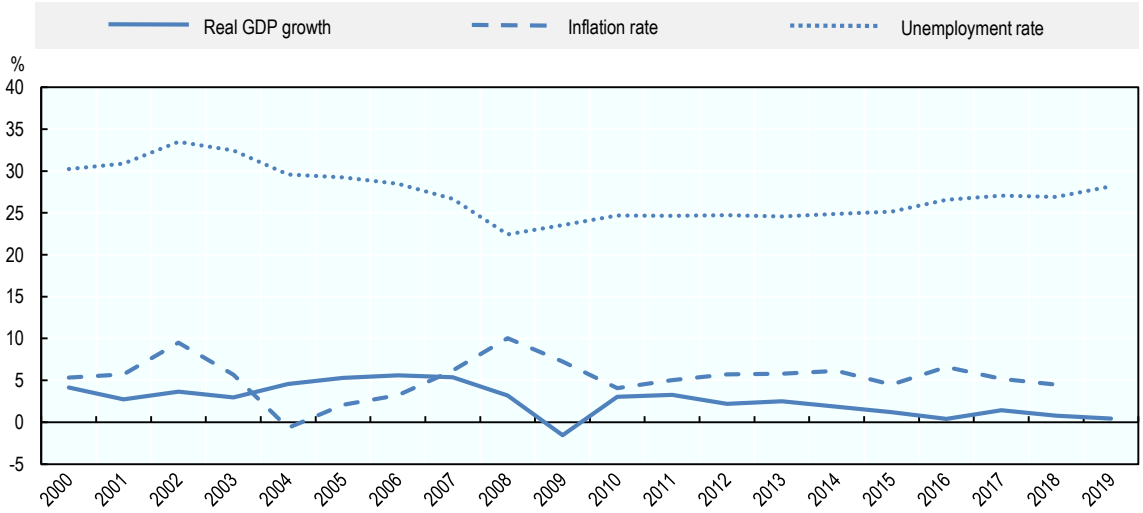
Table 24.2. South Africa: Contextual indicators

	South Africa		International comparison	
	2000*	2018*	2000*	2018*
Economic context			**Share in total of all countries**	
GDP (billion USD in PPPs)	347	793	0.9%	0.7%
Population (million)	44	57	1.0%	1.1%
Land area (thousand km²)	1 213	1 213	1.5%	1.5%
Agricultural area (AA) (thousand ha)	98 125	96 341	3.3%	3.2%
			All countries[1]	
Population density (inhabitants/km²)	37	48	53	62
GDP per capita (USD in PPPs)	7 870	13 578	9 275	21 924
Trade as % of GDP	19	25	12.4	15.3
Agriculture in the economy			**All countries[1]**	
Agriculture in GDP (%)	3.3	2.4	3.1	3.6
Agriculture share in employment (%)	9.9	5.2	-	-
Agro-food exports (% of total exports)	8.5	11.3	6.2	7.3
Agro-food imports (% of total imports)	5.2	7.1	5.5	6.3
Characteristics of the agricultural sector			**All countries[1]**	
Crop in total agricultural production (%)	56	49	-	-
Livestock in total agricultural production (%)	44	51	-	-
Share of arable land in AA (%)	14	12	32	33

Notes: *or closest available year. 1. Average of all countries covered in this report. EU treated as one.
Sources: OECD statistical databases; UN Comtrade; World Bank, WDI and national data.

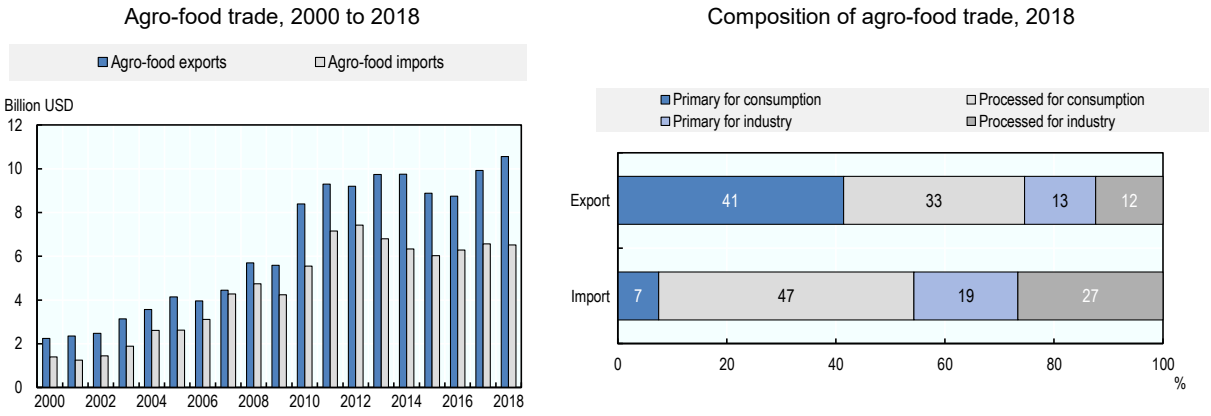
South Africa is a consistent net exporter of agro-food products and the values of both exports and imports are rising (Figure 24.5). The share of agro-food exports in total exports was around 11%, while the share of agro-food imports was around 7% in recent years (Table 24.2). Three-quarters of agro-food exports are for final consumption, both of primary and processed products. Agro-food imports are equally distributed among those for final consumption (54% of total imports, predominantly processed products) and for further processing in industry (46%) (Figure 24.5).

Figure 24.4. South Africa: Main economic indicators, 2000 to 2019



Sources: OECD statistical databases; World Bank, WDI and ILO estimates and projections.

Figure 24.5. South Africa: Agro-food trade

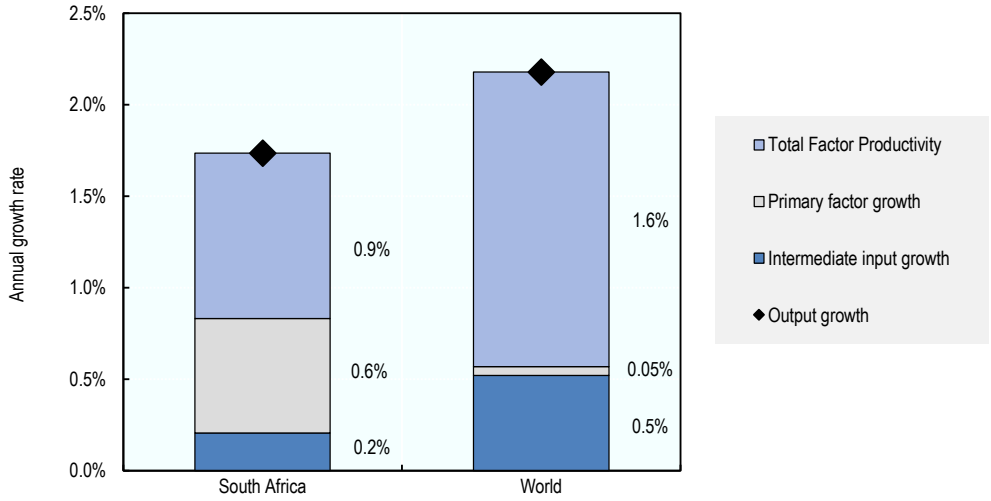


Note: Numbers may not add up to 100 due to rounding.
Source: UN Comtrade Database.

Growth in total factor productivity (TFP) contributes most to agricultural output growth in South Africa (Figure 24.6). However, TFP growth has slowed significantly relative to the 1990s and averaged 0.9% per year during 2007-16. As for output growth overall, TFP growth has therefore been well below the world average. Increased use primary factors and moderate growth in intermediate input use also contributed to the increase in output (Table 24.3).

Nitrate and phosphorus balances are very low (negative for nitrate) and well below the OECD average. Although agriculture uses 63% of abstracted water, only a few regions have irrigated land, and water resources are scarce in most of the agricultural areas (Table 24.3). The livestock sector is another important user of water in agriculture. Agriculture's share in energy use has declined, but remains above the OECD average.

Figure 24.6. South Africa: Composition of agricultural output growth, 2007-16



Note: Primary factors comprise labour, land, livestock and machinery.
Source: USDA Economic Research Service Agricultural Productivity database.

Table 24.3. South Africa: Productivity and environmental indicators

	South Africa		International comparison	
	1991-2000	2007-2016	1991-2000	2007-2016
			World	
TFP annual growth rate (%)	3.0%	0.9%	1.6%	1.6%
			OECD average	
Environmental indicators	**2000***	**2018***	**2000***	**2018***
Nitrogen balance, kg/ha	-2.5	-3.8	33.3	29.1
Phosphorus balance, kg/ha	0.2	0.3	3.3	2.3
Agriculture share of total energy use (%)	2.6	3.2	1.7	2.0
Agriculture share of GHG emissions (%)	..	..	8.1	8.9
Share of irrigated land in AA (%)	1.5	1.7	-	-
Share of agriculture in water abstractions (%)	61.3	62.5	46.0	49.0
Water stress indicator	..	..	9.9	8.9

Notes: * or closest available year.
Sources: USDA Economic Research Service, Agricultural Productivity database; OECD statistical databases; FAO database and national data.

Description of policy developments

Main policy instruments

In the post-apartheid period (mid-1990s), substantial reforms reduced state intervention in agricultural markets, which led to a stronger market orientation of the commercial farming sector. Under the current system, there are no domestic market support interventions and no export subsidies applied. Border measures, applied on the Southern African Customs Union (SACU)[3] common borders, are the only price support policy for all commodities except sugar. The Sugar Agreement of 2000 (between different agents in the sugar production chain) permits exports of raw sugar only through a single-channel industry arrangement, and allocates quotas to individual producers for sugar sold on the domestic market.

Other policy instruments used are input subsidies, mainly in the form of a diesel tax rebate; programmes supporting new farmers benefiting from land reforms; and general services provided to the sector, mainly research, extension and inspection services. The National Land Care Programme (NLP) is a community-based and government-supported approach promoting sustainable management and use of natural agricultural resources.

The Land Reform, launched in 1994, is the key policy issue related to the agricultural sector. The main objectives of the Land Reform are to redress past injustices, foster reconciliation and stability, support economic growth, improve household welfare and alleviate poverty in rural areas. Land restitution, land redistribution and land tenure reform are the main elements of the Land Reform. During the process of implementing the Land Reform a range of programmes (Comprehensive Agricultural Support Programme; *Illima/Letsema* projects; Micro-agricultural Financial Institutions of South Africa – MAFISA) were implemented to create an enabling environment for the previously disadvantaged farmers (subsistence, smallholders and commercial), such as capacity building, provision of appropriate information services and infrastructures.

A review of the Land redistribution for agricultural development (LRAD) projects indicated that a number of projects implemented are not economically viable. The DRDLR amended the Land Reform regulation in 2009 in order to rationalise the land redistribution process and to assist the vulnerable projects. The Agricultural Land Holding Account (created in 2009) is responsible for land acquisition and, through the Recapitalisation and Development Programme, for recapitalisation and development of distressed land reform projects. The beneficiaries may dispose of the land after an agreed lease period, provided the project is economically viable.

The Integrated Food Security Strategy (IFSS), introduced in 2002, based on public and private civil society partnerships, focuses on household food security as the building block for national food security. One of the strategic approaches is to increase household food supplies by providing production support services to households' own food production. The food security objective is further supported by *Fetsa Tlala*, an integrated food production initiative (introduced in 2013), which is aimed at the production of staple foods on fallow land with agricultural potential in communal areas.

The Comprehensive Rural Development Programme (CRDP), launched in 2009, provides support for the development of rural areas through two main programmes, both of them related to the agricultural sector. The Rural Infrastructure Development (RID) programme promotes investment in rural infrastructure. Expenditure increased significantly due to the increase in funding for projects providing access to basic services, particularly sanitation, irrigation and roads. The Rural Enterprise and Industrial Development (REID) programme assists in the co-ordination and facilitation of rural enterprise development, industrial development and support to rural communities to produce their own food.

South Africa is a founding member of the Southern African Customs Union (SACU). This is a full customs union, with a common external tariff. In 1994, South Africa became a member of the Southern African Development Community (SADC).[4] For the implementation of the FTA, the SADC incorporated the principle of asymmetry: a phase-down (started in 2000) of SACU tariffs in five years (by 2005); and those of other SADC countries to be completed in 12 years, i.e. by 2012. Hence, from 2012, the SADC free trade agreement (FTA) has been fully implemented.

South Africa is also a beneficiary of the US African Growth and Opportunity Act (AGOA), which is a non-reciprocal trade preference programme that grants eligible Sub-Saharan Africa countries duty-free quota-free (DFQF) access to the United States for selected export products. The AGOA act was enacted in 2000 for a period of 8 years to 2008. The initial Act was extended to 2015, and further extended to 2025. AGOA has a positive impact on some of South Africa's agricultural sub-sectors in particular the exports of wine, macadamia nuts and oranges.

Signatory to the 2016 Paris Agreement on Climate Change, the South African Government has committed to reducing greenhouse gas (GHG) emissions by 34% by 2020 and 42% by 2025 relative to the levels in 1990 (National Climate Change Response Policy 2011), through the approval of a carbon tax bill on 16 August 2017. This bill is an integral part of the system for implementing government policy on climate change. It should enable South Africa to meet its NDC commitments, and to reduce the country's GHG emissions in line with its National Climate Change Response Policy and National Development Plan. South Africa implements the Carbon tax through a phase-in approach. The current Phase 1 period is set for 2017 to 2020 and exempts primary agriculture from the carbon tax. However, this exclusion may be reconsidered for Phase 2 (from 2021).

Domestic policy developments in 2019-20

Support to agriculture: Overall, policies supporting farmers have remained unchanged. Most of the policy measures continue to target the smallholder sub-sector. The government provides post-settlement assistance, including production loans to new and upcoming farmers (mostly small scale farmers operating on redistributed or restituted land). Several programmes support those farmers in order to assist them to develop commercially viable businesses:

- The Comprehensive Agricultural Support Programme (CASP) focuses mainly on providing support in the following areas: on and off-farm infrastructure and production inputs; targeted training, skill development and capacity building; marketing and business development and support; information and knowledge management; technical and advisory services, regulatory services and financial services. Overall, the budgetary expenditure financing CASP was ZAR 1 595 million (USD 120 million) in 2018 (FY 2018/19[5]), and the sum budgeted for 2019 (FY 2019/20) is ZAR 1 478 million (USD 102 million).
- The Ilima/Letsema Programme (implemented in 2008/09) aims to increase food production, particularly by the smallholder farming sector. Through provincial departments, it finances mostly conditional grants for specific production projects such as upgrading irrigation schemes and other infrastructure and on farm investments to strengthen production capacity. The budget allocation to the programme was to ZAR 552 million (USD 41 million) in 2018 and for 2019 the budgeted amount increased to ZAR 583 million (USD 40 million).

Land reform: In March 2018, the parliament voted for a bill that would allow for the expropriation without compensation of commercial farms (mostly owned by white farmers). In order to be applied in practice, this legislation may require a change in the Constitution, and that legislative process continued into 2019. However, at the end of 2019, South Africa published a draft of a Constitutional Amendment Bill that proposes that owners of expropriated property would no longer need to be compensated, inviting public comments (Washington Post, 2020[3]).

This latest development needs to be put in a broader context. Since 2016, there were several policy changes targeted to enhance the redistribution of land within the land reform (started in 1994). In May 2016, South Africa passed a bill that allows the compulsory purchase of land in the public interest. The bill enables the state to pay for land at a value determined by a government adjudicator and then expropriate it for the "public interest", ending the willing-buyer, willing-seller approach to land reform. Another initiative of the government to accelerate the land reform was the policy approach called "Strengthening the Relative Rights of People Working the Land". This initiative empowers farm workers through a model that positions farm workers as part owners in agricultural operations alongside the existing farm owners. The Agricultural Land Holdings Act was published on 17 March 2017. The Act made provision for the establishment of a Land Commission to establish a register of public and private agricultural land ownership. According to the Act, foreign persons cannot buy agricultural land and may only conclude long-term leases of agricultural land (30 to 50 years).

Institutional change: The key government bodies implementing agricultural policies were the Department of Agriculture, Forestry and Fisheries (DAFF) and the Department of Rural Development and Land Reform (DRDLR). At the end of 2019, there was a reshuffle of these institutions merging the agriculture portfolio and the portfolio of land reform and rural development into the Department of Agriculture, Land Reform and Rural Development (DALRRD). The portfolio of forestry and fisheries merged with the portfolio of environment within the Department of Environment, Forestry and Fisheries (DEFF).

Trade policy developments in 2019-20

Import protection for agricultural and food products is based on specific and *ad valorem* tariffs. The average applied MFN tariff for agricultural products was 8.7% in 2018, well below the average bound tariff on agricultural products of 39%. Tariff rate quotas (TRQs) exist for a range of agricultural products under the WTO minimum market access commitments. The zero import tariffs for maize (applied since 2007) continued in 2019 and 2020.

For wheat and sugar South Africa applies a variable, formula based, ***import tariff*** reflecting the price changes on world markets. During 2019, the wheat and sugar import tariffs were adjusted four and two times, respectively, ending 100% higher for wheat and 29% higher for sugar compared to their levels at the end of 2018.[6]

The sunset review investigation on ***anti-dumping duties*** on frozen bone-in portions of fowl of the species *Gallus Domesticus* originating in or imported from the United States was finalised on 24 November 2017. The International Trade Administration Commission (IATC) made a final determination to recommend to the Minister of Trade and Industry that the anti-dumping duty on the subject product be maintained at ZAR 9.40/kg (USD 0.65) and the Minister approved the Commission's recommendation. Within specific quotas agreed, the imports from the United States are exempt from anti-dumping duties. The AGOA rebate quota was increased from 65 417 tonnes (in 2018/19) to 68 590 tonnes for 2019/20.

Currently a ***safeguard tariff*** is in place on bone-in chicken pieces from the European Union. Tariffs on chicken meat imports were increased in 2018. While South Africa phased out the safeguard measure on imports of potato chips from the European Union in 2016, the anti-dumping duties on frozen potato chips originating or imported from Belgium and the Netherlands are still in place. A sunset review investigation of anti-dumping duties on frozen potato chips originating or imported from Belgium and the Netherlands was initiated on 26 July 2019.

The January 2019 outbreak of foot and mouth disease (FMD) in South Africa led to several countries suspending imports of cloven-hoofed animals and their products from South Africa. These include the People's Republic of China, Botswana, Mozambique, Namibia, Swatini (Swaziland), Zambia, and Zimbabwe. South Africa was in the process of recovering from the January 2019 foot and mouth disease outbreak when a new incident occurred on 1 November 2019 in the Molemole District of Limpopo. Although South Africa was able to put a system in place to ensure that the January 2019 FMD outbreak was under control, they failed to convince the World Organization for Animal Health to reinstate the country's status of FMD-free zone. To lessen the impact of these trade bans on an industry that is currently recovering from drought and the 2017/2018 listeria outbreak, South Africa is engaging with its trade partners to relax the trade restrictions and negotiating new health certificates where necessary.

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DALRRD (2020), "Update on agriculture and food sector value chain - COVID-19", Media Statement 26 March 2020, Department of Agriculture, Land Reform and Rural Development, Republic of South Africa, https://www.daff.gov.za/docs/media/Media%20Statement-%20Update%20on%20Agriculture%20.pdf. [2]

Washington Post (2020), *Why Land Seizure Is Back in the News in South Africa*, https://www.washingtonpost.com/business/why-land-seizure-is-back-in-the-news-in-south-africa/2020/02/25/85d2f612-579c-11ea-8efd-0f904bdd8057_story.html. [3]

Notes

[1] https://www.reuters.com/article/health-coronavirus-safrica-wine/update-1-south-africa-eases-wine-export-restrictions-caused-by-coronavirus-lockdown-idUSL8N2BV6GL.

[2] FAO Food And Agriculture Policy Decision Analysis Tool (FAPDA), http://www.fao.org/in-action/fapda/tool/index.html#main.html.

[3] The SACU members are: Botswana, Lesotho, Namibia, Swatini (former Swaziland) and South Africa.

[4] The SADC member countries are: Angola, Botswana, Democratic Republic of Congo, Lesotho, Madagascar, Malawi, Mauritius, Mozambique, Namibia, Seychelles, South Africa, Swatini, Tanzania, Zambia and Zimbabwe.

[5] FY – financial year April/March.

[6] Wheat: 24 May – increased from ZAR 490.7/t to ZAR 675.1/t; 14 June – increased from ZAR 675.1/t to ZAR 958/t; 20 September – reduced from ZAR 958/t to ZAR 664.7/t; and 25 October – increased from ZAR 664.7/t to ZAR 1008.6/t. Sugar: 15 February – increased from ZAR 3 695.7/t to ZAR 4 017.9/t; and 18 October – increased from ZAR 4 017.9/t to ZAR 4 766.1/t.

25 Switzerland

Support to agriculture

Over the past decades, Switzerland has seen some moderate reductions in its support to agriculture, but support levels tended to stabilise most recently. Support to producers (PSE) remains high in terms of its share on gross farm receipts and is almost three times above the OECD average. Total support to agriculture (TSE) was around 1% of GDP in 2017-19 and is dominated by support to individual producers (PSE). In contrast, changes over time in the structure of support are more pronounced, as market price support (MPS) has partly been replaced by various types of direct payments.

MPS, mainly due to tariff rate quotas (TRQs) with high out-of-quota tariffs, remains the main component of support. However, over the past 30 years, MPS has been reduced from 80% to around 50% of total producer support. Nonetheless, average domestic prices were 45% above world prices in 2017-19. Switzerland provides significant direct payments to farms (almost all subject to environmental cross-compliance), which were introduced to partly compensate the reduction of the MPS. The role of the direct payments has been increasing over time and while these represented around 20% of support to farmers in the 1980s, their share has increased to almost 50% in current years. Most of these payments are currently provided in the form of payments per area, payments to maintain farming in less favoured conditions, and payments to farmers who voluntarily apply stricter farming practices related to environmental and animal welfare societal demand.

Expenditures for general services are high in Switzerland. The main element of the General Services Support Estimate (GSSE) is to finance the agricultural knowledge and innovation system, which represents almost half of the GSSE expenditures.

Main policy changes

The policy framework implemented during the period 2014-17 was extended until the end of 2021 (*Politique agricole* 2018-2021 – PA 2018-21). Overall, the spending budgeted for 2018-21 was reduced by 1.7% compared to 2014-17. The main change is the gradual reduction of transitional payments, while the saved budgetary resources are shifted to finance other direct payments (mainly to support biodiversity, sustainable use of natural resources and animal welfare).

As from 1 January 2019, export subsidies for processed food products were abolished. To compensate for the price reduction related to the elimination of the export subsidies, the funds saved were transferred to the agricultural budget to finance direct payments to milk and grain.

On 12 February 2020, the Federal Council announced its plan on the future development of the Agricultural Policy from 2022 (PA22+). The draft PA22+ foresees the promotion of an even more sustainable and value-creating agriculture. Extra support measures for the promotion of wine began in December 2019 and are to continue throughout 2020.

Assessment and recommendations

- The objective of ensuring security of food supply should be sought through a more competitive agriculture rather than by direct payments. Policies facilitating structural change including investment support and exit strategies should facilitate such a process.
- Continued reductions of import barriers and elimination of the export subsidies to processed products are important steps to further reduce the burden to consumers and distortions to markets.
- The introduction of output payments for milk and area payments to grain producers to compensate for the elimination of export subsidies could undermine efforts to reduce resource misallocation and could impede structural adjustment. Such compensatory measures should be temporary.
- The use of funds from the reduction of transitional payments to finance biodiversity, sustainable use of natural resources and animal welfare could potentially contribute to address some market failures.
- The range of measures envisaged in the Agricultural Policy 2022 are broadly supportive of a more sustainable agricultural sector. They could contribute to more efficient use of natural resources and enhance the environmental sustainability of agriculture. More regional targeting of direct payments is also foreseen, although a better distinction could be made between policies that address market failures (the provision of positive externalities and public goods as well as the avoidance of negative externalities), and those that address income problems. For the latter a use of economy wide measures, as opposed to specific agricultural ones, could be sought.
- The Swiss agricultural sector is only marginally affected by the current CO_2 legislation. In order to achieve its climate change targets for the agricultural sector, Switzerland should contemplate the extension of the CO_2 tax to other parts of the agricultural sector as well as to focus more on targeted policies.

Policy responses in relation to the COVID-19 outbreak

Agricultural policies

In addition to normal short-term loans available to bridge liquidity shortages of agricultural producers, the Swiss Government is considering the advanced payment of direct payments and payment for specific crops. No other compensation is being considered.[1]

Several existing web-based platforms allow farms searching for additional labour resources and interested workers to come together.

Agro-food supply chain policies

Flexibility has been introduced into the partial tariff quotas for foodstuff to stabilise market prices. So far this has been used for butter and eggs, but potentially can be used for a range of goods if needed.

The Swiss Government has allocated CHF 3 million for the freezing of beef and veal, and goat meat for which demand has reduced.

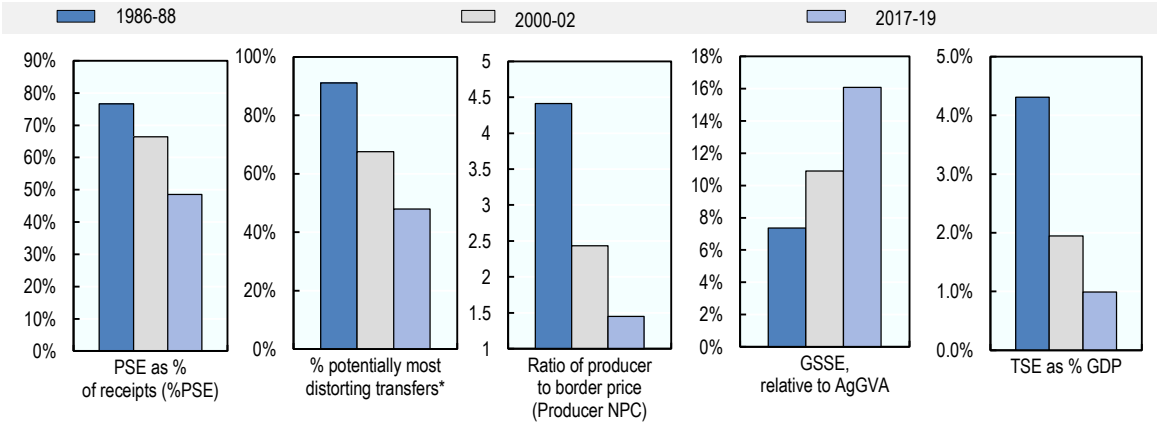
In the case of food shortages, tariff rate quotas as well as payment terms for agriculture imports can be temporarily extended.[2]

While markets have been closed, direct sale from farms to consumers, farm shops, and the online sale of seeds and other gardening products remains allowed. Serving food and drink to customers on site is forbidden.

Other

There are no sectoral restrictions on the fiscal stimulus package provided by the federal government. Consequently, food producers are eligible for a range of programmes designed to protect the incomes and address liquidity bottlenecks. The Federal Council has announced supportive fiscal measures amounting to over CHF 62 billion (nearly 9% of 2019 GDP), including for partial unemployment compensation, financial aid for particularly affected firms, loan guarantees for SMEs, loss cancellation for cancelled events, temporary and interest-free deferral of social-security contribution payments by affected companies, extended payment periods for taxes and payables to federal suppliers without having to incur interest on arrears, extension of short-time work allowance and simplification of the application process, and compensation for loss of earnings for self-employed people and for some employees affected by official measures to combat the coronavirus (e.g. parents who need to take care of children following the closing of schools).[3]

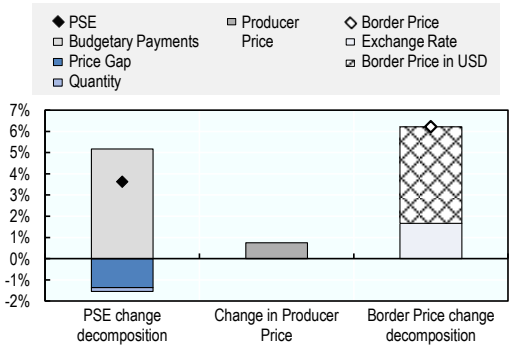
Figure 25.1. Switzerland: Development of support to agriculture



Note: * Share of potentially most distorting transfers in cumulated gross producer transfers.
Source: OECD (2020), "Producer and Consumer Support Estimates", OECD Agriculture statistics (database), http://dx.doi.org/10.1787/agr-pcse-data-en.
StatLink https://doi.org/10.1787/888934144876

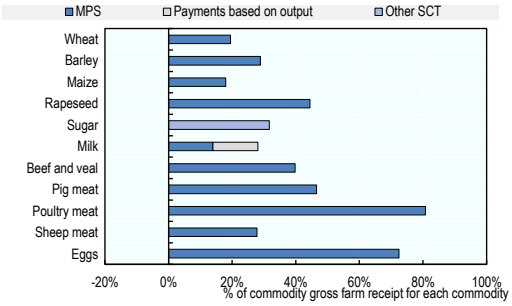
Support to producers (%PSE) has declined gradually over the long term but remains high. In the 2017-19 period support has been around 49% of gross farm receipts, almost three times the OECD average. The share of potentially **most distorting** transfers has decreased over time due to a decline in market price support (MPS), but still stands at about half of the support (Figure 25.1). The level of support has increased from 2018 to 2019 mainly due to the increase in budgetary payments. MPS has declined as higher world prices more than offset the increase in producer prices (Figure 25.2). Prices received by farmers were higher than world prices (by 45% on average); price support, the main component of Single Commodity Transfers (SCT), varies between commodities. The highest price gaps and hence the highest share of SCT in commodity gross farm receipts are observed for poultry and eggs (Figure 25.3). Overall, SCT represent 48% of the total PSE. The expenditures for **general services**, mainly on knowledge and innovation, relative to agricultural value added record an upward trend and are among the highest across the countries covered by this report. **Total support to agriculture** as a share of GDP has declined significantly over time. Almost 90% of the total support is provided to individual farmers (PSE).

Figure 25.2. Switzerland: Drivers of the change in PSE, 2018 to 2019



Source: OECD (2020), "Producer and Consumer Support Estimates", OECD Agriculture statistics (database), http://dx.doi.org/10.1787/agr-pcse-data-en.
StatLink https://doi.org/10.1787/888934144895

Figure 25.3. Switzerland: Transfer to specific commodities (SCT), 2017-19



Source: OECD (2020), "Producer and Consumer Support Estimates", OECD Agriculture statistics (database), http://dx.doi.org/10.1787/agr-pcse-data-en.
StatLink https://doi.org/10.1787/888934144914

Table 25.1. Switzerland: Estimates of support to agriculture

Million USD

	1986-88	2000-02	2017-19	2017	2018	2019p
Total value of production (at farm gate)	**8 025**	**5 695**	**9 088**	**8 785**	**9 241**	**9 236**
***of which:** share of MPS commodities (%)*	62.8	58.0	57.4	58.8	57.0	56.5
Total value of consumption (at farm gate)	**12 693**	**8 853**	**14 613**	**14 137**	**14 884**	**14 819**
Producer Support Estimate (PSE)	**6 871**	**5 054**	**6 155**	**6 266**	**6 041**	**6 160**
Support based on commodity output	5 966	3 361	2 883	3 063	2 822	2 764
Market Price Support[1]	5 939	3 142	2 559	2 765	2 522	2 390
Positive Market Price Support	5 939	3 142	2 559	2 765	2 522	2 390
Negative Market Price Support	0	0	0	0	0	0
Payments based on output	27	218	324	298	300	374
Payments based on input use	358	126	146	146	147	146
Based on variable input use	289	67	68	68	68	67
with input constraints	0	14	0	0	0	0
Based on fixed capital formation	46	53	79	78	79	79
with input constraints	0	0	34	29	36	37
Based on on-farm services	23	6	0	0	0	0
with input constraints	0	0	0	0	0	0
Payments based on current A/An/R/I, production required	392	564	1 044	962	981	1 190
Based on Receipts / Income	10	0	0	0	0	0
Based on Area planted / Animal numbers	382	564	1 044	962	981	1 190
with input constraints	217	540	997	915	935	1 141
Payments based on non-current A/An/R/I, production required	18	51	1 062	1 065	1 068	1 054
Payments based on non-current A/An/R/I, production not required	0	774	117	131	116	105
With variable payment rates	0	0	0	0	0	0
with commodity exceptions	0	0	0	0	0	0
With fixed payment rates	0	774	117	131	116	105
with commodity exceptions	0	0	0	0	0	0
Payments based on non-commodity criteria	0	58	710	710	713	708
Based on long-term resource retirement	0	0	0	0	0	0
Based on a specific non-commodity output	0	58	710	710	713	708
Based on other non-commodity criteria	0	0	0	0	0	0
Miscellaneous payments	137	120	192	190	194	192
Percentage PSE (%)	**76.6**	**66.4**	**48.5**	**51.0**	**47.3**	**47.4**
Producer NPC (coeff.)	**4.41**	**2.43**	**1.45**	**1.52**	**1.42**	**1.41**
Producer NAC (coeff.)	**4.27**	**2.98**	**1.94**	**2.04**	**1.90**	**1.90**
General Services Support Estimate (GSSE)	**431**	**337**	**741**	**738**	**742**	**741**
Agricultural knowledge and innovation system	110	70	368	367	367	369
Inspection and control	9	24	12	12	12	12
Development and maintenance of infrastructure	80	54	83	81	84	83
Marketing and promotion	29	37	64	65	65	63
Cost of public stockholding	66	32	42	41	42	43
Miscellaneous	137	120	171	172	173	170
Percentage GSSE (% of TSE)	**5.4**	**6.1**	**10.7**	**10.5**	**10.9**	**10.7**
Consumer Support Estimate (CSE)	**-9 012**	**-5 032**	**-4 322**	**-4 718**	**-4 095**	**-4 152**
Transfers to producers from consumers	-6 065	-3 243	-2 581	-2 804	-2 529	-2 409
Other transfers from consumers	-3 788	-1 986	-1 760	-1 939	-1 579	-1 762
Transfers to consumers from taxpayers	700	147	5	5	4	5
Excess feed cost	141	50	15	20	9	15
Percentage CSE (%)	**-75.0**	**-57.8**	**-29.6**	**-33.4**	**-27.5**	**-28.0**
Consumer NPC (coeff.)	**4.44**	**2.44**	**1.42**	**1.50**	**1.38**	**1.39**
Consumer NAC (coeff.)	**4.00**	**2.37**	**1.42**	**1.50**	**1.38**	**1.39**
Total Support Estimate (TSE)	**8 002**	**5 538**	**6 901**	**7 009**	**6 788**	**6 906**
Transfers from consumers	9 853	5 229	4 341	4 743	4 108	4 171
Transfers from taxpayers	1 937	2 296	4 320	4 205	4 259	4 497
Budget revenues	-3 788	-1 986	-1 760	-1 939	-1 579	-1 762
Percentage TSE (% of GDP)	**4.3**	**1.9**	**1.0**	**1.0**	**1.0**	**1.0**
Total Budgetary Support Estimate (TBSE)	**2 063**	**2 396**	**4 342**	**4 244**	**4 265**	**4 515**
Percentage TBSE (% of GDP)	**1.1**	**0.8**	**0.6**	**0.6**	**0.6**	**0.6**
GDP deflator (1986-88=100)	**100**	**127**	**137**	**136**	**137**	**138**
Exchange rate (national currency per USD)	**1.58**	**1.64**	**0.99**	**0.98**	**0.98**	**0.99**

Note: p: provisional. NPC: Nominal Protection Coefficient. NAC: Nominal Assistance Coefficient.
A/An/R/I: Area planted/Animal numbers/Receipts/Income.
1. Market Price Support (MPS) is net of producer levies and excess feed cost. MPS commodities for Switzerland are: wheat, maize, barley, rapeseed, sugar, milk, beef and veal, sheep meat, pig meat, poultry and eggs.

Source: OECD (2020), "Producer and Consumer Support Estimates", *OECD Agriculture statistics* (database), http://dx.doi.org/10.1787/agr-pcse-data-en.

Contextual information

Switzerland is a small economy with one of the highest GDP per capita and low inflation and unemployment. It is a densely populated country especially in the valley areas. The relative importance of agriculture in the Swiss economy is low with its share in the GDP at 0.7%, while its share in employment is around 3%. These relatively low shares are mainly due to highly developed industrial and services sectors in the economy (Table 25.2 and Figure 25.4).

The farm structure is dominated by relatively small family farms. Hills and mountain farming areas (including the alpine summer pastures) are used for extensive milk and meat production, while more concentrated pork and poultry production is located in valleys. The agricultural area is mostly grassland with arable land representing 26% of the total. Over the longer-term, crop production has shifted away from traditional arable crops (grains, oilseeds) towards an increasing production of fruits and vegetables and since the early 2000s the value of crop products has roughly equalled that of the livestock production.

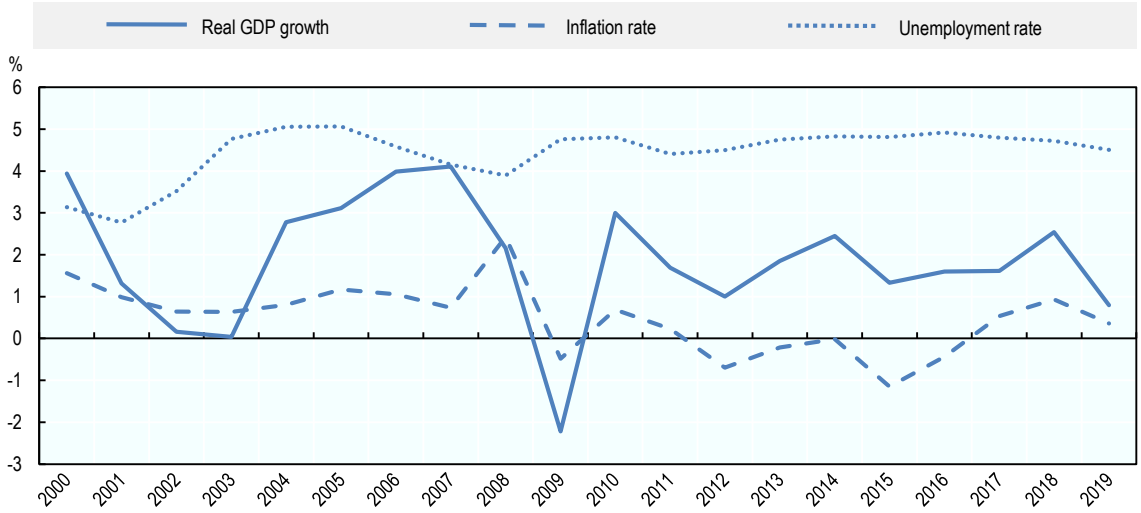
Table 25.2. Switzerland: Contextual indicators

	Switzerland		International comparison	
	2000*	2018*	2000*	2018*
Economic context			**Share in total of all countries**	
GDP (billion USD in PPPs)	257	591	0.6%	0.5%
Population (million)	7	9	0.2%	0.2%
Land area (thousand km²)	40	40	0.05%	0.05%
Agricultural area (AA) (thousand ha)	1 566	1 513	0.05%	0.05%
			All countries[1]	
Population density (inhabitants/km²)	180	213	53	62
GDP per capita (USD in PPPs)	35 443	69 358	9 275	21 924
Trade as % of GDP	30	42	12.4	15.3
Agriculture in the economy			**All countries[1]**	
Agriculture in GDP (%)	1.2	0.7	3.1	3.6
Agriculture share in employment (%)	4.8	3.1	-	-
Agro-food exports (% of total exports)	2.8	3.2	6.2	7.3
Agro-food imports (% of total imports)	5.9	4.5	5.5	6.3
Characteristics of the agricultural sector			**All countries[1]**	
Crop in total agricultural production (%)	48	47	-	-
Livestock in total agricultural production (%)	52	54	-	-
Share of arable land in AA (%)	26	26	32	33

Notes: *or closest available year. 1. Average of all countries covered in this report. EU treated as one.
Sources: OECD statistical databases; UN Comtrade; World Bank, WDI and national data.

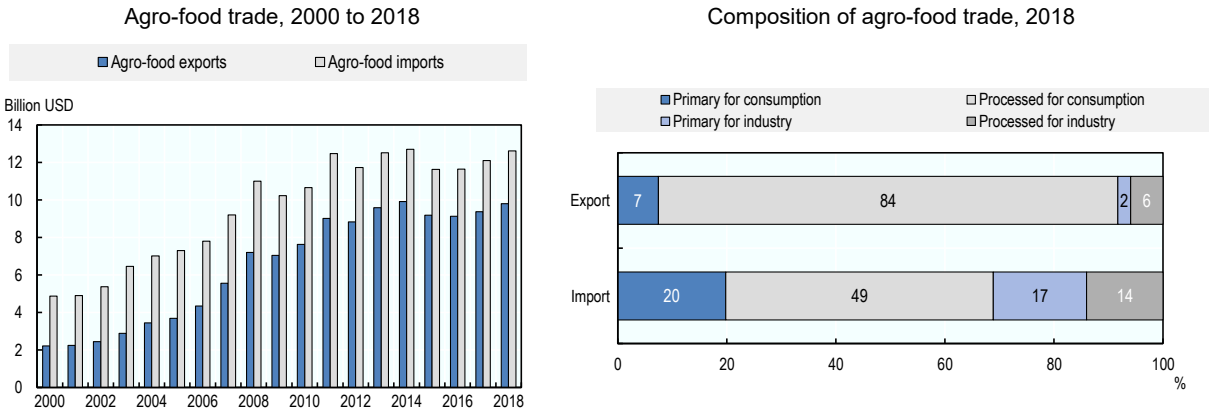
Switzerland has consistently been a net agro-food importer; its current share of agro-food imports in total imports is 4.5%, while the share of agro-food exports in total exports is 3.2% (Table 25.2). Swiss agro-food exports consist mostly of processed products for final consumption (84% of total agro-food exports). This category is also the most important, although less dominant, in the agro-food imports (49%), and imports for further processing in the food industry represent almost one-third of the imports (Figure 25.5).

Figure 25.4. Switzerland: Main economic indicators, 2000 to 2019



Sources: OECD statistical databases; World Bank, WDI and ILO estimates and projections.

Figure 25.5. Switzerland: Agro-food trade

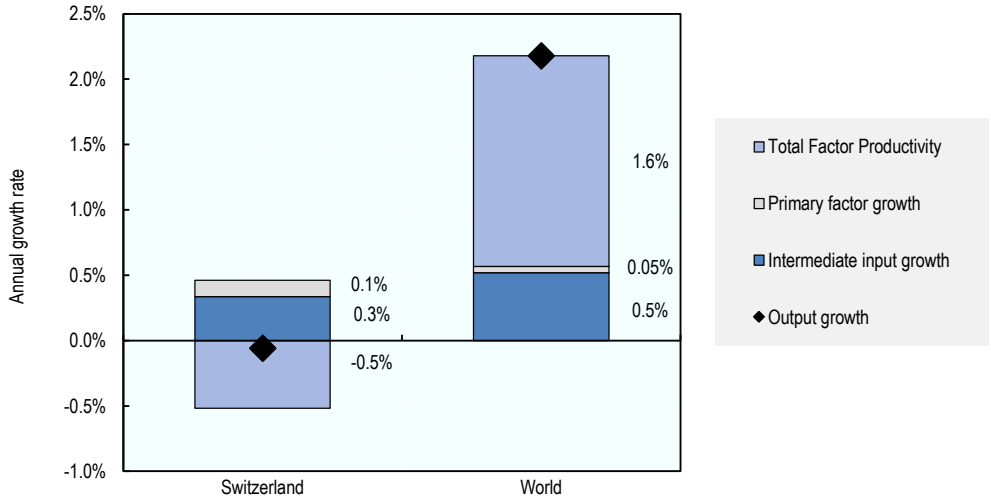


Note: Numbers may not add up to 100 due to rounding.
Source: UN Comtrade Database.

Total factor productivity (TFP) growth has slowed significantly and, between 2007 and 2016, is estimated to have been negative (Table 25.3). This was partially compensated by a small growth in the use of intermediary inputs (0.3%) and primary factor growth (0.1%). Still, overall output has declined during that decade.

Swiss agriculture is largely rain-fed. Swiss farmers irrigate only 2% of their agricultural land and the share of agriculture in the country's water abstraction is less than one-fifth of the OECD average. Also the water stress indicator is well below the OECD average. Nutrient surpluses have declined substantially in the 1990s, notably for phosphorus, but have been stagnant for many years. The surplus of nitrogen is still more than twice the OECD average. The share in greenhouse gas (GHG) emissions slightly increased and is higher than the OECD average.

Figure 25.6. Switzerland: Composition of agricultural output growth, 2007-16



Note: Primary factors comprise labour, land, livestock and machinery.
Source: USDA Economic Research Service Agricultural Productivity database.

Table 25.3. Switzerland: Productivity and environmental indicators

	Switzerland		International comparison	
	1991-2000	2007-2016	1991-2000	2007-2016
			World	
TFP annual growth rate (%)	0.8%	-0.5%	1.6%	1.6%
			OECD average	
Environmental indicators	**2000***	**2018***	**2000***	**2018***
Nitrogen balance, kg/ha	61.0	66.0	33.3	29.1
Phosphorus balance, kg/ha	3.0	3.0	3.3	2.3
Agriculture share of total energy use (%)	0.6	0.6	1.7	2.0
Agriculture share of GHG emissions (%)	11.8	12.9	8.1	8.9
Share of irrigated land in AA (%)	2.8	2.2	-	-
Share of agriculture in water abstractions (%)	..	8.0	46.0	49.0
Water stress indicator	4.9	3.8	9.9	8.9

Note: * or closest available year.
Sources: USDA Economic Research Service, Agricultural Productivity database; OECD statistical databases; FAO database and national data.

Description of policy developments

Main policy instruments

In a 2017 referendum, the Swiss electorate adopted a new article on food security in the Swiss Constitution. In order to guarantee the supply of food to the population, the Confederation shall create the required conditions for: a) safeguarding the basis for agricultural production, and agricultural land in particular; b) food production that is adapted to local conditions and which uses natural resources efficiently; c) an agriculture and food sector that responds to market requirements; d) cross-border trade relations that contribute to the sustainable development of the agriculture and food sector; and e) using food in a way that conserves natural resources. The new article in the Constitution supports the general thrust of current agricultural policy. It sets out how to guarantee proper food supplies to the Swiss population in the long

term. In doing so, it takes account of the entire process from farmers to consumers. Food supplies are to be guaranteed by exploiting both domestic production and imported foodstuffs. The article in the constitution defines the broad objectives of agricultural policy which is then developed in a 4-year framework of specific agricultural policy measures.

In March 2017, the Swiss Parliament voted a budgetary envelope to finance agricultural policies for the years 2018-21 (PA 2018-21). Broadly speaking, this policy framework is a continuation of agricultural policies applied in 2014-17. Overall, the spending was reduced by 1.7% in nominal terms compared to the 2014-17 global budget envelope.

Many agro-food imports to Switzerland are regulated by **tariff rate quotas** (TRQs) with relatively low in-quota tariffs and high out-of-quota tariffs. TRQs in particular cover meat, milk products, potatoes, fruits, vegetables, bread cereals and wine. Since 1999, an auctioning system is used to allocate most of the TRQs to traders. A notable exception to the quota system is cereals, including feed grains, which are subject to single tariffs. These are adjusted according to the situation of the market, to ensure that the level of protection does not increase feed prices.

Preferential tariff rates are unilaterally applied to imports from developing countries under the general system of preferences. In the context of the initiative of the Swiss government to grant zero tariffs on all products originating in Least Developed Countries (LDCs), all agricultural imports from LDCs (according to the official UN definition) are duty and quota free since September 2009.

All **export subsidies** for primary agricultural products were eliminated by 1 January 2010. The remaining export subsidies applied to some processed products were abolished as of 1 January 2019. Subsequently, additional payments to producers for commercial milk (Agriculture Act Art. 40) and grain (Agriculture Act Art. 55) have been introduced.

Following the abolition of the **milk quotas** in May 2009, the inter-branch organisation for milk (*l'Interprofession du Lait – IP Lait*) developed and implemented *standard milk delivery contracts* for its members (setting three levels of prices and corresponding volumes for contingents A, B and C). A decision of the Federal Council, made these standard milk delivery contracts compulsory to all milk producers (i.e. also to those outside the *IP Lait*) from 1 July 2013 until end of 2021 (with a potential to be further extended). The fact that these contracts are made compulsory for all producers continuously from 2013 up to 2021 (with a potential to be further extended) means that the abolished production quota system was *de facto* replaced by another production control mechanism on a private basis.

The network of Swiss trade agreements consists of the European Free Trade Association (EFTA) Convention, the Free Trade Agreement with the European Union and another 30 agreements concluded with 41 countries. All these agreements were negotiated and signed within EFTA with the exception of agreements with the People's Republic of China, Japan and the Faroe Islands.

The budgetary spending supporting agriculture consists of three broad financial envelopes. **Direct payments**: direct payments to farmers for meeting societal demand such as food security, environmental services (landscape, biodiversity, sustainable use of resources) and animal welfare. The environmental cross-compliance conditions continue to be applied within the new system of payments. **Production and marketing**: expenditures are mainly to support dairy producers in the form of three types of payments: (i) for milk delivered for cheese processing; (ii) to milk production without silage feed; and (iii) payments for commercial milk (introduced in 2019). Area payments are paid for oilseeds, protein crops, grain (introduced in 2019) and sugar beet. Some expenditures under this heading finance also general services to the sector such as marketing and product promotion. **Improving the production base and social measures**: spending in this envelope includes direct support to farm investments, but also general services to the sector through infrastructure improvement, social aid to farmers, and advice services. These payments were provided within the PA 2014-17 policy framework.

In the framework of the Paris Agreement on Climate Change, a key tool for achieving the statutory climate change targets used by Switzerland is the CO_2 levy. It is an incentive tax that has been imposed since 2008 on fossil fuels such as oil or natural gas. This tool is combined with an Emission Trading System (ETS) and facilitates the reduction of emissions where the costs of such reductions are low. Switzerland wants to link its ETS to the EU scheme so that Swiss companies can participate in the larger and more fluid EU emissions market and benefit from the same competition conditions as EU companies. To this end, an agreement was signed with the European Union on 23 November 2017. The Swiss parliament approved this agreement on 22 March 2019 and accepted the necessary changes to the current CO_2 Act. Up to now, the Swiss agricultural sector is only marginally affected by the current CO_2 legislation as the levy is applied on fuels used to heat the glasshouses and heated barns for livestock, but not on other emissions from agricultural production.

Domestic policy developments in 2019-20

The system of the *Direct payments* remains the same as the PA 2014-17 framework. The main change is the gradual reduction of transitional payments (to be eliminated by 2021), while the saved budgetary resources are shifted to finance other direct payments (mainly biodiversity, sustainable use of natural resources and animal welfare).

To compensate for the elimination of export subsidies for some processed products, two payment schemes were introduced in 2019: i) a payment to producers for commercial milk of 4.5 cents per kg of milk sold for processing (Agriculture Act Art. 40), and ii) a payment to producers for grain of CHF 128 per hectare (Agriculture Act Art. 55).

Box 25.1. Agricultural policy from 2022

On 12 February 2020, the Federal Council announced its plan on the future development of the Agricultural Policy from 2022 (PA22+). The draft PA22+ foresees the promotion of an even more sustainable and value-creating agriculture. Swiss agriculture should be given the means to increase its added value on the market. The efficiency of operations should be enhanced. The environmental impact and consumption of non-renewable resources should be further reduced.

Main modifications

The draft PA22+ contains a range of measures corresponding to the federal popular initiative “For clean drinking water and a healthy diet - No subsidies for the use of pesticides and the prophylactic use of antibiotics” (initiative for a clean drinking water). The draft Agricultural Law includes a binding “reduction trajectory” for nitrogen and phosphorus losses (-20% by 2030). If these objectives were not achieved, the Federal Council would be obliged to take corrective measures. The volumes of fertiliser elements delivered to agricultural holdings would need to be published in a regular and transparent manner. The government also plans to reduce the maximum amount of fertiliser applied on farms through the Water Protection Act. In the area of ecological services required (Proof of ecological performance), which is conditional for direct payments, additional measures to reduce drift and runoff of phytosanitary products are foreseen and it would no longer be possible to apply phytosanitary products presenting an increased risk to the environment. In addition, the nutrient balance is focused to limit nutrient losses by deletion of the current 10% tolerance. If, in spite of all these measures, there were too high entries of these substances in the rivers of the regions, the Confederation and the cantons would be able to require specific measures through regional agricultural strategies, and to tighten the regulations in a targeted manner on a regional level.

Direct payments: The government proposes to reallocate the payments for ensuring food security and cultivated landscape (basic contribution, contribution to production in difficult conditions and contribution

for keeping the landscape open) into a new zone contribution. The current resource efficiency contributions are to be integrated into the production system contributions. The latter are to be substantially increased in order to promote the targeted avoidance of pesticides, the reduction of ammonia emissions and the improvement of animal health. The draft PA22+ puts a focus on adapting agriculture more to local conditions through regional agricultural strategies. For this purpose, the payments to the quality of the landscape and to networking would be converted into a payment for agriculture adapted to local conditions. Payments to biodiversity would then be developed within the framework of five groups of measures. In addition, a minimum share of area promoting biodiversity within the arable land area of 3.5% would be mandatory in order to correct for identified biodiversity deficits.

Crop insurance: In order to protect agriculture against weather-related yield fluctuations due to large-scale risks (drought, frost), the government proposes to contribute financially to crop insurance premiums for a limited period of time.

Structural improvements: the proposed law would allow the Confederation to grant investment aid for the acquisition of agricultural buildings, for innovative technologies aimed at reducing environmental damage from agricultural production, for the subsidiary development of data transmission capacities (e.g. broadband wireless connection) and for animal health promotion. Such investment aid would be conditional on a positive assessment of the project's economic viability. The Confederation would also financially support skills and innovation networks for plant and animal breeding and for the health of farm animals. Support to pilot and demonstration projects would complement the support provided through networking of research, training and extension with actors in the field in agriculture and the agri-food sector

Enhanced support for the promotion of wine: due to the high stock levels of Swiss wine and the decreasing domestic wine consumption, the Federal Department of Economics, Education and Research (EAER) agreed to grant additional support to the 2019 annual budget (CHF 3.2 million) planned for the promotion of Swiss wine. The support is exclusively limited to communication measures. The additional promotion measures aim to promote sales and to increase the market share of Swiss wine by improving its visibility in large retail stores, as well as in the hotel and restaurant sector (HORECA). This action plan implemented by Swiss Wine Promotion (SWP) began in December 2019 and will continue throughout 2020.

New plant health legislation from 1 January 2020 (*nouvelle ordonnance sur la santé des végétaux du 31/10/2018; nouvelle ordonnance du DEFR et du DETEC du 14/11/2019*): with stricter regulations and stronger preventive measures the new plant health regime aims to better protect plants from particularly harmful pests. The new plant health legislation has been modernised, but at the same time has become more complex. From 2020 onwards, a plant passport is mandatory for all plants for planting. Imports of plant material from third countries, including through passenger travel, will be subject to stricter rules from 2020. Import bans on plants and plant products with high plant health risks from countries outside the European Union may be applied on a temporary basis. The new plant health legislation also introduces new contingency planning instruments.

Long term plant breeding strategy: the Federal Office for Agriculture has developed, in collaboration with representatives of various interest groups, a plant breeding strategy with measures that are to be implemented within the framework of the Agricultural Policy 2022 (PA22+). The "Plant Breeding 2050" strategy recognises the importance of plant breeding for Switzerland in the decades to come and sets the foundation for the use and allocation of public funds. Two concrete measures are pursued: 1) the creation of a Swiss Centre for Plant Breeding as a competence and innovation network for the implementation of research results in Swiss breeding programmes; and 2) the promotion of existing and new breeding programmes in Switzerland.

Trade policy developments in 2019-20

As an EFTA member, Switzerland participates in ongoing free trade negotiations with ***India, Malaysia*** *and* ***Viet Nam***. Negotiations with ***Algeria, Thailand***, and the ***Customs Union of the Russian Federation***, ***Belarus*** and ***Kazakhstan*** are on hold. Trade negotiations with ***Indonesia*** and ***Mercosur*** are completed, with signatures pending. Existing Free Trade Agreements with ***Chile*** and the ***South African Customs Union (SACU)*** are currently under renegotiation. These Free Trade Agreements and the ongoing negotiations also cover trade with all processed agricultural products and a range of basic agricultural products.

In 2018, export subsidies for processed products still amounted to CHF 94.6 million (USD 96.7 million) (CHF 81.9 million spent on dairy products and CHF 12.7 million on grain based products). In December 2017, the Swiss parliament adopted a legislation abolishing these export subsidies from 1 January 2019, following the WTO Ministerial Decision of December 2018. The funds initially allocated by the Finance Ministry to finance export subsidies were transferred to the agricultural budget to finance direct payments to milk and grain producers to compensate the price reduction related to the elimination of these export subsidies (see domestic policy development section).

Notes

[1] https://www.blw.admin.ch/blw/fr/home/nachhaltige-produktion/produktionssicherheit/neuescoronavirus.html.

[2] https://www.newsd.admin.ch/newsd/message/attachments/60796.pdf.

[3] https://www.imf.org/en/Topics/imf-and-covid19/Policy-Responses-to-COVID-19#S.

26 Turkey

Support to agriculture

Since the 1980s, transfers provided by the government have comprised more than 20% of farmers' revenue, with most of this support directed at influencing the market price of agricultural products. Total support to agriculture has been as high as 4% of GDP, but has declined as the importance of agriculture in the overall economy has diminished and is now about 1.5% of GDP.

The level of support in Turkey fell in 2018 and 2019, driven mainly by reductions in market price support (MPS) resulting from a depreciation in the value of the Turkish lira. The reduction in MPS has been partially compensated by increased premium payments, which cover the difference between target and market prices. Those for cereals doubled between 2018 and 2019. The largest amounts of these premium payments for cereals are for wheat and barley, but rye, oats, and paddy rice also saw premiums double in 2019.

Despite the recent reduction, MPS still accounts for two-thirds of the estimated support provided to producers in Turkey. Premium payments, especially for cotton and wheat, acreage payments to reduce the cost of diesel and fertiliser, and subsidised insurance coverage for crops and livestock are the most important budgetary payments providing aid directly to farmers.

Expenditures on infrastructure development for irrigation are the largest form of support for general services benefitting the sector overall (GSSE), amounting to 75% of the GSSE. Financial support to state enterprises involved in commodity marketing is the other major form of such indirect support.

Main policy changes

The Eleventh Development Plan covering 2019-23 was established in July 2019. As for past Plans, its main objective is to develop an efficient agricultural sector that is environmentally, socially and economically sustainable. The Plan sets a number of measures and targets to be achieved by 2023, including increased production of red meat and oilseeds, land consolidation and use of irrigation.

The 2019-23 Strategic Plan of the Ministry of Agriculture and Forestry (MoAF) was also established in line with the Development Plan. It sets seven strategic objectives for the agricultural sector, including increasing food production, quality and safety.

Turkey's National Strategy Document and Action Plan on Prevention, Reduction and Management of Food Losses and Waste were prepared in collaboration with the FAO in 2019 as part of a new global initiative called the "Save Food" campaign.

Assessment and recommendations

- Currently, many commodity marketing enterprises established by the government require regular capital infusions. To put them on a more self-sufficient footing, the government could consider

reforms to their operating conditions to allow more independence and flexibility. Allowing farmers more options to make use of other marketing channels can also impose more financial discipline on these firms while giving farmers additional flexibility to take advantage of market opportunities.

- The most important form of support to farmers is market price support. This is among the most distorting forms of support and a relatively inefficient way of supporting the incomes of farmers. A better option could be to help farmers obtain financing for investment and to deal with financial risk in the context of exchange rate uncertainty.
- Turkey allocates a relatively small share of spending on investments in innovation, services to farmers to help them improve their farming practices and education and training for farmers. Given the low estimates for productivity growth in agriculture, a greater emphasis on these essential services should be considered.
- Policy objectives currently mainly target production levels. Greater emphasis on improving productivity and efficiency in the context of environmental sustainability would likely yield better long term results for the sector.
- Turkey's Nationally Determined Contributions (NDCs) to the 2016 Paris Agreement aims to reduce emissions by up to 21% compared with business as usual projections by 2030. There are no specific targets for agriculture and no current policies designed exclusively to reduce emissions from agriculture. Turkey has noted that plans will be made to reduce emissions via fuel savings, rehabilitated grazing lands, controlling the use of fertilisers and supporting modern practices including minimum tillage.

Policy responses in relation to the COVID-19 outbreak

Agricultural policies

Turkey's Ministry of Agriculture and Forestry announced several measures or expected measures on 29 March 2020 to ensure that seasonal workers can continue to work. Agricultural workers will be provided with hygiene and personal protection products and allowed to travel to agricultural areas in order to take up work. Conditions for transportation and housing of seasonal workers are to be regulated.

Application deadlines for crop production supports for cereals and legumes have been extended to 29 May 2020. Application deadlines for oilseeds and olives, organic agriculture and good agricultural practices have been extended to 30 April 2020.[1]

The ministry has suggested that farmers refrain from using domestic or urban untreated wastewater for irrigation due to the potential for contamination by COVID-19. A guidance document on reuse applications of wastewater was released on 10 April 2020.[2]

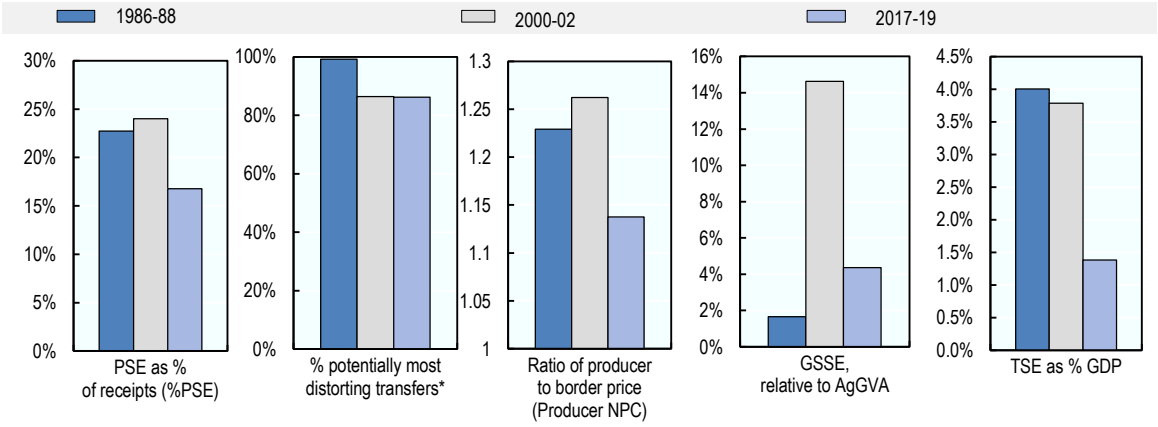
Turkey has subjected lemons to export control amid a rising domestic demand due to the coronavirus pandemic. The restriction beginning early April 2020 will continue until the end of August 2020.[3]

The government of Turkey cut the custom duty to zero for 100 000 tonnes of paddy rice imports until the end of May.[4]

Agro-food supply chain policies

Measures will be taken to ensure access to agricultural inputs such as fertilisers, seeds and medicines or to prevent problems in distribution. To do this, stock control and inspection will be carried out at fertiliser dealers.[5]

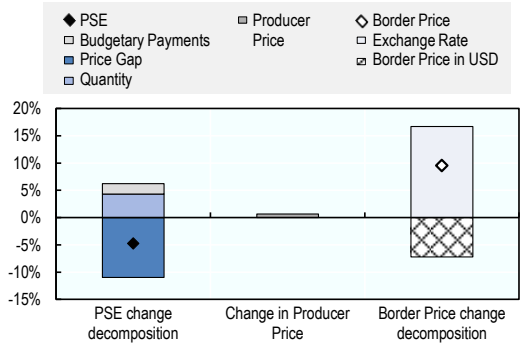
Figure 26.1. Turkey: Development of support to agriculture



Note: * Share of potentially most distorting transfers in cumulated gross producer transfers.
Source: OECD (2020), "Producer and Consumer Support Estimates", OECD Agriculture statistics (database), http://dx.doi.org/10.1787/agr-pcse-data-en.
StatLink https://doi.org/10.1787/888934144933

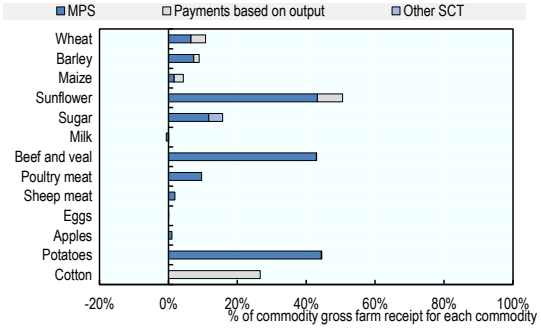
Support to producers (%PSE). For the past thirty years, support to producers has been above 20% of gross farm receipts (%PSE); it only recently declined below that amount in 2017-19 as exchange rate movements effectively reduced market price support (MPS) rates. Most support to producers is provided through MPS, one of the potentially most distorting forms of support and arising from market interventions, including export subsidies which are provided for processed fruit and vegetables, poultry meat and eggs (Figure 26.1). Single Commodity Transfers (SCT) for beef, sunflower seed and potatoes are more than 40% of commodity-specific gross farm receipts (Figure 26.3). Domestic prices were about 12% above world prices in 2017-19. Overall, total support to agriculture (TSE) represents less than 1.5% of GDP, but this ratio has been much higher in the past. Most of the support other than market price support is provided for the irrigation infrastructure. The PSE has reduced in 2019, driven mainly by higher effective border prices and a reduced price gap due to the aforementioned exchange rate depreciation (Figure 26.2).

Figure 26.2. Turkey: Drivers of the change in PSE, 2018 to 2019



Source: OECD (2020), "Producer and Consumer Support Estimates", OECD Agriculture statistics (database), http://dx.doi.org/10.1787/agr-pcse-data-en.
StatLink https://doi.org/10.1787/888934144952

Figure 26.3. Turkey: Transfer to specific commodities (SCT), 2017-19



Source: OECD (2020), "Producer and Consumer Support Estimates", OECD Agriculture statistics (database), http://dx.doi.org/10.1787/agr-pcse-data-en.
StatLink https://doi.org/10.1787/888934144971

Table 26.1. Turkey: Estimates of support to agriculture

Million USD

	1986-88	2000-02	2017-19	2017	2018	2019p
Total value of production (at farm gate)	**18 343**	**22 169**	**52 832**	**58 884**	**52 390**	**47 222**
***of which:** share of MPS commodities (%)*	55.0	70.6	65.9	67.9	64.8	64.8
Total value of consumption (at farm gate)	**14 075**	**18 581**	**37 852**	**41 545**	**37 707**	**34 305**
Producer Support Estimate (PSE)	**4 304**	**5 922**	**9 701**	**14 163**	**8 245**	**6 695**
Support based on commodity output	3 419	5 034	7 997	12 283	6 481	5 228
Market Price Support[1]	3 408	4 719	7 101	11 185	5 716	4 403
Positive Market Price Support	3 412	4 726	7 153	11 340	5 716	4 403
Negative Market Price Support	-3	-8	-52	-155	0	0
Payments based on output	11	316	896	1 098	765	825
Payments based on input use	885	426	662	817	754	415
Based on variable input use	850	302	419	526	395	337
with input constraints	0	0	0	0	0	0
Based on fixed capital formation	19	116	237	285	354	74
with input constraints	0	0	0	0	0	0
Based on on-farm services	16	8	6	7	5	5
with input constraints	0	0	0	0	0	0
Payments based on current A/An/R/I, production required	0	25	1 042	1 062	1 011	1 052
Based on Receipts / Income	0	0	213	234	219	185
Based on Area planted / Animal numbers	0	25	829	828	792	867
with input constraints	0	0	154	187	130	145
Payments based on non-current A/An/R/I, production required	0	0	0	0	0	0
Payments based on non-current A/An/R/I, production not required	0	436	0	0	0	0
With variable payment rates	0	0	0	0	0	0
with commodity exceptions	0	0	0	0	0	0
With fixed payment rates	0	436	0	0	0	0
with commodity exceptions	0	0	0	0	0	0
Payments based on non-commodity criteria	0	0	0	0	0	0
Based on long-term resource retirement	0	0	0	0	0	0
Based on a specific non-commodity output	0	0	0	0	0	0
Based on other non-commodity criteria	0	0	0	0	0	0
Miscellaneous payments	0	0	0	0	0	0
Percentage PSE (%)	**22.7**	**24.0**	**16.8**	**22.9**	**15.0**	**13.5**
Producer NPC (coeff.)	**1.23**	**1.26**	**1.14**	**1.22**	**1.11**	**1.10**
Producer NAC (coeff.)	**1.29**	**1.32**	**1.20**	**1.30**	**1.18**	**1.16**
General Services Support Estimate (GSSE)	**333**	**3 507**	**1 824**	**2 395**	**1 686**	**1 390**
Agricultural knowledge and innovation system	67	29	106	156	91	70
Inspection and control	51	67	13	3	20	16
Development and maintenance of infrastructure	22	513	1 314	1 644	1 240	1 057
Marketing and promotion	95	2 888	391	591	336	247
Cost of public stockholding	0	0	0	0	0	0
Miscellaneous	99	11	0	0	0	0
Percentage GSSE (% of TSE)	**7.4**	**37.8**	**16.1**	**14.5**	**17.0**	**17.2**
Consumer Support Estimate (CSE)	**-3 032**	**-4 513**	**-4 778**	**-7 686**	**-3 769**	**-2 878**
Transfers to producers from consumers	-3 027	-4 547	-4 812	-7 788	-3 769	-2 878
Other transfers from consumers	-49	-64	-20	-61	0	0
Transfers to consumers from taxpayers	0	0	0	0	0	0
Excess feed cost	43	97	54	163	0	0
Percentage CSE (%)	**-22.2**	**-22.5**	**-11.8**	**-18.5**	**-10.0**	**-8.4**
Consumer NPC (coeff.)	**1.29**	**1.30**	**1.14**	**1.23**	**1.11**	**1.09**
Consumer NAC (coeff.)	**1.29**	**1.29**	**1.13**	**1.23**	**1.11**	**1.09**
Total Support Estimate (TSE)	**4 637**	**9 429**	**11 525**	**16 558**	**9 931**	**8 085**
Transfers from consumers	3 075	4 611	4 832	7 849	3 769	2 878
Transfers from taxpayers	1 611	4 881	6 713	8 769	6 162	5 207
Budget revenues	-49	-64	-20	-61	0	0
Percentage TSE (% of GDP)	**4.0**	**3.8**	**1.4**	**1.9**	**1.3**	**1.1**
Total Budgetary Support Estimate (TBSE)	**1 229**	**4 710**	**4 424**	**5 373**	**4 215**	**3 682**
Percentage TBSE (% of GDP)	**1.1**	**2.0**	**0.5**	**0.6**	**0.5**	**0.5**
GDP deflator (1986-88=100)	**100**	**139 502**	**832 947**	**710 964**	**827 837**	**960 040**
Exchange rate (national currency per USD)	**0.00**	**1.12**	**4.72**	**3.65**	**4.84**	**5.68**

Note: p: provisional. NPC: Nominal Protection Coefficient. NAC: Nominal Assistance Coefficient.
A/An/R/I: Area planted/Animal numbers/Receipts/Income.
1. Market Price Support (MPS) is net of producer levies and excess feed cost. MPS commodities for Turkey are: wheat, maize, barley, sunflower, sugar, potatoes, tomatoes, grapes, apples, cotton, tobacco, milk, beef and veal, sheep meat, poultry and eggs.

Source: OECD (2020), "Producer and Consumer Support Estimates", *OECD Agriculture statistics* (database), http://dx.doi.org/10.1787/agr-pcse-data-en.

Contextual information

Primary agriculture accounts for 6% of GDP and employs 18% of the workforce, making agriculture one of the most important sectors of the country's economy. Turkey is a net exporter of agricultural products, which account for more than 10% of total exports, and access to world markets is a significant issue for the sector. Notwithstanding various structural bottlenecks, such as the predominance of small-sized, subsistence and semi-subsistence farms, Turkey ranks as a significant agricultural exporter of nuts, dried fruits, and some fresh vegetables; main export destinations include the European Union, Iraq, the Russian Federation and the United States.

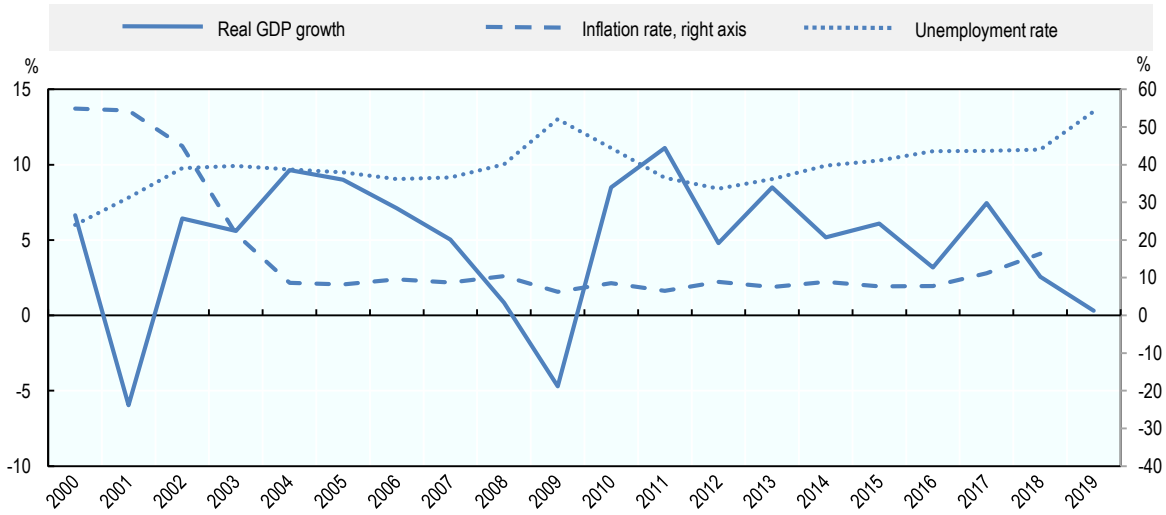
Table 26.2. Turkey: Contextual indicators

	Turkey		International comparison	
	2000*	2018*	2000*	2018*
Economic context			**Share in total of all countries**	
GDP (billion USD in PPPs)	606	2 316	1.5%	2.1%
Population (million)	64	81	1.5%	1.6%
Land area (thousand km²)	770	770	0.9%	0.9%
Agricultural area (AA) (thousand ha)	40 479	38 001	1.3%	1.3%
			All countries[1]	
Population density (inhabitants/km²)	82	107	53	62
GDP per capita (USD in PPPs)	9 433	28 455	9 275	21 924
Trade as % of GDP	15	25	12.4	15.3
Agriculture in the economy			**All countries[1]**	
Agriculture in GDP (%)	10.1	5.8	3.1	3.6
Agriculture share in employment (%)	36.0	18.4	-	-
Agro-food exports (% of total exports)	13.2	10.2	6.2	7.3
Agro-food imports (% of total imports)	5.9	6.4	5.5	6.3
Characteristics of the agricultural sector			**All countries[1]**	
Crop in total agricultural production (%)	69	53	-	-
Livestock in total agricultural production (%)	31	47	-	-
Share of arable land in AA (%)	59	53	32	33

Notes: *or closest available year. 1. Average of all countries covered in this report. EU treated as one.
Sources: OECD statistical databases; UN Comtrade; World Bank, WDI and national data.

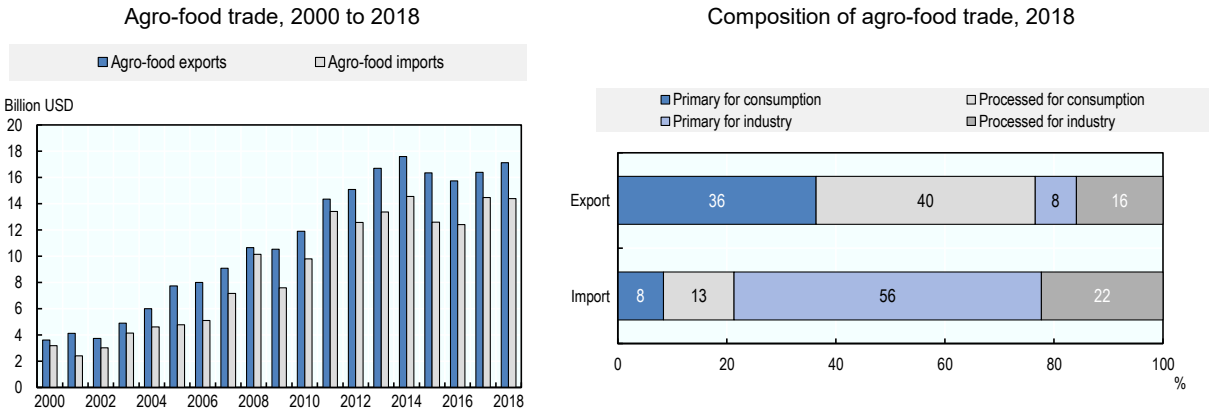
While Turkey's economic growth has been strong, it entered a period of macroeconomic uncertainty subsequent to a depreciation in the value of the lira since mid-2017, contributing to rising inflation and decreased investment. GDP growth was negative in late 2018 and early 2019 but recovered in response to stimulus actions by the government later in the year.

Figure 26.4. Turkey: Main economic indicators, 2000 to 2019



Sources: OECD statistical databases; World Bank, WDI and ILO estimates and projections.

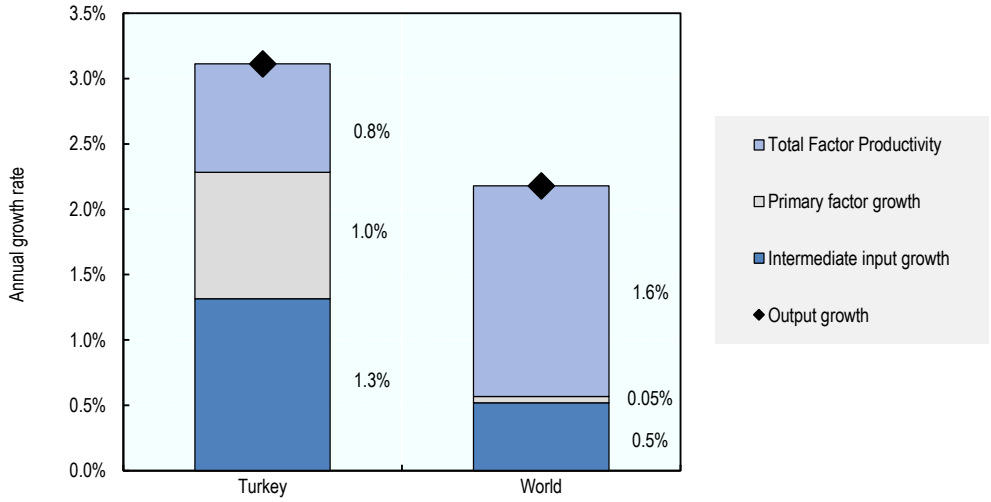
Figure 26.5. Turkey: Agro-food trade



Note: Numbers may not add up to 100 due to rounding.
Source: UN Comtrade Database.

Turkey's agro-food imports are dominated by primary and processed products for further processing by the domestic industry. These accounted for 78% of total agro-food imports in 2018. In turn, processed and primary products for consumption are key export categories, accounting for 76% of total agro-food exports. The depreciation in the lira should favour exporters and reduce imports in the short term.

Figure 26.6. Turkey: Composition of agricultural output growth, 2007-16



Note: Primary factors comprise labour, land, livestock and machinery.
Source: USDA Economic Research Service Agricultural Productivity database.

Table 26.3. Turkey: Productivity and environmental indicators

	Turkey		International comparison	
	1991-2000	2007-2016	1991-2000	2007-2016
			World	
TFP annual growth rate (%)	1.0%	0.8%	1.6%	1.6%
			OECD average	
Environmental indicators	**2000***	**2018***	**2000***	**2018***
Nitrogen balance, kg/ha	27.8	27.7	33.3	29.1
Phosphorus balance, kg/ha	8.0	7.0	3.3	2.3
Agriculture share of total energy use (%)	5.0	3.9	1.7	2.0
Agriculture share of GHG emissions (%)	14.1	11.9	8.1	8.9
Share of irrigated land in AA (%)	8.0	10.3	-	-
Share of agriculture in water abstractions (%)	75.4	85.2	46.0	49.0
Water stress indicator	18.6	25.4	9.9	8.9

Note: * or closest available year.
Sources: USDA Economic Research Service, Agricultural Productivity database; OECD statistical databases; FAO database and national data.

Description of policy developments

Main policy instruments

The main agricultural policy objective of **the Eleventh Development Plan covering 2019-23**, is to develop an efficient agricultural sector that is environmentally, socially and economically sustainable. The sector should provide an adequate and balanced food supply while making use of advanced technology to be internationally competitive. To achieve this objective, the Plan sets a number of measures and targets to be achieved by 2023, including increased production of red meat and oilseeds, land consolidation and use of irrigation.

In line with the Development Plan**, the 2019-23 Strategic Plan of the Ministry of Agriculture and Forestry (MoAF)** sets seven strategic objectives for the agricultural sector:

- Increasing economic welfare in rural areas, ensuring food supply by increasing yields and quality in agricultural production
- Ensuring food and feed safety from production to consumption by taking necessary measures for plant and animal health and animal welfare
- Protecting aquaculture and fisheries resources
- Ensuring sustainable management of land and water resources
- Efficiently combating climate change, desertification and erosion
- Protecting biodiversity
- Improving institutional capacity

Turkey is a signatory to the Paris agreement. Agriculture represents 7.3% of total greenhouse gas (GHG) emissions in the country. In its Nationally Determined Contributions (NDCs), Turkey proposes to reduce agricultural emissions through fuel savings resulting from consolidation of agricultural land, rehabilitation of grazing lands, controlling fertiliser use, implementation of modern farming practices and encouraging use of minimum tillage farming techniques.

Export subsidies are applied to 14 commodity groups, out of the 19 groups eligible under Turkey's WTO commitments. This included processed fruit and vegetables, poultry meat and eggs. Export subsidies are granted in the form of reductions of the exporters' debts to public corporations (for example, for taxes, and telecommunications or energy costs). Production quotas are applied at the farm level for sugar beet.

Deficiency payments, are provided as "premium payments" for products considered to be in short domestic supply. These payments are potentially directed to producers of 17 different agricultural products.[6] The list of products actually supported is determined separately in 945 basins according to which are the most suitable ecological and economical crops with high yield and quality.

Payments based on area are provided under several different rationales. Hazelnut producers receive payments based on area of production. Farmers can also receive area payments for producing fodder crops or certified saplings, organic farming, using good agricultural practices, using certified seeds, and for the rehabilitation of olive groves. Each farmer registered under the National Farmer Registration System (NFRS) receives a so-called "diesel payment" and a "fertiliser payment" separately based on current area of production.

Support for soil testing and analyses that are a prerequisite for receiving fertiliser payments was re-introduced in 2017, and is primarily intended to aid authorised laboratories. The use of organic and organomineral fertilisers (a hybrid type of fertiliser produced by blending organic and chemical raw materials) is supported to reduce the use of chemical fertilisers, improve the structure of the soil, increase its productivity and water holding capacity. Farmers can also receive payments to improve animal breeds and farm production capacity (e.g. field levelling, drainage, soil improvement and protection and land consolidation).

Farmers and agricultural enterprises can benefit from interest rate concessions and concessional loans offered by the *Ziraat Bank* (TCZB) and *Agricultural Credit Co-operatives* (ACC). Interest rate concessions vary by type of agricultural operation (livestock breeding, irrigation, organic agriculture and users of good farming practices).

A number of regulations aim to control water and soil pollution and provide protection to wetlands. Land conservation payments are designed to maintain land quality and ensure sustainability of natural resources in agricultural lands. The government plays a major role in providing infrastructure investment, especially for irrigation, including within the South-Eastern Anatolia and Konya Plain Projects.

The *Action Plan for the Programme on Enhancing Efficiency of Water Use in Agriculture*, introduced in 2015, prioritises modernising irrigation infrastructure, extending water saving practice for agricultural producers through training and extension programmes, reducing agricultural water pollution, revising support policies based on water scarcity and improving the governance of water policies. The plan aims to decrease the use of underground water and increase the use of water-saving irrigation technologies.

Country Irrigation Guidelines were prepared and used in watershed-scale studies to determine the water needs within each watershed and to establish the basin water budget. The planning, design and operational phases of irrigation project are determined based on, climate, soil and topography features, as well as the current water potential in the basin and expected water consumption by farmers.

The 2014-20 National Rural Development Strategy was adopted in 2014 to deliver the EU Instrument for Pre-Accession Assistance Rural Development (IPARD-II).[7] The initial budget for this was EUR 813 million (USD 901 million) but was subsequently reduced by the EU Commission to EUR 615.5 million (USD 682 million). As of the end of 2019, EUR 129.2 million has been granted to 3 792 projects under IPARD-II. These rural development projects require co-financing of beneficiaries, with the aim of mobilising private-sector resources. Public investments to improve agricultural infrastructure are targeted to boosting agricultural production and increasing the competitiveness of the sector. The MoAF also increased funding for IT projects, to improve data collection and the monitoring network and its efficient use, as well as to develop traceability in the sector.

Domestic policy developments in 2019-20

Turkey's National Strategy Document and Action Plan on Prevention, Reduction and Management of Food Losses and Waste were prepared in collaboration with the FAO in 2019 as part of a new global initiative called the “Save Food” campaign in line with SDG 12.3. This campaign aims to reduce food losses and waste by raising public awareness both nationally and internationally and disseminating good practices to avoid food waste. During Turkey’s G20 Presidency in 2015 a technical platform on the measurement and reduction of food loss and waste was established at the FAO together with IFPRI.

In order to encourage the sustainable use of forested areas and to take action related to SDG 13 on Climate Action and SDG 15 on Life on Land, the MoAF organised a tree planting campaign named “Breath for the Future” on 11 November 2019. As part of this campaign, about 13 million saplings were planted in just one day in all parts of Turkey.

A meeting of the Agriculture and Forestry Council was held in November 2019. This meeting brought together stakeholders in the agriculture and forestry sectors to develop plans covering the next 25 years. Council actions were gathered under eight main headings: i) Agricultural Production and Supply Security, ii) Food Safety, iii) Rural Development and Marketing, iv) Fisheries and Aquaculture, v) Soil and Water Resources, vi) Biological Diversity and Climate Change, vii) Forest, and viii) Institutional Capacity. Within the scope of the Council’s meeting, 38 actions plans were established.

Coverage of support to agricultural insurance has been extended to include more products and types of risks. In 2018, coverage had initially been extended to production losses of barley, rye, oats and triticale and covering risks related to drought, frost, hot winds, heat waves, excess moisture and excessive precipitation. It was further extended in 2019 to chickpeas, red lentils and green lentils. In 2019, more than 2 million agricultural insurance policies were issued, with the government spending TRY 2.5 billion (USD 424 million) to reduce premiums.

Within the scope of Combating Agricultural Drought, the “Turkey Agricultural Drought Strategy and Action Plan”, 2018-22, was published. The main pillars of the Action Plan are developing a capable institutional structure, taking a holistic and comprehensive perspective, and making the agricultural sector more resilient to drought. Activities in the Action Plan are grouped under five headings: i) drought risk estimation and crisis management, ii) ensuring a sustainable water supply, iii) effective management of agricultural

water demand, iv) increasing support to R&D activities, training and extension services, and v) institutional capacity building.

Trade policy developments in 2019-20

The average rate of customs duties applied in 2019 for basic agricultural products outside the Customs Union Common External Tariff was 57.85%. Customs duties were reduced on cocoa shells, husks, skins and other cocoa waste. Customs duties on glucose syrup (other) and palm kernel oil used for coffee cream production were also reduced.

In 2019, Turkey put into force its Free Trade Agreement (FTA) with Kosovo and FTA revision protocols with Serbia. Turkey also updated its FTA with Bosnia-Herzegovina and Montenegro in 2019. FTA negotiations are actively ongoing with five countries: Ukraine, Japan, Thailand, Indonesia and Somalia.

Notes

[1] https://www.tarimorman.gov.tr/Duyuru/1151/Bitkisel-Uretim-Destekleri-Basvuru-Sureleri-Uzatilmistir.

[2] https://dosya.tarimorman.gov.tr/app/tr-TR/App/Download/TarimBulut/eb3140cb-bf55-4dd7-93fa-c60342294675.

[3] https://www.aa.com.tr/en/economy/turkey-subjects-lemon-to-export-control-amid-covid-19/1795208.

[4] https://oryza.com/49865/turkey-cuts-customs-duty-paddy-rice-imports.

[5] https://www.tarimorman.gov.tr/Haber/4452/Tarim-Iscilerine-Koronavirus-Tedbiri.

[6] Sunflower, rapeseed, maize, cotton, soybeans, wheat, barley, oats, rye, triticale, safflower, olive oil, paddy, dry beans, chickpeas, lentils, fresh tea.

[7] IPARD is the Rural Development component of the Instrument for Pre-access Assistance (IPA), created by the European Union to support candidate and potential candidate countries. IPARD aims to support adaptation preparations and policy development for the implementation and management of the Common Agricultural Policy, Rural Development Policy and related policies of the European Union.

27 Ukraine

Support to agriculture

Producer support in Ukraine, as measured by the PSE, has been volatile over the past three decades, mostly due to fluctuations in market price support (MPS).[1] Since 1992, MPS has been negative in most years, reflecting average producer prices below international reference levels, but with significant variation across commodities and time. Protected by import tariffs, prices for several meat products and sugar have been above international price levels. Those for several grains, sunflower seeds and milk have generally been somewhat below reference prices. The impact on prices of the state-owned Agrarian fund and the State Fund and Grain Corporation activities, and the annual MoU on grain exports, is likely to be limited, and more recently the total MPS for the sector has been slightly positive.

Budgetary support in the form of tax benefits and input support continues to be relatively small, but has contributed to the positive overall producer support in the last two years.

Support for general services has increased since 2015 but remains low compared to other countries. During 2017-19, the GSSE averaged 1.7% of agricultural value-added, well below levels seen in the mid-1990s. Most of these expenditures go to inspection and control services and to agricultural schools.

Main policy changes

The Ministry of Agrarian Policy and Food was integrated into what has become the Ministry of Economic Development, Trade and Agriculture of Ukraine, aiming to accelerate reforms towards the integration of the agricultural sector into the general economy. This in particular concerns the areas of land use, job creation, innovation and digitalisation, and market deregulation.

Ukraine instated new support for small and medium sized producers. The area payments are higher for newly established farms during the first three years of their creation than for longer existing farms and require that the eligible land is used for farming purposes. Another new measure provides partial reimbursement of up to 30% of the investment for construction or reconstruction of grain storage and grain processing capacities.

While the moratorium on the sale of agricultural land, which has banned selling farmland in Ukraine since 2002, has not been extended into 2020, and while both interest rate support and partial compensations of loans for the purchase of land are foreseen by order of the Cabinet of Ministers of Ukraine, the sale and purchasing of agricultural land in Ukraine continues to be legally impossible pending the adoption of the Law on Agricultural Land Turnover.

Assessment and recommendations

- Producer prices in several of Ukraine's export oriented sectors, notably for sunflower seed and milk, remain below world price levels. Export duties applied to some of the products, the market

activities (though limited) of state-owned enterprises and limitations in export infrastructure may each contribute to this negative support. In order to take advantage of its agricultural competitiveness, Ukraine should take additional steps to facilitate exports, including continued investments into the logistics and transportation system in line with growing export volumes.

- Having abolished special VAT regimes, which provided producer support for various production inputs, the integration of agricultural producers into the economy-wide VAT system since 2018 should help increase the efficiency in the sector and reduce the administrative burden. Ensuring well-functioning input markets, including for agricultural credits, remains key to improving farmers' access to agricultural inputs.
- The end of the moratorium on the sale of agricultural land, which had been extended annually between 2002 and 2019, is a welcome signal towards removing rigidities in the land market that prevent this key agricultural resource from being optimally allocated. However, the efficiency-augmenting effect of this will only materialise once the sale and purchasing of agricultural land in Ukraine has been made fully legal by passing the Law on Agricultural Land Turnover.
- Productivity in agriculture has grown quickly over the past decade, but deteriorating capital stocks, likely caused by economic and political uncertainties, threaten future productivity growth. Ensuring macroeconomic and political stability will be critical for maintaining and developing a productive agricultural sector.
- Public expenditures for general services have started to recover after the economic depression of 2014-15, but remain low in relative terms. The focus on the country's inspection and control system is a necessary step for supporting the export-oriented sector. However, to ensure high performance of the sector sensitive to weather variability, notably in light of a changing climate, Ukraine will also need a well-functioning and sufficiently funded knowledge and information system.
- The merger of the former Ministry of Agrarian Policy and Food into what has become the Ministry of Economic Development, Trade and Agriculture of Ukraine highlights the government's ambition to accelerate reforms of agricultural policies within the development of the general economy. This should be linked to increasing the efficiency of the regulatory system and to improving the infrastructure needed by the export-oriented sector.
- Ukraine's Nationally Determined Contributions (NDCs) to the 2016 Paris Agreement on Climate Change commit the country to greenhouse gas (GHG) emissions in 2030 not exceeding 60% of its 1990 levels, including from all agricultural and other land use sources. The recently approved Action Plan should help implementing a multisectoral monitoring, reporting and verification of GHG emissions. With agriculture responsible for more than 12% of national emissions, specific reduction targets and related policy action will need to complement this Plan for achieving the overall ambition.

Policy responses in relation to the COVID-19 outbreak

Agricultural policies

In late March 2020, the Ministry for Development of Economy, Trade and Agriculture of Ukraine and grain traders signed a document which provides for a limit of wheat export from Ukraine in 2019/20, i.e. until 30 June 2020, at 20.2 million tonnes. The agreement aims to ensure stability in domestic grain markets and exports, and to prevent flour prices from rising.[2] Recent estimates saw Ukraine's wheat exports in 2019/20 at 20.5 million tonnes,[3] so the actual impact on trade flows may be limited. Nonetheless, the government indicated its preparedness for banning further wheat exports should sales exceed the limits agreed with the traders.[4]

The Cabinet of Ministers of Ukraine introduced a ban on buckwheat export until 1 July 2020. The export ban on buckwheat groats was implemented as a temporary measure and considered necessary to protect the domestic market.[5] Import duties on rice, rye, buckwheat, and other grain crops were temporarily removed until 1 July 2020.[6]

The Ukrainian Government expects no food shortages and hence no need for additional export restrictions.[7] However, Ukraine's Minister of Economy, Trade and Agriculture announced on 27 March that that the state-run grain firm DPZKU and Agrarian Fund would sell 128 000 tonnes of wheat flour on the local market aiming to curb a jump in prices.[8]

Agro-food supply chain policies

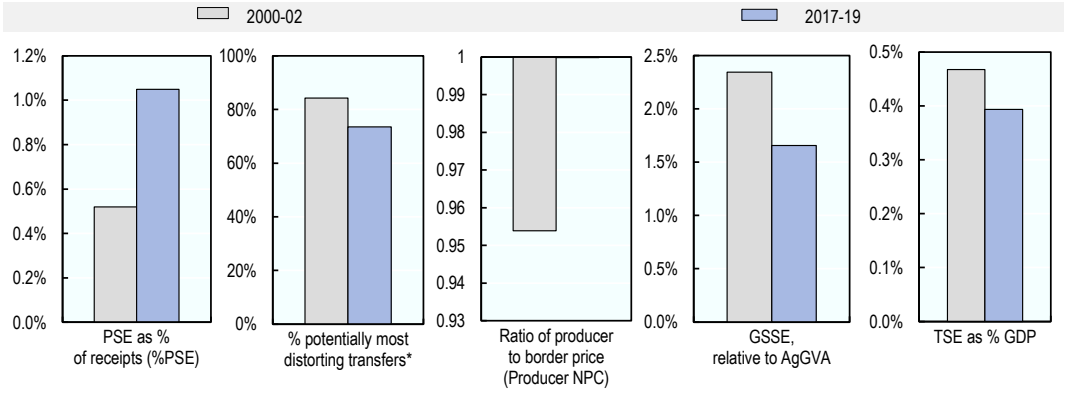
Essential workers who provide basic goods and services to support the life of the population, including in agriculture and food production, are exempt from self-isolation imposed on the population.

Food markets in Ukraine have been closed by special order from 14 April 2020.[9]

Consumer policies

The Cabinet of Ministers is preparing a list of products of social importance for which state regulation of prices should be renewed. Such measures are implemented in accordance with the requirements of the law passed by Parliament No. 540-IX.[10]

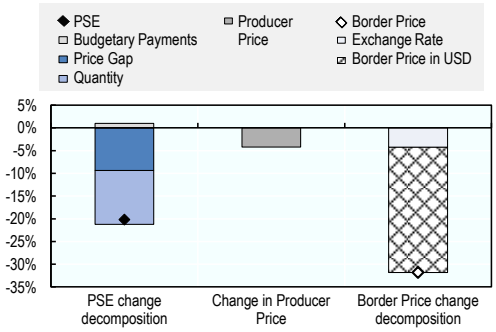
Figure 27.1. Ukraine: Development of support to agriculture



Note: * Share of potentially most distorting transfers in cumulated gross producer transfers.
Source: OECD (2020), "Producer and Consumer Support Estimates", OECD Agriculture statistics (database), http://dx.doi.org/10.1787/agr-pcse-data-en.
StatLink https://doi.org/10.1787/888934144990

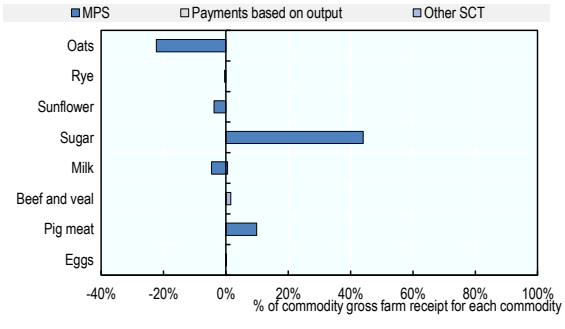
Support to producers (%PSE) has been fluctuating around zero for the past decade, and averaged 1.0% of gross farm receipts during 2017-19. Negative market price support (MPS) notably for sunflower seed and milk is offset by positive MPS mainly for sugar and pig meat, and limited budgetary producer support. On average, producer prices are aligned with reference prices, resulting in a Nominal Rate of Protection (NRP) equal to 1.0 for the 2017-19 period, although differences exist across commodities. Given these differences, 74% of all transfers to producers (whether positive or negative) are still implemented in forms that are potentially most distorting, down from 84% in the early 2000s (Figure 27.1). Single commodity transfers (SCTs) mirror the MPS across commodities, with sugar and pig meat receiving positive support and milk and sunflower seed, as well as the minor grain oats, being implicitly taxed (Figure 27.3). Total support has declined in relative terms, and represented 0.4% of GDP in the most recent three-year average, down from 0.5% in 2000-02. Support to general services has declined both as a share of total support (now 37.5%) and relative to the sector's size, representing 1.7% of the Agricultural Value-Added in 2017-19. Producer support has declined in 2019 relative to 2018 mainly due to an expanded negative price gap in sunflower seeds, following declining producer prices. This was only partly offset by lower reference prices in other commodities.

Figure 27.2. Ukraine: Drivers of the change in PSE, 2018 to 2019



Source: OECD (2020), "Producer and Consumer Support Estimates", OECD Agriculture statistics (database), http://dx.doi.org/10.1787/agr-pcse-data-en.
StatLink https://doi.org/10.1787/888934145009

Figure 27.3. Ukraine: Transfer to specific commodities (SCT), 2017-19



Source: OECD (2020), "Producer and Consumer Support Estimates", OECD Agriculture statistics (database), http://dx.doi.org/10.1787/agr-pcse-data-en.
StatLink https://doi.org/10.1787/888934145028

Table 27.1. Ukraine: Estimates of support to agriculture

Million USD

	2000-02	2017-19	2017	2018	2019p
Total value of production (at farm gate)	**9 619**	**31 213**	**28 510**	**31 469**	**33 659**
***of which:** share of MPS commodities (%)*	86.8	82.9	81.8	82.7	84.2
Total value of consumption (at farm gate)	**8 841**	**21 537**	**20 238**	**21 066**	**23 308**
Producer Support Estimate (PSE)	**53**	**330**	**-238**	**668**	**561**
Support based on commodity output	-415	-2	-591	357	226
Market Price Support[1]	-531	-2	-591	357	226
Positive Market Price Support	388	339	169	437	411
Negative Market Price Support	-919	-342	-760	-80	-185
Payments based on output	116	0	0	0	0
Payments based on input use	203	144	191	120	120
Based on variable input use	169	65	161	10	23
with input constraints	0	0	0	0	0
Based on fixed capital formation	31	79	30	109	97
with input constraints	0	0	0	0	0
Based on on-farm services	2	0	0	0	0
with input constraints	0	0	0	0	0
Payments based on current A/An/R/I, production required	265	189	162	191	214
Based on Receipts / Income	265	162	162	158	166
Based on Area planted / Animal numbers	0	27	0	33	48
with input constraints	0	0	0	0	0
Payments based on non-current A/An/R/I, production required	0	0	0	0	0
Payments based on non-current A/An/R/I, production not required	0	0	0	0	0
With variable payment rates	0	0	0	0	0
with commodity exceptions	0	0	0	0	0
With fixed payment rates	0	0	0	0	0
with commodity exceptions	0	0	0	0	0
Payments based on non-commodity criteria	0	0	0	0	0
Based on long-term resource retirement	0	0	0	0	0
Based on a specific non-commodity output	0	0	0	0	0
Based on other non-commodity criteria	0	0	0	0	0
Miscellaneous payments	0	0	0	0	0
Percentage PSE (%)	**0.5**	**1.0**	**-0.8**	**2.1**	**1.6**
Producer NPC (coeff.)	**0.95**	**1.00**	**0.98**	**1.01**	**1.01**
Producer NAC (coeff.)	**1.01**	**1.01**	**0.99**	**1.02**	**1.02**
General Services Support Estimate (GSSE)	**121**	**197**	**139**	**221**	**230**
Agricultural knowledge and innovation system	51	68	68	68	68
Inspection and control	26	108	55	130	141
Development and maintenance of infrastructure	36	10	5	14	11
Marketing and promotion	1	0	1	0	0
Cost of public stockholding	1	3	3	3	4
Miscellaneous	7	7	8	6	7
Percentage GSSE (% of TSE)	**69.5**	**37.3**	**..**	**24.9**	**29.1**
Consumer Support Estimate (CSE)	**384**	**34**	**566**	**-270**	**-195**
Transfers to producers from consumers	478	58	580	-240	-168
Other transfers from consumers	-38	-20	-13	-24	-22
Transfers to consumers from taxpayers	0	0	0	0	0
Excess feed cost	-55	-4	-1	-6	-5
Percentage CSE (%)	**4.3**	**0.2**	**2.8**	**-1.3**	**-0.8**
Consumer NPC (coeff.)	**0.95**	**1.00**	**0.97**	**1.01**	**1.01**
Consumer NAC (coeff.)	**0.96**	**1.00**	**0.97**	**1.01**	**1.01**
Total Support Estimate (TSE)	**174**	**527**	**-99**	**889**	**791**
Transfers from consumers	-440	-38	-568	264	189
Transfers from taxpayers	651	585	481	649	623
Budget revenues	-38	-20	-13	-24	-22
Percentage TSE (% of GDP)	**0.5**	**0.4**	**-0.1**	**0.7**	**0.5**
Total Budgetary Support Estimate (TBSE)	**705**	**529**	**492**	**532**	**564**
Percentage TBSE (% of GDP)	**1.9**	**0.4**	**0.4**	**0.4**	**0.4**
GDP deflator (2000-02=100)	**100**	**1 225**	**1 137**	**1 313**	**..**
Exchange rate (national currency per USD)	**5.38**	**26.55**	**26.60**	**27.20**	**25.85**

.. Not available

Note: p: provisional. NPC: Nominal Protection Coefficient. NAC: Nominal Assistance Coefficient.
A/An/R/I: Area planted/Animal numbers/Receipts/Income.
1. Market Price Support (MPS) is net of producer levies and excess feed cost. MPS commodities for Ukraine are: wheat, maize, rye, barley, oats, sunflower, sugar, potatoes, milk, beef and veal, pig meat, poultry and eggs.

Source: OECD (2020), "Producer and Consumer Support Estimates", *OECD Agriculture statistics* (database), http://dx.doi.org/10.1787/agr-pcse-data-en.

Contextual information

Ukraine is classified as an upper middle income country. It features a large area of fertile arable land, making agriculture a major sector of the economy compared to most other countries in this report: it accounts for 10% of the country's economy and 15% of its employment. Agro-food exports represent around 40% of Ukraine's total exports.

Four-fifths of Ukraine's agricultural area is arable, and crops represent some three-quarters of agricultural output, up from two-thirds in the mid-1990s.

Table 27.2. Ukraine: Contextual indicators

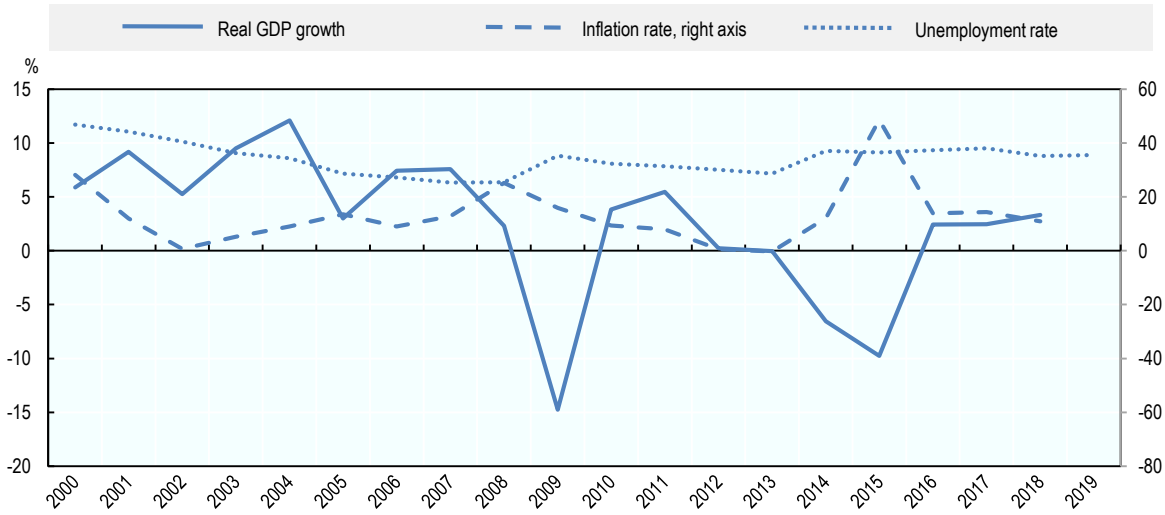
	Ukraine		International comparison	
	2000*	2018*	2000*	2018*
Economic context			**Share in total of all countries**	
GDP (billion USD in PPPs)	188	391	0.5%	0.3%
Population (million)	49	44	1.1%	0.9%
Land area (thousand km²)	579	579	0.7%	0.7%
Agricultural area (AA) (thousand ha)	41 406	41 489	1.4%	1.4%
			All countries[1]	
Population density (inhabitants/km²)	84	76	53	62
GDP per capita (USD in PPPs)	3 818	9 233	9 275	21 924
Trade as % of GDP	46	40	12.4	15.3
Agriculture in the economy			**All countries[1]**	
Agriculture in GDP (%)	14.5	10.1	3.1	3.6
Agriculture share in employment (%)	21.9	15.3	-	-
Agro-food exports (% of total exports)	10.1	39.4	6.2	7.3
Agro-food imports (% of total imports)	6.1	7.9	5.5	6.3
Characteristics of the agricultural sector			**All countries[1]**	
Crop in total agricultural production (%)	59	76	-	-
Livestock in total agricultural production (%)	41	24	-	-
Share of arable land in AA (%)	79	79	32	33

Notes: *or closest available year. 1. Average of all countries covered in this report. EU treated as one.
Sources: OECD statistical databases; UN Comtrade; World Bank, WDI and national data.

Between 2013 and 2015, real GDP had fallen by 16% while inflation rates had risen to almost 50%, due to adverse political circumstances. Since then, the economy has grown steadily at rates between 2.4% and 3.3% per year while inflation rates have come down. Unemployment also rose in 2014 and continues to be high at almost 9%.

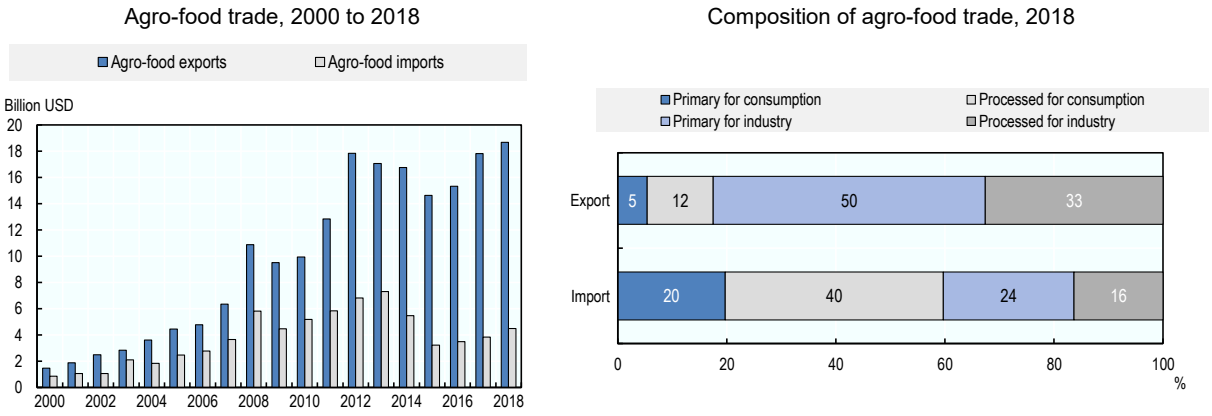
Ukraine is among the world's leading exporters of grains and vegetable oils. Its agro-food exports grew rapidly between the late 1990s and 2012, and export growth has resumed after the drop between 2012 and 2015, which was due to adverse political circumstances. Most of Ukraine's agro-food exports are intermediary, mainly primary, products for further processing. Imports, in turn, are more mixed, with primary and processed products for final consumption representing about 60% of agro-food imports.

Figure 27.4. Ukraine: Main economic indicators, 2000 to 2019



Sources: OECD statistical databases; World Bank, WDI and ILO estimates and projections.

Figure 27.5. Ukraine: Agro-food trade

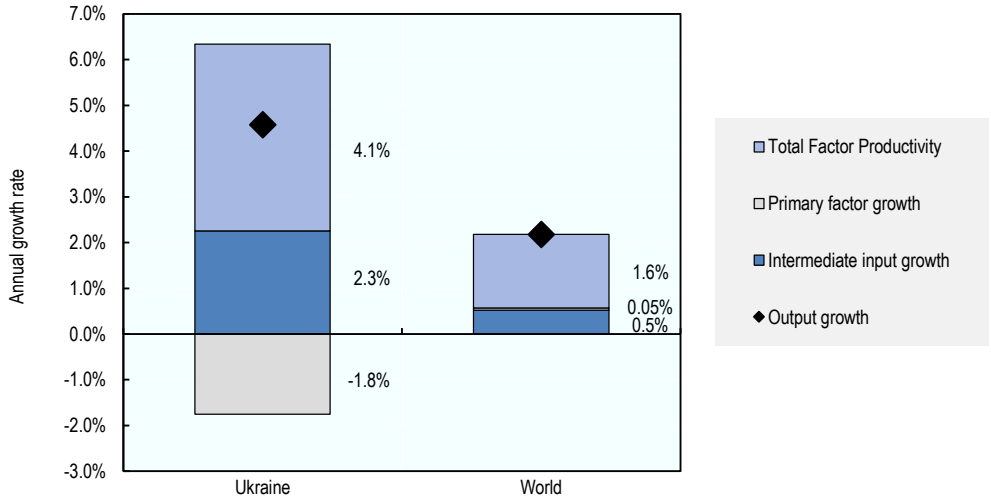


Note: Numbers may not add up to 100 due to rounding.
Source: UN Comtrade Database.

Both agricultural output and total factor productivity grew at rates significantly above global averages, at 4.6% and 4.1% per year respectively in the decade ending 2016. Output was also driven by intermediate input growth, while the use of primary factors, notably of capital, shrank. The shrinking capital stock may pose a risk for continued productivity growth in the future.

Despite the declining importance of agriculture within the economy, agriculture's shares in the country's energy use and GHG emissions have increased over the past two decades. Average nitrogen balances have also increased since 2000 and are now comparable to those across the OECD, while data now suggest a nation-wide negative balance for phosphorous.

Figure 27.6. Ukraine: Composition of agricultural output growth, 2007-16



Note: Primary factors comprise labour, land, livestock and machinery.
Source: USDA Economic Research Service Agricultural Productivity database.

Table 27.3. Ukraine: Productivity and environmental indicators

	Ukraine		International comparison	
	1991-2000	2007-2016	1991-2000	2007-2016
			World	
TFP annual growth rate (%)	0.7%	4.1%	1.6%	1.6%
			OECD average	
Environmental indicators	**2000***	**2018***	**2000***	**2018***
Nitrogen balance, kg/ha	20.9	29.6	33.3	29.1
Phosphorus balance, kg/ha	2.6	-0.9	3.3	2.3
Agriculture share of total energy use (%)	2.1	3.7	1.7	2.0
Agriculture share of GHG emissions (%)	8.4	12.1	8.1	8.9
Share of irrigated land in AA (%)	5.8	5.2	-	-
Share of agriculture in water abstractions (%)	30.0	32.1	46.0	49.0
Water stress indicator	..	..	9.9	8.9

Notes: * or closest available year.
Sources: USDA Economic Research Service, Agricultural Productivity database; OECD statistical databases; FAO database and national data.

Description of policy developments

Main policy instruments

Ukraine's agricultural policy measures are formulated in a number of major laws and decisions. The law "**On State Support of Agriculture in Ukraine**", adopted in 2004, defines priorities and measures of agricultural policy. The "**Concept of Rural Development in Ukraine**", approved in 2015, provides priorities for the development of rural areas in Ukraine until 2025. Ukraine's policies are increasingly influenced by the **Association Agreement with the European Union**, ratified by Ukraine in 2014. Finally, the financial scope of agricultural policies is defined in the annual law "**On State Budget of Ukraine**". Relative to 2018, this increased by about 15% in nominal terms in 2019.

Ukraine's legislation provides for a range of instruments to intervene in agricultural markets. These include tariff protection, non-tariff trade regulation, and various forms of domestic price measures. The state agency Agrarian Fund can implement domestic **price interventions** through the operation of the State Intervention Fund. Initially dealing only with grain, the Agrarian Fund has become progressively involved in other activities, such as sugar sales from public stocks; state purchases and sales of a broad range of agricultural and food products; forward-contracting; flour processing and wholesaling.

For purchases by the Agrarian Fund, the law "On State Support of Agriculture in Ukraine" provides for the setting of official minimum and maximum intervention prices, covering commodities that are "objects of state regulation", although the maximum prices have not been applied. Specific government decrees define the exact list of such products and the periods during which these administered prices are applied. Minimum prices do not play a role of guaranteed prices but represent a basis for decisions on commodity purchases for public stocks, and are regarded as a floor-price reference for private market operators. Minimum intervention prices should not exceed domestic market price levels to comply with the Ukraine's WTO domestic support commitment. While until 2016 the Agrarian Fund has continued to procure and sell limited amounts of grains under this mechanism, since the 2016/17 marketing year no budgetary funds have been allocated to state interventions, and corresponding minimum intervention prices have not been set.

Agricultural producers are eligible for a **Single Tax**,[11] which is set as a percentage of agricultural land value, established on 1 July 1995 and adjusted since with the general consumer price index. Introduced in 1998, the Single Tax originally replaced twelve taxes for which agricultural enterprises were liable as business entities. The scope of this tax have been narrowing since then. At present, the Single Tax replaces three taxes – profit tax, land tax (for land used in agricultural production), and special water use fee – with agricultural producers liable to all other taxes previously included in the Single Tax . The Single Tax regime generates implicit tax benefits to agricultural producers which for recent years were estimated to be around UAH 4.3 billion (USD 158 million) annually.

Since 2002, a moratorium on the sale of agricultural land bans selling farmland in Ukraine, although leasing for cultivation is permitted. The moratorium has been extended annually until and including 2019. It was not formally extended into 2020, but pending the adoption of the Law on Agricultural Land Turnover, the sale and purchasing of agricultural land in Ukraine continues to be legally impossible.

On 27 June 2014, the European Union and Ukraine signed the **Deep and Comprehensive Free Trade Area (DCFTA)** as part of their Association Agreement. It was provisionally applied from 1 January 2016 and formally entered into force on 1 September 2017. The liberalisation of trade between the European Union and Ukraine is to be implemented within a transition period of seven to ten years. The European Union opens tariff rate quotas for duty-free imports for Ukraine's principal agro-food products, such as grain, meat and milk products, and sugar, and grants free access for the others. Ukraine reduced import duties for a number of goods imported from the European Union. About 40% of agriculture-related import duties were reduced to zero immediately after the Agreement entered into force, and around a half of import duties will be eliminated during the transition period. However, about 10% of tariff lines – covering selected products in such product categories as dairy and eggs, sugar, miscellaneous edible products, animal oils and fats, and feeding stuff for animals – will preserve non-zero tariffs. Since 1 January 2016, Ukraine applies three tariff rate quotas (TRQs) with zero in-quota tariffs for imports from the European Union of pig meat, poultry meat and poultry meat preparations, and sugar, respectively. The parties committed to apply no export subsidies for mutually traded agricultural goods.

The DCFTA incorporates fundamental WTO rules on non-tariff barriers, such as prohibition of import and export restrictions and disciplines on state trading. The main barrier for trade integration remains Ukraine's difficulty in complying with EU food safety, veterinary and phytosanitary requirements. Thus, the DCFTA contains provisions for technical regulations, standards and conformity assessments to harmonise with those of the European Union, as well as for technical co-operation in the field of technical regulations,

standards and related issues between Ukraine and the European Union. In line with these provisions, the "**Comprehensive Strategy of Implementing Legislation on Sanitary and Phytosanitary Measures**" was approved in 2016 and provides for a process of harmonisation of Ukraine's SPS legislation with EU requirements.

Other Free Trade Agreements of Ukraine include the FTA with the European Free Trade Association (EFTA) in force since June 2012, the multilateral FTA with the Commonwealth of Independent States (CIS)[12] in force since August 2012 as well as bilateral ones with all CIS members, and the Canada-Ukraine FTA, in force since August 2017.

Ukraine signed the **Paris Agreement of the United Nations Framework Convention on Climate Change** in April 2016, and ratified it in September 2016. Through its Nationally Determined Contribution, Ukraine committed to total emissions across sectors, including agriculture, not exceeding 60% of those in 1990 (equivalent to not exceeding 140% of those in 2012). In December 2016, the Cabinet of Ministers of Ukraine (CMU) adopted the **National Concept of State Policy in the Field of Climate Change up to 2030**. The "**Strategy for Low Carbon Development of Ukraine up to 2050**" (SLCD) was approved by the Cabinet of Ministries of Ukraine in July 2018. The SLCD defines a co-ordinated approach by various parties concerned and provides a national vision for separating economic growth and social development from the increase of greenhouse gas emissions. The Action Plan for the implementation of this Concept was approved by the CMU in late 2018 (see below). In addition, the Ministry of Agrarian Policy and Food (MAPF) (since 29 August 2019: Ministry of Economic Development, Trade and Agriculture, MEDTA) is developing measures to improve environmental practices related to the adaptation of agriculture and forestry to climate change, in line with the obligations under the Association Agreement with the European Union.

While amounts of support differed from year to year, most measures providing financial support targeted to specific activities continued in 2019. These include various measures providing preferential credits, the partial compensation of costs for agricultural machinery and equipment, the compensation of farmers for agricultural advisory services and, importantly, the single tax regime, a simplified tax system based on normative monetary land values resulting in annual tax benefits estimated at more than UAH 4 billion (USD 155 million).

For livestock producers, continued support measures also include: interest rate support for livestock husbandry and breeding; the partial reimbursement of costs related to the construction and reconstruction of animal farms and complexes; per head payments for cows to agricultural enterprises and for young cattle to rural households; and a partial compensation to agricultural producers purchasing high breeding animals, semen and embryos.

On the crop side, support continued in the form of seed cost compensation, reimbursements for different types of on-farm investments and debt repayments.

In contrast, the **VAT accumulation system**, which had provided significant support to agricultural producers through unpaid VAT, was discontinued in 2017, and a one-year "**Development Subsidy**" with similar characteristics was provided only in that year. Since 2018, this form of support has no longer been provided, with agricultural producers now integrated into the economy-wide VAT system.

Domestic policy developments in 2019-20

On 29 August 2019, the Ministry of Agrarian Policy and Food (MAPF), one of the oldest government agencies of Ukraine, was integrated into the Ministry of Economic Development and Trade to form the new **Ministry of Economic Development, Trade and Agriculture of Ukraine** (MEDTA) as the central executive authority of Ukraine in charge of the country's agro-development. At the same time, the State Agencies of Forest Resources and for Fisheries of Ukraine have been transferred to the Ministry of Energy and Environment of Ukraine. The merger of the agricultural dossier into the Ministry of Economic

Development and Trade aims at accelerating reforms towards the integration of the agricultural sector into the general economy in terms of land use, job creation, innovation and digitalisation, and market deregulation.

After substantial reductions, the state budget for supporting the Ukrainian agricultural sector has significantly increased since 2016. In 2019, total expenses by the Ministry of Agrarian Policy and Food of Ukraine and subsequently the Ministry of Economic Development, Trade and Agriculture for direct subsidies to agricultural producers amounted to UAH 4 343 billion (USD 168 million), up from UAH 0.3 billion (USD 12 million) in 2016 when most of the support had been provided through public revenues foregone.

A number of important regulations and strategy papers have been put in place recently:

- In July 2019, the Cabinet of Ministers approved the "**Strategy for attracting private investment in agriculture for the period until 2023**" which aims to increase agricultural exports, ensure national food security, and improve effectiveness and sustainable growth of the agricultural sector.
- In November 2019, the Cabinet of Ministers of Ukraine adopted a resolution amending the **Action Plan on Implementation of the Association Agreement between Ukraine and the European Union**. The updated plan takes into account the deepening of the Ukraine-EU bilateral relations and a series of regulatory acts adopted by the bilateral bodies of the Association Agreement in recent years. The Action Plan aims to ensure the accomplishment of the targets contained in the Government's Action Program, to achieve Ukraine's compliance with the implementation of the Association Agreement, by clearly defining deadlines and responsibilities for carrying out specific tasks across authorities.
- In October 2019, the government approved the "**Procedure for establishing special conditions for imports of food and animal feed products**", thus strengthening the control over imports of food and animal feed goods by the State Service of Ukraine for Food Safety and Consumer Protection. The procedure aims to increase the effectiveness of state control over the imports of food and animal feed products in order to reduce or eliminate the level of threat associated with the presence of a dangerous factor in the imported products, and remove unnecessary burden during import procedures. The procedure clarifies under which conditions which import restrictions may be imposed, and assigns the authority to take decisions on establishing or abolishing import restrictions to the Ministry in charge of agriculture (now MEDTA).
- The Law "**On Feed Safety and Hygiene**", adopted by the Parliament in 2017 and in force since January 2020, sets legal and organisational principles for production, circulation, labelling and presentation of feedstuff, and regulates the relations between executive authorities[13] and feed market operators.
- The Law "**On foodstuff information**" adopted by the Parliament in 2018 and in force since August 2019, establishes the legal and organisational basis for providing food information to consumers. Among others, the law defines obligations of the food market operators, including on issues such as the placement and labelling of food products, as well as the control functions of the state.
- The Law "**On the basic principles and requirements for organic production, circulation and labelling of organic products**", adopted by the Parliament in 2018 and in force since August 2019, provides the main framework for the production of organic food products and the functioning of the market for organic products. It also defines the roles and obligations for public authorities and organic market operators, and lays out further public policy directions for the development of organic product markets. In pursuance of the Law, the Cabinet of Ministers approved, in October 2019, the "**Procedure for the Organic Production and Circulation of Organic Products**". The main provisions of this procedure are in line with the requirements of EU Regulation 889/2008.

The MAPF's Order "**On Approval of Honey Requirements"** from June 2019 will enter into force in June 2020. The Order aims at harmonisation of the Ukrainian legislation with the EU legislation regarding

the requirements for honey. The document sets requirements for the characteristics and composition of honey, terminology, honey labeling.

In October 2019, the Cabinet of Ministers of Ukraine approved the "**Irrigation and Drainage Strategy in Ukraine for the period up to 2030**". This nation-wide cross-sectoral policy document aims to apply irrigation and drainage arrangements in order to increase yields and make them less dependent of weather conditions. The strategy contains several working directions, including, among others, a reform of the public administration system for irrigation and drainage; an improvement and maintenance of river basin; the restoration and expansion of the areas equipped with irrigation and drainage systems; promotion of public-private partnerships; the involvement of relevant stakeholders in related public policy making; improving irrigation and drainage systems; and enhanced research and training.

New measures were introduced at the end of 2018 to support **small and medium sized producers**. This support comes in the form of general area payments. Payments are higher for newly established farms (available during three years after their creation for agricultural purposes), at UAH 3 000 per hectare but not exceeding UAH 60 000 (USD 2 321) per farm, whereas the payment limit for other small and medium sized farms is UAH 12 000 per farm member and UAH 40 000 per farm. Payments require that the land is used for farming purposes.

In 2019, producers could also receive partial reimbursement of the cost of **construction or reconstruction of grain storage and grain processing capacities**. Up to 30% of the investment – including for equipment – could be refunded. In addition, since December 2019 a new web-based service provided by the state enterprise "State Register" provides data on grain quantities stored in all elevators in Ukraine.

Finally, the order "**On approval of conceptual directions of cheaper loans to agricultural producers for the purchase of land**", approved by the CMU in September 2019, proposes both interest rate support and a partial compensation of loans used for the purchase of agricultural land. Pending the adoption of the Law on Agricultural Land Turnover that would provide the legal basis for land markets, however, the sale and purchasing of agricultural land in Ukraine continues to be legally impossible.

Trade policy developments in 2019-20

Ukraine has been a member of the WTO since May 2008. The country charges **import tariffs** on most agricultural products, with applied MFN tariffs for agricultural products averaging at 9.2%, well above the average for non-agricultural products at 3.7%. While most imports face *ad valorem* tariffs, Ukraine maintains a **global tariff-rate quota** for raw cane sugar which, however, has not been used since 2014 given excess supply on the Ukrainian market. **Export duties** are applied to some oilseeds, live animals and raw hides. Furthermore, Ukraine had **suspended VAT refunds** for exports of soybeans from September 2018, and planned to suspend those for exports of rapeseed from January 2020. However, VAT refunds for exports of both commodities were re-established from January 2020.

The FTA with Israel was signed in January 2019 and ratified by the Ukrainian Parliament in July 2019, but is yet to be put in force, pending ratification by Israel. Negotiations on a FTA with Turkey are ongoing.

In the context of the DCFTA with the European Union, parties agreed, in July 2019, to gradually increase duty-free EU tariff rate quotas for Ukrainian poultry and processed poultry meat. By 2021, the two TRQs are to reach a combined volume of 90 000 tonnes per year.

In response to a suspension by the Russian Federation of its free trade regime with Ukraine under the Agreement on Free Trade in the Commonwealth of Independent States (CIS) Area, and the implementation of a ban by the Russian Federation on imports of agro-food products from Ukraine, Ukraine in turn has suspended trade preferences for imports from the Russian Federation foreseen by the CIS FTA. Ukraine has banned imports of a list of 43 agricultural goods from the Russian Federation. This list

includes meat and meat by-products, fish, milk and dairy products, tea, coffee, grain and its processing products, vegetable and animal oils, confectionery, baby foods, beer, vodka, ethyl alcohol, cigarettes, and others. In December 2019, the suspension of trade preferences and the ban on specific imports were further prolonged until the end of 2020, and a number of corn-based products were added to the list of banned products. Since July 2019, Ukraine has also banned the import of mineral fertilisers, animal feeds and veterinary products from the Russian Federation. Anti-dumping duties for chocolate and other cocoa-based food products produced in the Russian Federation, effective from 20 June 2017 for a period of five years, continue to be in place.

In October 2019, the Ministry of Economic Development, Trade and Agriculture (MEDTA) and main associations of grain exporters signed the traditional **Memorandum of Understanding (MoU) on grain exports**. It covers mechanisms for interaction of grain market participants, the exchange of information on grain export prospects, and the monitoring of grain market functioning. In contrast to earlier MoUs, however, the Memorandum for the 2019/2020 marketing year does not contain annexes that would determine recommended volumes of grain exports. Instead, grain market participants have agreed to meet on a monthly basis to exchange information on the grain market and export situation.

The **Strategy for the Export Development of Agricultural, Food and Processing goods in Ukraine for the period until 2026** was approved by the Order of the Cabinet of Ministers of Ukraine in July 2019. The Strategy aims to enhance the competitiveness of products and expand the export product range; market diversification; stimulating the promotion of the Ukrainian food brand and information and analytical support for the exports of agricultural products, food and processed goods. A related Action Plan clarifies timing and responsibilities for the implementation of a large number of specific measures, such as the continuous monitoring and assessment of agricultural markets, online information systems or e-learning opportunities.

The **New State Customs Service of Ukraine** officially started working on 8 December 2019. The system was significantly transformed, with the number of regional customs offices across Ukraine reduced from 26 to 16.

The new **Export Promotion Office** was established in 2018 as a consultative and advisory body under the Ministry of Economic Development and Trade of Ukraine, to help Ukrainian exporters to access new markets. It provides assistance to both Ukrainian exporters and foreign importers.

Moreover, and per request by the CMU, a new **Export Credit Agency** was created in late 2018. This new agency is to facilitate Ukraine’s transition from a raw material exporter to a supplier of value added goods and services.

Notes

[1] Market price support estimates for the dairy sector have been revised for the years since 2014, to better reflect the quality difference between milk produced for the domestic market and that for the production of export products. These revisions have reduced the negative price gap for milk by 64% on average over the 2014-2019 period.

[2] https://latifundist.com/en/novosti/49385-minekonomiki-i-uchastniki-zernovogo-rynka-podpisali-dokument-ob-ogranichenii-eksporta-pshenitsy; USDA (2020): Cap on Ukrainian Wheat Exports, GAIN Report Number UP-2020-0019, 6 April 2020, https://apps.fas.usda.gov/newgainapi/api/Report/DownloadReportByFileName?fileName=Cap%20on%20Ukrainian%20Wheat%20Exports_Kyiv_Ukraine_04-05-2020.

[3] USDA (2020): *Grain: World Markets and trade*, March 2020, https://apps.fas.usda.gov/psdonline/circulars/grain.pdf.

[4] https://www.nytimes.com/reuters/2020/04/15/business/15reuters-health-coronavirus-ukraine-grains-exclusive.html.

[5] https://latifundist.com/en/novosti/49447-ukraina-vvela-zapret-na-eksport-grechki.

[6] https://oryza.com/49912/ukraine-remove-import-duty-rice.

[7] https://www.president.gov.ua/en/news/ukrayinci-zabezpecheni-harchami-j-zhodnoyi-nestachi-ne-bude-60497.

[8] https://www.reuters.com/article/grains-ukraine-flour/ukraine-sells-flour-to-curb-price-rise-monitors-wheat-exports-idUSL8N2BK5I7.

[9] https://www.bbc.com/ukrainian/news-52276696.

[10] https://agropolit.com/news/16090-uryad-gotuye-perelik-produktiv-sotsialnogo-znachennya-dlya-vstanovlennya-na-nih-regulyuvannya-tsin.

[11] Termed the “Fixed Agricultural Tax” before 2015.

[12] Other members and associate members include Armenia, Azerbaijan, Belarus, Kazakhstan, Kyrgyzstan, Moldova, the Russian Federation, and Turkmenistan.

[13] Cabinet of Ministers of Ukraine (CMU), Ministry of Agrarian Policy and Food (MAPF) (from 29 August 2019: Ministry of Economic Development, Trade and Agriculture, MEDTA) and State Service of Ukraine for Food Safety and Consumer Protection (SSUFSCP).

28 United States

Support to agriculture

The level of support provided to agricultural producers in the United States has been consistently below the OECD average. Producer support (PSE) was 11% of gross farm receipts in 2017-19. On average, prices received by farmers in 2017-19 were 4% higher than those observed in world markets, largely as a result of market price support (MPS) for milk, sugar, and to a lesser extent sheep meat. These commodities are protected by border measures (including tariff rate quotas). Producer prices of other commodities are mostly aligned with border prices. Support to consumers accounts for close to half of total support to US agriculture as a result of US domestic food assistance programmes. Expenditures for general services (GSSE) were equivalent to 5.8% of agricultural value added in 2017-19, slightly above the OECD average.

MPS has become a progressively smaller share of US support to agriculture. Budgetary support has increased in importance over time, mainly due to increases in payments that require production – reflecting the emphasis placed on farm insurance and risk management – and, to a lesser extent, increases in input payments. Reflecting the fact that crop insurance and the primary crop commodity programmes are counter-cyclical to market prices, the level of budgetary support is inversely related to market price developments. Support has peaked when world commodity prices have been depressed (in terms of USD), while high commodity prices after 2007-08 contributed to lower levels of support.

Main policy changes

In May 2019, USDA announced a second package of trade mitigation programmes to assist farmers affected by retaliatory tariffs, resulting in the loss of traditional export markets. The package includes three programmes: the Market Facilitation Program (MFP), the Food Purchase and Distribution Program (FPDP), and the Agricultural Trade Promotion Program (ATP). The MFP provides up to USD 14.5 billion for three tranches of payments to affected producers of row crops, hogs, milk, and certain specialty crops. As of 9 December 2019, MFP payments distributed in the first two tranches were USD 10.47 billion. A third tranche of MFP payments for 2019 was announced on 3 February 2020, which will provide the remaining 25% of total payments. The FPDP provides for purchases of up to USD 1.4 billion in other commodities targeted by retaliatory tariffs. The ATP provides up to USD 100 million in cost-share assistance to eligible US organisations to develop foreign markets for US agricultural products.

On **disaster assistance**, the *Additional Supplemental Appropriations for Disaster Relief Act of 2019* authorised just over USD 3 billion in disaster assistance for necessary expenses related to crop losses as a consequence of hurricanes, floods, tornadoes, typhoons, volcanic activity, snowstorms and wildfires occurring in 2018 and 2019. USDA is providing the assistance through three programmes: the *Wildfire and Hurricane Indemnity Program Plus (WHIP+)* for losses to eligible crops, trees, bushes, and vines; the *On-Farm Storage Loss Program* for eligible producers who suffered losses of harvested commodities (including hay) that were stored in on-farm structures; and the *WHIP Milk Loss Program*, which allows dairy operations to receive payments for milk that was dumped or removed without compensation from the

commercial milk market due to qualifying weather events in 2018 and 2019 that prevented the delivery of milk.

On 12 December 2019, the United States and the People's Republic of **China** (China) reached a **"Phase One" Trade Agreement**. The agreement was signed on 15 January 2020 and entered into force on 15 February 2020.

Assessment and recommendations

- Levels of producer support and border protection have decreased since the early 2000s. However, low levels of support in recent years have primarily reflected higher world commodity prices, as many of the agricultural support programmes are counter-cyclical to market prices.
- The increasing emphasis on insurance and risk management policy tools is, in principle, a good approach to providing support to producers when they are in need. However, most insurance programmes remain commodity-specific. Moving to an all farm-revenue approach would exploit differences in price and yield variability across products, reducing government costs for a given objective, and also remove distortions across commodity sectors. Risk management instruments should also be evaluated to ensure that they do not transfer risk that should be borne by farmers to the public budget.
- Established voluntary conservation programmes like the Environmental Quality Incentives Program (EQIP) and the programmes, consolidated into the Agricultural Conservation Easement Program (ACEP), appear to be effective in addressing soil conservation and water pollution problems. Careful assessments are needed to ensure that these and newer programmes, like the Regional Conservation Partnership Program, are well targeted and provide additional environmental benefits for public spending.
- Recent Farm Bills have continued strong support for farm incomes and strengthened the risk management system to help build farmers' resilience to natural disasters and market shocks. It will be important to ensure that the recent return to providing ad hoc support does not become entrenched, so that it does not dis-incentivise necessary adjustments to new market and environmental conditions.
- While a high rate of productivity growth – driven by farm consolidations and the adoption of innovations – has helped to maintain the competitiveness of US agro-food exports, future export opportunities will also be determined by access to markets facilitated by trade agreements. Resolving current trade uncertainties will be important to ensure that farmers are able to pursue available market opportunities.
- The United States has begun the process to withdraw from the 2016 Paris Agreement on Climate Change. However, USDA helps producers reduce GHG emissions, enhance carbon sequestration and adapt to a changing climate while improving the natural resource base by providing technical and financial assistance to landowners through various conservation practices and programmes.

Policy responses in relation to the COVID-19 outbreak

Agricultural policies

On 27 March 2020, President Trump signed into law the Coronavirus Aid, Relief, and Economic Security (CARES) Act. The CARES Act provides USD 9.5 billion in disaster relief to support producers impacted by COVID-19, including producers of specialty crops, producers that supply local food systems, including farmers markets, restaurants, and schools, as well as livestock producers, including dairy producers. The

CARES ACT also includes USD 14 billion to replenish the USD 30 billion in existing borrowing authority for the Farm Bill's Commodity Credit Corporation (CCC).[1] The CCC many of the U.S. Department of Agriculture's (USDA) programmes for farmers.

The United States has also announced a new USDA programme, the Coronavirus Food Assistance Program (CFAP) that will take several actions to assist farmers, ranchers, and consumers in response to the COVID-19 national emergency. CFAP will use the funding and authorities provided in the CARES Act, the Families First Coronavirus Response Act (FFCRA), and other USDA existing authorities. The programme includes direct support to farmers and ranchers. Specifically, CFAP will provide USD 16 billion in direct support based on actual losses for agricultural producers where prices and market supply chains have been impacted and will assist producers with additional adjustment and marketing costs resulting from lost demand and short-term oversupply for the 2020 marketing year caused by COVID-19.[2]

USDA is introducing flexibilities into its programmes and services in response to the COVID-19 pandemic and part of its implementation of the CARES Act:[3]

- USDA's Farm Service Agency is relaxing the loan-making process and adding flexibilities for servicing direct and guaranteed loans.
- USDA has extended the loan maturity for Marketing Assistance Loans for most commodities from 9 to 12 months.
- USDA's Risk Management Agency is working with those insurance providers to provide additional flexibilities.

The CARES Act also appropriated USD 349 billion for the Paycheck Protection Program (PPP). The PPP is a guaranteed loan programme administered by the Small Business Administration. The purpose of the programme is to support small businesses and help support their payroll during the coronavirus situation. Agricultural producers, farmers, and ranchers are eligible for PPP if their principal place of residence is in the United States; they have 500 or fewer employees; and fit within the revenue-based sized standard, which is on average annual receipts of USD 1 million.[4]

Agro-food supply chain policies

As part of CFAP, USDA will partner with regional and local distributors, whose workforce has been significantly impacted by the closure of many restaurants, hotels, and other food service entities. USDA will purchase USD 3 billion in fresh produce, dairy, and meat, beginning with the procurement of an estimated USD 100 million per month in fresh fruits and vegetables, USD 100 million per month in a variety of dairy products, and USD 100 million per month in meat products. Distributors and wholesalers will provide a pre-approved box of fresh produce, dairy, and meat products to food banks, community and faith based organizations, and other non-profits.[5]

The CARES Act also provides USD 140.75 million to USDA agencies to help with salaries and expenses in light of the COVID-19 pandemic. For example, the CARES Act appropriates an additional USD 45 million for the Agricultural Marketing Service (AMS) to prevent, prepare for, and respond to coronavirus, domestically or internationally, including necessary expenses for salary costs associated with commodity grading, inspecting, and audit activities. It also appropriates an additional USD 33 million for the Food Safety and Inspection Service (FSIS) to support staffing and overtime expenses for Food Safety Inspection Service inspectors at federally inspected slaughter facilities.[6]

USDA agencies have also introduced labelling flexibilities to facilitate the distribution of food to retail locations. USDA AMS will not enforce Country of Origin Labelling (COOL) requirements or method of production labelling requirements to allow the re-distribution of food products intended for foodservice to be sold in retail establishments, provided that the food does not make any country of origin or method of production claims. The reduced labelling requirements are limited to inventory-on-hand and for a period of

60 days.[7] USDA FSIS is temporarily relaxing requirements for the Nutrition Facts label for food already produced to be redirected from restaurants to retail consumer markets. Bulk products may also be redirected to retail consumer markets even if packaging carries a statement of limited use.[8] To facilitate the distribution of food during the COVID-19 pandemic, the US Food and Drug Administration is providing restaurants and food manufacturers with flexibility regarding nutrition labelling of certain packaged food to facilitate the re-sale of ingredients directly to consumers. Reduced labelling requirements are limited to inventory-on-hand.[9]

In response to potential labour shortages, the US State Department and the Department of Homeland Security have waived in-person interviews for eligible farm labour H-2A visa applicants who are already in the United States or have held such visas in the past 48 months.[10] Additionally, the Department of Homeland Security has allowed H-2A visa petitioners to hire guest workers already in the United States, and has extended the visas of H-2A workers beyond the normal 3-year maximum stay.[11]

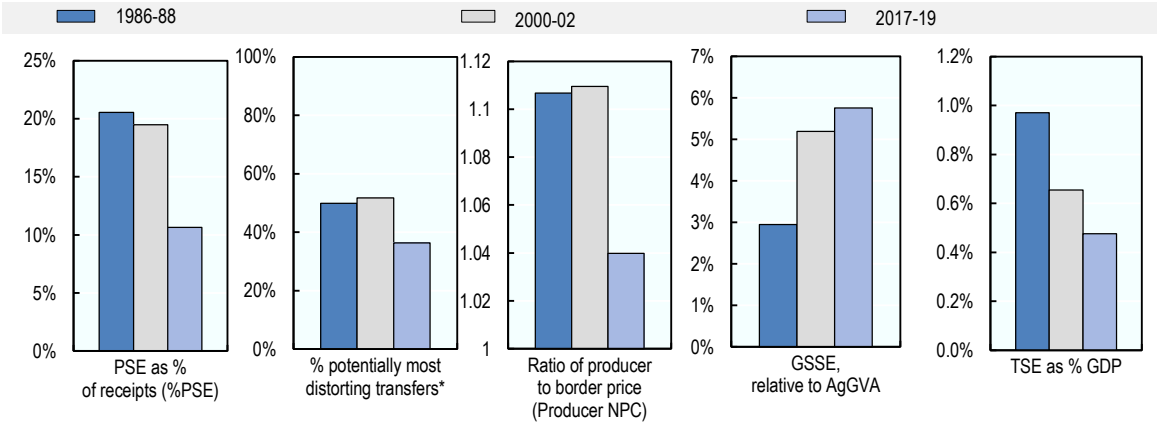
Consumer policies

The United States has provided additional funding for USDA domestic food assistance programmes though the CARES Act and the Families First Coronavirus Response Act 2020.[12] This includes:

- USD 15.8 billion for Supplemental Nutrition Assistance Program (SNAP), with USD 15.5 billion of that to be held in a contingency reserve for use if cost or participation exceeds budget estimates
- USD 8.8 billion in additional emergency funds for Child Nutrition Programs funds to help with needs due to the pandemic
- USD 500 million in funding for the Special Supplemental Nutrition Program for Women, Infants and Children (WIC)
- USD 850 million in additional funding for The Emergency Food Assistance Program (TEFAP) for states to distribute to food banks and food pantries.

In addition, the FFCRA Act 2020 modifies USDA food assistance and nutrition programmes to waive programme requirements for school and adult-care food programmes, and to provide waivers to states allowing them to issue emergency Supplemental Nutrition Assistance Program (SNAP) benefits in the event of having an emergency declaration for COVID-19. States may apply for Pandemic EBT, which provides benefits to children who normally receive free or reduced-price school meals; these benefits may be added to the Electronic Benefits Transfer (EBT) card for households already participating in SNAP or an EBT card may be issued to non-SNAP participating households with eligible children.[13] More generally, USDA's Food and Nutrition Service (FNS) is providing additional, temporary flexibilities to its nutrition programmes to enhance their accessibility.

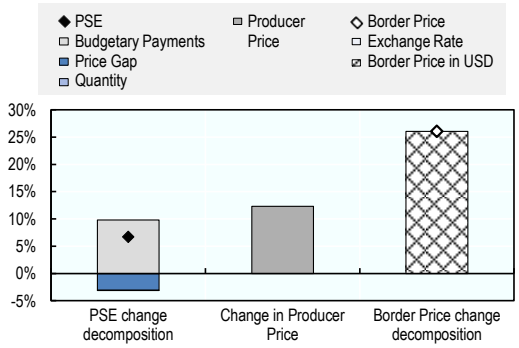
Figure 28.1. United States: Development of support to agriculture



Note: * Share of potentially most distorting transfers in cumulated gross producer transfers.
Source: OECD (2020), "Producer and Consumer Support Estimates", OECD Agriculture statistics (database), http://dx.doi.org/10.1787/agr-pcse-data-en.
StatLink https://doi.org/10.1787/888934145047

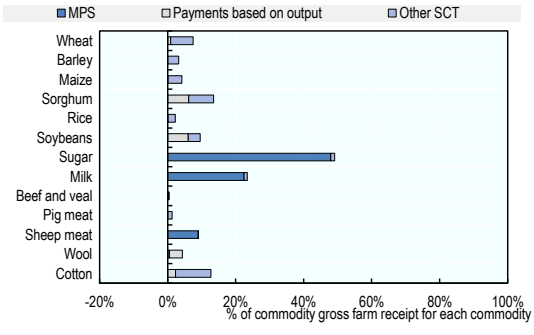
Support to producers (%PSE) declined from 19.5% of gross farm receipts in 2000-02 to 10.7% in 2017-19. The share of potentially **most distorting transfers** was 36% in 2017-19, below the OECD average and lower than levels in 2000-02 (Figure 28.1). Expenditures for **general services** (GSSE) were equivalent to 5.8% of agricultural value added in 2017-19, up from 5.2% in 2000-02. **Total support to agriculture** represented 0.5% of GDP in 2017-19. In 2019, the level of support increased due to higher budgetary payments, which offset a decline in MPS. Lower MPS results from a smaller price gap as domestic prices increased by less than world prices (Figure 28.2). On average, prices received by farmers in 2017-19 were 4% higher than those observed in world markets. This largely results from market price support for sugar, milk and sheep meat, as producer prices of other commodities are mostly aligned with border prices (Figure 28.3). Single commodity transfers (SCT) accounted for 50% of producer support in 2017-19. SCTs account for the highest share of producer support for sugar and milk.

Figure 28.2. United States: Drivers of the change in PSE, 2018 to 2019



Source: OECD (2020), "Producer and Consumer Support Estimates", OECD Agriculture statistics (database), http://dx.doi.org/10.1787/agr-pcse-data-en.
StatLink https://doi.org/10.1787/888934145066

Figure 28.3. United States: Transfer to specific commodities (SCT), 2017-19



Source: OECD (2020), "Producer and Consumer Support Estimates", OECD Agriculture statistics (database), http://dx.doi.org/10.1787/agr-pcse-data-en.
StatLink https://doi.org/10.1787/888934145085

Table 28.1. United States: Estimates of support to agriculture

Million USD

	1986-88	2000-02	2017-19	2017	2018	2019p
Total value of production (at farm gate)	**143 469**	**193 454**	**368 792**	**370 604**	**368 197**	**367 576**
of which: *share of MPS commodities (%)*	78.3	73.6	76.0	75.9	76.5	75.7
Total value of consumption (at farm gate)	**124 148**	**164 683**	**295 038**	**289 934**	**291 916**	**303 263**
Producer Support Estimate (PSE)	**34 253**	**43 789**	**42 611**	**33 041**	**45 863**	**48 928**
Support based on commodity output	14 031	19 713	14 323	9 825	21 572	11 571
Market Price Support[1]	10 922	12 532	11 389	9 783	12 907	11 479
Positive Market Price Support	11 008	12 532	11 389	9 783	12 907	11 479
Negative Market Price Support	-86	0	0	0	0	0
Payments based on output	3 108	7 181	2 933	42	8 665	92
Payments based on input use	7 061	7 572	8 421	8 210	8 728	8 324
Based on variable input use	3 697	3 091	1 743	1 833	1 946	1 452
with input constraints	739	168	583	584	567	597
Based on fixed capital formation	1 233	361	1 975	1 748	2 074	2 104
with input constraints	1 233	358	1 895	1 669	1 998	2 019
Based on on-farm services	2 131	4 120	4 702	4 629	4 709	4 769
with input constraints	349	677	1 466	1 441	1 515	1 441
Payments based on current A/An/R/I, production required	12 231	5 655	15 171	9 908	11 125	24 481
Based on Receipts / Income	912	2 055	2 196	2 038	2 327	2 222
Based on Area planted / Animal numbers	11 319	3 600	12 975	7 870	8 797	22 259
with input constraints	2 565	1 570	12 969	7 855	8 793	22 258
Payments based on non-current A/An/R/I, production required	0	0	262	0	428	358
Payments based on non-current A/An/R/I, production not required	338	8 789	3 049	3 103	2 594	3 450
With variable payment rates	0	3 969	3 041	3 102	2 588	3 432
with commodity exceptions	0	3 969	3 041	3 102	2 588	3 432
With fixed payment rates	338	4 819	8	1	6	18
with commodity exceptions	0	4 819	0	0	0	0
Payments based on non-commodity criteria	592	2 061	1 384	1 994	1 416	743
Based on long-term resource retirement	592	2 050	1 368	1 974	1 395	735
Based on a specific non-commodity output	0	0	0	0	0	0
Based on other non-commodity criteria	0	11	17	20	21	8
Miscellaneous payments	0	0	0	0	0	1
Percentage PSE (%)	**20.5**	**19.5**	**10.7**	**8.4**	**11.4**	**12.1**
Producer NPC (coeff.)	**1.11**	**1.11**	**1.04**	**1.03**	**1.06**	**1.03**
Producer NAC (coeff.)	**1.26**	**1.24**	**1.12**	**1.09**	**1.13**	**1.14**
General Services Support Estimate (GSSE)	**3 108**	**6 164**	**10 835**	**10 666**	**10 874**	**10 965**
Agricultural knowledge and innovation system	1 129	1 805	2 504	2 399	2 454	2 658
Inspection and control	372	685	1 318	1 285	1 415	1 254
Development and maintenance of infrastructure	13	461	4 030	4 151	4 209	3 730
Marketing and promotion	495	957	1 507	1 355	1 319	1 846
Cost of public stockholding	0	107	0	0	0	0
Miscellaneous	1 100	2 149	1 477	1 477	1 477	1 477
Percentage GSSE (% of TSE)	**6.6**	**8.9**	**11.1**	**11.9**	**10.6**	**11.0**
Consumer Support Estimate (CSE)	**-1 647**	**5 110**	**30 447**	**34 231**	**30 887**	**26 224**
Transfers to producers from consumers	-10 379	-12 238	-11 196	-9 604	-12 636	-11 349
Other transfers from consumers	-1 651	-2 078	-2 390	-2 248	-2 302	-2 619
Transfers to consumers from taxpayers	10 089	19 425	44 033	46 082	45 825	40 192
Excess feed cost	294	0	0	0	0	0
Percentage CSE (%)	**-1.4**	**3.5**	**12.1**	**14.0**	**12.6**	**10.0**
Consumer NPC (coeff.)	**1.11**	**1.10**	**1.05**	**1.04**	**1.05**	**1.05**
Consumer NAC (coeff.)	**1.01**	**0.97**	**0.89**	**0.88**	**0.89**	**0.91**
Total Support Estimate (TSE)	**47 450**	**69 379**	**97 479**	**89 789**	**102 562**	**100 085**
Transfers from consumers	12 030	14 316	13 586	11 852	14 938	13 968
Transfers from taxpayers	37 071	57 141	86 282	80 185	89 926	88 736
Budget revenues	-1 651	-2 078	-2 390	-2 248	-2 302	-2 619
Percentage TSE (% of GDP)	**1.0**	**0.7**	**0.5**	**0.5**	**0.5**	**0.5**
Total Budgetary Support Estimate (TBSE)	**36 528**	**56 847**	**86 089**	**80 007**	**89 655**	**88 606**
Percentage TBSE (% of GDP)	**0.7**	**0.5**	**0.4**	**0.4**	**0.4**	**0.4**
GDP deflator (1986-88=100)	**100**	**139**	**192**	**188**	**193**	**196**
Exchange rate (national currency per USD)	**1.00**	**1.00**	**1.00**	**1.00**	**1.00**	**1.00**

Note: p: provisional. NPC: Nominal Protection Coefficient. NAC: Nominal Assistance Coefficient.
A/An/R/I: Area planted/Animal numbers/Receipts/Income.
1. Market Price Support (MPS) is net of producer levies and excess feed cost. MPS commodities for the United States are: wheat, maize, barley, sorghum, alfalfa, cotton, rice, soybean, sugar, milk, beef and veal, sheep meat, wool, pig meat, poultry and eggs.

Source: OECD (2020), "Producer and Consumer Support Estimates", *OECD Agriculture statistics* (database), http://dx.doi.org/10.1787/agr-pcse-data-en.

Contextual information

The United States is the world's second largest economy and the third largest country by land area and population. US GDP per capita is almost three times the average of all countries analysed in this report (Table 28.2). Primary agriculture accounts for a small part of the economy – around 0.9% of GDP and 1.6% of employment – but agro-food exports account for over 10% of total exports. The US agricultural sector benefits from a large domestic consumer market, as well as abundant arable and pasture land and diverse climatic conditions that support production of a wide range of commodities. In recent years, total agricultural production has been divided relatively equally between crops and livestock, although their shares vary over time. Key industries include grains (maize and wheat), oilseeds (soybeans), cotton, cattle, dairy, poultry, and fruits and vegetables.

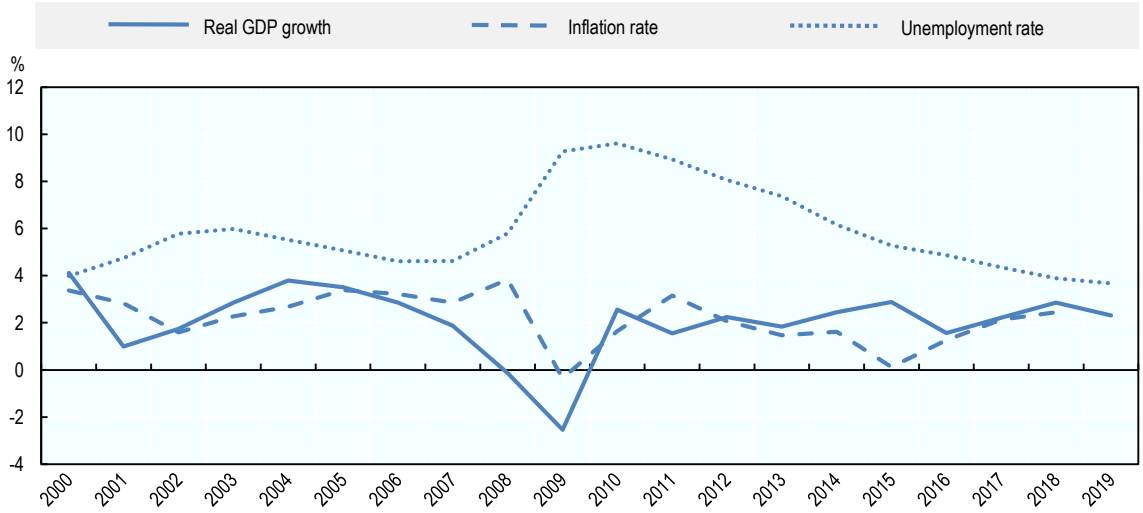
Table 28.2. United States: Contextual indicators

	United States		International comparison	
	2000*	2018*	2000*	2018*
Economic context			**Share in total of all countries**	
GDP (billion USD in PPPs)	10 252	20 580	25.7%	18.2%
Population (million)	282	327	6.6%	6.4%
Land area (thousand km²)	9 162	9 147	11.2%	11.1%
Agricultural area (AA) (thousand ha)	414 399	405 552	13.8%	13.5%
			All countries[1]	
Population density (inhabitants/km²)	31	36	53	62
GDP per capita (USD in PPPs)	36 305	62 853	9 275	21 924
Trade as % of GDP	9	10	12.4	15.3
Agriculture in the economy			**All countries[1]**	
Agriculture in GDP (%)	1.2	0.9	3.1	3.6
Agriculture share in employment (%)	1.8	1.6	-	-
Agro-food exports (% of total exports)	7.8	10.2	6.2	7.3
Agro-food imports (% of total imports)	3.5	5.5	5.5	6.3
Characteristics of the agricultural sector			**All countries[1]**	
Crop in total agricultural production (%)	56	57	-	-
Livestock in total agricultural production (%)	44	43	-	-
Share of arable land in AA (%)	42	39	32	33

Notes: *or closest available year. 1. Average of all countries covered in this report. EU treated as one.
Sources: OECD statistical databases; UN Comtrade; World Bank, WDI and national data.

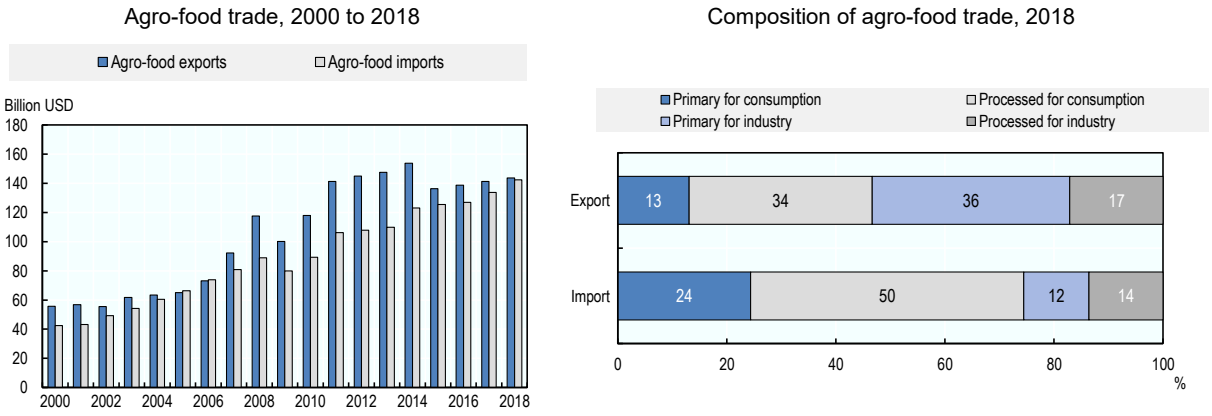
The rate of US economic growth slowed in 2018, however, unemployment continued to fall and was at its lowest level since 2000 (Figure 28.4). The current expansion continued one of the longest on record. The United States is a net exporter of agro-food products and the world's largest agricultural exporter, even though the US agro-food trade surplus has narrowed in recent years (Figure 28.5). Canada, Mexico and the European Union were the largest markets for US agricultural exports in 2018, and were also the largest suppliers of US agro-food imports. Exports are dominated by primary products for further processing and processed products for final consumers, while half of agro-food imports are processed products for final consumption.

Figure 28.4. United States: Main economic indicators, 2000 to 2019



Sources: OECD statistical databases; World Bank, WDI and ILO estimates and projections.

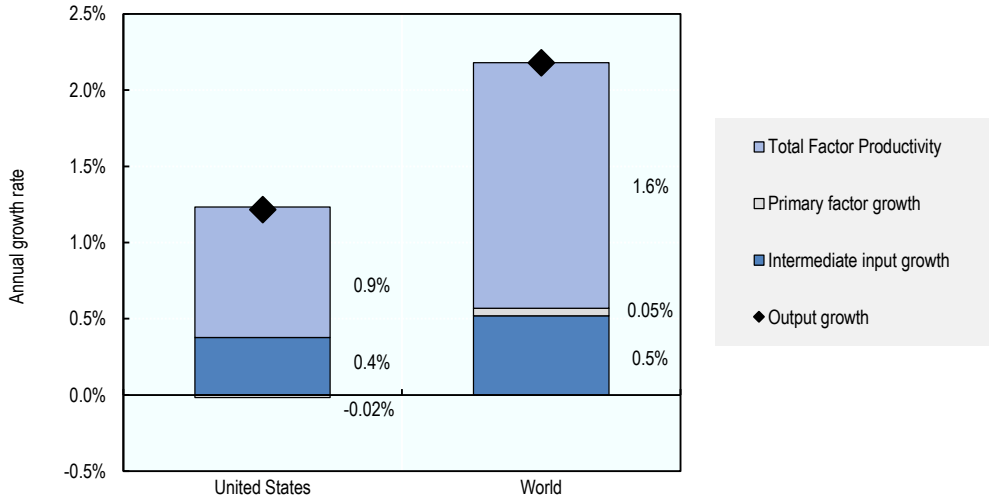
Figure 28.5. United States: Agro-food trade



Note: Numbers may not add up to 100 due to rounding.
Source: UN Comtrade Database.

Total factor productivity (TFP) growth and intermediate input growth have driven agricultural output growth of 1.2% per year on average over the recent decade (Figure 28.6). TFP growth averaged 0.9% per year between 2007 and 2016, driven by farm consolidation and the adoption of innovations in crop and livestock breeding, nutrient use and pest management, farm practices, and farm equipment and structures. The productivity growth realised by US agriculture has been achieved with an overall reduction in environmental pressures from the sector. Nutrient surplus intensities at the national level have declined and are below the average for OECD countries (Table 28.3). Agriculture's share in energy use is below the OECD average, as are GHG emissions. However, water stress in the United States is above the OECD average.

Figure 28.6. United States: Composition of agricultural output growth, 2007-16



Note: Primary factors comprise labour, land, livestock and machinery.
Source: USDA Economic Research Service Agricultural Productivity database.

Table 28.3. United States: Productivity and environmental indicators

	United States		International comparison	
	1991-2000	2007-2016	1991-2000	2007-2016
			World	
TFP annual growth rate (%)	2.2%	0.9%	1.6%	1.6%
			OECD average	
Environmental indicators	**2000***	**2018***	**2000***	**2018***
Nitrogen balance, kg/ha	34.4	27.0	33.3	29.1
Phosphorus balance, kg/ha	2.6	-0.9	3.3	2.3
Agriculture share of total energy use (%)	0.9	1.4	1.7	2.0
Agriculture share of GHG emissions (%)	7.1	8.4	8.1	8.9
Share of irrigated land in AA (%)	5.3	5.3	-	-
Share of agriculture in water abstractions (%)	39.7	45.6	46.0	49.0
Water stress indicator	19.5	15.6	9.9	8.9

Note: * or closest available year.
Sources: USDA Economic Research Service, Agricultural Productivity database; OECD statistical databases; FAO database and national data.

Description of policy developments

Main policy instruments

The Agricultural Improvement Act of 2018 (also known as the 2018 Farm Bill) provides the basic legislation governing farm programmes for the period 2019 to 2023. The 12 titles of the 2018 Farm Bill authorise policies for commodity programmes, conservation on agricultural land, agricultural trade promotion and international food aid, nutrition programmes, farm credit, rural development, agricultural research, forestry on private lands, energy, horticulture and organic agriculture, and crop insurance. Around 76% of budgetary spending under the 2018 Farm Bill is projected for programmes in the Nutrition title – primarily, the *Supplemental Nutrition Assistance Program* (SNAP) – with farm programmes accounting for less than 25% of projected budgetary outlays. Among the farm programmes, crop insurance is projected to account

for 9% of total expenditures, and Commodities and Conservation for 7% each. The remaining titles together account for 1% of projected spending.

The primary crop commodity programmes under the 2018 Farm Bill include programmes that make payments to producers with historical base acres of programme crops (wheat, feed grains, rice, oilseeds, peanuts, pulses and seed cotton)[14] when prices fall below statutory minimums or when crop revenue is low relative to recent levels. Producers are not required to produce the covered commodity to receive payments on their historical base. *Price Loss Coverage* (PLC), a counter-cyclical price programme, makes a payment when market prices for covered crops fall below fixed reference prices. *Agriculture Risk Coverage* (ARC), a revenue-based programme, makes a payment when actual revenue at the county level falls below rolling average benchmark revenues. For both programmes, payments are made on 85% of base acres. Participating producers are required to make a choice for their base acre elections between the PLC and ARC programmes on a commodity-by-commodity basis that holds for both 2019 and 2020, and then an annual choice for each year thereafter through 2023.

The crop insurance programme offers coverage options for both yield and revenue losses. Traditional crop insurance makes available subsidised crop insurance to producers who purchase a policy to protect against losses in yield, crop revenue, or whole farm revenue. The list of insurable commodities was expanded under the 2018 Farm Bill to include hemp.[15] In addition, the *Supplementary Coverage Option* (SCO) offers producers additional area-based insurance coverage in combination with traditional crop insurance policies (but excluding crops for which producers have elected to participate in the ARC programme). The *Stacked Income Protection Plan* (STAX) provides premium subsidies to upland cotton producers to purchase area-based revenue insurance policies. Producers who choose to enrol former upland cotton base acres as seed cotton base (seed cotton became a covered commodity under the PLC and ARC programmes as a result of the Bipartisan Budget Act of 2018) are not eligible to purchase STAX policies. Participants in the STAX programme may not purchase SCO policies for the same upland cotton acreage.

Sugar is supported by a tariff rate quota (TRQ), together with provisions for non-recourse loans and marketing allotments. Milk and dairy products are no longer supported by minimum prices with government purchases of butter, skim milk powder and cheddar cheese, but tariffs and TRQs continue to exist. A programme for dairy producers, the *Dairy Margin Coverage* (DMC) programme, insures the margin between milk price and feed costs for a premium, with payments made on enrolled historical milk production. The 2018 Farm Bill also allows producers to participate in both DMC and dairy livestock insurance programmes. Under the new *Milk Donation Reimbursement Program* (MDP) fluid milk producers with pre-approved plans may be reimbursed for costs incurred in donating fluid beverage milk to low income groups. Marketing assistance loans continue for wheat, feed grains, cotton, rice, oilseeds, pulses, wool, mohair and honey, as do border measures (including TRQs) for beef and sheep meat and some other products, although US agricultural tariffs are generally low at 5.3% in 2018.[16]

At the federal level, agri-environmental programmes focus on land retirement programmes and measures to encourage crop and livestock producers to adopt practices that reduce environmental pressures on working land (that is, cropland and grazing land in production). Working land programmes include the *Environmental Quality Incentives Program* (EQIP) and the *Conservation Stewardship Program* (CSP). Land retirement programmes include the *Agricultural Conservation Easement Program* (ACEP) and the *Conservation Reserve Program* (CRP). The *Regional Conservation Partnership Program* offers options for regionally or watershed focused conservation efforts that may combine both land retirement and working lands programmes. Since the enactment of the 1985 Farm Act, eligibility for most federal commodity programme payments, including crop insurance premium subsidies, is subject to the recipients having established an individual farm-based conservation plan to protect highly erodible cropland and wetlands.

Other farm programmes include direct and guaranteed loans – including microloans – for farmland purchase and for operating credit, which are designed to assist producers who face difficulty obtaining

credit on their own in the private market, particularly beginning, military veteran, and socially disadvantaged farmers. Farm Bill programmes also support public agricultural research and technical assistance, including programmes targeted specifically to specialty crops; organic production; pest and disease prevention; the promotion of sustainable farming practices; and standing disaster programmes for livestock, forage, and trees, bushes, and vines to help producers cope with production, financial and physical losses related to or caused by natural disasters.

Agriculture in the United States is also affected by a wide range of other legislation, at both federal, state and local levels, including trade measures, food safety regulation, commodity trading and finance, tax policy, energy, and transportation.

Production of ethanol and other biofuels is supported mainly in the form of mandated blending for fuel use, and loan and grant programmes.

The United States is continually working to enhance agricultural productivity, including under increasing climate variability and extreme weather events. On climate adaptation, the United States Department of Agriculture (USDA) continues to operate its network of Regional Climate Hubs. These link USDA research and programme agencies in order to develop and deliver science-based, region-specific information and technologies to agricultural producers and professionals to enable climate-informed decision-making, and provide access to assistance to implement those decisions.

USDA also helps producers reduce GHG emissions, enhance carbon sequestration and adapt to a changing climate while improving the natural resource base by providing technical and financial assistance to landowners through various conservation practices and programmes. For example, USDA's Soil Health Initiative offers technical and financial assistance to agricultural producers through conservation practices and programmes, including EQIP and CSP.

Domestic policy developments in 2019-20

The most significant new policy developments in 2019-20 include the 2019 round of trade mitigation programmes and a 2019 package of Congressional ad hoc disaster assistance, as well as continuing developments in international trade. The United States also continued to implement provisions of the Agriculture Improvement Act of 2018 (the 2018 Farm Bill), as well as the 2018 suite of trade mitigation programmes and the 2018 Congressional ad hoc disaster assistance package.

In May 2019, USDA announced a second package of **trade mitigation programmes** to assist farmers affected by retaliatory tariffs resulting in the loss of traditional export markets. The package included three programmes: the *Market Facilitation Program* (MFP), the *Food Purchase and Distribution Program* (FPDP), and the *Agricultural Trade Promotion Program* (ATP). The MFP provides payments up to USD 14.5 billion in three tranches to affected producers of non-specialty crops, hogs, milk, and certain specialty crops (fresh sweet cherries, tree nuts, fresh grapes, cranberries, and cultivated ginseng). In contrast to the 2018 MFP, 2019 crop payments were made on a per-acre basis rather than on per-unit production. Non-specialty crop payments were made at a county-specific per-acre payment rate regardless of which eligible commodities were planted. The 2019 MFP also expanded the number of MFP-eligible crops[17] and increased payment limits. As of 9 December 2019, MFP payments for the first two tranches were USD 10.47 billion. A third tranche of MFP payments for 2019, which will provide the remaining 25% of total payments, was announced on 3 February 2020. The FPDP provides for purchases of up to USD 1.4 billion in other commodities targeted by retaliatory tariffs. The ATP provides up to USD 100 million in cost-share assistance to eligible US organisations to develop foreign markets for US agricultural products through activities such as consumer advertising, public relations, point-of-sale demonstrations, participation in trade fairs and exhibits, market research, and technical assistance.

On programmes that make **direct payments** to producers, landowners and producers with historical base acres completed the process of electing either ARC or PLC for their base acres, which holds for the 2019 and 2020 programme years, and of updating PLC yields, which is to hold for the life of the Farm Bill.

In June 2019, dairy operations began enrolling in the new *Dairy Margin Coverage* (DMC) programme, which was authorised by the 2018 Farm Bill, with payment eligibility retroactive to 1 January 2019. Key changes from the previous Margin Protection Program for Dairy include increased coverage margins of up to USD 9.50 per hundredweight on the first 5 million pounds of milk production history and the inclusion of a 50% blend of premium and supreme alfalfa hay prices in the alfalfa hay price component of the programme feed cost. In addition, operations began receiving payments to reimburse for premiums paid above payments received under the former Margin Protection Program for Dairy, as provided by the 2018 Farm Bill. As of 16 December 2019, more than 80% of dairy operations with established production history had enrolled in DMC.

On **disaster assistance**, the *Additional Supplemental Appropriations for Disaster Relief Act of 2019* authorised just over USD 3 billion in disaster assistance for necessary expenses related to crop losses (including milk, on-farm stored commodities, and harvested adulterated wine grapes) and damaged trees, bushes and vines as a consequence of hurricanes, floods, tornadoes, typhoons, volcanic activity, snowstorms and wildfires occurring in 2018 and 2019. USDA is providing the assistance through three programmes: the *Wildfire and Hurricane Indemnity Program Plus (WHIP+)* for losses to eligible crops, trees, bushes, and vines; the *On-Farm Storage Loss Program*; and the *WHIP Milk Loss Program*.

WHIP+ provides assistance to eligible producers who suffered losses to crops, trees, bushes and vines. Similar to the 2017 WHIP (OECD, 2019[1]), payments are based on several factors, including the expected value of the crop, the expected income from the harvested crop, and crop insurance coverage and payments, among others factors. The Disaster Relief Act also expanded the 2017 WHIP to cover losses due to Tropical Storm Cindy, losses of peach and blueberry crops in 2017 due to extreme cold, and blueberry productivity losses in 2018 due to extreme cold and hurricane damage in 2017. Producers receiving WHIP+ payments are required to purchase crop insurance at the 60% coverage level, or coverage under the non-insured crop disaster assistance programme (NAP) if crop insurance is not available, for the next two crop years after payments were received.

The *On-Farm Storage Loss Program* provides payments to eligible producers who suffered losses of harvested commodities (including hay) that were stored in on-farm structures, as a result of the disaster events included in the Disaster Relief Act's provisions.

The *WHIP Milk Loss Program* allows dairy operations to receive payments for milk that was dumped or removed without compensation from the commercial milk market due to qualifying weather events in 2018 and 2019 that prevented the delivery of milk.

Under provisions of the Disaster Relief Act, the Federal Crop Insurance Corporation (FCIC) will establish *prevented planting supplemental disaster payments* to provide assistance to producers who were prevented from planting eligible 2019 crop year crops in the 2019 calendar year due to specified causes of loss, namely excess moisture/precipitation, flood, cold wet weather, storm surge, tornado, volcanic eruption, hurricane/tropical depression, and cyclone.

In December 2019, the *Further Consolidated Appropriations Act* added quality losses of crops, drought in instances of the Drought Monitor indicating D3 (extreme drought) or higher, and excessive moisture to the list of eligible causes for disaster assistance under the Disaster Relief Act. The Further Consolidated Appropriations Act also opened the remaining disaster assistance funding from the Bipartisan Budget Act of 2018[18] – approximately USD 1.5 billion – to fund disaster assistance for losses in 2018 and 2019. Finally, some of the available Disaster Relief Act funding is being provided to certain States through block grants to address specific losses in those states.

On **crop insurance**, the 2018 Farm Bill amended the *Controlled Substances Act* to address how industrial hemp is to be defined and regulated at the federal level. This allowed the Federal Crop Insurance Corporation to offer policies for hemp.[19] In August 2019, USDA announced that Whole-Farm Revenue Protection coverage would be available for hemp growers. This option provides coverage for hemp grown for fibre, flower or seeds within a Whole-Farm Revenue Protection policy. Eligible producers must be in areas covered by USDA-approved hemp plans (see the following paragraph), or who are part of approved state or university research pilot programmes. In December 2019, USDA announced a new crop insurance option for hemp growers in selected counties of 21 states. The pilot insurance programme will provide coverage for hemp grown for fibre, grain or cannabidiol (CBD) oil for the 2020 crop year.

On **natural resources and environmental measures**, implementation of 2018 Farm Bill provisions is ongoing. During 2019, USDA published interim final rules for the *Conservation Reserve Program*, *Conservation Stewardship Program,* and *Environmental Quality Incentives Program*, enabling 2020 signups for these programmes. Review and updating of all conservation practice standards is also underway, as mandated by the 2018 Farm Bill, and clarification of crop insurance rules for crops planted after cover crops will reduce uncertainty for producers who want to use cover crops to meet conservation goals.

On **climate change**, on 4 November 2019, the United States began the process to withdraw from the 2015 Paris Agreement on Climate Change. According to the terms of the Agreement, the United States submitted formal notification of its withdrawal to the United Nations. The withdrawal will take effect one year from delivery of the notification.

In February 2020, USDA announced a new initiative, the *Agriculture Innovation Agenda* (AIA) with the objective of aligning USDA resources, programmes and research to better equip farmers and producers to meet future food, fibre, fuel and feed demands while reducing the environmental footprint of US agriculture. The initiative sets goals and indicators for five outcomes: productivity growth, water quality, carbon sequestration, renewable energy, and reduction of food loss and waste.

On **infrastructure**, expansion of rural broadband connectivity has been a particular focus under the 2018 Farm Bill. USDA committed USD 600 million in 2019 to support rural broadband expansion through the ReConnect Pilot Program. The ReConnect Program offers unique federal loans, grants and grant/loan combinations to facilitate broadband deployment in rural areas that do not have sufficient access to broadband. This programme generates private-sector investment to deploy broadband infrastructure to as many rural places as possible, including homes, community facilities, health care institutions, public safety departments, schools, libraries, farms, ranches and businesses. On 12 December 2019, US Secretary of Agriculture, Sony Perdue, announced the availability of a second round of funding under the ReConnect Program. USDA will make up to USD 200 million available for grants; up to USD 200 million for 50/50 grant/loan combinations; and up to USD 200 million for low-interest loans. Applications for this new round of funding were accepted beginning from 31 January 2020.

On **public sector service policy**, in October 2019, USDA established rules and regulations governing the production of hemp, as mandated by the 2018 Farm Bill. USDA is to approve plans submitted by States and Indian Tribes for the domestic production of hemp and establishes a federal plan for producers in States or territories of Indian Tribes that do not have their own USDA-approved plan. The programme includes provisions for maintaining information on the land where hemp is produced, testing the levels of delta-9 tetrahydrocannabinol, disposing of plants not meeting necessary requirements, licensing requirements, and ensuring compliance with the requirements of the new plan.

On **food labelling**, on 1 January 2020 the National Bioengineered Food Disclosure Standard, announced in December 2018, came into effect. Small food manufacturers must meet the standard by 1 January 2021. The Standard is required by the National Bioengineered Food Disclosure Standard Law, which was enacted in 2016, and defines bioengineered foods as those that contain detectable genetic material that has been modified through certain lab techniques, and cannot be created through conventional breeding

or found in nature. Also on food labelling, final rules on the new Nutrition Facts label for packaged foods came into effect on 1 January 2020 for manufacturers with USD 10 million or more in annual sales. Smaller manufacturers have an additional year to comply. The new labels provide updated nutrition information based on new scientific information, including the link between diet and chronic diseases.

On **food safety**, the Food Safety and Inspection Service (FSIS) is establishing an optional new inspection system for market hog slaughter establishments, called the *New Swine Slaughter Inspection System* (NSIS). Government inspectors will continue to check all live animals before they are killed as well as meat products after slaughter. However, establishments can choose to have employees, rather than USDA workers, remove meat with certain defects from the slaughtering process. Establishments can also now determine their own slaughter speeds based on their ability to prevent faecal contamination and minimise bacteria, according to the rules. Market hog establishments initially have until 30 March 2020 to notify their FSIS District Office of their intent to operate under the NSIS.

On **food loss and waste**, the United States began implementation in 2019 of the *Winning on Reducing Food Waste Initiative*, a joint agency formal agreement signed in late 2018 by the US Department of Agriculture, the US Environmental Protection Agency, and the US Food and Drug Administration. The agencies moved forward in six priority action areas, including enhanced interagency co-ordination, increased consumer education and outreach efforts, improved co-ordination and guidance on food loss and waste measurement, clarification and communication of information on food safety, food date labels, and food donations, collaboration with private industry to reduce food loss and waste across the supply chain, and encouragement of food waste reduction by Federal agencies in their own facilities.

On **biofuels**, on 30 May 2019 the Environmental Protection Agency (EPA) finalised regulatory changes to allow gasoline blended with up to 15% ethanol (E15) to take advantage of the 1-psi Reid Vapor Pressure (RVP) waiver that currently applies to E10 during the summer months. Under the finalised expansion, E15 is allowed to be sold year-round without additional RVP control rather than just eight months of the year. In December, the EPA finalised adjustments to the way that annual renewable fuel percentages are calculated as part of its final renewable fuel standards for 2020. The proposed adjustments would help ensure that the required volumes of renewable fuel blended into the nation's fuel supply are not effectively reduced by future hardship exemptions for small refineries. The 2020 RFS also included a slight increase in advanced biofuel volumes. Finally, the *Consolidated Appropriations Act of 2020* reinstated the USD 1 per gallon tax credit for biodiesel production and blending through 2020, retroactive to 1 January 2018.

Trade policy developments in 2019-20

On 29 January 2020, President Trump signed the **United States-Mexico-Canada Agreement** (USMCA). This new agreement is to replace the North American Free Trade Agreement (NAFTA) once it is ratified by all three countries and enters into force. Mexico ratified the agreement on 20 June 2019.

On 12 December 2019, the United States and **China** reached a **"Phase One" Trade Agreement**. The agreement was signed on 15 January 2020 and has entered into force on 15 February 2020. The United States agreed to modify tariff actions on Section 301 as part of this agreement. The agreement covers structural reforms and other changes to China's economic and trade regime in the areas of intellectual property, including Geographical Indications (GIs); technology transfer; agriculture; financial services; and currency and foreign exchange. It also includes a commitment by China to make substantial additional purchases of US goods and services in the coming years. The agreement also establishes a dispute resolution system that ensures prompt and effective implementation and enforcement. The agreement contains a specific chapter on agriculture, which addresses structural barriers to trade such as non-tariff measures to US agricultural and seafood products, including for meat, poultry, seafood, rice, dairy, infant formula, horticultural products, animal feed and feed additives, pet food, and products of agriculture biotechnology. The United States and China have agreed to not implement food safety regulations, or

require actions of each other's regulatory authorities that are not science- or risk-based and to apply regulations and require such actions only to the extent necessary to protect human life or health (USTR, 2020[2]).

On 4 December 2019, the **US-Japan Trade Agreement** was approved by Japan's Diet and came into effect on 1 January 2020. The United States and Japan are to begin consultations in early 2020 to discuss further negotiations on a broader trade agreement. Under the agreement, Japan agreed to eliminate or lower tariffs for certain US agricultural products and provide preferential US-specific quotas for others. The United States agreed to eliminate or reduce tariffs on 42 tariff lines for agricultural imports. The United States has also agreed to modify its global WTO tariff rate quota for imports of Japanese beef, enabling Japanese beef producers to compete for a larger share of the global TRQ quantity (USTR, 2019[3]).

On 16 October 2018, the Trump Administration notified Congress that the President intended to negotiate a trade agreement with the **European Union**, and one with the **United Kingdom** after it leaves the European Union. Negotiating objectives for both agreements were made available publicly in early 2019. Priorities for agriculture in both agreements include securing comprehensive market access for US agricultural goods in the European Union by reducing or eliminating tariffs; obtaining reasonable adjustment periods for US import-sensitive agricultural products; elimination of practices that decrease US market access opportunities or distort agricultural markets to the detriment of the United States, including non-tariff barriers that discriminate against US agricultural goods and restrictive rules in the administration of tariff rate quotas; promotion of greater regulatory compatibility to reduce burdens associated with unnecessary differences in regulations and standards, including through regulatory co-operation where appropriate; and establishment of specific commitments for trade in products developed through agricultural biotechnologies, including on transparency, co-operation, and managing low level presence issues, and a mechanism for exchange of information and enhanced co-operation on agricultural biotechnologies (USTR, 2019[4]; 2019[5]).

In December 2019, the US Trade Representative completed the first segment of a Section 301 investigation of **France's Digital Services Tax** (DST), finding that it discriminates against US companies and is unusually burdensome. USTR issued a notice in the Federal Register to solicit comments on USTR's proposed action in response to the French DST, including additional duties of up to 100% on certain French products, including cheese and wine.

In October 2019, the US Court of International Trade (CIT) ordered the US Department of Commerce to vacate the 2017 amendments to the agreements suspending the antidumping and countervailing duty investigations on **Mexican sugar**. The Department of Commerce terminated the 2017 amendments in December, and is in the process of finalising draft amendments to the 2014 agreement.

In September 2019, the US Department of Commerce and **Mexican tomato growers** reached a new agreement to suspend the antidumping investigation of Mexican tomatoes. In February 2019, Commerce had notified the Mexican signatories to the 2013 Suspension Agreement on Fresh Tomatoes from Mexico of its intent to withdraw from the Agreement, which was terminated in May 2019.

In December 2019, the US Department of Commerce announced final determinations in the antidumping and countervailing duty investigations of imports of dried tart cherries from **Turkey**. However, in January 2020, the US International Trade Commission made a negative injury determination, which means no antidumping or countervailing duty orders are to be issued.

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USTR (2019), *United States-European Union Negotiations: Summary of Specific Negotiating Objectives*, https://ustr.gov/sites/default/files/01.11.2019_Summary_of_U.S.-EU_Negotiating_Objectives.pdf. [4]

USTR (2019), *United States-United Kingdom Negotiations: Summary of Specific Negotiating Objectives*, https://ustr.gov/sites/default/files/Summary_of_U.S.-UK_Negotiating_Objectives.pdf. [5]

WTO (2020), *Tariff Profiles – United States*, https://www.wto.org/english/res_e/statis_e/tariff_profiles_list_e.htm. [6]

Notes

[1] https://www.natlawreview.com/article/agriculture-provisions-cares-act.

[2] https://www.usda.gov/media/press-releases/2020/04/17/usda-announces-coronavirus-food-assistance-program.

[3] https://www.farmers.gov/coronavirus.

[4] https://www.farmers.gov/coronavirus.

[5] https://www.usda.gov/media/press-releases/2020/04/17/usda-announces-coronavirus-food-assistance-program.

[6] https://www.natlawreview.com/article/agriculture-provisions-cares-act.

[7] https://www.ams.usda.gov/content/usda-announces-labeling-flexibilities-facilitate-distribution-food-retail-locations.

[8] https://www.fsis.usda.gov/wps/portal/fsis/newsroom/meetings/newsletters/constituent-updates/archive/2020/SpecialAlert032320.

[9] https://www.fda.gov/food/cfsan-constituent-updates/fda-provides-temporary-flexibility-regarding-nutrition-labeling-certain-packaged-food-response-covid.

[10] https://www.usda.gov/media/press-releases/2020/03/26/secretary-perdue-applauds-state-departments-h-2-decision; https://travel.state.gov/content/travel/en/News/visas-news/important-announcement-on-h2-visas.html.

[11] https://www.usda.gov/media/press-releases/2020/04/15/dhs-and-usda-move-protect-american-farmers-and-ensure-continued.

[12] https://farmdocdaily.illinois.edu/2020/04/reviewing-usda-funding-in-the-cares-act.html; https://www.fns.usda.gov/disaster/pandemic/covid-19.

[13] https://fns-prod.azureedge.net/sites/default/files/resource-files/SNAP-COVID-PEBTQA.pdf.

[14] Base acres are a farm's crop-specific historical acreage of wheat, feed grains, seed cotton, rice, oilseeds, pulse crops, or peanuts eligible to participate in the ARC and PLC commodity programmes. Base acres are not linked to current plantings.

[15] Hemp was previously uninsurable because of legal restrictions on its cultivation.

[16] Simple average MFN applied tariff (WTO, 2020[6]).

[17] MFP-eligible crops are fresh sweet cherries, tree nuts, fresh grapes, cranberries, cultivated ginseng, and non-specialty crops, which include corn, soybeans, wheat, alfalfa hay, barley, canola, crambe, dry peas, extra-long staple cotton, flaxseed, lentils, long grain and medium grain rice, mustard seed, dried beans, oats, peanuts, rapeseed, rye, safflower, sesame seed, small and large chickpeas, sorghum, sunflower seed, triticale, temperate japonica rice, and upland cotton.

[18] The Bipartisan Budget Act of 2018 funded the 2017 WHIP.

[19] The 2018 Farm Bill defines hemp as containing 0.3% or less of delta-9 tetrahydrocannabinol (THC) on a dry-weight basis.

29 Viet Nam

Support to agriculture

The overall level of support provided to Viet Nam's agricultural sector fluctuates at low or negative levels, largely driven by changes in market price support (MPS). In 2017-19, Viet Nam's producer support estimate (PSE) was negative at –7.1% of gross farm receipts. MPS varies across commodities. Producers of import-competing commodities, such as maize, sugar cane and beef, benefit from tariff protection, while producers of several exported commodities are implicitly taxed. Budgetary transfers are relatively small and include payments based on variable input use, primarily to subsidise an irrigation fee exemption, and direct payments to rice producers that are tied to maintaining land in rice production. Rice producers also benefit from a price support system based on target prices designed to provide farmers with a profit of 30% above production cost. In some years this price support system results in implicit taxation of rice producers when domestic prices are below international levels.

Support for general services for agriculture is dominated by expenditure to develop and maintain infrastructure, in particular irrigation. Total support to agriculture (TSE) varies between positive and negative values, as in some years budgetary transfers to producers and expenditure on general services do not compensate for overall negative MPS.

Main policy changes

In December 2018, the Ministry of Agriculture and Rural Development (MARD) issued a list of 13 key national products, which includes rice, coffee, rubber, cashews, pepper, tea, vegetables and fruits, cassava and products thereof, pig meat, poultry meat and eggs. The 13 products are eligible for preferential support measures, including exemptions from or reductions in land or water surface rents; preferential credit; support for the transfer and the application of high-technology in agriculture, human resources training, and market development and promotion activities; and support for investments in facilities and equipment for processing or preserving agricultural products.

On climate change, in 2020 the government will update several key documents that form the basis of current climate change policies for the agricultural and rural development sector. These include the action plan to adapt to and mitigate climate change in the agricultural sector for the period 2021-30, with a vision to 2050; and the plan for the agricultural sector to carry out the government's action plan to implement the Paris Agreement on Climate Change. Also in 2020, MARD will promulgate the green growth criteria for the agricultural and rural development sector.

On 30 June 2019, the European Union and Viet Nam signed a bilateral free trade agreement, the EU-Vietnam Free Trade Agreement (FTA). Viet Nam has agreed to progressively eliminate duties for EU food products over a period of ten years, including for chicken, dairy, beef, wine, spirits, chocolate, pasta, apples, wheat, and olive oil. At the end of the implementation period, an average tariff of 1.1% is to apply to agricultural goods originating in Viet Nam and 2.1% to processed agricultural products. The average tariff for EU agricultural exports to Viet Nam is to be reduced to 2.6%. Viet Nam has agreed to recognise

and protect the Geographical Indications (GIs) of 169 European food and drink products, at a comparable level to that of EU legislation. Vietnamese GIs will also be recognised as such in the European Union, and the agreement allows new GIs to be added in the future.

Assessment and recommendations

- Viet Nam's deeper integration into the global economy, including through trade agreements such as the CPTPP and EU-Vietnam FTA, brings opportunities for the agricultural sector to expand and diversify exports and markets. But these agreements also pose challenges, for example, increased competition from imports as agro-food tariffs are reduced and the require for domestic producers to meet stringent food hygiene, safety and technical standards in export markets.
- Further efforts are needed to improve the sector's competitiveness and environmental sustainability. Most of the easy sources of lifting production – expanding the agricultural land area and using higher rates of fertilisers – have been fully exploited, and negative environmental impacts are increasingly seen. While these conditions are challenges for Viet Nam, they also open opportunities to adopt new technologies, create incentives for farm consolidation to increase the scale of production, and to focus attention on improving quality.
- To improve the allocation of scarce land resources, farm consolidation could be encouraged, including through various forms of co-operation between farmers, and restrictions on crop choice should be removed. This can also help small-scale farming households connect to market opportunities and participate in value chains.
- To improve the competitiveness and quality of Viet Nam's rice exports, additional reforms could be considered to further ease restrictions on rice exporters, in particular, deregulating the export floor price. The current system risks cutting-off potentially profitable rice exports and creates uncertainty in engaging in export transactions if the minimum export price is likely to be changed.
- Water overuse is exacerbated by the low cost of water, and increases the agricultural sector's vulnerability to drought. While re-introducing a fee for irrigation services is a positive step, a fee based on a per unit of water charge – rather than on area or crop type as previously applied – would encourage greater water use efficiency.
- Viet Nam has committed to reduce greenhouse gas (GHG) emissions by 8% between 2021 and 2030 compared to Business-as-Usual (BAU) levels using domestic resources. The government has set the ambitious target of reducing GHG emissions in agriculture and rural areas by 20% every 10 years through the application of crop and animal husbandry practices, including climate smart agriculture practices.

Policy responses in relation to the COVID-19 outbreak

Agricultural policies

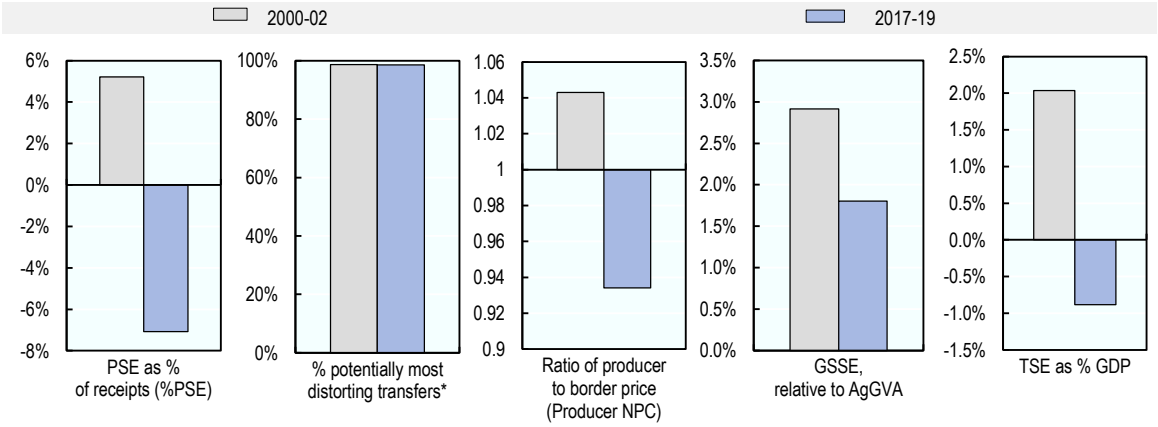
In response to the COVID-19 pandemic, on 11 March 2020, the government ordered private rice traders to maintain rice reserves equivalent to 5% of the volume shipped in the preceding six months, in order to stabilise the domestic market. [1]

On 25 March 2020, the government suspended rice exports in order to ensure domestic food security during the COVID-19 outbreak and in the context of a severe drought in the Mekong River Delta. The decision was subsequently reversed in favour of setting a monthly quota for rice exports, and on 3 April 2020, the government approved a plan to export 400 000 tonnes of rice in April, and a further 400 000 tonnes in May.

On 27 March 2020, Viet Nam also announced that it plans to stockpile 270 000 tonnes of rice, including 80 000 tonnes of paddy (unhusked) rice, to ensure domestic food availability during the COVID-19 pandemic. The Ministry of Finance was directed to buy 190 000 tonnes of rice and 80 000 tonnes of paddy rice.

Viet Nam is also allowing enterprises, individuals and household businesses affected by the COVID-19 pandemic to defer payment of value added tax, corporate income tax, personal income tax, and land rental fees. Agriculture, forestry and fishery production, and food production and processing, are among the business sectors that are eligible to defer payments of tax and land rent.[2]

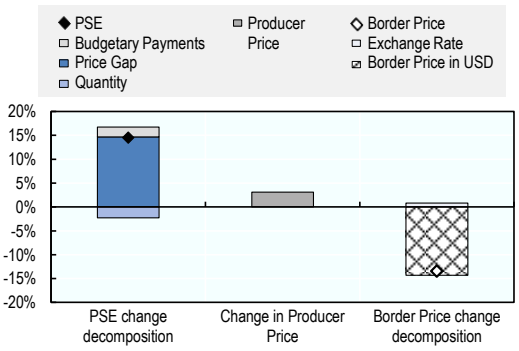
Figure 29.1. Viet Nam: Development of support to agriculture



Note: * Share of potentially most distorting transfers in cumulated gross producer transfers.
Source: OECD (2020), "Producer and Consumer Support Estimates", OECD Agriculture statistics (database), http://dx.doi.org/10.1787/agr-pcse-data-en.
StatLink https://doi.org/10.1787/888934145104

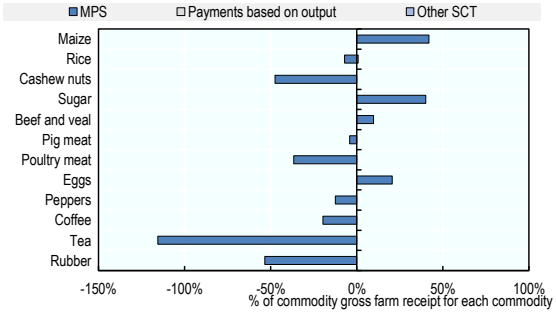
Support to producers (%PSE) was -7.1% in 2017-19, implying an implicit overall taxation, compared to a positive level of support in 2000-02. Almost all gross transfers to producers – whether positive or negative (i.e. expressed in absolute terms) – are provided via measures that are potentially **most distorting to production and trade** (Figure 29.1). Expenditures for general services (GSSE), which focus largely on irrigation systems, were equivalent to 1.8% of agricultural value added in 2017-19, among the lowest across countries covered by this report, and down from 2.9% in 2000-02. Total support to agriculture varies between positive and negative values. The PSE increased (i.e. became less negative) in 2019, as negative price gaps narrowed, most significantly for rice and poultry (Figure 29.2). On average during 2017-19, effective prices received by farmers (including output payments) were 7% lower than world prices, though this hides large differences between commodities. Transfers to single commodities vary widely, with maize, sugar, beef and veal, and eggs receiving positive MPS, while cashew nuts, pig and poultry meats, pepper, coffee, tea and rubber are implicitly taxed (Figure 29.3).

Figure 29.2. Viet Nam: Drivers of the change in PSE, 2018 to 2019



Source: OECD (2020), "Producer and Consumer Support Estimates", OECD Agriculture statistics (database), http://dx.doi.org/10.1787/agr-pcse-data-en.
StatLink https://doi.org/10.1787/888934145123

Figure 29.3. Viet Nam: Transfer to specific commodities (SCT), 2017-19



Source: OECD (2020), "Producer and Consumer Support Estimates", OECD Agriculture statistics (database), http://dx.doi.org/10.1787/agr-pcse-data-en.
StatLink https://doi.org/10.1787/888934145142

Table 29.1. Viet Nam: Estimates of support to agriculture

Million USD

	2000-02	2017-19	2017	2018	2019p
Total value of production (at farm gate)	**8 570**	**38 298**	**37 988**	**38 550**	**38 357**
of which: *share of MPS commodities (%)*	82.3	73.3	74.5	74.9	70.6
Total value of consumption (at farm gate)	**7 443**	**34 530**	**32 614**	**34 750**	**36 228**
Producer Support Estimate (PSE)	**461**	**-2 719**	**6**	**-4 418**	**-3 745**
Support based on commodity output	340	-3 065	-327	-4 726	-4 141
Market Price Support[1]	340	-3 065	-327	-4 726	-4 141
Positive Market Price Support	901	1 664	2 533	1 356	1 104
Negative Market Price Support	-562	-4 729	-2 860	-6 082	-5 245
Payments based on output	0	0	0	0	0
Payments based on input use	101	253	237	215	305
Based on variable input use	101	252	237	215	305
with input constraints	0	0	0	0	0
Based on fixed capital formation	0	0	0	0	0
with input constraints	0	0	0	0	0
Based on on-farm services	0	0	0	0	0
with input constraints	0	0	0	0	0
Payments based on current A/An/R/I, production required	0	93	96	92	91
Based on Receipts / Income	0	2	2	2	2
Based on Area planted / Animal numbers	0	91	94	91	89
with input constraints	0	0	0	0	0
Payments based on non-current A/An/R/I, production required	0	0	0	0	0
Payments based on non-current A/An/R/I, production not required	0	0	0	0	0
With variable payment rates	0	0	0	0	0
with commodity exceptions	0	0	0	0	0
With fixed payment rates	0	0	0	0	0
with commodity exceptions	0	0	0	0	0
Payments based on non-commodity criteria	21	0	0	0	0
Based on long-term resource retirement	21	0	0	0	0
Based on a specific non-commodity output	0	0	0	0	0
Based on other non-commodity criteria	0	0	0	0	0
Miscellaneous payments	0	0	0	0	0
Percentage PSE (%)	**5.2**	**-7.1**	**0.0**	**-11.4**	**-9.7**
Producer NPC (coeff.)	**1.04**	**0.93**	**1.00**	**0.90**	**0.91**
Producer NAC (coeff.)	**1.06**	**0.93**	**1.00**	**0.90**	**0.91**
General Services Support Estimate (GSSE)	**206**	**605**	**587**	**556**	**672**
Agricultural knowledge and innovation system	23	91	89	91	94
Inspection and control	4	3	3	3	3
Development and maintenance of infrastructure	173	463	445	415	529
Marketing and promotion	1	1	1	1	1
Cost of public stockholding	5	46	48	46	45
Miscellaneous	0	0	0	0	0
Percentage GSSE (% of TSE)	**31.2**	**..**	**99.0**	**..**	**..**
Consumer Support Estimate (CSE)	**-549**	**-548**	**-2 428**	**1 229**	**-446**
Transfers to producers from consumers	-551	718	-1 637	2 265	1 526
Other transfers from consumers	-20	-1 633	-1 209	-1 336	-2 353
Transfers to consumers from taxpayers	0	0	0	0	0
Excess feed cost	22	367	418	301	382
Percentage CSE (%)	**-7.3**	**-1.6**	**-7.4**	**3.5**	**-1.2**
Consumer NPC (coeff.)	**1.08**	**1.03**	**1.10**	**0.97**	**1.02**
Consumer NAC (coeff.)	**1.08**	**1.02**	**1.08**	**0.97**	**1.01**
Total Support Estimate (TSE)	**667**	**-2 114**	**593**	**-3 862**	**-3 073**
Transfers from consumers	571	915	2 846	-929	827
Transfers from taxpayers	117	-1 396	-1 044	-1 597	-1 547
Budget revenues	-20	-1 633	-1 209	-1 336	-2 353
Percentage TSE (% of GDP)	**2.0**	**-0.9**	**0.3**	**-1.6**	**-1.2**
Total Budgetary Support Estimate (TBSE)	**328**	**951**	**920**	**864**	**1 068**
Percentage TBSE (% of GDP)	**1.0**	**0.4**	**0.4**	**0.4**	**0.4**
GDP deflator (2000-02=100)	**100**	**389**	**383**	**396**	**..**
Exchange rate (national currency per USD)	**15 000.33**	**22 988.28**	**22 715.36**	**23 023.21**	**23 226.28**

.. Not available

Note: p: provisional. NPC: Nominal Protection Coefficient. NAC: Nominal Assistance Coefficient.
A/An/R/I: Area planted/Animal numbers/Receipts/Income.
1. Market Price Support (MPS) is net of producer levies and excess feed cost. MPS commodities for Viet Nam are: rice, rubber, coffee, maize, cashew nuts, sugar, pepper, tea, beef and veal, pig meat, poultry and eggs.

Source: OECD (2020), "Producer and Consumer Support Estimates", *OECD Agriculture statistics* (database), http://dx.doi.org/10.1787/agr-pcse-data-en.

Contextual information

Viet Nam is a mid-size country in terms of area, but its population of 96 million makes it the 15th most populous country in the world. Around two-thirds of the population live in rural areas. Since the mid-1980s, a long series of reforms have moved the economy, including the agricultural sector, in the direction of open markets for trade and investment, private sector decision-making, private land use rights, and a greater role for private firms. These reforms resulted in rapid, stable and inclusive economic growth, transforming Viet Nam from one of the world's poorest nations to a lower middle-income country, and contributing to significant reductions in poverty rates and improvements in other social outcomes, including in rural areas.

The agricultural sector in Viet Nam has undergone significant structural changes in recent decades, reflecting a shift away from staple foods to export commodities, in particular perennial crops such as rubber and cashew nuts, and to livestock production, in particular pig meat. Nevertheless, crops dominate with rice accounting for around 25% of the value of agricultural production. Agricultural production has more than tripled in volume terms since 1990. While the relative importance of agriculture in the economy has declined over time, agriculture remains an important sector, contributing 15% to Viet Nam's GDP and employing 40% of the labour force.

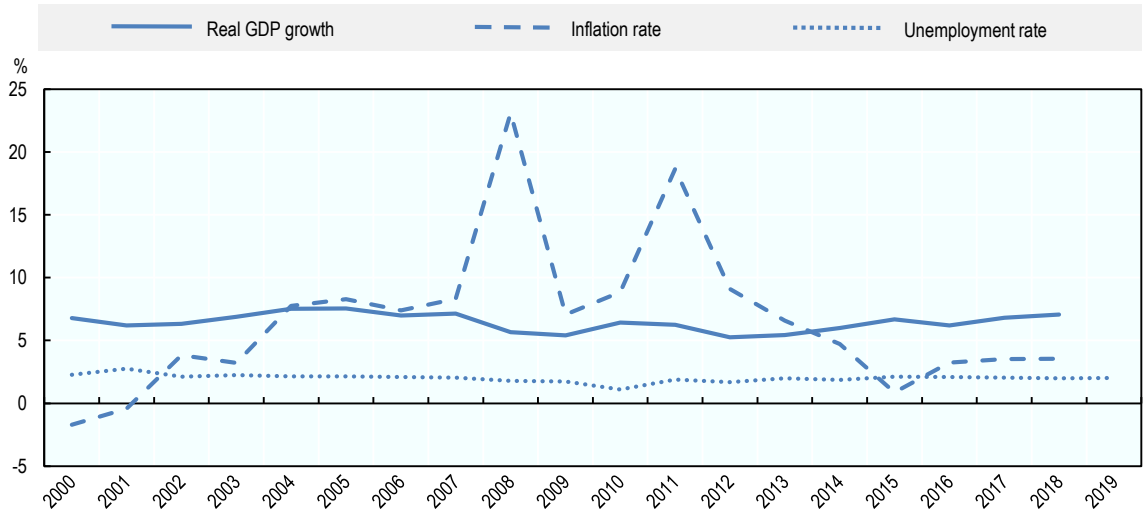
Table 29.2. Viet Nam: Contextual indicators

	Viet Nam		International comparison	
	2000*	2018*	2000*	2018*
Economic context			**Share in total of all countries**	
GDP (billion USD in PPPs)	164	712	0.4%	0.6%
Population (million)	80	96	1.9%	1.9%
Land area (thousand km^2)	310	310	0.4%	0.4%
Agricultural area (AA) (thousand ha)	8 780	12 169	0.3%	0.4%
			All countries[1]	
Population density (inhabitants/km^2)	258	308	53	62
GDP per capita (USD in PPPs)	2 048	7 448	9 275	21 924
Trade as % of GDP	49	97	12.4	15.3
Agriculture in the economy			**All countries[1]**	
Agriculture in GDP (%)	22.7	14.7	3.1	3.6
Agriculture share in employment (%)	65.3	39.8	-	-
Agro-food exports (% of total exports)	16.9	9.2	6.2	7.3
Agro-food imports (% of total imports)	6.1	9.0	5.5	6.3
Characteristics of the agricultural sector			**All countries[1]**	
Crop in total agricultural production (%)	79	73	-	-
Livestock in total agricultural production (%)	21	27	-	-
Share of arable land in AA (%)	71	57	32	33

Notes: *or closest available year. 1. Average of all countries covered in this report. EU treated as one. Agro-food trade includes natural rubber.
Sources: OECD statistical databases; UN Comtrade; World Bank, WDI and national data.

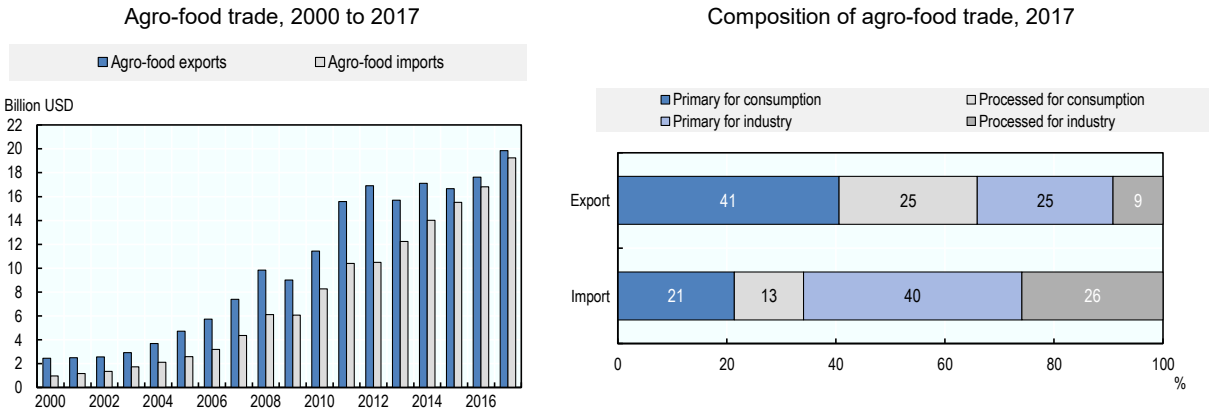
The agro-food sector is well integrated with international markets. Agro-food exports have increased eight-fold since the early 2000s, and Viet Nam is now one of the world's largest exporters of a wide range of agricultural commodities, including cashews, black pepper, coffee, cassava and rice. Two-thirds of Viet Nam's agro-food exports are delivered to foreign consumers without further processing. Agro-food imports have also increased significantly. The majority of agro-food imports form intermediate inputs into Viet Nam's processing sectors.

Figure 29.4. Viet Nam: Main economic indicators, 2000 to 2019



Sources: OECD statistical databases; World Bank, WDI and ILO estimates and projections.

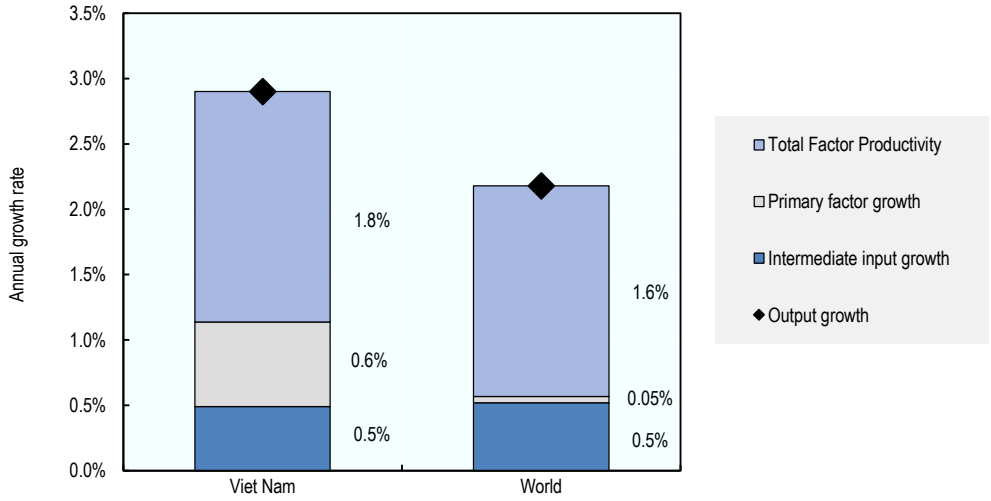
Figure 29.5. Viet Nam: Agro-food trade



Note: Numbers may not add up to 100 due to rounding. Agro-food trade includes natural rubber.
Source: UN Comtrade Database.

Agricultural production increased by 2.9% p.a. on average between 2007 and 2016, driven by total factor productivity growth of 1.8% p.a. and greater use of primary factors and intermediate inputs. However, agriculture places significant and growing pressure on natural resources. Excessive use of fertilisers, pesticides and other chemicals has contributed to a gradual degradation of water and land quality. Together with climate change, degradation of the natural resource base caused by excessive use of inputs poses a significant risk to agricultural production and the capacity of the sector to maintain current, strong rates of productivity and output growth. The sector accounts for almost a third of Viet Nam's greenhouse gas emissions.

Figure 29.6. Viet Nam: Composition of agricultural output growth, 2007-16



Note: Primary factors comprise labour, land, livestock and machinery.
Source: USDA Economic Research Service Agricultural Productivity database.

Table 29.3. Viet Nam: Productivity and environmental indicators

	Viet Nam		International comparison	
	1991-2000	2007-2016	1991-2000	2007-2016
			World	
TFP annual growth rate (%)	2.2%	1.8%	1.6%	1.6%
			OECD average	
Environmental indicators	**2000***	**2018***	**2000***	**2018***
Nitrogen balance, kg/ha	174.3	152.9	33.3	29.1
Phosphorus balance, kg/ha	29.9	34.5	3.3	2.3
Agriculture share of total energy use (%)	1.7	1.8	1.7	2.0
Agriculture share of GHG emissions (%)	47.9	29.2	8.1	8.9
Share of irrigated land in AA (%)	..	..		
Share of agriculture in water abstractions (%)	..	..	46.0	49.0
Water stress indicator	..	..	9.9	8.9

Notes: * or closest available year.
Sources: USDA Economic Research Service, Agricultural Productivity database; OECD statistical databases; FAO database and national data.

Description of policy developments

Main policy instruments

The main form of support for Vietnamese producers is domestic price support, with border protection being the main tool used. Domestic price support varies across commodities. In particular, producers of import-competing commodities such as beef and veal, and sugar cane, are protected by tariffs. Producers of export commodities such as natural rubber, coffee, cashew nuts and tea are implicitly taxed, in that they receive prices for their outputs that are lower than world prices. As a result, total MPS is the sum of positive and negative support. Farm gate rice prices are supported by a subsidy to rice purchasing enterprises for the temporary storage of rice during harvest and establishment of target prices that vary between regions and crop season, with the objective of providing farmers with a profit of 30% above production cost.

Payments to producers are relatively small. Expenditure associated with subsidising the irrigation fee exemption is the dominant payment. An **area payment** with the objective of keeping 3.8 million hectares in paddy rice production has been provided since 2012. Since 2016,[3] rice growers have received VND 1 million (USD 43)/ha/year for land under wet paddy cultivation, and VND 500 000 (USD 22)/ha/year for other rice land, except upland fields not under paddy land-use plans.[4] Rice growers also receive support when land is reclaimed for rice cultivation, amounting to VND 10 million (USD 432)/ha/year, except for upland fields, and VND 5 million (USD 216)/ha/year for wet paddy land reclaimed from one-crop paddy land or other crop land.

Other programmes that provide support based on input use include programmes that provide plant genetic and animal breeding material to farmers at subsidised rates. At the national level, these are often provided as part of the package for farmers recovering from natural disasters or disease outbreaks. Since 2009, a number of policy packages have been introduced to provide farmers with subsidised credit to purchase inputs and assets for agricultural production (fertilisers, pesticides, machinery and equipment). Since 2003, most farming households and organisations have been exempt from paying agricultural land use tax or benefited from a land tax reduction.

General services for the agricultural sector are dominated by expenditures on irrigation systems. Expenditures on other forms of general services such as extension services, research and development, inspection and control and marketing and promotion are relatively limited.

All land is owned by the state and administered by it on behalf of the people. Farmers have **land user rights**, and benefit from a wide range of rights, including the right to rent, buy, sell and bequeath land, and to use land as collateral with financial institutions for mortgages. However, there are restrictions on land use including the duration of land use rights, land areas per household, the choice of crops, the process for converting paddy land from rice to another crop, and land transfers and exchanges.

Until 2016, the government maintained a large **degree of control over rice exports**. Exporters had to meet specific milling and storage requirements, the minimum export price had to be respected, and certain administrative functions were given to the Viet Nam Food Association (VFA). However, in January 2017, in line with the Investment Law of 2014, Viet Nam's Ministry of Industry and Trade (MOIT) abolished Decision No. 6139/2013/QD-BCT, which had capped the number of rice exporters at 150 and stipulated strict conditions for becoming a rice exporter. In 2018, the government further relaxed export conditions on rice.[5] To be eligible to export rice, companies must have at least one storage and one milling facility that meet national standards and regulations, which can be owned or leased. Traders must also maintain rice reserves equivalent to 5% of the volume shipped in the preceding six months.

Following Viet Nam's accession to the WTO in 2007, the simple **average MFN applied tariff** on agricultural imports decreased from around 25% in the mid-2000s to 16.5% in 2018, compared with a simple average bound tariff on agricultural products of 18.8%. Applied tariffs are much lower on imports originating from countries or regions with which Viet Nam signed free trade agreements. For example, the average tariff is just 3.4% on agricultural imports from ASEAN members and 5.4% from the People's Republic of China (hereafter "China").

Since joining the World Trade Organisation (WTO) in 2007, Viet Nam has made some progress towards implementing the requirements of the **Sanitary and Phytosanitary Agreement**. However, the regulatory regime still suffers from limited enforcement capacity, poor co-ordination and a large number of overlapping regulations.

Viet Nam implements **trade liberalisation** through multilateral, regional and bilateral trade agreements. It is a member of the WTO, Association of Southeast Asian Nations (ASEAN) and Asia-Pacific Economic Cooperation (APEC), and supports trade liberalisation between ASEAN members and their major trading partners in the region, including China, Japan, India, Korea, Australia and New Zealand.

Viet Nam's 2011 **National Strategy on Climate Change** tasks the agricultural sector with reducing greenhouse gas (GHG) emissions by 20% every ten years, while increasing gross production by 20% and reducing the poverty rate by 20% (Decision 2139/QD-TTg). The Ministry of Agriculture and Rural Development (MARD) subsequently issued an action plan to adapt to and mitigate climate change in the agricultural sector, most recently in Decision No. 819/QD-BNN-KHCN. The action plan prioritises research on, selection and production of plant varieties and animal breeds able to minimise GHG emissions and adapt to climate change; minimum tillage and techniques for reducing the use of water and fertilisers to minimise methane gas emissions in rice fields; the reduction of plants contributing to GHG emissions; and an increase in the production of bioenergy crops. MARD has also approved a programme to reduce GHG emissions in the crop, livestock, fishery and forestry sectors, and in irrigation and rural industries by 2020, while enhancing economic growth and reducing poverty (Decision No. 3119/QD-BNN-KHCN). The programme aims to: reduce GHG emissions in agriculture and rural areas by 20%; ensure that 3.2 million hectares of rice apply advanced methods, such as the System of Rice Intensification and Alternative Wetting and Drying (AWD); and promote more efficient use of agricultural inputs.

Viet Nam ratified the **Paris Agreement on Climate Change** in 2016. Viet Nam's Nationally Determined Contributions (NDCs) includes the commitment to reduce greenhouse gas (GHG) emissions by 8% between 2021 and 2030 compared to Business-as-Usual (BAU) levels using domestic resources, and up to 25% conditional on receiving international support. The Action Plan to Implement the Paris Agreement on Climate Change is outlined in Decision 2053/QD-TTg dated 28 October 2016, and includes activities for adaptation and mitigation in the agricultural sector.

The commitment to reduce agricultural GHG emissions has also been affirmed in recent decisions. In 2017, MARD issued Decision No. 932/QD-BNN-KH approving the **Green Growth Action Plan of the agriculture and rural development sector for the period 2016-2020**. This plan outlines ten prioritised tasks and policy measures to reduce GHG by 20% in 2020, compared with the BAU scenario. Key activities include applying: organic farming; efficient use of agricultural inputs; short duration, high quality rice varieties; water saving practices (AWD); climate smart agriculture (CSA) practices; integrated crop management practices to reduce GHG emissions from rice and crop production; and enhancing animal feed mixing and animal waste (biogas) and crop residues management to reduce CH4 and other GHG emissions. The recent laws on Crop Production and Animal Husbandry (OECD, 2019[1]) also identify a role for research and development in helping the sector to adapt to climate change and mitigate greenhouse gas emissions from the sector.

Domestic policy developments in 2019-20

On support to **agricultural sector and rural development**, in December 2018 MARD issued a list of 13 key national products, which includes rice, coffee, rubber, cashews, pepper, tea, vegetables and fruits, cassava and products thereof, pig meat, poultry meat and eggs (Circular No. 37/2018/TT-BNNPTNT).[6] The 13 national products are eligible for preferential support measures offered under Decree No. 57/2018/ND-CP on incentive policies to encourage enterprises to invest in agriculture and rural areas. Preferential support measures include exemptions from or reductions in land or water surface rents; preferential credit; support for the transfer and the application of high-technology in agriculture, human resources training, and market development and promotion activities; and support for investments in facilities and equipment for processing or preserving agricultural products (OECD, 2019[1]).

In 2019, the government continued to implement policies to support agricultural sector and rural development and the restructuring of agricultural production to improve competitiveness, increase value-added and promote sustainable development. In July 2019, the Government issued Resolution No. 53/NQ-CP on measures to encourage and facilitate businesses to invest in agriculture in an effective, safe and sustainable manner. The resolution sets out the vision to 2030 for the primary agriculture and agricultural processing sectors, and directs ministries and the people's committees of provinces and cities to continue

to implement policies to encourage enterprises to invest in the agricultural sector and rural areas, including policies to facilitate access to credit, the agricultural insurance programme, and preferential support measures for enterprises (OECD, 2019[1])).[7]

Also on agricultural sector and rural development, the government issued a Decree that defines the conditions for establishing, organising, operating and terminating the operations of co-operative groups (Decree No. 77/2019/ND-CP). According to the new Decree, co-operative groups are not legal entities and are established on the basis of a co-operative contract. They can be established by two voluntary founders, which can be either Vietnamese individuals or entities. Members can contribute capital in the form of assets or in-kind contributions as determined through mutual agreement of the members. The new regulations continue to allow co-operative groups to operate as independent economic entities.

On **risk management**, the government increased funding for agricultural insurance and issued Decree No. 22/2019/QD-TTg on the implementation of policies supporting agricultural insurance. The agricultural insurance programme was announced in 2018 (OECD, 2019[1]). Individuals engaged in rice, cattle and aquaculture production in specified provinces and centrally run cities[8] receive subsidies for insurance premiums of up to 90% for those classified as being in or near poverty,[9] and up to 20% for all others. Enterprises that apply high technologies in large-scale agricultural production shall receive subsidies for insurance premiums of up to 20%. The types of events supported by insurance include natural disasters, animal diseases and plant pests (as determined by the competent state agencies). The subsidy is available from June 2019 until the end of 2020.

On **natural disasters**, the government issued Decree No. 83/2019/ND-CP, amending conditions for the setting up and management of natural disaster prevention and control funds, including for agriculture. The Decree increases the maximum public funding available for investments in natural disaster prevention and control, and for relief and assistance in overcoming the consequences of natural disasters, from VND 1 billion to VND 3 billion (USD 43 154 to USD 129 463) per project. Eligible projects include repairs to irrigation dykes, embankments and culverts.

On **land use**, in July 2019 the government issued a Decree revising the registration procedure that applies when paddy land is converted from rice to another crop (Decree No. 62/2019/ND-CP). The Decree specifies the maximum time to be taken in processing the registration.

On **agricultural regulation**, in 2018 MARD approved a Circular outlining the process for importing and exporting agricultural plant varieties, forestry plant varieties, genetically modified (GM) varieties, animal breeds, import of agrochemicals and procedures for plant quarantine, including requirements for pest risk analysis before importing into Viet Nam (Circular No. 43/2018/TT-BNNPTNT). In April 2019 the government banned the use of glyphosate, removing glyphosate-based herbicides from the list of pesticides that are allowed to be used in Viet Nam (Decision No. 1186/2019/QD-BNN-BVTV). In December 2019, MARD approved a circular outlining the procedures for inspecting organic products and certifying conformity to national standards for organic agriculture (Circular No. 16/2019/TT-BNNPTNT).

On **animal welfare**, the 2018 Law on Animal Husbandry came into force on 1 January 2020 (Law No. 32/2018/QH14). The law stipulates the humane treatment of livestock for the first time, including: provision of suitable housing for breeding and raising livestock; and provision of adequate feed and water that meets acceptable hygiene standards. The Law also stipulates the humane treatment of livestock during transport and at slaughter facilities.

On **climate change**, the government is updating several key documents that form the basis of current climate change policies for the agricultural and rural development sector. In 2020, MARD will issue a Decision to update the action plan to adapt to and mitigate climate change in the agricultural sector for the period 2021-30, with a vision to 2050. The updated action plan will set out the priorities for the sector to respond to climate change and foster green growth, and update the lists of key projects and sector-specific strategies for addressing climate change, in order to better target public investment projects related to

climate change.[10] Also in 2020, MARD will issue a Decision approving its plan to implement the Paris Agreement on Climate Change for the period 2021-30. The draft decision sets out the tasks for the sector to implement the government's action plan to implement the Paris Agreement on Climate Change,[11] while ensuring the growth rate of the agricultural sector; the restructuring of agricultural production to improve competitiveness, increase value-added and promote sustainable development; and accomplishing the objectives of the National Target Programme for New Rural Development. Finally, in 2019 MARD evaluated the implementation of the Green Growth Action Plan of the agriculture and rural development sector for the period 2016-20,[12] and will issue a Decision in 2020 promulgating the green growth criteria for sector.

Trade policy developments in 2019-20

On 30 June 2019, the **European Union and Viet Nam** signed a bilateral free trade agreement, the EU-Vietnam Free Trade Agreement (FTA). The agreement is pending the approval of the Vietnamese National Assembly after the European Parliament ratified the agreement in February 2020. The agreement includes improved market access for Vietnamese agricultural commodities with the progressive reduction of duties over a maximum period of seven years. Viet Nam has agreed to progressively eliminate duties for EU food products over a period of ten years, including for chicken, dairy, beef, wine, spirits, chocolates, pastas, apples, wheat, and olive oil. At the end of the implementation period, an average tariff of 1.1% is to apply to agricultural goods originating in Viet Nam and 2.1% to processed agricultural products. The average tariff for EU agricultural exports is to decline to 2.6%. Viet Nam has agreed to recognise and protect the Geographical Indications (GIs) of 169 European food and drink products, at a comparable level to that of EU legislation. Vietnamese GIs are also recognised as such in the European Union, and the agreement allows new GIs to be added in the future.

On 26 June 2019, the Ministry of Industry and Trade issued a Circular regulating the tariff quota for imports of dried tobacco leaves and rice originating from Cambodia in 2019 and 2020 (Circular No. 08/2019/TT-BCT). The Circular is in force from 12 August 2019 until 31 December 2020. According to the new Circular, the quota on rice from Cambodia in 2019 is 300 000 tonnes per year and the quota for dried tobacco leaves is 300 000 tonnes per year.

References

OECD (2019), "Viet Nam", in *Agricultural Policy Monitoring and Evaluation 2019*, OECD Publishing, Paris, https://dx.doi.org/10.1787/8ecdbfd5-en. [1]

OECD (2015), *Agricultural Policies in Viet Nam 2015*, OECD Food and Agricultural Reviews, OECD Publishing, Paris, https://dx.doi.org/10.1787/9789264235151-en. [2]

Notes

[1] AMIS Market Monitor No. 77– April 2020; FAO Food And Agriculture Policy Decision Analysis Tool (FAPDA), http://www.fao.org/in-action/fapda/tool/index.html#main.html.

[2] Decree 41/2020/ND-CP extending tax and land rent payment deadlines.

[3] Direct payments to protect and develop land for rice production were increased in 2016 in line with Decree No. 35/2015/ND-CP on the management and use of land for rice cultivation.

[4] Wet-paddy farming land is defined as land currently under wet-paddy cultivation or having the conditions for growing two or more wet-paddy crops a year; other paddy farming land is defined as land for growing only one wet-paddy crop a year and land for growing upland rice. Approximately 95% of current paddy land meets the wet-paddy land definition (OECD, 2015[2]).

[5] Decree No. 107/2018/ND-CP on rice export business.

[6] National products are set out in Circular No. 37/2018/TT-BNNPTNT. The full list of products is: rice, coffee, rubber, cashews, pepper, tea, vegetables and fruits, cassava and products thereof, pig meat, poultry meat and eggs, pangasius (a type of freshwater fish), shrimp, and wood and products thereof.

[7] Decree No. 116/2018/ND-CP on credit policies for agricultural and rural development and solutions of the banking industry; Decree No. 58/2018/ND-CP on agricultural insurance; and Decree No. 57/2018/ND-CP on incentive policies to encourage enterprises to invest in agriculture and rural areas.

[8] For rice, in the provinces of Thai Binh, Nam Dinh, Nghe An, Ha Tinh, Binh Thuan, An Giang and Dong Thap. For cattle, in the provinces and centrally run cities of Ha Giang, Vinh Phuc, Hanoi, Thanh Hoa, Nghe An, Binh Dinh, Dong Nai and Binh Duong.

[9] Defined in Decision No. 59/2015/QD-TTG promulgating the multidimensional poverty levels applicable during 2016-20.

[10] Relative to Decision No. 819/QD-BNN-KHCN approving the action plan to respond to climate change in the agricultural and rural development sector in the period 2016-20 and vision to 2050.

[11] Decision No. 2053/QD-TTg on the Action Plan to Implement the Paris Agreement on Climate Change.

[12] Decision No. 932/QD-BNN-KH approving the Green Growth Action Plan of the agriculture and rural development sector for the period 2016-20.

Annex A. Sources and Definitions of Contextual Indicators

Table X.2. Contextual indicators

Gross Domestic Product – GDP (USD billion in PPP): OECD National Accounts Statistics (database), Gross domestic product, USD, current prices, current PPPs. World Bank, World Development Indicators (WDI database) for Emerging Economies not available in the OECD database.

Population (million): OECD National Accounts Statistics (database), Population and employment by main activity. Calculation based on Eurostat database for the European Union. United Nations, World Population Prospects: 2019 Revision, Population, for Emerging Economies not available in the OECD database.

Land area (thousands km^2): FAOSTAT Land Use (database), Land area ('000 ha) recalculated to thousands km^2. Land area excludes water areas.

Agricultural area (AA) (thousand ha): FAOSTAT Land Use (database), Agricultural area.

Population density (inhabitants/km^2): OECD Regional and Cities (database), Regional demography, Population density and regional area. United Nations, World Population Prospects: 2019 Revision, Population density, for economies not available in OECD database. Calculation based on the Eurostat population and area databases for the European Union.

GDP per capita (USD in PPP): OECD National Accounts Statistics (database), Gross domestic product (output approach), per head, USD, current prices, current PPPs. World Bank, World Development Indicators (WDI database) for Emerging Economies not available in OECD database.

Trade as % of GDP: Calculation based on UN COMTRADE (database) for trade data, customs data, and GDP (local currency) indicator. Average trade calculated as (exports+imports)/2. The European Union aggregate does not account for intra-EU trade.

Agriculture share in GDP (%): OECD National Accounts Statistics (database), "National Accounts at a Glance", Gross value added, Agriculture, forestry and fishing, percentage of total activity. Eurostat database for the European Union. World Bank, World Development Indicators (WDI database) for Emerging Economies not available in OECD database.

Agriculture share in employment (%): Calculation based on OECD Labour Force Statistics (database), Employment by activities and status (ALFS), as a share of employment in agriculture, hunting, forestry and fishing in all activities (ISIC rev.3, A-B and A-X; ISIC rev.4, A and A-U). Calculation based on Eurostat, share of employed persons, aged 15 years and over, in agriculture, hunting, forestry and fishing in total NACE activities, for the EU Member States. World Bank, World Development Indicators (WDI database), Employment in agriculture, hunting, forestry and fishing as a share of total employment; and national data for Emerging Economies not available in OECD database.

Agro-food exports in total exports (%): Calculation based on UN COMTRADE (database). Agro-food definition does not include fish and fish products. Agro-food codes in H0: 01, 02, 04 to 24 (excluding 1504, 1603, 1604 and 1605), 3301, 3501 to 3505, 4101 to 4103, 4301, 5001 to 5003, 5101 to 5103, 5201 to 5203, 5301, 5302, 290543/44, 380910, 382360.

Agro-food imports in total imports (%): Calculation based on UN COMTRADE (database). Agro-food definition does not include fish and fish products.

Crop in total agricultural production (%): National data, share of value of total crop production (including horticulture) in total agricultural production.

Livestock in total agricultural production (%): National data, share of value of total livestock production in total agricultural production.

Share of arable land in AA (%): Calculation based on FAOSTAT Land Use (database), arable land as a share of agricultural area.

Table X.3. Productivity and environmental indicators

TFP annual growth (%): Agricultural Total Factor Productivity indexes of the USDA Economic Research Service use primarily FAO data supplemented by national data. Agricultural TFP indexes are estimates by country and for groups of countries aggregated by geographic region and income class. The European Union single area is recalculated from individual countries data and weights. The presented growth rates are sensitive to the choice of the time period. Reported values have changed relative to previous releases following the International Agricultural Productivity database update that includes revisions of historical estimates to reflect newly available data and modifications to the estimation procedures. The full documentation of the revisions is available at: https://www.ers.usda.gov/data-products/international-agricultural-productivity/update-and-revision-history/.
USDA, Economic Research Service (2019), International Agricultural Productivity database, https://www.ers.usda.gov/data-products/international-agricultural-productivity/ (accessed December 2019).

Nitrogen balance (Kg/ha): Balance (surplus or deficit) expressed as kg nitrogen per hectare of total agricultural land calculated at the national level. OECD aggregate for nitrogen balance is calculated as the ratio between the total surplus and the total agricultural land area in the OECD area. European Union as a single area is calculated as the Gross Nitrogen Balance in the EU area over the utilised agricultural area of the EU.
OECD (2019), Agri-environmental indicators (database), http://www.oecd.org/tad/sustainable-agriculture/agri-environmentalindicators.htm.

Phosphorus balance (Kg/ha): Balance (surplus or deficit) expressed as kg phosphorus per hectare of total agricultural land calculated at the national level. OECD aggregate for phosphorus balance is calculated as the ratio between the total surplus and the total agricultural land area in the OECD area. European Union as a single area is calculated as the Gross Phosphorous Balance in the EU area over the utilised agricultural area of the EU.
OECD (2019), Agri-environmental indicators (database), http://www.oecd.org/tad/sustainable-agriculture/agri-environmentalindicators.htm.

Agriculture share of total energy use (%): Share of agricultural consumption in total final consumption (TFC).
International Energy Agency (2019), IEA World Energy Statistics and Balances (database), https://doi.org/10.1787/data-00512-en, and OECD Agri-environmental indicators (database), http://www.oecd.org/tad/sustainable-agriculture/agri-environmentalindicators.htm,

Agriculture share in total GHG emissions (%): Greenhouse gas emissions by source, excluding land use, land-use change and forestry (LULUCF). European Union as a single area is calculated from UNFCCC data as Agriculture greenhouse gas emissions in the EU area over the total GHG emissions in EU area.

UNFCCC Greenhouse Gas Inventory Database (2019), https://unfccc.int, and OECD Agri-environmental indicators (database), http://www.oecd.org/tad/sustainable-agriculture/agri-environmentalindicators.htm

Share of irrigated area in Agricultural Area (AA) (%): Share of irrigated area in total agricultural area. OECD (2019), Agri-environmental indicators (database), http://www.oecd.org/tad/sustainable-agriculture/agri-environmentalindicators.htm and FAOSTAT database for Emerging Economies not available in OECD database.

Share of agriculture in water abstractions (%): Share of agriculture in total freshwater abstractions. European Union as a single area is calculated as the total abstractions for agriculture in the EU area over the total freshwater abstractions in the EU area.
OECD (2019), Agri-environmental indicators (database), http://www.oecd.org/tad/sustainable-agriculture/agri-environmentalindicators.htm.

Water stress indicator: The indicator refers to the intensity of use of fresh water resources. It is expressed as gross abstraction of freshwater as percentage of total available renewable freshwater resources. European Union is treated as a single area.
OECD (2019), "Water: Freshwater abstractions", OECD Environment Statistics (database), http://dx.doi.org/10.1787/data-00602-en.

Figure X.4. Main macro-economic indicators, 2000 to 2019

Real GDP growth (%): OECD Country Statistical Profiles, real GDP growth. OECD Economic Outlook: Statistics and Projections (database) as a benchmark for the latest year. World Bank, World Development Indicators (WDI database) for Emerging Economies not available in OECD database.

Inflation rate (%): OECD National Accounts Statistics (database), Prices and Purchasing Power Parities, Annual average rate of change in Harmonized Indices of Consumer Prices (HICPs). World Bank, World Development Indicators (WDI database) for Emerging Economies not available in OECD National Accounts Statistics.

Unemployment rate (%): OECD Economic Outlook: Statistics and Projections (database), Labour market statistics. Eurostat database for the European Union. International Labour Organization (ILO), Unemployment rate by sex and age (estimates and projections) for Emerging Economies not available in OECD database.

Figure X.5. Agro-food trade

Agro-food exports (USD billion), 2000 to 2018: UN COMTRADE (database). Agro-food definition does not include fish and fish products.

Agro-food imports (USD billion), 2000 to 2018: UN COMTRADE (database). Agro-food definition does not include fish and fish products.

Composition of agro-food trade, 2018: UN COMTRADE (database). Agro-food definition in HS classification (see above) combined with the Classification by Broad Economic Categories (BEC) to generate breakdowns into type of commodities (Primary or Industrial commodities) and type of destination (Consumption or Industry).

Figure X.6. Composition of agricultural output growth, 2007-16

TFP annual growth (%): Agricultural Total Factor Productivity indexes of the USDA Economic Research Service use primarily FAO data supplemented by national data. Input growth is the weighted-average

growth in quality-adjusted land, labour, machinery power, livestock capital, synthetic NPK fertilisers, and animal feed, where weights are input (factor) cost shares. Special breakdown created to dissociate primary factors (land, labour, machinery and livestock) from intermediate input (feed and fertilizer) growth. Output growth corresponds to gross agricultural output for each country.

Agricultural TFP indexes are estimates by country and for groups of countries aggregated by geographic region and income class. The European Union single area is recalculated from individual countries data and weights. The presented growth rates are sensitive to the choice of the time period.

Reported values have changed relative to previous releases following the International Agricultural Productivity database update that includes revisions of historical estimates to reflect newly available data and modifications to the estimation procedures. The full documentation of the revisions is available at: https://www.ers.usda.gov/data-products/international-agricultural-productivity/update-and-revision-history/. USDA, Economic Research Service (2019), International Agricultural Productivity database, https://www.ers.usda.gov/data-products/international-agricultural-productivity/ (accessed December 2019).

Indicators used to calculate selected ratio and percentage indicators

GDP (local currency): OECD National Accounts Statistics (database), Gross domestic product, local currency, current prices. OECD Economic Outlook: Statistics and Projections (database) as a benchmark for the latest year. Calculation based on Eurostat database for the European Union. World Bank, World Development Indicators (WDI database) for Emerging Economies not available in the OECD database.

Agriculture Gross Value Added (local currency) (AgGVA): Calculation based on Agriculture share in GDP (%) and GDP (local currency) indicators.

Deflator: OECD Economic Outlook: Statistics and Projections (database), Gross domestic product, market prices, deflator. Eurostat database for the European Union. World Bank, World Development Indicators (WDI database) for Emerging Economies not available in the OECD database.

Exchange rate: OECD National Accounts Statistics (database), Prices and Purchasing Power Parities, Nominal Exchange Rate. Eurostat database for the European Union and EU Member States. World Bank, World Development Indicators (WDI database) and national data for Emerging Economies not available in the OECD database.

Currencies

ARS	Argentinian peso	JPY	Japanese yen
AUD	Australian dollar	KRW	Korean won
BRL	Brazilian real	KZT	Kazakh tenge
CAD	Canadian dollar	MXN	Mexican peso
CLP	Chilean peso	NOK	Norwegian krone
COP	Colombian peso	NZD	New Zealand dollar
CHF	Swiss frank	PHP	Philippines peso
CNY	Chinese yuan renminbi	RUR	Russian rouble
CRC	Costa Rican colon	TRY	New Turkish lira
EUR	Euro	UAH	Ukrainian hryvnia
IDR	Indonesian roupiah	USD	United States dollar
INR	Indian rupee	VND	Vietnamese dong
ILS	Israeli shekel	ZAR	South African rand
ISK	Icelandic krona		

Agricultural Policy Monitoring and Evaluation 2020

This annual report monitors and evaluates agricultural policies spanning all six continents, including the 37 OECD countries, the five non-OECD EU Member States, and 12 emerging economies. It is a unique source of up-to date estimates of support to agriculture using a comprehensive system of measuring and classifying support to agriculture – the Producer and Consumer Support Estimates (PSEs and CSEs), the General Services Support Estimate (GSSE) and related indicators – which provide insight into the increasingly complex nature of agricultural policy and serve as a basis for OECD's agricultural policy monitoring and evaluation. Comprehensive country chapters and the Statistical Annex containing detailed background tables with indicators of agricultural support are available in electronic form on the publication website.

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