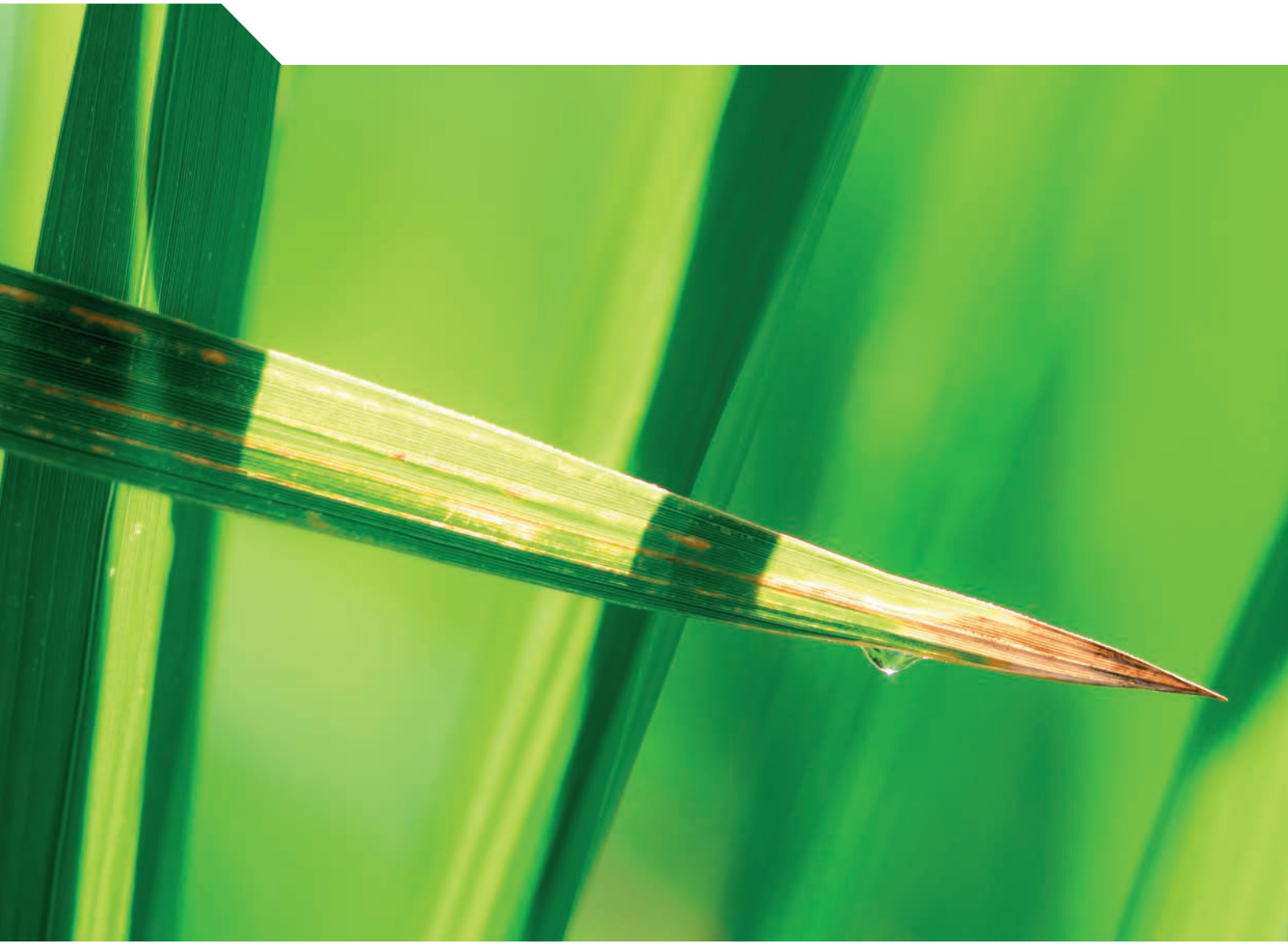
Taxation in Agriculture



OECD

Taxation in Agriculture



BETTER POLICIES FOR BETTER LIVES

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Foreword

Tax policy can affect innovation, productivity and sustainability in the food and agriculture sector through numerous pathways. In general, tax policy affects the decisions of firms and households to save or invest in physical and human capital, with implications for the adoption of innovation. In particular, tax policy influences the conduct, structure and behaviour of farms, input suppliers and food companies. For example, tax systems in some countries can incentivise farm investments by reducing taxable income through provisions for depreciation. In other countries, the tax system allows farmers to smooth income variations over time by using tax averaging. Taxes on income, property and land, and capital transfer may affect structural change, while differential tax rates on specific polluting activities, resources, or input use may affect sustainability. At both the sectoral and the economy-wide levels, the tax system can also be used to provide direct incentives for innovation – for example, preferential tax treatment can be applied to investments in private R&D or to young, innovative companies.

This report is a first step in investigating how tax policy influences farm productivity and sustainability performance via its impact on innovation, structural change, natural resource use, and climate change. It builds on previous OECD work (OECD, 2005[1]) which identified and described various types of differential treatment related to the taxation of agricultural activities and assets in OECD countries, analysed the extent to which different provisions could be considered as tax concessions generating benefits relative to other sectors of the economy, and which developed a typology of tax types. The present report explores several concepts in greater depth, including the notion of foregone revenue (or tax "expenditures"). It provides the latest available information on taxation and tax concessions in agriculture, extending country coverage to consider differences in general tax levels across countries, and reviews the available evidence on the impact of taxation on agriculture. Finally, coverage is extended to countries which have joined the OECD since the 2005 report, and to several emerging economies.

Part I contains a review of the literature on the impact of taxation on income levels and variability, farm transfers and structural adjustment, and investment and innovation in agriculture, and on the performance of tax instruments for improving environmental sustainability. It also compares various tax provisions across countries, outlining concessions applied to agriculture. The concluding section outlines the diversity of tax provisions and suggests areas for further investigation on their policy effectiveness. Part II contains 35 country notes based on information acquired either through country responses to a questionnaire (Annex A.A.1) or sourced from country reviews on innovation, sustainability and productivity in food and agriculture.

This report was prepared by Elena Avery, Katherine Baldwin, and Catherine Moreddu, with early contributions from Joanna Ilicic-Komorowska. It benefited from government responses to a questionnaire, which formed the basis of the country notes, and from comments by colleagues in the Trade and Agriculture Directorate as well as country delegates to the Working Party on Agricultural Policies and Markets. The report also draws on information and expertise on general taxation available at the OECD. Martina Abderrahmane provided editorial assistance and Michèle Patterson prepared the publication.

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Executive summary

Tax policy affects agricultural competitiveness through its impact on farm income levels and variability, investment in land and technology, labour and other input use, and the adoption of farm practices. For example, tax systems can incentivise farm investments by reducing taxable income through provisions for depreciation. In some countries, the tax system allows farmers to smooth income variations over time by using tax averaging. Taxes on income, property and land, and capital transfer may affect structural change, while differential tax rates on specific polluting activities, resources, or input use may affect sustainability.

This new review of taxation in agriculture in 35 OECD countries and emerging economies outlines the diversity of tax provisions affecting agriculture, provides an overview of cross-country differences in tax policy, and confirms the widespread use of tax concessions specifically for agriculture, although their importance and modalities differ across tax areas and countries. Common concessions include exempting small farmers from paying taxes, allowing cash-based accounting, providing estimates of taxable income thereby eliminating the need to keep accounts, reducing annual land and property taxes, reducing the taxes associated with the transfer of land between generations, exempting farmers from being registered for value added taxes and providing tax concessions for fuel used in agricultural production.

These concessions were often established long ago and have not since been revisited. Some countries have, however, increased agricultural tax concessions, often in response to the deterioration of the economic situation of farm households, while others have simplified the taxation systems to limit concessions to agricultural land and basic food products. Additionally, some countries have made changes to tax system provisions in order to help smooth income variability. Finally, the use of taxation to improve environmental performance has become more widespread, as has the reliance on tax rebates to support R&D investment.

The review of the literature suggests that tax policy is often used as a lever through which to affect behaviour in the agricultural sector, impacting producer income, farmland transfer, investment, innovation, and sustainability outcomes. In some cases, the tax system is used to complement other policies in achieving larger goals. In other cases, taxes or tax concessions in one area provide incentives that are contrary to the achievement of policy goals in other areas.

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

Although many countries include provisions in their tax codes designed to influence the agricultural sector, for most of the topic areas explored in this review, there remains only scant sector-specific analysis that can inform future policymaking efforts. The exception to this has been in the area of sustainability, where new tax policies have been implemented

alongside monitoring programmes, and periodic analyses of *ex post* effectiveness have been published and often lead to policy changes to improve effectiveness or repeal inefficient taxes. But the impact of other kinds of taxes on natural resource use is not documented.

Further investigation is needed in nearly all areas covered here in order to make more definitive determinations on whether or not tax provisions have achieved their aims (and if so, under what conditions), how they have contributed to improving farm productivity and sustainability, 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.

Part I. Taxation in Agriculture: Main report

Chapter 1. Impact of taxation in agriculture: Literature review

This chapter examines relevant findings from the literature on taxation and agriculture, focusing on four areas: the impact of income tax on income levels and variability; the impact of property taxes on farm transfers and structural adjustment; the impact of taxation on investment and innovation; and the performance of tax instruments for improving environmental sustainability.

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.

1.1. Background

Previous OECD work in this area concluded that, while tax policies as they relate to agriculture can take different forms depending upon the country, they can generally be classified according to the following typology: taxes on income, profits and capital gains; social security contributions[1] (which are a mixture of tax, duty and insurance); taxes on payroll and workforce which concern farm operators as employers; taxes on property (including taxes on property transfer); and taxes on goods and services (including sales tax and VAT) (OECD, 2005[1]). While the sector is certainly affected by the levying of different tax provisions in these areas, it also benefits relative to other sectors through the granting of tax concessions. A given tax measure is considered to be a "tax concession" to agriculture if it results in differential treatment to the sector in such a way that agriculture is favoured, resulting in some foregone tax revenue, or "tax expenditure". Furthermore, any given tax measure is only considered as an agricultural tax concession in the OECD framework to measure agricultural support if the policy mainly benefits the agricultural sector and not other sectors to which they may also apply [e.g. fisheries, small and medium-sized enterprises (SMEs)]. Some commonly utilised concessions include special tax rates applied to farmer income; allowing income tax averaging to smooth income across years given that income from agriculture is more volatile than income in most other sectors; special treatment for depreciation (in particular through accelerated write-offs) to encourage investment; preferential treatment on property taxes applied at transfer by sale, gift or death to facilitate farm transition with minimal disruption to producing activities; and preferential treatment on taxes on inputs, outputs, or VAT (including fuel tax exemptions).[2] Previous OECD work on taxation in agriculture emphasised that tax concessions are used as a vehicle to achieve a wide variety of objectives in the sector (OECD, 2005[1]). However, a comparative analysis of these regimes is complicated by the fact 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.

Given the ubiquity of agricultural tax concessions, it would be rational to anticipate that a substantial body of scholarship would have analysed the effects of these concessions. Instead, only a handful of studies devoted to these mechanisms within the sector were identified, with much of the evidence base covered in this review drawn from more generic, economy-wide analyses. This gap is a consequence of various factors, including the lack of uniformity in national tax structures that complicates cross-country analysis efforts; the reduced public scrutiny on these policies since they result in foregone revenue rather than direct budget outlays; the necessity of sifting through multiple layers of tax regulation (national, regional, local) in any comprehensive analytical framework; and the political sensitivity of analysing agricultural taxation provisions (OECD, 2005[1]; Hill and Blandford, 2007[2]). Nevertheless, tax provisions, whether concessional or not, can have substantial repercussions for farm income, input use, transfer arrangements, and investment decisions. The current analysis picks up where previous work left off, focusing on what the literature in the wake of the report has concluded regarding four primary areas of interest related to taxation in agriculture:

- The impact of income taxes on income levels and variability
- The impact of property taxes on farm transfers and structural adjustments
- The impact of taxation on investment and innovation
- The performance of tax instruments for improving environmental sustainability.

This literature review focuses on specifically providing evidence on the extent and the efficiency implications of taxation in these areas. Although taxation analysis raises additional questions surrounding policy effectiveness with respect to revenue-raising

objectives and equity considerations, those topics are considered to be outside the scope of the current review.

Although the literature review focuses on these four areas, there is also a recognition that it can be difficult to fully disentangle the various means through which taxation affects agriculture. In the first place, there are undoubtedly many tax provisions that either do not target or are not specific to agriculture that can have an effect on farm income, farm transfer, innovation, and sustainability, although their effect is rarely assessed. At the same time, given the difficulty of adequately targeting tax concession provisions, it is likely that tax concessions originally intended for a specific purpose may have unintended consequences for other areas. For example, tax concessions that succeed in spurring innovation may lead to higher farm incomes once said innovation is adopted. Nevertheless, this review largely concentrates on examining the evidence base in these four key areas in an effort to identify some tangible mechanisms through which the tax system has aided in fostering growth, investment, innovation, and improved sustainability outcomes in agriculture. With a view toward being as comprehensive as possible, this review examines both *ex ante* academic analyses, as well as *ex post* evaluations of policies actually implemented by countries. Additionally, while this review aims to examine the existing literature specifically related to taxation in agriculture, some more general findings on tax policy issues are also included in areas where the findings are likely to have implications for the agricultural sector.

1.2. Impact of income tax on income levels and variability

The literature review identified several studies on the impact of income tax on farm income levels and variability, where "income tax" can include both personal income tax (for farm households) and corporate income tax (for farm enterprises), although the former is more common in OECD countries. However, most analyses collectively considered the effect of changes in the whole tax regime on level of income, rather than merely the income tax provisions. The works can largely be divided along thematic lines, with several comparing how tax regimes affect competitive position (*vis-à-vis* the agricultural tax systems of other countries), while other studies analysed the potential effects of changes to an individual country's tax code in an empirical framework. Literature in the latter category is focused on the United States, as that country recently underwent a major overhaul of its tax system.

From an economy-wide point of view, general work on the usage of income taxes in overall tax structures provides some insights that are relevant to the agricultural sector. Previous OECD work on how tax structures can best support growth established that taxes on corporate and personal income are the tax categories that most distort economic incentives for production, and are therefore the most harmful for a country's overall economic growth (OECD, 2010[3]). The authors of this study stressed that tax systems should "avoid encouraging economic behaviour that could influence market activity adversely" – in other words, policymakers should ensure that the tax system does not penalise the very activities that are most conducive to growth (OECD, 2010[3]). In lieu of taxing income, the review instead suggested that countries rely more heavily on less distortionary taxes, such as property taxes and, to some extent, consumption taxes. At the same time, given the importance of land as a factor of production in the agricultural sector, the more detailed implications of this ranking of taxes from most to least distortive with respect to the agricultural sector deserves further study.

Specific work related to taxation in agriculture largely took a more comparative approach to analysing diverse tax systems. Work from Norway comparing the tax regimes of nine different countries (Australia, Canada, France, Germany, Ireland, Italy, Switzerland, the United Kingdom, and the United States) served as the basis for previous OECD work on

taxation in agriculture. While that analysis made no direct quantitative comparisons between countries, it did conclude that every country analysed had some form of tax expenditure for farmers (where a "tax expenditure" is defined as "a fiscal advantage [that] is conferred on a group of individuals, or a particular activity, by reducing tax liability rather than by direct cash subsidy") (Andersen et al., 2002[4]). The authors found that the focus countries differed in the "volume and shaping" of tax expenditure benefits, including which expenditures were offered, the applied tax rates under similar provisions across countries, and how the countries have designed their tax bases (Andersen et al., 2002[4]). These expenditures included special systems for valuing income, tax averaging systems, special property tax valuations, inheritance tax reductions and farm transfer provisions. Previous OECD work on farm income extended upon this conclusion, providing some quantitative evidence that OECD taxation regimes very often provide relative benefits to farm households. The analysis found that in several member countries, the economic position improved for farm households compared to non-farm households when after-tax income was considered (OECD, 2003[5]). It also found that income taxation reduced the frequency of low incomes among farm households.

Two articles from Europe compared the tax system of different Member States in an effort to assess how the different tax regimes might affect the competitive position of their respective agricultural sectors. In a 2007 analysis, authors compared the agricultural tax systems of Belgium, the Czech Republic, Denmark, France, Germany, Hungary, the Netherlands, Poland, Spain, and the United Kingdom. After considering various provisions in the different countries – including income smoothing, depreciation, investment, and overall tax rates – the authors concluded that in aggregate, the tax systems in Belgium, France, the Netherlands, and the United Kingdom were the most supportive, in that they resulted in a lower overall tax burden for the agricultural sector (compared to the other countries examined), supported innovation and investment, allowed larger farms to develop efficiencies of scale, and facilitated farm transfers (Van Der Veen et al., 2007[6]). For example, the authors noted that the availability of income averaging in France, the Netherlands and the United Kingdom allowed farmers the flexibility to smooth their variable taxable incomes, which helped to reduce their tax burden.[3] A subsequent analysis from 2012 compared only the tax systems of Belgium, Denmark, France, Germany, and the Netherlands. The results of this analysis indicated that specific components of each tax system (including provisions for social security contributions or depreciation) could have a large impact on overall tax burden and income in a given year (Boullet et al., 2012[7]).

Turning to the empirical analyses, two recent studies looked at the likely effects of the 2017 US Tax Cuts and Jobs Act (TCJA).[4] Both research teams considered the multi-dimensional mechanisms through which the law would affect farm household tax burdens, but using different analytical frameworks. First, Williamson and Bawa (2018[8]) considered how the law would affect farm income using data from the US Internal Revenue Service and Agricultural Resource Management Survey (ARMS) in a tax simulation model. Their results suggested that, had the law been in place in 2016, farm households would have seen their average effective income tax rate fall by 3.3 percentage points to 13.9%. The authors estimated that tax rates would have declined for farms of all sizes and types, although the magnitude of these effects varied (Williamson and Bawa, 2018[8]). In contrast, Beckman, Gopinath and Tsigas (2018[9]) analysed the impacts of the law using a CGE framework, arguing that the implications of the tax reform are such that a whole economy analysis is needed to estimate the law's likely effects. They found that TCJA will likely lead to a decline in agricultural production as resources are allocated to other sectors, but farm household income is likely to rise because of higher income from non-farm activities (Beckman, Gopinath and Tsigas, 2018[9]).

Independent of the 2017 tax bill, an additional analysis from the United States looked at the role of various factors in farm household economic returns, including tax-loss benefits. The authors reported that tax allowances for depreciation expenses (in this case, immediate expensing through accelerated depreciation provisions) reduced farm income variability, as investments in depreciable assets typically occurred in high income years, thus allowing households to reduce their tax burden (Prager, Tulman and Durst, 2018[10]). Overall, the authors estimated that farm households reporting negative income for tax purposes in 2015 received an average economic benefit of USD 2 178 per household from those losses (Prager, Tulman and Durst, 2018[10]).

In addition to discussing the impact of taxation on income levels, various authors also highlighted the potential benefit of tax averaging to smooth income variability (although none attempted to specifically quantify those benefits). In one example, an analysis of the Australian agricultural tax system found tax averaging to be a useful tool to help farmers manage fluctuations in primary income (Boyce Chartered Accountants and McCluskey, 2016[11]). Similarly, an analysis from the European Union highlighted the potential tax benefits of averaging – particularly for industries like horticulture that are associated with high income volatility (Van Der Veen et al., 2007[6]).

1.3. Impact of property taxes on farm transfers and structural adjustment

Another lever through which taxation can affect farm operations is through allowances or incentives that either facilitate or discourage farm transfers. Much of the focus on tax policy in this area is related to taxes on inherited property (also referred to as estate taxes) and farm succession incentives. Previous OECD work indicated that special provisions for agriculture in the area of land transfer may be necessary due to equity concerns, as a farm businesses typically need to be refinanced every generation, such that the levying of high taxes on inherited property may put an undue burden on the successor, requiring the partial liquidation of the farm unit (OECD, 2005[1]). Outside of farm succession, some countries have utilised tax policy to facilitate agricultural land rental arrangements, helping to ensure that farmland can be put to productive uses in cases where the owner does not wish to engage in farming. One article analysing the impact of taxes on these types of arrangements was also reviewed.

With respect to estate taxes, much of the scholarship comes from the United States, where estate tax requirements have been relaxed in the past two decades. For example, the individual estate tax exclusion under US law has increased from USD 675 000 in 2001 to USD 11.18 million in 2018, while the tax rate on the taxable estate has fallen from 55% to 40% (Van Der Hoeven, 2013[12]; Williamson and Bawa, 2018[8]). With these changes, multiple sources assert that very few US farms are now subject to estate taxes. Furthermore, owners of farms that are subject to estate taxes should have sufficient resources to pay their tax bills without selling the farm property, motivating the authors to conclude that liquidity problems as a result of estate taxes do not hinder intergenerational family farm transfer in the United States (Durst, 2013[13]; Van Der Hoeven, 2013[12]; Gravelle, 2018[14]). However, this literature review was not able to identify any work that analysed exactly how these changes in tax provisions affected farm succession arrangements or transfer decisions.

Other countries have implemented succession tax incentive schemes that attempted to facilitate more predictable farm transfers by designating a successor well in advance of the current owner's retirement. With respect to the effectiveness of these programmes, the evidence is mixed. An analysis from Ireland using a hypothetical microsimulation model to investigate the economic factors motivating farm transfers suggested that an Irish programme that attempted to improve the facilitation of farm transfers did not provide sufficient economic incentive to encourage either land transfer before death or a phased

land management approach (Leonard et al., 2017[15]). The authors indicated that this was partly due to the fact that inheritance tax thresholds were very high when the designated successor was a child of the farm owner, so there was little comparative benefit to either current owners or successors for choosing early succession. Interestingly, although the simulations indicated that tax incentives did not greatly affect farm income projections (and thus the incentive to make early transfer arrangements) under different transfer scenarios, farmers themselves were very concerned with how taxation might affect their transfer decisions – farmers listed taxation as one of the primary issues of concern that motivated them to attend government-sponsored workshops on family farm transfers. While farm transfer tax provisions seemed to have little effect in Ireland, work from Germany concluded that, for a subset of the country's producers who did transfer their farms to a successor before death, the country's tax regulations provided sufficient financial incentives to accelerate succession planning decisions (Glauben et al., 2009[16]). At the same time, the authors of this work noted that other factors – such as the age of the current manager and the profitability of the farming operation – also influenced succession decisions, leading to the conclusion that while farm households do seem to react to tax regulations during succession planning, many determinants of succession are beyond policymakers' control.

Outside of the realm of farm succession, one additional analysis investigated the role of property taxes on structural adjustment. In a study from Ireland, authors investigated the use of tax incentives to facilitate land leasing arrangements and improve farmland mobility by modelling and comparing four hypothetical farm management scenarios. They found that long-term leases to other farmers could be a more profitable option for cattle and tillage farmlandowners than farming the land themselves, while dairy farmers were likely to derive higher income through farming than through leasing (Geoghegan, Kinsella and O'Donoghue, 2017[17]). At the same time, the authors indicated that most Irish farms are too small to fully take advantage of the policy. Moreover, the authors noted that other policy factors (such as the desire to continue operations in order to maintain eligibility for other payments) may also have contributed to a reluctance to engage in long-term leases. The authors surmised, however, that redesigning the tax incentive to better take into account average Irish farm sizes may incentivise more landholders to take advantage of the policy (Geoghegan, Kinsella and O'Donoghue, 2017[17]). In fact, more recent data from Ireland's Office of Revenue Commissioners does indicate that in the wake of additional changes to the tax incentives, the number of long-term leases has increased (Office of Revenue Commissioners of Ireland, 2018[18]). However, a further analysis on the most likely motivation behind this rise in the number of leases has yet to be released.

1.4. Impact of taxation on investment and innovation

Taxation can affect investment and innovation through various pathways, most of which change the cost structure of firms to incentivise the investment [be it in capital goods or research and development (R&D)]. Specifically related to the agricultural sector, the evidence base on the effects of taxation on investment is mostly devoted to how tax code provisions for depreciation affect farm capital investment levels. With respect to innovation, much of the literature reviewed here is from a generic perspective, because the agriculture-specific evidence base is thin. However, several studies on how taxation can motivate innovation in sustainability and within specific agricultural sectors are also considered.

On the topic of depreciation, all reviewed analyses supported the hypothesis that accelerated depreciation in the United States (under US Internal Revenue Code Section 179[5]) was linked to higher investment levels (Ariyaratne and Featherstone,

2009[19]; Hadrich, Larsen and Olson, 2013[20]; Williamson and Stutzman, 2016[21]; Polzin, Wolf and Black, 2018[22]). However, the specific conclusions reached in each article varied based on the methodology, source data, and overall research objectives. An econometric analysis on farm-level data from the US state of Kansas found that the previous year's machinery and equipment depreciation was associated with large investments in farm machinery in the present year, but depreciation on buildings and structures was negatively related to investments in machinery (Ariyaratne and Featherstone, 2009[19]). The authors hypothesised that depreciation would ease liquidity constraints and permit agricultural firms to invest more, but they do not offer an explanation for why the investment responses differed for the two asset classes. Hadrich, Larsen and Olson (2013[20]) analysed the topic instead using farm data from the US state of North Dakota, concluding that use of accelerated depreciation provisions under Section 179 increased both the probability of purchasing machinery, and the value of the machinery that would be purchased. This led the authors to conclude that this accelerated depreciation programme was, "influencing decision-making processes, and possibly causing producers to have a larger machinery line than needed for their operations," (Hadrich, Larsen and Olson, 2013[20]). Subsequent work using panel data for the whole United States supported this conclusion, with Williamson and Stutzman (2016[21]) finding that for every 1 USD increase in the Section 179 expensing amount, farm investment increased by USD 0.32 from 1996-2012. At the same time, given that very few farms now exceed the annual Section 179 limits, further increases are not likely to have much effect on investment. Finally, Polzin, Wolf and Black (2018[22]) looked at the effects of accelerated depreciation (under both Section 179 and bonus depreciation provisions) on certain asset classes, since the various assets can be depreciated on different timetables. They found that Section 179 allowances led to increased investment in all asset classes, but the largest investment responses occurred in the 10-year[6] and 15-year[7] asset classes.

Aside from this recent literature on depreciation and investment, several reports were reviewed examining the relationship between taxation and innovation, though most were not specific to the agricultural sector.[8] Broadly speaking, the literature finds that different tax measures seem to have varying effects on both the level and type of innovation. Accordingly, key findings related to tax credits and reduced tax rates versus findings related to tax levies are explored separately below.

Tax credits or reduced tax rates (either on income or, in some cases, on labour costs) theoretically incentivise innovation by reducing the relative cost of that activity, but the extent to which this occurs is highly dependent upon the policy's design. Outside the realm of agriculture and environment, a broad review of the literature on the relationship between tax incentives and R&D funded by the European Commission concluded that R&D tax credits are effective in stimulating R&D investment (although the size of the effect varies widely), but there is only limited evidence that R&D tax credits have much of a positive impact on innovation itself (i.e. the actual development of new technologies) (CPB Netherlands Bureau for Econ. Policy Analysis et al., 2014[23]). Moreover, the review found that R&D tax credits have the drawback of incentivising companies to invest in projects with higher private returns rather than greater social returns. This outcome, combined with the finding that one euro of foregone revenue from the tax credits raised R&D expenditure by less than one euro, suggested that R&D credits may not be the most effective vehicle for resolving the innovation gap (CPB Netherlands Bureau for Econ. Policy Analysis et al., 2014[23]). Other authors offered a more mixed view of the quantitative impacts of R&D tax credits. One review of tax incentive programmes in different countries found that some programmes produced economic gains that more than offset the foregone tax revenue, while others did not. For example, the benefits of Canada's scientific research and experimental development (SR&ED) programme more than offset its costs, creating a net

economic gain of 11 cents per CAD, while the Netherlands' R&D employee's wage tax reduction incentive resulted in a net loss since every EUR in lost tax revenue resulted in only EUR 0.72 in additional firm investment (KPMG Baltics AS, PRAXIS Center for Policy Studies and Staehr, 2009[24]). A 2016 review of Australia's R&D Tax Incentive found that although the programme did generate R&D spending by firms, it did not seem to achieve programme goals of additionality (further spending on R&D beyond what would have occurred even in the absence of the incentive) and spillovers (benefits to the wider sector or economy and not just to the innovating firm), but there was potential to better target the incentive to meet these objectives (Ferris, Finkel and Fraser, 2016[25]). Accordingly, the review made several recommendations on how to refine the tax incentive, including the introduction of a collaboration premium for R&D undertaken in conjunction with publicly-funded research organisations, as well as the use of an intensity threshold for large firms (that is, R&D spending only beyond a certain percentage of business expenses would be eligible for the concession).[9]

More recent work from the OECD echoed some of the findings of CPB et al. (2014[23]). Appelt et al. (2016[26]) concluded that R&D tax incentives typically do lead to additional investment. However, these authors stressed that the design of the tax instrument matters, and the benefits of these incentives are not uniform. For example, higher incentives tend to favour incumbent firms at the expensive of more dynamic newcomers. Additional research from the European Commission's Directorate-General for Research and Innovation (Ognyanova, 2017[27]) reinforced some of the findings of Appelt et al. (2016[26]). In addition to concluding that R&D tax incentives stimulate R&D investment (with the effects varying by firm and sector), the EC analysis noted that the effectiveness of these kinds of incentives is reduced if the incentive is unpredictable, unstable, or lagged (Ognyanova, 2017[27]). In contrast to Appelt et al. (2016[26]), however, this analysis found evidence that the impact of R&D incentives on innovation is typically stronger for younger firms and for SMEs (Ognyanova, 2017[27]).

One analysis instead focused on the relative advantages and drawbacks of tax incentives *vis-à-vis* other fiscal incentives as a means of generating innovation. Generally speaking, the authors concluded that tax incentives are the preferred instrument for innovations that can be brought to market quickly – if countries instead are seeking to promote more long-term research development, then research grants are a more effective policy tool (Neubig et al., 2016[28]). One final OECD analysis of R&D tax credits or reductions found that lower corporate taxes were associated with increased patent applications, with both the location of the research and the location of patent legal ownership affected by tax rates (Bieltvedt Skeie et al., 2017[29]).

Tax credits, however, are not the sole mechanism through which taxation and innovation are linked in practice. Taxes that are levied on firms can also affect innovation, albeit through different pathways – either by incentivising a change in firm behaviour by discouraging a "negative" activity (such as polluting), or by utilising the revenue raised by the tax to fund R&D activities. Much of the research relevant to the first case comes from the environment and sustainability literature. A 2010 OECD review on the intersection of taxation, innovation and the environment concluded that environmental taxes could both provide incentives for the adoption of new innovations, as well as effectively incentivise smaller, firm-level innovations (OECD, 2010[30]). The review emphasised that environmental taxes seemed to be most effective at accelerating innovations that are nearly market-ready, and do not generally lead to transformative changes. One striking example provided by this review came from Sweden, where the number of firms that had adopted existing abatement technology increased from 7% to 62% in the year following the introduction of a tax on NOx emissions (OECD, 2010[30]).

Other work in this area sought to gauge the relative effectiveness of environmental taxes compared with other policy instruments in increasing innovation. For example, Requate (2005[31]) concluded that emissions taxes generally seemed to provide stronger incentives for both higher investment in R&D and greater adoption of new mitigation technologies than tradeable permits. This finding was reinforced by OECD research, which indicated that emissions taxes would be more likely to incentivise investments in clean technologies compared to a system of free allocation of tradeable emissions permits if the tax was set at the same rate as the permit price (Flues and van Dender, 2017[32]). In a similar vein, numerical simulations carried out in a partial equilibrium model by Clancy and Moschini (2018[33]) indicated that carbon taxes were more effective at spurring breakthrough innovations than clean energy mandates that established targets for renewable energy production [somewhat in contrast to the general conclusions drawn by the earlier OECD (2010[30]) analysis]. Additionally, they found that the effectiveness of mandates in spurring innovation was more dependent upon the nature of the competition in innovation than were carbon taxes (Clancy and Moschini, 2018[33]).

Taxes can also incentivise innovation if the revenue raised by a given tax is specifically designated for research purposes.[10] The agriculture industry provides some unique examples of this arrangement, as specific sectors in many countries collect this type of revenue through so-called "producer levies" (sometimes called assessments or check-offs) for the purposes of research or market promotion (OECD, 2013[34]; OECD, 2019[35]). These levy schemes reflect a diversity of institutional arrangements (including a mixture of public and private administration, research, and priority-setting), and some are not "taxes" in a technical sense, as the revenue is not directly collected by the government. But levies collected under most programmes of this type are government-mandated – typically brought about under generic legislation that enables producers in a particular industry to vote to institute a system under which "funds from a hypothecated tax will be used to finance specific activities" (Alston, Gray and Bolek, 2012[36]). Levies are usually mandatory in order to eliminate the free-rider problem, but they are in some cases refundable. One OECD publication (2019[35]) notes that, through this mechanism, producer organisations fund R&D expenditures in Australia, Canada, Colombia, Sweden and the United States, and that this money remains within the given industry's value chain in all cases, except for Sweden.

As with other tax schemes covered in this review, the effectiveness of this mechanism as a vehicle for increasing innovation seems to depend upon the programme's design. For example, although many US check-off programmes are authorised for both R&D and market promotion purposes, in reality the bulk of the funds collected are funnelled into market promotion activities (Alston, Freebairn and James, 2003[37]). Nonetheless, some positive effects of check-offs on innovation were found. For example, Bessler (2009[38]) estimated that US soybean check-off research expenditures were responsible for a 0.95 bushel per acre increase in soybean yields over the period 1994 to 2007, translating to higher producer revenues on the order of USD 17 per acre. While innovation returns under the American system are perhaps less well-studied, the benefits of the Australian system of Rural Research and Development Corporations (RDCs) – which are co-financed through producer or industry levies and matching funds from the Australian government – have been well-documented. In their review of RDCs, the Australian Productivity Commission (2011[39]) noted numerous examples of how RDC-funded research led to productivity improvements or input cost savings, including the funding of new grain varieties, the implementation of new production practices that led to higher lobster yields, and the realisation of improved environmental outcomes in cotton production. In fact, the review noted that the average return for AUD 1 invested in research through the RDC system was AUD 2.36 after five years, AUD 5.56 after ten years, and AUD 10.51 after 25 years

(Productivity Commission, 2011[39]). While the system has generated new innovations, it also has its share of critiques, including that the system can crowd-out other public sources of funding (Alston, Gray and Bolek, 2012[36]), the system focuses narrowly on industry priorities and eschews research into broader rural issues with potentially larger spillover effects (Productivity Commission, 2011[39]), and the fact that it is unclear whether or not the party paying the levy (mostly producers) is also the party to whom the majority of benefits accrue (for example, food processors may capture the benefits) (Alston, Freebairn and James, 2003[37]).[11]

1.5. Performance of tax instruments for improving environmental sustainability

Given the increased political interest in reducing the negative environmental impacts of agriculture, including by mitigating greenhouse gas emissions, a growing body of scholarship is devoted to gauging the performance of various tax instruments for improving environmental sustainability. Many taxes can be related to sustainability, but those with the most obvious linkages are environmental taxes. These are defined as taxes whose "base is a physical unit (or a proxy of it) of something that has a proven, specific, negative impact on the environment" (OECD, 2014[40]). The UN System of Environmental-Economic Accounting (SEEA) framework classifies environmental taxes into four groups (OECD, 2014[40]):

- *Energy taxes:* Applied to energy products (including fuel oil, natural gas, coal, and electricity) used for transportation or stationary purposes, such as irrigation pumping. Carbon taxes are included under this category in the SEEA framework.
- *Transport taxes:* Applied to ownership or use of motor vehicles.
- *Pollution taxes:* Applied to emissions (either measured or estimated) to air and water, or to generation of solid waste.
- *Resource taxes:* Applied to extractions of natural resources, such as water or other minerals.

Because the mechanisms, incentives and response functions for said taxes differ somewhat, the literature specific to each of these areas is discussed separately below.

Energy taxes, including carbon taxes

Energy use emissions have various negative externalities, including environmental damage, negative health impacts, and climate change effects. Consequently, countries sometimes institute taxes on energy use as a means of charging for these damages, with the additional effects of reducing emissions and raising government revenues as well. Previous OECD work has noted that energy taxes make up the bulk of environmental tax revenue in agriculture (OECD, 2017[41]). Even so, a majority of emissions from the agricultural sector are either not taxed at all, or are taxed at a very low rate (5% or under) (OECD, 2018[42]), with many countries even offering tax concessions on fuel used for farming purposes (OECD, 2005[1]). These tax exemptions run counter to sustainability goals, disconnecting fuel demand from market signals and thereby encouraging overuse. In fact, the OECD's 2017 report stressed that "…the low tax rates and exemptions on fuel used in agriculture suggest that some of the lowest-cost opportunities to reduce carbon emissions are being foregone" (OECD, 2017[41]). At the same time, the political feasibility of eliminating these measures is often a challenge, with various authors noting that increased energy taxes are more conspicuous than changes in market prices alone (OECD, 2018[43]). In an economy-wide sense, recent OECD work on support to fossil fuels notes that most support to the fossil fuel sector is granted through tax expenditure mechanisms (OECD, 2018[44]). Moreover, although overall support is on the decline, there are still some important

differences amongst countries, with new support mechanisms introduced every year (OECD, 2018[44]).

In general, the literature on energy taxes advocates for the use of Pigouvian taxes, where the tax rate on an externality is set at the level where the marginal social benefit equals the marginal social cost. These taxes are typically assessed on the polluters themselves (the "polluter pays" principle). Even a decade ago, the application of this principle was complicated by a lack of data on the impacts of emissions. However, the field is advancing, and it is now possible to estimate the negative impacts of certain activities with greater accuracy. In this environment, scholars advocate that energy taxes should be set to match the externalities of certain activities, differentiated by region. Such an approach could yield substantial benefits. For example, Parry (2014[45]) estimates that if corrective energy taxes were to be applied globally, energy-related CO_2 emissions would fall by 23% and raise 2.6% of global GDP in new revenues.

At an economy-wide level, carbon taxes are one form of energy taxes that have been utilised to achieve sustainability goals. Both *ex ante* and *ex post* analyses of carbon taxes have indicated that they can be an effective means of achieving reduced emissions. Two *ex ante* example studies used CGE frameworks to estimate the potential costs and benefits of a carbon tax in specific national contexts. The first investigated the likely effect of a carbon tax on the Chilean economy, concluding that a carbon tax of USD 26 per tonne would likely reduce the country's emissions by 20% (García Benavente, 2016[46]). A similar CGE analysis of Scotland concluded that a carbon tax of GBP 50 per tonne would be sufficient to attain Scottish emission targets, and that the tax could also stimulate additional economic activity if the revenues were recycled into the economy through income tax reductions (Allan et al., 2014[47]).

Two *ex post* analyses of carbon taxes confirmed that they are sometimes effective in reducing emissions, but that their effectiveness depends upon how the policy is implemented. First, a review of British Columbia's carbon tax on curbing greenhouse gas emissions estimated that the policy has reduced emissions by between 5% and 15%, with the authors indicating that the tax allowed only some minor exceptions (for example, for energy consumed by greenhouses, and fuel use in agriculture) (Murray and Rivers, 2015[48]). Next, the authors of a comparison of carbon tax applications in Denmark, Finland, the Netherlands, Norway and Sweden suggested that the design of the policy was crucial to its overall effectiveness, as they attributed the varied outcomes to both the applied rates and the exemptions permitted under the respective regimes (Lin and Li, 2011[49]).

Two forthcoming OECD studies drill down further to analyse specifically what effects carbon taxes would likely have on the agricultural sector. The first used data from four representative EU farm cases [based on data from the Common Agricultural Policy Regional Impact Analysis (CAPRI) database] in a detailed quantitative bioeconomic farm model to analyse the likely effects of six different GHG mitigation policies – an emission constraint, an emission tax, an abatement subsidy, an input tax on fertiliser, an input tax on ruminants, and carbon trading. The analysis concluded that the market-based instruments that target emissions more broadly (that is, the emission constraint, the emission tax, and the abatement subsidy) are most cost-effective at achieving emissions targets, such that the recommended approach is to target all emissions rather than a subset or proxy for emissions (OECD, 2019[50]). At the same time, these policies induce a reallocation of resources and income-generating activities at the farm level, causing production to shift away from high-emission activities like dairy production into lower-emission activities like crop production, but the magnitude of these shifts differs between the short- and the long-run, due largely to sunk investment costs and (lack of) access to off-farm income. The second analysis complements the findings of the first, analysing the comparative effects of a range

of policies [a tax on GHG emissions, a tax on GHG emissions combined with a food consumption subsidy, a payment to producers to cover their costs of adopting abatement technologies, a tax on emission-intensive inputs (ruminant animals and nitrogen fertilisers), and a tax on emission-intensive consumer products (red meat and dairy), applied either globally or specifically to OECD countries] on the trade-offs between mitigation outcomes and agricultural income, competitiveness, food consumption and government finances. Echoing conclusions from the previous analysis, the results indicated that the policy with the widest base – the global tax on GHG emissions – would be most effective at reducing emissions (OECD, 2019[51]). At the same time, this policy would have large negative impacts on farm income and lead to large reductions in food consumption because of higher prices. However, the policy would also generate a large government revenues, which could be returned to consumers in the form of a food subsidy to maintain consumption levels. But this food subsidy would not resolve the loss of income to producers, with those in low-income countries being the most affected (OECD, 2019[51]).

It is worth noting that energy taxes could generate additional sustainability dividends based on how the revenues from the taxes are spent. For example, one 2016 study analysed the spending patterns of the comparative revenues raised through carbon taxes and cap and trade policies. The authors reported that, to date, most revenue from carbon taxes is refunded to taxpayers or directed into general funds, and 15% of carbon tax revenues were earmarked for "green" spending (Carl and Fedor, 2016[52]). One additional theoretical analysis showed the potential returns from similar types of combined tax-subsidy schemes. The authors used a model calibrated to Finnish conditions to show the potential costs and benefits of a scenario in which tax revenue from farms' GHG emissions was recycled back to the sector through a subsidy on afforestation or green set-aside. The analysis showed that such an approach could bring about substantial additional reductions in nitrogen utilisation (and consequently improvements in water quality through reduced runoff), as nitrogen application would cease for the land taken out of production (Ervola, Lankoski and Ollikainen, 2018[53]).

However, there is not clear evidence that directing energy tax revenues to specific uses leads to higher environmental benefits, or whether it should be advocated as a policy design at all. A recent review of carbon pricing initiatives in OECD countries, for example, concluded that there was not sufficient evidence to indicate which uses of carbon tax revenue were to be preferred, or even how strong the commitment to that revenue use should be (Van Dender, 2019[54]). There is even some dispute as to the validity of the "double-dividend hypothesis", where countries ostensibly benefit twice from environmental taxes by both reducing the negative externality and then utilising revenues to achieve some additional policy objective. As with all taxes, environmental taxes may have other market-distorting affects that may decrease overall welfare and thus negate any net benefits. For example, Fullerton and Metcalf (1997[55]) emphasise that the net impact of any given reform will depend upon to what extent the policy discourages polluting activities and encourages productive market activities.

Transport taxes

Transport taxes are levied on either motor vehicle ownership or usage, typically as a means to reduce environmental (or other) externalities associated with road transit. At this writing, no literature was identified on the effect of transport taxes specifically in the agricultural sector. A number of OECD countries utilise transport taxes more generally (OECD, 2014[40]), and there is mixed evidence that they can be effective as a tool for achieving overall sustainability goals (by making the ownership and utilisation of pollution-emitting vehicles more expensive). For instance, a forthcoming OECD analysis of the French

vehicle feebate system estimated that the programme resulted in an emissions reduction of 4.8 million tonnes of CO_2 (Teusch, Braathen and Van Dender, 2019[56]). On the other hand, one analysis of the effectiveness of several environmental taxes in the European Union over the period from 1995 to 2013 concluded that transport taxes had no effect on emissions (Aydin and Esen, 2018[57]). The authors surmised that the lack of effect could be due to the level of the tax being too low to influence purchase decisions, or else there could be too many exemptions to the policy.

Pollution taxes

Pollution taxes are levied on emissions that pollute the air and water, and are sometimes employed as a lever through which to either reduce the use of polluting products, or to curb their emissions. These taxes are highly relevant to the agricultural sector, as runoffs of agricultural inputs like fertilisers and pesticides can pollute air and waterways. In response, a number of OECD countries have enacted regulations designed to reduce the usage of these products [see, for example, OECD (2012[58])], but the effectiveness of these measures has been mixed, due to both the design of the policies and the response functions of producers. For both fertiliser and pesticide taxes, the literature includes both *ex ante* academic studies that offer insights into optimal policy design, as well as *ex post* analyses of how effective these policies have been in achieving their pollution reduction targets. Literature under the two categories are considered in this section.

For fertilisers, *ex ante* analyses have indicated that fertiliser taxes can be an effective means of reducing fertiliser use. In an analysis integrating farm, soil, and water models, researchers concluded that taxes could be an effective means of reducing nitrate emissions in the upper Rhine valley, but that the tax should be set at a relatively high level in order to be effective (Graveline and Rinaudo, 2007[59]). In the same vein, a bio-economic model of a nitrogen fertiliser tax for Yolo County, California concluded that nitrogen taxes could be used to achieve substantial reductions in nitrogen leaking, by incentivising both adjustments in cropping patterns and lower overall fertiliser application (Merel et al., 2014[60]). Finally, an analysis from Ireland suggested that ending that country's discounted VAT on fertilisers (that is, applying the standard VAT of 23% up from the current level of 0%) would result in a non-trivial 10% reduction in fertiliser consumption (Morganroth, Murphy and Moore, 2018[61]). At the same time, this analysis notes that there are both caveats to the finding and challenges to the implementation of such a change in policy. First of all, such a tax could disproportionately affect small farmers. Additionally, the policy would need to be designed in such a way as to not disincentivise measures to address sub-optimal soil fertility levels – a condition which affects the majority of Irish soils. Finally, the policy would face challenges in implementation due to the fact that a large majority of Irish farmers are not VAT registered.

Other work modelled different tax designs to achieve reduced fertiliser use. Iho (2010[62]), for instance, suggested that rather than taxing phosphorus use, similar outcomes could be achieved by instead taxing soil phosphorus content. The author's findings suggested that such a tax would actually require less information to enforce (as soil quality is already tested in many jurisdictions), and the tax could also be better targeted to achieve reduced phosphorus runoff. Also arguing against a pure input tax model, researchers using data on Switzerland's Lake Baldegg watershed suggested that the optimal approach to achieve reduced nitrogen runoff would be through the combined application of both nitrogen input taxes and land-use taxes (Goetz, Schmid and Lehmann, 2006[63]). The authors asserted that most analyses of nitrogen taxes focused on intensive usage and discounted potential extensive margin effects, which could offset any per hectare reductions incentivised by a nitrogen tax. Their analysis concluded that combining land-use and nitrogen input taxes

would be roughly 18% more cost efficient than input taxes alone. Finally, a quantitative analysis of various hypothetical policy scenarios based on Finnish data suggested that nitrogen fertiliser taxes and a soil greenhouse gas (GHG) emissions tax could be effective at reducing GHG emissions and nutrient runoff, leading to gains in overall social welfare over a baseline case, but also resulting in reduced farm income (Lankoski et al., 2018[64]).

While these *ex ante* analyses have provided support to using fertiliser taxes to achieve improved sustainability outcomes, in practice, there is mixed evidence that this policy instrument has been successful. Early iterations of taxes on fertiliser were often designed to raise revenue for export subsidies (for example, in Austria and Finland), with improved environmental outcomes relegated to a secondary policy goal (Rougoor et al., 2001[65]). Because tax rates in these cases were set primarily to raise revenue and not to curb fertiliser utilisation, the rates were typically not high enough to incentivise large use responses. As such, they achieved only marginal reductions in fertiliser use and runoff. For example, calculations based on the Finnish case indicated that a 15% tax rate on nitrogen would induce only a 4-5% reduction in nitrogen use, resulting in only a 4-5% decline in nitrogen runoff as well (Lankoski and Ollikainen, 2013[66]). The Dutch Mineral Accounting System (MINAS) provides another example of a nutrient tax that was ultimately unsuccessful. MINAS combined a whole farm mineral accounting system with a tax on nutrient surpluses over a certain threshold, which was reduced over time to incentivise lower nutrient utilisation. But the system ran into problems. The burden of the tax fell heavily on pig producers (with large mineral surpluses and relatively little land), leading to the widespread perception that the tax was unfair, to a point that many farmers stopped paying their levies or else exploited loopholes to reduce their tax burden (Wright and Mallia, 2008[67]). Furthermore, administrative and enforcement costs for the programme were very high (substantially reducing any societal net benefit), there was some uncertainty about the farm-level nutrient surplus calculations, and the system's complexity introduced some non-pecuniary costs to farmers (OECD, 2015[68]). In this environment, the European Court of Justice ruled in 2003 that the MINAS policy did not comply with the EU's Nitrate Directive (which instead targeted reducing nitrogen application at the source), and the policy was replaced in 2006. The final example comes from Sweden, where long-standing taxes on nitrogen and phosphorous in commercial fertilisers were eliminated in 2009. A 2018 OECD analysis on land use and ecosystem services indicated that Sweden's measures were dropped partly because there was not sufficient evidence that the taxes had curbed fertiliser use (Hardelin and Lankoski, 2018[69]). In all of the cases cited above, part of the reason that these policies failed in achieving their sustainability objectives of curbing fertiliser use is that fertiliser demand is relatively inelastic. As such, the effectiveness of such a tax on curbing fertiliser use would require input tax rates so high as to likely be politically infeasible (OECD, 2012[58]). In the cases explored above, either the rates were set too low to achieve any desired response (Austria, Finland and Sweden), or else they were set so high that, although they would have induced dramatic reductions in mineral use, they caused such a political backlash that they were ultimately scrapped (the Netherlands).

A recent OECD assessment of the effectiveness of various policy instruments (including taxes, tradable permits, direct environmental regulation, public financial support, payments for ecosystem services, information measures, and voluntary schemes) utilised for the purpose of curbing nitrogen runoff offers some comprehensive analysis on the relative effectiveness of nitrogen taxes. The report notes that taxes can be effective in reducing pollution, but the level of their effectiveness varies. Taxes are also cost-efficient and administratively feasible, but policy frameworks often allow exemptions and discounts that can blunt their overall effectiveness. To ensure maximum effectiveness and political feasibility, the report ultimately concludes that country policy frameworks should utilise a mix of available instruments (OECD, 2018[70]).

With respect to pesticides, one cross-country analysis of Denmark, France, Norway, and Sweden concluded that pesticide taxes had demonstrated only limited effectiveness in their aims to reduce pesticide usage, but very high taxes on a specific product could substantially reduce its application (Böcker and Finger, 2016[71]). Recent OECD work comparing the effectiveness of different environmental tax schemes highlighted the example of Norway as one success story. Norway introduced a pesticide tax programme in 1999, which classified products according to different bands defined by their environmental and health-related risks. The analysis reported that this policy had been effective in reducing the application of more harmful products, and generally encouraged more conservative use of pesticides (OECD, 2017[72]).[12] Several schemes in other countries have also had some success. For example, a 2016 analysis from Estonia indicated that increasing tax rates on water pollutants in that country have been effective at reducing emissions (OECD, 2018[73]).

An additional analysis from Denmark provided a more detailed picture of how the design of pesticide tax policy matters for improving water quality. Although the implementation of a pesticide tax programme in 1996 was followed by an initial decline in application rates (OECD, 2005[74]), pesticide applications subsequently rose to levels more than two times the application rate that the policy hoped to achieve – despite the tax rates being raised to a level thought to be the highest in the world (Pedersen, Nielsen and Andersen, 2015[75]). One 2015 analysis of the policy posited many reasons that the tax did not meet its objectives, including the inelastic demand for pesticides, the trajectory of grain prices during the study period, and the responsiveness of producers to economic incentives. The findings suggested that policymakers must carefully consider stakeholder objectives and response functions when designing these types of tax instruments. Denmark has since redesigned their pesticide tax scheme, introducing a differentiated tax similar to that of Norway. Recent evaluations there have indicated that this new policy is achieving its aims of incentivising the substitution of the most harmful pesticides with those that are less damaging, leading to a 40% reduction in overall pesticide load (Sommer Holtze, Martin Kühl and Hyldebrandt-Larsen, 2018[76]).

Forthcoming work from the OECD Environment Directorate investigated the experiences of several member countries regarding their usage of taxes and other instruments to incentivise reduced usage of both fertilisers and pesticides. Overall, the review concluded that taxes can be utilised as one component of a set of policies that intend to reduce the use and risk of these products, with certain caveats (OECD, 2018[77]). First of all, echoing the findings cited above, the low price elasticity of fertilisers and pesticides necessitates that the tax rate be set at a relatively high level in order to incentivise reduced use. For example, the review indicated that tax rates set by fertiliser tax schemes in both France and the United States were too low to generate reduced fertiliser usage. Second, the review suggests that the application of differentiated taxes can be an effective means of reducing the use of products that carry higher environmental risks. The authors noted that such schemes have successfully been used in Denmark, Norway, and Sweden as part of a strategy to reduce both environmental and human health risks from pesticide use. Finally, the review noted that taxation alone was unlikely to achieve environmental targets with respect to fertiliser and pesticide usage. Rather, a mix of policy instruments would likely be needed, including regulatory instruments, economic instruments (including taxes and subsidies), and information and advisory services (OECD, 2018[77]). In addition, findings from the behavioural management sphere stress that a crucial component in the success or failure of tax policies as a tool to curb non-point source water pollution is communication and interaction. Authors stressed that policies that fail to consider social acceptability as well as efficiency may not achieve targeted outcomes (OECD, 2012[78]). In summary, countries should follow some general guidelines for implementing water pollution-reducing taxes:

clearly communicate the tax's objectives, provide an incentive to polluters, reflect environmental and opportunity costs in line with the polluter pays principle, treat different sources of pollution equally, and provide for re-allocation of pollution allowances or permits (OECD, 2017[72]).

Resource taxes

Resource taxes are applied to water or other natural resources, and can be implemented as a means of reducing the extraction thereof. In the agricultural sector, resource taxes are most commonly implemented with respect to groundwater extractions. The theoretical research on water taxes indicates that the implementation and effectiveness of a tax on groundwater abstractions is not straightforward for various reasons, including recognising that demand for water may be highly inelastic (Hendricks and Peterson, 2012[79]), as well as the general difficulty of measuring the relevant costs and benefits of groundwater depletion (Koundouri, 2004[80]). The relative inelasticity of groundwater demand means that in order to elicit behaviour changes, extraction taxes need to be quite high (OECD, 2015[81]). Even in countries that tax water abstractions, agricultural uses are sometimes exempted (EEA, 2013[82]).

As a consequence of these underlying conditions, there is no strong evidence that existing groundwater taxation mechanisms have been very effective at curbing extractions. An European Environment Agency (EEA) review of groundwater extraction taxes in the European Union found scarce evidence that existing taxes were incentivising improved water use efficiency (EEA, 2013[82]). A groundwater tax instituted in the Netherlands, for example, was abolished at the end of 2011, because it was not found to be effective in reducing groundwater extractions (partly because it exempted most small users from the tax, including most agricultural users) (Schuerhoff, Weikard and Zetland, 2013[83]). Similarly, an analysis from Estonia on the impacts of groundwater abstraction taxes over the period from 2000 to 2010 indicated that, although the taxes had increased over the period, water abstraction trends seemed to vary by industry, and there seemed to be little correlation between the taxes and overall abstraction levels (OECD, 2018[73]). At the same time, the EEA review did note that there was evidence to support the introduction of volumetric pricing in lieu of flat fees – analyses cited in the EEA report indicated that regions that instituted volumetric pricing utilised between 10% and 35% less water than regions using flat-rate pricing (EEA, 2013[82]). Further on from volumetric pricing, some literature recognised that the spatial variability of groundwater sources and conditions necessitates that policies like extraction taxes or quantity restrictions vary either across space or across time in order to realise the highest net benefits (Guilfoos, Khanna and Peterson, 2016[84]).

1.6. Summary

While tax policy generally should distort markets as little as possible, the above review suggests that tax policy is often used as a lever through which to affect behaviour in the agricultural sector, impacting producer income, farmland transfer, investment, innovation, and sustainability outcomes. In some cases, the tax system is used to complement other policies in achieving larger goals. In other cases, taxes or tax concessions in one area provide incentives that are contrary to the achievement of policy goals in other areas (such as the continued utilisation of fuel tax credits, which are counterproductive to the attainment of sustainability goals).

Although many countries include provisions in their tax codes designed to influence the agricultural sector, for most of the topic areas explored in this review at least, there remains

only scant sector-specific analysis that can inform future policymaking efforts. The exception to this has been in the area of sustainability, where new tax policies have been implemented alongside monitoring programmes, and periodic analyses have been published. In particular, further analysis is needed on existing tax concessions that aim to facilitate land transfer in order to inform policy recommendations in this area.

Notes

[1] Social security systems were included in the original classification typology in order to ensure that the widest tax base possible was covered, and to avoid a situation that misrepresented the overall level of differential treatment afforded to agriculture. In many countries, the tax and social security systems are integrated, so the two were analysed in concert for all countries covered by the study so as not to bias the original analysis, see OECD (2005[1]).

[2] For a more complete cataloguing of tax concessions in agriculture, see OECD (2005[1]). The cross-country comparison in Chapter 3 provides an overview of tax concessions applied to agriculture in 2018-19 and the country notes in Part II contain more detailed information.

[3] To understand just how useful tax averaging may be as an income smoothing tool, previous OECD work offered the following example. Under systems that tax income one year in arrears, businesses where income fluctuation follows a biennial pattern (as can be in the case in agricultural) may have to confront situations where their tax bills for high income years must be paid in a low income year, amplifying the fluctuation in post-tax disposable income. Tax averaging over a period of years would resolve this problem. See OECD (2005[1]).

[4] Among other provisions, the TCJA: reduced individual income tax rates; established a new 20% standard deduction for qualifying business income; raised the threshold on accelerated capital recovery to allow deduction of up to USD 1 million for depreciation in the year of capital purchase; allowed the deduction of purchases of used assets under depreciation provisions; and raised the exemption level for the estate tax to USD 11.18 million per individual (Williamson and Bawa, 2018[8]).

[5] As per Williamson and Stutzman (2016[21]), "Section 179 [of the US Internal Revenue Code] allows a taxpayer [to] treat the investment as a cost and recover the cost of the investment by deducting or 'expensing' it in the year of the purchase."

[6] Including single-purpose agricultural structures, such as manure pits.

[7] Including drainage facilities, paved lots, water wells, driveways, culverts, tile and erosion control.

[8] Various authors stressed that analysing this relationship between taxation and innovation is not a straightforward undertaking. First of all, measuring an effect first requires some definition and quantification of "innovation". Research spending and patent applications are two commonly employed metrics, but certainly these are insufficient to capture the broader advancements implied by the term. Secondly, specifically in the case of tax levies, since firms are free to determine their own optimal responses in the face of the added cost, each firm may adopt different innovations, making it difficult to find a

consistent means of measuring the effect. For further discussion on these points (and others), see OECD (2010[30]).

[9] Several of the recommendations of the 2016 Review were incorporated into government budget proposals for 2018-19, with a view toward better targeting the programme and improving its integrity and fiscal affordability. See (Australian Taxation Office, 2019[91]).

[10] In fact, in a technical sense, the revenue raised by any tax that is used for research purposes is a mechanism through which taxation affects innovation. However, these programmes are highlighted here because it is much easier to measure the direct effects of the initiatives given the earmarking of the funds.

[11] See (OECD, 2015[93]) for an evaluation of the Australian innovation system, including the RDCs.

[12] At the same time, the Norwegian approach has its own drawbacks as well, including the critique that there are simply too few pesticides on the market in Norway for the banded system to be completely effective. For a more detailed evaluation of Norway's pesticide tax programme, see (OECD, 2005[74]).

Chapter 2. Cross country comparison of taxation in agriculture

This chapter provides an overview of taxation in agriculture comparing general systems and special tax provisions for agriculture among 35 OECD countries and emerging economies. This cross-country comparison covers a wide range of tax areas: on income, profits and capital gains; on corporate income; on property; on goods and services and fuels; environmental taxes; and on incentives for research and development and innovation.

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.

2.1. General observations

The typology of concessions from the OECD 2005 report (OECD, 2005[1]) was used to structure this section, which offers comparative analysis between countries. Comparisons of tax provisions for agriculture are qualitative only and all the information is based on that provided by countries and contained in the country notes. Comparison of general tax rates come from the OECD tax database.

Where it has been provided, tax expenditure information is included, in particular to highlight the significant value of fuel tax concessions to the sector. Data on tax concessions included in the OECD database on agricultural support indicators (PSE database) have been included for the analysis of the fuel tax concessions.

As noted in the literature review there is limited transparency concerning the estimated costs of the differential tax treatment of agriculture in terms of revenue foregone. In many instances there is no information available to be able to quantify measures and make comparisons between countries.

Lack of transparency of tax expenditure generally remains an issue. Countries that provided information on revenue foregone from tax measures for this study were Australia, Belgium, France, Germany, Ireland, Korea, and the United States.

This is consistent with findings from Redonda and Neubig (2018[85]) who compared the tax expenditure reporting of 43 developed G20 and OECD countries against good practice criteria. From their analysis, the following nine countries are assessed as having comprehensive and publicly available tax expenditure reports: Australia, Austria, Canada, France, Germany, Italy, Korea, the Netherlands, and Sweden.

2.2. Agricultural tax policy changes since the early 2000s

For many countries tax measures that target agriculture remain largely unchanged, for example in Australia, Canada, New Zealand, and the United Kingdom. It should be noted, however, that observations are limited to tax measures that target agriculture rather than tax reforms that countries have carried out more generally.

New or enhanced tax concessions for farmers have been enacted in some countries. For instance, as a result of its agri-taxation review undertaken in 2014, Ireland's use of the tax mechanism has been boosted with many measures having been implemented or enhanced in 2015. Tax measures are being used to deliver policy objectives including to increase the productive use of land, assist with farm succession, increase investment, encourage the entry of young farmers to the sector, and to respond to income violability.

Reforms to the Mexican Tax Law in 2014 saw Mexico establish its Agriculture, Forestry and Fisheries Regime (AGAPE) offering tax exemptions and reduced rates to taxpayers engaged in the sector. Before that, farmers were included in a so-called Simplified Tax Regime for small taxpayers.

As a result of major reforms initiated in 2015, France has changed how taxable income of farmers is treated. It has replaced the estimation method of calculating taxable income (*régime forfait collectif*) with the micro-BA scheme in 2017. Farmers with average turnover of less than EUR 82 800 (USD 97 700) can reduce their taxable incomes by 87% for tax purposes. Although similar to schemes applying to other sectors, farmers have a higher rate of abatement, i.e. 87% as opposed to 72% and 34% for other businesses.

In Italy, tax reforms implemented in the last ten years have further lowered farm taxation compared with other sectors. In particular, the Stability Law 2016 exempts farmers from

having to pay the regional tax on economic activities (IRAP) and the municipal tax on land property (IMU).

Other countries have removed special tax treatments previously available for the agricultural sector. As part of a wider reform of its tax system, in 2004 the Slovak Republic ended all the tax treatments for farmers so that now there are virtually no specific tax exemptions. From 2009 onwards, farmers in Lithuania have been required to pay personal income tax, which previously was not the case.

Greece has made changes to the way it taxes personal and corporation income from the agricultural sector. Up until 2013, personal income from farming was assessed using an estimation method, afterwards income was calculated like other business income but was taxed at a flat rate of 13% and since 2015 farm income faces the same progressive tax rates as other sectors. Additionally, income derived from agricultural co-operatives and producer groups was exempt from corporate income tax until 2012, then in tax year 2013 income from these entities was taxed at 26%, and since 2014 a reduced corporate tax rate of 13% applies (compared with the usual rate of 28%).

In terms of taxes on inputs, the Slovak Republic removed its tax rebates on fuel for agriculture in 2011, with Austria and the Netherlands taking this approach in 2013 (although the latter maintains a reduced energy tax rate for gas used for heating greenhouses).

In some countries, tax rates for agriculture may have changed to reflect the changes in general tax rates, but further investigation is needed. Prompted by the administrative ease of online tax filing, since the beginning of 2018 farmers in the Netherlands are now subject to the usual VAT rules.

To encourage farm transfers Norway changed how it taxes capital gains on farmland sold to people outside of the immediate family in 2016. This is now taxed at the standard rate of 22%. Prior to this, the combined capital gains taxes were up to 50%, seriously disincentivising the turnover of farmland.

Given the variability of farm income, countries have added tax measures for income smoothing. In 2019, both Austria and Belgium have implemented new carry back schemes to reduce farm income volatility. In 2019, France replaced two programmes, the deduction for unforeseen circumstances (*la déduction pour aléas*) (DPA) and tax deductions for investment (DPI) schemes, with an annual tax deduction for precautionary savings (*déduction pour épargne de précaution*) (DEP).

Implemented in 2018, the United States' Tax Cuts and Jobs Act (TCJA) 2017 has made extensive changes to the federal income tax system. As highlighted in the literature review in Section 2, according to research by Williamson and Bawa (2018[8]), the biggest impact for farmers from the TCJA comes from the reduced marginal income tax rates reducing their effective income tax rate.

Several countries have put in place carbon or energy taxes to price CO_2 emissions (Canada, the Netherlands, Switzerland, and the United Kingdom). Counter intuitively in some cases, these same countries retain discounted excise taxes on fuels used for agriculture.

In some countries (Netherlands and Sweden), nutrient taxes were eliminated because cost-effectiveness was deemed insufficient. Similarly, the Netherlands abolished a groundwater tax at the end of 2011 (Section 2).

2.3. Overview of special tax provisions for agriculture by countries

From Table 2.1 below it is evident that all countries offer differential tax treatment for their agricultural sectors under their tax regimes. The following sections outline and discuss these tax measures in more detail.

Based on typology of concessions from the OECD 2005 report (OECD, 2005[1]) and the order of questions from the initial questionnaire the following kinds of differential tax treatments will be covered in the ensuing pages:

- Preferential treatment in taxes on income, profits and capital gains
  - Ability to use cash accounting rather than accrual methods
  - Simplified accounting with taxable incomes calculated on the basis of standard or notional income and expenses
  - Taxes levied on income from real estate instead of actual farm activities
  - Tax exemptions
    - Special allowances
    - Tax exemptions for small or low-income farmers
    - Tax exemptions for subsidies
    - Tax exemptions for income from particular products
    - Tax exemptions for income from particular regions
    - Tax exemptions for income from young farmers' activities
  - Tax exemptions averaging, income smoothing, deferrals and income offsetting schemes
  - Valuation of livestock for tax purposes
  - Special treatment of capital consumption estimation (depreciation) in calculating income, in particular accelerated rates or write-off
  - Capital gains exemptions
- Preferential treatment in taxes on corporate income
- Preferential treatment in taxes on property
  - Exemptions from paying land taxes
  - Valuation of land for tax purposes that is lower than its market value
  - Discounted tax rates for property taxes
  - Discounts on land taxes to discourage land abandonment and encourage farming practices
  - Exemptions from paying local or regional business taxes
  - Transfer/acquisition and stamp duty concessions
  - Inheritance and gift tax concessions
- Preferential treatment in taxes on goods and services and fuels
- Environmental taxes and related concessions in agriculture
- Tax incentives for R&D and innovation and the uptake by the agricultural sector

Table 2.1. Overview of special tax provisions for agriculture by countries

	Income taxation			Property taxation			Tax on goods and services			Environ-mental taxes	Tax incentives for R&D and innovation	Social security measures	Other taxes
	PIT	CGT	CIT	Property and land tax	Transfers Acquisitions and Stamp Duties	Inheritance and gift taxes	Outputs	Inputs	Fuel		All sectors		
Australia	X			X			X			X	X		X
Austria	X	X	X	X	X		X	X			X	X	
Belgium	X		X	X	X		X		X	X	X	X	
Canada	X	X	X	X			X		X	X	X		
Chile				X					X		X		
Colombia	X		X	X	X		X	X		X	X		
Costa Rica				X			X	X					X
Croatia	X		X				X	X	X		X		
Czech Republic	X	X	X	X			X		X	X	X		
Denmark				X					X	X	X		
Estonia	X			X					X	X			
Finland				X	X	X	X	X	X	X		X	
France	X			X	X	X	X		X	X	X	X	
Germany	X						X		X	X		X	
Greece	X		X	X	X		X	X			X		
Hungary	X	X	X	X	X	X	X		X		X		
Ireland	X	X			X	X	X	X	X		X		
Israel	X		X				X				X		
Italy	X		X	X	X		X	X	X			X	
Japan	X	X	X	X	X	X	X		X		X		
Korea	X	X	X	X	X	X	X	X	X	X	X		
Latvia	X	X	X	X			X	X	X	X		X	
Lithuania			X	X			X		X	X	X	X	
Mexico	X		X				X	X	X		X		
Netherlands	X	X	X	X	X		X		X		X		
New Zealand	X								X		X		X
Norway	X	X		X					X	X	X		
Poland	X		X	X	X	X	X		X	X	X	X	
Slovak Republic				X					X		X		
Slovenia	X			X	X	X	X	X	X	X	X	X	
Spain	X			X	X		X	X	X	X	X	X	
Sweden		X		X			X		X	X	X		
Switzerland		X		X			X	X	X			X	
United Kingdom	X			X		X	X		X		X		
United States	X		X	X	X	X	X		X		X		

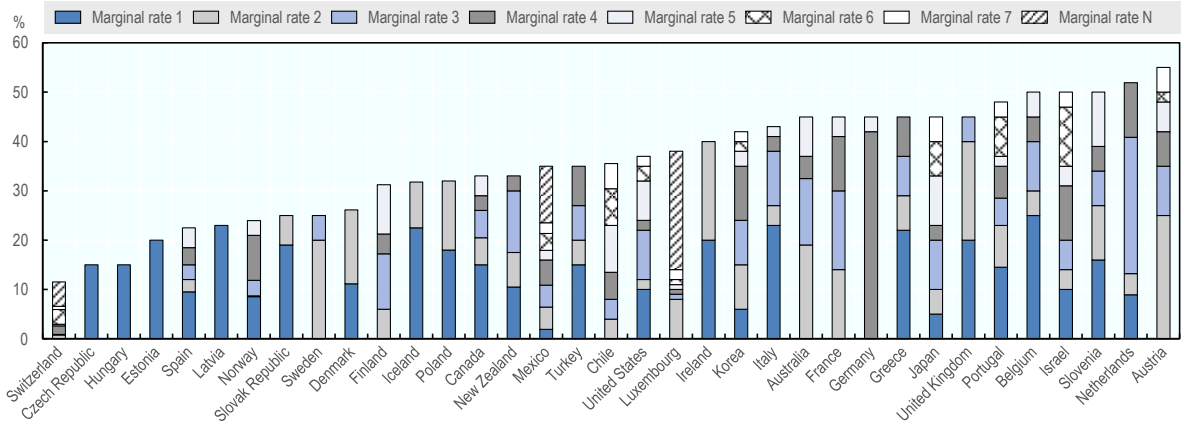
Note: * indicates presence of a tax/preferential treatment; NA – no information available. PIT: Personal Income Tax; CGT: Capital Gains Tax; CIT: Corporate Income Tax.
Source: Country responses to the OECD questionnaire on taxation in agriculture.

2.4. Taxes on income, profits and capital gains, and related concessions in agriculture

The most common business structure in the agricultural sector is an owner-operator family farm (unincorporated business) which is subject to personal income taxation.

General tax rates from the central government on personal income vary by country, income level and number of marginal tax rates (Figure 2.1). For example, among countries with low marginal taxation rates (below 15%), Switzerland and Luxembourg have multiple rates, while the Czech Republic, Estonia, Hungary and Latvia have a unique rate, whatever the income level. Similarly among countries with a higher upper tax rate, Germany only has two rates, and the United Kingdom and the Netherlands have three, while Israel and Austria have seven rates. One might expect agricultural tax concessions to be associated to high general rates (and vice versa), but the evidence suggests that this is not necessarily the case. For example, Switzerland does not offer tax concessions to farmers because general tax rates are very low. At the same time, Czech farmers benefit from income tax concessions in spite of low income tax rates. At the opposite end of the scale, Dutch farmers pay the general tax rate, which is relatively high and do not benefit from personal income tax concessions.

Figure 2.1. Central government personal income tax rates, 2018



Note: See thresholds for marginal rates in Table A B.1.
Source: OECD (2019), OECD Tax Database, http://www.oecd.org/tax/tax-policy/tax-database.htm (extracted April 2019).

To enable cross-country comparisons, the main forms of concessions for farmer's personal income taxation are discussed in the subsections below and summarised in Table 2.2. It is evident from the comparison of Table 2.2 and Table 2.3 that tax concessions are more frequent under personal income tax regimes (only two countries report no preferential treatment) than under corporate income tax regimes (18 of the 35 countries report no preferential treatment). While these concessions generally reduce the tax base and thus payment of farm households, some aim to alleviate specific issues, such as reducing income variability, compensating for higher costs in certain regions or for young farmers, reducing the administrative burden for small farms by allowing cash accounting, and exempting (part of) capital gains to facilitate farm transfers. However, as noted in OECD (2005[1]), low income problems could be more effectively addressed using the general tax and social security system. This would require that all of a household's actual income is known, but

due to sector specific exemptions many farmers fall outside of the tax system altogether. Furthermore it is generally observed that households supplement farm income with income from other sources. This is another argument for actual income from all activities being registered via the tax system.

Table 2.2. Personal income taxes: Concessions for agriculture

	Special system and concessions	Capital gains tax
Australia	- Income averaging system for primary producers - Farm Management Deposit Scheme (income stabilisation tool) - Deferral of profit from early sale of double wool clips - Deferral or spreading of income from the forced disposal or death of livestock - Spreading insurance recoveries for loss, timber or livestock - Income tax exemption on payments from Sustainable Rural Water Use and Infrastructure Programme - Valuation of livestock from natural increase - Deductions for various activities (e.g. accelerated depreciation for water management costs, accelerated depreciation for fencing and fodder storage).	- No preferential treatment
Austria	- Liability is based on assessed value of farm (capitalised value) rather than market value for tax - An assessed value of below EUR 75 000, taxable income is 42% of the assessed value (full flat rate) - An assessed value of between EUR 75 000 and EUR 130 000, farmers can reduce 70% (80% in the case of livestock farm) from their taxable income as expenses (partial flat rate) - Small producers can use cash accounting	- Capital gains from farmland sale are subject to a special tax rate of 30%
Belgium	- 80% of farmers calculate profits on the basis of sector average per unit valuation - EU direct support payments are taxed at 12.5% and 16.5% for other EU support measures - Capital and interest subsidies are tax exempt - Carry back to off-set losses against profits made in the three preceding years	
Canada	- Cash accounting - One tax instalment per year (not four) - Deduct 50% of farm business losses against income (when farming main source of income) - Carry forward 20 years and back 3 years restricted losses (when farming is not the main source of personal income and the farm generates a loss) - Income smoothing for cash basis farmers adding inventory to income in years of loss - Deduction of certain types of capital expenditures - Deferred Cash Purchase Tickets as a form of payment delaying the payment until after the end of the tax year - Deferral of Income Received from Destruction of Livestock - Tax Deferral for Drought or Flood Induced Sales of Breeding Livestock	- Lifetime Capital Gains Deduction of CAD 866 912 (2019). When the farm is being transferred to a direct descendant the exemption is CAD 1 million (CAD 2 million if both the farmer and their spouse qualify) - Tax deferrals on the transfer of farm to direct descendants - Claim a capital gains reserve over a 10-year period (5-year period if the transfer is to persons other than a child) to average capitals gains. A minimum of 10% (20%) of the taxable portion of the gain must be bought into income each year. - Part of restricted farm losses can be used to offset capital gains from selling up farms
Chile	- Low-income farmers (miners and transporters) pay taxes on a presumed income	- No preferential treatment
Colombia	- Special calculation to determine taxable income - Exemptions for income derived from sale of energy generated from wind, biomass and agricultural residues - Preferential tax rate for new perennial crops cultivated before 2014 - Investments in agricultural companies listed on the stock market can be deducted as a tax credit - Tax relief for new businesses established in one of the Zones Most Affected by Conflict - Exemption of subsidies paid to farmers as part of the Rural Capitalisation Incentive (ICR) - Income derived from investments of over USD 260 000 is exempt from income tax for 10 years	- No preferential treatment
Costa Rica	- Organic producers are exempt from import taxes on equipment, machinery and inputs used in different stages of production and import taxes on work vehicles	- No preferential treatment

Croatia	- Farmers with income below HRK 300 000 may be taxed on a flat-rate basis - Small farmers with income below HRK 80 500 are exempt from income tax - Farmers in less favoured areas may benefit from tax exemptions	- No preferential treatment
Czech Republic	- Self-employed farmers can deduct a flat rate of 80% of income as expenses (provision not exclusive to farmers but the maximum amount for farmers is greater than other self-employed)	- Tax relief granted on gains when farmland is transferred between close relatives when a farmer retires
Denmark	- No preferential treatment	- No preferential treatment
Estonia	- A sole proprietor farmer can deduct up to EUR 2 877 from the income received from selling self-produced unprocessed agricultural products	- No preferential treatment
Finland	- No preferential treatment	- No preferential treatment
France	- Cash accounting for farmers with 2-year average turnover below EUR 350 000 - Income smoothing using the micro-BA scheme for farmers with 3-year average turnover below EUR 82 800. Taxable income is equal to the three-year average of revenues for the tax year and the two previous years minus a flat rate 87% deduction for expenses - An annual tax deduction for precautionary savings (*déduction pour épargne de précaution*) (DEP) scheme whereby farmers make tax deductions with at least 50% to 100% of the income deducted needs to be saved and should be used within ten years on all business expenses at which point they become taxable. - Income smoothing measures - Young farmers farming under settlement aids are allowed to reduce their taxable agricultural income for their first five consecutive years - Accounting for livestock inventories until the sale of these goods - Spreading tax over five years	
Germany	- Small scale farmers with less than 20 hectares estimate taxable income using flat rate method - Gross income below EUR 30 700 for single (EUR 61 400 for married) special tax income allowance deducted from annual taxable income (EUR 900 for single farmers and EUR 1 800 for married farmers) - Income smoothing	- No preferential treatment
Greece	- Investment subsidies and other subsidies under Pillar I are not taxed - Profit includes only amounts of the direct aid subsidies under Pillar I of the Common Agricultural Policy of the European Union as follows: basic aid and the sum of green payments and coupled aid exceeding EUR 12 000	
Hungary	- Special tax regimes for small-scale agricultural producers (89% of all farmers) and for the agricultural smallholders (a subset within the small-scale category (accounting for 97% of the category) with an income less than HUF 8 million - Income from leasing agricultural land is tax exempt if the lease is for 5 years or more	- Tax exempt up to HUF 200 000 on capital gains conditional on the farm being sold to a registered farmer who will farm the land for at least 5 years or to an employee who will lease the land for at least 10 years
Ireland	- Income averaging system for primary producers - Capital allowances for certain expenditure - Capital allowance for farm buildings and other works - Stock relief of 25% for general stock relief, 100% for certain young trained farmers, 50% for registered farm partnerships, relief for stock transfer due to discontinued farming - Deferral or spreading of income from the forced disposal or death of livestock and 100% stock relief during the deferral period - Annual tax credits for Succession Farm Partnerships Scheme	- Retirement relief from CGT - Retirement relief from CGT – parent to child transfers Retirement relief from CGT – transfers to other than a child Capital Gains Tax Relief on Farm Restructuring Capital Gains Tax Relief for Transfer of a Site from Parent to Child Capital Gain
Israel	- Accelerated depreciation for equipment and buildings - Reduced tax rate for five years on dividends from an agricultural enterprise (20% instead of 25% or 30%) - Reduced personal income tax (top bracket subject to a tax rate of 30% instead of 47%) - Foreign resident experts invited to render services to an agricultural enterprise are subject to reduced tax rate	- No preferential treatment
Italy	- Income from agriculture and forestry is defined as income from real estate properties and determined on a cadastral basis and not actual yields or income generated. Yields in the land register are estimated as average values of land and buildings and are very low.	
Japan	- Full deduction of salaries and compensation for all self-employed, including farm workers - Farmers can defer the loss of farm income for three years	- Concessions given to encourage agricultural land transfers

	- Farmers receiving crop income stabilisation direct payments can accumulate payments and deduct them from farm income provided that payments are used for farm expansion - Farmers can defer losses of agricultural assets due to natural disaster for three years following the incident	- Capital gains on land transferred to consolidate farmland are eligible for a special tax deduction of JPY 8 million
Korea	- Income from grains and other food crops are exempt from taxation - Income from plant cultivation is tax exempt if the revenue is less than KRW 1 billion - Dividends from agricultural enterprises generating income from crops for human consumption are fully or partially exempt from personal income tax with the remaining dividends taxed separately from other types of income	- Farmers selling land near where they live or land that they have been farming for more than eight years are exempt from paying capital gains tax
Latvia	- Small farmers with income below EUR 3 000 are exempt from income tax - State aid and EU support for agriculture and rural development are exempt from income tax	- Sale of agricultural land to be continued to be farmed is exempt from capital gains tax
Lithuania	- Sales of less than EUR 45 000 are tax exempt - Direct and otherwise agricultural subsidy payments are not subject to income tax	- No preferential treatment
Mexico	- Special tax treatment of agricultural activities under the “Agricultural, Forestry, and Fisheries Regime” (AGAPE) resulting in tax exemptions and reduced tax rates	- No preferential treatment
Netherlands	- Subsidy payments for specific woodland and nature programmes are exempt from income tax	- Capital gains on land are free from tax under certain conditions
New Zealand	- Income equalisation scheme (applicable also to forestry and fisheries) - Land improvements for farming can be deducted in full immediately from taxable income, rather than treated as capital and amortised over time - Costs associated with planting or maintaining trees for erosion on farms can be immediately deducted from income tax. - Farmers can claim a tax deduction of a maximum of NZD 7 500 for planting trees - Tax deductions for expenditure on farming, horticultural, aquacultural and forestry improvements are calculated using a deduction percentage multiplied by the diminished value - Various tax relief assistance measures for farmers experiencing adverse climatic events and natural disasters - Deductibility of expenses associated with farmhouses based on the extent to which they are incurred in the running of the farming business - Two methods for valuing livestock - the natural standard cost scheme or the herd scheme	- No preferential treatment (there are no capital gains taxes)
Norway	- Farmers with an income from agriculture up to NOK 90 000 can deduct 100% of this from their taxable income. Income above NOK 90 000 can be reduced by 38% until tax deductions reach a maximum of NOK 190 000 (at an income level of NOK 353 000). Incomes over NOK 353 000 can deduct up to NOK 190 000 from general income giving a maximum tax saving of NOK 42 000 (approximately USD 4 580) per farmer. - Deduct the expense of breaking in new land - The total cost of buildings constructed using investment subsidies in less favoured areas is the basis for depreciation (rather than the subsidy being deducted from the book value of buildings) creating a tax advantage - Income equalisation for production of furskins.	- Sales of farms are exempt from tax under specific conditions
Poland	- Only the production of specific products is subject to income tax (farms producing such products represent only 2% to 5% of all farms). - Taxable income is established based on average production standards or based on accounts - Farm incomes are not taxed on the basis of revenue for 95% of farmers but instead an agricultural property tax is applied	
Slovak Republic	- No preferential treatment	
Slovenia	- Small family farm income is established based on the five-year average of representative income (taken from economic accounts) calculated per ha of agricultural and forest land (from land cadastre) - Approximately 50% of agricultural subsidies (subsidies that support environmentally-friendly production, investment subsidies, etc.) are excluded from taxable income - Investments in machinery and equipment may be deducted from income tax	
Spain	- An estimation method is used to calculate taxable income multiplying sales by fixed index numbers that estimate average costs for each agricultural production system then adjusted by multipliers taking into account production circumstances - 2% of agricultural income withheld - 1% of pig and poultry farming income withheld - Farmers must pay a 2% tax on their volume of sales for each quarter	

	- Certain EU agricultural subsidies are excluded from taxable income and those included are adjusted by a multiplier under the estimation method - 25% reduction of taxable income for young farmers applied for 5 years	
Sweden	- No preferential treatment	- No preferential treatment
Switzerland	- No preferential treatment	- Zero or reduced capital gains taxes levied on sales of farms
United Kingdom	- Income averaging for tax purposes - Hobby farmers can offset losses in agriculture against income from elsewhere - Able to treat livestock as capital assets not as a trading stock	- No preferential treatment
United States	- Allowed to use the cash method of accounting - Income averaging - Deducing capital assets in the first year of purchase - Ability to deduct the cost of developing certain farm assets from taxable income in the year where the costs were incurred includes costs associated with raising dairy, draft, breeding, or raising livestock to their age for mature use - Claim tax deductions for expenditures on soil and water conservation or for the prevention of erosion of land used in farming - Income generated by the sale of assets used in farming businesses (i.e. farmland, buildings, machinery and livestock held for draft, dairy, breeding, or sporting purposes) not subject to income tax but taxed as capital gains or losses at more favourable rates	

Note: CGT: Capital Gain Tax.
Source: Country responses to the OECD questionnaire on taxation in agriculture.

Ability to use cash accounting rather than accrual methods

Frequently, countries offer special tax treatment for farmers by allowing them to use cash accounting (or not requiring them to keep accounts) when other businesses are generally required to use the accrual method of accounting for tax reporting. Cash accounting recognises revenues and expenses at the time physical cash is actually received or paid. This gives farmers flexibility on when to report revenue and expenses for tax purposes. Farmers with turnovers below certain thresholds in Canada, France, Germany and the United States are able to use cash-based accounting. It should be noted that the thresholds are typically high. In Germany, the threshold is turnover less than EUR 600 000 (USD 708 100), making one-third of German farmers eligible in 2016. In the United States, farm sole proprietors, farm partnerships, small business corporations and corporations with gross cash farm income receipts of less than USD 25 million are able to use a cash-based method.

Simplified accounting with taxable incomes calculated on the basis of standard or notional income and expenses

Keeping accounts is not necessary for farmers when calculations of taxable income from agricultural activities are based on valuation or estimation methods rather than being determined by actual income. While simpler, this system does not provide farmers with reliable information on which to base business decisions. As noted in (OECD, 2005[1]), this special approach for calculating taxable farm incomes dates back to when bookkeeping in agriculture was rare. Although now in many countries taxing farm income is treated in the same manner as taxing other self-employed, benefits from the simplified methods are still enjoyed by a significant number of farmers within the OECD area.

Taxable income is calculated on the per unit basis set by the relevant authorities. Per unit bases are usually lower than market prices (lower than actual – real income). Presumptive income estimations lessen the tax burden for farmers by reducing administration through not having to keep accounts and by reducing the tax base. OECD countries offering this tax calculation to their farmers are: Austria, Belgium, Chile (offered to low-income farmers as well as to miners and transporters), Croatia, Czech Republic, France, Germany, Norway,

Slovenia and Spain. A significant number of farmers are using estimation methods. For example, 80% of farmers in Belgium, more than 95% of farmers in Slovenia, and 94% of farmers in Spain.

Eligibility for using simplified accounting via an estimation method can be restricted to small or low-income farmers. For instance, in Germany, farmers with less than 20 hectares or 50 livestock units are eligible to use a flat rate calculation.

Similarly, expenses can be estimates applied as flat rates to determine taxable incomes. In Austria, the concept of "assessed value" on the productive capacity of a farm determines farmers' eligibility to use cash accounting and flat rates. Farms with an assessed value of less than EUR 75 000 (USD 88 500) have taxable incomes of 42% of that assessed value, while farms with an assessed value between EUR 75 000 and EUR 130 000 (USD 153 400) can deduct 70% (or 80% for livestock activities) from taxable income as expenses.

Taxes levied on income from real estate instead of actual farm activities

Income from farming activities is sometimes not even calculated on the activity itself. In Italy, income from agriculture and forestry is defined as income from real estate properties. Income is determined by registered assigned yields (on a cadastral basis) and not on actual yields. Yields in the land register are estimated as average values of land and are very low. This results in a preferential tax treatment. In Poland, 95% of farmers are exempt from paying income tax and instead pay agricultural property tax calculated on area multiplied by the value of a set number of hundredweights of rye per hectare.

Tax exemptions

Exemptions for tax purposes are common in OECD countries' treatment of agriculture. Special allowances can be granted to farmers that reduce their tax bill. Exemptions are also granted on income from: small and low income farmers, subsidies, products, unfavourable regions, small or young farmers starting out. These are examples whereby the tax system is being used to address low income households via sector specific tax measures.

Special allowances

In Norway, farmers with income from agriculture of up to NOK 90 000 (USD 9 800) can deduct 100% of this from their taxable income. Income above NOK 90 000 can be reduced by 38% until the maximum tax deduction amount of NOK 190 000 is reached, at an income level of NOK 353 000 after which the tax deduction is held constant at NOK 190 000 giving a maximum tax saving of NOK 42 000 (USD 4 580). German farmers can deduct EUR 900 (USD 1 062) (or EUR 1 800 (USD 2 124) for married farmers) as an allowance if gross income is below EUR 30 700 (USD 36 232) (or EUR 61 400 (USD 72 463) for married farmers).

Tax exemptions for small or low income farmers

Tax exemptions for small or low income farmers are common. In Hungary farmers earning less than HUF 600 000 (USD 2 220) are exempt from paying tax. For more profitable but still small-scale Hungarian farmers, there are various standard cost taxation options offered. These measures reduce the tax burden for all small-scale agricultural producers who earn less than HUF 8 million (EUR 29 600) and who account for 89% of all farmers.

Farmers earning less than EUR 3 000 (USD 3 541) do not pay income tax in Latvia and in Croatia farmers are only taxed if their earnings are more than HRK 80 500 (USD 12 817).

Mexico offers tax exemptions and reduced tax rates and farmers earning less than USD 64 341 are exempt from personal income tax.

Tax exemptions for subsidies

Concessions in the treatment of agricultural subsidies in income tax exist in countries covered in this report. In Belgium, EU subsidies are taxed separately at a reduced rate of 12.5% for direct support payments and 16.5% for other EU support measures. Subsidies paid to farmers under the Rural Capitalisation Incentive (ICR) in Colombia are not included as income for tax purposes. Coupled aid above EUR 12 000 (USD 14 162) is included as income as is all basic aid and green payments in Greece, but investment support and other Pillar I payments are not. Latvia exempts all state provided agricultural subsidies and all EU agricultural and rural development support, as does Lithuania. While in the Netherlands, payments for woodland and nature programmes are excluded for tax purposes.

Investment support granted in Norway for farm building construction projects in less favoured areas are included in the book value of the asset providing the basis for depreciation. Spain excludes from the calculation of taxable income certain EU agricultural subsidies (some of which are no longer granted). Those included are then adjusted by a corrective multiplier applied to all farm income effectively reducing the tax paid by Spanish farmers on the subsidy.

In Japan, crop farmers receiving direct payments under the Law on Farm Income Stabilisation introduced in 2007 are allowed to accumulate their payments and deduct them from the declared farm income. Accumulated payments must be used to expand farmland or farm assets within five years. In Croatia, self-employed farmers may deduct from the tax base any employment incentives, state aid for education and training, and incentives for research and development.

Tax exemptions for income from particular products

Tax exemptions for the income from specific products is another concession. The support this provides has implications for production distortions and product specific subsidies. For example, in Korea income from grains and other food crops are exempt from taxation and income from plant cultivation is not taxed if the revenue is less than KRW 1 billion (USD 862 890).

In some instances, the production of certain products is liable for income tax when other farm systems are exempt or taxed differently. Farms in Poland producing the following products are liable for income tax: greenhouse production, poultry, mushrooms, bee keeping, silkworm production. As a result, only 2% to 5% of all the farms in Poland are liable for income taxes.

Tax exemptions for income from particular regions

Income tax exemptions can be applied to farmers in certain regions. Farmers (and all other tax payers) from regions in Croatia experiencing difficult economic conditions can benefit from tax reliefs (50% exemption rate in Group I areas and complete exemption from personal income taxes for taxpayers from the Vukovar region).

Tax exemptions for income from young farmers' activities

To facilitate structural changes in France, beneficiaries of the young farmer settlement aid are able to reduce their taxable incomes for the first five years they are farming (this tax option also applies to tradespeople and craftspeople who are starting out). Ireland offers

100% stock relief for income tax for certain young trained farmers to enable investment in livestock.

Income averaging, income smoothing, deferrals and income offsetting schemes

Income averaging, income smoothing, deferrals and income offsetting schemes are popular tax tools used by OECD countries to support producers' income risk management.

The following countries have income averaging measures for their farmers: Australia, Canada, France, Germany (introduced in 2016), Ireland, New Zealand, Norway (available only for furskin production which will be banned from 2025), the United Kingdom, and the United States. A similar system exists in the Netherlands but it is not specific to agriculture.

Australia and Ireland have recently made changes to their programmes to enable flexibility. From 2017, Australia allowed farmers who opted out of the scheme 10 years ago or earlier to re-join. Farmers in Ireland have the flexibility to opt out of averaging for a single year, and from 2019 onwards the 50% of Ireland's farm households that have off-farm income can join the scheme.

Australia's popular Farm Management Deposit (FMD) scheme is an example of a tax deferral measure where taxation is partially put off to a later period, improving liquidity and lower tax progression. Under the scheme, farmers can claim deductions for farm income deposited in an FMD account in the year it is earned with the deposited FMD monies included in taxable income in the year it is withdrawn. As of June 2019, under the FMD there were 53 790 accounts with AUD 6.8 billion (USD 4.6 billion) deposited. In 2016, Australia doubled the maximum limit on deposits to AUD 800 000 (USD 597 615).

As of 1 January 2019, France has implemented its new annual tax deduction for precautionary savings scheme (DEP). Similar to Australia's FMD scheme, farmers can make tax deductions provided that the income deducted is placed in a savings account (although unlike Australia's scheme French farmers are only obligated to deposit between 50% to 100% of the money deducted). Savings can be used in the following ten years on all business expenses, at which point they become taxable.

In the event of exceptional circumstances in some countries, tax deferrals measures are available for farmers. For example, farmers in Australia, Canada, Ireland and the United Kingdom can defer income received from the destruction of livestock as a result of livestock disease. In Canada, income from the sale of livestock as a result of a climatic event can be deferred, as can income from the sale of early shearing double wool clips in Australia. In Japan, farmers can defer losses of agricultural assets due to a natural disaster for three years.

Policies of offsetting losses, either carrying forward or back, to reduce farm income volatility are offered to farmers in Canada, Costa Rica (for two years longer than non-agricultural businesses), Japan, and Korea. Austria and Belgium have recently implemented offsetting measures also.

Valuation of livestock for tax purposes

Tax concessions are provided in the valuing of livestock and changes in livestock numbers over a tax period. In New Zealand, farmers can use one of two methods for tax purposes – either the natural standard cost method (a cost of production approach) or the herd scheme (whereby livestock are capital assets and only changes in livestock numbers are assessable income not changes in stock values). The United Kingdom allows for livestock kept for the sake of the product (e.g. milk or eggs) or offspring (breeding livestock) to be treated as

capital assets rather than trading stock, meaning farmers can benefit in terms of allowable deductions.

Stock relief is offered in Ireland whereby the value of the trading stock between the beginning and the end of an accounting period is reduced by 25% to 100% and then deducted from taxable income.

Under certain conditions, income generated by the sale of livestock is not subject to income tax and is instead taxed as capital gains or losses in the United States. To be eligible livestock must be held for a minimum amount of time (the required holding period).

Special treatment of capital consumption estimation (depreciation) in calculating income, in particular accelerated rates or write-off

Accelerated depreciation and write-offs are offered by governments to promote capital investment in certain areas such as improvements towards environmental sustainability. The following countries allow accelerated depreciation or write-offs of certain on-farm expenditure: Canada, New Zealand (for farm improvements), and the United States. Ireland offers capital allowances for tax purposes in lieu of a deduction for the depreciation of certain expenditures on farm buildings, fences, farm roadways and other works.

Farmers in some countries are able to deduct certain costs from income taxes, which under general rules would be depreciated. In New Zealand, costs associated with planting trees for soil erosion can be deducted from income tax, as can expenditure to prevent erosion in the United States. Costs associated with breaking in new land in Norway can be deducted, and in Slovenia farmers can claim 40% of the amount invested in agricultural machinery and investments in plantations.

Costs for developing certain farm assets in the tax year when the costs are incurred can be deducted in the United States. Examples of pre-productive development costs include raising dairy, draft, breeding, or raising livestock to their age for mature use, caring for orchards and vineyards before they are ready to produce crops, and clearing land and building long-term soil fertility by applying fertiliser.

Capital gains exemptions

Many countries offer special tax treatment for capital gains generated in the agricultural sector. To encourage farm succession and restructuring, and ultimately the productivity of the sector, capital gains are either excluded from income taxes in some countries, or else only a proportion is taxed. Farms are sometimes valued in such a way that the gain is zero. As with all tax instruments economy-wide these special tax concessions can actually reduce agricultural output when speculators purchase farmland as part of their wealth maximisation strategies through tax offsetting, increasing land values.

Capital gains on farmland are exempt from taxes in Korea and in the Netherlands capital gains are exempt from personal and corporate income tax (under certain conditions). In Hungary and Latvia, the capital gains tax exemptions are conditional on the farmland remaining in agricultural production.

Frequently the special treatment is linked to the land being sold to a descendant who will continue to farm the land, as is the case in the Czech Republic. Canada excludes a proportion of the capital gains income when the farm is sold to direct descendants, provides averaging capital gains income from farm transfers over a number of years, and allows capital gains to be offset by restricted farm losses. Ireland also offers a capital gains tax relief scheme.

Some countries exclude a proportion of the gain from capital gains tax. In Japan this approach is used to incentivise farmland consolidation; eligible land transfers receive a special tax deduction of JPY 8 million (USD 72 400).

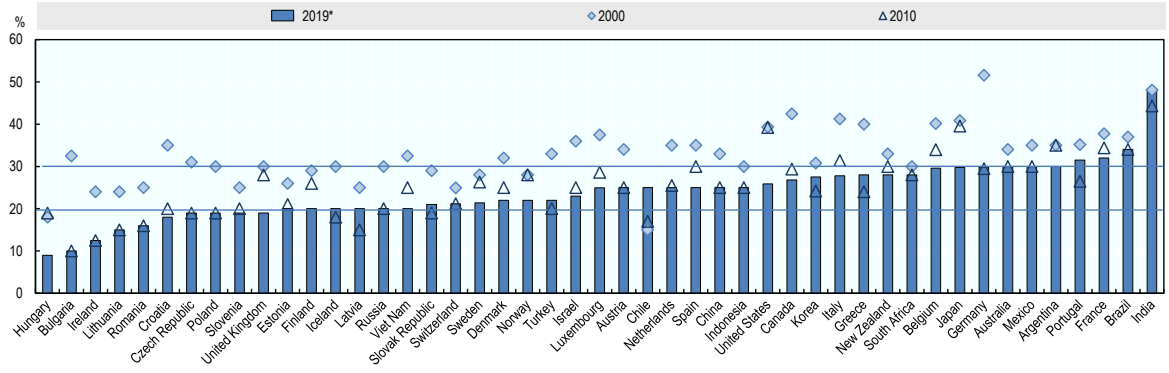
Capital gains in Switzerland are automatically zero when farmland is sold to a family member at a price set at the capitalised earnings value (a price much lower than the real estate market price).

2.5. Taxes on corporate income and related concessions in agriculture

Increasingly, farming businesses are organised as corporate businesses, and thus are subject to corporate taxes on profit. In some countries, farm business can also be organised as agricultural cooperatives and producer organisations. Tax rates on corporate profits range between 9% in Hungary to 48% in India. However, most countries tax corporate profits at rates between 20-30% (Figure 2.2).

There has been a general decline in corporate tax rates of profit since 2000, when more than half of countries considered had rates equal to or above 30%. Chile is the only country where tax rates increased from 15% to 25% between 2000 and 2019, but additional countries increased tax rates between 2010 and 2019 (Greece, Iceland, India, Korea, Latvia, Portugal, the Slovak Republic, and Turkey).

Figure 2.2. Total corporate tax rate of profit, 2000, 2010 and 2019*



Notes: See Table A B.2.
* 2018 for non-OECD countries.
1. Basic combined central and sub-central (statutory) corporate income tax rate given by the adjusted central government rate plus the sub-central rate.
2. Netherlands: applies to taxable income over EUR 200 000.
Source: OECD (2019), OECD Tax Database, http://www.oecd.org/tax/tax-policy/tax-database.htm (extracted August 2019).

Various countries offer special corporate income tax treatments for agriculture structures organised as corporate entities (Table 2.3). These are less widespread and diverse than concessions on personal income tax for farmers. For example, while the flexibility to use cash accounting for taxation purpose is frequent for family farms, only Austria and the United States allow companies producing agricultural goods to use cash accounting, which deviates from the usual tax treatment of companies.

The corporate income tax concession may vary depending on business size, location or activity. For example, Mexico applies tax exemptions and reduced tax rates for agricultural corporations depending on their scale under its Agricultural, Forestry and Fisheries Regime (AGAPE). To encourage regional development, new businesses established in one of the

Zones Most Affected by Conflict of Colombia benefit from tax relief, while corporate farms located in Croatian less favoured areas benefit from lower tax rates. In Korea, income earned from crops for human consumption is exempt from corporate income tax (this product specific tax concession is aimed at rice).

Preferential taxes or exemptions are applied on income from agricultural cooperatives in the following countries: Austria (partial tax exemptions), Israel (tax holiday for five years), Italy (exemptions), Japan and Lithuania (reduced tax rates). In Greece, agricultural co-operatives and producer organisations are taxed at a rate that is half of the usual corporate income tax rate.

Table 2.3. Corporate income taxation: Concessions in agriculture

	Corporate income taxation concessions
Australia	- No preferential treatment
Austria	- Cash accounting permitted to determine taxable income - Some agricultural co-operatives are partially tax exempt under certain conditions
Belgium	- A reduced corporate income tax rate of 5% is applied to capital and interest subsidies under certain conditions - Carry back to offset losses against profits made in the three preceding years
Canada	- No preferential treatment
Chile	- No preferential treatment
Colombia	- Investments in agricultural companies listed on the stock market can be deducted as a tax credit - Tax relief for new businesses established in one of the Zones Most Affected by Conflict
Costa Rica	- No preferential treatment
Croatia	- Corporate farms located in less favoured areas (City of Vukovar or Group I areas) benefit from lower tax rates
Czech Republic	- Agricultural enterprises can apply 20% higher depreciation rates on eligible farm machinery in the first year of depreciation.
Denmark	- No preferential treatment
Estonia	- No preferential treatment
Finland	- No preferential treatment
France	- No preferential treatment
Germany	- No preferential treatment
Greece	- Profits from agricultural cooperatives and producer groups are taxed at a tax rate of half the usual corporate tax rate
Hungary	- Agricultural enterprises have special exemptions to the general CIT rules concerning the carryover of losses and tax advances and may account for deferred losses from the tax year by reducing the pre-tax profit of the preceding 2 tax years by 30% of the deferred loss (as opposed to carrying over losses for 5 years).
Ireland	- No preferential treatment
Israel	- Accelerated depreciation for equipment and buildings - Reduced tax rate for 5 years on dividends from an agricultural enterprise (20% instead of 25% or 30%) - Foreign resident experts invited to render services to an agricultural enterprise are subject to reduced tax rate for 3 to 5 years with the top bracket subject to a tax rate of 25% instead of 47%. - Qualifying agricultural companies enjoy a 5-year tax holiday. However, corporate tax is collected upon payment of dividends from the exempt revenue in addition to tax imposed on the dividends at a rate of 20%.
Italy	- Some exceptions from the tax liability, e.g. incomes of agricultural cooperatives
Japan	- Reduced corporate tax rates for agricultural co-operatives that provide banking, insurance, farm input supply, marketing, and technical advice services to their members
Korea	- Income generated from crops for human consumption is excluded from corporate income tax - Agricultural corporations are exempted from paying the registration and license tax when they are registered as corporations until 2020
Latvia	- Corporate income tax is paid by the producers of agricultural production with a turnover during the previous taxation year of greater than EUR 300 000 (or those who have opted to pay CIT) - Farmers who are CIT payers are entitled to reduce amounts received as state aid to agriculture or EU support for agriculture and rural development from the taxable base by up to 50% (and no more than the total taxable income)
Lithuania	- A reduced 5% tax rate applies to cooperatives when more than 50% of the cooperatives income is generated from agricultural activities

	Corporate income taxation concessions
Mexico	- Special tax treatment of agricultural activities under the "Agricultural, Forestry, and Fisheries Regime" (AGAPE) resulting in tax exemptions and reduced tax rates for corporations and other societies that vary depending on their size
Netherlands	- Capital gains on land sold are in some circumstances exempt from corporate income tax
New Zealand	- No preferential treatment
Norway	- No preferential treatment
Poland	- Advantages in particular in regard to the recovery of value added taxes
Slovak Republic	- No preferential treatment
Slovenia	- No preferential treatment
Spain	- No preferential treatment
Sweden	- No preferential treatment
Switzerland	- No preferential treatment
United Kingdom	- No preferential treatment
United States	- Able to use cash accounting if gross receipts are less than USD 1 million or a family corporation that has gross receipts of less than USD 25 million for any tax year

Source: Country responses to the OECD questionnaire on taxation in agriculture.

2.6. Taxes on property and related concessions in agriculture

Land is the biggest asset of farmers in comparison to other similarly sized businesses. As such, capital taxes can have a significant impact on farmers. In recognition of this, almost all OECD countries provide tax concessions on annual property taxes for farmers. Special tax treatment is also provided for the transfer of farm properties by sale or inheritance to family members to address structural issues associated with entry to and exit from farming (Table 2.4). As highlighted in (OECD, 2005[1]) the relative effectiveness of tax measures to encourage structural change may be offset by the resultant increases in land prices making it more difficult for new entrants, apart from those from farming families, to enter the profession. Moreover, farmland may be purchased as part of wealth maximisation strategies for inheritance tax. In such cases farms may be run as hobby farms or lifestyle units. All these tax treatments on land are capitalised into land values.

Table 2.4. Property taxes: Concessions in agriculture

	Property	Transfers/Acquisition taxes and Stamp duty	Inheritance and gifts
Australia	- Each State and Territory provides an exemption from land tax for 'Land for primary production' (except the Northern Territory which does not have land tax)		
Austria	- An assessed value (taxable value) specific to agriculture is used as the basis of the annual property tax	- Transfers of agricultural property within family are subject to preferential tax rate of 2% applicable on the land's assessed value (productive value)	- No taxes
Belgium	- Reduced annual property taxes charged on agricultural land in the regions - Tax is calculated on an average "cadastral" income - Tax credits of 25% and 50% for small properties	- Trade of land between farmers when land is of similar values is exempt from sales tax - If land is not of similar value then sales tax applies on the difference - If the difference is less than 25% a lower rate of 6% applies to the excess	- No preferential treatment
Canada	- Exemptions of some properties, such as farm dwellings and farmland - Assessments of farm properties that are less than the fair market/actual value - Rebates by provincial governments on some of the taxes paid by farmers		- No taxes

	Property	Transfers/Acquisition taxes and Stamp duty	Inheritance and gifts
	- Deferral (and forgiveness) of taxes due unless the use of the farmland changes to non-farm use - Lower maximum tax rates that can be paid by the agriculture sector		
Chile	- Lower real estate tax rates apply to farms than for other land - Valuation of agricultural land is an assessed value not a market value	- No preferential treatment	- No preferential treatment
Colombia	- Lower tax rates apply to small rural property	- Exempt	- No preferential treatment
Costa Rica	- Valuation of agricultural land is based on the land use, not its market value - Farmers eligible for a 40% reduction of the annual property taxes for soil conservation	- No preferential treatment	
Croatia	- No preferential treatment		- No preferential treatment
Czech Republic	- Tax rate depends land use and location municipalities set coefficients for these parameters based on the relevant cadastre - Arable land, hop gardens, vineyards, fruit orchards and permanent grasslands may be exempt from land taxes or pay two to five times less tax - The tax rate ranges from 0.25% (for pasture and forestry) to 0.75% (for arable crops) - Reclaimed agricultural land is exempt from tax for 5 years (25 years for reclaimed forest land)	- No preferential treatment	- No preferential treatment
Denmark	- Valuation of agricultural land lower and discounted tax rates apply for municipal land taxes	- No preferential treatment	- No preferential treatment
Estonia	- Reduced land tax rates	- No preferential treatment	- No preferential treatment
Finland	- Exempt from land taxes	- Young farmers are exempt from paying transfer tax	- Farm valued at a lower taxation value instead of its market value and the heir is obligated to farm for the next 10 years
France	- Buildings used for rural farms are exempt from property tax - Agricultural land benefits from a 20% reduction on the property tax on non-developed land (TFNB) - Farmers can claim a reduction on the TFNB proportional to income losses from climate events - Farmers can request a rebate on the property tax corresponding to losses resulting from an animal disease epidemic - Young farmers receiving settlement aids benefit from a 50% rebate on property taxes for the first five years - Exemption from paying local business taxes for farms - Exemption from the company property tax (CFE) and the property tax on buildings used for agricultural methanisation using at least 50% of matter coming from the farm	- Acquisitions of rural buildings and agricultural land leased by farmers benefit from reduced transfer duties of 0.75% (instead of 5.80%) provided that the tenant has been using the land for 2 years and will develop the property for at least 5 years - Young farmers under the settlement aid scheme are charged a reduced transfer tax rate of 0.715% (instead of 5.80%) on the first EUR 99 000 of the sales price of farms located in rural revitalisation zones	- Rural property leased on a long-term basis is partially exemption from transfer duties on donations or inheritances (DMTG)
Germany	- No preferential treatment		
Greece	- Agricultural land is excluded from the total value calculations for the supplementary tax applied when the total value of the immovable property exceeds EUR 200 000	- Exempt	- No preferential treatment
Hungary	- Buildings used for animal husbandry or plant cultivation or for storage purposes (e.g. stables, greenhouses, facilities for storing crops or fertiliser, barns) are exempt from paying the local building tax - Incorporated land used for agricultural purposes is exempt from municipal government property tax.	- Exempt (under certain conditions)	- 50% of the regular inheritance tax shall be paid on inheritance of land ownership or land user rights for agricultural land - 25% of the regular inheritance tax shall be paid if the heir is a registered farmer
Ireland		- Full relief from stamp duty for farm transfers to young trained farmers - Consanguinity relief for stamp duties	- Capital Acquisition Tax relief available reducing market value of agricultural property by 90% -

	Property	Transfers/Acquisition taxes and Stamp duty	Inheritance and gifts
		- Stamp Duty Relief for Farm Consolidation (for transactions under Capital Gains Tax Relief on Farm Restructuring) - Capital Acquisition Tax relief - Capital Gains Tax/ Capital Acquisition Tax relief Lower interest rate on instalment payments for Capital Acquisition Tax	inheritance tax levied on this amount - Lower interest rate on instalment payments of the Capital Acquisition tax for agricultural properties
Israel	- No preferential treatment	- No taxes	- No preferential treatment
Italy	- Exempt from the property tax - Exempt from the regional tax on productive activities	- Reduced tax rates apply when the purchaser is a professional farmer and they are exempt from paying stamp duty	
Japan	- Preferential assessment of the value of farmland for municipal land taxes - Farm land is exempted from the City Planning Tax and the Special Land Holding Tax (municipal tax) - Real estate tax reduced by 50% on land leased through a Farmland Bank. - Tax rates imposed on idle land are increased by 1.8 times if owners do not lease out land or resume cultivation	- A reduced Real Estate Acquisition Tax rate is applied to transfers of farmland	- Preferential tax base assessment and deferral of taxation are allowed for farmland subject to inheritance taxes
Korea	- Property tax on farmland is a flat rate of 0.07% (instead of progressive rates starting from 0.07%) - The landowner is exempt from property taxes if they belong to the farmland pension programme and are currently actively farming the land	- Acquisition tax reduced by 50% for farmland bought by a person who has engaged in farming for at least two years (until 2021) - Acquisition taxes on farmland reduced by 50% for a person who moved from an urban area for farming within three years of moving (until 2021) - Agricultural corporations exempt from paying acquisition taxes for farmland for farming within two years of the registration of the incorporation (until 2019).	- Partial or full exemption from inheritance tax and gift tax conditional on relationship between heir and donor and the continued farming of land - Farm assets are excluded from inheritance tax with maximum deduction of KRW 1.5 billion from the taxable value of inherited property when inherited by direct descendant who is a farmer and who will continue farming the land for up to 5 years
Latvia	- Agricultural buildings and land in conservation areas or newly planted forests are exempt from real estate tax - The real estate tax is levied on the cadastral value of land; the growth rate of cadastral value of agricultural land has been constrained by government regulation (2016-2025)		
Lithuania	- Buildings used in agricultural activities are not taxed - Other buildings not used in agricultural activities are taxed at reduced rates depending on their value - Buildings of agricultural companies and cooperatives are not taxed when more than 50% of their income is generated by agricultural activities - Land tax on agricultural land is reduced by 35% for cultivated land but if abandoned land areas are found within land holdings the discount is not applied - Land acquired to establish a new family farm is exempt from land tax for 3 years		- No preferential treatment
Mexico	- Tax is levied on the basis of the cadastral value		
Netherlands	- Greenhouses are exempt from real estate tax	- Acquisition of land under commercial cultivation for agricultural or forestry purpose is exempt	- No preferential treatment
New Zealand	- No preferential treatment	- No taxes	- No taxes
Norway	- Agricultural property used in the agricultural business is exempt from municipal property tax (except farm housing etc.)	- No taxes	- No taxes

	Property	Transfers/Acquisition taxes and Stamp duty	Inheritance and gifts
Poland	- Farmers are subject to a specific local agricultural property tax instead of income tax and a number of exemptions may apply - Farm buildings exempt from real estate tax	- Exempt when farmers retire and transfer ownership of farm to relatives	- Agricultural property and farm buildings are exempt from gift and inheritance tax; farmer housing may also be exempt under specific conditions
Slovak Republic	- Lower tax rates apply to agricultural buildings	- No taxes	- No taxes
Slovenia	- Agricultural buildings are exempt from real estate tax - Agricultural and forest land is exempt from land tax (but not agricultural buildings)	- Transfers of farmland within the agrarian bond operations is exempt from tax otherwise transfer taxes apply	- Exempt when agricultural land is transferred to another farmer
Spain	- No preferential treatment	- Full or partial exemption of transfer taxes when transferring farms qualifying as priority holdings between family members	- No preferential treatment
Sweden	- Farm land, farm buildings and forest land exempt from property taxes	- No preferential taxes	- No taxes
Switzerland	- A capitalised earnings value is used as the basis of the annual property taxes (this is 25% to 33% of the actual market value for land including buildings and 10% of the value of land without buildings)		
United Kingdom	- Agricultural land and buildings exempt from annual property tax		- Exemption or significantly reduced inheritance and gifts taxes provided that the land is being farmed
United States	- Reduced state and local property taxes by valuing farmland at its "farm use value" rather than its fair market value		- Value of the farm for inheritance tax purposes is its use value which is 40-70% lower than the fair market value

Source: Country responses to the OECD questionnaire on taxation in agriculture.

Land taxes are usually set and levied by municipal governments within bounds directed by central governments. Farm land location can influence the coefficient applied by the municipality to the valuation of agricultural land determined by the cadastre (or land registry). Therefore, tax rates and rules applying to the sector can vary across a country and within regions.

To illustrate the complexity, in the case of Canada different provinces take the following different approaches to farmland taxation: exemptions of some properties, such as farm dwellings and farmland; assessments of farm properties that are less than the fair market, actual value; rebates by provincial governments on some of the taxes paid by farmers; deferral of taxes due unless the use of the farmland changes to non-farm use; and lower maximum tax rates that can be paid by the agriculture sector.

To enable cross-country comparisons, the main forms of concessions for property taxation are discussed in the subsections below.

Exemptions from paying land taxes

Farm land in the following countries is exempt from land or property taxes: Australia, Canada (in some provinces), Finland, Italy, Japan, Slovenia (except agricultural buildings and farm housing), Sweden, and the United Kingdom.

In the following countries, buildings used in agricultural production are exempt from property or land taxes: Australia, Canada (in some provinces), France, Hungary, Latvia, Lithuania, the Netherlands (greenhouses), Norway, Poland, Slovenia, and Ukraine.

Exemptions can be production or crop specific. In the Czech Republic, arable land, hop gardens, vineyards, fruit orchards and permanent grasslands may be exempt from taxes or pay two to five times less tax.

Valuation of land for tax purposes that is lower than its market value

Alternatively, farmers in some countries pay taxes on the basis of a lower valuation of the land than its market value. Often the value is the cadastral value of land. This is the case in the following countries: Austria, Belgium, Chile, Costa Rica, Canada (in some provinces), Denmark, Japan, Latvia, Switzerland and the United States. In 2018, foregone federal estate tax revenue from the "special use valuation" programme for farmers in the United States is estimated as being USD 59.7 million.

Discounted tax rates for property taxes

Farmers are charged reduced property tax rates on farmland and farm buildings in the following countries: Belgium (where there are also tax credits for small properties), Canada (in some provinces), Chile, Colombia (applying to small rural properties), Czech Republic, Denmark, Estonia (landowners), France (agricultural land receives a 20% reduction on the property tax on non-developed land), Korea (where the property tax on farmland is set at a very low flat rate tax instead of the usual progressive tax), Slovak Republic (on agricultural buildings) and Ukraine.

Chilean authorities assess the value of agricultural land. A reduced tax rate is charged on agricultural land in comparison to other land. Increases in land taxes paid by farmers as a result of a re-assessment of the land values cannot exceed 10% cap.

Discounts on land taxes to discourage land abandonment and encourage farming practices

Exemptions or discounts on land taxes are sometimes offered for not abandoning farmland. Landowners in Korea do not pay property taxes if they belong to the farmland pension programme and are actively farming their land (until 2021). In Japan, taxes are used as incentives for landowners to lease land through a Farm Land Bank. From 2017, leasing landowners pay only half the real estate tax while tax rates on idle land that is not cultivated or leased out have been increased by 1.8 times. Lithuania offers a discount of 35% on land taxes for cultivated land while discounts are withheld if any abandoned land areas are found within the land holding.

To encourage certain farming practices, some countries offer discounts on property taxes. Soil conservation practices earn farmers in Costa Rica a 40% discount on land taxes. In the Czech Republic, no property taxes are paid on reclaimed agricultural land for five years and for 25 years on reclaimed forest land. Land in conservation areas is excluded from taxes in Latvia.

Young farmers can be charged reduced property taxes for time limited periods while they are starting out. In France, young farmers are eligible for a 50% rebate on property tax on non-developed land for the first five years. Land acquired to establish a new family farm is exempt from paying property taxes for three years in Lithuania.

Exemptions from paying local or regional business taxes

Farmers in France and Italy are exempt from paying other local or regional taxes or company property taxes. In Greece, agricultural land is excluded from calculations of the

supplementary tax paid by taxpayers with property and buildings valued over EUR 200 000.

Transfer/acquisition and stamp duty concessions

Purchases of farms and agricultural buildings are exempt from paying the usually applicable transfer/acquisition taxes or stamp duties in many countries. The exemption is often conditional on ongoing agricultural production in order to encourage business continuity.

The following countries do not charge taxes on transfers: Colombia, Greece, Hungary, and the Netherlands (conditional on the land remaining under commercial cultivation). In France and Japan, reduced or discounted tax rates apply for the acquisition of farmland.

Transfer taxes can also be charged on agricultural land valued at a price lower than the market price. To support the continuation of family farm enterprises in Austria, the tax base for transfers is the lower assessed value (i.e. the farm's capitalised value which is lower than the farm's likely annual income) taxed at a concessional tax rate.

Exemptions or reduced rates can apply when agricultural land is transferred to a family member or professional farmers who will run the farm business. Such special treatment is offered in France, Ireland, Italy, Korea, Poland and Spain.

In France, Finland and Ireland, young farmers pay reduced transfer taxes or are fully exempt.

Farm land acquired in Korea by a person who is taking up occupancy in a rural community as an urban returner is charged 50% less on the acquisition tax.

In Slovenia transfers of farmland within the agrarian bond operations are exempt from transfer taxes, and in Korea purchases of farmland by agricultural corporations for farming purposes within two years of the registration of the incorporation are also exempt until 2019.

Inheritance and gift tax concessions

Countries exempt or apply reduced inheritance taxes rates on farms inherited by family members usually on the condition that the farming activities continue. The policy objectives of these measures are to ensure that farms remain viable and undivided. This approach is taken by the following countries: France (partially exempt donation or inheritance charges if the rural property is leased on a long-term basis), Hungary (only 50% of regular inheritance tax shall be paid, or 25% if the heir is a registered farmer), Ireland, Korea (depending on the relation between the heir and the donor), Poland, Slovenia (exempt if the farm is transferred to another farmer), the United Kingdom and the United States (where a progressive tax rate is applied to inheritances of all family businesses above the threshold of USD 11.18 million as amended (and doubled) by the TCJA).

In Korea farm assets are excluded from inheritance tax with a maximum deduction of KRW 1.5 billion (USD 1.36 million) from the taxable value of inherited property, when inherited by direct descendant who is a farmer and who will continue farming the land for up to five years.

Valuation of agricultural land can also be lower than the market price, creating a preferential tax base on which inheritance taxes are levied. This approach is used by the following countries: Japan, Finland, and the United States (the value of farmland for inheritance tax purposes is its "use value" which is 40%-70% lower than the fair market value). Market values of agricultural properties in Ireland are reduced by 90%. Discounts

depend on fulfilment of the conditions that the beneficiary is a farmer with an agricultural qualification or is already farming the property at least 50% of their normal working time, and who commits to farm the inherited land on a commercial basis.

Deferral of taxation is allowed for farmland subject to inheritance taxes in Japan, while in Ireland, lower interest rates are charged on instalment payments for the Capital Acquisition Tax due on inheritances of agricultural property.

2.7. Taxes on goods and services and fuels and related concessions in agriculture

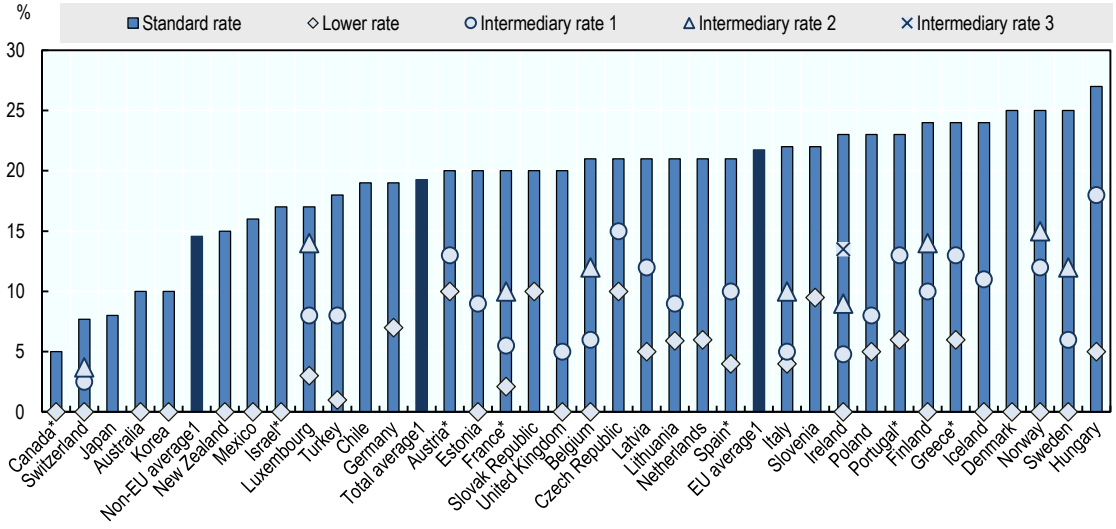
In almost all countries, standard value added and general tax rates range between 8% and 27% in Hungary (Figure 2.3). The average tax rate in EU Member States is 22%, while for other OECD countries covered, the average rate is lower at 15%. Canada combines a federal sales tax of 5% and provincial taxes, while in the United States, sales taxes only apply at the state or local levels, the total rate varying between states from zero to 10%. Reduced rates are frequently used for some products, in particular agricultural and food products, which are considered as basic necessities. A few countries also apply reduced rates in specific region (Table A B.3).

Zero or special reduced Value Added Tax (VAT) rates for agricultural outputs or inputs are offered by all countries apart from Chile, Denmark (standard rate 25%), Estonia (standard rate 20%), Japan (standard rate 10%) and New Zealand (standard rate 15%) (Table 2.5).

VAT is often either not levied or levied at reduced rates on basic foodstuffs. Reduced prices of agricultural outputs can be beneficial to farmers via increased demand, but consumers are the main beneficiaries and the target for this policy measure.

Figure 2.3. Value-Added Tax rates in OECD countries, 1 January 2018

Percentage of sales



Notes: See Table A B.3. * See country notes in Box 2.A2.1 of the source.
1. Unweighted average.
Source: Annex Table 2.A.1 VAT rates from OECD (2018[86]), (last updated 11 December 2018).

Table 2.5. Taxes on goods and services and fuels: Concessions in agriculture

	Standard rate	Output taxes	Input taxes	Fuel taxes
Australia	10%	- Most food is free from goods and services tax (GST)	- Some farmland is sold GST-free	
Austria	20%	- Reduced VAT rates apply for foodstuffs - Farmers may apply compensation percentages under the flat rate scheme	- Vehicles used solely in agriculture are exempt from Motor Vehicle Tax	- No preferential treatment
Belgium	21%	- Reduced VAT rates apply for some food products - Farmers may apply compensation percentages under the flat rate scheme	- Reduced VAT rates apply for some agricultural inputs	- Exemption from excise duties applied to energy products used in agricultural activities i.e. gas, oil, kerosene, heavy fuel oil, LPG, natural gas, electricity, coal, coke or lignite
Canada	5%	- Zero federal GST applied to most agricultural commodities	- Zero federal GST applied to most farm inputs	- Exemptions or reduced provincial fuel taxes - Exemptions from carbon tax charges on fossil fuels used in agricultural machinery
Chile	19%	- No preferential treatment	- No preferential treatment	- Farmers can claim tax rebates for fuel used off-road (fuel used for agricultural machinery)
Colombia		- No VAT charged on the majority of farm outputs	- No VAT charged on the majority of farm inputs and all machinery used in agriculture	
Costa Rica		- A reduced VAT is applied to sales of all basic foodstuffs	- A reduced VAT is applied to sales of agricultural inputs including veterinary services - Reduced rates applying to raw materials and machinery used for agricultural production	
Croatia		- Reduced VAT rate applies to selected food products	- Reduced VAT rate applies to agricultural inputs (feed, seeds, fertilisers etc.)	- No excise duty is charged on so-called "blue diesel" fuel used in agriculture, fisheries and aquaculture
Czech Republic	21%	- Reduced VAT applies to most agricultural outputs (food and beverages), animal feeds, live animals, seeds, plants and additives for the preparation of foodstuffs	- No preferential treatment for VAT - 25% reduction on road users tax	- Refund of 40% of the excise tax on diesel used for crop production, forestry and fish farming - Refunds ranging from 40% to 87% of the excise tax on diesel used for animal production (depending on livestock intensity)
Denmark	25%	- No preferential treatment	- No preferential treatment	- Farmers pay 1.8% of the ordinary energy tax on fuels, which corresponds to an effective tax rate of DKK 1.4 per GJ **- The tax rebate has an estimated value of DKK 40 million (EUR 5 million) per year.**
Estonia	20%	- No preferential treatment for VAT - For small beer producers the excise duty rate is halved.	- No preferential treatment for VAT	- Excise duty on diesel fuel used for agriculture (including for grain drying) is reduced by 73%
Finland	24%	- Reduced VAT applies to food	- Reduced VAT applies to animal feed - The tax for electricity used in agriculture is rebated. **- The total value of the rebate has an estimated value of about EUR 25 million per year.**	- Lower rates for excise taxes are applied to diesel and fuel oil used in agriculture. **- The total value of the rebate has an estimated value of about EUR 30 million per year.**
France	20%	- Reduced VAT rates applied to food - Two VAT compensation regimes in agriculture based on sales volumes: the *remboursement forfaitaire* (RFA) and the *régime simplifié agricole* (RSA)	- Reduced VAT rates for organic fertilisers and inputs	- Reduced domestic consumption tax on energy products for diesel fuel used for farm machinery and farm vehicles (as well as for building and public works businesses). **- These are the most important tax concessions and represent 60% of tax expenditures in 2018 (and were worth EUR 825 million in 2018).** - Tax refunds to offset increases in the tax for climate change contributions
Germany	19%	- Reduced VAT applying to foodstuffs - Farmers may apply compensation percentages under the flat rate scheme	- Agricultural vehicles are exempt from automobile taxes - Farmers pay reduced energy tax rates for electricity	**- Refund on agricultural diesel worth EUR 450 million in 2018.**
Greece	24%	- Reduced VAT applies to agricultural outputs	- Reduced VAT applies to farm inputs	- No preferential treatment

	Standard rate	Output taxes	Input taxes	Fuel taxes
		- Farmers with a turnover of below EUR 15 000 and total subsidies received below EUR 5 000 are entitled to a refund by the State by applying an additional percentage to the value of sales		
Hungary	27%	- Reduced VAT rates for certain agricultural products - Non-VAT registered farmers can apply flat rate charges on crop and livestock products sold to processors to compensate for VAT paid on inputs		- Refunds on excise taxes for diesel oil used in farming equal to 82% (if the world oil price is higher than USD 50 per barrel) or 83.5% (if the world oil price is lower than USD 50 per barrel) up to an annual 97 litres limit per hectare.
Ireland	24%	- Zero or reduced VAT applying to foodstuffs - Farmers may apply compensation percentages under the flat rate scheme	- Zero or reduced VAT applying to agricultural inputs - Ability to reclaim VAT paid on construction of farm buildings and structures, land reclamation, hedgerows and underpasses	- Tax relief for farmers for the increase in carbon tax on farm diesel in addition to the income tax deductibility of agricultural diesel as business expenses – results in a double tax deduction
Israel	17%	- Zero VAT on fresh fruit and vegetables		
Italy	22%	- Reduced VAT rates applied on agricultural products - Farmers may apply compensation 11 different percentages under the flat rate scheme	- Zero VAT applied on farm inputs	- Lower excise tax for fuel used by the agricultural sector - A 22% reduction of the state tax on mineral oils (*Imposta di fabbricazione sugli oli minerali*) for use of a certain quantity of fuel used in agriculture **- In 2017 the tax saving derived from the application of the reduced excise tax rate on fuel in the agricultural sector was EUR 990 million or 40% of the total agricultural tax expenditures.**
Japan[1]	10%	- Reduced VAT rates for food consumed at home (8%)		- Exemption from diesel tax for diesel used in agricultural machinery and greenhouses
Korea	10%	- No VAT on agricultural products and unprocessed food products	- Zero VAT on most inputs - VAT paid by farmers on inputs purchased for their businesses can be refunded	- Agriculture sector is exempt from the transport, energy and environment tax imposed on gasoline, diesel and other oil fuels. **- Tax revenue foregone for this tax relief was worth KRW 1.2 trillion in 2017 (USD 1.1 million).**
Latvia	21%	- A reduced rate VAT is applied to fresh fruits and vegetables - Farmers may apply compensation percentages under the flat rate scheme - VAT for the supply of cereals and oilseeds shall be paid by the recipient of the cereals (VAT reverse charge mechanism)	- Agricultural producers pay 25% of the total rate of the transport vehicle exploitation tax - Farmers are exempt from paying the company car tax if their farm income is over EUR 5 000	- Diesel used in agricultural production is subject to 15% of the standard excise duty rate - A volume limit applies to the diesel purchased at reduced rate depending on the crop - Natural gas used to heat greenhouses, industrial poultry holdings and incubators pay reduced excise duty tax
Lithuania	21%	- Farmers with less than 7 hectares or with sales of less than EUR 45 000 are not obligated to register as VAT payers and can apply compensation percentages under the flat rate scheme		- Agricultural operators not exceeding maximum gas oil consumption in agricultural production are eligible for reduced excise duty for gas oil
Mexico	16%	- Zero VAT rate applies to agricultural outputs	- Zero VAT rate applies to agricultural inputs	- Tax credits for excise taxes on diesel and gasoline used as inputs apply to agriculture (and other branches of the economy). - Agricultural producers in the AGAPE regime with annual incomes below a certain limit for owner-operators and corporations can seek a cash reimbursement of the excise tax paid on diesel and gasoline, subject to a maximum reimbursement per month.
Netherlands	21%	- Most agricultural products (including foodstuffs and flowers) are subject to a reduced VAT rate		- Diesel tax rebates for the agriculture sector were removed in the beginning of 2013 - Reduced energy tax rate is applied to the first 1 million m^3 of gas used for heating greenhouses each year

	Standard rate	Output taxes	Input taxes	Fuel taxes
New Zealand	15%	- No preferential treatment	- No preferential treatment	- Refunds for excise duty paid on fuel (excluding diesel) are available to owners of exempt vehicles including agricultural vehicles - Farm vehicles are exempt from paying road user charges applicable to diesel-using vehicles
Norway	25%	- A reduced VAT rate applies to food and beverages - Farmers (foresters and fishers) are given longer to return VAT than other sectors - Included in the prices of most agricultural products is a general sales tax used to finance promotional activities and market balancing	- Commercial greenhouses are exempt from paying electrical power taxes	- Diesel for use in agricultural machinery (and construction machinery) is exempt from paying the road user excise taxes
Poland	23%	- Reduced VAT rates apply for a number of basic food products - Farmers may apply compensation percentages under the flat rate scheme		**- Rebates for excise tax for fuel used in agriculture are significant and in 2018 they were worth EUR 216 million.**
Slovak Republic	20%	- Reduced VAT rates apply for a selection of food products - Small spirit producers and breweries are subject to a reduced excise tax rate	- Vehicles used in agriculture and forestry are exempt from motor vehicle tax	
Slovenia	22%	- Farm household farmers with total income below EUR 7 500 can apply a compensation percentage (8% on the selling price) under the flat rate scheme - Reduced VAT rates apply to all edible agricultural products - Small wine and spirit producers benefit from excise duty concessions	- Reduced VAT rates apply to all agricultural inputs	- Refunded 70% of excise duties paid on fuel for use in agriculture on a limited amount per year depending on the agricultural activity
Spain	21%	- Reduced VAT rates apply to food - Farmers under the Special Regime for Agriculture, Livestock and Fisheries (REAGP) can apply compensation percentages under the flat rate scheme	- Reduced VAT rates apply to agricultural inputs - 85% reduction on the energy consumption tax for electricity used for agricultural irrigation	- Reduced taxes charged for diesel used in tractors and agricultural machinery of EUR 96.71 per 1 000 litres (2019) compared with the usual rate for diesel for general use of EUR 331 per 1 000 litres (2019). - Farmers using agricultural diesel are entitled to a tax refund of EUR 63.71 per 1 000 litres (2019).
Sweden	25%	- Reduced VAT rates for food and non-alcoholic beverages		- Farmers can be reimbursed 99% of the energy tax on electricity and part of the carbon dioxide on fuel. Until 30 June 2019, farmers are reimbursed SEK 1 430 m^3 of the carbon dioxide tax on fuels used for tractors and harvesters. Between 1 July 2019 and 31 December 2019, the repayment is SEK 2 430 m^3. - For coloured fuel used for heating and stationary engines on the farm i.e. for grain dryers, farmers are reimbursed 70% of the energy tax and 0% of the carbon dioxide tax. - Reduced tax rates applied for fuel commercial greenhouses.
Switzerland	7.7%	- Agricultural products (cultivated by individual farms), the sale of cattle by cattle dealers and the sale of milk by milk collection centres for processing are exempt from VAT - Food is subject to reduced VAT rates	- Services (field work) supplied to farmers are subject to reduced VAT rates - Veterinary services and the supply of certain inputs used in agriculture are subject to reduced VAT rates - Farm vehicles are exempt from the heavy goods vehicle tax	- Refund of the mineral oil tax levied on fuel used in agricultural production on a lump-sum basis calculated based on fixed production indicators
United Kingdom	20%	- Zero VAT charged on basic food stuffs - Two VAT compensation regimes in agriculture: the Agricultural Flat Rate Scheme (for non-VAT registered farmers) or the Flat Rate Scheme (available to all VAT-registered businesses)	- Farm vehicles exempt from annual vehicle tax	**- Lower excise duty rates apply to fuel for agricultural use worth approximately GBP 0.66 billion per year** - Horticultural growers can claim back excise duties paid on heavy oil for heating

	Standard rate	Output taxes	Input taxes	Fuel taxes
United States[1]	..	- Most states provide partial or full relief from sales taxes on food for household consumption		- Fuel (gasoline, diesel fuel, etc.) used on a farm is fully or partially exempt from federal and state excise or sales taxes on fuel - No tax is charged on dyed diesel fuel for farming - Farmers can claim a tax refund or tax credit for gasoline and undyed diesel used in agricultural production

Note: VAT – value added tax.
..: Not applicable.
1. Sales taxes in the United States are set at the State and local levels, the total rate varying between states from zero to 10%.
Source: Country responses to the OECD questionnaire on taxation in agriculture. Annex Table 2.A.1 VAT rates from OECD (2018[86]), (last updated 11 December 2018).

A reduced or zero VAT on farm inputs is offered in many countries. Table 2.6 details the VAT levels charged in EU Member States on pesticides and fertilisers. This differentiated approach to inputs may lead to policy inconsistencies which is highlighted by an analysis included in the literature review. For instance by replacing the zero VAT rate currently charged on some fertiliser products in Ireland with the standard VAT of 23% fertiliser consumption would decrease by 10%. The need for a consistent mix of policies is discussed further under fuel taxes.

Table 2.6. VAT rates applied to sales of pesticides and fertilisers in the EU Member States

Percentage

Member States	Standard VAT Rate	Pesticides and plant protection materials	Fertilisers
Austria	20	20	13, 20
Belgium	21	6, 12, 21	12, 21
Bulgaria	20	20	20
Croatia	25	25	25
Cyprus	19	5	5
Czech Republic	21	21	21
Denmark	25	25	25
Estonia	20	20	20
Finland	24	24	24
France	20	10, 20	10, 20
Germany	19	19	19, 7
Greece	24	24	24
Hungary	27	27	27
Ireland	23	23	0, 23
Italy	22	22	4
Latvia	21	21	21
Lithuania	21	21	21
Luxembourg	17	17	3
Malta	18	18	18
Netherlands	21	21	21
Poland	23	8	8
Portugal	23	6	6
Romania	19	9	9
Slovakia	20	20	20
Slovenia	22	9.5	9.5

Member States	Standard VAT Rate	Pesticides and plant protection materials	Fertilisers
Spain	21	10	10
Sweden	25	25	25
United Kingdom	20	20	20

*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: European Commission (2019), Taxation and Customs Union website, https://ec.europa.eu/taxation_customs/business/vat_en (last updated 1 January 2019).

In many countries, farmers are not obligated to be VAT registered. With no need to account for VAT, submit VAT returns or make claims for VAT paid, farmers' tax administration compliance costs are reduced. To compensate non-VAT registered farmers for VAT paid on inputs purchased for their businesses which they are unable to claim, most EU Member States implement flat rate regimes as is provided for by the European Commission.[1] Under this scheme, non-VAT registered farmers are able to add a certain percentage on to the prices of their agricultural products sold to VAT-registered businesses, or farmers are compensated by a lump sum paid by the State. EU Member States using the flat rate scheme and the percentages added to different products are listed in Table 2.7. Noteworthy is Italy, which has eleven flat rate charges for different products.

Although most countries restrict farmers' entitlement to use the flat rates by income, it should be noted that a significant number of farmers in Europe are using this simplified method. Ninety per cent of farmers in Spain operate under the Special Regime for Agriculture, Livestock and Fisheries (REAGP) with farm incomes of below EUR 250 000 (USD 295 000). These farmers are able to charge a flat rate on their products. In Germany, 65% of farmers are using the flat rate (which is believed to be advantageous), and in Poland over 60% of farmers are not VAT registered and so use the scheme.

As of 1 January 2018, the Netherlands discontinued the flat rate regime for farmers. Online tax filing means that scheme's rationale of easing tax administration for farmers is no longer justified.

In the United Kingdom there are two VAT regimes depending on whether a farmer is VAT registered or not. Farmers who are not VAT-registered can use the Agricultural Flat Rate Scheme and charge a flat rate of 4% on their sales to VAT registered customers. A simplified administrative option is also available for VAT-registered farmers who may participate in the Flat Rate Scheme, which includes sectoral flat rates for agriculture. This is available to all VAT-registered businesses with turnover under GBP 150 000 (USD 200 000).

Latvia introduced a VAT reverse charge in 2016 whereby the VAT on cereals and oilseeds processed for consumption is paid by the recipient of the cereals. From 1 January 2019, non-VAT registered farmers in Ireland can claim VAT paid on construction of farm buildings, drainage, and land reclamation.

Table 2.7. Compensation percentages applied by the EU Member States under the common flat rate scheme for farmers

Member State	Use of flat rate scheme	Flat rate compensation percentage
Belgium	Yes	2% (supplies of wood) 6% (all other supplies of goods and services)
Bulgaria	No	
Croatia	No	
Czech Republic	No	
Denmark	No	
Germany	Yes	10.7% (agriculture) 5.5% (forestry)
Estonia	No	
Ireland	Yes	5.4%
Greece	Yes	6%
Spain	Yes	10.5% (livestock and fisheries) 12% (agriculture and forestry)
France	Yes	5.59% (milk, poultry and rabbits, eggs, meat and charcuterie animals, oilseeds, protein crops) 4.43% (other products)
Italy	Yes	2% (wood, natural cork) 4% (frogs, fish, crustacean and shellfish, fresh milk for food consumption, packaged for retail and milk products, plants, vegetables and eatable plants, fruit, spices, cereals, algae, oil of olive, cider, wine vinegar, raw tobacco and raw flax) 7.30% (horses, sheep, goat, certain other domestic animals such as rabbits and pigeons, bees and silkworms) 7.50% (poultry) 7.65% (live animals of bovine species) 7.95% (live animals of pork species) 8.30% (certain types of meat) 8.50% (certain types of meat and fat) 8.80% (eggs, honey, wax, fur) 10% (fresh milk not treated for the retail sale) 12.30% (wines of fresh grapes with some exclusions)
Cyprus*	Yes	5%
Latvia	Yes	14%
Lithuania	Yes	6%
Luxembourg	Yes	12% (forestry) 12% (crop production, stock farming together with cultivation)
Hungary	Yes	7% 12%
Malta	No	
Netherlands	No	Scheme abolished since 1 January 2018
Austria	Yes	12%
Poland	Yes	7%
Portugal	Yes	6%
Romania	Yes	8% as of 2019
Slovenia	Yes	8%
Slovakia	No	
Finland	No	
Sweden	No	
United Kingdom	Yes	4%

Note: Updated June 2018.
Source: https://ec.europa.eu/taxation_customs/sites/taxation/files/resources/documents/taxation/vat/traders/vat_community/flat_rate_farmer_scheme_compensation_percentages_en.pdf.

Fuel tax concessions

Despite being counter to sustainability goals, reductions on excise taxes for fuels used in agricultural production activities are applied in almost all the countries surveyed. Often times this is the largest tax concession granted to the sector. From information provided by countries, in Italy the tax saving derived from reduced tax rates of fuel in the agricultural sector represented 40% of total agricultural tax expenditure (in 2017) while in France these concessions represented 60% of tax expenditures (in 2018).

Taking the form of tax expenditures benefiting agricultural users of fossil fuels these policies are enduring and are not subject to the same scrutiny or frequency of review as budgetary transfers (OECD, 2018[44]). In OECD (2005[1]) the point is made that the history of tax concession measures should be assessed to test the logic of their continuation, highlighting that the lowering of fuel duties in the United Kingdom was initiated during the Second World War to increase production.

Politically these measures are extremely difficult to remove but some countries have. Since 2013, the agricultural sector in Austria has been charged the regular mineral oil tax. The Netherlands also removed its policy of differential tax rate on diesel fuel in 2013 due to the negative environmental impact of the policy which was also considered as being too costly to monitor to prevent fraud. These countries are among only a handful of EU Member States to have taken such an approach. In January 2019, the Slovak Republic reinstated fuel tax rebates for farmers a policy previously removed in 2011. In Switzerland, the refunds of the mineral oil tax is not based on real fuel consumption but calculated as a lump sum based on fixed production indicators whereby the marginal costs of fuel consumption are not reduced.

International pressure to reform fuel subsidies is mounting with initiatives being driven by the G20 and APEC. Fuel subsidies and their measurement are the focus of extensive work being undertaken in the OECD to increase the transparency of countries' policies and to promote fossil fuel subsidy reform.

The OECD's Fossil Fuels Support and Tax Expenditure database estimates countries' budgetary transfers and tax expenditures benefiting producers and consumers of fossils fuels. The database includes agricultural-specific information for some of the countries covered by this report.

Following on from the G20 countries commitment in 2009 to "rationalise and phase out over the medium term inefficient fossil fuel subsidies that encourage wasteful consumption" six countries have voluntarily completed G20 Peer Reviews of inefficient fossil fuel subsidies. These reviews are chaired and facilitated by the OECD. To date the reviews have contained agriculture sector specific recommendations.

The PSE database captures agriculture fuel tax concessions for most countries. PSE data for fuel tax concessions appears to be missing or may be incomplete for the following countries covered by this report: Belgium, Chile, Croatia, Finland, Korea, Lithuania, Mexico and Spain. Working with countries the OECD will investigate the inclusion of information in order to improve consistency.

Using information from the PSE in absolute terms (in USD) the countries offering the largest tax fuel rebates to their agricultural sectors in 2018 are France, Italy, the United States and Germany (Table 2.8). The amount of rebates has, however, decreased in the United States, while it has increased in France, Italy and Germany. Moreover, some countries (Austria, Greece, Mexico, the Netherlands, the Slovak Republic and Spain), which had or introduced fuel tax concessions for agriculture in the mid to late 2000s, no

longer offered them in 2018 (although as of 2019 the Slovak Republic has reintroduced agricultural fuel tax concessions). In Japan, fuel tax rebates remain very small.

Table 2.8. Fuel tax concessions for agriculture, 2000, 2005, 2010, 2015, 2018

Million USD

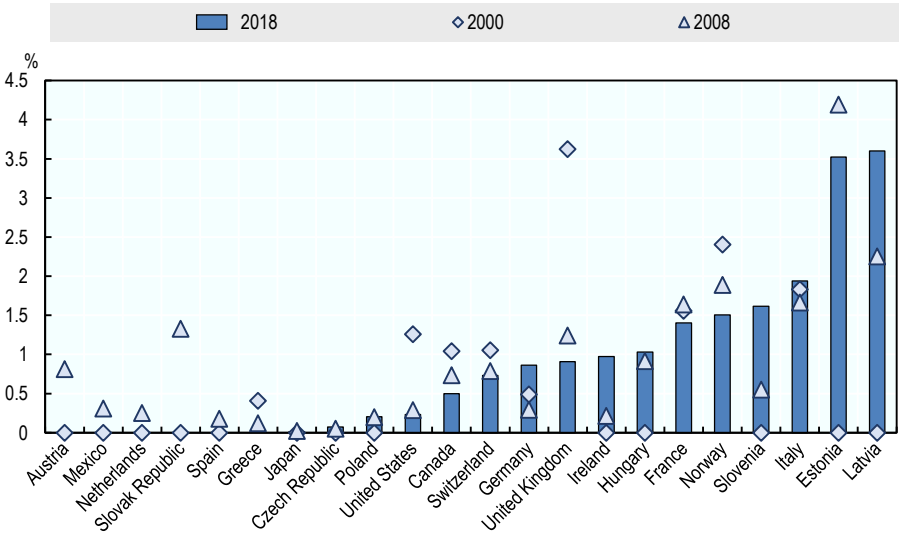
	2000	2005	2010	2015	2018e
Austria	0	48	64	0	0
Canada	211	267	300	248	228
Czech Republic	0	63	88	49	112
Estonia	NA	23	33	29	33
France	803	1 852	1 065	848	1 198
Germany	177	510	523	488	532
Greece	35	14	17	22	0
Hungary	0	101	106	102	105
Ireland	0	18	113	84	97
Italy	709	1 066	1 027	1 214	1 188
Japan	0	0	14	8	9
Latvia	0	20	19	37	49
Mexico	0	93	119	0	0
Netherlands	0	0	87	0	0
Norway	47	62	74	52	57
Poland	0	0	200	212	247
Slovak Republic	0	29	21	0	0
Slovenia	0	6	18	22	25
Spain	0	82	0	0	0
Switzerland	67	66	65	65	65
United Kingdom	410	378	339	334	266
United States	2 385	2 385	767	777	777

Note: e: estimated; NA: no information available.
Source: OECD (2019[87]).

Relative to the size of the sector, fuel tax rebates for agriculture have significantly increased in the last decade in Latvia reaching levels well above those in other countries. Fuel tax rebates account for over 1% of the total value of agricultural production in France, Norway, Slovenia and Italy, although they have decreased in Norway (Figure 2.4). Overall fuel tax rebates have increased relative to the size of the agricultural sector in half of the countries that have implemented some concessions over the period 2000-18, and have decreased in the other half.

Figure 2.4. Fuel tax concessions for agriculture, 2000, 2008, 2018

As a percentage of the total value of agricultural production



Note: Eurostat agricultural output value at producer price for EU member States.
Source: OECD (2019[87]), (extract September 2019).

2.8. Environmental taxes and related concessions in agriculture

About half of the countries in Table 2.9 use environmental taxes and related concessions in agriculture to encourage a more sustainable management of natural resources, or the adoption of more environmentally-friendly farm practices.

In the following countries taxes are charged for the use of water: Czech Republic, Latvia, Poland and Slovenia. Studies included the literature review are inconclusive about the impact of taxes on reducing extractions. Water pollution is taxed in Belgium, Czech Republic and Spain.

Estonia, France and Latvia charge farmers for the use of resources generally. Permits for pollution emissions can production-systems specific for example in Lithuania poultry and cattle producers are taxed whereas in Poland poultry and pig farmers are charged. The Flemish government applies a manure levy on the amount of manure produced by farms.

Denmark, France, Norway and Sweden apply pesticide taxes. As highlighted in the literature review the relative effectiveness of these measures in reducing pesticide use is limited, however Norway's scheme of taxing pesticide brands according to their environmental risks has reduced the use of more harmful products. Denmark has subsequently changed its pesticide tax measure and adopted a similar approach to Norway after finding that despite taxing pesticide at the highest levels in the world, application rates doubled.

Users of fertilisers in Denmark are taxed on the product's nitrogen content, although many farmers are exempt. From the literature review it is apparent that although fertiliser taxes can be a useful tool in reducing pollution the optimal level of taxes needs to be set relatively high and success is dependent on the policy mix.

One critical element is ensuring policy consistency. For example from Section 2.7 it is apparent that in many countries no VAT or a reduced VAT is charged on farm inputs which include fertilisers and pesticides. From Table 2.6 (Section 2.7) the following countries

included in this report offer discounted VAT rates for these products: Austria, Belgium, France, Germany, Ireland, Italy, Poland, Slovenia and Spain.

Fees are charged for removing land from agricultural production in the Czech Republic, whereas in Spain a tax is levied on the underutilisation of agricultural land. Landowners in Australia, Canada and Colombia may benefit from tax deductions by participating in conservation or easement programmes or in the case of Colombia by maintaining natural forest.

Belgium and Lithuania apply levies on packaging used in agriculture. In France there is a tax credit for organic producers.

Table 2.9. Environmental taxes and related concessions in agriculture

	Taxes and concessions in agriculture
Australia	- Landowners participating in conservation covenanting programmes, under specific conditions, may claim an income tax deduction and concessional capital gains tax treatment
Austria	- No taxes
Belgium	- Tax on water pollution Flemish region: agriculture-specific-adjected flat rate tax system with the total tax charged to farmers equals the number pollution units from different activities for which water is used multiplied by a fixed rate - Walloon region: agricultural tax system is based on the environmental burden generated by the farm taking into account number of livestock to calculate effluent charges and cultivation activities - Manure levy – applied by the Flemish government allowing fixed amounts of manure to be discharged free of charge and fines for operators who exceed their allowable limits. - Packaging levy
Canada	- None at the federal level - Farmers with farmland in easement programmes may receive tax benefits, tax receipts for difference in land value as a result of the easement and capital gains tax reductions - Ontario farmers may be exempt property tax if farm contains heritage features - Ontario farmers with managed forests pay 25% of the municipal tax rate set for residential properties
Chile	- No taxes
Colombia	- Landowners maintaining natural forests can deduct direct and indirect costs from income
Costa Rica	- No taxes
Croatia	- No taxes
Czech Republic	- Use of water is charged, during periods of serious water deficits farmers are not required to pay the levy - Discharges of polluted water is taxed - Changing land use from agriculture to another use incurs a fee (with exceptions)
Denmark	- Farmers pay full carbon dioxide tax of their use of fossil fuels - Use of pesticides is subject to a quantity-based tax - Users of fertiliser are subject to a tax based on the nitrogen content but many farmers are exempt
Estonia	- Permits purchased for rights for "environmental use". Higher environment charges paid for exceeding permitted quantities or not holding a permit for the activities. - Exemptions from water abstraction charges for irrigation of agricultural land, including greenhouses
Finland	- Energy taxes – rebates for electricity taxes for electricity used in agriculture (see Section 3.7)
France	- Tax credit for organic farmers generating at least 40% of their revenue from organic farming set at a maximum of EUR 3 500 - Fees apply for diffuse pollution to limit the use of pesticides - A general tax on polluting activities consists of a group of several taxes related to the environment with varying amounts and the applicable tax rates
Germany	- Energy taxes for electricity (see section 3.7)
Greece	- Excise duty exemption on the use of electricity in agriculture
Hungary	- No taxes
Ireland	- No taxes
Israel	- No taxes
Italy	- No taxes
Japan	- No taxes

	Taxes and concessions in agriculture
Korea	- No taxes
Latvia	- Taxes applied for the use of natural resources, water extraction, water and air pollution
Lithuania	- Permits for emissions of pollution for poultry and cattle farmers and non-compliance fees apply when permitted pollution limits are exceeded. Fees charged depend on the type of pollutant discharged. - Packaging used in agriculture is also taxed
Mexico	- No taxes
Netherlands	- No taxes
New Zealand	- No taxes
Norway	- Pesticide fee charged on sales
Poland	- Agricultural enterprises (rather than farms) pay for environmental permits for activities related to raising or breeding poultry or pigs, the uptake of ground water for farming and emission of sewage via water permit
Slovak Republic	- No taxes
Slovenia	- Environmental taxes on water use for the purpose of irrigation of agriculture land, sport fishing in commercial ponds and aquaculture
Spain	- Environmental taxes are imposed by the regions i.e. on underutilised agricultural land, wastewater charges - All regions (except Murcia) water used for agricultural uses is exempt from charges - Most regions fees charged for water contamination with fertiliser, pesticides and other organic matter from agricultural activities - Tax on fluorinated greenhouse gases imposed which affects the food distribution chain
Sweden	- Taxes on pesticides - Energy and carbon dioxide taxes (see Section 3.7)
Switzerland	- CO_2 tax (imposed on all fossil heating and processed fuels). Greenhouse gas-intensive companies can be exempted from the CO_2 levy if they commit to a reduction in their greenhouse gas emissions in return
Ukraine	- No taxes
United Kingdom	Climate Change Levy: environmental tax on energy supplies to many sectors, including agriculture
United States	- No taxes

Note: NA – no information available.
Source: Country responses to the OECD questionnaire on taxation in agriculture.

2.9. Tax incentives for R&D and innovation and the uptake by the agricultural sector

R&D tax incentives include income tax deductions or tax credit for investment in R&D activities, tax deductions for income from R&D activities (e.g. patent box), and reduced labour tax or social security contributions for researchers.

Almost all countries use tax incentives to stimulate research and development (R&D) activities in the private sector, with only six of the 35 countries covered in this report not using any (Costa Rica, Croatia, Estonia, Finland, Germany and Switzerland) (Table 2.10).

Table 2.10. R&D tax incentives

	All sectors
Australia	- Research and development tax incentive - including a refundable and non-refundable tax offset - Innovation tax incentives - Tax exemption for Venture Capital Limited Partnerships and Early Stage Venture Capital Limited Partnerships - Capital Gains Tax for carried interests paid to venture capital partners
Austria	- Financial support for research and development is treated as a tax credit for income or corporate tax - An 2012 evaluation shows a small number of R&D projects in the agriculture, forestry, fisheries and food industries
Belgium	- Tax incentives for R&D but these are not agriculture specific
Canada	- 35% tax credit for first CAD 3 million spent under Scientific Research and Experimental Development (SR&ED) tax incentive programme and 15% on further expenditure plus provincial tax credits ranging from 3.5% to 15% (Quebec 30% - 35.7%) - SR&ED programme is more attractive to larger firms rather than farms and agri-food companies
Chile	- Tax incentives for R&D but these are not agriculture specific
Colombia	- 25% of investments in research, technological development and innovation can be deducted from the due income tax

	All sectors
	- Donations to eligible research are tax deductible (within limits)
Costa Rica	- No tax incentives
Croatia	- No tax incentives
Czech Republic	- Up to 100% of expenses associated with R&D projects can be deducted from tax - R&D expenses can be deducted twice – once as normal tax deductible costs and a second time as a special tax allowance - Another 10% can be applied as an allowance on the increase of spending on R&D between years - Use of these tax incentives by the agricultural sector is not significant
Denmark	- Tax deductions for R&D expenditure increasing from 101.5% in 2019 to 110% in 2026 - Accelerated depreciation for R&D capital assets - Companies with tax losses can receive tax credits of 22% for any deficit related R&D expenses (up to a maximum of DDK 5.5 million per year)
Estonia	- No tax incentives as the corporate tax system of only taxing dividends encourages businesses to reinvest their remaining profits
Finland	- No tax incentives
France	- Tax credits of 30% of R&D expenditure not exceeding EUR 100 million with a 5% rate applying above this threshold - A tax credit of 20% on eligible expenditure of up to EUR 400 000 per ear for innovation expenditure claimed by SMEs
Germany	- No tax incentives
Greece	- Tax deductions of 130% of expenditure on R&D - Accelerated depreciation of scientific equipment for R&D
Hungary	- Large and medium sized enterprises are taxed 0.3% for an innovation contribution - Expenditures on R&D can be deducted twice from the tax base - Reduced social security contribution chargers for researchers employed by companies to undertake R&D
Ireland	- 25% tax credit for R&D - Knowledge Development Box (KDB) is a corporate tax relief on 50% of profits generated by a qualifying asset resulting from R&D activities i.e. patents, computer programmes
Israel	- Tax benefits for enterprises that contribute to the development of the productive capacity of the economy by generating industrial income
Italy	- No taxes incentives for innovation that are specific to the agricultural sector
Japan	- R&D tax credits. In total, up to 45% of corporation's national corporate income tax liability can be deductible.[1]
Korea	- Tax incentives to promote R&D and human resource development - Tax credits for investments in facilities needed for R&D
Latvia	- No tax incentives as the corporate tax system of only taxing dividends encourages businesses to reinvest their remaining profits
Lithuania	- Tax deductible expenditures under the Scientific Research and Experimental Development (SRED) scheme - 50% tax deduction on taxable profits for companies investing in technological renewal over the period 2009-23 - Small uptake of both programmes from the agriculture, forestry and fisheries sector
Mexico	- A 30% tax credit for incremental spending and investment on R&D for firms - Total funds available under the scheme are MXN 1 500 million so tax grants are distributed having been evaluated by a Committee
Netherlands	- R&D payroll tax allowance (WBSO) - R&D allowance for deducting R&D investments in equipment and exploitation costs - Innovation Box, which is directed towards lower taxes for benefits from WBSO projects and patents - Tax incentives have been used in horticulture, but not so much by small food processing companies - Specific tax deductions for environmentally friendly investments
New Zealand	- 15% tax credit for R&D expenditure over NZD 50 000 per year with an expenditure cap of NZD 120 million per year
Norway	- Tax Deduction for Research and Development in an Innovative Business (SkatteFUNN) scheme where small and medium-sized enterprises can claim 20% of expenditure and large companies can claim 18%
Poland	- 100% tax deduction for R&D expenses including salaries of researchers, purchases of scientific equipment and materials - Use of this mechanism has been low particularly in rural areas
Slovak Republic	- Corporations can deduct from tax base 100% of expenses on R&D and 100% of the average increase of R&D expenses over two years - Uptake by agricultural corporations of these tax deductions is low
Slovenia	- Tax deduction of 100% of expenses on internal R&D activities and the purchase of R&D services - The use of these tax incentives in agriculture is very limited. Only large profitable agricultural companies are capable of using the incentives.
Spain	- Tax incentives for R&D expenses (with no limits on the R&D expenditure) - Reductions on the social security contributions businesses pay for research staff

	All sectors
Sweden	- Businesses employing staff to undertake R&D pay a discounted employer contribution
Switzerland	- No tax incentives
United Kingdom	- R&D Expenditure Credit (RDEC) - R&D scheme for SMEs - In 2017-18 the agricultural sector accounted for only 1% of all tax claims submitted and received only GBP 10 million in tax relief
United States	- Deduction from taxable income for research expenses - Tax credit: businesses are allowed to reduce their federal income tax by an amount equal to 20% of their qualified R&D expenditure over a certain threshold - Exemption for donations to charitable agricultural research organisations - Thirty six states offer tax credits for R&D expenses.

Note: NA – no information available.
Source: Country responses to the OECD questionnaire on taxation in agriculture, (OECD, 2015[68]; OECD, 2018[88]; OECD, 2018[44]).

The tax provisions are not specific to agriculture-related R&D, but can be used by farm input suppliers to generate innovation for agriculture, and by food processing companies, with indirect benefits for primary agriculture through the value chain. Many countries reflected that there was a low uptake by the agricultural sector of available R&D tax credits. In the Netherlands for example, these provisions are mainly used in the horticultural sector (OECD, 2015[68]).

In 2015, support from tax incentives accounted for over three-quarters of government support for business R&D in the Netherlands, Australia, Ireland, Japan, Lithuania and Canada, and for over half of government support in a majority of the countries included in Figure 2.5. The lowest shares of support for business R&D through tax incentives are found in Greece, New Zealand and the Slovak Republic. The United States is also among the countries, where support for business R&D is mainly through direct support (about three-quarters).

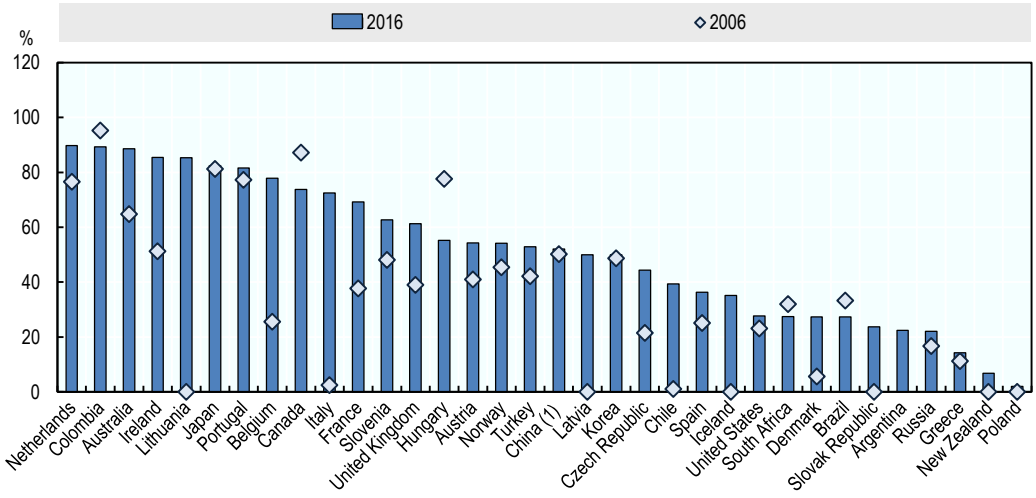
In the last decade, support for business R&D through tax incentives increased in almost all OECD countries and emerging economies for which the OECD collects data (OECD, 2018[88]; OECD, 2019[87]). Moreover, the share of tax incentives in government support for business R&D increased in almost two-thirds of the countries covered between 2006 and 2016 (Figure 2.5).

Tax credits or reduced tax rates (either on income or, in some cases, on labour costs) theoretically incentivise innovation by reducing the relative cost of that activity, but the extent to which this occurs is highly dependent upon the policy's design (Section 3.2). The generosity of R&D tax incentives is also related to business characteristics, in particular whether the firm is making a profit (OECD, 2018[88]).

An approach to measure the potential incentive effect of tax relief for R&D is to estimate for representative firms the expected impact of tax incentives on the after tax cost of R&D for the marginal unit to spend on R&D. This implied tax subsidy rate is defined as 1 minus the B-index, a measure of the before-tax income needed by a "representative" firm to break even on USD 1 of R&D outlays (Warda, 2001[90]).

Figure 2.5. Change in government support for business R&D through direct funding and tax incentives, 2006 and 2016

As a percentage of total support



Note: For more information on R&D tax incentives, see http://oe.cd/rdtax, and for general notes and country-specific notes for this R&D tax incentive indicator, see http://oe.cd/sb2017_notes_rdtax.
2016 is replaced by 2015 for Australia, Austria, Belgium, Brazil, Denmark, France, Greece, New Zealand, Slovenia, United Kingdom, by 2014 for Iceland and Brazil, by 2013 for the United States. 2006 is replaced by 2007 for Denmark, Korea, Netherlands, New Zealand, by 2008 for Brazil, Chile, Turkey, by 2009 for People's Republic of China (China), and by 2011 for Greece.
Source: OECD (2019[89]), (extracted in September 2019).

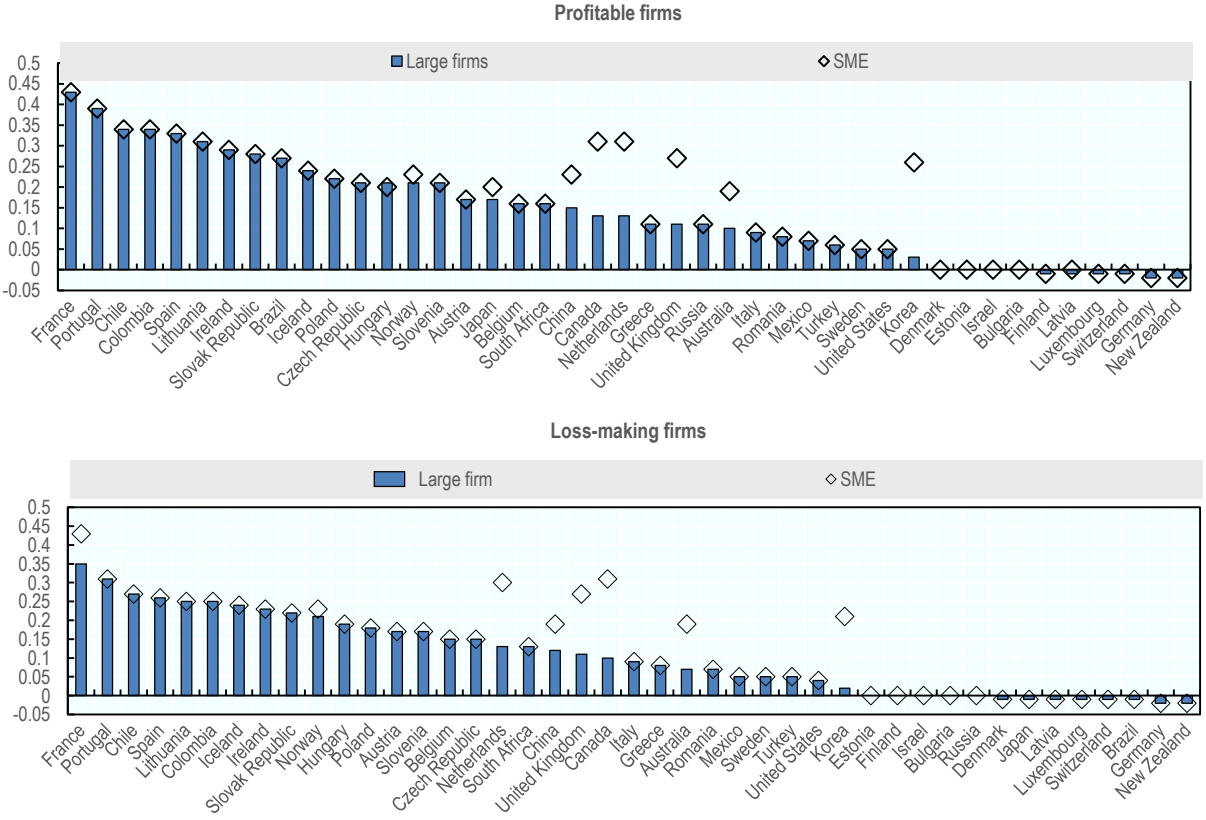
Figure 2.6 presents OECD estimates of implied tax subsidy rates for "representative" large firms and SMEs according to whether they can claim tax benefits against their tax liability in the reporting period. There are large variations across countries in all scenarios. For large profitable or loss-making firms, the highest rates are estimated in France, Portugal and Chile. Among other countries which rely predominantly on tax incentives to support business R&D, implicit tax subsidy rates are relatively high in Ireland, but much lower for large firms in Australia, Canada, the Netherland and Japan, for example.

According to OECD estimates, profit-making firms benefit from higher implied tax subsidy rates than loss-making firms. Moreover, in countries where R&D tax incentives only include corporate income tax rebates such as Brazil and Japan, loss-making firms experience a full loss of tax benefits. In several countries, however, the estimated rates are equal for profit- and loss-making firms. This is the case in particular for the Netherlands, where tax allowances are directed towards reducing the wage costs of employees involved R&D or deducting R&D investment and exploitation costs, without affecting taxation of profits (OECD, 2015[68]).

In several countries, Small and Medium sized enterprises (SMEs) benefit from higher tax concessions (Australia, Canada, France, Japan, Korea, Spain, United Kingdom and United States). This is also the case for start-ups and young firms in Belgium, France, Portugal, and the Netherlands (OECD, 2018[88]). In these countries, SMEs benefit from higher tax subsidy rates than large firms. The gap is particularly large in Australia, Canada, Korea, the Netherlands, and the United Kingdom (Table A B.4).

Figure 2.6. Implied tax subsidy rates on R&D expenditures, 2018

1 minus the B-index[1]



1. The tax subsidy rate is defined as 1 minus the B-index, a measure of the before-tax income needed by a "representative" firm to break even on USD 1 of R&D outlays.
Source: OECD (2019[89]) (extracted in September 2019).

Note

[1] Under Council Directive 2006/112/ES of 28 November 2006 on the on the Common System of Value Added Tax – Common Flat Rate Scheme for Farmers, Chapter 2 Articles 295 – 305.

Chapter 3. Conclusions and next steps

This chapter outlines the wide range of tax rates, as well as the diversity and frequency of concessions in agriculture found across the reviewed countries. It briefly discusses the likely effects of tax systems and concessions for agriculture on the performance of the sector. Finally, it points to the need to improve understanding of the direct and indirect effects of tax provisions on agriculture and to evaluate the impact of tax policy on agriculture on a more regular basis.

The underlying motivation behind this review of taxation in agriculture was to improve the evidence base regarding the impact of various tax policies on the main drivers of agricultural productivity and sustainability – innovation, structural change, natural resource use and climate change. To that end, this review compiled information on taxation in agriculture for 32 OECD countries, as well as Colombia, Costa Rica and Croatia. It also examines the literature reporting the results of both *ex ante* analysis of the impact of tax provisions on agriculture, and *ex post* evaluations of policies actually implemented by countries.

Based on a typology of concessions developed in 2005 (OECD, 2005[1]), different kinds of taxes and differential tax treatments are considered, mainly for taxes on income, profits and capital gains; taxes on property including agricultural land, and property transfer; taxes on goods and services and fuels; environmental taxes and related concessions in agriculture; and tax incentives for R&D and innovation, as well as the uptake of these incentives by the agricultural sector. Social contributions were included in the questionnaire, but cross-country comparison was found to be difficult to interpret given the diversity of policy frameworks and the unequal reporting of respondent countries.

The value of this study has been to document current concessions according to established typologies, investigate how taxation regimes with respect to agriculture have evolved since the early-2000s, and include more countries than in the 2005 study (OECD, 2005[1]). To the extent possible, this study also considers tax concessions in the context of general tax rates applied in the economy. One might expect that more generous concessions would be available in countries where general taxation is high, but this is not always the case.

The overview of tax systems across countries outlines the wide range of tax rates and the diversity of concessions in agriculture. It also points to tax types where concessions are most frequent. However, a comparative analysis of these regimes is complicated by the fact 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. Whether they are agriculture-specific or not, these tax concessions may have implications for agricultural productivity and sustainability, and their potential effects need to be assessed and compared with the impact of alternative options for meeting policy objectives. Even in the absence of sector-specific concessions, taxation affects farmers' decisions and farm household income. For example, in most countries income taxation is progressive and potentially reduces the frequency of low incomes across farm households.

The usage of tax concessions for the agricultural sector is widespread in countries covered in this report. In fact, some form of differential treatment to the sector is available in each country examined here. Some concessions are widespread and commonplace for individual farms. They include exempting small farmers from paying taxes, allowing cash-based accounting, providing estimates of taxable income (thereby eliminating the need to keep accounts), reducing annual land and property taxes, reducing the taxes associated with the transfer of land between generations, exempting farmers from being registered for value added taxes, and offering tax concessions for fuel used in agricultural production. 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. Agricultural goods (outputs and inputs including pesticides and fertilisers) also 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.

At the farm level there are fewer concessions offered by countries that tend to treat agriculture like any other sector, although agricultural land taxation is an exception. In other countries, tax provisions are increasingly used to help farmers (and sometimes other

firms) manage risks, and there is evidence that these actually help reduce year to year income variability.

It is also clear that progressive tax systems and income tax concessions for agriculture improve the income situation of farm households, thus reduce the frequency of low incomes. Poverty resulting from low income farms could, however, be more effectively addressed using the general social security system. This would require that all of a household's actual income is known, however, and as noted in OECD (2005[1]), many farmers fall outside of the tax system altogether in some countries due to sector-specific exemptions. Furthermore, it is generally observed that households supplement farm income with income from other sources. This is another argument for actual income from all activities being registered via the tax system. Another argument against using the tax system to reduce poverty is that it is unable to reach poor farm households with income levels below the tax threshold.

While some features of the tax system may facilitate farmland transfers and the transmission of farm assets between generations, the ability of households with comfortable income levels to offset farm losses against off-farm income may have a negative effect on the productivity (and sustainability) of the sector as a whole.

Most countries also use tax incentives to support investment in R&D and innovation, which are generally not agriculture-specific. Many countries reflected that there was a low uptake of available R&D tax credits by the agricultural sector. However, agriculture increasingly benefit from innovation in other sectors. Whether R&D is agriculture-specific or not, farms can benefit indirectly, in so far as they adopt the innovations created by firms using this type of support.

At the same time, the current review of tax systems and concessions offers few conclusions in the area of policy effectiveness. Each of these concessions was ostensibly put in place with a clear policy goal in mind (in many cases years ago), but with the exception of policies in the sustainability space, there is extremely thin publicly available evidence that the concessions have achieved their intended objectives. It is clear that once these policies are in place, removing them is extremely difficult in a political sense.

Furthermore, these policies have very real costs to countries in terms of foregone revenue. As such, it is completely in the realm of possibility that even in the case that a policy were to be effective in achieving its objective, the cost-effectiveness of the scheme may be unknown – that is, it remains to be seen whether or not the same objective could have been achieved more cheaply using a different policy instrument.

Finally, these policies undoubtedly have knock-on effects, which remain almost totally uninvestigated. Knock-on effects include: increases in greenhouse gas emissions from relatively cheaper fuel for agricultural activities; the increased use of pesticides and fertilisers due to discounted value added taxes; the capitalisation of tax concessions into land values; and the incentives to purchase farmland for inheritance planning purposes or tax off-setting. The latter incentives may lead farmers, in particular those with comfortable off-farm incomes, to run annual farm losses to reduce their income tax, and accumulate wealth from rising land values, while benefiting from lower taxed capital gains. Thus farm tax provisions may decrease incentives to optimise the productive use of farm assets, leading to lower sectoral productivity and reduced output, reduced demand for farm inputs and services, and lower rural employment.

The documentation of policies contained in this review provides a useful starting point for further analysis on these issues of policy effectiveness, cost-effectiveness, and secondary impacts – particularly with respect to how these policies drive changes in agricultural productivity and sustainability. However, further investigation is needed in nearly all areas

covered here in order to make more definitive determinations on whether or not these policies have achieved their aims (and if so, under what conditions, and how have they contributed to improving farm productivity and sustainability), and what secondary effects these policies have had on production and investment decisions in the sector.

For such an analysis to be conducted, further transparency in reporting of cross-country tax expenditures would be required (potentially as part of reporting already in place for the calculation of PSEs), and increased access to data on farm-level outcomes would also be helpful. While comparing income level before and after taxes would require only a few years, any investigation of impact would require a longer time series of farm (household) level data – especially when analysing the effect on income variability, long-term farm viability and structural adjustment, including land transfers. There is some evidence associated with the implementation of tax reforms, but long-standing concessions are rarely evaluated.

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Annex A. **Questionnaire on taxation in food and agriculture**

Questionnaire coverage and definitions

A questionnaire was sent to countries included in the OECD monitoring and evaluation of agricultural policies to obtain information on taxation in agriculture (see next section). Countries covered in previous OECD work on taxation in agriculture (OECD, 2005[1]) (OECD, 2019[35]) were asked to update the information available in these reports. As a result, some country notes replicate some text already published in (OECD, 2005[1]) and country reviews on innovation, agricultural productivity and sustainability synthesised in (OECD, 2019[35]).

Main types of taxes covered are:

- Income taxation (income and profit)
- Property taxation[1]
  - Annual taxes (on land, buildings, financial assets)
  - Taxes on transfers (on capital gains, sales, gifts and inheritance)
- Tax on goods and services (e.g. value-added and general sales tax, excise duties)
- Environmental taxes (taxes and fees on farm inputs such as water, energy, machineries, fertilisers, pesticides).
- Other taxes

Basic features of taxes to be specified include:

- Subject of taxation: e.g. natural persons and legal entities.
- Object of taxation (tax base): e.g. farm income, market sales, land area, capital gains.
- Taxation period: definition of a tax year, and the possibility to average income over several tax years.
- Depreciation and other allowances[2]
- Tax rate
- Tax relief

Tax concessions can come in various forms of special treatment relative to the rest of the domestic economy, which relate to one of the basic features that characterise the structure of a tax. These can be formulated as follows:

- Exemptions: amounts excluded from the tax base
- Allowances: amounts deducted from the benchmark to arrive at the tax base
- Credits: amounts deducted from tax liability
- Rate relief: a reduced rate of tax applied to a class of tax payers or taxable transactions
- Tax deferral: a relief that takes the form of a delay in paying tax.

Response rate

Out of 48 countries queried, 33 responded to the questionnaire (Table A A.1). Country notes were developed for 35 countries based on information provided and complementary information to ensure cross-country comparability and inform broader policy conclusions.

Countries included for the first time in this agriculture taxation inventory are: Chile, Colombia, Costa Rica, Croatia, Estonia, Greece, Israel, Latvia, Lithuania, Mexico and Slovenia.

Table A A.1. Country responses to the OECD questionnaire on taxation in agriculture

Country	OECD Member	EU Member States	2005 report	Country reviews	Response	Country note prepared
Australia	OECD		1	1	1	1
Austria	OECD	EU	1	-	1	1
Belgium	OECD	EU	1	-	1	1
Brazil			-	1	-	-
Canada	OECD		1	1	1	1
Chile	OECD		-	-	1	1
China			-	1	-	-
Colombia			-	-	1	1
Costa Rica			-	-	1	1
Croatia		EU	-	-	1	1
Czech Republic	OECD	EU	1	-	1	1
Denmark	OECD	EU	1	-	1	1
Estonia	OECD	EU	-	1	1	1
Finland	OECD	EU	1	-	1	1
France	OECD	EU	1	-	1	1
Germany	OECD	EU	1	-	1	1
Greece	OECD	EU	1	-	1	1
Hungary	OECD	EU	1	-	1	1
Iceland	OECD		-	-	-	-
Indonesia			-	-	-	-
Ireland	OECD	EU	1	-	1	1
Israel	OECD		-	-	1	1
Italy	OECD	EU	1	-	1	1
Japan	OECD		1	1	-	1
Kazakhstan			-	-	-	-
Korea	OECD		1	1	1	1
Latvia	OECD	EU	-	1	1	1
Lithuania	OECD	EU	-	-	1	1
Luxembourg	OECD	EU	-	-	-	-
Mexico	OECD		-	-	1	1
Netherlands	OECD	EU	1	1	1	1
New Zealand	OECD		1	-	1	1
Norway	OECD		1	-	1	1
Philippines			-	-	-	-
Poland	OECD	EU	1	-	1	1
Portugal	OECD	EU	-	-	-	-
Russia			-	-	-	-
Slovak Republic	OECD	EU	1	-	1	1

Country	OECD Member	EU Member States	2005 report	Country reviews	Response	Country note prepared
Slovenia	OECD	EU	-	-	1	1
South Africa			-	-	-	-
Sweden	OECD	EU	1	1	1	1
Switzerland	OECD		1	-	1	1
Spain	OECD	EU	1	-	1	1
Turkey	OECD		-	1	-	-
United Kingdom	OECD	EU	1	-	1	1
United States	OECD		1	1	-	1
Viet Nam			-	Forthcoming	-	-
TOTAL	36	24	24	10	33	35

Questionnaire

For each type of tax please, please provide information on basic features defined above, and concessions specific to agriculture and agro-food companies, or likely to benefit them to a significant extent, for example because of the small size, or the use of a particular input (e.g. land, water, fuel).

If you are aware of any evidence on the impact of taxation on the productivity and sustainability of farms and agri-food companies from government evaluation or academic studies, please provide the references.

A. Overview

1. Please provide a brief overview of the tax system, including the general stance, coverage, and institutional framework (governance level), as was done in the 2005 OECD report (OECD, 2005[1]).
2. How is agriculture considered in the system? Are there specific provisions for farms or agriculture related businesses? If yes, for what purpose?
3. Please mention major reforms implemented in the last ten years or envisaged in the near future, and their purpose.

B. Income taxation

1. For income taxation, what tax regime(s) applies(y) to farmers and agro-food companies?
2. To what extent do these regimes differ from the general regime?
3. Are there any differences by legal status of the subject of taxation, by source of income (e.g. income from real estate properties, activities, capital investments, wages and salaries, professional and independent personal services, subsidies) or by activity (e.g. primary agriculture, processing, farm or non-farm activities)?
4. Are there any provisions allowing to smooth taxable income over time, such as tax deferral or saving schemes? If yes, are they specific to agricultural enterprises? Are they widely used?
5. Is there any evidence that income tax provisions have facilitated investment and innovation? Please provide references.

C. Property taxation

1. What arrangements apply to taxes a) on property (including land), which may relate to the value of the real estate, and b) on property transfers by gift, inheritance or sale?

2. Are there specific provisions for farm or farm household's assets, such as farmland, buildings, machineries, large livestock? Are there regional differences?
3. Is there any evidence of the effect of property taxation provisions on investment and farm transfers?
4. Is there any evidence of the effect of taxes on property value and property transfers on the environment, the use of natural resources and the resilience to climate change? If yes, what types of incentives lead to such impacts? Please provide references.

D. Tax on goods and services

1. What is the general tax regime on goods and services (e.g. value-added tax, general sales tax, excise duty)?
2. Does it apply to a) farm inputs and b) agricultural and food outputs or are there any specific provisions for them?

E. Environmental taxes

1. What are the main tax provisions used to improve the environmental impact of agriculture-related activities (e.g. taxes, levies and fees on the use of farm input and natural resources, such as water, energy, vehicles, fertilisers, pesticides)?
2. Do they apply equally to farm and non-farm activities? Do they differ by regions?
3. Is there any evidence of how effective they have been in reducing environmental impact of agri-food activities? Please provide references.
4. Are there any tax incentives to encourage the provision of environmental goods, in particular land-based ones (e.g. rebates for provision, and higher tax rates for non-provision)?

F. Tax incentives for R&D and innovation

1. What kind of tax incentives are used to facilitate private investment in R&D or the introduction of innovation?
2. What type of tax is concerned (e.g. labour, profit)?
3. Are there differences by type of company (e.g. by size, activity)?
4. Are tax incentives widely used by farms and agri-food companies?

G. Other taxes

1. What are provisions for taxes and social contributions on labour, including pensions? Are there specific provisions for agricultural labour? Do they apply equally to hired, self-employed or family labour in agriculture?
2. Are there any other tax exemptions applying to agriculture?

Notes

[1] Tax on property is a gross tax on the value of real property (real estate) with no deduction for debts. Tax on wealth is a net tax where the basic for taxation is the value of both real and financial capital reduced by debt.
[2] The term “tax allowance” is defined as a reduction of the tax base.

Annex B. **Background tables**

Overview of OECD tax statistics

The OECD Tax Database is available at: www.oecd.org/tax/tax-policy/tax-database.htm. It contains information on personal income tax rates (Table A B.1; Corporate and capital income tax rates (Table A B.2), Social security contributions, the tax burden on wage income, taxes on consumption (Table A B.3) and information on R&D tax incentives (Table A B.4), which originate from the OECD Main Science and Technology Indicators (available at: www.oecd.org/sti/msti.htm).

The OECD database on Instruments used for environmental policy documents the current use of environmentally related taxes (and a number of other environmental policy instruments). In addition to the revenues raised, the database gives information on the tax-base covered, the tax rates applied, important exemptions and refund mechanisms. Tax Rates of Environmentally Related Taxes are available at http://www.oecd.org/env/tools-evaluation/environmentaltaxation.htm.

Table A B.1. Central government personal income tax rates and thresholds, 2018

Thresholds in 1 000 National Currency; marginal rates in %

	Personal allowance	Tax credit	Surtax rate	Marginal rate (MR) 1	Threshold (Th) 1	MR2	Th 2	MR3	Th 3	MR4	Th 4	MR5	Max Threshold	Max MR	Number of rates
Australia	..	..	2.0	0	18	19	37	32.5	90	37	180	45	180	45	5
Austria	..	..	..	0	11	25	18	35	31	42	60	48	1 000	55	7
Belgium	7.4	..	..	25	9	30	13	40	22	45	40	50	40	50	5
Canada	..	1.8	..	15	47	21	93	26	144	29	206	33	206	33	5
Chile	..	..	..	0	7 833	4	17 407	8	29 012	14	40 617	23	69 628	36	7
Czech Republic	..	24.8	..	15		..		..	..	..	..	..		15	1
Denmark	..	5.1	8.0	11	499	26		..	..	..	..	..	499	26	2
Estonia	6.0	..	..	20		..		..	..	..	..	..		20	1
Finland	..	..	..	0	17	6	26	17	42	21	74	31	74	31	5
France	..	..	9.7	0	10	14	28	30	74	41	156	45	156	45	5
Germany	..	..	5.5	0	9	..	14	..	55	42	261	45	261	45	3
Greece	..	..	10.0	22	20	29	30	37	40	45	..	..	40	45	4
Hungary	..	..	..	15		..		..	..	..	..	..		15	1
Iceland	..	646.7	..	23	10 725	32		..	..	..	..	..	10 725	32	2
Ireland	..	1.7	8.0	20	35	40		..	..	..	..	..	35	40	2
Israel	..	5.8	..	10	75	14	107	20	173	31	240	35	642	50	7
Italy	..	1.9	..	23	15	27	28	38	55	41	75	43	75	43	5
Japan	380.0	..	2.1	5	1 950	10	3 300	20	6 950	23	9 000	33	40 000	45	7
Korea	1 500.0	..	..	6	12 000	15	46 000	24	88 000	35	150 000	38	500 000	42	7
Latvia	0.7	..	..	23		..		..	..	..		..		23	1
Luxembourg	1.0	0.6	7.0	0	11	8	13	9	15	10	17	11	44	38	19
Mexico	3.6	4.9	..	2	7	6	59	11	104	16	120	18	3 499	35	11
Netherlands		2.3	..	9	20	13	34	41	69	52		..	69	52	4
New Zealand		..	..	11	14	18	48	30	70	33		..	70	33	4
Norway	152.4	..	..	9	169	9	238	12	598	21	962	24	962	24	5

	Personal allowance	Tax credit	Surtax rate	Marginal rate (MR) 1	Threshold (Th) 1	MR2	Th 2	MR3	Th 3	MR4	Th 4	MR5	Max Threshold	Max MR	Number of rates
Poland	1.3	1.4	..	18	86	32		..		..		..	86	32	2
Portugal		..	2.5	15	7	23	11	29	20	35	25	37	81	48	7
Slovak Republic	3.8	..	..	19	35	25		..		..		..	35	25	2
Slovenia	3.3	..	..	16	8	27	20	34	48	39	71	50	71	50	5
Slovenia	3.3	..	..	16	8	27	20	34	48	39	71	50	71	50	5
Spain	5.6	..	..	10	12	12	20	15	35	19	60	23	60	23	5
Sweden	13.4	..	..	0	455	20	662	25		..		..	662	25	3
Switzerland	..	..	..	0	15	1	32	1	41	3	55	3	755	13	11
Turkey	..	..	0.8	15	15	20	34	27	120	35		..	120	35	4
United Kingdom	..	..	..	20	35	40	150	45		..		..	150	45	3
United States	..	..	..	10	10	12	39	22	83	24	158	32	500	37	7

Source: OECD (2019), OECD Tax Database, http://www.oecd.org/tax/tax-policy/tax-database.htm (extracted April 2019).

Table A B.2. Corporate income rate rates, 2018

Percentage

		Central government			Sub-central government tax rate	Combined corporate income tax rate
Country	Targeted	Corporate income tax rate	Statutory tax rate exclusive of surtax	Tax rate less deductions for sub-national taxes		
Australia	Yes	30.0	..	30.0	..	30.0
Austria	No	25.0	..	25.0	..	25.0
Belgium	Yes	29.0	29.0	29.6	..	29.6
Canada		15.0	..	15.0	11.8	26.8
Chile		25.0	..	25.0	..	25.0
Czech Republic		19.0	..	19.0	..	19.0
Denmark	No	22.0	..	22.0	..	22.0
Estonia		20.0	..	20.0	..	20.0
Finland		20.0	..	20.0	..	20.0
France	Yes	34.4	33.3	34.4	..	34.4
Germany	No	15.8	15.0	15.8	14.0	29.8
Greece	Yes	29.0	..	29.0	..	29.0
Hungary	No	9.0	..	9.0	..	9.0
Iceland	Yes	20.0	..	20.0	..	20.0
Ireland		12.5	..	12.5	..	12.5
Israel		23.0	..	23.0	0.0	23.0
Italy	No	24.0	..	23.9	3.9	27.8
Japan	Yes	23.2	..	22.4	7.4	29.7
Korea		25.0	..	25.0	2.5	27.5
Latvia		20.0	..	20.0	..	20.0
Lithuania		15.0	..	15.0	..	15.0
Luxembourg		19.3	18.0	19.3	6.8	26.0
Mexico		30.0	..	30.0	..	30.0
Netherlands		25.0	..	25.0	..	25.0
New Zealand	No	28.0	..	28.0	..	28.0
Norway	Yes	23.0	..	23.0	..	23.0
Poland		19.0	..	19.0	..	19.0
Portugal	Yes	30.0	21.0	30.0	1.5	31.5
Slovak Republic	No	21.0	..	21.0	..	21.0
Slovenia		19.0	..	19.0	..	19.0
Spain	Yes	25.0	..	25.0	..	25.0
Sweden	No	22.0	..	22.0	..	22.0
Switzerland		8.5	..	6.7	14.4	21.1
Turkey		22.0	..	22.0	..	22.0
United Kingdom	Yes	19.0	..	19.0	..	19.0
United States		21.0	..	19.7	6.1	25.8
Argentina		30.0	..	30.0	..	30.0
Brazil		34.0	..	34.0	..	34.0
China		25.0	..	25.0	..	25.0
India		48.3	30.0	48.3	..	48.3
Russian Federation		20.0	..	20.0	..	20.0
Viet Nam		20.0	..	20.0	..	20.0

Source: OECD (2019), OECD Tax Database, http://www.oecd.org/tax/tax-policy/tax-database.htm (extracted April 2019).

Table A B.3. Value-Added and general sales taxes, as of 1 January 2018

Percentage rate

	Implemented	1995	2005	2010	2015	2016	2017	2018	Reduced rates (b)	Specific regional rates
Australia	2000	-	10.0	10.0	10.0	10.0	10.0	10.0	0.0	-
Austria*	1973	20.0	20.0	20.0	20.0	20.0	20.0	20.0	10.0/13.0	19.00
Belgium	1971	20.5	21.0	21.0	21.0	21.0	21.0	21.0	0.0/6.0/12.0	-
Canada*	1991	7.0	7.0	5.0	5.0	5.0	5.0	5.0	0.0	13.0/15.0
Chile	1975	18.0	19.0	19.0	19.0	19.0	19.0	19.0	-	-
Czech Republic	1993	22.0	19.0	20.0	21.0	21.0	21.0	21.0	10.0/15.0	-
Denmark	1967	25.0	25.0	25.0	25.0	25.0	25.0	25.0	0.0	-
Estonia	1992	18.0	18.0	20.0	20.0	20.0	20.0	20.0	0.0/9.0	-
Finland	1994	22.0	22.0	22.0	24.0	24.0	24.0	24.0	0.0/10.0/14.0	-
France*	1968	20.6	19.6	19.6	20.0	20.0	20.0	20.0	2.1/5.5/10.0	0.9/2.1/10.0/13.0 & 1.05/1.75/2.1/8.5
Germany	1968	15.0	16.0	19.0	19.0	19.0	19.0	19.0	7.0	-
Greece*	1987	18.0	18.0	19.0	23.0	23.0	24.0	24.0	6.0/13.0	4.0/ 9.0/16.0
Hungary	1988	25.0	25.0	25.0	27.0	27.0	27.0	27.0	5.0/18.0	-
Iceland	1990	24.5	24.5	25.5	24.0	24.0	24.0	24.0	0.0/11.0	-
Ireland	1972	21.0	21.0	21.0	23.0	23.0	23.0	23.0	0.0/4.8/9.0/13.5	-
Israel*	1976	17.0	17.0	16.0	18.0	17.0	17.0	17.0	0.0	0.0
Italy	1973	19.0	20.0	20.0	22.0	22.0	22.0	22.0	4.0/5.0/10.0	-
Japan	1989	3.0	5.0	5.0	8.0	8.0	8.0	8.0	-	-
Korea	1977	10.0	10.0	10.0	10.0	10.0	10.0	10.0	0.0	-
Latvia	1995	-	18.0	21.0	21.0	21.0	21.0	21.0	5.0/12.0	-
Lithuania	1994	18.0	18.0	21.0	21.0	21.0	21.0	21.0	5.9/9.0	
Luxembourg	1970	15.0	15.0	15.0	17.0	17.0	17.0	17.0	3.0/8.0/14.0	-
Mexico	1980	10.0	15.0	16.0	16.0	16.0	16.0	16.0	0.0	-
Netherlands	1969	17.5	19.0	19.0	21.0	21.0	21.0	21.0	6.0	-
New Zealand	1986	12.5	12.5	12.5	15.0	15.0	15.0	15.0	0.0	-
Norway	1970	23.0	25.0	25.0	25.0	25.0	25.0	25.0	0.0/12.0/15.0	-
Poland	1993	22.0	22.0	22.0	23.0	23.0	23.0	23.0	5.0/8.0	-
Portugal*	1986	17.0	19.0	20.0	23.0	23.0	23.0	23.0	6.0/13.0	4.0/9.0/18.0 & 5.0/12.0/22.0
Slovak Republic	1993	25.0	19.0	19.0	20.0	20.0	20.0	20.0	10.0	-
Slovenia	1999	-	20.0	20.0	22.0	22.0	22.0	22.0	9.5	-
Spain*	1986	16.0	16.0	16.0	21.0	21.0	21.0	21.0	4.0/10.0	0.0/2.75/3.0/7.0/9.5/ 13.5/20.0 & 0.5/10.0
Sweden	1969	25.0	25.0	25.0	25.0	25.0	25.0	25.0	0.0/6.0/12.0	-
Switzerland	1995	6.5	7.6	7.6	8.0	8.0	8.0	7.7	0.0/2.5/3.7	-
Turkey	1985	15.0	18.0	18.0	18.0	18.0	18.0	18.0	1.0/8.0	-
United Kingdom	1973	17.5	17.5	17.5	20.0	20.0	20.0	20.0	0.0/5.0	-
Unweighted average		17.7	17.8	18.2	19.3	19.3	19.3	19.3		

Note: * See country notes in Box 2.A2.1 of the source.
a. Yearly data: the rates shown in the table are rates applicable on 1 January of each year. Reduced rates and specific rates applicable in specific regions are those applicable as at 1 January 2018
b. Reduced rates: reduced rates include zero-rates applicable to domestic supplies (i.e. an exemption with right to deduct input tax). This does not include zero-rated exports.
Source: Annex Table 2.A.1 VAT rates from OECD (2018), *Consumption Tax Trends 2018: VAT/GST and Excise Rates, Trends and Policy Issues*, OECD Publishing, Paris, https://doi.org/10.1787/ctt-2018-en (last updated 11 December 2018).

Table A B.4. Tax subsidy rates on R&D expenditures, 2018

	Profitable firms			Loss-making firms		
	A. Large	B. SME	Ratio A/B	A. Large	B. SME	Ratio A/B
Australia	0.1	0.19	1.4	0.07	0.19	1.0
Austria	0.17	0.17	1.0	0.17	0.17	1.0
Belgium	0.16	0.16	1.1	0.15	0.15	1.1
Canada	0.13	0.31	1.3	0.1	0.31	1.0
Chile	0.34	0.34	1.3	0.27	0.27	1.3
Czech Republic	0.21	0.21	1.4	0.15	0.15	1.4
Denmark	0	0	..	-0.01	-0.01	0.0
Estonia	0	0	..	0	0	..
Finland	-0.01	-0.01	1.0	0	0	..
France	0.43	0.43	1.2	0.35	0.43	1.0
Germany	-0.02	-0.02	1.0	-0.02	-0.02	1.0
Greece	0.11	0.11	1.4	0.08	0.08	1.4
Hungary	0.21	0.2	1.1	0.19	0.19	1.1
Iceland	0.24	0.24	1.0	0.24	0.24	1.0
Ireland	0.29	0.29	1.3	0.23	0.23	1.3
Israel	0	0	..	0	0	..
Italy	0.09	0.09	1.0	0.09	0.09	1.0
Japan	0.17	0.2	-17.0	-0.01	-0.01	1.0
Korea	0.03	0.26	1.5	0.02	0.21	1.2
Latvia	-0.01	0	..	-0.01	-0.01	1.0
Lithuania	0.31	0.31	1.2	0.25	0.25	1.2
Luxembourg	-0.01	-0.01	1.0	-0.01	-0.01	1.0
Mexico	0.07	0.07	1.4	0.05	0.05	1.4
Netherlands	0.13	0.31	1.0	0.13	0.3	1.0
New Zealand	-0.02	-0.02	1.0	-0.02	-0.02	1.0
Norway	0.21	0.23	1.0	0.21	0.23	1.0
Poland	0.22	0.22	1.2	0.18	0.18	1.2
Portugal	0.39	0.39	1.3	0.31	0.31	1.3
Slovak Republic	0.28	0.28	1.3	0.22	0.22	1.3
Slovenia	0.21	0.21	1.2	0.17	0.17	1.2
Spain	0.33	0.33	1.3	0.26	0.26	1.3
Sweden	0.05	0.05	1.0	0.05	0.05	1.0
Switzerland	-0.01	-0.01	1.0	-0.01	-0.01	1.0
Turkey	0.06	0.06	1.2	0.05	0.05	1.2
United Kingdom	0.11	0.27	1.0	0.11	0.27	1.0
United States	0.05	0.05	1.3	0.04	0.04	1.3
Brazil	0.27	0.27	1.0	-0.01	-0.01	1.0
Bulgaria	0	0	..	0	0	..
China (People's Republic of)	0.15	0.23	1.3	0.12	0.19	1.2
Colombia	0.34	0.34	1.4	0.25	0.25	1.4
Romania	0.08	0.08	1.1	0.07	0.07	1.1
Russia	0.11	0.11	1.0	0	0	..
South Africa	0.16	0.16	1.2	0.13	0.13	1.2

Note: ..: not applicable. The tax subsidy rate is defined as 1 minus the B-index, a measure of the before-tax income needed by a "representative" firm to break even on USD 1 of R&D outlays. This is an experimental indicator based on quantitative and qualitative information representing a notional level of tax subsidy rate under different scenarios. It requires a number of assumptions and calculations specific to each country. Estimates allow for differences in the treatment of the various components of R&D expenditures: current (labour, other current) and capital (machinery and equipment, facilities/buildings). International comparability may be limited. For more information on R&D tax incentives, see http://oe.cd/rdtax, and for general notes and country-specific notes for this R&D tax incentive indicator, see http://oe.cd/sb2017_notes_rdtax.

Source: OECD (2019), OECD Tax Database, http://www.oecd.org/tax/tax-policy/tax-database.htm (extracted April 2019). Science, Technology and Industry Scoreboard 2017, https://doi.org/10.1787/9789264268821-en.

Part II. Country notes

Chapter 4. Australia

This chapter contains a description of tax provisions applied to agriculture in 2019, unless otherwise specified. They include taxes on income and profit, property, good and services, environmental taxes, and tax incentives for R&D and innovation.

4.1. Overview

The Commonwealth of Australia is a federal state and consists of six states and two territories (collectively referred to as 'the states'). The federal government as well as the state governments impose taxes. Most of the total taxes are paid to the federal tax collector and are made up of income taxes, customs duty and excise. Additionally, the Commonwealth imposes a goods and services tax (GST) on most goods and services sold within Australia. Collected by the Commonwealth, the GST is allocated to the states and is a major source of revenue. State taxes include employer's payroll taxes, gambling taxes, certain motor vehicle taxes and taxes on property such as land tax and stamp duty. Local governments charge rates for the provision of services.

The Australian Government Treasury reports annually on tax expenditures in its Tax Benchmarks and Variations Statement (TBVS) (previously known as the Tax Expenditure Statement, TES) (Table 4.1). Tax expenditures arise when there is a difference between the tax treatment for a specified activity or class of taxpayers, and the standard or "benchmark" tax treatment. In the TBVS such special treatments are assessed with respect to "benchmarks" for each tax, the details of which are described in the TBVS.

The TBVS classifies tax expenditures into broad groups (such as concessional tax rate, exemption, deferral, accelerated write-off, and rebates). Significant tax expenditure is in the form of rebates under the Wine Equalisation Tax (WET) producer rebate. The main tax expenditures (concessions) due to primary production include the Farm Management Deposit scheme and the income tax averaging scheme. Farm Management Deposits are deferrals where the taxation is partially put off to a later period. The benefit can thus be composed of a mix of improvement of liquidity and lower tax progression. The scheme also has effect of smoothing income variations. This along with the income tax averaging scheme operate as policy instruments to support producer income risk management.

Other tax preferences are to facilitate structural adjustment including exemptions from capital gains tax for exiting small businesses (also available to farmers operating as a small business) and to incentivise investments in specific activities. Another group of tax preferences is linked to encouraging environmental improvements, sustainable water use and soil conservation.

4.2. Income taxation

In Australia the company tax rate is 30% for large corporate tax entities. For incorporated businesses with an aggregated annual turnover of less than AUD 50 million the tax rate is 27.5%. The tax rate for eligible companies will fall from 27.5% to 26% in 2020-21 and then to 25% in 2021-22.

Unincorporated businesses with aggregated annual turnover of below AUD 5 million will benefit from an increase in the unincorporated small business tax discount rate. The discount rate will increase from 8% to 13% in 2020-21 and then to 16% in 2021-22 (up to the existing cap of AUD 1 000).

The Farm Management Deposit (FMD) scheme allows primary producers (with no more than AUD 100 000 of non-primary production income) to defer their income tax liability. Primary producers are able to claim deductions for primary production income that they deposit in an FMD with an Authorised Deposit-taking Institution (ADI) in the year it is earned. The FMD is included as assessable income in the year it is withdrawn or is deemed to have been withdrawn. From 1 July 2016 the maximum limit on deposits made under the FMD is AUD 800 000 (double the previous limit).

The FMD scheme is very popular among Australian farmers. As of June 2019, there were 53 790 accounts and the total amount deposited was AUD 6.8 billion. In June 2004, when the previous report was prepared (OECD, 2005[1]) there were 43 309 accounts and the total amount deposited was AUD 2.6 billion.

Primary producers are able to use FMDs deposits as a loan offset to reduce bank interest costs on primary production loans. ABARES estimated that this offsetting mechanism, if used by all primary producers, could result in AUD 150 million of interest savings annually for the sector. This figure is based on full uptake of FMD offset accounts, however, to date only one ADI has chosen to offer such accounts in their product range. A number of other ADIs have chosen to offer interest rate deductions to primary producers holding FMDs rather than provide a formally structured FMD offset account product.

To smooth out their income tax liability primary producers can elect to pay tax at a tax rate based on their average income earned over the previous five income years. This provides a concession because, on balance, the saving from paying less tax in high income years outweighs additional tax paid in low income years.

From 1 July 2017, primary producers were permitted to re-commence income averaging ten years after opting out. Prior to this amendment, a primary producer who had opted out of income averaging could never return to the arrangement, except in special circumstances.

Farmers affected by drought, natural disasters and other hardships can apply to the Australian Taxation Office to receive assistance such as: extra time to pay tax debts, paying debts in instalments and waiving of interest charges. In special circumstances, the Commissioner for Taxation may release individuals from payment of income tax, fringe benefits taxes and some other taxes where it is shown that payment would cause serious hardship. These decisions are made on a case–by–case basis.

There are a number of taxation measures and concessions available to primary producers experiencing highly variable incomes, due to difficulties such as drought. These include special treatment of:

- proceeds from double wool clips
- profit from the forced disposal or death of livestock
- insurance recoveries.

As a consequence of drought, fire or flood, primary producers carrying on a sheep grazing business in Australia may conduct advanced shearing. Under these circumstances the woolgrowers can elect to put off the profit on the sale of the wool from the advanced shearing to the next income year. (2018 TBVS code B32 Deferral of profit from early sale of double wool clips)

Primary producers who receive income from the forced disposal or death of livestock can elect to defer this income and use it to reduce the cost of replacement livestock within the next five income years. Alternatively, primary producers can elect to spread profits over the next five income years (or 10 years if the forced disposal was in relation to the control of bovine tuberculosis). (2018 TBVS code B33 Deferral or spreading of profit from the forced disposal or death of livestock)

Likewise insurance payouts received in relation to timber lost because of fire, or livestock lost due to natural disasters can be spread equally over five income years, resulting in a tax deferral. (2018 TBVS code B36 Spreading of insurance income for loss of timber or livestock).

There are special circumstances for primary producers wishing to access their FMDs early without the loss of their claimed taxation benefits. Primary producers do not have to hold their FMD for the required 12-month period to retain their claimed taxation benefits if they are affected by an eligible drought or natural disaster.

There are several schemes that allow primary producers to claim deductions on different capital expenditures or assets such as:

- fencing and fodder storage assets (accelerated depreciation)
- water facilities (accelerated depreciation)
- landcare
- forestry managed investments
- discounted valuation of stock from natural increases
- horticultural plants (accelerated depreciation)
- horse breeding stock (accelerated depreciation)
- telephone lines and electricity connections (accelerated depreciation)

Primary producers can immediately deduct capital expenditure on fencing and fodder storage assets such as silos and hay sheds to store grain and other animal feed. This measure, which enhances farmers' ability to invest in and stockpile fodder, is available for fodder storage assets first used or installed ready for use from 19 August 2018. Previously only fencing was eligible for an immediate deduction while fodder storage assets were eligible for accelerated depreciate over three income years. (2018 TBVS code B63 Accelerated depreciation of fencing and fodder storage assets for primary producers.)

From 12 May 2015, primary producers can immediately deduct capital expenditure on water facilities such as dams, tanks and pumps. Previously this expenditure was deductible over three years. The expenditure must be incurred primarily for conserving or conveying water for use in primary production. (2018 TBVS code B64 Accelerated write-off for expenditure on water facilities for primary producer) Immediate deductions can also be claimed for capital expenditure on water facilities and landcare operations such as constructing a levee or the prevention of land degradation. (2018 TBVS code B66 Accelerated write-off for irrigation water providers and 2018 TBVS code B67 Accelerated write-off for landcare operations.)

Additionally up until 30 June 2020, small and medium-sized businesses, including those in primary production, with an aggregated annual turnover of less than AUD 50 million are eligible for an immediate tax deduction of capital expenditure of less than AUD 30 000. This measure helps businesses to improve cash flows. Small businesses can continue to place assets which cannot be immediately deducted into the small business simplified depreciation pool. Medium-sized businesses with an aggregated annual turnover of AUD 10 million or more, but less than AUD 50 million, do not have access to the small business simplified depreciation rules and instead continue to depreciate assets costing AUD 30 000 or more using the existing, ordinary depreciation rules.

Taxpayers who receive payments under eligible Sustainable Rural Water Use and Infrastructure Programme (SRWUIP) agreements to improve water infrastructure and return water entitlements to the Commonwealth, have the option to exclude this income from tax assessment (including any capital gains realised). Any expenditures funded by payments (including depreciation and capital losses) are non-deductible. The SRWUIP is a national programme investing in rural water use, management and efficiency, including improved water knowledge and market reform, and water purchase for the environment. (2018 TBVS code B37 Sustainable Rural Water Use and Infrastructure Program.)

Investors in forestry managed investment schemes are able to claim immediate upfront deductions for their expenditure on such schemes. At least 70% of the expenditure must be directly related to developing forestry. (2018 TBVS code B31 Accelerated write-off for forestry managed investment schemes.)

Several different methods are available to primary producers for determining the value of animals acquired by natural increase. These methods may produce a value lower than the actual cost of production, giving the primary producer a concessional tax treatment. (2018 TBVS code B38 Valuation of livestock from natural increase.)

Accelerated depreciation is available for horse breeding stock, capital expenditure on horticultural plants and that incurred with connecting a telephone line or connecting or upgrading electricity mains to a primary production property. (2018 TBVS code B69 Closing stock valuation options for horse breeding stock) (2018 TBVS code B65 Accelerated write-off for horticultural plants) (2018 TBVS code B68 Accelerated write-off for telephone lines and electricity connections)

Other tax deductions available to primary producers include exemptions from Fringe Benefit Tax for meals provided to employees who are carrying on business in a remote area (2018 TBVS code D16 Exemption for meals for primary production employees in remote areas) and exemptions from primary industry levies. From 1 July 2019, primary producers (and certain tourism businesses) are also eligible to claim a refund of up to AUD 10 000 for any luxury car tax they may have had to pay on certain cars used in their business that have a GST inclusive price over AUD 67 525 or AUD 75 526 for fuel efficient cars (the luxury car tax threshold for the 2019-20 financial year). (2018 TBVS code F5 Luxury car tax.)

There is a range of small business Capital Gains Tax (CGT) concessions which may apply to primary production businesses.

There is no CGT taxing point when a taxpayer dies. Recognition of the gains or losses accrued during the life of the deceased is deferred until the person inheriting the CGT asset later disposes of it. An exception applies if the asset passes to an exempt entity, the trustee of a complying superannuation entity, or a foreign resident.

4.3. Property taxation

Land tax is a state tax based on the ownership of land. Its rate, base, and application can vary between the states. As a state tax, the federal government is not involved in the states' individual policy choices regarding land tax. Each state and territory provides an exemption from land tax for "Land for primary production". The exception to this is the Northern Territory which does not have a land tax.

Stamp duty on conveyances is also a state tax, applied to the transfer of real estate. Its rate, base, and application can vary between the states. Again, the federal government is not involved in the states' setting of stamp duties.

4.4. Tax on goods and services

Goods and services tax (GST) is a broad-based tax of 10% on most goods, services and other items sold or consumed in Australia. Most basic food is GST-free (e.g. eggs, fruit and vegetables), along with health, education and childcare.

Further, under certain conditions supplies of farmland are GST-free. The conditions are the following: where farmland supplied for farming on which a farming business has been carried on for at least five years immediately before the sale; continuity of the farming

businesses is intended to be carried out on the land; and subdivided farmland that is potential residential land and supplied to associates for nil or for less than market value. (2018 TBVS code H21 Supplies of farmland.)

Specified fuels used in off-road business activity are eligible for fuel tax credits that are available to most businesses and are not limited to primary producers.

4.5. Environmental taxes

Under the Income Tax Assessment Act 1997, landowners may apply for tax concessions for covenants established under conservation covenanting programmes approved by the Australian Government Minister for the Environment, for the period covered by a certificate of approval (Environment Ministers Covenanting Programme). All states, except for the Northern Territory and the Australian Capital Territory, have a covenanting programme. Since 2001, 14 conservation covenanting programmes have been approved, of which ten are current.

Conservation covenants are an agreement to protect land of high conservation value made between the landowner and a covenant scheme provider. Covenants restrict or prohibit certain activities that could degrade the environmental value of the land. The covenants are permanent and are registered on the title to the land. A landowner who enters into a covenant under an approved covenanting programme and does not receive any money, property or other material benefit as a result, may be able to claim a tax deduction and concessional capital gains tax treatment. Since 2014, there have been 11 applications for tax deductions under this programme, with seven of these determined as being eligible.

4.6. Tax incentives for R&D and innovation

The Research and development (R&D) tax incentive encourages all companies to engage in R&D by providing a tax offset for eligible R&D activities. The ATO and AusIndustry (within the Department of Industry, Innovation and Science, on behalf of Innovation and Science Australia) jointly administer the Research and Development Tax Incentive. R&D activities must be registered with AusIndustry before the tax offset is claimed, and the ATO determines if the expenditure claimed in a tax return for R&D activities is eligible for the tax offset.

Changes to the R&D tax incentive were announced in May 2018 in the 2018/19 Budget to better target the programme and improve its fiscal affordability. The changes, are detailed in 2018 TBVS code B77 Research and development — exemption of refundable tax offset, and 2018 TBVS code B78 - Research and development — non-refundable tax offset. The implementation of the changes to the R&D tax incentive is subject to the passage of legislation.

Research and Development – exemption of refundable offset. The R&D refundable tax offset is available to all companies with a turnover of less than AUD 20 million at a rate of 43.5% for the first AUD 100 million of expenditure on eligible R&D activities for income years beginning from 1 July 2016. In the 2018/19 budget, it was announced that, from 1 July 2018, the refundable R&D tax offset will be equal to the entity's corporate tax rate (currently either 30% or 27.5%) plus 13.5%, and that cash refunds will be capped at AUD 4 million. R&D expenditure on clinical trials does not count towards this cap. R&D tax offsets that cannot be refunded will carried forward as non-refundable tax offsets to future income years. The implementation of changes of the R&D tax incentive is subject to the passage of legislation.

Research and Development – non-refundable tax offset. The R&D non-refundable tax offset is available to all companies with turnover of AUD 20 million or over at a rate of 38.5% for the first AUD 100 million of expenditure on eligible R&D activities for income years beginning from 1 July 2016. In the 2018/19 Budget, it was announced that, from 1 July 2018, the non-refundable R&D Tax offset will be calculated using an R&D premium that provides multiple rates of support above the entity's company tax rate. The level of support increases with intensity of the entity's incremental R&D expenditure. The R&D expenditure threshold will also be increased from AUD 100 million to AUD 150 million. The implementation of changes to the R&D tax incentive is subject to the passage of legislation.

There are a number of innovation tax incentives that are intended to encourage investment by all businesses. These include:

- a 20% non-refundable carry forward tax offset on investments in qualifying Australian early stage innovation companies (capped at AUD 200 000 per investor per year) along with a 10-year exemption on capital gains tax for investments held for at least twelve months.
- a 10% non-refundable carry forward tax offset on investments in qualifying Australian early stage venture capital limited partnerships (ESVCLPs).

Eligible investors are exempt from tax on gains derived in respect of their investments in Venture Capital Limited Partnerships and Early Stage Venture Capital Limited Partnerships.

Venture capital fund managers may be paid a performance-based share of partnership profits by investors. Such performance payments are 'carried interests'. Instead of being treated as taxable income of the fund managers an entitlement to receive a carried interest is considered a capital gains tax. Consequently, taxation of the income is deferred until the gains are realised and individual managers are eligible for the 50% discount on their carried interest (Capital Gains Tax for carried interests paid to venture capital partners).

4.7. Other taxes

Payroll tax also applies in Australia, as a state-based tax. However, its rate, base, and application can vary between the states. In practice, most small businesses, including farmers, are more or less exempt because of the size threshold applied. As a state tax, the federal government has no involvement in the states' individual policy choices regarding payroll tax.

The Wine Equalisation Tax (WET) is a federal tax of 29% of the wholesale value of wine, generally paid on the last wholesale sale of wine. Australian and New Zealand wine producers are able to claim a WET rebate of up to AUD 350 000 of WET paid in the previous financial year. The rebate also extends to producers of other fruits and vegetable wines, traditional cider, perry, mead, and sake. To be eligible, Australian wine producers must own at least 85% of the grapes used to make the wine throughout the winemaking process, and wine is to be branded and packaged in a container not exceeding five litres (51 litres for cider and perry). Wine made for personal use by private individuals is exempt from the WET. (2018 TBVS code F19 Wine equalisation tax producer rebate.)

Table 4.1. Tax expenditure directed at the agricultural sector, 2000 to 2018

Millions AUD

	Type of expenditure	Date	2000 /01	2001 /02	2002 /03	2003 /04	2004 /05	2005 /06	2006 /07	2007 /08	2008 /09	2009 /10	2010 /11	2011 /12	2012 /13	2013 /14	2014 /15	2015 /16	2016 /17	2017 /18	2018 /19
Farm management Deposit scheme (FMD)	Deferral	1999	50	150	410	245	95	120	75	105	135	95	30	230	150	145	170	240	250	500	370
Income tax averaging system for primary producers	Concessional rate	Before 1985	175	260	230	150	105	80	70	110	100	85	155	145	140	175	195	190	195	*	*
Accelerated depreciation of fencing and fodder storage assets for primary producers	Accelerated write-off	2015																3	30	50	65
Accelerated write-off for expenditure on water facilities for primary producers[1]	Accelerated write-off	2015	20	20	25	25	20	20	30	20	20	20	20	70	80	70	5	10	45	45	40
Sustainable Rural Water Use and Infrastructure Programme	Exemption	2010											-	-	30	15	-5	-	-5	10	-10
Accelerated write-off for forestry managed investment schemes	Accelerated write-off	2007						-	-	-	40	70	*	*	*	*	*	*	*	*	*
Valuation of livestock from natural increase	Discounted valuation	Before 1985	290	190	85	105	150	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Accelerated write-off for horticultural plants	Accelerated write-off	1995	5	4	4	4	5	4	4	5	5	*	*	*	*	*	*	*	*	*	*
Accelerated write-off for telephone lines and electricity connections	Accelerated write-off	1981	8	8	13	15	15	15	15	15	*	*	*	*	*	*	*	*	*	*	*
Wine Equalisation Tax (WET) producer rebate[2]	Rebate	2004	1-	-	-	-	60	115	200	220	220	240	250	280	290	300	310	320	340	310	290

Notes: *Unquantifiable - Only programmes where the tax expenditure is quantifiable are included.

1 Accelerated write-off for expenditure on water facilities for primary producers - previously was the "Three year write-off for expenditure on water facilities for primary Producers" which commenced in 23 May 1980. This now includes tax expenditure under the programmes "Accelerated write-off for irrigation water providers and Accelerated write-off for landcare operations"

2 WET producer rebate - before 1 October 2004 was known as the Rebate of wine equalisation tax (WET) for cellar door and mail order wine sales which commenced in 2000

Source: Australian Treasury (2018), 'Tax Benchmarks and Variations Statement 2018' released in January 2019: https://treasury.gov.au/publication/p2019-357183/and previous years of the Australian Treasury's Tax Expenditure Statement https://treasury.gov.au/publication/2017-tax-expenditures-statement/ and (OECD, 2005[1]) *Taxation and Social Security in Agriculture*, http://dx.doi.org/10.1787/9789264013650-en.

Chapter 5. Austria

This chapter contains a description of tax provisions applied to agriculture in 2019, unless otherwise specified. They include taxes on income and profit, property, good and services, environmental taxes, and tax incentives for R&D and innovation.

5.1. Overview

According to the 2016 census there are 161 155 agricultural and forestry businesses in Austria, 90% of which are small scale and family run.

There are separate tax provisions applicable to the agriculture and forestry sectors. Agricultural income is differentiated from other incomes and there are simplified methods for assessing both income and value added tax for small agriculture and forestry enterprises. Taxable income can be calculated based on a full or partial flat rate assessment (lump-sum assessment). In addition, the valuation of the property for property taxes and land transfer tax is not at the market rate. When transferring farms between family members, the land transfer tax is calculated using a lower concessional tax rate.

An important concept in the treatment of agriculture and forestry for tax purposes is the estimation of an assessed value (*Einheitswert*). The assessed value (*Einheitswert*), calculated according to law and is set by local tax offices, expresses the productive capacity of agricultural and forestry entities. It represents the capitalised, and sustainably achievable monetary returns. Regional variations exist in the calculation of the assessed value (*Einheitswert*) due to differences in the natural yield conditions. The assessed value (*Einheitswert*) is considerably lower than the business's likely annual income meaning that the majority of farmers in Austria pay very little tax. The Austrian tax legislation is updated on a regular basis, with most recent revisions made in 2018.

5.2. Income taxation

There are progressive personal income tax rates with an entry tax rate of 25% for low income earners and a maximum tax rate of 55% for income earners of more than EUR 1 million (decreasing to 50% after 2020). There are six income brackets.

Accrual accounting is mandatory for agricultural and forestry enterprises with turnover exceeding EUR 550 000 in two consecutive years or an assessed value (*Einheitswert*) at 1 January of greater than EUR 150 000. Cash basis accounting is permitted for lower income farms.

For certain occupational groups the Austrian tax legislation provides for the possibility of determining taxable income on the basis of flat rates (average rates). These separate tax rules are set out in the Income Tax Act and are stated by the Federal Minister of Finance. The flat rates for farmers and foresters, including those involved in processing of agricultural products, providing agricultural services and some non-agricultural services like tourism on farms, are set in regulation which was last updated in 2015. For eligible cash basis agricultural and forestry businesses, taxable income is calculated using either the full flat rate or the partial flat rate.

Farmers and foresters with an assessed value (*Einheitswert*) of up to EUR 130 000 and a turnover of less EUR 400 000 in the last two years are able to determine their taxable income using flat rates.

The full flat rate is used for businesses that have an assessed value (*Einheitswert*) not exceeding EUR 75 000 and a maximum of 60 hectares of cultivated land and 120 livestock units. In this case their taxable income is determined by multiplying their assessed value (*Einheitswert*) by an average flat rate of 42%. Additional revenue includes for example processing of agricultural products. Additional deductible expenses include interests on debt, rents, and social insurance contributions.

The partial flat rate regulation is used for agricultural and forestry businesses operating on a cash basis with assessed value (*Einheitswert*) of between EUR 75 000 and EUR 130 000.

These businesses may deduct 70% (80% in case of livestock farms) (including VAT) from their taxable income as expenses (*Teilpauschalierung*).

Making flat rate estimates of income-related expenses and operating expenses allows these expenses to be deducted without documented evidence of the actual expenses paid. The flat rate regulation simplifies the profit calculation thereby reduces accounting compliance costs. Austria's agricultural sector is characterised as small scale with 90% of farms run as family businesses and managed by a sole proprietor. The majority of farmers and foresters calculate their profit on basis of the flat rate regulation and therefore pay very little income tax.

Corporations are subject to corporate income tax at a flat rate of 25%. Again, different types of taxable income determination are available via accrual or cash-based accounting.

There are also agricultural and forestry co-operatives that are companies with separate legal entities and flexible membership. These are primarily intended to further their members' businesses. Only a very small group of agricultural co-operatives are partially tax exempt under certain conditions.

Capital gains from the sale of land, enterprises or sub-enterprises are taxed under the income taxation regime. Income from land sales are subject to a special tax rate of 30%, whereas the general tax rate applies to gains from the sales of enterprises.

5.3. Property taxation

Domestic property is subject to an annual property tax. The tax for agricultural and forestry land is calculated on the basis of their assessed value (*Einheitswert*). This also includes buildings, machinery and livestock. A base value for taxation is determined by multiplying the assessed value (*Einheitswert*) by a specific tax figure. For the first EUR 3 650 of the assessed value (*Einheitswert*) a tax rate of 1.6% is applied, while 2% is applied for the remainder. The property tax and its supplements are calculated using multipliers of minimum 2 125%. The following example illustrates the tax calculation for a farm with an assessed tax value (*Einheitswert*) of EUR 15 000:

EUR 3 650 x 0.16% = EUR 5.84
EUR 11 350 x 0.2% = EUR 22.70
Base value for taxation: EUR 5.84 + EUR 22.70 = EUR 28.54
Property tax: EUR 28.54 x 2 125% = EUR 606.48

An additional property tax in Austria is the land value levy for undeveloped sites considered for construction purposes. The federal tax is 1% of the assessed value (*Einheitswert*) (mainly for real estate), if the assessed value is higher than EUR 14 600. Farmers and foresters have to pay the land value levy for undeveloped sites, if those sites are considered for construction purposes in the near future and the land is not sustainably used for agriculture or forestry. Again, the assessed value (*Einheitswert*) is used to calculate the tax.

Since the abolition of the inheritance and gift tax in 2008, donations, inheritances and sales of property are subject to a land transfer tax. To support the continuation of family farm enterprises, transfers within the family benefit from concessional tax rates. The tax for an agricultural or forestry property transferred to a family member is calculated on the basis of the assessed tax value (*Einheitswert*) with a concessional tax rate of 2%.

5.4. Tax on goods and services

The standard Value Added Tax (VAT) rate in Austria is 20% with reduced rates of 13% (charged on agricultural supplies and wine production and supply, etc.) and 10% (charged

on foodstuff amongst other things) and a special tax rate for certain geographic regions of 19%.

The Austrian VAT Act, amended as part of the 2015/16 tax reform, includes a flat rate system for agricultural producers. The approach is based on the provisions of the Council Directive 2006/112/EC of 11 November 2006 on the Common System of Value Added Tax. The flat rate compensation percentage is determined using macro-economic data from the last three years. Cash basis taxpaying farmers can either use the flat rate option or the normal VAT regime. By opting for the flat rate system farmers pay VAT at an average of 10% on both inputs and outputs. There is not record keeping required and no assessment is made by the tax office.

A rate of 13% applies between businesses. For example, a farmer who sells cattle to a cattle dealer has to invoice the transaction at a rate of 13% which may then be offset by the dealer against their tax payable.

Since 2013, Austria charges the agricultural sector the regular mineral oil tax and is one of only a handful of EU Member States to take such an approach.

Motor vehicles only used on farms are exempt from the Motor Vehicles Tax.

Austria collects an excise tax for sparkling wine (reintroduced in 2014) and an alcohol tax.

5.5. Environmental taxes

Austria does not apply any environmental taxes and instead uses payments under its Agri-Environmental Programme (ÖPUL) for the promotion of an environmentally sound, extensive and natural habitat protecting agriculture.

5.6. Tax incentives for R&D and innovation

Since 1 January 2018, all Austrian companies can claim back 14% of their expenses on research and experimental development (previously only 12% of expenses could be claimed). Both the company's own research as well as commissioned research, are eligible for this support. The support is not taxable (no operating income) and it is delivered via a tax credit for income tax or corporate tax. An evaluation from 2012 shows that there is a small number of supported research and development projects from the agriculture, forestry, fisheries and food industries.

5.7. Other taxes

In agriculture, the same employment taxes and social security contributions apply as to the rest of the economy. Family workers are integrated in the social security system for (self-employed) farmers and foresters. Farmers social security contributions are levied on the basis of the assessed value *(Einheitswert)* which is computed into a month contribution basis.

Austria provides preferential treatment to agriculture in the insurance tax scheme. In general, the assessment basis for the insurance tax is the insurance fee, the tax rate is 11%. There are various exceptions from this general provision, including exceptions for the agricultural sector. For hail insurance the assessment basis is the insured amount for each year of insurance and the tax rate is 0.2. Since 2019 this rule also applies to other agricultural insurances against natural hazards.

Chapter 6. Belgium

This chapter contains a description of tax provisions applied to agriculture in 2019, unless otherwise specified. They include taxes on income and profit, property, good and services, environmental taxes, and tax incentives for R&D and innovation.

6.1. Overview

The number of agricultural holdings in Belgium has decreased steadily year after year and totalled 35 910 in 2017. Farms are mainly owner operated, but the share of corporate farms is increasing and reached 15.8% in 2016. Forty-four per cent of the land surface of Belgium is cultivated with farmland increasingly concentrated. In 37 years, the average utilised agricultural area per farm holding has more than tripled in Flanders (from 8.4 ha in 1980 to 26.4 ha in 2017) and in Wallonia (from 20.7 ha to 56.6 ha). The increase in intensity of farm holdings is most significant for livestock farms with the average number of livestock per pig farm increasing from 141 animals in 1982 to the present average of 1 414 animals.

In principle, the agricultural sector is taxed as any other sector (common law). However, there are specific provisions which are widely used in practice. These include the possibility to calculate taxable income using a valuation method and not actual income, reduced taxation of income from EU agricultural subsidies, reduced land taxes, capital gains tax exemptions on donated or inherited farmland, a flat rate VAT compensation scheme and exemptions from excise taxes for energy products including heavy fuel oil, natural gas, electricity, and coal. In Flanders, livestock producers pay a levy on manure.

6.2. Income taxation

Farmers can calculate their taxable income on the basis of actual income or by using a valuation method *landbouwbarema*, which can be more beneficial for tax purposes. In the valuation method, profits are determined on a flat rate basis using sector averages of semi-gross profit per unit (based on surface or number of livestock in the case of pig and poultry farmers). The flat rate per unit valuations is published annually by the tax administration and are product specific. About 80% of farmers make use of this system.

There are two specific tax incentives with regard to agricultural support as far as personal income tax (PIT) is concerned. Firstly, EU direct support payments are separately taxed at the reduced rate of 12.5% and at 16.5% for other EU support measures. Secondly ,capital and interest subsidies targeted at farmers are tax exempt. Concerning corporate income tax (CIT), a reduced rate of 5% is applied to capital and interest subsidies under certain conditions (Table 6.1).

From the tax year 2019, farmers can benefit from a carry back scheme giving both companies and the self-employed the possibility to off-set losses in the current year against the profits made in the three preceding years. The measure should help to protect farmers against income loss as a result of exceptional weather conditions or strong price fluctuations in a certain year.

Table 6.1. Tax revenue foregone from taxing income from agricultural subsidies at 5%

Million EUR

	2012	2013	2014	2015	2016
Subsidies in the context of agriculture aid taxed at 5%	4.77	5.01	5.26	4.72	3.71

Note: Permanent character of the measure since 2015
Source: Federal Tax Expenditure Report 28 November 2018, http://www.lachambre.be/FLWB/PDF/54/3293/54K3293004.pdf page 49.

6.3. Property taxation

Reduced annual property taxes are charged on agricultural land in the regions. Tax is calculated on an average "cadastral" income. Tax rates range from between 1.25% to 3.97% and there are tax credits of 25% to 50% for small properties.

Regarding the transfers of family businesses and enterprises (including farms) in all regions there are complicated special regimes applied. Some regions exempt these transfers while others apply reduced tax rates. Regional governments use tax regimes to retain family enterprises and businesses in their entirety to avoid enterprises needing to be partially or totally sold, or shares needing to be sold outside the family in order to be able to pay the registration duties.

Registration duties on donations (Gift taxes) – Special regimes for the transfer of family-run businesses and enterprises. (Art 140bis – 140octies Walloon Registration Code, Art 140/1 – 140/6 Brussels Registration Code and Art 2.8.6.0.3 – 2.8.6.0.7 Flemish Tax Code)

Flemish Region: Subject to meeting several conditions, a total exemption of gift tax is applied when donations of family businesses or shares from a family enterprise are made within the extended family. The businesses must practice a real economic activity (excluding real estate holding companies) and continue activities unchanged for at least three years after the transaction. For family enterprises the capital of the donated business may not decrease and the registered office of the company may not be transferred outside the EEA.

Brussels Capital Region: Similar rules to those in the Flemish Region apply.

Walloon Region: An exemption from donation rights may be granted if the transaction fulfils a number of conditions (the donation of housing is not included in the exemption). For example in the case of the donation of agricultural land this must be transferred to the farmer's spouse or to a descendant (and not to all members of the family). In the case of an actively farmed farm, this can be donated to any person and it is possible to transfer land, stocks, livestock, equipment and farm buildings. All donations and inheritance are tax exempt.

To maintain the benefits of the exemption, the business must: continue its activities for at least five years after the date of the donation agreement; not reduce employment by more than 25% nor reduce the capital of the enterprise during the same period; and maintain a registered office within the EEA.

Inheritance tax – Special provisions for family businesses and enterprises. (Art 60bis Walloon Registration Code, Art 60bis – 60quater Brussels Registration Code and Art 2.7.4.2.2 – 2.7.4.2.4 Flemish Tax Code)

Flemish Region: For inheritance taxes a virtually identical regime to the transfer by donation of family businesses or family enterprises exists however, there are no full exemptions granted. The inheritance tax scheme provides reduced tax rates of 3% (for full descendants and spouses) or 7% (for inheritances between all other persons).

Walloon Region: A total exemption for inheritance tax.

Brussels Capital Region: Applies similar rules and rates to those in the Flemish Region for inheritances.

Registration duties on rental agreements involving agricultural land or agricultural buildings.

When a farmer rents agricultural land or buildings from an owner they must pay the normal registration duty of 0.2% of the value of the accumulated rents. For open-ended contracts, the tax is levied on the value of 10 years of accumulated rents, regardless of the duration of the contract. A special increased tariff of 1.5% is applicable if the renting agreement concerns fishing or hunting grounds.

Registration duties (Sales duty) on barter trades of land between farmers and agricultural enterprises. (Art 72 Walloon and Brussels Registration Code and Art 2.9.4.2.8 Flemish Tax Code).

When the value of the land is similar an exemption from the sales duty is granted on barter trade of land between farmers and only a small lump-sum registration duty of EUR 50 is levied. If the value of the land is not the same, then the ordinary sales rights apply on the excess. If the value of the excess is less than 25% of the value of the property with the lowest value, a lower rate of 6% applies on the excess.

6.4. Tax on goods and services

Apart from specific excise duties, Belgium applies a value added tax. The standard VAT rate is 21%, but reduced rates of 6% and 12% apply for certain goods and services.

Non-VAT registered farmers can use the flat rate VAT scheme charging 6% on their goods and services to compensate for paying VAT on inputs.

The main excise duty exemption regards energy products i.e. gas oil, kerosene, heavy fuel oil, LPG, natural gas, electricity, coal, coke or lignite used strictly and exclusively in agricultural, horticultural or piscicultural works and in forestry.

Taxes on hunting and fishing permits apply in the Flemish Region and in the Walloon Region whereas in the Brussels Capital Region a levy on the delivery of fishing permits exists. In all cases lump sum tariffs apply.

Contributions to the budgetary fund for the health and the quality of animals and animal products (more commonly known as the Sanitel-levy) are collected on behalf of the Public Health Department. The proceedings from the levy are used for actions aimed at the prevention of animal diseases, disease and disease outbreak control, support for farmers that have an animal disease outbreak, and specific research. Farmers who produce certain animals or animal products (cattle, pigs, poultry and eggs, sheep, goats and cervids, and dairy) are required to pay contributions. There are five different species-based tax regimes each with a different tax base, tariff scheme and possible exemptions.

Contribution for the protection of plant variety rights is due by farmers who invented, discovered or created a new plant variety, and who seek to protect their invention with a patent-like instrument.

All parties involved in the global food chain are required to pay a yearly levy. The levy is used to finance the services provided by the food safety fund such as extensive controls to safeguard and protect the safety of food products intended for human consumption.

Agricultural vehicles are exempt from traffic taxes, i.e. a tax on traffic circulation and a kilometre levy.

6.5. Environmental taxes

Most environmental taxes are not specific to the agricultural sector. A notable exception to this is the tax on manure. More common however, the general tax rules are in principle applicable to agricultural enterprises but with sector-adjusted provisions i.e. exemptions or reduced tax base calculation methods.

Tax on water pollution (Law against water pollution of 26/03/1971, Flemish Decree on measures concerning underground water of 24/01/1984, Art. 252-316 of the Walloon Water Code).

Flemish Region: Agricultural enterprises are mostly subject to an agriculture-specific-adjusted-flat rate tax system in which the total amount of the tax due equals the number of pollution units multiplied by a fixed rate (amount in EUR per pollution unit). The number of pollution units are estimated based on the different activities for which the water was used. The origin of the water has no influence on the tariff (underground water, surface water, rainwater).

An additional levy on the extraction of underground water is due by agricultural enterprises abstracting more than 500m³ each year.

Walloon Region: The agricultural tax system is based on the environmental burden generated by the farm and takes into account:

- The number of livestock held or environmental charges generated by run-off from on-farm livestock effluent storage facilities that reach groundwater and surface water.
- Cultivation activities that generate, through the application of nitrogen fertilisers and the use of phytosanitary products, damage to the aquatic resource.

The tax on environmental charges is determined by applying an environmental coefficient to the areas of crops and grasslands and livestock. A levy contribution is also applied to farms with more than 3 000m³ of groundwater (wells). Farms liable for the tax on environmental charges are exempt from cost-truth-remediation (CVA) on the volumes of water consumed, with the exception of the volume equal to the presumed water consumption of the household, i.e. 90 m³.

The levy on manure is charged on the amount of manure produced by farms because of the heavy pollution this waste substance can cause to surface and non-surface waters. This tax is a regional tax. Since 2006 the Flemish government has implemented a system which allows a certain fixed amount of manure to be discharged by each agricultural company free of charge. Administrative fines are applicable to those who exceed their allowable discharge limits. In the Walloon and Brussels Capital Region no manure levy exists.

Packaging levy (Art. 370-375 Law of 16/07/1993). A specific packing levy is charged to a certain segment of the food industry for individual packaged beverages. There are two tariffs: one for non-reusable packaging and a levy for reusable packaging, which is significantly lower.

6.6. Tax incentives for R&D and innovation

There are tax incentives for R&D in Belgium but these are not agriculture specific.

6.7. Other taxes

In general, all social security contribution schemes for self-employed persons apply equally to the agricultural sector as to other sectors. However, some specific schemes, such as the "assisting spouse" regime might be more frequently applied in the agricultural sector. Under this scheme depending on the age of the "assisted spouse", full social coverage or only sickness risks coverage is granted at reduced contribution rates. Also of relevance to the agricultural sector are the reduced contributions available for new entrepreneurs for up to three years.

Temporary reductions or advantageous payment facilities for social security contributions can be granted to the agricultural sector in circumstances such abnormal weather conditions, or trade measures impacting exports (i.e. the Russian fruit embargo) or specific food safety crises.

In the agriculture and horticultural sectors there is a specific social contribution regime of presumptive daily wages for occasional labour. The tax base is a (lower) daily wage instead of the actual remuneration limited to a maximum number of days work.

There is a conditional exemption to filing obligations for labour in agriculture undertaking the following activities: planting hop plants, picking hops and tobacco, and cleaning and sorting wicker. The exemption applies to a maximum of 25 labour days per year for employees during specified periods.

Chapter 7. Canada

This chapter contains a description of tax provisions applied to agriculture in 2019, unless otherwise specified. They include taxes on income and profit, property, good and services, environmental taxes, and tax incentives for R&D and innovation.

7.1. Overview

The Canadian federal government levies income tax and sales tax on corporations, consumption and customs. At the sub-national level, the provinces levy purchase tax, land and property taxes and also income tax. Through agreements with the federal government provincial and territorial governments (with the exception of the province of Quebec[1]) use federally-defined personal and corporate income tax bases. Municipalities, local school authorities and some special purpose authorities are allowed to levy taxes; however, this is normally limited to property taxes.

In Canada, agriculture and agri-food businesses are subject to a combination of federal and provincial income taxes, federal and provincial sales and excise taxes, and provincial and municipal property taxes. Tax rates, exemptions and deductions on agricultural land vary from province to province.

Special tax treatment, not available for non-farm and fishing businesses, exists for the agriculture sector. Special tax provisions to the agricultural sector include: permitting cash accounting and annual income tax payments (rather than quarterly); providing for certain farm losses to be claimed against all income and carried forward over 20 years; averaging taxable income by adding the value of inventory to income; allowing the deduction of certain capital expenditures or shares of a qualifying farm corporation; exempting capital gains taxes on a portion of the income generated from selling a farm to descendants; deferring any remaining capital gains tax where such farm or shares are transferred to a child; and averaging capital gains income from the farm transfer over a number of years. Property taxes applied by the provinces to farmland and farm buildings are reduced, as are the provincial fuel taxes and carbon taxes levied on farmers.

The income of indigenous people earned on a reserve is in some cases exempt from tax, this includes farming income. Eligibility for this tax exemption is set out in the Indian Act.

7.2. Income taxation

Income tax rates for farms and agri-food businesses vary depending on how the business is organised. Farms and agri-businesses can be either unincorporated or incorporated businesses. There are no differences in the federal income tax rate for income from farm businesses and non-farm businesses. However, there are special federal provisions for calculating farm business income that are not available for non-farm businesses.

Taxation of farming businesses

Income tax rates

Income earned in Canada by individuals from every type of unincorporated business (such as sole proprietorships, joint ventures and partnerships) is subject to the progressive federal as well as provincial and/or territorial personal income tax rates that apply to all types of income earned directly by individuals (such as salary and interest income). The federal personal income tax rates that apply to income from unincorporated businesses in 2019 increase progressively from 15% to 33% of the income within each income bracket. A progressive provincial/territorial income tax also applies to income from unincorporated businesses, with 2019 rates ranging across provinces from 4% for the lowest tax bracket to 21% for the highest tax bracket. The combined federal and provincial marginal personal income tax rates range from 19% to 54%.

Incorporated farm businesses pay corporate income taxes at a lower tax rate on their active business income. The federal general corporate income tax rate on business income is 15%.[2] Up to CAD 500 000[3] of annual qualifying active business income earned by a Canadian-controlled private corporation (CCPC) is subject to a lower 9% small business tax rate in 2019 (from 10% in 2018). Provinces and territories also have a general and a small business corporate income tax rate – their general 2019 rate ranges from 11.5% to 16% applicable to all sources of corporate income, and their 2019 small business rate ranges from 0% to 6% up to the same federal small business limit for most provinces and territories.[4]

Business income computational rules

Cash accounting: Farmers (and fishers) have the option to use cash accounting for income tax reporting whereas other businesses are generally required to use the accrual method of accounting for tax reporting (i.e. revenues are declared when earned, and expenses claimed when incurred). Cash accounting recognises revenues and expenses at the time cash is actually received or paid which gives farmers flexibility on when to report revenues and expenses for tax purposes.

Mandatory Inventory Adjustments and Optional Inventory Adjustment (also called Flexible Inventory Provision) are income smoothing mechanisms which allow cash basis accounting farmers to add their inventory to the income they report for tax purposes. Mandatory inventory adjustments are required when a year results in a net loss through the purchase of inventory. If this occurs, farmers are required to add the lesser of the value of purchased inventory or the amount of the loss to income. Optional inventory adjustments can be used to increase the net income in a low-income year to take advantage of non-refundable tax credits, thereby averaging income between years and lowering overall tax liability in future years due to the progressivity in the tax structure. It also allows farmers to avoid creating losses that would be subject to time limitations if carried forward. The value of inventory (based on fair market value) added to income in one year must be deducted in the following year.

Income deductions: Capital Cost Allowance (CCA) is the tax term for the accounting concept of depreciation. It is available in respect of depreciable capital assets of all businesses (including farming). When a farmer buys fixed assets such as machinery, equipment or buildings (excluding land), a portion of the capital cost is deductible as CCA each year. The CCA rates for asset classes are set out in the Income Tax Regulations. The maximum amount of CCA for a given year is not required to be claimed. Instead any amount, from zero to the maximum, can be claimed.

A temporary accelerated capital cost allowance measure was introduced by the federal government in 2018 for businesses of all sizes, across all sectors of the economy. This general measure allows up to three times the usual first-year allowance for most types of capital assets acquired after 20 November 2018 and before 2028. An even greater allowance is available for machinery and equipment used primarily in Canada for the manufacturing or processing of goods for sale (e.g. food processing) and for specified clean energy equipment. These assets are eligible for a full write-off in the year of acquisition. Both the general measure and the more specific measures are subject to a phase-out beginning in 2024. By allowing a substantially faster write-off of eligible investments than the usual declining-balance rate as set by the CCA regulations, these measures defer taxes and allow businesses to recover the cost of capital assets more quickly.

Businesses, including farms, can deduct an allowance of up to 5% of their expenditures on intangible assets such as goodwill and franchises. Until 2017, 75% of such expenditures were added to a corporation's eligible capital property. Since 2017, such expenditures are

added to class 14.1 of depreciable capital property. In Canada, quota qualifies as expenditure for class 14.1 depreciable properties and as such an annual allowance can be deducted based on its cost.

Deduction of Certain Capital Expenditures — the costs of capital expenditures for improvements (clearing and levelling land, laying tile drainage, etc.) can be distributed over a number of years because the resulting benefits are realised over an extended period of time. Farmers can also deduct some pre-production expenses associated with vineyards and orchards.

Restricted Farm Losses (RFLs) — if farming is not the main source of income and the farm generates a loss, only a portion of this farm loss can be claimed each year against non-farming income and the remaining loss is the "restricted farm loss". The restricted farm loss can be carried forward 20 years and back three years and can be deducted against any farm income in those years. If farm losses exceed CAD 32 500, farmers can apply a farm loss deduction of up to CAD 17 500 against other income and carry forward the restricted farm losses. Part of the RFLs could be applied against any capital gain farmers have when they sell their farmland if these RFLs were incurred in farming and could not be deducted in previous years. In the case of reducing capital gains, farmers may use RFLs to reduce capital gain to zero from selling farmland. An RFL cannot be used to create or increase a capital loss from selling farmland. The amount of RFLs that farmers can apply cannot be more than the property taxes and the interest on money they borrowed to buy the farmland that were included in the calculation of the RFLs for each year.

Income tax instalments

Unlike other self-employed individuals, self-employed farmers and fishers (including individual farmers and fishers operating through a partnership) are exempt from making quarterly federal and provincial income tax instalments. In general terms, if the chief source of self-employment income is from farming or fishing, the individual has to make only one instalment payment per year by 31 December of the current year of two-thirds of the estimated amount of tax payable for the year, with the remainder having to be paid by April of the following year.

In general terms, incorporated farmers and fishers have to pay monthly income tax instalments, but eligible small Canadian-controlled private corporations (CCPCs) may qualify for quarterly instalments.

Selected issues

Tax on dividend distributions from incorporated farming businesses

Dividends received by an individual from an incorporated farming business are subject to the same treatment as other types of corporate dividends. In general terms, the individual must include in income a proxy for the pre-tax profits of the corporation and then claim a tax credit in recognition of the corporate-level tax. This so-called "integration" mechanism aims to tax the individual in a manner similar to the way he or she would be taxed if the corporate income had been earned directly by the individual.

Tax on split income

The tax on split income (TOSI) rules are designed to prevent high-earning individuals from splitting their income with their children and family members to reduce their personal income tax otherwise payable.[5] Under the long-standing TOSI rules, an individual under 18 years is subject to the highest marginal tax rate (currently 33%) on split income, which

includes certain taxable dividends, taxable capital gains and income from partnerships or trusts. The TOSI rules have been expanded, effective in 2018, to in general apply where an individual over 17 years receives dividend or interest income from a corporation, or realises a capital gain (other than from a qualified farm or fishing property), and a related individual is either actively engaged in the business of the corporation or holds a significant amount of equity (with at least 10% of the value) in the corporation.

Capital gains exemption for farmers and fishers

A Lifetime Capital Gains Deduction (LCGD)[6] is available to farmers, fishers and owners of small business corporations. The LCGD provides an exemption from tax on a portion of any capital gains realised on the disposition of eligible property, including farm property and shares of a farm corporation. The purpose is, in part, to help farmers and small business owners save for their retirement. A small business owner qualifies for an LCGD of CAD 866 912 in 2019, whereas farmers disposing of their farm property (e.g. agricultural land, buildings, equipment, quota or shares in a family farm corporation) can claim an LCGD of up to CAD 1 million. The LCGD is applied on an individual basis so that each farmer is allowed an exemption up to the limit of CAD 1 million.

Capital gains deferral on intergenerational transfers of farming business

Farmers are entitled to a tax deferral on the transfer of their farming business to a child thereby avoiding the immediate tax on capital gains.[7] This rule permits the farmer to elect to transfer the property at any amount between its cost base (the cost of the property plus any expenses to acquire it, such as commissions and legal fees) and its fair market value at the time of the transfer.

Capital gains reserve

Farmers are entitled to claim a capital gains reserve over a ten-year period where the proceeds of disposition, such as a transfer of farm property, shares of a farm corporation, or small business corporation shares, have not been fully received and the property has been transferred to the farmer's child.[8] The ten-year reserve allows farmers to average capital gains income from the farm transfer over a number of years and allows the child an extended time to pay for the farm. A minimum of 10% of the taxable portion of the gain must be brought into income each year. Should there be transfers of a family farm business to persons other than a child (e.g. a nephew, niece, or unrelated person) the farmer may claim a capital gain reserve over a five-year period if the proceeds of disposition are not all receivable in the year of the sale. Under the five-year capital gains reserve, a minimum of 20% of the taxable portion of the gain must be brought into income each year.

7.3. Property taxation

No inheritance tax is levied on the beneficiaries. The estate pays any tax that is owed to the government. When a person die, his/her legal representative needs to file the final tax return to the Canada Revenue Agency (CRA) and pay any tax owed up until the point of death. This includes taxes on some of the assets the person owes, such as car, cottage and certain types of investments.

Annual property (land and buildings) taxes are levied only by local authorities and municipalities (and provinces in some cases) and are used to fund services (water, sewage, solid waste, transit, roads, police, fire protection, etc.) provided to residents. Property taxes are also used to fund primary and secondary education in most provinces. The characteristics of these taxes vary widely. Property taxes are a benefit-based tax and are set

to capture, as closely as possible, the cost of services consumed. As farms generally consume less of these services than other properties, such as residential or commercial properties, this provides a rationale for treating agricultural properties differently from other properties types.

There are a number of property tax programmes provided to the agriculture sector by each province as described in Table 7.1. These include:

- Exemptions of some properties, such as farm dwellings and farmland.
- Assessments of farm properties that are less than the fair market/actual value.
- Rebates by provincial governments on some of the taxes paid by farmers.
- Deferral (and forgiveness) of taxes due unless the use of the farmland changes to non-farm use.
- Lower maximum tax rates that can be paid by the agriculture sector.

Table 7.1. Agricultural property tax programmes in the provinces

Province	Agricultural Property Tax Programme
British Columbia	BC's agricultural land and reserve land is eligible for a 50% School Tax exemption. A wide variety of Provincial Sales Tax (PST) exemptions apply for bona fide farmers. Low assessed values given to farmland for property tax purposes. Land classified as farmland, including land associated with farm dwellings, is valued for property taxation based on schedules that prescribe values that are often significantly lower than market values. For the provincial school tax, municipal taxes and the other taxing jurisdictions that refer to the School Act, farm homes are taxable but farm buildings are 87.5% exempted. For the purpose of the provincial rural area tax, farm homes and general farm outbuildings are fully exempt. All Class 9 (Farm) properties are eligible for a 50% School Tax credit on the land value in addition to the 50% exemption that applies on taxes other than municipal and rural tax (e.g. property taxes).
Alberta	Farm land in Alberta is based on the assessed productive value of the farmland (i.e. based on the land's ability to produce income from the growing of crops and/or the raising of livestock). The municipality sets property tax rates, which differ for different assessment classes of farmland. The municipality sets property tax rates, which differ for different assessment classes of farmland. Farm buildings in rural municipalities are 100% exempt (in urban municipalities farmland is 50% exempt and over the next five years will be transitioned up to 100%) from property taxes. Farm residences are partially exempt. This exemption is based on the assessed productive value of the fam land. For example, if the farmland is assessed at CAD 15 000 then this amount is removed from the farm residence assessment to a maximum of CAD 61 540 for the first residence and CAD 30 770 for each additional residence.
Saskatchewan	Farm residences and buildings are exempt from property taxation. The assessment value for farmland is 45% (for rangeland) and 55% (for cultivated agricultural properties) of the fair market value.
Manitoba	Property taxes for farm properties are calculated on 26% of their fair market value (45% for residential property). The Farmland School Tax Rebate (FSTR) provides Manitoba farmlandowners with an 80% rebate in 2018 (up from 33% in 2004) on school taxes. Landowner cannot receive rebates of more than CAD 5 000.
Ontario	Eligible farm property (including farmland and associated outbuildings placed in the farm property class) are taxed at 25% of the municipal residential tax rate. Farm property is assessed at market value.
Quebec	Refunds of about on average 78% for municipal property and school property taxes are granted in Quebec. Under the Quebec Municipal Taxation Act, agricultural land is valued according to its market value and farm buildings are valued at their true value, generally using the cost method. For the purpose of school taxes, the taxable value of registered land situated in an agricultural zone is limited to CAD 375 per hectare. The refunds are available for registered farm properties (farmland and/or outbuildings) that meet the environmental performance and income criteria (gross sales are greater than CAD 5 000 and minimum income of CAD 8 per CAD 100 of property assessment).
New Brunswick	Deferral of the provincial property tax of CAD 12 173 per CAD 100 of the assessed value as well as the portion of the local/municipal tax rate that is above the average Local Service District (LSD) tax rate for the province. This deferral is available for registered farm property (farmland and/or outbuildings) under the Farm Land Identification Program. If the property use changes from farming to other uses (i.e. property is deregistered or withdrawn from the programme), deferred taxes for the previous 15 years together with associated interest becomes due and payable. All residences that are owner-occupied are not subject to provincial property taxes.
Nova Scotia	Farm land is exempted from taxes. Farm buildings are assessed based on market value and taxed at a 'resource rate', while farm residences are assessed on the basis of market value and taxed at a 'residential rate'.

Province	Agricultural Property Tax Programme
Prince Edward Island	Farm land is assessed on the basis of its productive value and not at market value (the assessment is often less than 50% of the agricultural market value).
Newfoundland and Labrador	Exemptions from property taxes for productive farmland and farm building under the Real Property Tax Exemption Program for Agricultural Land in accordance with the *Municipalities Act*. It may apply to individuals who are productively using agricultural land, whether it is owned, leased or rented.

7.4. Tax on goods and services

In Canada, a sales tax is applied to the retail price of the purchased good at both the federal (the Goods and Services Tax (GST)) and the provincial levels (the Provincial Sale Tax (PST)). The federal GST is 5%, while each province (except Alberta) applies their own PST.

Five of the ten Canadian provinces (Newfoundland and Labrador, Prince Edward Island, Nova Scotia, New Brunswick and Ontario) have entered into agreements with the federal government and implemented a Harmonised Sales Tax (HST). The HST is composed of the federal GST of 5% and the provincial component. The HST is applied to the same base of goods and services as the federal GST base, with some exceptions, which differ across provinces. The HST is administered by the federal government, and as a result, businesses collect one tax and remit and report to one government agency.

Zero GST is applied to most agricultural commodities. This means that the farm business does not collect GST on those sales but can still recover the GST they paid on the inputs to those sales. However, for many inputs purchased exclusively by farmers (farm machinery and equipment, fertiliser, pesticides, etc.) there is no GST. No GST is payable either when they are purchased (inputs) or when they are sold (outputs). There are varying exemptions for production goods among the provinces.

Fuel tax – Both federal and provincial taxes apply to fuel. The federal excise tax rate is CAD 0.10 per litre on gasoline and CAD 0.04 per litre on diesel for all users, including farmers. However, each province levies its own taxes on gasoline, diesel, and propane, but farmers generally do not pay the provincial taxes on these fuels (Table 8.2). The methods of exemption and rebates vary from province to province.[9] Typically, diesel fuel is dyed and farmers are exempt from the tax at the time of purchase, while gasoline is kept clear and farmers apply for a tax rebate after purchase. Farmers can only use coloured fuel in off-road situations, and usage is not lawfully permitted for use in road licensed vehicles. Farmers are exempted from the provincial tax on propane; in some provinces it must be paid if it is used for automotive purposes. In each province, the farmer must apply to the provincial government for a tax exemption card or permit, which enables the farmer to purchase coloured fuel tax-free, and apply for a tax rebate on gasoline. Indigenous individuals who are registered under the Indian Act and Indigenous communities may use coloured fuel in licensed vehicles where the fuel is acquired on a reserve.

Carbon Levy – in June 2018 Canada enacted its Greenhouse Gas Polluting Pricing Act (GGGPA) to meet its greenhouse gas (GHG) emissions reduction targets. Provinces are able to choose to continue with their own carbon pollution pricing system, or from 1 April or 1 July 2019, the federal pricing system will apply in provinces without a provincial carbon levy involving charges on fossil fuels. The federal pricing will start at CAD 20 per tonne of carbon dioxide equivalent (CO_2e) emissions in 2019 increasing to CAD 50 per tonne of CO_2e by 2022 and beyond unless specified. Under the GGGPA farmers will be exempt from the fuel charges for fuels used in tractors, trucks and other farm machinery via an exemption certificate when certain conditions are met.

Table 7.2 provides a summary of the federal and provincial fuel excise taxes and includes the carbon levy for each province.

Table 7.2. Federal and provincial fuel excise taxes, including carbon tax, as of 1 July 2019

CAD cents per litre

Province	Carbon pricing scheme	Unleaded gasoline	Carbon tax on unleaded gasoline	Diesel	Carbon tax on diesel	Propane	Carbon tax on propane
Newfoundland and Labrador[1]	Carbon levy CAD 20 per tonne of CO2e (2019)	16.5	4.42	16.5	5.37	7	
Prince Edward Island	Carbon levy	13.1	4.42 (2019) 6.63 (2020)	20.2	5.37 (2019) 8.05 (2020)	0	Exempt
Nova Scotia	Cap and trade in place since 2019	15.5		15.4		7	
New Brunswick[2]	Carbon levy in place since 2019	15.5	4.42 (2019) 11.05 (2022)	21.5	5.37 (2019) 13.41 (2022)	6.7	3.10 (2019) 7.74 (2022)
Quebec	Cap and trade in place since (2013)	19.2		20.2		0	
Ontario[2]	Carbon levy (disputing at the court of appeal)	14.7	4.42 (2019) 11.05 (2022)	14.3	5.37 (2019) 13.41 (2022)	4.3	3.10 (2019) 7.74 (2022)
Manitoba[2]	Carbon levy in place since 2019	14	4.42 (2019) 11.05 (2022)	14	5.37 (2019) 13.41 (2022)	3	3.10 (2019) 7.74 (2022)
Saskatchewan[2]	Carbon levy (disputing at the court of appeal)	15	4.42 (2019) 11.05 (2022)	15	5.37 (2019) 13.41 (2022)	9	3.10 (2019) 7.74 (2022)
Alberta	Carbon levy in place since 2007 CAD 30 per tonne of CO2e (2018)	13	6.73 (2019)	13	8.03 (2019)	9.4	4.62 (2019)
British Columbia[3]	Carbon levy in place since 2008 CAD 40 per tonne of CO2e (2019) increasing to CAD 50 (2021)	14.5	7.78[4]	15.0	8.95	2.7	5.39
Yukon[5]	Carbon levy in place since 2019	6.2	4.42 (2019) 11.05 (2022)	7.2	5.37 (2019) 13.41 (2022)	0	3.10 (2019) 7.74 (2022)
North West Territories[6]	Carbon levy in place since 2019	10.7/ 6.4	4.42 (2019) 11.05 (2022)	9.1	5.37 (2019) 13.41 (2022)	0	3.10 (2019) 7.74 (2022)
Nunavut[5]	Carbon levy in place since 2019	6.4	4.42 (2019) 11.05 (2022)	9.1	5.37 (2019) 13.41 (2022)	0	3.10 (2019) 7.74 (2022)
Canada's Federal tax		10		4		0	

Notes: 1. Source: www.releases.gov.nl.ca/releases/2018/mae/1023n01.aspx
2. Implemented on 1 April 2019 Source: https://www.fin.gc.ca/n18/data/18-097_1-eng.asp
3. Fuel tax rates and carbon levy rates in British Columbia vary by region. The values in the table are the rates for regions except Vancouver Area and Victoria Area, which apply rates that are significantly higher.
4. In British Columbia, eligible commercial greenhouse growers can apply for a grant equal to 80% of the carbon levy paid on their purchases of natural gas and propane consumed for heating and producing CO_2 for greenhouses. Source : www2.gov.bc.ca/gov/content/industry/agriculture-seafood/programs/greenhouse-carbon-tax-relief-grant
5. Implemented on 1 July 2019. Source: www.fin.gc.ca/n18/data/18-097_1-eng.asp; www.fin.gc.ca/n18/data/18-097_1-eng.asp 6.
6. In the Northwest Territories, gasoline is taxed at CAD 6.4 cents per litre in communities not served by a highway system.

7.5. Environmental taxes

There are tax provisions used to improve the environmental impact of agriculture-related activities at the federal level but a number of provinces also have tax provisions. For instance in Quebec the agricultural property tax credit programmes includes a cross-compliance measure to address phosphorus balance.

Farmland Easement Agreement (FEA) are private, legal contracts that are negotiated between willing property owners and a qualified easement-holding organisation (e.g. Land Trust) to ensure their farmland will never be converted to urban development or some other non-agricultural use in the future.[10] FEAs can impact property values. An appraisal is conducted as part of the easement process to measure any potential reduction in market value that may be caused by the FEA. If there is negative impact, farm owners are compensated, in part, with a charitable tax receipt from the easement holder for the difference in value. Additional benefits such as capital gains tax reduction may also apply.

Ecological Gifts Programme (Eco-Gifts), implemented by Environment Canada, can provide significant additional tax benefits to a farm owner that protects their property with an easement agreement. The Eco-Gift Programme is geared toward the preservation of natural features like forests, wetlands and grasslands.[11]

Farmers in Ontario with natural heritage features or forested land can apply for the following tax programmes:

- Conservation Land Tax Incentive Programme (CLTIP) whereby portions of the property that have eligible natural heritage features may qualify for a 100% property tax exemption.
- Managed Forest Tax Incentive Programme (MFTIP) provides tax relief to property owners who agree to prepare and follow a Managed Forest Plan for their properties. Properties classified as Managed Forest pay 25% of the municipal tax rate set for residential properties.

7.6. Tax incentives for R&D and innovation

Both federal and provincial governments use tax incentives to support private investments in R&D by all Canadian businesses including agricultural corporations and agri-food business. The Scientific Research and Experimental Development (SR&ED) Tax Incentive Programme is the single largest federal tax assistance programme supporting business R&D in Canada[12] and is supplemented by related provincial credits for R&D. Activities eligible for the SR&ED tax incentives are: basic research, applied research, and experimental development. The tax incentives come in three forms:

- an income deduction (allowing immediate deduction of all allowable expenditures)
- an investment tax credit (which is applied to income taxes otherwise payable and are partially or fully refundable for smaller businesses)
- in certain circumstances, a refund.

Generally, a Canadian-controlled private corporation can earn an enhanced investment tax credit (ITC) of 35% for the first CAD 3 million of SR&ED expenditures carried out in Canada, and 15% on further expenditure. Other Canadian corporations, proprietorships, partnerships, and trusts can earn a basic ITC of 15% of qualified expenditures for SR&ED carried out in Canada. The provincial tax credit rates range from 3.5% in Ontario to 10% in Saskatchewan, Alberta and British Columbia and to 15% in the Atlantic Provinces, Manitoba, Yukon Territories. Quebec has differentiated their SR&ED programme into four sub-programmes that can provide tax credits of between 30% to 35.7% for large Canadian-

controlled corporations. Some provinces include limitations and the carryback/carryforward provisions for tax credits.

Mandatory check-offs or levies administered by producer organisations are used to fund research and development. Producer organisations act as agents through which member farmers can finance eligible research investments. The SR&ED tax credit is then distributed back to individual farmers. While the Canadian Beef Cattle Check-Off has a mandatory levy it has no implications for tax credits.[13] However, the Western Wheat & Barley Check-off is eligible for a tax credit through the SR&ED programme, provided that no refund is requested. The maximum for these ITC, federally, depends on the farm's legal status and the amount of qualified expenditures for SR&ED carried out in Canada.

The eligibility of a producer organisation to receive the SR&ED tax credit is a good fit for the agricultural sector, since very few farm operations are in a position to initiate or fund their own research projects. Also, advances in agricultural research are likely to have spill-over benefits for other farmers (especially those belonging to same commodity sector). Tax incentives are not widely used by farms and agri-food companies and the SR&ED programme is more attractive to larger firms.

7.7. Other taxes

Taxes and Social Contributions on Labour Employees - Businesses are required to deduct employee' income taxes and social contributions from employees' pay cheques and remit those, to the Canadian Revenue Agency. Other mandatory deductions include Canada Pension Plan (CPP) contributions, Employment Insurance (EI) premiums, and other provincial specific taxes or contributions. Both employment income and income from self-employment are taxed the same. However, self-employed individuals are exempt from EI contributions.

There are no specific income or tax provisions for agriculture labour in Canada.

Notes

[1] Quebec represents a special case allowing the local authorities to levy an independent income tax.

[2] The base federal corporate income tax rate is 38%. This rate is reduced by a 10% provincial abatement regarding provincial income (provinces may provide a corporate rate that is higher or lower than 10%), and by a 13% general tax rate reduction on qualifying income). As a result, the net federal tax rate for corporations is 15%. A special tax rate regime applies to investment income earned by Canadian-controlled private corporations: such income is subject to a partly refundable federal corporate tax which, combined with the provincial corporate income tax, seeks to prevent individuals from deferring personal income tax on such income.

[3] This limit can be reduced where the corporation and its associated group members have total capital or certain types of investment income that exceed certain limits. The investment income factor is a new constraint that applies as of 2019.

[4] The business limit in Saskatchewan is CAD 600 000.

[5] Source: www.canada.ca/en/revenue-agency/programs/about-canada-revenue-agency-cra/federal-government-budgets/income-sprinkling/frequently-asked-questions-income-sprinkling.html.

[6] Source: www.canada.ca/en/department-finance/news/2017/10/backgrounder_supportforfarmingandfarmfamilies.html.

[7] For these purposes a child is defined to include the taxpayer's child, grandchild, great grandchild, and minors within the taxpayer's custody who rely on the taxpayer for support.

[8] The same broad definition of child noted above applies for these purposes.

[9] For example: in Quebec, the provincial tax is 100% refunded for farmers. In Alberta eligible farmers receive a partial exemption from the fuel tax of CAD 0.09 per litre on both marked diesel and marked gasoline and therefore paying effectively CAD 0.04 per litre. Eligible farmers are fully exempt from the provincial tax on propane and aviation fuel used for farming purposes.

[10] Source: https://farmlandagreements.ca/farmland-agreements/protecting-your-farm/tax-benefits-and-implications/

[11] Source: https://www.ec.gc.ca/pde-egp/default.asp?lang=En&n=52A624CF.

[12] Source: https://www.canada.ca/en/revenue-agency/services/scientific-research-experimental-development-tax-incentive-program.html.

[13] However, this may change in the future as the Saskatchewan Cattlemen's Association is investigating the feasibility of claiming the Scientific Research and Experimental Development tax incentive. See the SCA Producer Handbook at: www.saskbeef.com.

Chapter 8. Chile

This chapter contains a description of tax provisions applied to agriculture in 2019, unless otherwise specified. They include taxes on income and profit, property, good and services, environmental taxes, and tax incentives for R&D and innovation.

8.1. Overview

Agriculture is a significant sector of Chile's economy and accounts for 2.9% of GDP and 9.3% of employment. The proportion of land used for agriculture is around 21% (i.e. the sum of annual and permanent crops; planted, permanent and rotational meadows; fallow and resting lands; and natural and improved pastures).

For tax purposes the sector is largely treated the same as other economic activities although farmers (as well as miners and transporters) with annual incomes below a certain low threshold are allowed to calculate taxable income on a presumed income and are not required to keep accounts. Annual property taxes on farmland are levied at a lower tax rate than other real estate (1% instead of 1.4%) on the value of the agricultural land assessed by the Internal Revenue Service rather than its market value.

8.2. Income taxation

Taxpayers who exploit agricultural land are subject to the general regime of the Income Tax Law (LIR) and therefore, the same First Category Tax (FCT) rates that affect all taxpayers are applied. Tax rates are 25% for taxpayers in the fully integrated system (i.e. tax is charged on income regardless of whether dividends are distributed) or 27% if taxpayers choose the partially integrated system (i.e. income is taxed only if dividends are distributed).

As a general rule under the LIR taxpayers must declare their activity's taxable income based on accounts. However, Article 34 of the LIR establishes that taxpayers whose activity is the exploitation of agricultural land, mining, or transporting cargo or passengers, may choose to pay the FCT on the basis of a presumed income, thereby they are released from the obligation of having to keep accounts.

To benefit from this regime, farmers must meet the following requirements:

- sales or annual net income of the first category must be below UTM[1] 9 000 (using the 2019 value of UTM, this is approximately CLP 432 000 or USD 640 000 per annum)
- be natural persons who act as natural entrepreneurs, individual limited liability companies, communities, cooperatives, partnerships and stock companies, made up of individuals.

In addition, natural persons, owners of agricultural land, and members natural persons of companies that exploit agricultural land (as shareholders), are subject to the Global Complementary Tax with progressive rates for income brackets, or the Additional Tax, with a rate of 35%, if they lack residence or domicile in Chile.

8.3. Property taxation

There is an annual Territorial Tax of 1.4% levied on the official valuation of real estate. Farming properties are usually charged a lower tax rate of 1% applied to the assessed value of the agricultural land.

However for the four year period, from 1 January 2016 until 31 December 2019, the tax rate charged on agricultural real estate will be 0.86% (instead of 1%) due to a mechanism stipulated in the law that prevents increases of more of 10% of the tax to be paid arising from the appraisal of the value of land. Appraisals are undertaken every four years by the Internal Revenue Service, as explained below.

In accordance with Law No. 17.235, under the Territorial Tax, the Internal Revenue Service must appraise the value of agricultural land every four years. The appraisal of this land is determined by multiplying its surface according to its soil class (in hectares) by the unit value that corresponds to it (CLP/ha). This sum is then reduced by a percentage deduction according to the farm's location, i.e. its distance from supply centres and services. In the event whereby one farm is made up of different soil types, prior to adjusting its appraisal value by its location, the assessed values of the different surfaces are added together according to their respective soil class unit value.

There are no transfer taxes in Chile currently levied on the sale of real estate, whether agricultural or non-agricultural.

8.4. Tax on goods and services

A standard value added tax (VAT) of 19% is charged on all goods and services. However, not all services are subject to VAT in Chile, including services that are directly related to agricultural activity.

Energy taxes apply on petrol and diesel oil used by land transport companies that transit through streets, roads and public roads. Excises taxes for petrol and diesel are levied at the time of first sale or importation on the producer or importer of the fuels. In the other sales of these products those taxes are not applied again. Exporters and people who carry out activities in which they do not use fuel to transit through streets and roads are able to recover this tax. Therefore, farmers are able to recover the specific tax on diesel oil consumed by the agricultural machinery they use in their exploitation. .

8.5. Environmental taxes

In 2017, Chile began applying a green tax on stationary sources emitting local (PM, NO, SO_2) and global (CO_2) pollutants. The tax is charged annually on the emissions produced by establishments whose fixed sources produce thermal power greater than or equal to 50 thermal megawatts, individually or as a whole. In the case of local pollutants, the tax is calculated using a formula which aims to recognise the damage generated by emissions. As a result, the tax is higher in areas with larger populations in which pollution levels are considered to be saturated or latent. For CO_2 emissions, the tax is set at CLP or USD 5 for each tonne discharged. The tax does not apply to fixed sources that use non-conventional renewable energy sources which rely primarily on biomass. There are no special rules for the agricultural sector.

8.6. Tax incentives for R&D and innovation

Chile offers a R&D tax credit for the introduction of innovation. The R&D tax credit covers 35% of companies' internal expenditures on R&D. However, there are no special rules for the agricultural sector. There is no information about the uptake by the agricultural sector of the tax credits in comparison to the industrial sector.

8.7. Other taxes

Chile does not provide any tax concessions to the agriculture sector through its social security system.

Note

[1] UTM: Monthly tax unit which is equal to CLP 48 350 in 2019 (http://www.sii.cl/valores_y_fechas/utm/utm2019.htm)

Chapter 9. Colombia

This chapter contains a description of tax provisions applied to agriculture in 2019, unless otherwise specified. They include taxes on income and profit, property, good and services, environmental taxes, and tax incentives for R&D and innovation.

9.1. Overview

Colombia imposes taxes at national level and subnational level (departmental and municipal). National taxes apply to all residents and non-residents who carry out activities in the Colombian territory. Table 9.1 provides an overview of taxes applied in Colombia.

After 50 years of armed conflict, Colombia is rebuilding its agricultural economy. There are 2.7 million farmers of which 45% live in poverty. Preferential tax treatment is available to the agricultural sector and is aimed at encouraging investment and establishing farming businesses to promote post-conflict rural development. Subsidies paid to farmers are not included as income for tax purposes and annual municipal property taxes on farmland are levied at reduced rates.

The most significant reform of the Colombian tax rules in the last 30 years took place in 2016 with the main objective being to tackle high levels of tax evasion. Reforms increased the VAT general rate, established income tax applicable to dividends, simplified individuals' taxation, and reduced corporate income tax rate to improve competitiveness. Reforms as of the end of December 2018 have resulted in changes to tax rates applicable from 1 January 2019.

Table 9.1. Overview of taxes applied in Colombia

Taxes	Description	Rates
National Taxes		
Income and capital gains tax corporate level	Income tax is imposed on profits and gains resulting from ordinary and extraordinary income. Colombian companies or entities, and permanent establishments of foreign companies are taxed on worldwide income; foreign companies are only taxed on Colombian-source income	Corporate Income Tax: 33% (2019), 32% (2020), 31% (2021), 30% (2022 and following years) Capital Gains: 10%
Individual income tax and capital gains	Residents are taxed on worldwide income; non-residents are only taxed on Colombian-source income. Income received by individuals should be separated into three baskets depending on the type of income: general (labour, capital and non-labour), pension, and dividends (interests or financial yields, rentals, royalties, etc.). Capital gains tax is levied on inheritance, gifts and the sale of fixed assets held by the taxpayer for a period of 2 years or more.	Residents: The tax rate for general and pension baskets may be 0%, 19%, 28%, 33%, 35%, 37% and 39%. For dividends basket may be 0% or 15%. Non-residents: a 35% general tax rate applies. Capital Gains: 10%
Dividends	The income tax applicable to dividends will be levied on profits generated. For resident individuals, there will be a rate of 0% or 15% depending on the amount of dividends to be paid. If the profits that are being distributed as dividends were taxed at the level of the company, the rate of 0% or 15% will be applicable when dividends are distributed to individuals deemed as residents for Colombian tax purposes. If profits distributed as dividends were not taxed at the level of the company, these profits will be taxed first at the general rate applicable in the year of distribution rate and the profit remaining after this tax will be subject to the rate mentioned above. When the taxpayer receiving the dividends is a Colombian company or a non-resident alien, either individual or company, there will be a 7.5% rate if the profits being distributed as dividends were taxed at the level of the company. If profits distributed as dividends were not taxed at the level of the company, these profits will be taxed first at the general rate applicable in the year of distribution and the profit remaining after this tax will be subject to the general 7.5% rate mentioned above.	Resident Natural Person: 0% or 15% if taxed at the level of the company the general rate Non-Resident Natural or legal Person: 7.5% Legal Person: 7.5% In every case, if not taxed at the level of the company: 33% (2019), 32% (2020), 31% (2021), 30% (2022 and following years), and then 0% or 15% or 7.5% will apply first
Sales Tax (VAT)	VAT is imposed on the sale of goods and imports and the provision of services within the Colombian territory.	Different rates apply depending on the type of service and goods: 0%, 5%, or 19%
Consumption tax	Imposed on vehicles, telecommunications, the sale of food and beverages in restaurants and similar shops, and the sale of food and alcoholic drinks in bars and discos.	4%, 8% and 16%

Taxes	Description	Rates
Financial transactions (GMF)	Imposed on financial transactions when withdrawing resources from checking, deposit or savings accounts and cashier checks.	0.4% of the value of the transaction
Wealth tax	Applicable to individuals and companies with an equity higher than COP 5 000 million (USD 1 500 million approx.) by 1st January 2019 and will be charged until 2021.	Resident natural persons and Companies: 1%
Local taxes		
Industry and commerce tax (ICA)	Levied on income derived from industrial, commercial or services activities carried out in a municipality.	From 0.2% to 1.4%
Property or real estate tax	Imposed on the ownership, usufruct or possession of real estate property. This tax is charged by the municipality where the property is located.	Between 0.1% and 3.3%
Registration tax	Imposed to documents like contracts, legal acts, bylaws and more, registered with the chambers or the Registry of Public Deeds.	Between 0.1% and 1% depending on the act.

Source: DIAN, February 2019

9.2. Income taxation

Individuals are liable to tax in Colombia in respect of their (source of) income and capital gains. Resident individuals are subject to tax on their worldwide income, whereas non-resident individuals are subject to tax only in respect of their Colombian source income. Income received by individuals is classified into three baskets depending on the activities generating the income as follows: general (labour, non-labour and capital), pension, and dividends.

With regard to capital gains, the Colombian Tax code has established a tax rate of 10% which is applied to gains from the liquidation of a company, selling business assets held by the taxpayer for a period of two years or more and gains derived from inheritances, legacies, donations, life insurance and spousal forced shares.

Farmers and agro-food companies are subject to the general income taxation system. However, there is a special way to calculate taxable income derived from biological assets based on the International Financial Reporting Standards and this is the method applied in Colombia. Further, agriculture enjoys a number of tax reliefs, including:

- Income derived from the sale of electrical energy generated from wind, biomass, solar or agricultural residues is exempted from income tax for a 15-year term.
- A preferential tax rate of 9% for new perennial crops cultivated before taxable year 2014. The special tax rate applies for ten years after the start of the crops' production and it is applicable to rubber, palm oil, cocoa, citrus trees and other fruit trees.
- Taxpayers who invest in agricultural companies, listed on the stock market, have the right to deduct the value of the investment as a tax credit, which may not exceed the 1% of the income tax.
- New companies established in one of the Zones Most Affected by Conflict (ZOMAC), as determined by the Colombian Government, will have temporary tax rate reliefs for a period of 10 years. Micro and small companies will have preferential rates of 0% (applied over the period 2017-21), 25% (applied 2022-24) and 50% (applied 2025-27). Medium and large companies will have preferential rates of 50% (applied over the period 2017-21) and 75% (applied 2022-27). Farmers and agro-food companies will benefit from this tax incentive because most of the zones affected by conflict are rural and, therefore, a big part of the new companies established will develop agricultural activities.

- Coffee growers have a deemed tax basis for labour costs equivalent to 40% of the taxable income obtained by the coffee grower (which is a tax deductible cost).
- Payments made for the purchase of goods or products from agriculture origin made through the Colombian Mercantile Exchange, will not be subject to withholding tax, independent of the value.
- Subsidies and incentives paid to farmers by the government as part of the programme Rural Capitalization Incentive (ICR) are not considered taxable income.
- Taxpayers are able to deduct from their income tax the VAT paid for productive real fixed assets used in agricultural or industrial production.
- Income derived from investments that increase the production of the agriculture sector is exempt from income tax for the following ten years. One of the requirements to apply this exemption is a minimum investment of 25 000 tax value units (equivalent to USD 260 000 approx.)

9.3. Property taxation

The ownership, as well as the usufruct, of real estate (referred to in domestic law as immovable property) is subject to an annual real estate tax, which is levied by the municipality or the district where the property is located. In most cases, the tax base is the property's official valuation (*avalúo catastral*), however, certain municipalities have introduced a self-assessment system for real estate tax. Each municipality or district sets its own real estate tax rate between 0.1% and 3.3%, depending on the location and use of the property.

The tax rate for small rural property used for cattle or agriculture must only be between 0.1% and 1.6%.

Transfers of property by gifts, inheritance or sale may generate capital gains, which fall under income taxation as described above.

The transfer of fixed rural assets, new or used, intend to agricultural activity are not subject to the immovable national consumption tax, which is levied at a general rate of 2% on transfers which value exceed 26 800 tax value units (equivalent to USD 280 000 approx.).

9.4. Tax on goods and services

Value Added Tax (IVA) taxes apply to the sale of tangible goods, immovable property and intangibles related to industrial property, which have not been excluded from tax by law. VAT taxes also apply to the provision of services within the national territory and the importation of tangible goods that have not been excluded by law. The taxpayer can credit against the VAT payable, the VAT paid on goods and services purchased for the production of the goods or services provided.

The general rate is 19%. However, some goods and services benefit from lower IVA rates of 5% (processed coffee, corn and rice for industrial use, cotton) and some are excluded altogether (non-processed coffee, seeds, energy). No IVA is charged on the majority of farm inputs and agriculture outputs (both, domestically produced and imported).

9.5. Environmental taxes

There are no tax incentives to encourage the provision of environmental goods. However, companies who invest in preserving the environment or in mitigating the environmental impact of their activities have the right to discount 25% of their investment as a tax credit

for income tax purposes. When the investment is undertaken in order to comply with environmental regulations, companies do not benefit from the discount.

The direct and indirect costs incurred by a landowner to maintain natural forest ecosystems can be deducted in the income tax return. This is in recognition of the environmental and social benefits derived from these forests.

9.6. Tax incentives for R&D and innovation

The Colombian Tax Code stipulates that taxpayers who invest in research, technological development or innovation projects, considered as such by the National Council of Tax Benefits in Science, Technology and Innovation (CNBT) are eligible to apply a 25% discount of their investment; such discount is applied directly to the due tax. This investment will also be deducted from the tax base in the taxable year in which the investment was made, what constitutes another benefit for the taxpayer. These tax benefits apply to the income tax. There is no difference on the type of taxpayer, the provision establishes that it applies to all persons, either legal or natural.

Taxpayers who make donations to research, technological development or innovation projects, considered as such by the National Council of Economic Politic and Social, can deduct the amount of the donation (with a limit) in the income tax return in the taxable year in which the investment was made.

9.7. Other taxes

In Colombia, pension savings are an obligation for all employees; the law requires each employee make a pension contribution of 16% of their monthly wage. However, the burden of this contribution is distributed between the employer (12%) and the employee (4%). When the monthly wage is over four times the current minimum monthly labour wage the employee must pay an additional rate of between 1% and 2% towards the Solidarity Fund. In the case the individual is an independent employee, they are required to assume the whole value of the contribution.

Individuals may choose between two pension regimes and may voluntarily save for their pension through a voluntary pension scheme.

Contributions made by the employer, are deductible for income tax purposes. Employees' contributions are considered exempt income for income tax purposes. The voluntary contributions made to pension funds and to the account for the promotion of construction (AFC), are exempt income. However, all contributions must not exceed 30% of the individual's annual income and in all cases, they cannot exceed 3 800 tax value units (equivalent to USD 40 000) per annum. All contributions exceeding either of these values are fully taxable.

There are no exemptions applicable to agriculture for the pension saving schemes.

Chapter 10. Costa Rica

This chapter contains a description of tax provisions applied to agriculture in 2019, unless otherwise specified. They include taxes on income and profit, property, good and services, environmental taxes, and tax incentives for R&D and innovation.

10.1. Overview

The Costa Rican tax system consists of a set of over one hundred different types of contributions, between taxes and rates, that apply both at the national and the local level. However, few of them contribute significantly to tax collection. For 2018, of the revenue projected by the Ministry of Finance, 56% comes from taxes, while the remainder comes from domestic debt financing. In order to address this, a major tax reform was implemented in July 2019 under the Law on Strengthening Public Finance (Law No. 9635) which aims to improve fiscal actions and increase revenue.

In 2018 agriculture contributed 4.6% to GDP and employed 12% of the population. Land use dedicated to agriculture accounts for 47% (in 2014) of the total land area. Farm size is on average 25.9 hectares (in 2014) and 91% of farms are owned by the farmer.

Organic producers are exempt import taxes on equipment, machinery, work vehicles and inputs used in production. For the purposes of annual property taxes the value of farmland is based on its land use and not its actual market value. Agricultural businesses can carry forward losses for longer than non-agricultural businesses.

10.2. Income taxation

The new Law No. 9635, in Title II, Article 2 makes an amendment to Article 1 of Law No. 7092, Income Tax Law, which establishes a tax on the profits of natural and legal entities and includes the collective entities without legal status. Under the previous law, these were not included. This reform does not include the income of non-residents since this tax is territorial.

Income taxation in Costa Rica is based on the concept of "income/product" where only revenue resulting from the use of productive factors is taxable. This is a territorial, schedular tax (whereby income from different sources is taxed separately) with different tax bases and rates applied by level of revenue.

A capital gains tax calculated on the difference between the value of specific equity components at two points in time entered into effect from July 2019. A rate of 15% is applied on real estate sales and investment income.

Remittances abroad of any income originating in Costa Rica are subject to tax withholdings at variable rates depending on the type of revenue. Public entities (except companies) and civil organisations (cooperatives and solidarity associations) are not subject to this contribution.

With Law No. 9635 the profits paid by the cooperatives to associates are subject to a 10% tax rate and the profits paid by the solidarity associations are taxed by progressive rates of between 5% and 10% on dividends.

Enterprises under the Free Trade Zone modality are subject to total or partial tax exemption, depending on whether they are located or not in the Expanded Greater Metropolitan Area (GAMA).

Taxes on legal entities are calculated based on a defined scale that provides the system a certain degree of progressiveness. With Law No. 9635, the scale of monthly income rates for the collection of income tax for both individuals and legal persons is expanded.

Taxes on natural persons with gainful activities are calculated based on net revenue. As a result of the latest reforms, which broaden the tax base, there are four tax brackets with tax rates of between 10% to 25% applied after a certain income threshold.

According to Article 8, sub-paragraph g) of Law No. 7092, Law on Income Taxes, when an agricultural enterprise experiences losses in a given fiscal period, these are deductible from taxes over the next five periods. The Tax Administration will determine any losses and these will be accepted provided they are duly accounted as deferred losses. This measure is not exclusive to the agriculture sector and non-agricultural enterprises can also deduct losses but only during the next three fiscal periods.

For tax purposes producers of organics receive special exemptions under Law No. 8591 "Law on the Development, Promotion and Advancement of Organic Farming". Groups of organised organic producers (GPO) registered with the Ministry of Agriculture and Livestock are exempt from the following taxes:

- Import taxes on equipment, machinery and inputs used in different stages of production and agro-industrialisation of organic farming products.
- Import taxes on work vehicles with a load capacity equal to or greater than 1.8 tonnes on the proviso that the vehicle is not sold within four years from its purchase. In the event that the vehicle is later sold to a third party not subject to similar tax exonerations, the corresponding taxes, rates and surcharges must be paid.

10.3. Property taxation

Annual property taxes are levied by municipal governments at a rate of 0.25% of the property value. The municipal government maintains a property valuation database on which it determines taxes. Law No. 9071 "Special Regulations on the Enforcement of Law No. 7509 and its Reforms for Farmlands" regulates property valuation of agricultural land which is based on the land use, not its market value. Farm land valuation takes into consideration the following variables: type of farm, land use, production, land use capacity, regularity, slope, access to roads and hydrology. This valuation methodology entered into force on 3 March 2017.

Also farmers can be eligible for a 40% reduction of the annual property taxes if they are certified by the Ministry of Agriculture and Livestock as using farming practices which manage and conserve soil. This exemption is still valid but owners of agricultural land prefer to use Law No. 9071 to value their land and apply the land tax, since both exonerations cannot be used at the same time.

Transfers of property are taxed at a rate of 1.5%. The tax base is the value that the parties specify in the title deed, however, the Tax Administration carries records of the minimum values applicable. Transfers of agricultural land are not exempt from transfer taxes.

10.4. Tax on goods and services

In July 2019, the general sales tax was replaced by a value added tax (VAT) applying to a larger range of goods and services. The standard rate of the VAT is 13% with reduced rates of 4%, 2% (applying to raw materials and machinery used for production, etc.) and 1%. The reduced rate of 1% applies to the sale and importation of goods and related services throughout the production chain of basic foodstuffs until they are available to the final consumer. In addition, 1% applies to veterinary products and agricultural and fishing inputs, with the exception of sport fishing.

Some goods and services are exempt from VAT, including goods and services for export to free trade zones and services for livestock auctions.

Law No. 8114 of July 2001 establishes a single general specific tax by fuel type, either produced locally or imported. Agricultural producers are not exempt from fuel taxes.

There are excise duties on alcoholic and non-alcoholic beverages, tobacco and on selective goods produced domestically or imported.

10.5. Environmental taxes

There are no environmental taxes in Costa Rica.

10.6. Tax incentives for R&D and innovation

Costa Rica does not offer any tax incentives to facilitate private investment for R&D or the introduction of innovation.

10.7. Other taxes

Costa Rica does not provide any tax concessions to the agriculture sector through its social security system.

Chapter 11. Croatia

This chapter contains a description of tax provisions applied to agriculture in 2019, unless otherwise specified. They include taxes on income and profit, property, good and services, environmental taxes, and tax incentives for R&D and innovation.

11.1. Overview

Croatia has approximately 1.5 million hectares of agricultural land and the sector is characterised by small scale family run farms.

The tax structure in Croatia includes both direct taxation through income taxes and corporation taxes, and indirect taxation through value added tax. In addition, there are excise duties, taxes on property and customs duties. Taxes are levied by federal, county and city or municipal levels and in some instances jointly.

There is a special provision in the personal income taxation system for the agriculture and forestry sector whereby low-income farmers are either exempt from paying income tax altogether or they are able to calculate the tax on the basis of a flat rate. Low-income farmers are not obligated to register for VAT. The purpose for this exception is to decrease the administrative burden for small producers and to facilitate the production and selling of domestic agricultural products. Farmers (and fishers) are exempt from excise duties on blue diesel fuel which significantly reduces their costs of production.

11.2. Income taxation

For personal income tax the taxpayer in the income tax system is a natural person who realises income, who inherited tax liabilities arising from the income of a deceased relative and who receives income from inherited sources of income.

Income tax is calculated and paid for the calendar year (the tax period). The tax rates are 24% for annual income of up to HRK 360 000 (since 1 January 2019) and 36% for income above that threshold. Taxpayers have a right to deduct a personal allowance of HRK 3 800. For final income (income from property, capital, insurance, refunds from social security contributions etc.), the tax rates are 12%, 24% and 36% depending on the source of income, without any personal allowance deductions.

Income from self-employment in agriculture and forestry is subject to the general tax rates. However, farmers' income is taxed only if at least one of the following conditions is met:

- In the previous calendar year, their total annual receipts agriculture and forestry activities exceeded HRK 80 500.
- They are selling processed agricultural products (e.g. wine produced from grapes).
- They are VAT registered.
- They are choosing to pay taxes.

Further, a self-employed farmer may deduct from the tax base any employment incentives, state aid for education and training, and incentives for research and development. Farmers (and all other taxpayers) from regions with difficult economic conditions can also benefit from tax reliefs (50% exemption in Group I areas and 100% exemption from personal income taxes for taxpayers from the Vukovar region).

Income from agriculture and forestry activities may be taxed on a flat rate basis if in the previous calendar year, the total annual income did not exceed HRK 300 000 and the farmer is not obliged to pay VAT.

Surtaxes on personal income tax can be levied by local government on residents, including farmers. Tax rates of up to the following amounts can be charged by the different levels of local government:

- 10% for municipalities.
- 12% for a city with up to 30 000 inhabitants.

- 15% for a city with more than 30 000 inhabitants.
- 18% for the City of Zagreb.

Profits are taxed at 12% for income up to HRK 3 million and 18% for income above this level. A farmer who conducts business through a company or who carries out agricultural activities through crafts (or equivalent activities) may be subject to profit tax.

Profit tax applies if the farmer voluntarily chooses to pay this instead of income tax, or if farmer's total receipts in the previous tax period were above HRK 3 million, or if two of the following conditions were met by the farmer:

- In the previous taxation period their income was above HRK 400 000.
- They own fixed assets worth more than HRK 2 million.
- In the previous taxation period, they employed more than 15 employees.

Farmers subject to profit tax and who carry out activities in the assisted areas (Group I areas or the City of Vukovar), benefit from lower tax rates. The amount of tax relief granted is consistent with the general EU rules on state aid.

11.3. Property taxation

The real estate transfer tax shall be paid by the purchaser of real estate when no value added tax (VAT) is paid on such transfer. In 2019 the transfer tax rate of 3% is multiplied by the tax base, which is the market value of the real estate. There are no specific provisions for farmers.

Inheritance and gift tax of 4% is charged on cash, money claims and securities, as well as movables if the market value of the movable property exceeds HRK 50 000. The taxpayer is a natural or legal person inheriting, receiving a gift or obtaining the property. There are no special provisions for farmers.

11.4. Tax on goods and services

Value added tax (VAT) rates in Croatia are the following: 25% (the standard rate); 13% (applies to seedlings and seeds, fertilisers, pesticides and other agrochemicals, animal feed (other than pet food), fresh or chilled meat, fresh or chilled sausages or similar meat products, live, fresh or chilled fish, molluscs or other aquatic invertebrates, fresh or chilled crustaceans); or 5% (applies to basic foodstuff i.e. bread and milk).

A farmer must be registered for VAT if:

- Their total annual taxable income in the previous or current calendar year exceeds HRK 300 000.
- They voluntarily opt into the VAT system (for instance because of expected higher volume of production, planned investments or the planned submission of a request for financing from EU funds).

A number of taxes are implemented in Croatia, such as the special motor vehicle tax, excise duty on electricity, excise duty on natural gas, excise duty on solid fuels.

Tax exemptions for so-called "blue diesel" fuel are in place for farmers. No excise duty (which otherwise amounts to HRK 3 060 per 1 000 litres) is charged on this fuel, which can only be used in agriculture, fisheries and aquaculture.

11.5. Environmental taxes

A number of environmental taxes and charges exist such as charges for environment pollutants, charges for the environmental impact of waste and a special environmental charge for motor vehicles. None of the environmental taxes are specific to the agricultural sector. Agricultural policy measures, including through payments, are used to incentivise the positive environmental impact of agriculture.

According to the European Commission, Croatia's revenues from environmentally-related taxes reached 3.86% of GDP in 2014. This was higher than the EU average of 2.46% and in this respect amongst EU Member States, Croatia is second only to Slovenia.

11.6. Tax incentives for R&D and innovation

Prior to the accession to the European Union, Croatia implemented state aid in the form of tax deductions for research and development projects. This tax relief was provided until the end of 2014, when it was terminated as a result of commitments undertaken during the accession negotiations.

In mid-2018, Croatia introduced the Law on State Aid for Research and Development Projects containing new tax incentives for R&D projects. The law includes the following deductions:

- 200% for fundamental research costs.
- 150% for industrial research costs.
- 125% for experimental development costs.
- 150% for feasibility study costs.

11.7. Other taxes

If farming is their sole or main occupation a farmer is obligated to pay contributions for compulsory insurance. These contributions are for pension and health insurance. This obligation also holds if the farming activity is carried out by a farmer employed elsewhere.

If the farmer employs workers, the farmer is obliged to calculate and pay contributions for retirement insurance from workers' salaries. As an employer, farmers are responsible for contributing to the employee's compulsory insurance.

Chapter 12. Czech Republic

This chapter contains a description of tax provisions applied to agriculture in 2019, unless otherwise specified. They include taxes on income and profit, property, good and services, environmental taxes, and tax incentives for R&D and innovation.

12.1. Overview

In 2017, agriculture contributed 2.4% to GDP and employment. There are 46 055 farms with a utilised agriculture area of over 3.522 million hectares. Farms of over 50 hectares account for 92% of the utilised agriculture area but represent just 16% of all farms. While only 10% of farmers in the Czech agriculture sector are a legal person, in terms of the share of cultivated land they account for 70%.

For agriculture, tax relief takes the form of a lump sum tax deduction for expenses of up to the amount of CZK 800 000 (an amount higher than that received by self-employed in other sectors), accelerated depreciation on capital investment on farm machinery, exemptions or reduced real estate taxes, a refund of excise duty on mineral oils, exemptions from paying water abstraction charges in times of drought and from paying fees associated with changing land use, and a 25% reduction on the road users charge for vehicles involved in crop production.

12.2. Income taxation

For personal income tax a single rate of 15% with an additional "solidarity surcharge" of 7% is levied on gross income exceeding CZK 1 438 992. Under the Income Tax Act taxable personal income includes income from self-employed activities, income from self-employment, income from capital, rental income and other income. A general tax credit of CZK 24 840 is available on taxable personal income, plus additional deductions can be made for dependents. The income of farm employees is taxed under the same personal income tax rules as income from other employment and there are no special provisions for the sector.

Farmers registered as self-employed are allowed to deduct a flat rate of 80% of their agricultural income as expenses (without needing to provide evidence of the actual business expenses incurred). This tax measure is not specific to farmers and applies to certain self-employed from other sectors. However, the maximum amount that farmers can claim, i.e. CZK 800 000 is greater than the maximum entitlements of other self-employed.

The corporate tax rate is set at 19%. No differences exist for the taxation of corporate income tax for entities engaged in agricultural activities.

Enterprises engaged predominantly in agricultural and forestry production can apply 20% higher depreciation rates on eligible farm machinery in the first year of depreciation. A higher depreciation rate makes investment activities more attractive.

Capital gains are treated as ordinary income and there is no wealth tax. There are tax exemptions on income earned on transfers of farmland between close relatives when a farmer retires.

12.3. Property taxation

Real estate tax is imposed on land and buildings. In the case of land, the basis of the tax is the land area and land price which is set according to a decree on land prices in CZK per m^2. The rate of tax depends on how the land is used and the location of the land. Municipalities are able to set coefficients for these parameters based on the relevant cadastre. This leads to regional variations in the tax rates for agricultural land.

As far as real estate tax is concerned this is a significant relief for agriculture. Arable land, hop gardens, vineyards, fruit orchards and permanent grasslands may be exempt from land taxes in some municipalities or pay two to five times less tax. The tax rate for agricultural land ranges from 0.25% (for pasture and forestry) to 0.75% (for arable crops) of the tax base, depending on the type of land. Furthermore reclaimed agricultural land is not required to pay land tax for five years with reclaimed forest land exempt for 25 years.

There are inheritance and gift taxes in the Czech Republic. In the case where property, including farms, are inherited by a close relative the beneficiary is not required to pay inheritance tax on the value of the property.

Tax on the acquisition of real estate is 4% and is payable by the buyer of the property regardless of the relationship between the seller and buyer. The tax base is the higher of either the estimated property price, or the actual selling price.

12.4. Tax on goods and services

Since 1993, the value added tax (VAT) has been applied in the Czech Republic. VAT registration is obligatory for persons with turnover exceeding CZK 1 million for a maximum of 12 consecutive months. The tax is paid monthly or quarterly depending on the turnover of the taxpayer.

A reduced rate of 15% VAT applies to most agricultural outputs, i.e. food and beverages (excluding alcoholic beverages), animal feeds; live animals, seeds, plants and additives for the preparation of foodstuffs. A 10% VAT applies to infant nutrition.

Conversely, most farm inputs (fertilisers, plant protection products, machinery, etc.) are subject to the standard VAT rate of 21% on which VAT registered taxpayers can claim a deduction.

As the majority of farmers are registered as VAT payers, the refunded VAT usually exceeds the amount of VAT that they have paid for sold agricultural commodities.

Excise duties are levied on mineral oils, alcohol, beer, wine and tobacco products. An important relief for farmers is the refund of part of the mineral oil tax to persons using these oils for crop production (so-called “green diesel”). From 1 January 2016 the refund was extended to motor oils used in livestock production. The objective of this measure was to encourage farmers to maintain or potentially increase the number of animals they farm to improve soil condition using manure from the animals. Forty per cent of the excise tax on diesel is refunded for crop production, forestry and fish farming and refunds range from 40% to 87% for animal production depending on the livestock intensity. From 2019, the excise tax return will also reflect whether the farmer grows grape vines or sensitive crops such as fruit or vegetables.

Taxes are applied on energy and transport. Taxes on gas for heating and fuels used for vehicles are applied to end users and also to suppliers at the following rates: EUR 1.15 per MWh for heating and for fuels for engines not used on public roads; EUR 0 to EUR 10.15 per MWh according type of gas for fuel for vehicles used on public roads. Tax for fossil solid fuels is CZK 8.5 per GJ of heat. Tax from liquid fuels including liquid gas used as fuel are EUR 18 to EUR 527 per 1 000 litres according to different types of fuels.

Levies and tolls charged for use of highways and roads are set according to type of vehicle (e.g. level of emissions) and the capacity of the engine. Vehicles used for crop production activities are eligible for a 25% reduction on the road users tax.

12.5. Environmental taxes

Use of surface water is charged according to specific conditions in each watershed. During periods of serious water deficits farmers are not required to pay the levy. Ground water abstractions of more than 6 000m^3 per year are levied. For drinking water the fee is CZK 0.077 per m^3 and for water for other uses the fee is CZK 0.115 per m^3.

Discharges of polluted water to surface water bodies are taxed at different levels according to the pollutant substances. Waste water discharged into groundwater are taxed at a level equivalent to EUR 13.50 per inhabitant per year.

Air polluters are taxed for emissions of specific substances for large sources of pollutions (from EUR 41 to EUR 161.50 per tonne of substance per year). It is unlikely this tax would apply to farm level sources.

Changing land use from agricultural to another use (e.g. construction) incurs a fee. For a permanent change a lump sum fee is charged, while for a temporary change there is annual payment. The level of the fee is set according to land price and the level of protection of land.

Farmers are exempt from the permanent land use change charge where the land is being used for the following: the construction of buildings for primary production, farm roads, creation of ponds for aquaculture or ducks, investments to increase soil fertility, construction of water purification plants, farmyards, space around farm houses, green belts around farm houses and sanitary and similar facilities on farms. Farmers are exempt from paying the temporary levy in the case where the land is being used for production of Christmas trees or trees for energy production.

Environmental taxes are applied on energy and transport in the Czech Republic (see the section above).

12.6. Tax incentives for R&D and innovation

Tax deductions can be made to support R&D or in support of vocational training. Up to 100% of expenses associated with R&D projects can be deducted as a special tax allowance. Eligible expenses include direct costs (for personnel costs and materials), depreciations of fixed assets used for R&D activities and operational expenses associated with the R&D project (e.g. telecommunications, electricity, water etc.). R&D costs can be deducted twice, once as a normal tax-deductible cost and secondly as a special tax allowance. Another 10% can be applied as an allowance on the increase of spending on R&D between years. Deductions can be made for up to three years. Use of these tax incentives by the agricultural sector is not significant.

12.7. Other taxes

Employers are obliged to pay the insurance premiums to cover participation of their employees in the social security insurance. This amounts to 25% of their employees' incomes. Contributions are for health, disabilities, pension and unemployment insurances. These are charged at the following rates: health insurance premiums (2.3%), retirement insurance premiums (21.5%) and contribution of state employment policy (1.2%). At the same time, the employer is obliged to deduct premiums of 6.5% from employees’ wages. Self-employed persons must pay the pension insurance premiums and the state employment policy contribution.

Chapter 13. Denmark

This chapter contains a description of tax provisions applied to agriculture in 2019, unless otherwise specified. They include taxes on income and profit, property, good and services, environmental taxes, and tax incentives for R&D and innovation.

13.1. Overview

Denmark places great emphasis on personal income taxes as approximately 50% of public income comes from direct personal taxes. Individual taxes are paid to the state and local authorities (municipalities). Corporate taxes are paid to the state, but 15% of these taxes are distributed by the state to the local authorities.

Agriculture accounts for 61% of land use in Denmark. In total, there are approximately 35 000 farms with an average farm size of 76 hectares and 9 800 full-time farms (with a threshold of minimum 1 665 working hours per year) with an average farm size of 191 hectares.

Municipal land taxes on farms are levied at discounted tax rates and are based on a lower than market valuation of the land. Diesel used in the agricultural sector is levied a lower energy tax than the general energy tax for processing purposes in other sectors. Farmers pay taxes on their use of pesticides and fertiliser in order to internalise the environmental costs. There is no reduced value added tax rate applied for agricultural products and farmers pay the full carbon dioxide tax on their use of fossil fuels.

13.2. Income taxation

Individuals are subject to state and municipal taxes. Collection is carried out by the state. Income from capital is also taxable and includes capital gains on the sale of shares, net interest income or expense; capital gains from real estate investments under some circumstances; and capital gains and income from certain other investments in financial assets.

The agriculture sector primarily consists of self-employed individuals. A self-employed individual can choose to be taxed according to the Business Taxation Scheme. The Business Taxation Scheme enables the self-employed to be taxed at a rate of 22%, the same rate as the corporate taxation rate. Only when the income is withdrawn from the business savings it will be taxed as personal income. Interest is fully deductible under the Business Taxation Scheme.

Companies pay a flat rate state tax on income and capital gains of 22%. The determination of a corporation's taxable income is based on the accounts prepared detailing a company's income and expenses. Generally business expenses incurred in acquiring, securing and maintaining taxable income are deductible. Interest expenses are generally deductible regardless of the purpose of the loan, subject to Danish interest restriction rules. Machinery and equipment are generally depreciated using the declining-balance method at a rate of up to 25%. Buildings and installations are generally depreciated at a rate of up to 4% using the straight-line method.

Goodwill and other intangibles may be amortised over seven years using the straight-line method. However, the acquisition costs of patents and acquired know-how may, as an alternative to the straight-line method, be fully deducted in the year of acquisition. The possibility of writing-off the value of patents and know-how immediately postpones the payment of corporate taxes and thereby reduces the real rate of taxation.

13.3. Property taxation

Danish property taxation includes a national property value tax on owner-occupied housing and a municipal land tax.

The national property value tax is based on the value of the property (the aggregate value of both owner-occupied real estate and land). The amount is reassessed every other year with the public valuation. Property value tax is collected by the state and is progressive. The tax rate is 1% of the taxable value up to DKK 3 040 000 and 3% on the value above that threshold. Reductions in property tax are available to those who bought their property before 1 July 1998 and to senior citizens.

The municipal land tax is based on the public valuation of the land. The tax rate is collected and determined by the municipalities and must be between 1.6% and 3.4%. Agricultural land receives a "discount" on the tax rate of 1.48 percentage points when the municipal land tax rates are 2.2% or below. For example, if land tax rate is 1.6%, the agricultural land tax rate will be 0.12% (i.e. 1.6% – 1.48% = 0.12%). When the land tax rate is above 2.2% the agricultural land tax rate is capped at a maximum taxation rate of 0.72%. Furthermore, the public valuation of agricultural land is calculated so that it is lower in comparison to the market value of land in general.

In 2002 a freeze was introduced on property value tax along with a limitation on the annual increase of the land tax base. The Danish government is expected to propose new legislation regarding property taxation (that will change both the property value tax and the land tax) in 2019 to enter into force from 2021.

An inheritance tax is payable on the market value of the asset if the value exceeds a certain amount. Spouses are exempt from paying the tax. Gifts with a value above a certain base value are also subject to a tax. There is no special legislation for farmers and their families.

Stamp duty is levied at the registration of ownership of real property, ships and planes. There are no special concessions for agriculture.

13.4. Tax on goods and services

The standard value added tax (VAT) rate is 25% and this is the rate applied to agricultural products.

Denmark levies an energy tax of DKK 56 per GJ on energy products plus a carbon dioxide tax of around the DKK 175 per tonne CO_2 emitted from the use of energy products. Electricity consumption in households is levied a tax of DKK 0.884 per kWh. VAT-registered companies can claim a rebate for the energy taxes levied on energy used for process purposes, resulting in an effective tax of DKK 4.5 per GJ on fossil fuels and DKK 0.004 per kWh for electricity for process purposes. The full energy tax is levied for heating purposes, whereas electricity used for heating is levied at a rate of DKK 0.26 per kWh. Meanwhile the full carbon dioxide tax is levied on business as well as private use of fuels in the non-Emission Trading Scheme sector.

Farmers (including horticulture producers) can claim a special deduction in energy taxes levied on fuels for the operation of machinery. Farmers pay 1.8% of the ordinary energy tax, which corresponds to an effective tax rate of DKK 1.4 per GJ. The tax rebate relative to paying the process energy tax of DKK 4.5 per GJ has an estimated value of DKK 40 million (EUR 5 million) per year.

13.5. Environmental taxes

The use of pesticides is subject to a quantity-based tax differentiated according to health and environmental criteria. The revenue generated from the levy is approximately DKK 550 million (EUR 75 million) per year which is quite high compared to other EU countries.

Users of fertilisers are subject to a tax based on the nitrogen content. The purpose of the tax is to decrease the use of fertiliser outside of the agricultural sector (e.g. gardens, parks and golf courses). Most livestock farmers and crop producers are exempted from the tax and their use of fertilisers is regulated instead through the Fertiliser Register. The revenue generated from the tax based on nitrogen content is DKK 20 million (EUR 3 million) per year.

A tax on feed phosphate has been abolished as of July 2019, as other environmental regulation will regulate the sector in the future.

13.6. Tax incentives for R&D and innovation

Denmark provides tax concessions for all companies undertaking R&D. Tax deductions for R&D expenditures are set to increase gradually from 101.5% in 2019 to 110% in 2026. There are no special tax concessions for R&D expenditure for the agricultural sector. Depreciation for R&D capital assets (machinery and equipment in general) is accelerated so it can be deducted within the year of acquisition. Denmark also offers companies in a tax loss position the possibility to earn a refund for deficit-related R&D expenditures. Companies receive tax credits corresponding to 22% of any deficit related to R&D expenses. The maximum tax credit that can be given is DDK 5.5 million per year (22% of DKK 25 million).

13.7. Other taxes

There is no special treatment for farmers under Denmark’s social security system which is characterised as being relatively open with general access for all relevant groups. Membership of the voluntary unemployment insurance scheme is, however, required in order to receive unemployment benefits, but self-employed people can join. The basic public pension system is open for all, only requiring an age qualification and a certain length of stay in the country.

In comparison with most other EU countries, only part of the social benefits in Denmark are based on employers' contributions and direct contributions from the insured, and the right to financial assistance is only partly dependent on earlier employment. About 66% of total social expenditure is financed by the state via taxes and duties as opposed to an average of 33% for other EU countries.

Chapter 14. Estonia

This chapter contains a description of tax provisions applied to agriculture in 2019, unless otherwise specified. They include taxes on income and profit, property, good and services, environmental taxes, and tax incentives for R&D and innovation.

14.1. Overview

Under Estonia's tax system there are very few exceptions for agriculture with farms and agro-food firms generally subject to the same taxation regime as the rest of the economy. There are differences in the taxation of income from sales of self-produced unprocessed agricultural products, a reduced land tax levied on land used in agricultural production, discounted fuel excise duty rates for agricultural producers and reduced excise duties for small producers of beer.

The state and local authorities collect taxes. State taxes comprise of income tax (personal income tax and corporate income tax), value-added tax (VAT), social tax, customs tax, excise duties, land tax, gambling tax and heavy goods vehicles tax. Taxes paid to the local authorities are 11.6% of the taxable income of a resident natural person and land taxes as well as some other local taxes.

14.2. Income taxation

In 2019 the personal income tax rate is 20%. A basic tax exemption applies to all combined income and up to the threshold of EUR 14 000 taxpayers are entitled to an annual basic tax exemption of EUR 6 000. Decreases on the basic tax exemption occur for annual income from between EUR 14 000 and EU 25 200 according to the following formula: EUR 6 000 – EUR 6 000 ÷ EUR 10 800 × (income amount – EUR 14 400). No basic exemption is granted for annual income over EUR 25 200.

A sole proprietor farmer can deduct up to EUR 2 877 from the income received from selling self-produced unprocessed agricultural products minus the documented business expenses. Cleaning, sorting, cutting, drying, cooling and packaging of agricultural products is not considered processing. In 2018, the supplementary deduction amounted to EUR 1.66 million.

Two income smoothing tax provisions allow all sole proprietors, including farmers, to smooth their taxable income over time to manage financial risks and enhance investment. First, income losses in one year may be deducted from the business income of the following seven taxation periods, thus reducing income variability over time. Second, a special account can be opened in a credit institution to save money for future investments. The money set-aside in the year can be deducted from the taxable income, but interest gains are taxed as income every year. Special accounts are not widely used. This may be due to the complexity of accounting for the changes in the special accounts over different periods of taxation.

A special feature of corporate income tax in Estonia is the fact that only dividends are taxed. Earnings are not taxed as long as they are reinvested in the company. Distributed profits are generally subject to the 20% corporate income tax at 20/80 of the net amount of profit distribution. For example, a company that has profits of EUR 100 available for distribution can distribute dividends of EUR 80, on which it must pay corporate income tax of EUR 20. In a calendar year, corporate income tax is levied on: 1) fringe benefits and the social security taxes; 2) gifts and donations; 3) representation expenses; 4) dividends and other profit distributions; and 5) expenses and payments not related to business.

To encourage Estonian companies to distribute profits subject to income tax more regularly, from the beginning of 2018 a lower income tax rate of 14% (compared to the standard 20%) is levied on regular profit distributions. Profit distributions are considered regular if the amount of the distribution does not exceed the company's last three years' average profit distributions subject to taxation in Estonia. The income tax rate for all amounts exceeding the last three years' average profit distributions will remain at 20%.

From the beginning of 2018, natural persons (not sole proprietors) have the possibility to provide services and sell goods to other natural persons via a special business account. The special business account is a bureaucracy-free and affordable form of business for natural persons. It is subject to 20% income tax and is aimed at small entrepreneurs, whose annual income does not exceed EUR 25 000. Any amount that exceeds this income is subject to 40% tax. An entrepreneur who uses a special business account does not have to submit any accounting reports. Everything takes place automatically via the special business account. The bank automatically transfers 20% of business income tax on any income received to the bank account of the Tax and Customers Board every month. This means that entrepreneurs keep 80 cents of every euro earned.

14.3. Property taxation

The share of property taxes is very low in Estonia. Tax on land is a state level tax, which accrues entirely to the budget of the local governments. Paid by the landowner the amount of land tax is obtained by multiplying the assessed value of land by the land tax rate. Regular mass land evaluation based on market information determines the assessed value of land. The land tax is imposed on land only, without taking account of the value of the buildings, forests, plants and other accessories.

Under the Land Tax Act the land tax rate is equal to 0.1% to 2.5% of the annual taxable land value. For agriculture land the tax rates are reduced. For areas under agricultural cultivation and natural grasslands the tax rate is 0.1% to 2% of the annual assessed land value. With local governments responsible for setting applicable rates the land tax burden for agricultural producers may vary across regions.

Property transfers by gift, inheritance or sale are subject to income tax (for natural persons) and VAT (for enterprises). For tax purposes expenses directly related to the transfer of the property can be deducted from the income received from the sale. Inherited or gifted property is not taxed if it is not sold.

Although, as a rule, gains from the transfer of property are subject to taxation, there are some exceptions. For example acceptance of succession is exempt from income tax. If a taxpayer transfers more than one permanent or primary place of residence in two years, the tax exemption will only be applied to the first transfer.

14.4. Tax on goods and services

The standard VAT rate is 20% (with a reduced rate of 9% and some goods and services are exempt from VAT). The standard rate applies to farm inputs and to agricultural and food outputs.

Taxpayers are obligated to be VAT registered when their taxable turnover exceeds EUR 40 000. A person liable to pay VAT is entitled to deduct input value added tax.

Excise duties are applied to liquid fuels, gaseous fuels, electricity, solid fuels, alcohol, tobacco and packaging brought into Estonia. Diesel fuel used for agriculture (including grain drying) has a 73% lower excise duty rate. For small beer producers the excise duty rate is halved.[1]

A heavy goods vehicles tax is levied on trucks with a maximum authorised weight or gross laden weight of not less than 12 tonnes. The tax based on the maximum authorised weight, number of axles and type of suspension, is paid by the owners or users of the vehicles.

From 2012, agricultural plastic (bale plastic wrap, silage cover, tunnel plastic, plastic mesh and plastic twine) is not subject to packaging excise duty. The company responsible for

selling packaged goods to the end user or consumer is obliged to collect the farm plastics waste from the agricultural producer without any possible additional administrative burden.

14.5. Environmental taxes

The Environmental Charges Act sets out taxes for "environmental use" including: extraction of mineral resources; water abstraction; fishing; hunting; emission of pollutants into the ambient air, water bodies, groundwater or soil; and waste disposal by way of depositing in landfills or other activities that result in the discharge of waste into the environment. Environmental charges are jointly administered by the Tax and Custom Board and the Environmental Board.

Environmental permits grant rights to remove natural resources from their natural state, emits pollutants into the environment or disposes waste. Environmental charges are paid for these rights. Exceeding quantities permitted or not holding a permit for the activities, will result in the person paying a higher rate of environmental charges.

There are two types of environmental charges: natural resource charges set in regulation and pollution charges to decrease pollution from point sources. Pollution charges are imposed in the event of emission of pollutants into the ambient air, groundwater or soil, and upon waste disposal. The sensitivity to pollution of the emission site, the hazardousness of the pollutant and the use of the best possible technology are taken into account to determine the charge rates.

Agricultural producers who have been granted the following permits are subject to environmental charges:

- integrated environmental permit (including the water abstraction permit and ambient air pollution permit)
- water abstraction permit for the right to abstract water (abstraction charges are not levied for water for the irrigation of agricultural land, including greenhouses)
- water permit for the right to discharge waste water into any receiving water body
- ambient air pollution permit.

14.6. Tax incentives for R&D and innovation

Estonia does not provide any tax rebates to research and development (R&D). The corporate tax system of only taxing dividends encourages businesses to reinvest their remaining profits.

14.7. Other taxes

In accordance with the Social Tax Act, the Estonian social security system is financed by a social tax imposed on employers and sole proprietors (self-employed persons) and by the state. The social tax rate is 33% of the gross salary and entrepreneurial income of sole proprietors.

From 1 August 2012, a self-employed person entered in the commercial register has the right to register their spouse and pay social tax for them, thereby ensuring their social security cover. The spouse participates in the activities of the self-employed without being in employment, a model which is very relevant for farming households.

Self-employed persons and companies are subject to different treatment as regards social taxes. Self-employed persons receive benefits (sickness and pension insurance) and there is a maximum limit for the social tax they pay, whereas a company pays the social tax, and

there is no maximum limit for the social tax they pay and the employees receive the benefits.

In 2019 the unemployment insurance premium is 1.6% of the gross salary of an employee. Employers pay the unemployment insurance premium at a rate of 0.8% of the amount of gross salaries monthly. From 2012, the rate of a funded pension payment is 2% of the gross salary of a resident employed.

Earnings coming through the recently established special business accounts are taxed income tax of 20%, social tax of 33% and for those who are members of the obligatory funded pension payment a rate of 2%. No additional payments are made by government. Upon payment of the business income tax, the social guarantees of a person arise or increase as a part of the tax is paid to ensure social protection. Such an additional benefit increases the taxpayers' motivation to declare their unofficial income through an enterprise account.

There are no specific provisions for agricultural labour. Provisions for taxes and social contributions on labour, including pensions, apply equally to hired, self-employed or family labour in agriculture.

Note

[1] Excise duty rates in Estonia: www.emta.ee/eng/business-client/excise-duties-assets-gambling/about-excise-duties/rates-excise-duty.

Chapter 15. Finland

This chapter contains a description of tax provisions applied to agriculture in 2019, unless otherwise specified. They include taxes on income and profit, property, good and services, environmental taxes, and tax incentives for R&D and innovation.

15.1. Overview

In 2016 there were 47 361 active agricultural businesses in Finland. In general, Finnish farmers face the same rules for taxation and social security as the rest of society even if there is a special institution responsible for the social security system for farmers. Agricultural and forestry land is exempt from annual real estate charges levied by municipalities and in the case of the inheritance of agricultural land, for tax purposes, this is valued at a lower value than its market value thereby reducing the tax payable. Fuels and electricity used in agriculture receive tax rebates.

15.2. Income taxation

The central government and municipalities in Finland have the right to levy taxes. Municipalities receive funds from the central government to enable them to provide the services for which they are responsible.

Individuals are taxed according to progressive tax rates at the national level and flat rates at the municipal level. Individuals are subject to income tax whether employees or self-employed. There are four tax brackets, i.e. 6%, 17.25%, 21.25% and 31.25%. Income exceeding EUR 17 600 is taxable and the highest tax rate applies to taxable income exceeding EUR 76 100 (2019). The municipal tax rate applied to income is between 17% and 22.5% (2019). Also all members of both the Evangelical Lutheran Church of Finland and the Finnish Orthodox Church (the two state churches of Finland) pay a church tax.

Any income accrued from capital, e.g. dividends, rental income and capital gains, as well as interest on income, is taxed at a flat rate.

Farmers, like all private entrepreneurs, can divide income to capital income or earned income. The tax rate for capital income is 30% until EUR 30 000 and 34% for capital income over EUR 30 000. Gains from the sale of a taxpayer's home are tax exempt if the taxpayer has owned and lived in it continuously for at least two years.

All companies are subject to corporate income tax at a rate of 20%, but no capital tax is levied on the net wealth. Commercial accounts establish the basis for taxation. Losses may be carried forward and off set in the subsequent ten tax years. The depreciated balance method is used in Finland.

15.3. Property taxation

Property is subject to property tax based on the taxable value of the property. The revenue goes to the municipality where the property is located and it is the municipalities that determine the tax rates levied on properties. Land used in forestry or agriculture is exempt from property tax.

A tax on inheritances is imposed on each beneficiary's share of the inherited (or gifted) property. The tax is based on the market value of the property inherited on the date of the death. The amount of tax payable depends on the relationship between the donor and the beneficiary. Rates are progressive up to 33%. If the inheritance or gift includes a farm, there are rules, which reduce taxes in the case of inheritance or transfers between generations with the aim of keeping farm businesses viable and farms undivided. In this case the property can be valued according to its taxation value instead of the market value. The heir or successor is obligated to farm the agricultural property for the following ten years.

A transfer tax is payable on the transfer of real estate. Farm successors who are eligible for support under the EU young farmers scheme are exempt from paying this tax.

15.4. Tax on goods and services

The VAT is, in general, 24% but a reduced rate of 14% is applicable for food and animal feed.

Excise taxes apply to all fossil fuels. Lower rates are applied to diesel and fuel oil used in agriculture, which account for the majority of fuel use in the sector. Excise tax on fuels is based on each fuel's energy content and carbon dioxide emissions from combustion. Fuels used in agricultural production receive a tax return on the share of energy content. In 2018, the excise tax rebate for the agricultural sector was EUR 75 per 1 000 litres. The remaining tax paid by agriculture was EUR 165.4 per 1 000 litres, the same as in other industries. The total value of the excise tax rebate on fuels for agriculture is estimated to be about EUR 30 million per year.

Electricity consumption is subject to an electricity tax. Electricity used in industry is taxed at a lower rate than electricity in households. Electricity used in agriculture is entitled to a tax return. In 2018, the electricity tax rebate for the agricultural sector was EUR 0.0155 per kwh. The tax paid by other industries is EUR 0.00703 per kwh, which is the remaining tax level also paid by agriculture producers after the rebate. The total value of the rebate to agriculture is estimated to be about EUR 25 million per year for electricity.

15.5. Environmental taxes

The environmental taxes applying to agriculture consist of energy taxes. These are an excise tax on fuels and an electricity tax (see the description in the section above).

15.6. Tax incentives for R&D and innovation

There are no R&D tax incentives in Finland.

15.7. Other taxes

The Finnish social security system is composed of three basic elements: preventive social and health policies, social and health care services, and social insurance. A distinctive characteristic of the Finnish social insurance system is that a large proportion of social insurance is managed by private insurance institutions, although the system is obligatory and statutory, e.g. there is a private insurance institution that manages the social insurance scheme for the majority of Finnish farmers. The social security system is financed through employer contributions, contributions by the insured, and taxes.

In principle, the social security system for farmers offers the same employment security as employees in other professions, e.g. retirement payments, disability payments, and unemployment payments. There is also a possibility of receiving help at the farm. A special pension is given to farmers who cease their commercial activities before their retirement age. Insurance payments are based on, for example, the size of the farm, number of work hours at the farm, and on income.

Chapter 16. France

This chapter contains a description of tax provisions applied to agriculture in 2019, unless otherwise specified. They include taxes on income and profit, property, good and services, environmental taxes, and tax incentives for R&D and innovation.

16.1. Overview

Historically, the French agriculture sector has been subject to an extremely complex taxation system that is more generous and clearly differentiated from that applying to other sectors. Special tax provisions that exist for agriculture include an optional 87% flat rate expense deduction offered to low income farmers with annual gross incomes of below EUR 82 800 significantly reducing their tax burden and simplifying their tax administration. There are income smoothing mechanisms, investment incentives, a new precautionary savings tax deduction for all future farm expenses. VAT reimbursement occurs under two schemes, and there are partial exemptions from land taxes, discounts on land transfer taxes and incentives provided to young farmers for their first five years of farming. Tax credits for diesel fuel used in agriculture are the largest concessions accounting for 60% of fiscal expenditure (tax revenue foregone) for the sector.

16.2. Income taxation

Farm profit for individual farmers or partnerships can be taxed under two tax regimes: the micro-BA scheme and using actual income (determined by cash or accrual accounting (*régime réel)*). Other partnerships are in principle taxed using actual income.

Levels of turnover including subsidies and allowances generally determine the applicable tax regime. Farmers and farm businesses with a two-year average turnover of more than EUR 350 000 are taxed using accrual accounting. Farmers with a turnover below EUR 350 000 can voluntarily opt to use accrual accounting or they can use cash-based accounting.

Those farmers with a turnover from the last three years (before tax) of below EUR 82 800 can choose between cash-based accounting and micro-BA scheme. The micro-BA scheme is a form of income smoothing. Taxable income is equal to the three-year average of revenues for the tax year and the two previous years minus a flat rate 87% deduction for expenses. No evidence of actual business expenses incurred is needed to justify the deduction. In 2017, the number of agricultural enterprises under the micro-BA was estimated as being 18%.

From 2017 the micro-BA scheme replaced the collective agricultural scheme (*régime forfait collectif*) as a result of a major reform initiated in 2015: the scope of the micro-BA is larger than the collective agricultural scheme which had a threshold income of EUR 76 000. Although similar to the micro-BIC and micro-BNC schemes applying to commerce and industry and the liberal professions, micro-BA has a higher abatement rate, i.e. 87% compared to 72% and 34%.

Other special tax provisions for agriculture include the deduction for unforeseen circumstances (*la déduction pour aléas*, DPA) scheme, that was implemented in 2001 and applied until 2018. This provision allowed bookkeeping farmers to deduct a share of their annual profits on the condition that at least 50% of the deducted amount it was placed in a savings account. Under DPA deposited savings could be used within seven years for payment of expenses resulting from government recognised adverse climate events and under certain conditions, i.e. unforeseen economic events and fires. Expenses could include insurance premiums, crop and livestock losses, and the purchase of supplementary feed. The money on this account became taxable when was is used.

The DPA augmented the scheme providing tax deductions for investment (the DPI scheme). Under DPI bookkeeping farmers could deduct for five years a fraction of their profits at the end of each fiscal year in order to finance their stock, their fixed redeemable assets or their shares in an agricultural cooperative. Since 2012, DPI could no longer be

used for the acquisition of depreciable property. The cumulative limit for tax deductions under the DPA and DPI schemes was EUR 150 000.

As of 1 January 2019 the DPA and the DPI have been replaced with an annual tax deduction for precautionary savings (*déduction pour épargne de precaution*) (DEP). Under this scheme farmers using actual income can make tax deductions provided that at least 50% to 100% of the income deducted is placed in a savings account. Savings can be used in the following ten years on all business expenses (unlike the DPA where expenditure had to be linked to an official recognised adverse climatic event or unforeseen economic event) at which point they become taxable. This is a temporary measure applying until the end of 2022.

The amount of annual income tax deductions under DEP are capped as indicated in Table 16.1.

Table 16.1. Annual precautionary savings tax deductions

EUR

Taxable income	Tax deduction
0 – 27 000	100%
27 000 – 50 000	27 000 plus 30% of profits exceeding 27 000
50 000 – 75 000	33 900 plus 20% of profits exceeding 50 000
75 000- 100 000	38 900 plus 10% of profits exceeding 75 000
Greater than 100 000	41 400

Source: www.terre-net.fr/observatoire-technique-culturale/reglementation-social-juridique-fiscal/article/tout-ce-qu-il-faut-savoir-sur-la-deduction-pour-epargne-de-precaution-220-145051.html.

For farmers under an actual tax regime, there are two income smoothing measures to avoid tax variations generated by the irregular results from agricultural activities:

- spreading in the event of exceptional results whereby farmers may benefit from a seven-year averaging of their windfall profits (code 170306 in Table 17.2);
- the system of the triennial average where farmers apply to be taxed on a profit equal to the average of the profits for the tax year and the two preceding years.

Young farmers are allowed to reduce their taxable agricultural income for their first five consecutive years of farming if they fall under the actual tax regime. This special tax treatment is only open to young farmers who are beneficiaries of the young farmer settlement aid *("la dotation jeune agriculteur (DJA)"*). The rule also applies to tradespeople and craftspeople who start their own business. From the Finance Act 2019 the reductions for the first five years are as follows:

- For the first year farm income below EUR 43 914 is exempt from tax and for income between EUR 43 914 and EUR 58 552, 60% is exempt from tax.
- For the four following years:
  - in the case where farm income exceeds EUR 43 914, then 50% of income up to EUR 43 914 is exempt from tax and for income between EUR 43 914 and EUR 58 552, 30% is exempt from tax.
  - if farm income is below EUR 43 914, then 75% is exempt from tax.

Smallholders earning less than EUR 43 914 will therefore benefit from greater financial support a 100% reduction in the first year and 75% in the following four years.

To encourage capital investment two tax measures were set up for a limited period of time with the aim of accelerating farm restructuring. Both schemes are no longer in effect. The schemes were:

- The exceptional deduction scheme for investment (which concerns all commercial, agricultural, industrial and liberal enterprises) which ceased in April 2017 (code 110240 in Table 16.2).
- The exceptional depreciation of livestock buildings which ceased in December 2017 (code 200217 in Table 16.2).

Included in the Finance Act 2019 are the following tax measures benefiting the agriculture sector: accounting for livestock inventories until the sale of these goods (reinstating Article 72B bis of the General Tax Code until 2024) and spreading tax over five years (reinstating Article 75-0 C of the General Tax Code).

For capital gains accruing to businesses, there are special tax measures that are not confined only to the agriculture sector. Farmers are exempt from paying capital gains when their average revenue realised in the last two calendar years proceeding the capital gains realisation does not exceed EUR 250 000. Partial exemption of capital gains occurs when farmers' average revenue in the last two years is between EUR 250 000 and EUR 350 000. To benefit from this concession the farming activity must have been running for the five previous years.

16.3. Property taxation

Property tax on developed properties (TFPB) and the property tax on non-developed land (TFNB) are local taxes that apply throughout France. Taxes are based on the cadastral rental value (or cadastral income) minus an allowance multiplied by a rate fixed by the territorial authorities. Buildings used for rural farms are exempt from TFPB. While agricultural land benefits from a 20% reduction on the TFNB.

Farmers may claim a reduction on the TFNB proportional to income losses as a result of adverse climatic events or a fire. In the case of livestock loss resulting from an animal disease epidemic the farmer may request a rebate on the TFNB corresponding to the amount of losses. Young farmers receiving settlement aids (DJA) benefit from a 50% rebate on the TFNB for the first five years of their farm business activity. This reduction in the TFNB is limited to the agricultural sector.

Concerning local taxes, other special provisions for farmers include:

- An exemption from paying local business taxes (territorial economic contribution).
- A permanent exemption from the company property tax (CFE) and TFPB applies to installations and buildings used for agricultural methanisation, providing that this production comes from at least 50% of matter coming from the farm.

Real estate tax is charged on persons whose net taxable wealth in real estate properties exceeds EUR 1 300 000 (this tax is referred to as the IFI). Professional property (including buildings used in agriculture) is specifically excluded from the tax base. Shares in farmland associations (GFA) which represent rented rural property under long term rental arrangements are either fully or partially exempt from the IFI. Similar exemptions exist for forestry.

Transfer duties on donations or inheritances (DMTG) are based on the value of the property transmitted. Taxes are calculated using rates that vary according to the relationship between the deceased or the donor and the beneficiary. Rural property leased on a long-term basis is partially exemption from the DMTG charges. Similar exemptions exist for forestry.

Taxes on the acquisition of real estate (DMTO) are collected by local government (departments and municipalities). Taxes are added to the sale price and are paid by the buyer. The applicable rate is set at 5.09% but in practice the overall tax rate charged by most local authorities is 5.80%. Acquisitions of rural buildings (buildings and agricultural land) leased by farmers benefit from transfer duties at a reduced rate of 0.75%. Conditions that need to be met for the discount are that at the date of acquisition the buildings have been in operation for at least two years by the purchaser/tenant and that the purchaser undertakes to develop the property for at least five years.

Acquisitions buildings (buildings and agricultural land) located in rural revitalisation zones are also subject to the reduced transfer rate of 0.715% (instead of 5.80%) on the first EUR 99 000 of the sales price with the remainder of the sales price charged the usual tax rate. This scheme is offered exclusively to young farmers receiving settlement aids (DJA) buying rural buildings and farmland for their use. The acquisition must take place within four years of granting the aid.

16.4. Tax on goods and services

Sales of goods and services are subject to value added tax (VAT) and excise duties (applying to beverages and alcohol, tobacco, domestic consumption tax on energy products, tax on oils, flour tax).

With regard to agricultural inputs (fertilisers, phytosanitary products) the rate of VAT is the standard rate of 20%. The intermediate rate of 10% applies to limestone fertilisers and plant protection products that can be used in organic farming, and organic fertilisers made from natural waste, plants or animals.

The rates applied to agricultural products are either 5.5% or 10% in the case of unprocessed products for human or animal consumption or for use in the preparation of foodstuffs or in agricultural production. There is also a 2.10% VAT rate applicable on the sales of slaughter and butchery animals to persons not registered for VAT and farmers subject to the *remboursement forfaitaire* (RFA).

Whilst most countries have some special VAT arrangements for farmers, France has a separate agricultural VAT system. There are two VAT regimes in agriculture based on sales volume: the *remboursement forfaitaire* (RFA) and the *régime simplifié agricole* (RSA).

The *remboursement forfaitaire* (RFA), is used by 12% of farmers liable for VAT in 2017 (in 1998, 25% of farmers used the mechanism). The number of farmers eligible for the RFA is decreasing steadily as the industry modernises. This regime applies to farm businesses with an average turnover of less than EUR 46 000 in two consecutive years. It provides a lump sum reimbursement: the farmer pays the VAT on their purchases without being reimbursed and they do not charge VAT on their own sales. In return, the farmer receives a payment from the State related to sales, i.e. a 5.59% reimbursement on sales of milk, poultry, rabbits, eggs, meat and charcuterie animals, oilseeds and protein crops and a 4.43% reimbursement on sales of all other products.

The *régime simplifié agricole* (RSA) is compulsory for farm businesses with average sales of over EUR 46 000. The majority of farmers who do not use the RFA fall under the RSA. In this simplified regime if in the year the VAT paid is greater than the sum charged by the farmer, the difference is compensated by the State. In the opposite case, it is the farmer who reimburses the difference. The VAT is thus a neutral factor for the farmer under this regime, just as it is for other professionals and there is no preferential treatment for farmers.

A domestic consumption tax is levied on energy products (*taxe intérieure de consommation sur les produits énergétiques* (TICPE)). The normal TICPE rate on diesel is

EUR 594.00 per 1 000 litres (2018). Diesel fuel used for farm machinery and farm vehicles (as well as by building and public works businesses) benefits from a reduced TICPE rate of EUR 188.20 per 1 000 litres (code 800201 in Table 17.2). Farmers also benefit from a refund of TICPE to offset increases in the tax for climate change contributions (code 800405 in Table 17.2).

Until 2015, to expand the outlets for certain agricultural products and contribute towards better environmental protection, the government encouraged production of colza diester and bioethanols by exempting a certain volume of "green fuels" from payment of the TICPE (code 800107 in Table 16.2).

16.5. Environmental taxes

There is a tax credit available for organic farmers generating at least 40% of their revenue from organic farming as defined by EC rules (R. (EC) No 834/2007). From 2018 the tax credit was set at a maximum of EUR 3 500 (increased from EUR 2 500 previously) and can be added to aid for conversion or maintenance of organic farms paid under the CAP, up to a combined total of EUR 4 000 (code 210316 in Table 17.2).

Of the environmental taxes listed below not all of these measures apply equally to agricultural or non-agricultural activities. Some relate more specifically to agricultural activity (e.g. the diffuse pollution tax applies in particular to substances used in agricultural activities).

Under the Law on Water and the Aquatic Environment 2006 fees for diffuse pollution were implemented from 1 January 2008. This measure aims to limit the use of pesticides and the associated contamination of environments. The Finance Act 2019 increases fees for substances under the Law classified as carcinogenic.

The general tax on polluting activities (*taxe générale sur les activités polluantes* TGAP). This tax consists of a group of several taxes related to the environment. It is applied to companies whose activity or products are considered as pollutants, i.e. waste, polluting emissions, lubricating oils and preparations, detergents, and extraction materials. Amounts charged and the applicable tax rates vary according to the categories of activity and products. Under the new rules, tax rates vary between EUR 0.90 and EUR 9 per kilo while previously the tax did not exceed EUR 5.10. There is also a TGAP on fuels and classified installations.

16.6. Tax incentives for R&D and innovation

Research tax credits are available to all companies undertaking R&D. Research expenses including amortisation of capital assets created or acquired and used in research operations, or amortisation of patents are deductible from taxable income. Personnel costs (researchers' salaries) are also taken into account as well as operating expenses. The tax credit amounts to 30% of research expenses not exceeding EUR 100 million with a 5% rate applying above this threshold.

For innovation expenditure (e.g. implementation of prototyping of new products) claimed by SMEs the tax credit is equal to 20% of eligible expenditure up to EUR 400 000 per year providing a maximum tax credit of EUR 80 000 per year.

16.7. Other taxes

Regarding employment, there is the tax credit for competitiveness and employment. It benefits all companies employing salaried staff, subject to corporation tax (IS) or income

tax (IR) according to their actual profit, whatever the legal status (sole proprietorship, partnership, corporation, etc.), and whatever the sector of activity (agricultural, artisanal, commercial, industrial, service). The tax credit is based on the gross amount of salaries not exceeding 2.5 times the minimum wage (SMIC). The rate of the tax credit is set at 6% for salaries paid in 2018. As of 2019, the credit is transformed into a permanent tax rate deduction of 6% of the employer's health insurance contribution.

Farmers and their families and farm workers have their own social security system and around 10% of all budgetary expenditures by the Ministry of Agriculture and Food are dedicated to the agricultural social security system in 2018. Farmers' own social security contributions formed only 18% of the total expenses for their social security system. Young farmers starting out have a sliding discount on their social security contributions for their first five years of business. To be eligible their sole business employment must be farming and they must be between the ages of 18 and 40 years at the time of starting out farming (however, under certain circumstances the 40 year old cut off may be waived). In 2018, the exemption discount was degressive and applicable below certain limits as follows:

- Year 1 - 65% of the amount of the contributions for a maximum of EUR 2 842
- Year 2 – 55% of the amount of the contributions for a maximum of EUR 2 405
- Year 3 – 35% of the amount of the contributions for a maximum of EUR 1 530
- Year 4 – 25% of the amount of the contributions for a maximum of EUR 1 093
- Year 5 – 15% of the amount of the contributions for a maximum of EUR 656

There is a tax credit for replacing workers in agricultural employment. Since 2006, farmers, whose daily presence on the farm is necessary have been granted a tax credit for expenses incurred to ensure their replacement. This tax credit is equal to half of the staff expenses incurred within the 14-day replacement period. In 2017, 32 676 agricultural businesses used the replacement tax credit at an estimated fiscal expenditure cost of EUR 18 million.

Under the Finance Act 2019 from 2019 small taxes charged to the agricultural sector will be abolished. These include the tax on:

- Common wheat flour, meal and groats delivered or used for human consumption. payable by the farmers producing cereals
- Wood and vine plants
- Marine fishery products
- Adding sugar to the harvest.

16.8. Estimation of the value of taxation expenditures

The estimates of tax expenditures used as agricultural policy instruments listed in Table 17.2 are published in the report entitled *Evaluation des voies et moyens* (Evaluation of ways and means) concerning proposals put forward by the *Loi de Finances* (Finance Law). According to the Ministry of Economics and Finance the total amount of agricultural fiscal expenditures (revenue forgone) for the year 2018 was estimated at EUR 2.9 billion, compared to approximately EUR 5.2 billion of public expenditure on agriculture activities. The most important tax concessions concern consumer taxes on energy products (TCIPE) applicable to domestic diesel fuel used on farm that represents 60% of tax expenditures in 2018. It should be noted that any advantage given by using the different systems for taxing farm income has not been included because of the difficulty of measurement.

Table 16.2. Estimation of fiscal expenditures involving agriculture, 2014 to 2018

Million EUR

Code for the measure	Measures	2014	2015	2016	2017	2018
800201	TICPE – Reduced tax on diesel fuel (farm use and for use by building and public works businesses)[1]	1 733	1 820	1 785	1 835	1 965
	(For farm use only)	*727*	*764*	*749*	*770*	*825*
800405	TICPE - Rebate for farmers for taxes on energy products	116	105	153	197	247
800107	TICPE - Capped exemption of a certain volume of green fuels	145	114	40	-	-
060102	20% exemption on local land taxes (TFNB) for agricultural land	167	153	138	124	125
170103	Specific deductions for investments (DPI)	150	100	78	nc	nc
170105	Deduction for unforeseen circumstances (DPA)	39	19	13	nc	nc
170201	Income tax deductions for young farmers	55	42	35	35	nc
170306	Attachment of the exceptional income of a farmer subject to a real tax system in equal parts, to the results of the exercise of its realisation and the following six fiscal years	23	11	12	nc	nc
200217	Exceptional depreciation of livestock buildings and equipment and facilities for the storage of livestock manure equal to 40% of the cost of goods spread over five years	-	-	-	4	8
210316	Tax credit for organic farming	21	21	29	49	nc
320122	Deduction for employers' groups of amounts entered in a trust account and intended to cover their joint and several liability for the payment of wage debts	6	6	8	8	8
730212	VAT rate of 10% applicable to components of livestock feed, fertilisers, limestone fillers and plant protection products for use in organic farming and fertilisers or culture media of agricultural organic origin	26	26	24	24	24
730302	2.10% rate applicable to sales of slaughter and butchery animals to persons not subject to VAT	7	7	6	6	6
110240	Tax credit for expenditures by farmers to replace farms	13	14	13	16	17
060201	Tax credits for loss of crops or livestock	14	6	6	6	34
	Total for Agriculture (including forestry)	**2 803**	**2 964**	**2 884**	**2 831**	**2 914**

Note: nc = not calculated

1. Figures in 800201 - TICPE Reduced tax on diesel fuel includes tax credits for fuel used by building and public works businesses as well as for the agricultural sector. The figures in the row beneath in italics are tax credits for diesel fuel for farm use only.

Source: Annexe au Project de Loi de Finance pour 2018, Évaluations des Voies et Moyens, Tome II, Dépenses fiscales, www.performance-publique.budget.gouv.fr/sites/performance_publique/files/farandole/ressources/2018/pap/pdf/VMT2-2018.pdf

2014 – 2017 editions of Annexe au Project de Loi de Finance, Évaluations des Voies et Moyens, Tome II, Dépenses fiscales.

Chapter 17. Germany

This chapter contains a description of tax provisions applied to agriculture in 2019, unless otherwise specified. They include taxes on income and profit, property, good and services, environmental taxes, and tax incentives for R&D and innovation.

17.1. Overview

Approximately 51% of Germany's total land area is used for agriculture. There are 275 400 farms, with an average size of 60 hectares. An estimated 90% of farms are family run businesses.

Preferential taxation provisions exist to reduce taxes paid by the agricultural and forestry sectors. These include special rules for book keeping, special exemptions and tax rate reductions, an income smoothing mechanism, a lower property tax on arable land, a fixed flat rate arrangement for value added tax, and of most significance in terms of tax expenditure for the sector is the reduced tax rates for diesel fuels.

17.2. Income taxation

Income tax is a personal and federal tax. Income tax rates for farmers are the same as for other (unincorporated) businessmen.

For small scale, low income farmers there is a simplifying procedure for farmers to estimate taxable income ("flat rate" method). Under this method taxable income is calculated based on an average amount set out in legislation and farmers are not obligated to keep accounts. Farmers with less than 20 hectares or less than 50 livestock units are eligible to apply the flat rate method.

In addition, to limit the administrative burden on small businesses, including farms, there is an intermediate, simplified cash-based procedure to determine profit (only income less expenses is accounted for). Farms falling between the income thresholds can use this net income method for tax purposes.

Farms generating income greater than EUR 60 000, or turnover greater than EUR 600 000, or that have an imputed "economic value" greater than EUR 25 000 are obliged to use standard bookkeeping rules. As of 2016, about 57% of all farms fell under this category.

An overt subsidy element is a special tax agriculture income allowance deducted from annual taxable income. The allowance is EUR 900 for single farmers and EUR 1 800 for married farmers, if the gross income is below EUR 30 700 for single farmers or EUR 61 400 for married couples.

Income smoothing of profits from agricultural and forestry holdings was introduced at the end of 2016 in response to market and climate induced profit volatility. This was to supplement the two-year smoothing of profits already in place. In doing so, the incomes from agriculture and forestry that are taken as a basis for taxation are to be evenly distributed among three specific tax assessment periods (period 2014-16, period 2017-19, and period 2020-22). The new regime has not yet come into force as it is still subject to the state aid approval by the European Commission.

Not exclusive to agriculture and applicable to all taxpayers is the following treatment of capital gains. Capital gains of less than EUR 45 000 are exempt from income tax when a taxpayer has reached the age of 55 or is permanently unable to work under social security law and is divesting or terminating their business. The capital gains allowance is granted to the taxpayer only once. For capital gains up to EUR 136 000, the EUR 45 000 allowance is deducted, with income tax levied on the difference between the gain and EUR 136 000. For capital gains greater than EUR 136 000, the EUR 45 000 allowance is progressively reduced by the amount by which the capital gain exceeds the EUR 136 000 threshold. Therefore the allowance no longer applies to capital gain of EUR 181 000 or more.

Companies are normally required to keep accounts and are taxed on this basis.

17.3. Property taxation

Annual land taxation in Germany for all kinds of land and buildings, is based on economic values relating to 1964. This is not specific to agriculture and therefore no concession is implied.

17.4. Tax on goods and services

The standard value added tax (VAT) rate is 19% with a VAT of 7% applying to foodstuffs and beverages and other basic goods and services.

Farmers are eligible for a 'flat rate' system for value added tax that is believed to be advantageous. Farmers can apply a flat rate of 10.7% to their sales to compensate them for the VAT paid on inputs. The flat rate system is used by 66% of farms.

Farmers pay reduced energy tax rates for electricity and mineral oils and gases. The tax refund for agricultural diesel is designed to charge agriculture with a tax rate of EUR 255.60 per 1 000 litres for diesel fuel. Since 2003, this corresponds to a compensation of EUR 214.80 per 1 000 litres for diesel fuel.

Fuel for agricultural use is taxed at a lower rate.

Agricultural vehicles are exempt from automobile taxes used to fund the building of roads.

17.5. Environmental taxes

Germany levies an energy tax on electricity and mineral oils (see the section above).

17.6. Tax incentives for R&D and innovation

Germany does not offer any tax incentives for R&D or the introduction of innovation.

17.7. Other taxes

A special social security system operates for farmers, their spouses and family members working on the farm covering old age pensions, health insurance and accident insurance. Government expenditure is needed to balance the system.

17.8. Estimation of the value of taxation expenditures

The Federal authorities make estimates of the budgetary effect of tax measures on the agricultural sector. The most recent sets of figures from Federal Reports on Subsidies are given in Table 17.1.

Table 17.1. Budgetary effects of tax measures on the agricultural sector, 2013 to 2018

Million EUR

	2013	2014	2015	2016	2017	2018
Agricultural income allowance	55	55	50	60	60	60
Exemption from car tax	260	260	260	260	260	260
Allowance on diesel oil tax	430	400	440	450	450	450

Source: 25th Federal Report on Subsidies for 2013 to 2016 from September 2015; and 26 *Subventionsbericht* for 2015 to 2018 from August 2017.

Chapter 18. Greece

This chapter contains a description of tax provisions applied to agriculture in 2019, unless otherwise specified. They include taxes on income and profit, property, good and services, environmental taxes, and tax incentives for R&D and innovation.

18.1. Overview

Agriculture accounts for 11.7% of total employment in Greece (2016) and 31.9% of the population live in predominantly rural areas (2016). Farm sizes are small with the average farm size 6.8 hectares (2013).

Greece has a broad based tax system under which income from agriculture receives special concessions resulting in a reduced tax burden for the sector. Income from some of the Common Agricultural Policy subsidies is exempt from taxation, as is agricultural land from supplementary property taxes and transfer taxes. A flat rate compensation is applied by non-VAT registered farmers with income less than a certain threshold. Agricultural cooperatives and producer groups pay a corporate tax rate which is less than half of the usual rate.

18.2. Income taxation

Individuals are subject to national income tax. Every individual who derives income from sources in Greece is subject to tax irrespective of his nationality, place of domicile or residence. Moreover, every individual with domicile in Greece (more than 183 days) is taxed on their worldwide income irrespective of the individual's nationality. Due consideration is given to bilateral conventions designed to preclude double taxation. Spouses file a joint tax return but each spouse is liable for the tax payable on his or her share of the joint income.

Taxable income is derived from the following sources:

- employment and pensions
- business activity (which includes income from agricultural activity although taxed differently)
- investment income (income from dividends and interests (taxed at a flat rate of 15%), royalties (taxed at a flat rate of 20%), and rental income from immovable property)
- income from capital gains (taxed at a flat rate of 15%), which includes income derived from transfer of real estate or securities.

Income from employment and pensions is pooled together with income from business activity (including agricultural activity) and is taxed at progressive rates starting at 22% and increasing to 45% under four income brackets.

Rental income from immovable property is taxed at 15% for income between EUR 0 and EUR 12 000, 35% for rental income between EUR 12 001 and EUR 35 000 and 45% for rental income above EUR 35 001. Since 1 January 2017, these tax rates also apply to income derived from short term rentals (under certain conditions).

A special solidarity contribution tax is imposed on total income above EUR 12 000. Tax rates for the special contribution tax are progressive with six income brackets and rates ranging from 2.2% applied to income between EUR 12 001 and EUR 20 000, through to 10% applied to income above EUR 220 000.

All employee and pensioner taxpayers with annual incomes under EUR 20 000 can claim the following tax deductions:

- EUR 1 900 with no dependent children
- EUR 1 950 with one dependent child
- EUR 2 000 with two dependent children
- EUR 2 100 with three dependent children or more.

Taxpayers with annual incomes exceeding EUR 20 000 can still claim these tax credits that are reduced by EUR 10 for every EUR 1 000 of taxable income above the threshold. To qualify for the tax deductions the taxpayer must spend a minimum amount, determined by law, in Greece or in Member States of the European Union or EEA. Spending must be paid via electronic payments.

Profits made by legal persons and legal entities are taxed at the corporate income tax rate of 28% for income earned in tax year 2019 (which will be reduced by 1% annually to reach 25% by 2022). Taxable business income is total business income after deducting business expenses, depreciation and provisions for doubtful receivables. Revenue from business transactions includes income from the sale of the assets by the enterprise and the proceeds of its liquidation. All compulsory social security contributions are fully tax deductible.

Agricultural activity has always been treated differently for tax purposes due to its significance to the Greek economy as well as for the protection of agricultural production. Income from agricultural business activities includes income from the production of agricultural, poultry, livestock, forestry, logging and fishery products.

For individual agricultural entrepreneurs not all Pillar I Common Agricultural Policy subsidies are included in the determination of profit. Profit from business activities includes: all basic aid payments and green payments and coupled aid above EUR 12 000. Investment subsides and other Pillar I subsidies are not taxed.

From 1 January 2020, any transfer of immovable property is subject to a special tax of 15% for individual taxpayers if the gain on the property is more than EUR 25 000 and the property was owned by the taxpayer for less than five years.

If a legal person transfers a property, revenue generated from the sale is added to profits from business activity and is taxed at 28%.

Since 2015, personal income from agricultural businesses is taxed separately but with the same progressive tax schedule as for income from employment and pensions. This has not always been the case. Farmers are eligible for the same tax credits as employees and pensioners. When a farmer is earning income from both employment and a pension, only one tax credit is given.

Over the period 2013 to 2015 the tax treatment of income from agricultural businesses underwent several changes. Up until 2013 personal net farming income from cash based agricultural activity was assessed through an objective method (based on average income for the number of hectares or livestock or other production units). Objective income was then added to the taxpayer's other taxable income and was taxed at 26% for income below EUR 50 000 and 33% for income over EUR 50 000.

In the tax year 2014, personal farming income was calculated like any other business income (with some special treatment for subsidies) and it was taxed at a flat rate of 13%. From 2014 business profits earned by agricultural cooperatives and producer groups are taxed at a rate of 13%, less than half of the usual corporate tax rate. Until 2012, agricultural income derived by these entities was completely exempt from taxes and in 2013 all income generated by these entities was taxed at 26%.

18.3. Property taxation

Property tax is imposed on all kinds of immovable property (buildings and land). The tax is calculated based on the type of immovable property, region, surface, levels, and age of the building. When the total value of the immovable property exceeds EUR 200 000 a

supplementary tax is charged as well. Agricultural land is excluded from the total value calculations for the supplementary tax.

Sale of a new property by a trader is subject to a 24% VAT on the sale price. For property that is not new or where the seller does not carry out an economic activity, the buyer is charged with a real estate transfer tax of 3% on the larger amount between the objective value and the value of the purchase contract. Purchases of first homes are exempt from the transfer of property tax under certain conditions.

Farmers are exempt from transfer tax when purchasing or exchanging agricultural or livestock areas, together with all the associated working capital. This exemption applies to all farmers (young, new entrants or over the age of 40), without any limitations on the value or size of the agricultural land.

Property acquired through inheritance or gift is subject to a tax calculated on the basis of three scales taking into account the degree of affinity between the donor and the heir or beneficiary. For all scales there is a tax-free amount. This is larger the closer the degree of kinship. The tax may amount to up to 40% of the value of the property and is borne by the heir or the donor. No exceptions on inheritance or gift taxes exist for the agricultural sector.

18.4. Tax on goods and services

A value added tax (VAT) is imposed on the sales of goods and services at the following rates: a standard rate of 24%; a reduced rate of 13% for certain goods and services including farm inputs and agricultural outputs; and a super reduced rate of 6% for human health care medicines, books and theatre tickets only.

Farmers with a turnover of below EUR 15 000 and total subsidies received below EUR 5 000 can use a special flat rate scheme. Under the flat rate scheme, farmers who are not VAT registered, are entitled to a refund by the State by applying an additional 6% to the value of sales of their agricultural or forest produce and their supply of agricultural services to other taxable persons. The provisions for VAT compensation do not apply to deliveries of agricultural products for processing and to agricultural services provided to other flat rate eligible farmers or to non-taxable persons.

Since 1 January 2016 there are no rebates for excise duties for fuels available to farmers in Greece. Greece has an excise tax exemption on the use of electricity in agriculture.

18.5. Environmental taxes

There are no environmental taxes in Greece.

18.6. Tax incentives for R&D and innovation

Expenditure on scientific and technological research are deducted from the gross business revenue at the time of their implementation at a rate of 130%. Equipment and instruments used for scientific and technological research purposes are depreciated over three years at a depreciation rate of 40%.

18.7. Other taxes

Greece does not provide any tax concessions to the agriculture sector through its social security system.

Chapter 19. Hungary

This chapter contains a description of tax provisions applied to agriculture in 2019, unless otherwise specified. They include taxes on income and profit, property, good and services, environmental taxes, and tax incentives for R&D and innovation.

19.1. Overview

Significant steps have been taken in recent years towards improving the competitiveness of the tax system in Hungary by shifting the tax structure to consumption and cutting direct taxes. For example, the standard value added tax rate is 27% while the corporate income tax is 9%.

In 2016, the agriculture sector contributed 4.5% to Hungary's GDP and employed 5% of the labour force. With 58% of the total land area under agriculture cultivation, private farms account for 54% of landownership and corporate farms own 36%.

Specific taxation provisions for agriculture related activities and businesses exist providing exemptions, tax relief, and standard cost taxation options all reducing the tax burden for small-scale agricultural producers (who account for approximately 89% of all farmers in Hungary) thereby simplifying their tax administration. Income from land is exempt from taxation and business continuity is promoted with discounted taxes on farms transferred, bequeathed or gifted to family members or other experienced farmers. Refunds of fuel excise taxes are also available to farmers.

19.2. Income taxation

In case of resident taxpayers incomes deriving both from Hungary and abroad are subject to corporate income tax (CIT). Non-residents are subject to CIT only on their income from their Hungarian branch's business activities. The CIT taxable income is calculated after adjustments, i.e. loss carry forward and double-deductibility of certain costs (tax base allowances). The CIT tax rate is 9% from 1 January 2019. If a company's CIT taxable income is less than 2% of its total revenues it can choose to file a declaration and pay CIT according to the general provisions or to pay CIT on its minimum tax base.

Agricultural enterprises have special exemptions to the general CIT rules concerning the carryover of losses and tax advances. For instance under the CIT rules if the tax base is negative in any tax year, the taxpayer may deduct this loss from its pre-tax profit spread out at any rate in the following five tax years. Losses deferred from previous tax years may be deducted from the pre-tax profit of up to 50% of the tax base. CIT paying agricultural enterprises may account for deferred losses from the tax year by reducing the pre-tax profit of the preceding two tax years by 30% of the deferred loss.

Under the general CIT rules taxpayers have to pay tax advances during the tax year in equal instalments. If the taxpayer paid tax under HUF 5 million in the previous year than it has to pay the advances quarterly, otherwise monthly. Firms operating in the agriculture, forestry or fishery sectors can pay these advances on the basis of a special schedule.

Instead of paying CIT, alternative tax regimes exist for SMEs to reduce tax burdens, making the tax system more growth-friendly, as well as simpler. Small enterprises can choose from the three options. The lump sum tax for small taxpayers (KATA) and simplified business tax (EVA) are the main options targeted at private entrepreneurs or very small enterprises, while the small business tax (KIVA) was designed to cater for SMEs with a higher number of employees and investment activities.

Private entrepreneurs choosing PIT as their income tax have to pay the so-called self-entrepreneurial PIT on their profits at 9% and dividend tax of 15% on the remainder of their income.

Under the Hungarian Personal Income Tax Act a special tax regime applies to farmers, who are registered as "small-scale agricultural producers". In 2017, 89% of farmers were small-scale agricultural producers. Income from small-scale agricultural activities qualifies as

independent income. Table 19.1 presents the distribution of farm holdings by tax categories.

Table 19.1. Numbers of enterprises and self-employed persons in the agricultural sector by tax category, 2017

	Number (000)	%
Corporate income tax (CIT)	11.3	4
Lump sum tax for small taxpayers (KATA)	5.6	2
Simplified business tax (EVA)	0.1	
Small business tax (KIVA)	0.2	
Self-employed (PIT)	15.6	5
Small-scale agricultural producers	256.8	89
Total	289.6	100

As a general rule a small-scale agricultural producer may choose from two methods of expense accounting: itemised expense accounting (based on actual expenses) or deduct a lump sum of 10% of their income as expenses.

Within the small-scale agricultural producer category there is a subset for agricultural smallholders (historically backyard farming). These are farmers with farm revenue of less than HUF 8 million per annum. In 2017, 97% of small-scale agricultural producers were agricultural smallholders (Table 19.2).

Table 19.2. Breakdown of small-scale agricultural producers by income, accounting method and tax treatment, 2017

	Accounting method	Tax treatment	Number (000)	%
Revenue less than HUF 0.6 mil		Exempt from filing a tax return	100.8[1]	39
Revenue between HUF 0.6 mil – HUF 4 mil	Itemised expense accounting	Negative declaration statement Deduct smallholder allowance of HUF 0.6 mil	81.6	32
Revenue between HUF 4 mil – HUF 8 mil	Itemised expense accounting	Deduct smallholder allowance of HUF 0.6 mil Deduct 40% as “smallholders’ expense allowance” Remaining income is part of the consolidated PIT base	54.3	21
Revenue between HUF 4 mil – HUF 8 mil	Standard cost method	Deduct 85% of revenues for crops or 94% of revenues for production of animal products as expenses Remaining income is part of the consolidated PIT base	12.0	5
Revenue above HUF 8 mil	Itemised expense accounting		7.9	3
Revenue above HUF 8 mil		10% lump sum deduction	0.2	
Total			256.8	100

Note: Small-scale agricultural producers with revenue below HUF 8 million are considered agricultural smallholders
1 Estimation based on the data published by the Hungarian Central Statistical Office and the annual tax return data. This number may contain those, who are registered but did not engage in economic activity in 2017.

Small-scale agricultural producers with revenue of less than HUF 600 000 per annum are not be required to report this income in the annual PIT return. Revenue over this threshold is included in taxable income.

Small-scale agricultural producers using itemised expense accounting with annual revenues over HUF 600 000 but below HUF 4 million, can exclude income from small-scale

agricultural production during the tax year (negative statement). The agricultural small holder must have invoices for expenses incurred for at least 20% of revenues to justify the negative statement.

As a general rule (typically applied to revenues over HUF 4 million), agricultural smallholders may choose from two methods of expense accounting: itemised expense accounting (based on actual expenses) or a standard cost method. Taxpayers using itemised expense accounting may also deduct 40% from their income as a "smallholders' expense allowance" and the remaining income is part of the consolidated PIT base.

When small-scale agricultural producers choose the standard cost calculation they cannot deduct their actual expenses or the 40% allowance, but they are entitled to apply standard cost rates (85% of revenue for crops or 94% of revenue for production of animal products) and the remaining income is part of the consolidated PIT base. This results in a very low or even zero tax burden for agricultural smallholders.

Family members engaged in joint small-scale agricultural activities (with a joint license) using itemised expense accounting, can divide total revenues and expenses by the number of family members involved in the farming activity.

Income from the leasing of agricultural land is tax exempt if the lease is for five years or more. Income from selling property (even from selling agricultural land) is tax exempt if the property has been owned by the seller for more than five years. Income from the sale of agricultural land is tax exempt up to HUF 200 000 per year on the condition that the land is sold to a registered farmer who undertakes to farm the land for at least five years, or the land is transferred to an employee who agrees to lease the land for at least ten years.

19.3. Property taxation

In Hungary, local governments are entitled to impose local business taxes (LBT), property and land taxes. Federal laws set basic rules and tax ceilings up to which the municipal government can determine taxes. Taxes are charged on both legal and non-legal persons. All the firms and private entrepreneurs are required to pay LBT at a rate of up to 2%. The tax base is net sales revenue decreased by the value of the payments to subcontractors, the cost of raw materials, and direct cost of basic research, applied research and experimental development.

Local government taxes on buildings are charged on the basis of net floor space or the adjusted market value of the building. The maximum rate of this tax is HUF 1 100 per m^2 or 3.6% of the adjusted market value. Buildings used for animal husbandry or plant cultivation or for storage purposes (e.g. stables, greenhouses, facilities for storing crops or fertiliser, barns) are exempt from the building tax.

Municipal government charge taxes on property calculated on the basis of the actual area of the land or the adjusted market value of the land. The maximum rate of this tax is HUF 200 per m^2 or 3% of the adjusted market value. Incorporated land used for agricultural purposes is exempt from property tax.

Duty on inheritance and gifts is set at 18% of the net worth of the inheritance or gifts received by an heir. The deceased's close relatives (including the relatives based on adoption) as well as the surviving spouse do not have to pay taxes on the inheritance. In respect to the inheritance of land ownership or land user rights for agricultural land, only 50% of the regular inheritance tax shall be paid or 25% if the heir is a registered farmer.

When the heir to agricultural land sells any portion of the land to any other heir who is a registered farmer, the original heir shall be exempt from inheritance duty on the share sold.

Gifts of movable property are subject to gift taxes if the market value of the movable property exceeds HUF 150 000. As a general rule, no gift duties are charged on gifts donated to close relatives (including the relatives based on adoption) or gifts (including agricultural land with associated farm buildings and farm homestead and the land user rights).

The duty on the transfer of property is 4% of the market value of real estate property acquired up to HUF 1 billion plus 2% of the portion of the market value above HUF 1 billion, not to exceed HUF 200 million per property. No transfer taxes apply for the transfer of agricultural land under certain conditions.

19.4. Tax on goods and services

In Hungary the general VAT rate is 27%. A 5% VAT applies to the supply of livestock, meat products, edible offal of swine, fish, eggs and milk and an 18% VAT applies to dairy products and cereals.

Taxable persons carrying out activities in the agricultural sector either apply the general VAT rules, or if they are not VAT registered they can apply flat rates charges of 12% for crops or 7% for livestock products sold to processors to compensate for VAT paid on inputs.

In Hungary excise duty is levied on alcoholic beverages, fuels and tobacco products. Farmers are entitled to a refund on fuel excise taxes for diesel oil for use in farming, forestry or fisheries or for the transportation of harvested products. The refund is equal to 82% (if the world oil price is higher than USD 50 per barrel) or 83.5% (if the world oil price is lower than USD 50 per barrel) not exceeding 97 litres per hectare in a year.

19.5. Environmental taxes

There are no provisions used to improve the environmental impact of agriculture-related activities.

19.6. Tax incentives for R&D and innovation

Large and medium sized enterprises are required to pay an innovation contribution at a rate of 0.3%.

All companies can deduct R&D costs from the corporate income tax, local business tax and innovation contribution. R&D costs are deductible twice from the tax base.

For researchers who are PhD students and doctoral candidates employed by enterprises the social contribution tax rate is 9.75% (instead of 19.5%) for gross wages of up to HUF 200 000 per month. For researchers who have a PhD degree or another title in science employed by enterprises there are no social contribution and the vocational training contributions charged (instead of 21%) for gross wages of up to HUF 500 000 per month.

19.7. Other taxes

Special rules apply to the small-scale agricultural producers' social security position. Small-scale agricultural producers have to pay all the contributions (except the labour market contribution) and social contribution tax on the basis of the national minimum wage if their previous year annual revenue is more than HUF 8 million or if it is their first year as small-scale agricultural producer. If their previous year's annual revenue is less than HUF 8 million, they have to pay 10% pension contribution and a 4% in-kind health

insurance contribution on the basis of 20% of their previous year revenue. The basis for social contribution tax depends on the cost deduction method farmers choose. If the self-employed small-scale agricultural producer elects to they can pay additional contributions in order to gain higher benefit entitlements.

Small-scale agricultural producers, whose previous periods of social contributions combined with the time they have left to work until retirement age is less than 20 years, are not compulsorily insured. These farmers have to pay HUF 7 500 per month in 2019 in return for the health care entitlement.

Chapter 20. Ireland

This chapter contains a description of tax provisions applied to agriculture in 2019, unless otherwise specified. They include taxes on income and profit, property, good and services, environmental taxes, and tax incentives for R&D and innovation.

20.1. Overview

The agri-food sector continues to play a crucial role in Ireland's economic recovery, with a turnover of EUR 26 billion, contributing 7.8% of GNI and generating 11% of all merchandise exports in 2017. The agri-food sector has performed strongly in recent years with the value of food and drink exports reaching EUR 13.6 billion in 2017, marking growth of over 70% since 2009. The agri-food sector also makes a significant contribution to employment in rural areas accounting for 7.9% of total employment. In 2016, there were 137 500 farms in Ireland with the average farm size of 32.4 hectares. In 2017 the average family farm income was EUR 31 374 with 35% of all farms earning a farm income of less than EUR 10 000, 21% earning a farm income of between EUR 10 000 and EUR 20 000 and 51% of farms households earning income from off-farm sources.

In recognition of its significant role in the economy, and especially the rural economy, there are numerous specific taxation measures aimed at the agriculture sector many of which have been implemented or enhanced since 2015. Tax measures include income smoothing for farmers, capital allowances for on-farm investments, stock relief, tax credits for succession partnerships, stamp duty relief, capital gains tax relief for retirement, lower valuation of agricultural lands and assets for capital acquisition taxes on gifts and inheritances, exemptions from income from leasing farmlands, flat rate compensation for VAT and double tax deductions for the carbon tax on diesel.

Many of the recent changes to the taxation measures for agriculture were as a result of recommendations included in the Agri-Taxation Review (the Review) undertaken in 2014 as a joint initiative between the Department of Agriculture, Food and the Marine and the Department of Finance. The Review provided a solid evidence base for continued assistance to the primary agriculture sector through taxation measures, and provides a clear strategy with specific policy objectives for the future to:

- Increase the mobility and the productive use of land.
- Assist succession.
- Complement wider agriculture policies and schemes, such as supporting:
  - Investment to enhance competitiveness, including assisting new entrant, young trained farmers.
  - Environmental sustainability, including the improvement of farm efficiency.
  - Alternative farming models such as farm partnerships.
  - Responses to increasing income volatility.

In a progress report on the implementation of the recommendations included in the Review published as part of the Budget 2019, it is apparent that almost all of the 25 recommendations have been put in place (Table 20.1).

Table 20.1. Progress in implementing recommendations from the 2014 agri-taxation review

Recommendation	Budget implemented
A. Increase the mobility and the productive use of land	
1. Retain Relief for certain income from leasing of farmland.	Retained
2. Increase the income thresholds for relief from leasing income by 50%	Introduced in Budget 2015
3. Introduce a fourth threshold for lease periods of 15 or more years with an exemption for the first EUR 40 000 per annum.	Introduced in Budget 2015
4. Remove the lower age threshold of 40 years of age for eligibility for the long-term leasing tax relief.	Introduced in Budget 2015
5. Allow non-connected limited companies as an eligible lessee for the long-term leasing tax relief.	Introduced in Budget 2015
6. Relieve stamp duty on long-term leases (5 years or more) for agricultural land.	Introduced in Budget 2015, commenced in 2018
7. Raise awareness among landowners of the current reliefs for long-term leasing	Ongoing
B. Assist succession	
8. Retain Agricultural Relief from Capital Acquisitions Tax.	Retained
9. Target Agricultural Relief from Capital Acquisitions Tax to qualified or full-time farmers or to those who lease land out on a long-term basis.	Introduced in Budget 2015
10. Retain Retirement Relief from Capital Acquisitions Tax at current levels.	Retained
11. For transfers under Retirement Relief (from capital gains tax), extend the eligible letting period of a qualifying asset to 25 years.	Introduced in Budget 2015
12. For transfers other than to a child under Retirement Relief, as a once-off measure until the end of 2016, allow conarce lettings as eligible.	Introduced in Budget 2015
13. Extend Stamp Duty Consanguinity Relief on Non-Residential Transfers to the end of 2017.	Extended in Budget 2015 and renewed in Budget 2018
14. Retain current stamp duty exemptions on transfers of land.	Retained and renewed in Budget 2016
C. Complement wider agriculture policies and schemes	
15. Retain the current Capital Allowances available to the sector.	Retained
16. Retain current Stock Reliefs.	Retained and renewed in Budget 2016
17. Retain Capital Gain Tax relief on farm restructuring, allow whole-farm replacement and extend the measure to the end of 2016.	Changes introduced in Budget 2015 and renewed in Budget 2017
18. Retain as tax exempt, profits or gains from the commercial occupation of woodlands.	Retained
19. Examine the broadening of the scope of Sustainable Energy Authority of Ireland's (SEAI) ACA scheme to incentivise investment in energy efficient equipment by making it available to non-incorporated businesses.	Introduced in Budget 2017
D. Alternative farming models such as farm partnerships	
20. Retain the current measures and review in the context of new partnership register and supports under the Rural Development Programme.	Retained
E. Responses to increasing income volatility	
21. Retain and enhance Income Averaging by increasing the period from 3 to 5 years.	Introduced in Budget 2015
22. Allow averaging to be availed of where a farmer and/or their spouse receive income from an on-farm diversification trade or profession.	Introduced in Budget 2015
F. General recommendations	
23. Examine the scope for extending income averaging to forestry clear-felling profits.	Forestry income was removed from the 'High Earners Restriction' in Budget 2016, thereby negating the need for averaging.
24. The Agri-taxation Working Group should remain in place to monitor the agri-taxation measures and examine other issues arising; and specifically to:	
a. Examine the feasibility of introducing a risk deposit scheme	Is being considered
b. Examine the feasibility of introducing a 'Phased Transfer Partnership'	Introduced in Budget 2017
c. Examine the tax system to determine unintended barriers to female participation	Please see Appendix 5
d. Examine other issues as necessary.	
25. The Agri-taxation Working Group should also work to ensure better data collection on costs and benefits.	Ongoing

Source: Budget 2019, Report on Tax Expenditures Incorporating outcomes of certain Tax Expenditure & Tax Related Reviews completed since October 2017, "Progress Implementation Update of the Agri-taxation Review 2014 Report of the Agri-taxation Working Group October 2018", www.budget.gov.ie/Budgets/2019/Documents/Tax%20Expenditures%20Report%202018%20FINAL%2017.10.18%20(002).pdf.

20.2. Income taxation

If the farmer is the sole trader, profits from farming and capital gains on the disposal of certain assets, are assessable under income tax and capital gains tax. If the trade of farming is in a company, the profits and gains are assessable under corporation tax. The same approach and principles apply to the agro-food industry whether they are a sole trader or a company.

Farmers are able to smooth taxable income over time under the long-standing Income Averaging Farming scheme. From 2015 onwards the period of income averaging has increased from three to five years. For the years of assessment 2016 onwards, a farmer may elect to opt out of the income averaging regime and revert to the normal basis of assessment for a single year. This was introduced to assist in cashflow for exceptional years (once in a five-year period) where income may fall significantly. From 2019 the income averaging measure was extended to include farm families with off-farm income, which is the case for approximately 50% of farm households.

Capital allowances are granted for tax purposes in lieu of a deduction for depreciation for certain expenditure. They effectively allow the write-off of the costs of an asset over a period of time.

Capital Allowance for Farm Buildings and Other Works is available to the agriculture sector to assist with the construction of farm buildings (excluding farm dwellings), fences, farm roadways, holding yards, drains, land reclamation and other ancillary works such as walls, water and electrical installation. Farmers may claim the allowance for capital expenditure from their taxable incomes over a seven year period at a rate of 15% for each of the first six years and 10% in year seven.

The Review recommended the retention of the current capital allowances for the agriculture sector. It also found that there was a positive cost benefit analysis on capital allowances and the econometric analysis concluded that there is a positive relationship between investment and output.

Stock reliefs enable investment and are especially important in supporting young farmers and generational renewal:

- 25% General Stock Relief on Income Tax
- 100% Stock Relief on Income Tax for Certain Young Trained Farmers
- 50% Stock Relief on Income Tax for Registered Farm Partnerships
- Relief for Stock Transfer due to discontinued farming trade.

Stock relief is calculated by the increase of value of the trading stock between the beginning and end of an accounting period. The percentage relief is then deducted from taxable income.

Special tax treatment applies in respect of profits on compulsory disposal of livestock due to statutory disease eradication measures. It allows deferral of the profit from the disposal over four accounting periods and a special 100% stock relief during the deferral period. A farmer may exclude the profits arising from the compulsory disposal from the profits of the accounting period in which the disposal took place. Instead they can elect to spread the profits in equal instalments over four accounting periods immediately after the period in which the profit arises or spread the profits in four equal tranches in the accounting period in which the disposal actually took place and in the three immediately following accounting periods.

Under the Succession Farm Partnership Scheme an annual tax credit of EUR 5 000 is granted for five years to farmers and their successors who have an approved partnership. Under the partnership at least 80% of the farm assets must be transferred to the successor.

Capital gains tax (CGT) is payable on gains made from the sale, gift or exchange of an asset at a rate of 33%. There are certain circumstances where relief from this tax may apply:

Retirement Relief from CGT is available where an individual, who is at least 55 years of age (with some exceptions such as chronic ill-health) disposes, by way of sale or gift, of the whole or part of their qualifying assets. Although the relief is commonly known as "retirement relief" a claimant does not have to retire in order to qualify. Available to non-agricultural businesses also, the amount of retirement relief from CGT available is dependent on whether qualifying assets transferred are parent to child transfers or transfers other than to a child.

Irrespective of the amount of consideration for the disposal, full relief may be claimed by an individual aged 55–65 years of age on the disposal of the whole or part of their qualifying assets to their child. The relief is clawed back where the child disposes of an asset within six years of the date of acquisition from their parent. (Retirement Relief from CGT – Parent to child transfers)

Where the capital gains is less than EUR 750 000, full exemption from CGT is given in respect in the case of an individual aged 55–65 years of age. For individuals aged 66 years or more EUR 500 000 is exempt from the CGT for transactions after 1 January 2014. (Retirement Relief from CGT – Transfers other than to a child)

Capital Gains Tax Relief on Farm Restructuring provides for a rollover relief for farm restructuring and parcel swaps with certain conditions to ensure a more efficient farm holding arises. To be eligible for the relief, the sale and purchase of qualifying land(s) must occur within 24 months of each other with the initial sale or purchase of qualifying land taking place in the period 1 January 2013 to December 2019. The conditions attached to the EU State Aid approval also restrict the scope of the CGT relief to agricultural land only. Buildings on the land are not eligible for the relief. Relief is only available to claimants who are issued with a Farm Restructuring Certificate by Teagasc.

Stamp Duty Relief for Farm Consolidation allows for a 1% rate of stamp duty (as opposed to the general rate of 6%) where the land transactions qualify for a "Farm Restructuring Certificate" for the purposes of Capital Gains Tax Relief on Farm Restructuring. A clawback of the relief will apply where the land or part of the land purchased is disposed of or partly disposed of before the end of the five-year holding period. Such a clawback will not occur where the land purchased is compulsorily acquired.

An exemption from CGT is available for the disposal of a site from a parent to a child where the transfer is to enable the child to construct a principal private residence on the site. The market value of the site must not exceed EUR 500 000. The area of the site (exclusive of the area on which the house is to be built) must not exceed 0.4 ha. If the child subsequently disposes of the site without having occupied a principal private residence on the site for at least three years, then the capital gain which would have accrued to the parent on the initial transfer will accrue to the child in addition to their own gain. This measure is available to both farmers and non-farmers. (Capital Gains Tax Relief for Transfer of a Site from Parent to Child)

Capital Gains Tax Relief for Woodlands applies to the disposal of woodlands. The consideration for the disposal of trees growing on the land is not included in calculating the chargeable gain nor are insurance proceeds received on foot of destruction of or damage or injury to trees by fire or other hazard on such land. The relief applies to individuals only.

20.3. Property taxation

Stamp duty is payable on certain instruments (written documents) that transfer ownership of property or are agreements to transfer ownership of property. Property includes land, buildings, business assets (like goodwill) and shares, stocks and marketable securities (both quoted and unquoted). Subject to certain conditions, it may not be chargeable on transfers between spouses. The general rate for stamp duty is 6% of the selling price for non-residential property.

Full relief from stamp duty applies to the transfer of an interest in agricultural land to Young Trained Farmers who are under 35 years of age and who hold a relevant agricultural qualification. The relief encourages the transfer of land to a younger and better trained generation of farmers. Only agricultural land can qualify for relief. However, agricultural land includes such farm houses and buildings and the land on which they are situated. The transfer of land may be by way of a sale or a gift. A transferee must intend to spend at least 50% of their normal working time farming the transferred land, and retain ownership of that land, for a period of at least five years from the date of execution of the deed of transfer. Relief can be clawed back where ownership of the land is not retained for the required five-year period.

Consanguinity Relief applies for stamp duty is applied to land transfers between related persons (referred to as Stamp Duty – Consanguinity Relief for Family Transfers). A rate of 1% stamp duty applies. In order to qualify a beneficiary must either farm the land for at least six years or lease it for at least six years to someone who will farm it. If the beneficiary is farming the land, they must hold a specified qualification or obtain it within a period of four years from the date they receive the land or spend at least 50% of their time farming land (including this land transfer). If it is leased to someone else to farm, that person must hold a specified qualification or obtain it within a period of four years from the date the beneficiary got the land or spend at least 50% of their time farming land (including this land transfer). The land must be farmed on a commercial basis and there must be an intention to make a profit from it.

Capital Acquisition Tax (CAT) is a tax on gifts and inheritances. Gifts and inheritances may be received up to a set value over a person's lifetime before having to pay CAT. Once due, it is charged at the current rate of 33%. Certain reliefs are available to the farming sector.

Capital Acquisitions Tax relief is available in respect of gifts and inheritances of agricultural property, subject to certain conditions being satisfied. Designed to ensure productive use of agricultural property the relief operates by reducing the market value of "agricultural property" by 90%, so that gift or inheritance tax is calculated on an amount - known as the "agricultural value" – which is substantially less than the market value. In general, the relief applies provided the beneficiary qualifies as a "farmer", and has an agricultural qualification or farms the agricultural property for not less than 50% of their normal working time. The agricultural property must also be farmed on a commercial basis and with a view to the realisation of profits

If CGT and CAT are payable on the same event (for example, a gift of land by a parent to a child) any CGT paid by the parent can be used by the child as a credit against their CAT liability. (Capital Gains Tax / Capital Acquisition Tax "same event" relief)

Lower interest rate on instalment payments for Capital Acquisition Tax due on gifts/inheritances of agricultural property are available. It is possible for CAT to be paid in instalments in certain circumstances. This option is available where a beneficiary takes an absolute interest in immovable property and/or a limited interest in any property, whether

moveable or immovable. It is also available where a beneficiary takes a gift or inheritance of agricultural property and/or relevant business property which is movable property (e.g. livestock, machinery, stock).

20.4. Tax on goods and services

There are different rates of Value Added Tax (VAT) currently applicable to goods and services. The standard rate of VAT is 23%. A reduced VAT rate of 13.5% applies to fuel (coal, heating oil and gas), electricity, veterinary fees and agricultural contracting services etc. A reduced VAT of 4.8% applies to livestock (excluding chickens). No VAT is charged on basic foodstuffs, fertilisers, vegetable and fruit seeds and large animal feed.

VAT registration is obligatory when annual turnover exceeds or is likely to exceed the VAT thresholds. However, if farmers are engaged solely in agricultural production activities, they are not obliged to register for VAT. In order to compensate farmers for VAT paid on farm supplies, a farmer is entitled to add a flat rate of 5.2% (2019) to the prices at which their agricultural produce or agricultural services are supplied to VAT-registered persons.

From 1 January 2019 farmers can reclaim VAT they have paid on construction or alterations of farm buildings and structures, drainage, land reclamation, hedgerows and underpasses. The farmer cannot be VAT registered and must make the claims within four years.

Tax relief is available to farmers for the increase in carbon tax on farm diesel from May 2012. This is in addition to the already permitted income tax deductibility of costs of green (agricultural) diesel as business expenses. This results in a double tax deduction.

20.5. Environmental taxes

One of the stated objectives of the 2014 Agri-taxation review was to complement agri taxation policy with wider agriculture policies and schemes such as environmental sustainability including farm efficiency. Arising from its recommendations Capital Gains Tax relief on farm restructuring, allowing whole-farm replacement was retained and provides ongoing environmental benefits.

Accelerated capital allowances on capital expenditure are available to companies and unincorporated businesses that incur expenditure on eligible energy-efficient equipment for use in their trade.

20.6. Tax incentives for R&D and innovation

No specific tax incentive for R&D and innovation exists for sole trading farmers. There is however a R&D Tax Credit for all companies in Ireland. The R&D tax credit is calculated at 25% of qualifying R&D expenditure and is used to reduce a company's corporation tax. Where a company has offset current and previous years' corporate tax liabilities, it may apply for a credit payable in instalments.

A company may qualify for the R&D Tax Credit if it is within the charge of corporate tax in Ireland; it carries out qualifying R&D activities in Ireland or the European Economic Area (EEA); and the expenditure does not qualify for a tax deduction in another country.

Knowledge Development Box (KDB) is a corporation tax relief whereby eligible companies can deduct 50% of the usual corporate tax rate on profits generated by qualifying assets. To be eligible for the KDB tax relief a company creates a usable qualifying asset

from R&D activities that earns income. Qualifying assets include patents, computer programmes and, for smaller companies, certain other certified intellectual property.

20.7. Other taxes

The central taxation system PAYE stands for "Pay As You Earn". All labour incurs Income Tax (IT), Pay Related Social Insurance (PRSI) and Universal Social Charge (USC) and pays the amount deducted to the Office of the Revenue Commissioners. PAYE ensures that the yearly amounts due are collected evenly on each pay day over the course of the tax year.

There are no special concessions in terms of contributions for farmers, as self-employed or as employers. However, a special scheme is applied to farmers (The Farm Assist Scheme) which is a means tested social insurance scheme for low income farm households.

20.8. Estimates of tax expenditure

Table 20.2. Tax expenditures directed at the agricultural sector, 2012 to 2016

Million EUR and number of claims

Relief	Cost 2012	Claims 2012	Cost 2013	Claims 2013	Cost 2014	Claims 2014	Cost 2015	Claims 2015	Cost 2016	Claims 2016
Stock Relief (Partnerships)*	0.1	30	0.1	30	0.3	30	0.1	60	0.5	360
Stock Relief for YTF*	1.1	280	1.1	310	1.1	280	1.4	460	1.4	500
Stamp Duty Relief for Consanguity*	3.7	2 344	2.0	1 208	3.0	1 796	4.7	2 071	2.1	864
Stamp Duty Relief for YTF*	7.9	1 157	3.8	714	4.7	722	5.2	989	4.6	735
General Stock Relief*	5.2	7 720	5.2	8 950	5.2	9 100	6.1	10 690	6.4	11 010
Exempt Rental Income from Leasing	7.3	3 980	7.3	4 370	9.2	5 130	13.9	6 830	19.4	8 490
Farmer VAT Refunds*	48.3	17 506	50.1	17 095	50.5	16 556	54.4	16 526	55.7	17 666
Capital Gains Tax Retirement Relief (outside family)[1]	NA	424	NA	341	NA	270	NA	391	NA	391
Capital Allowances Miscellaneous	67.0	11 687	63.0	11 053	62.0	10 704	57.0	9 894	49.0	8 899
Capital Allowances Case Rental Income	63.0	8 132	66.0	8 930	55.0	9 055	42.0	9 324	36.0	9 956
Capital Gains Tax Retirement Relief (within family)[1]	NA	237	NA	211	NA	234	NA	294	NA	264
Farmer Capital Acquisition Tax Relief*	201.0	1 747	163.0	1 594	164.0	1 581	215.0	2 024	118.0	1 263

Relief	Cost 2012	Claims 2012	Cost 2013	Claims 2013	Cost 2014	Claims 2014	Cost 2015	Claims 2015	Cost 2016	Claims 2016
Capital Allowances Industrial Buildings	191.0	35 131	190.0	33 158	184.0	33 039	175.0	32 851	167.0	33 168
Capital Allowances Machinery and Plant	396.0	63 312	395.0	64 609	390.0	65 577	376.0	66 738	370.0	69 483
Total cost	**991.6**		**946.6**		**929.0**		**950.8**		**830.1**	
Total cost agriculture specific	**267.3**		**225.3**		**228.8**		**286.9**		**188.7**	

Notes: An individual farmer may avail of a number of reliefs, the total figure does not reflect the number of individual farmers but the number of claims made under each relief.
*The table shows total expenditures directed at the agriculture sector were valued at EUR 830 million in 2016. Most of these measures are business reliefs available to all SMEs/sole traders. The table shows that agriculture specific tax measures were valued at EUR 188.7 million in 2016, mainly reliefs aimed at encouraging land mobility and the earlier transfer of family farms.
*Reflects reliefs directed specifically at the agriculture sector, in 2016 the cost of these reliefs amounted to EUR 188.7 million.
[1]Revenue cannot provide costings on this as the relevant tax returns does not seek information in respect of the changeable gain.
Source: Budget 2019, Report on Tax Expenditures Incorporating outcomes of certain Tax Expenditure & Tax Related Reviews completed since October 2017, "Progress Implementation Update of the Agri-taxation Review 2014 Report of the Agri-taxation Working Group October 2018" www.budget.gov.ie/Budgets/2019/Documents/Tax%20Expenditures%20Report%202018%20FINAL%2017.10.18%20(002).pdf

Chapter 21. Israel

This chapter contains a description of tax provisions applied to agriculture in 2019, unless otherwise specified. They include taxes on income and profit, property, good and services, environmental taxes, and tax incentives for R&D and innovation.

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.

21.1. Overview

With limited water resources and arable land Israel's agricultural sector is characterised by an intensive production systems which combine agri-technological advancements to increase production levels. In 2017, 1% of the labour force was employed in agriculture and the agricultural GDP amounted to 1.3%. Specific tax benefits for agricultural income exist mostly reducing the tax rates applied to taxable income from the sector.

Over 80% of Israel's agriculture is based on cooperative foundations (the kibbutz and the Moshav), using nationally owned land under a long-term renewable 49-year leases. The "kibbutz" (based on the Hebrew word for "group") is a rural community generally comprising several hundred inhabitants involved in cooperative production on land ranging in size from 300 to 700 hectares. The major economic activities of the kibbutz are agricultural production, industry, agro-tourism and services. Over the years, the share of agriculture in the economy of the kibbutz has declined, and now most kibbutz income comes from non-agricultural activities.

The other major farming community, the Moshav, comprises 50 to 120 individual family farm units, which like the kibbutz, is formally defined as an "agricultural cooperative".

A third type of rural community is the non-cooperative Moshava, a community of farmers who mostly live on privately owned land. Some Moshava farmers have organised themselves as an agricultural association in order to provide the members with certain services such as sorting, packing, processing, operating packhouses and wineries.

The overall number of rural communities in Israel rose from 769 in 1961 to 966 in 2016.

21.2. Income taxation

Income tax is levied according to the Israeli Income Tax Ordinance, 5721-1961 (ITO). The ITO contains rules for corporate income tax, individual income tax as well as for the administrative aspects of taxation.

As of 2019, corporations in Israel are subject to a tax rate of 23%.

Individuals are subject to progressive personal income tax rates ranging from 10% to 47%. An additional tax for high income earners (in excess of ISL 649 560) is charged at a rate of 3%. Special tax rules apply with regard to passive source income, rental fees, persons aged over 60 years old, new immigrants and returning residents. An Israeli individual resident taxpayer may reduce their taxable income in accordance with the tax brackets and rates by using various allowable credits.

Personal and corporate income taxes are levied on the worldwide income of individuals or companies who are Israeli tax residents. Non-residents are taxed on Israeli-source income. An individual is an Israeli tax resident if "centre of life" of that person is located in Israel (s. 1(a) ITO). A company is considered as Israeli tax resident if it is incorporated in Israel or it is managed and controlled from Israel (s. 1(b) ITO).

Foreign residents are liable to tax on income generated or derived in Israel, subject to source rules and the respective double taxation treaties. Permanent establishments of foreign companies are generally taxed on Israeli-source income only. The Israeli income tax system includes special rules with regard to foreign professional companies, controlled foreign companies and foreign occupational companies enabling Israel to tax foreign source income in Israel under the defined circumstances.

Capital gains, defined as the excess of proceeds from the sale of an asset over its depreciated cost, are taxed at a rate of 25% or 30% based on ownership interest holding with respect to individuals and at the standard income tax rate of 23% with respect to companies.

Agriculture income is considered as any other business income. Specific tax benefits are granted to agriculture income in accordance with the Law for Encouragement of Capital Investment in Agriculture, 1980. These benefits include:

- Accelerated depreciation for equipment and buildings. (Art. 31,32)
- Reduced tax rate for five years on dividends from an agricultural enterprise of 20% instead of 25% or 30%. (Art. 33(b))
- Reduced personal income tax with the top bracket subject to a tax rate of 30% instead of 47%. (Art. 33(c)(d))
- Foreign resident experts invited to render services to an agricultural enterprise are subject to reduced tax rate with the top bracket subject to a tax rate of 25% instead of 47%. This benefit exists for three to five years. (Art. 35(a))
- Qualifying agricultural companies enjoy a 5-year tax holiday. However, corporate tax is collected upon payment of dividends from the exempt revenue in addition to tax imposed on the dividends at a rate of 20%. (Art. 35A(a)(c))

21.3. Property taxation

There is no special property tax treatment for agriculture.

There is no gift tax or inheritance tax in Israel.

The government levies an acquisition tax on purchases of real estate between 0% and 10% for a first apartment and 5% and 10% for a second apartment.

21.4. Tax on goods and services

A valued added tax (VAT) of 17% is applied to certain goods and services. Fresh fruit and vegetables have a VAT rate of 0%.

21.5. Environmental taxes

There are no tax provisions used to improve the environmental impacts of agriculture-related activities applied in Israel.

21.6. Tax incentives for R&D and innovation

There is no distinction for agricultural R&D activities. Under the Law for the Encouragement of Capital Investment there are tax benefits for enterprises that contribute to the development of the productive capacity of the economy by generating industrial income. These tax incentives can apply to the income generated from intellectual property developed by plant breeding companies provided that they meet the necessary requirements.

21.7. Other taxes

Israel does not provide any tax concessions to the agriculture sector through its social security system.

Chapter 22. Italy

This chapter contains a description of tax provisions applied to agriculture in 2019, unless otherwise specified. They include taxes on income and profit, property, good and services, environmental taxes, and tax incentives for R&D and innovation.

22.1. Overview

The 2016 Italian farm structure survey by the Italian National Institute of Statistics (ISTAT) has registered a remarkable decrease in the number of agricultural holdings (a decrease of 22% compared to 2013 and a decrease of 29% since 2010). In 2016, there were 1 145 705 farms of which 94% are individual farms. The remaining farms take other legal forms, i.e. corporate farms 1% and other forms 5%.

The agricultural sector is characterised by small-sized holdings. Farms with less than 5 hectares account for 62% of the total number of farms while cultivating only 12% of the national utilised agricultural area (UAA). Land consolidation is taking place. Over the period 2013 to 2016 the number of farms with UAA below 5 hectares and micro-farms with a UAA below 1 hectare decreased by 68%, while the number of farms with holdings of greater than 5 hectares increased by 16% and large-sized farm holdings, with an UAA higher than 50 hectares, increased by 3.4%. Meanwhile large-sized holdings with an UAA of greater than 50 hectares represent only 4% of total farms but are responsible for cultivating 43% of the total UAA. Farm sizes have increased throughout the country and at a national level the average UAA of farms has increased from 8.4 hectares to 11 hectares (an increase of 31% over the period 2013 to 2016).

The main sources of tax revenue in Italy are the personal income tax (IRPEF), corporate income tax (IRES) and the value added tax (VAT). The personal income tax is paid by all natural persons while the corporate income tax is paid by legal entities, independently from the economic sector in which they operate. The value added tax is paid by all consumers of goods and services. These taxes are paid at national level and their revenue is distributed among the state, regions and municipalities.

Tax treatment of the agricultural sector results in a lower tax burden as a result of the application of many tax advantages (tax breaks, lower rate of social security contributions for employers and exemptions) and income taxation calculated on the basis of the cadastral register. Additionally farmers pay reduced taxes on fuel which accounts for 40% of the tax expenditure on agriculture in 2017. Consequently, the tax burden in the agricultural sector decreased from 21.5% in 2011 to 19.3% in 2015, while for other sectors there was a strong increase from 40.7% to 43.4%.

Reforms implemented in the last ten years have further reduced the farm taxation. In particular, the Stability Law of 2016 exempted farmers from having to pay the regional tax on economic activities (IRAP) and the municipal tax on land property (IMU).

22.2. Income taxation

Natural persons residing in Italy must pay personal income tax (Imposta sul reddito delle persone fisiche — IRPEF) on both regular and occasional income. IRPEF is basically a state tax, but since 1998 a part of IRPEF is allocated to regions and municipalities. Personal income tax is based on a progressive system composed of six categories of income:

- Category 1 - Income from real estate properties (income from agriculture, forestry and other estate property including income from buildings).
- Category 2 - Income from capital investments.
- Category 3 - Income from wages and salaries.
- Category 4 - Income from professional and independent personal services.
- Category 5 - Income from trade and industry.
- Category 6 - Income from other sources.

Taxable income for each of the six categories is determined by its own set of rules. The tax basis is the aggregate income from the six categories of income.

Real estate properties in Italy are registered either in the property land registers or in the urban building land registers. Income from agriculture and forestry is defined as income from real estate properties (category one) and determined by registered assigned yields (cadastral basis) and not on the basis of actual yields or income generated. Yields in the land register are estimated as average values of land and buildings and are very low. This results in a preferential tax treatment of agriculture and forestry.

Yields from other real estate properties are taxable under income category six, income from other sources (e.g. income from mines, salt works, lakes, ponds, etc.).

The income from real estate is deemed, in principle, to belong to the person who has the right to use the estate and not to the owner (if these are different persons). Social contributions do not enter the income tax base.

Tax on incomes of legal persons (Corporate income tax - IRES) is a state tax. The basis of assessment is total net income from companies and other legal persons. There are some exceptions from the tax liability, e.g. incomes of agricultural cooperatives, small-scale fisheries cooperatives, or labour and production co-operatives under certain conditions. The tax rate is a flat 24% on the total taxable income.

22.3. Property taxation

In 2012, the new property tax IMU (Imposta municipale propria) replaced the Italian Council Tax (ICI). The standard 0.8% rate applies to most other properties in Italy. The rate is fixed by the municipality that can change this rate by 0.2%, by issuing local regulations. Farmers are exempt from IMU from 2016.

Regional tax on productive activities (IRAP) (Imposta Regionale sulle attività produttive) is charged on the value of net production resulting from the business activity within the region. The tax revenue is distributed among the state and regions. The Stability Law of 2016 eliminated the regional tax on productive activities for the majority of farmers.

Sale and transfer of agricultural land ownership is subject to Registration tax (Imposta di registro), Mortgage tax (Imposta Ipotecaria), Cadastral tax (Imposta catastale) and Stamp duty (Imposta di bollo). The normal tax rate of the registration tax is 15% reduced to 9% if the buyer is a farmer or a professional farmer enrolled in the registries of agricultural pension funds. Farmers or professional farmers pay EUR 50 for cadastral and EUR 50 registration taxes and are exempt from stamp duty.

22.4. Tax on goods and services

The value added tax (VAT) is applied to all goods and services and paid by consumers. The VAT rate applied to agricultural goods (i.e. vegetables, cereals) is 4%, whereas the standard VAT rate is 22% and a VAT rate of 10% applies to other food products (water, meat, fish) in 2018 and 2019. The VAT rate applied on fuel and electrical energy used by farmers is 10%. The VAT rate on fertilisers is 4% and on pesticides it is 10% for all users.

Non-VAT registered farmers in Italy can add a flat rate to the price of their outputs as compensation for paying VAT on inputs. Farmers use the following rates 11 flat rates for different categories of goods: 2% (wood, natural cork), 4% (frogs, fish, crustacean and shellfish, fresh milk for food consumption, packaged for retail and milk products, plants and parts of plants, vegetables and eatable plants, fruit, spices, cereals, algae, oil of olive, cider, wine vinegar, raw tobacco and raw flax), 7.30% (horses, sheep, goat, certain other

domestic animals such as rabbits and pigeons, bees and silkworms), 7.50% (poultry), 7.65% (live animals of bovine species), 7.95% (live animals of pork species), 8.30% (certain types of meat), 8.50% (certain types of meat and fat), 8.80% (eggs, honey, wax, fur), 10% (fresh milk not treated for the retail sale), 12.30% (wines of fresh grapes with some exclusions).

Excise taxes are charged on energy products (petrol, gas oil, natural gas and coal), alcohol, tobacco and electricity. Excise tax is lower for fuel used by the agricultural sector. Motor fuels and other petroleum products are generally subject to tax on mineral oils (Imposta di fabbricazione sugli oli minerali). This is a state tax. However, there are many exemptions and reduced rates; for instance, the reduction is 22% of the full tax for use of a certain quantity of fuels used in agriculture, horticulture, forestry and fish farming. The reduction in the tax on motor fuels is important for farmers. From a purely quantitative point of view, this measure is the most important "tax saving" attributable to the agricultural sector and accounted for 35% of the total agricultural tax expenditures in the period 2012-16. In 2017, the tax saving derived from the application of the reduced excise tax rate on fuel in the agricultural sector was EUR 990 million which equals 40% of the total agricultural tax expenditures.

22.5. Environmental taxes

There are no special tax provisions applied to the agricultural sector in order to reduce the consumption of natural resources (water) or discourage the use of farm inputs such as energy, fuel etc.

22.6. Tax incentives for R&D and innovation

The Italian taxation system does not include specific provisions to favour innovation and investments in the agricultural sector. Farm investments are generally supported by direct public expenditure programmes more than tax incentives (Pillar II of the Common Agricultural Policy). There are some general provisions that apply to all firms.

22.7. Other taxes

The special treatment for the agriculture sector in the social security system consists of the application of a reduced rate on social security contributions paid by employers which operate in disadvantaged and mountainous areas. This results in a discount of up to 80% of the total amount of social security payments.

Chapter 23. Japan

This chapter contains a description of tax provisions applied to agriculture in 2019, unless otherwise specified. They include taxes on income and profit, property, good and services, environmental taxes, and tax incentives for R&D and innovation

23.1. Overview

The share of agriculture in the Japanese economy is 1.1% of GDP and 3.4% of employment, the majority of those employed in agriculture are part-time farmers. Agriculture comprises 36% of the country's total habitable land area and 68% of total water withdrawal.

For tax purposes income from agriculture is treated the same as other incomes under Japan's taxation system. However, income from direct payments for crops can be deferred provided that these payments are reinvested in the capital or land for the farm business. Preferential tax treatment is provided for farmland which is often exempt from land taxes or is taxed on a lower than market value base. Waivers exist for inheritance tax to encourage the continuation of farming and farmers are exempt from environmental taxes on petroleum for farm use and benefit from tax exemptions on petroleum and coal for heating greenhouses and diesel for machinery used in agricultural production.

23.2. Income taxation

Agricultural income is taxed under Japan's progressive income tax system. Since agricultural income is generally lower than other incomes it is taxed at a lower tax rate than the income tax rates applying to wages and salaries.

Self-employed farmers or those that have multiple sources of income are required to file a tax return. Farmers declaring income based on double bookkeeping receive the same tax deductions available for all "blue return" filers. The blue return is the special tax return used by all self-employed who have obtained approval by their local tax office to use this tax scheme. Under this system wages payed to family employees engaged in the business of the "blue return" filer can be deducted as necessary expenses. Moreover, under the "blue return" system farmers can defer the loss of farm income for three years (ten years in the case of corporate farms) irrespective of the cause of income loss.

Tax deferral is available for certified farmers receiving direct payment subsidies. These direct payments, included under the Law on Farm Income Stabilisation introduced in 2007, are the main programme for the crop sector. Farmers are allowed to accumulate the direct payments without including them in their annual declared farm income on the condition that the accumulated payments will be used to acquire farmland, farm buildings or farm machines within five years. The accumulated payments then needs to be deducted from the value of the acquired assets in the year of asset acquisition.

To mitigate the impacts of natural disasters on income, Japan's Income Tax Act allows farmers to reduce their income by all or part of the value of agricultural assets damaged or destroyed by the natural disaster. Moreover, if the loss of the assets is too large to deduct, losses can be carried over for a period of three years after the incidence.

Capital gains from the sale of land are considered as taxable income. Various tax concessions are given to dispose of farmland in order to encourage transfers and consolidation of agricultural land. Gains on land transferred in order to transfer and consolidate farmland for business farmers are eligible for a special tax deduction of JPY 8 million.

Agricultural co-operatives that provide banking, insurance, farm input supply, marketing, and technical advice services to their members are eligible for a reduction on corporate tax rates.

23.3. Property taxation

The municipal Fixed Assets Tax, a tax on land holdings, is levied on the value of assets at a standard rate of 1.4% with an upper limit of 2.1%. Preferential assessment of the value of farmland is provided for under this tax regime. In general, the taxable base for land assets is the Appraised Value for Fixed Assets Tax (AVFAT). The AVFAT is the normal market value. Farmland is eligible for preferential assessment with the AVFAT assessed at 55% of the normal market value. (OECD, 1998)

Farmland is exempted from the City Planning Tax levied by the municipality on land assets, as assessed according to their AVFAT values, at a rate of 0.3%. This tax has been frozen since the 1998 fiscal year.

Furthermore farmland is exempted from the Special Land Holding Tax (municipal tax) of 1.4% of the acquisition cost of land minus the taxes due on that land under the Fixed Assets Tax. This tax has been frozen since the 2003 fiscal year.

The Registration and License Tax is levied on applicants for the registration of land for the purposes of preservation, transfer and other ownership of land. The tax base is the AVFAT and the tax rate depends on the property being registered. For example the registration of land transfer is taxed at a rate of 2% and the registration of land ownership for preservation is taxed at a rate of 0.4%.

A Real Estate Acquisition Tax is imposed by municipal governments upon the acquisition of real estate, calculated as 4% of the AVFAT. For farmland the rate has been reduced to 3% for the period 1 April 2006 to 31 March 2021.

Various forms of tax relief are incorporated into this tax to encourage transfer of farmland in line with structural adjustment programmes. For example, where a farmer purchases farmland in accordance with an authorised plan, they are eligible to claim the base deduction against the purchased farmland of up to 25% to 33% of its AVFAT. A special rule on tax amounts for residential lands is also levied by the municipality upon the acquisition of land. This tax is calculated as 3% of the acquisition cost minus taxes already paid on the same land under the Real Estate Acquisition Tax provisions. However, farmland is generally exempted from this tax. (OECD, 1998) Imposition of this tax has been temporarily stopped since 2003.

The national inheritance or gift tax is progressive and is levied at tax rates of between 10% to 50%. To avoid the subdivision of farmland sole heirs of farmland are exempt from paying these taxes.

Preferential tax base assessment and deferral of taxation are allowed for farmland subject to inheritance taxes. For example, a successor who uses the inherited land for farming is given a “grace” (deferment) on the inheritance payment. Moreover, the tax is exempted if the successor dies or if the successor inherits the farmland as an advance in a single unit.

The valuation of an inherited estate is usually based on its AVFAT and in principle, this applies to farmland as well as other types of land. Farmland in rural (agricultural) areas is evaluated at AVFAT, despite being adjusted by actual price records derived from other farmland transactions in the region. However, the valuation of farmland located in urban or peripheral zones may be determined according to the observed price of residential land nearby. It is possible that farmland can be exempted from this standard valuation, through an alternative approach whereby an Agricultural Investment Price is estimated and used in place of a market price. It is defined as the hypothetical market price for farmland on the assumption that the land will be permanently devoted to agricultural use. As a result of this

preferential arrangement, the assessed value of farmland as a taxable base tends to be much lower than the actual market price (OECD, 1998)

Also, if the farmlands are in the specific urbanised area within the three metropolitan areas of Tokyo, Osaka and Nagoya they are designated by municipal authorities as "Productive green zones". These lands can benefit from tax concessions associated with the Property Tax, City Planning Tax, and Inheritance Tax, with the obligation for the landowner to manage the farmland for at least thirty years.

By 2022, the abovementioned 30 years management obligation expires for approximately 10 000 hectares of farmland. At this point landowners can apply to the municipal government to sell their land. In the case whereby land ownership is not transferred 3 months after applying to sell the land, management obligations will be lifted. In May 2017, a related law was amended so that the designation period can be extended by a decade, on the premise of landowners' intention.

In 2014, Farmland Banks (Public Corporations for Farmland Consolidation to Core Farmers through Renting and Subleasing) were established in each prefecture to enable farmland transactions including the leasing of farmland. Taxes are used as incentives for landowners to lease land through a Farmland Bank. From 2017, the property tax on leased land was reduced by 50%. Tax rates imposed on idle land have been increased by 1.8 times if owners do not lease out the land or resume cultivation.

23.4. Tax on goods and services

Japan's consumption tax rate was raised to 10% in October 2019 with reduced rate of 8% applying to food (consumed at home and as takeaway).

In 2012, Japan introduced an environmental tax on petroleum and coal to finance GHG emissions reduction measures; farmers are exempted from the taxation on farm-use petroleum.

Heavy crude oil used for agriculture, which is mainly used for heating in horticultural farms, is eligible for an exemption to petroleum and coal tax. In addition, farmers are also partially exempted from the diesel tax used by agricultural machinery.

23.5. Environmental taxes

See above.

23.6. Tax incentives for R&D and innovation

Japan has developed a tax credit system that allows enterprises to deduct certain R&D related expenditures, reducing the amount of corporate taxes. The total tax credit, when all available tax credits are applied, is capped at 45% of applicable corporate income taxes.

R&D tax credits are available to companies irrespective of their size. SMEs with capital of JPY 100 million or below receive a higher percentage of R&D expenditure deduction. Moreover, the R&D tax system provides additional incentives to increase R&D expenditure or to maintain high levels of R&D expenditure in addition to performing collaborative R&D. For example, 30% of collaborative R&D expenditure with national research institutions and universities (25% in the case that the collaboration with the R&D oriented ventures and 20% in the case of other research partners) is deductible from taxable corporate income (the maximum amount of the tax deduction corresponds to 10% of the corporate tax).

Chapter 24. Korea

This chapter contains a description of tax provisions applied to agriculture in 2019, unless otherwise specified. They include taxes on income and profit, property, good and services, environmental taxes, and tax incentives for R&D and innovation.

24.1. Overview

In 2017 cultivated land accounted for 16% of total land area in Korea with an average farm size of 1.6 hectares. More than 70% of farms are less than 1 hectare in size while only 8% are larger than 3 hectares. Amongst OECD countries Korea is one of the most land scarce.

Agricultural taxation is comprised of state and local taxes and includes income and property tax. Income tax includes general income tax and corporate tax. Property tax is classified into property tax, aggregate land tax, inheritance and gift tax, and capital gains tax. Other taxes that are also imposed include the value added tax.

Along with providing one of the highest levels of agricultural support and protection to its farmers among OECD countries, Korea's agricultural sector also receives a considerable number of special tax treatments. Tax expenditure on agriculture accounts for 12.1% of total expenditure in 2018 which is higher than the share of agriculture in budget expenditure (Table 24.1). Tax expenditures account for 19.8% of total expenditure on agriculture, higher than for other policy areas, indicating the importance of tax relief as a policy measure to support the sector. Special tax treatment for the sector includes: the zero VAT rate for agricultural inputs (worth KRW 1.6 trillion in 2017), the tax exemption for fuel oil used for agricultural production (worth KRW 1.2 trillion in 2017), and special treatment of capital gains tax on self-cultivated agricultural land (worth KRW 1.2 trillion in 2017). There is also a tax favouring investments and deposits of mutual financial institutions including agricultural cooperatives, fisheries cooperatives and credit unions.

Table 24.1. Budget and tax expenditures in Korea, 2018

Trillion KRW, %

	Budget expenditure		Tax expenditure		Total expenditure		B/(A+B) (%)
	Amount (A)	Share (%)	Amount (B)	Share (%)	A+B	Share (%)	
Agriculture[1]	19.6	4.6	4.8	12.1	24.4	5.2	19.7
Education	64.1	14.9	1.5	3.8	65.6	14.0	2.3
Social welfare	135.2	31.5	10.8	27.1	146.0	31.1	7.4
Others	210.1	49.0	22.7	57.0	232.8	49.7	9.8
Total	429.0	100.0	39.8	100.0	468.8	100.0	8.5

Note: 1. Forestry and fisheries included.
Source: National Assembly Budget Office (2018).

24.2. Income taxation

Korea's tax system supports farmers by providing special provisions for the agricultural incomes of farmers and agricultural corporations and farmlands and farming equipment.

Income from grains and other food crops are exempt from taxation and income from plant cultivation is not taxed if the revenue is less than KRW 1 billion. The agricultural income tax applied by local authorities on crops was abolished in 2009 due to tax revenues declining to the point of not being sufficient to cover administrative costs associated with the measure.

As for incomes incurred from other activities, farming incomes are considered as business income and the basic framework under which they are subject to income tax or corporate

tax is the same as for other industries. For instance, livestock farming is subject to general income tax collected by the state.

For agricultural enterprises income generated from crops for human consumption is excluded from corporate income tax until 2021. Also, dividends from these businesses are fully or partially exempt from personal income tax with the remaining dividends taxed separately from other types of income until 2021.

When property is transferred, the seller is subject to capital gains tax depending on the profits from the transfer. The usual tax rates for capital gains are between 6% and 42% depending the capital gains. Farmers selling land near where they live or selling land that they have used for agricultural production for more than eight years are exempt from paying capital gains tax.

Deferral of deficits is also applied to the farming sector. Losses can be carried forward for up to ten years and deducted from taxable income in the current tax year.

24.3. Property taxation

Property tax and comprehensive real estate taxes are imposed for the holding of properties according to the value of the given property. An annual property tax ranging from 0.07% to 5% is charged. Farmers are levied a flat rate of 0.07% on their farmland. If the landowner belongs to the farmland pension programme and is actively farming the land they are exempt from paying property taxes until 2021.

Acquisition tax is imposed when a property is acquired. This tax for the acquisition of farmland and farming facilities is reduced by 50% on farmland acquired for cultivation by a person who has engaged in farming for least two years or a person who is taking up occupancy in a rural community (an urban-to-rural returner referred to as “returning farmers”) until 2021. Until 2019 acquisition tax on properties gained by an agricultural corporation for farming purposes within two years of the registration of the incorporation was fully exempted.

In the case of inheritance or gift taxes these are imposed on the heir or beneficiary depending on the value of the property. In the agricultural sector, the relevant provisions allow inheritance tax and gift tax to be partially or fully exempted.

Gift tax is a progressive tax under which marginal tax rates between 10% and 50% usually apply. Until 2020 no gift tax is applied in the case where farmers gift productive farmland to a child who is a farmer and who undertakes to farm the land for at least the next five years.

Farm assets are excluded from inheritance tax with a maximum deduction of KRW 1.5 billion from the taxable value of inherited property, when inherited by the farmer’s direct descendant and both the benefactor and the heir have been engaged in farming and the heir continues to farm the land for at least five years afterwards.

24.4. Tax on goods and services

Value added tax is exempted for agricultural produce and unprocessed food products. To ensure farmers are not disadvantaged a 0% VAT is levied on some agricultural inputs such as fertilisers, plant protection chemicals, agricultural machinery and equipment and materials for livestock farming and feed. The 0% VAT is also imposed on some environmentally-friendly equipment and materials used in agricultural production until 2020.

VAT paid by farmers on inputs purchased for their businesses can be refunded.

The transport, energy and environment tax is imposed on gasoline, diesel and other oil fuels is not charged to the agricultural sector for fuel used in agricultural machinery i.e. tractors and heaters until 2021. The usual rates are the following: for gasoline and alternative petroleum products the tax is KRW 475 per litre, and for light oil and alternative petroleum products the tax is KRW 340 per litre. Tax revenue foregone for this tax relief was worth KRW 1.2 trillion in 2017.

24.5. Environmental taxes

There is a transport, energy and environment tax imposed on fuels (see the description in the section above).

24.6. Tax incentives for R&D and innovation

In general, there is a special income tax or corporate tax treatment to promote investment in R&D as well as human resource development. However, it is not limited to the agricultural sector. Expenses covered are salaries for researchers, capital expenses for R&D materials, and job capability development costs. Tax credits are also available for investment in facilities needed for R&D. Levels of tax deduction differs according to the type of business and size of a corporation. Credit ratios are higher for SMEs. This is the third largest item in terms of revenue foregone for the agricultural sector.

24.7. Other taxes

Agricultural corporations are exempted from paying the registration and license tax when they are registered as corporations until 2020.

Chapter 25. Latvia

This chapter contains a description of tax provisions applied to agriculture in 2019, unless otherwise specified. They include taxes on income and profit, property, good and services, environmental taxes, and tax incentives for R&D and innovation.

25.1. Overview

In 2016, Latvia had 82.4 thousand agricultural holdings with an average size of 35.9 hectares. The total area of utilised agricultural land in 2017 was 1 932.2 thousand hectares and agriculture, forestry and fisheries contributed 3.7% to GDP.

On 1 January 2018, an ambitious tax reform came into effect in Latvia. The aim of tax reform is to provide a stable and predictable tax policy focused on economic growth and welfare of the population and reduce the tax wedge, especially for low-wage earners. A progressive income tax system has been implemented for the first time and a corporate income tax regime with zero tax for reinvested earnings is now in place.

Special tax treatment for agriculture includes: exempting income earnt by small scale farmers and income earned from agricultural subsidies paid by the state or by the European Union; a cap on increases of cadastral values used to calculate real estate taxes for agricultural land; excluding farming buildings from restate estate taxes; flat rate compensation for non-VAT registered farmers; exemptions from capital gains taxes when selling agricultural land; reduced excise taxes for diesel used in agriculture and natural gas for heating in poultry operations and greenhouses; and exemptions from vehicle operation and company car taxes.

25.2. Income taxation

There are two income taxes in Latvia, personal income tax and corporate income tax. General tax rules are applicable to farmers and agro-food companies.

Personal income tax (PIT) is imposed on worldwide income derived by natural persons, including farmers. A progressive income tax system was introduced from 2018 with three tax rates ranging from 20% to 31.4% applying to different income thresholds. Income from capital and capital gains is taxed at 20% and a solidarity tax is levied on annual income exceeding EUR 62 800 (2019).

Farmers who are PIT payers are granted the following tax relief:

- PIT is not imposed on income less than EUR 3 000, for those taxpayers deriving income from agricultural production and rural tourism services.
- All agriculutre subsidies received within the framework of the state support for agriculture or under the European Union support for agriculture and rural development are tax exempt.

PIT from capital gains is payable in Latvia when selling real estate (including land) at a rate of 20%. Capital gains value is determined by subtracting from the price of the capital asset (real estate) the acquisition value and the investment value made to the capital asset during the ownership. Capital gains tax exemptions exist when a person sells land to be used for agricultural purposes.

Corporate income tax (CIT) is paid by the producers of agricultural production as well domestic enterprises (commercial companies, cooperative societies and other private law legal persons), individual merchants, including farms and fishery farms with a turnover during the previous taxation year of greater than EUR 300 000, or those who have opted to become CIT payers.

From 1 January 2018 under the new law:

- CIT is payable on distributed profits (including deemed profit distributions).
- No CIT is payable on undistributed profits.

- CIT is payable on net amount of expenditures not related to business activity.
- The CIT rate is 20% on the gross distributed amount or 20/80 on the net income.
- In case of dividends distributed to individuals, no personal income tax applies.
- The CIT taxable period is one month.

By not taxing reinvested earnings, companies can improve their capitalisation which will facilitate lending and investment.

Farmers who are CIT payers are entitled to reduce CIT taxable income for the amounts received as state aid to agriculture or EU support for agriculture and rural development from the taxable base by up to 50% (and no more than the total taxable income).

25.3. Property taxation

Real estate tax (RET) is calculated from the cadastral value (set by the State Land Service) of the property. The standard rate is 1.5% of the cadastral value for land and buildings. However local governments are entitled to determine RET rates of between 0.2% to 3% of the cadastral value of the property. In order to limit the rapid increase of the cadastral values for agricultural land, from 2016 until 2025 a special value is set for the agricultural lands exceeding than three hectares. Under this rule the increase of the cadastral value shall not exceed 10% of the cadastral value set for the previous year.

The following are excluded from paying RET:

- Buildings and engineering constructions used only in agricultural production.
- Land in special conservation areas, in which economic activity is prohibited by law, and on the existing buildings and engineering structures used for nature protection in these territories.
- Land areas under restored or newly planted forest stands (young forest stands).

25.4. Tax on goods and services

The value added tax (VAT) is the major type of consumption tax. In 2019, the standard rate of VAT was 21% with a reduced rate of 12% applied to some goods and services. From 1 January 2018 until 31 December 2020, a 5% VAT applies to supplies of fresh fruits, berries and vegetables.

Farmers who are not registered as VAT payers, upon supplying untreated, raw agricultural produce to agricultural processors who are registered as the VAT payers, can charge a flat rate of 14% on the delivered agricultural produce. The aim of flat rate is to compensate farmers for VAT they have paid on purchases for their business.

Farmers with incomes above EUR 40 000 must be VAT registered. They are required to account for VAT, submit VAT returns, and are able to claim back VAT paid on inputs.

The VAT for the supply of the cereals and technical crops (including oilseeds) processed for final consumption shall be paid by a recipient of the cereals. This so-called VAT reverse charge mechanism was introduced as of 1 July 2016.

The excise tax (hereinafter referred to as “ET”) is applied to alcohol, tobacco, oil products, natural gas, soft beverages, coffee and liquids used in electronic cigarettes.

From 1 July 2018 to 31 December 2019, the reduced ET rate for diesel fuel for use in agriculture is EUR 55.80 per 1 000 litres, and from 1 January 2020, it will be EUR 62.10 per 1 000 litres. The reduced ET rate is levied on diesel fuel intended for use in agricultural machinery (i.e. for the operation of tractors and self-propelled vehicles and transportation

of agricultural produce). This is 15% of the standard ET for diesel fuel. A volume limit applies to the diesel purchased at the reduced rate that depends on the crop and ranges from 60 to 130 litres per hectare of cultivated agricultural land that has been declared and approved for the single area payments (SAP). Furthermore, agricultural producers are granted reduced excise taxes on natural gas used for heating covered areas (i.e. greenhouses) and for heat supply for industrial poultry holdings (i.e. poultry houses) and incubators.

Agricultural producers pay 25% of the total rate of the transport vehicle exploitation tax for the transport vehicle, truck, trailer or semi-trailer. Farmers are exempt from paying the company car tax if their income from agricultural activities is at least EUR 5 000.

25.5. Environmental taxes

The main environmental tax in Latvia is the Natural Resources Tax. Taxes are applied for the use of natural resources, water extraction, water and air pollution. Natural resource taxes are not differentiated between agriculture and other activities and do not differ between regions. The natural resource tax is payable for the pollutants emitted to the environment in accordance with conditions of polluting activity permits. The pollution charges are set in regulations and vary depending on the scope of activities. Fertilisers and pesticides products are not taxed.

25.6. Tax incentives for R&D and innovation

The new CIT law aims to support R&D investments by providing the conceptually new CIT payment regime. It defers the CIT payment until the moment profits are distributed or spent in a manner not providing further development of the enterprise.

25.7. Other taxes

The total State Social Insurance Mandatory Contributions (hereinafter SSIMC) rate is 34.09%. This includes the employee's SSIMC of 11% and the SSIMC paid by the employer for income derived by their employees of 24.09%. For self-employed persons (also for physical persons, carrying out agricultural activity, and owners of agricultural farms and fishing farms) the SSIMC rate is 32.15%, for retired self-employed persons the SSIMC rate is 30.34%.

PIT for paid labour is imposed on income derived by natural persons and consists of salary tax, which is calculated and paid by the employer for income derived by the employee. PIT salary tax rates for the year 2018 range from 20% to 31.4% and apply to different income thresholds. The seasonal workers' PIT is 15% of their salary. Seasonal workers are people who are employed in work such as growing or planting fruit trees, berry bushes and vegetables, tending to sowing and planting, and harvesting and sorting of fruits, berries and vegetables.

Chapter 26. Lithuania

This chapter contains a description of tax provisions applied to agriculture in 2019, unless otherwise specified. They include taxes on income and profit, property, good and services, environmental taxes, and tax incentives for R&D and innovation.

26.1. Overview

Lithuania's tax system comprises of direct taxes (e.g. income tax, personal income tax, immovable property tax, land tax, pollution tax) and indirect taxes (e.g. value added tax and excise duties).

According to the 2016 Farm Structure Survey over the period 2010 to 2016 the number of farms with more than one hectare reduced by 25% in Lithuania from 199 900 to 150 300. Enlargement of farms and the retiring of working-age farmers from agricultural activities are factors behind this trend.

Over the period the scale of medium-sized farms increased from 13.8 hectares to 19.5 hectares of utilised agricultural area (UAA) but the most rapid growth was observed in the number of large farms. Numbers of farms of more than 100 hectares of UAA increased by 38%.

As noted above the number of small farms with an area of 1 to 1.9 ha shrunk by 31% and those with an area from 2 to 9.9 hectares by 32%. The decline in the number of farms could be assessed positively, if not for its contribution to negative demographic changes. Lithuania, in comparison to other EU Member States, has the highest decline in population numbers and over the last ten years the population has dropped by 16%. Declining population is due to both internal and international migration. Rural regions, which according to 2017 data were inhabited just by 40% of the population, are depopulating most rapidly.

Agricultural operators are subject to more favourable conditions of taxation, as compared to other sectors. Historically, agriculture is one of the most significant economic sectors in Lithuania. To promote the sustainable development of regions, agriculture is encouraged by tax measures including by granting preferential fiscal treatment to both legal and natural persons in the form of personal income tax, profit tax, excise duties, immovable property tax, land tax, etc.

Before 2009, farmers who met certain criteria did not pay personal income tax, and companies were relieved of profit tax. There was also a reduced 5% rate of VAT applicable to agricultural and food products, and services. Furthermore, residents in possession of small and medium-sized agricultural holdings were not included in the state social and compulsory health insurance system. Following a tax reform which came into force in 2009 these exemptions were removed. However, residents and companies engaged in agricultural activities are still subject to preferential fiscal treatment.

Significant tax reforms were implemented in 2017 aimed at harmonising fiscal treatments of individual economic sectors. The state social insurance and pension reform was implemented in 2018 and came into force in 2019.

26.2. Income taxation

In 2019 personal employment related income is taxed at a rate of 20% with social security contributions from income 19.5%, and the tax rates for pension social insurance range from 1.8% to 3% (employee's choice).

Income received by farmers is not taxed, if the farmer is not obligated to register during the taxable period and is not a registered payer of VAT. Persons supplying goods and services exceeding EUR 45 000 are obliged to the registered for VAT purposes.

Farmers' taxable income generated by agricultural activity is calculated on the same basis as self-employed persons and business expenditure is deducted from business income. Self-

employed, including farmers, calculate their personal taxable income by applying a tax credit calculated according to a set formula. Taxable income below EUR 20 000 per year, is taxed at 5%. Annual taxable income between EUR 20 000 and EUR 35 000 per year is taxed at progressive rates scaling upwards from 5% to 15%, and income above EUR 35 000 is taxed at the fixed rate of 15%.

Profits of agricultural companies are taxed in accordance with a general profit taxation rules, although tax reliefs intended to promote agricultural activities also apply. For instance, direct and otherwise agricultural subsidy payments specified by the laws or other legal acts of the Republic of Lithuania to maintain the income level of agricultural operators, are not subject to the income tax.

Small enterprises, including small agricultural companies, are subject to a tax rate of 5% if their annual income is less than EUR 300 000 and they employ no more than 10 employees. Other agricultural companies, except cooperatives, are subject to the normal corporate income tax of 15%. A reduced 5% tax rate applies to cooperatives when more than 50% of their income is generated by agricultural activities.

Capital gains on all property transfers, including farms, are taxed in accordance with the general procedure of the income taxes.

26.3. Property taxation

In Lithuania, land and other immovable property (buildings and structures) are taxed separately.

Land is taxed in accordance with the provisions of the Law on Land Tax and is generally calculated on the average market value of the property. Tax rates are determined by municipal councils with land tax set at rates between 0.01% and 4%. Municipalities have the right to reduce or exempt land tax on taxpayers at the expense of their budgets. Tax on agricultural land plots is differentiated according to the use of the land (abandoned or cultivated land) with tax incentives used to reduce the area of abandoned land and encourage landowners to use their land more efficiently. Tax on cultivated land is reduced by 35% of its determined value. When abandoned land areas are found within agricultural land holdings, the land tax is not discounted.

If land is acquired by a natural person in one of possible ways (purchase, exchange, inheritance, restoration of property rights, donation) with the aim of establishing a new family farm, it will be exempt from the land tax for three tax periods calculating from the date of the property rights acquisition to the land.

Buildings and structures are taxed in accordance with the provisions of the Law on Immovable Property Tax. Taxes are generally calculated on the average market value of the property and tax rates range between 0.3% and 3%. Buildings used in agricultural activities are not taxed. Other buildings owned by farmers but that are not used in agricultural activities are taxed at different rates according to their total taxable value as follows:

- 0.5% on property exceeding EUR 220 000.
- 1% on property exceeding EUR 300 000.
- 2% on property exceeding EUR 500 000.

Buildings of agricultural companies and cooperatives are not taxed by Immovable Property Tax, when more than 50% of the legal persons' income is generated by agricultural activities during the taxable period.

Property inherited by residents is taxed in accordance with the provisions of the Law on Taxation of Inherited or Donated Property. In cases of inheritance or donation of agricultural properties, no special conditions apply.

Companies and residents operating within the agricultural sector are not subject to any preferential treatment, related to the calculation of the depreciation of property or its transfer, with respect to the profit tax.

26.4. Tax on goods and services

In Lithuania, products and services are subject to value added tax (VAT). The standard rate of VAT is 21% with reduced rates of 9% and 5%.

VAT applies generally both to farmer sales (if the farmer is registered or obligated to register as a payer of VAT) and procurement. However, farmers with less than seven hectares of land who are neither VAT registered, nor obligated to register as payers of VAT, can apply a flat rate charge of 6% for the agricultural products and (or) services they sell. This is to compensate them for the VAT paid on input purchases.

In Lithuania, ethyl alcohol, alcoholic drinks, processed tobacco and energy products are subject to excise duties.

There are annual rates set for the maximum gas oil consumption in agricultural (including aquacultural and commercial fishing) production according to the type of production. In 2019, agricultural operators that do not exceed these annual rates are eligible for a reduced excise duty of EUR 56 per 1 000 litres. Otherwise the significantly higher standard rate of EUR 330.17 per 1 000 litres is applied.

26.5. Environmental taxes

The main tax provisions used to improve the environmental impact of agriculture related activities are set forth in the Law on Pollution Tax and Law on State Natural Resources Tax. Economic instruments, such as taxes, charges, fees, are used to reduce pollution to required limits, prevent waste and incentivise waste management and rational use of state natural resources. This is consistent with the National Environmental Strategy.

Under the Law on Pollution Tax, pollutants emitted from stationary sources into the environment (atmosphere, water bodies, surface and deeper layers of the ground) are taxed. The tax payer is a legal or natural person who is obliged to obtain an Integrated Pollution Prevention and Control permit (IPPC). Permits are for determined levels of the emission of pollutants. The requirements and criteria for getting a permit are set in regulations.

Permits are mandatory for farmers rearing a certain amount of poultry and cattle or operating installations of certain capacity. The tax payer should calculate the tax for every unit of discharged pollutant into environment and pay it to State Tax Inspectorate at the end of the calendar year. When permitted pollution limits are exceeded a non-compliance fee applies. Fees for non-compliance differ depending on the type of pollutant discharged. The more hazardous the pollutant, the higher tax rate is applied. Legal and natural persons discharging pollutants from biofuel combustion installations when burning bio fuels are exempted from tax payment for quantities of pollutants discharged not exceeding the ratio set in the permit.

There is no tax on fertilisers or pesticides in Lithuania but packing used in agriculture is taxed with the exception of haylage packaging.

Pollutants discharged from stationary sources are taxed equally regardless of the type of activity. Exemptions are applied to natural and legal persons polluting from transport vehicles used for agricultural activities, if their income gained from such activity accounts for more than 50% of the total income.

Taxes have a low impact on reducing the environmental impact of agri-food activities. Pollution taxes are more targeted towards the reduction of pollution at the end of the pipe and less at the source.

In order to protect forests and prevent the reduction of forest land due to land-use changes, Lithuania has introduced specific forestry legislation. In case of land-use change, all forest owners must plant new forest on their own land or pay compensation, which is used to plant and maintain new forests.

26.6. Tax incentives for R&D and innovation

Income tax benefits in Lithuania are oriented towards the promotion of innovation and technological renewal.

Under the scientific research and experimental development (SRED) benefit, expenditure incurred while conducting R&D is deductible from companies' income three times; certain types of fixed assets used in such activities are subject to more favourable conditions for the calculation of depreciation;

Companies investing in technological renewal can claim an investment benefit and reduce their taxable profits by up to 50% during the taxable period 2009-2023 by way of expenses incurred under R&D projects.

The SRED and investment benefits are available to all companies, regardless of size and field of activity. Of approximately 120-140 companies making use of the SRED benefit, only 1 or 2 are engaged in the agriculture, forestry, and fishery sector (less than 1%). Of approximately 1 000 companies making use of the investment benefit, around 50 are from the agriculture, forestry, and fishery sector (or approximately 5% of companies).

26.7. Other taxes

In 2019 the overall rates of the state social insurance contributions payable by employers for pension, sickness, maternity, unemployment social insurance and health insurance is 1.47%. The rate of the state social insurance contributions of employees is 19.5%. State social insurance contributions by self-employed persons for pension, sickness, maternity social insurance and health insurance is 19.5%, or 21.3% (if they participate in pension accumulation and pay for pension at a rate of 1.8%), or 22.5% (if they participate in pension accumulation and pay for pension at a rate of 3%).

Farmers and their partners are covered by social insurance for pensions, sickness and maternity. For farmers, who declare income, the national social insurance and compulsory health insurance premiums calculate from 90% of taxable income. Farmers who do not declare income shall calculate the contribution from the minimum monthly salary of EUR 555 per month (2019). The annual amount of the taxable income from which the premiums are calculated may not be higher than the government-approved 43 amounts of average wages (2019 to 1997) 43 x EUR 1 136.20 = EUR 48 856.60).

Farmers whose farm size exceeds 4 units of economic size pay the state social insurance contributions. Those operating smaller farms or agricultural holdings are exempted from paying state social security contributions. The economic size of the holding or agricultural holding used for tax purposes is calculated on the basis of the areas declared by the farmers

and the average number of animals and the standard productive profit of each production or animal type as calculated by the Lithuanian Institute of Agrarian Economics and endorsed by the Ministry of Agriculture.

The rates of the state social insurance contributions have changed since 2019. Farmers' social insurance contribution rate is 12.52%. Farmers and their partners are not obliged to pay social security contributions when they receive old-age pensions, invalidity benefits or social assistance pensions.

Compulsory health insurance contributions are paid by all farmers. Compulsory health insurance contributions rates have changed since 2019. For farmers whose farm size is up to 2 economic-size units, the contribution rate is 2%. For farmers whose farm size exceeds 2 units of economic size, the contribution rate is 6.98%.

Chapter 27. Mexico

This chapter contains a description of tax provisions applied to agriculture in 2019, unless otherwise specified. They include taxes on income and profit, property, good and services, environmental taxes, and tax incentives for R&D and innovation.

27.1. Overview

Mexico operates under a federal fiscal system where the federal government collects national income and consumption taxes and sets special levies on specific products.

Agriculture plays a modest role in the Mexican economy and in 2018, crop cultivation was responsible for 2% of total GDP, livestock husbandry amounted to 1%, and forestry and fisheries accounted for 0.2%. Notwithstanding this, primary activities comprise 13% of total national employment and continue to be the most important source of income in rural areas.

Corn, avocados, sugarcane, and tomatoes comprise 35% of crop value, whereas beef, poultry, milk, and pork consist of 85% of the value of production in the livestock sector. Agrifood exports have steadily grown since NAFTA implementation, reaching a record high of USD 34.2 billion in 2018.

The most dynamic agricultural areas are located in the northern and western parts of the country. Central and southern Mexico are mainly characterised by small land plots producing basic subsistence crops. In general, low productivity is still the norm. This is best reflected in poverty rates: in 2016, 58.2% of rural households were poor (including 17.4% of extremely poor); in contrast, 39.2% of urban households were classified as poor, including only 4.7% of extremely poor.

Agriculture is treated differently for income tax purposes with tax exemptions and reduced tax rates. Farmers are reimbursed the excise tax they pay on diesel and gasoline used for agricultural machinery.

27.2. Income taxation

The national income tax (ISR by its Spanish acronym) is a direct tax collected on individuals and corporations. The personal income tax (ISR *a personas físicas*) operates on a cash flow basis under a territorial principle. National and foreign individuals must pay the ISR on earnings originated in Mexican territory. In the case of foreigners, income is attributed to be of Mexican origin if they have a "permanent establishment" in Mexico.

There are two main categories of taxpayers under the personal income tax: those that derive their income primarily from wages and salaries (ISR *a asalariados*) and those that derive income from entrepreneurial activities (ISR *a personas físicas con actividades empresariales*). Tax for salary earners is directly withheld by their employer.

In the case of individuals with entrepreneurial activities, the tax base is the difference between income and the cost of acquisition of inputs, services, and marketed goods, plus other expenses deemed as absolutely necessary for the generation of taxable income. Depreciation of assets is allowed at a yearly rate dependent on their useful life.

The tax is calculated according to the following formula: ISR = {[Tax base – Lower limit] * [Marginal rate (%)]} + Fixed rate.

A fiscal year is the same as a calendar year. Preliminary payments are made on a monthly basis (proportional tax bracket tables are available for each month of the year), and a final declaration for the entire fiscal year is presented during April of the following year.

In the case of corporations, the corporate income tax (ISR *a personas morales*) operates on an accrual basis under a territorial principle. The tax base is defined as the difference between income (either in cash, goods, or services) and the cost of such sales and other expenses deemed as necessary for the generation of taxable income. The corporate income

tax rate is 30%. Depreciation of assets is deducted from the tax base using a linear schedule based on the useful life of buildings, machinery, vehicles, and equipment.

The 2014 reforms to the Mexican Tax Law established a specific tax regime for those taxpayers engaged in agricultural (including animal husbandry), forestry, and fisheries activities.[1] Previously, they were included in the so-called Simplified Tax Regime for small taxpayers.

According to Article 74 of the Mexican Tax Law, to be eligible for the "Agricultural, Forestry, and Fisheries Regime" (AGAPE, by its Spanish acronym), at least 90% of total income must come from agricultural activities. Individuals, corporations, and/or other forms of organisations like ejidos and production cooperatives can be included under the AGAPE. Income from the sale of land or other fixed assets is excluded from the AGAPE. Very small farming units with annual income below 8 Units of Measures (UMA) (worth MXN 246 576 in 2019) per year need to derive at least 25% of their income from agricultural activities in order to qualify for the AGAPE regime.

Fiscal treatment depends upon total income obtained from agricultural, forestry, and fisheries activities, according to the schedule described in Table 27.1.

Table 27.1. Special tax treatment of agricultural activities under the AGAPE

	Small-scale producers	Medium-scale producers	Large-scale producers
Corporations and other societies	Annual income of up to 200 UMAs (or MXN 6 164 400 in 2019)	Annual income between 200 UMAs and 423 UMAs (or MXN 13 037 706 in 2019)	Annual income above 423 UMAs
Tax treatment	Total exemption	ISR paid on income in excess of 200 UMAs is reduced by 30%	ISR paid on income in excess of 200 UMAs is reduced by 30% with no further reduction on income above 423 UMAs
Corporations (*personas morales*) whose constituting members are exclusively private individuals (personas físicas)			Annual income above 4 230 UMAs (or MXN 130 377 060 in 2019)
Tax treatment	Total ISR exemption up to 20 UMAs per stockholder pa (or MXN 616 440 in 2019) with a total limit of 200 UMAs per corporation	Total ISR exemption up to 20 UMAs per stockholder pa with a total limit of 200 UMAs per corporation & 30% reduction on ISR on income above 200 UMAs and up to 4 230 UMAs pa	Total ISR exemption up to 20 UMAs per stockholder pa with a total limit of 200 UMAs per corporation & 30% reduction on ISR on income above 200 UMAs and up to 4 230 UMAs pa with no further reduction on income above 4 230 UMAs
Private individuals (*personas físicas*)	Annual income of up to 40 UMAs (or MXN 1 232 880 in 2019)	Annual income between 40 UMAs and 423 UMAs	Annual income above 423 UMAs
Tax treatment	Total exemption	Exemption on the first 40 UMAs, the ISR on income above 40 UMAs is reduced by 40%	Exemption on the first 40 UMAs, the ISR on income above 40 UMAs up to 423 UMAs is reduced by 40% with no further reduction on income above 423 UMA

Note: UMAs = Units of Measures are reference units used to index payments of loans, taxes and other federal and state contributions to inflation. Their value is updated on a yearly basis by the National Institute of Statistics.
pa = per annum.
In 2019 1 UMA = MXN 30 822.

In the case of agri-food companies (or individuals) operating in the food and beverages industry (processing of raw materials), the regular ISR tax regime applies and no special treatment is granted.

Under the ISR regime, specific provisions apply for income derived from real estate properties, interests, dividends, transportation activities, and lotteries. Nevertheless, those provisions do not apply to income earned in agricultural activities.

27.3. Property taxation

In Mexico, municipal governments have the authority to levy the property tax on land. Tax is levied on the basis of cadastral value and neither farmland nor other farm household's assets are subject to tax provisions different to those applied to other branches of the economy.

27.4. Tax on goods and services

The consumption tax takes the form of a federal Value Added Tax (IVA, by its Spanish acronym) with rates of 16%, 0%, and exempted goods. Most of the inputs used in primary production, investment goods, and services used by primary production are taxed at a 0% rate.

Since most of agricultural producers sell goods taxed at the 0% rate, it is highly probable for them to have a net positive balance which can be used to pay for future VAT taxes or can be reimbursed by the fiscal authority.

Excise taxes are collected in the production and sale of different goods and services. The so-called "Impuesto Especial sobre Producción y Servicios" (IEPS) is levied on: gasoline, diesel, alcoholic beverages, tobacco products, soda and flavoured beverages and energy drinks (introduced in 2014) and processed foods (introduced in 2014).

All individuals and corporations, including agricultural producers, using diesel and gasoline as inputs in their production processes, receive a tax incentive. It is worth noting that the incentive applies only for fuels used for the operation of tractors and machinery, but not other vehicles, like cars or pickups. The IEPS paid in the acquisition of the fossil fuels can then be deducted from their corresponding ISR payable.

While tax credits for diesel and gasoline used as inputs apply to all individuals and corporations engaged in entrepreneurial activities. In the case of agricultural producers in the AGAPE regime instead of using the IEPS fuel rebate as a credit against their ISR, they can ask for a cash reimbursement. For individual producers with an annual income of less than MXN 551 000 the maximum reimbursement is MXN 1 496 per month and for corporations under the AGAPE regime with an income below MXN 5.5 million, the maximum monthly reimbursement is MXN 14 948.

27.5. Environmental taxes

There is no information on the existence of environmental taxes in Mexico. The IEPS on fossil fuels could be considered to be the only tax measure under this category.

27.6. Tax incentives for R&D and innovation

The ISR Law contains a general tax incentive to promote investment in Research and Technological Development (R&D). It is available to all companies and is not specifically directed towards agricultural activities. Features of the incentive are as follows:

- It consists of a fiscal credit equivalent to 30% of spending on and investments in R&D, which can be credited against the payable ISR in the same fiscal year.
- It applies only to incremental spending and investment in R&D with respect to the previous three years average. Thus, if a firm spent MXN 300 million in R&D from 2015 to 2017, its three-year average would be MXN 100 million. Suppose that in 2018 the firm spends MXN 120 million on R&D. Then, the incentive will amount to MXN 6 million (= 30% of MXN 20 million = 120 million minus the 100 million 3-year average).
- The total available incentive is MXN 1 500 million per year. Once the limit is reached, no new incentives are granted. To avoid concentration of the incentive in a low number of firms, an upper limit of MXN 50 million per taxpayer applies.
- There is a mechanism to distribute the tax grants for investment in R&D which are subject to a limit. Instead of a first come, first served basis, all applications are submitted to an Inter-Institutional Committee that evaluates the applications and decides which will receive the tax incentive.

There is no information that indicates if the R&D incentive is widely used (or not) by farms and agri-food companies.

27.7. Other taxes

There are no further tax provisions or exemptions applying only to agriculture in the case of social contributions, pensions, labour or other taxes.

Note

[1] Agricultural activities include planting, cultivation, and harvesting crops, animal husbandry (rearing and fattening of cattle, dairy cows, pigs, poultry); rearing, feeding, breeding of all kinds of marine and river species; forestry activities; and marketing (first sale only) of all primary products that have not been subject to any industrial transformation.

Chapter 28. Netherlands

This chapter contains a description of tax provisions applied to agriculture in 2019, unless otherwise specified. They include taxes on income and profit, property, good and services, environmental taxes, and tax incentives for R&D and innovation.

28.1. Overview

In 2017, there were an estimated 55 000 farms in the Netherlands mostly owner-operated family businesses. Partnerships are also a common ownership structure in the agriculture sector especially when the ownership of the farm business is in the process of being transferred. Numbers of agro-food companies are small and these are primarily glasshouse operations.

While farmers benefit from some tax reduction arrangements, these are generally not restricted solely to agriculture. An example of special tax rules for famers is the Farm Land Appreciation Exemption *(Landbouwvrijstelling)* where capital gains on farmland are exempt from taxation under certain conditions. The horticulture sector benefits from a reduction of energy taxes for greenhouse operations and an exemption from real estate taxes. At the beginning of 2018, the VAT Agricultural Exemption was abolished and at the beginning of 2013, diesel tax rebates for the agriculture sector were removed.

28.2. Income taxation

The taxable income for all entrepreneurs in the Netherlands is reduced by an entrepreneurs' allowance. Self-employed farmers can benefit from this tax concession. The allowance covers being self-employed, research and development, co-operation and a cessation of business allowance. Entrepreneurs can make use of a fiscal reserve to provide for their old-age pension.

All businesses, including those from the agriculture sector, can use the income averaging scheme. Under this mechanism a business calculates an average operating income based on its results over three years. The tax rate is then applied to the new amounts, which may lead to a tax refund. There is also the possibility to compensate for income losses three years backward and nine years forward. For incorporated businesses the compensation period is one year backward and six years forward.

Specific income tax rules that are applicable to the agricultural sector are:

- Subsidy payments for specific woodland and nature programmes are tax exempt.
- The Farm Land Appreciation Exemption *(Landbouwvrijstelling)* exempts capital gains on land from personal and corporate income taxation when the land is sold under certain conditions. However changes in value arising in the course of business (e.g. implementing irrigation schemes) are taxable. Non-agricultural changes in the value of land are also taxable (i.e. only changes to the value of the land under continued agricultural activities are tax exempt).

Incorporated small businesses are taxed at a preferential corporate tax rate of 19% up to a taxable profit of EUR 200 000 in 2019.

28.3. Property taxation

Municipalities charge an annual real estate tax *(onroerende zaakbelasting)* levied on owners of immovable property and on users of non-residential immovable property. The real estate tax is not deductible. To the benefit of the horticulture sector, greenhouses are exempted from the real estate tax.

Real estate transfer tax (conveyance tax) is levied on persons who acquire immovable properties in the Netherlands. The value of non-residential immovable property is taxable at 6%, while residential immovable property is taxed at 2%. To encourage business

continuity the acquisition of land under commercial cultivation for agricultural or forestry purposes is exempt from the transfer tax.

Inheritance and gift tax levied on the beneficiary is based on a fair market value of all property received minus liabilities. Inheritance and gift taxes are determined by the value of the property and the relationship between the deceased/donor and the beneficiary. In 2019, in the case of a parent-child relationship, the tax rate charged was 10% for inheritances with a value of up to EUR 123 248 and 20% thereafter.

28.4. Tax on goods and services

As of 2019, there are two VAT rates for goods and services. The usual VAT rate is 21% but basic goods (including foodstuffs and flowers) are taxed at 9%.

Up until 1 January 2018, farmers made use of the VAT Agricultural Exemption (*Landbouwregeling*). Under this scheme farmers and other operators in the agriculture sector were exempt from charging VAT and could not claim back the VAT on costs they had incurred.

With the abolition of the VAT Agricultural Exemption (*Landbouwregeling)* at the beginning of 2018, farmers are subject to the usual VAT rules. The scheme was abolished because the rationale for maintaining it, i.e. administrative ease, is much less relevant nowadays with the possibility of online tax filing.

An energy tax applies to all users of energy (natural gas, other gases, electricity and certain mineral oils). The tax depends on the amount used and decreases with greater usage. There is a standard tax on energy (EB) and an additional charge for the Subsidy Scheme for Sustainable Energy (SDE +). This tax is also known as the Surcharge Sustainable Energy (ODE). Due to the degressive tax rate for both EB and ODE the energy tax charges are relatively low for large scale users (for example industry).

Agriculture and horticulture account for 7.6% of the national energy consumption in the Netherlands as a result of the prevalence of the glasshouse sector. Glasshouse horticulture operations have a small-scale company structure but in relative terms can be just as energy intensive as the large scale industrial users.

A reduced energy tax rate is applied to the first 1 million m^3 of gas used for heating greenhouses each year, which results in a comparable energy tax rate pressure as for similar energy intensive industrial companies. In return the horticultural sector takes part in agreements and covenants with the government that contain reduction targets for CO_2 emissions.

Energy-related greenhouse gas emissions of agriculture accounts for approximately 4% of total greenhouse gas emissions in the Netherlands. To meet the CO_2 emissions target in 2020 the glasshouse horticulture sector must reduce its emissions by 32% in 2020 compared with 1990 levels. The sector will have to pay when exceeding the agreed CO_2 emissions target. In laws and regulations a yearly decreasing CO_2-target is secured for “the glasshouse horticulture CO_2 sector system”. When the emissions of the sector in a particular year exceed the target, all companies pay proportional to their use of gas. With this levy allowances can be bought that cover the excess.

28.5. Environmental taxes

See section above for a description of the energy tax applying to all users of energy (natural gas, other gases, electricity and certain mineral oils).

28.6. Tax incentives for R&D and innovation

Fiscal incentives for private R&D include three main instruments, which are provided to SMEs, self-employed and multinationals in all sectors of the economy:

- The R&D payroll tax allowance (WBSO) offers, since 1994, a contribution towards the wage costs of employees directly involved in R&D.[1] This provision is not relevant for the primary agricultural sector, which does not have such employees.
- The Innovation Box (Innovatiebox), introduced in 2010 as a successor of the previous "Octrooibox*"* operating since 2007, is directed towards lower taxes for benefits from WBSO projects and patents.

Tax incentives have been used in horticulture, but not so much by small food processing companies.

A specific tax deduction is given for environmentally friendly investments *(MIA)*, investments in energy saving *(EIA)* and investments by small businesses *(Kleinschaligheidsinvesteringsaftrek)*. Investments that are applicable for a tax deduction are for example electric vehicles, insulation, LED lighting and sustainable construction.

There is a special agriculture category for loans to entrepreneurs investing in specific environmentally friendly operating resources and projects such as organic farming (although this is not strictly a tax concession).

28.7. Other taxes

There are no other tax concessions for the agriculture sector.

Note

[1] The WBSO is described on the website of the Netherlands Enterprise Agency as: 'WBSO is an Act that provides a fiscal facility for companies, knowledge centres and self-employed persons who perform R&D work'. http://english.rvo.nl/subsidies-programmes/wbso-rd-tax-credit-and-rda-research-and-development-allowance.

Chapter 29. New Zealand

This chapter contains a description of tax provisions applied to agriculture in 2019, unless otherwise specified. They include taxes on income and profit, property, good and services, environmental taxes, and tax incentives for R&D and innovation.

29.1. Overview

New Zealand has a broad based tax system with very few exemptions. Tax revenue from the agriculture sector is an important component of government revenue. Only central government has the power to impose taxes on income and good and services.

Agriculture and agricultural related industries are treated as normal businesses to which standard tax rules apply. An exception is made in the case of some land improvements for farming which can be deducted immediately in full from taxable income, rather than be treated as capital and amortised over time.

Farmers also have access to an income equalisation scheme, which can result in lower taxes, but at the expense of delayed access to income. The scheme is also available to foresters and fishers. There are also a number of tax relief assistance measures for farmers experiencing adverse climatic events and natural disasters.

There have been no major reforms over the last ten years but since 1 October 2010 the top tax rate charged on income was reduced from 39% to 33%, while the corporate tax was reduced from 33% to 28%.

In early 2019, a Tax Working Group established the year before provided its final recommendations to the government having reviewed the tax system. Recommendations include changing the tax rules relating to capital income and imposing environmental taxes, which are likely to impact farmers. Introducing wealth taxes, land taxes, increasing income tax or the Goods and Services Tax (GST) are not being recommended. Any changes to taxes will not be implemented until April 2021, although implementing a capital gains tax has already been ruled out by the current government.

No concessions are granted to the agricultural sector for social security taxation, property taxation, taxation on transfers or the value added tax. Refunds are paid for excise duty on fuel for vehicles (excluding diesel) that do not travel on the road and these vehicles are exempt from road user charges.

29.2. Income taxation

Farmers and agro-food companies face the same standard income and corporate taxes that apply elsewhere in the economy with the minor exceptions noted above.

Examples of farm enhancement expenses that can be deducted from income tax include: the removal of weeds or plants and animal pests; repairing flood or erosion damage on land; removing scrub; building fences; and re-grassing and fertilising pasture. (Section DO 1 Income Tax Act 2007) The provision of these concessions provides compliance cost reductions for tax payers. Simplifying their treatment for accounting purposes, the immediate deduction provides clarity about whether a capital or revenue treatment is the correct accounting treatment for expenditure on farm enhancement activities. The financial advantage is negligible.

Costs associated with planting or maintaining trees for erosion, land shelter and water protection purposes on farms can be immediately deducted from income tax. (Section DO 2 Income Tax Act 2007) More generally farmers can claim a tax deduction of a maximum of NZD 7 500 for planting trees (DO 3 Income Tax Act 2007). Tax deductions for expenditure on farming, horticultural, aquaculture and forestry improvements are calculated using a deduction percentage multiplied by the diminished value. Deduction percentages applicable for the different types of improvements are listed in a schedule to the Income Tax Act 2007. (DO 4 Income Tax Act 2007)

Farmers have access to an income equalisation scheme to smooth income over time. Funds must usually be held for a minimum of 12 months and cannot be held for more than five years. Funds receive a pre-tax interest rate of 3% per annum after 12 months. Foresters and fisheries can also use the same scheme. In the event of adverse climatic conditions, farmers may be allowed to make late deposits or early withdrawals of their funds from the income equalisation scheme.

New Zealand's Inland Revenue Department has a number of tax relief assistance measures for farmers experiencing adverse climatic events and natural disasters. These include late re-estimates of provisional tax, extensions of time for filing, instalment arrangements, and a reduction of penalties. Other tax relief measures available include the following:

- Deductions can be made for farm losses when certain improvements are destroyed or irreparably damaged.
- Livestock or materials donated because of an adverse event may be treated as zero-value rated.
- Payments or donations from charities are not taxable or liable for GST.
- Tax treatment of insurance payments depends on what the payment is compensating, for example insurance for loss of capital assets is non-taxable, but income-replacement insurance may be taxed.
- Interest on money borrowed to keep the farm going may be deductible.
- Eligibility for independent earner tax credit.

In the financial year 2017-18, changes were made to the deductibility of expenses associated with farmhouses based on the extent to which the expenses are incurred in the running of the farming business. Previously farmers and vineyard owners could claim a 25% deduction on power, insurance and maintenance expenses and 100% reductions on telephone, rates (the annual property taxes charged by local government authorities to property owners to finance local community services and infrastructure), and interest on farm mortgage expenses. Deductions are now 20% for farmhouse expenses and 100% deductions for rates and interest when the value of the farmhouse is 20% or less than the total value of the farm.

For income tax purposes there are two methods for valuing livestock (Section EC 7 Income Tax Act 2007): the natural standard cost scheme or the herd scheme. The natural standard cost scheme is a cost of production approach, whereas the herd scheme considers that livestock are capital assets and that only changes in livestock numbers should be assessable income not changes in stock values. The valuation method chosen can have tax advantages and disadvantages.

29.3. Property taxation

New Zealand does not have any national land taxes. Local regional and district councils charge rates based on capital or land values for local services.

New Zealand does not have any taxes on the sale of rural property; there is no stamp duty, no inheritance tax, no capital gains tax and, since 2010, no gift duty. No specific provisions or regional differences exist for agriculture.

There is no evidence of the effect of property taxation on investment and farm structures. However, IMF and OECD, in their biannual reviews of the New Zealand economy, have suggested that the lack of a capital gains tax has probably led to over investment in land generally relative to other forms of investment.

29.4. Tax on goods and services

A goods and services tax (GST) applies on the value added component across all sectors of the economy. It is currently set at 15% (having been increased from 12.5% in 1 October 2010). There are no specific provisions for farm inputs; the same GST is levied on the value added component of all products and services, including agriculture.

Refunds for excise duty paid on fuel (excluding diesel) are available to owners of exempt vehicles. Exempt vehicles include agricultural vehicles and some mobile machinery that do not travel on the road. Vehicles used on farms are also exempt from paying road user charges applicable to diesel using vehicles.

29.5. Environmental taxes

There are no environmental taxes in New Zealand.

29.6. Tax incentives for R&D and innovation

From April 2019 New Zealand introduced a 15% tax credit granted for eligible R&D expenditure over NZD 50 000 per annum with an expenditure cap of NZD 120 million per company. The definition of R&D ensures accessibility across all sectors.

29.7. Other taxes

New Zealand does not provide any tax concessions to the agriculture sector through its social security system. New Zealand has a pay as you earn system that taxes employees and contractors as they earn income from employers. The labour income earned by those working on farms is treated the same as any other income source for tax purposes.

New Zealand has an employer levy to meet the cost of work place accidents to employees. This levy is set on a risk weighted basis and no concession is made for agriculture. A standard levy is imposed on employees to cover non-work related accidents. Self-employed people, including farmers pay a levy to cover both their work and non-work related accidents.

Income of Veterinary Clubs and Herd Improvement Societies is exempt from tax if, and only if, it is re-invested in the activities of the said organisations.

Fifty per cent of the interest derived from Farm Vendor Mortgage loans issued prior to 1984 are exempt from income tax. After more than 30 years there are virtually no loans outstanding.

Chapter 30. Norway

This chapter contains a description of tax provisions applied to agriculture in 2019, unless otherwise specified. They include taxes on income and profit, property, good and services, environmental taxes, and tax incentives for R&D and innovation.

30.1. Overview

In 2018, there were 39 500 farm holdings in Norway. Agriculture is generally supported by expenditures from the national budget but there are also special exemptions from the general tax regulation for the agricultural sector. Farmers benefit from a special tax deduction on income from agriculture, with deductions depending on their income level and a maximum tax savings of approximately NOK 42 000 (approximately USD 4 580). Subsidies provided for investment in farm buildings in less favoured areas are not deducted from the book value of the capital assets giving farmers depreciating tax advantages.

Farmers are not required to pay municipal property taxes for buildings used in the agricultural business, and on gains from land transfers to family members. Tax concessions for farmers are used to increase the income and production of Norwegian agriculture and encourage the transfer and continuity of agricultural businesses between family members. Diesel used in agricultural machinery and in machines used for construction is exempt from the road user tax included in the price of diesel. Commercial greenhouses are exempt from paying electrical power taxes.

Taxes are charged on fuel used for agricultural machinery on the basis of CO_2 emissions and there are fees for the sale of pesticides. These are part of the different measures, including direct payments, Norway has implemented to improve the environmental impact of agricultural activities.

30.2. Income taxation

The tax system in Norway is composed of direct taxes including personal income tax, corporate income tax and taxation of assets, and indirect taxes such as value added tax, excise duties, custom duties, and fees and sectoral taxes. In 2019, income tax for individuals is charged at a flat rate of 22% on “ordinary income”. Ordinary income is a net income concept which consists of all taxable income (wages, pensions, business income, taxable share income and other income) minus deductions (such as losses, interest on debts). For “personal income” a progressive tax is applied with four tax brackets. Income earned on shares and self-employment is taxed and there are special tax rules for pension income.

Most Norwegian farmers are self-employed and are eligible for a special tax concession on their income generated from agriculture which is not granted to other self-employed persons. There are no special tax rules for agro-food companies.

From 2020, farmers can earn up to NOK 90 000 of agricultural income by deducting 100% of this taxable income through the calculation of ordinary income tax. There is no deduction when calculating personal income tax. For agricultural income above NOK 90 000, farmers can deduct 38% until they reach the tax deduction ceiling of NOK 190 000 (which occurs on agricultural incomes above NOK 353 000). For income from agriculture above NOK 353 000 the tax deduction is held constant at NOK 190 000. This special tax allowance results in a maximum tax saving of approximately NOK 42 000 (approximately USD 4 580) per farmer.

In Norway, there are several schemes with additional subsidies for agriculture in rural areas. These are all subject to the general tax rules.

An exemption from general income tax rules is the depreciating tax treatment of direct financial support to farmers for investments in the construction or renewal of farm buildings in less favoured areas. In 2016, a total of approximately NOK 540 million was paid in investment grants of which approximately NOK 380 million went to the less favoured areas. Subsidies for the renewal of farm buildings in these regions can be up to 33% of the total cost. For accounting purposes benefitting farmers record the total cost of

the building (including the subsidy) in their accounts and this cost provides the basis for depreciation, thereby providing a tax advantage. Such an approach deviates from the general tax rules in Norway where such grants are deducted from the book values of assets. This tax exemption is used to achieve the goal of maintaining agricultural activity across the country.

Agricultural producers can also deduct from the business's taxable income the expense of breaking in new land.

For the production of furskins, there is a fund scheme that allows for the equalisation of income between years within certain limits. In years where the auction prices are above a certain amount, the difference can be deposited into a fund; the fund can then be used to cover for the price difference when prices are below a certain amount. From 2025 the production of furskins in Norway will be banned.

There are no other income smoothing schemes in agriculture, there is however, a fund scheme for forestry.

In Norway, private housing (including farm housing), occupied by the owner over a certain period, is exempt from gains tax. Gains from the sale of other private property are taxed as capital income at the flat rate of 22% in 2019, the same rate as tax on ordinary income. Profits from sale of commercial property are taxed both as ordinary income and as personal income to which social security contributions are levied and at progressive tax rates. For agricultural income, the social security contribution is 11.4%, while the maximum progressive tax is 11.5%. The maximum marginal tax after this is 50.9%. For companies with limited liability, the sale profits are only subject to corporate income tax (at the flat rate of 22%), but dividends to private individuals and paid dividends on shares are taxed additionally at 22% multiplied by the adjustment factor of 1.44 (2019), which gives an overall tax rate of 53.58%.

Sales of farms within the immediate family are exempt from gains taxes when properties have been in the family for at least 10 years. Gains from sales of farms outside the immediate family are only subject to the 22% capital tax, Gains on the sale of machinery and equipment and livestock are subject to general tax rules and are not included in this exception. There is no regional differentiation to these rules.

For many years, there has been relatively small turnover of agricultural property outside the family. Many who quit farming choose to rent out their land instead of selling the property. There are several reasons for this, with tax rules considered as an explanation. For instance over the period 2006 to 2016, gains on the sale of agricultural properties outside the immediate family were taxed both as ordinary income and as personal income under the progressive tax with higher rates applying on high incomes. As a result the tax on such sales could be up to about 50% of the gain. Therefore from 2016, gains from the sale of agricultural properties is only taxed as capital income. It is too early to say whether this has had an effect on the turnover of agricultural properties.

30.3. Property taxation

Norway has a tax on wealth calculated for all assets of a taxpayer, including property and land (under which debts are deductible). Municipalities can also choose to impose tax on the value of property (under which debts cannot be deducted). For property tax, there are state-specified maximum rates, but within these limits, municipalities can determine their rates. Of the 420 municipalities, 260 have introduced property taxes. Agricultural properties of self-employed farmers (excluding housing and agricultural buildings that are used for other activities such as processing activities, tourism or warehouses) are exempt from these municipal taxes. "Industrialised" agricultural activity is not exempt.

Norway discontinued inheritance tax from 2014 and there is no tax on property transfers by gift.

30.4. Tax on goods and services

Norway has a value added tax (VAT) set at 25% for most goods and services. A reduced rate of 15% applies to food and drinks, and 10% to passenger transport, cinema tickets and room rental. For inputs and sales of products from farms, the value added tax is set at a standard rate. Small companies with annual sales of less than NOK 1 million and VAT registered persons within the agriculture, forestry and fisheries sectors can return VAT on a yearly basis as opposed to the general rule of a monthly basis.

Included in the prices of most agricultural products is a general sales tax. The general sales tax is set by the Ministry of Agriculture and Food based on recommendations by the Norwegian Agricultural Marketing Board. The taxes, collected by the producer organisations, are held in separate commodity accounts and are used in promotional activities and to finance market balancing (i.e. paying for temporary storage or product transformation to stop excess supply on the domestic market reducing producer prices). Additionally, a research fee is levied on the sales of most primary products.

Diesel for use in agricultural machinery and other construction machines that are not used on public roads is exempt from the road user tax which is added to the price of diesel. Commercial greenhouses are exempt from paying electrical power taxes.

There is a tax on fuel for agricultural machinery calculated on the basis of CO_2 emissions.

30.5. Environmental taxes

In Norway a fee is charged on the sales of pesticides.

Violation of environmental legislation can result in farmers receiving less subsidies or having their application for production subsidies refused. This can be imposed in addition to sanctions based on environmental regulations. These rules apply equally to all farmers regardless of where their farms are located.

There are a number of different measures that aim at improving the environment in Norway. Isolating the effect of individual measures is very difficult and as such there is no research on the environmental impact of tax measures.

30.6. Tax incentives for R&D and innovation

A general tax deduction scheme for R&D called “SkatteFUNN” which was established in 2002. All Norwegian companies undertaking research and development can claim tax deductions for R&D project costs subject to the approval of the Research Council. Small and medium-sized enterprises can claim 20% of project costs and large companies are able to claim 18%. In 2017, under the SkatteFUNN there were 57 R&D projects registered in the forest and wood sector, and 521 projects focusing on land use and food.

30.7. Other taxes

Some of the Norwegian social security is financed by taxes and a national insurance scheme. The tax office collects the compulsory social security contributions from personal income including salaries, income from self-employment and pensions through tax deductions at the applicable tax rates. Employers contribute for their employees via a payroll tax. Rates employers are expected to pay vary between regions and are lower in less favoured areas.

Chapter 31. Poland

This chapter contains a description of tax provisions applied to agriculture in 2019, unless otherwise specified. They include taxes on income and profit, property, good and services, environmental taxes, and tax incentives for R&D and innovation.

31.1. Overview

The agriculture sector in Poland is characterised by a large number of small farm holdings which employ a significant share of the labour force. Farm productivity is low and rural poverty rates are relatively high. Forty per cent of the population lives in rural areas and 93% of the total land is considered rural. In 2016 there were 1.4 million farms, 97% of which were owner operated.

Poland has a preferential tax system for agriculture aimed at reducing the tax burden on the sector. Farm income is not taxable under the general income taxation system with 95% of farmers exempt from paying income tax. A small number of farmers producing specific products pay income tax either calculated on the basis of average production norms or on actual cost accounts. Agricultural property taxes are calculated on a set unit price for rye multiplied by the area of the farm holding. These taxes are lower than regular property tax and by expanding the size of the farm holdings farmers can be exempted. Most farmers use the flat rate scheme rather than the regular VAT regime.

Taxes on inherited or gifted transfers of agricultural land and buildings are not taxable nor are taxes applied when agricultural land is being transferred between generations as part of a farmer's retirement. Excise tax fuel rebates for fuel used in agriculture are significant and in 2018 these rebates were worth EUR 216 million. Farmers and their families contribute less to their special social insurance scheme than they would under the normal social security system and are entitled to receive similar levels of, mostly state funded, pay-outs.

31.2. Income taxation

Farm incomes are taxed differently from regular non-agricultural activities. Income tax is not charged on the revenue for most farms, instead an agricultural property tax is levied (see the section below).

Revenue from farms producing the following agricultural products is liable for income tax: greenhouse production, poultry, mushrooms, bee keeping, silkworm production and animal production carried out outside the holding. These farms represent only 2% to 5% of total farms in Poland. Income taxes levied on agricultural production from these farms may be assessed in two ways either based on average production norms or based on cost accounts. If tax payments are based on average production norms, the calculation is an average unit charge multiplied by the area or numbers of units of production. In this case, the farmer is not obliged to keep financial records. If the farmer keeps accounts, then the calculation of taxable income is based on normal cost accountancy, profit and loss calculations.

Individual farmers operating non-agricultural businesses as natural persons or in partnership or as a partner companies are obliged to keep accounting records for fiscal purposes. In addition, agricultural entities must keep accounts if their profits from the previous financial year exceed EUR 2 million. Tax accounts are prepared on a monthly basis according to farm accounts and payments are also submitted monthly to the tax office with a reconciliation completed at the end of the tax year in April.

Individual farmers who run non-agricultural business activities are subject to the same obligations as any other entity and are subject to income tax. Nevertheless, they have certain privileges related to the social insurance system for farmers (KRUS). One of the conditions for being insured by the scheme is that income tax paid on non-agricultural activities does not exceed the annual limit set at PLN 3 376 (in 2018).

On 1 January 2017, the amended provisions of the Corporate Income Tax (CIT) Act came into force, reducing the standard corporate tax rates applied to small taxpaying companies

from 19% to 15%. The status of a "small taxpayer" (*mały podatnik*) is granted to companies whose annual turnover in the previous financial year was less than EUR 2 million (including VAT) in 2019 (an increase on the previous threshold of EUR 1.2 million meaning a larger number of small taxpayer companies benefit from the lower CIT rate). The government intends to continue to reduce CIT rates for small taxpayer companies to 9% making it one of the lowest CIT rates in Europe.

Individual farmers who operate through a limited liability company are subject to different tax regulations, in particular, they have certain advantages in the recovery of value added taxes.

31.3. Property taxation

Instead of paying income tax farmers and foresters pay agricultural property tax (*podatek rolny*) to their local authority. This is different from regular property tax and is calculated on unit area multiplied by the value of a set number of hundred weights of rye per hectare. The value of this rye is announced for the next tax year by the National Statistics Office.

There are certain exemptions to having to pay the agricultural property tax. For instance if a farmer increases the size of their agricultural holding to a maximum of 100 hectares or creates a new holding or buys or leases land from the Agricultural Land Agency they are exempt from the tax. Certain classes of agricultural land are exempted (i.e. classes V, VI and Viz all categories of agricultural land with low soil quality) as well as wooded lands and organic farms.

Farm buildings used exclusively in agricultural activities are exempt from real estate tax.

Inheritance or gift taxes do not apply in the case of agricultural property (land and buildings). Buildings, which are used for agricultural production and are located on holdings less than one hectare are also exempted in the case of inheritance by a close family member. The transfer of the farm dwelling is however liable to normal property inheritance taxation unless the person who inherits does not own another residential property and declares they intend to live in the dwelling for a minimum period of five years.

Transfers of an agricultural holding (including land, buildings and dwelling) within the provisions of the social insurance programme for farmers, are exempt from property transfer taxes. This procedure is common when the farmer retires and hands control of the agricultural holding to a child or a close relative.

31.4. Tax on goods and services

The standard VAT rate is 23% while a lower VAT of 5% applies to basic food products, such as bread, cereal products, dairy products, meat preparations and juices. On the construction of buildings the VAT rate is 8%.

In 2017 only 38.7% of farms are VAT registered, although every resident in Poland is issued with a personal VAT identification number. Farms registered for VAT are able to account in full, as any other business, their VAT and recover or offset payments on a yearly, biannual or monthly basis.

Farmers who are not VAT registered are not required to account for VAT, submit VAT returns or make claims for VAT paid. However they can charge a flat rate of 7% on their sales of goods and services to VAT registered customers. Most farms use the flat rate VAT scheme although in some cases it may be disadvantageous to smaller farmers who are unable to recover the full costs of VAT.

Since 2006, Poland provides excise tax fuel rebates for fuel used in agriculture (in 2018 these rebates were worth EUR 216 million). In 2019, the excise tax refund limit is PLN 100 multiplied by the number of hectares of agricultural land (increased from the 2018 refund limit of PLN 86) and PLN 30 multiplied by the average number of large bovine conversion units per annum. To claim the refund farmers must present their VAT invoices as proof of fuel purchases.

31.5. Environmental taxes

Agricultural enterprises (in the form of legal entities) are levied with various environmental taxes. Obligations of the Environmental Protection Law 2001 (Ustawa z 24 kwietnia 2001 r. – Prawo ochrony środowiska) relate to agricultural activities such as:

- Raising or breeding poultry or pigs in connection with the integrated permit.
- Using underground water from wells (within the framework of the water license) held for the purposes of farming, including fruit and vegetable growing
- Emissions of sewage directly into the environment with a water permit (‘pozwolenie wodne’).

31.6. Tax incentives for R&D and innovation

There are tax allowances in CIT and Personal Income Tax (PIT) related to the deduction of eligible costs (relief for research and development). From 1 January 2018, an R&D tax relief covers 100% of eligible costs, which can be deducted from the tax base. The types of eligible costs incurred for R&D has been expanded and include the following: salaries of researchers, purchases of scientific equipment and materials required for research, costs of registering patents, depreciation of fixed assets. The aim of increasing tax relief and expanding the expenses covered by the R&D tax incentives is to encourage the use of this mechanism which has been low, particularly in rural areas.

31.7. Other taxes

The Act of 20th December 1990 concerning social insurance payments for farmers (OJ. 1998, No.7 Item 25 with later amendments) created a social security fund for farmers (known as KRUS) which provides retirement payments. The contributions made by farmers are only a small proportion of the total payments they receive, the majority (more than 90%) of which comes directly from the state budget.

Eligibility for the KRUS is broad. All residents of Poland with land ownership of greater than 1 ha of agricultural or forestry land may register for KRUS rather than the normal Social Security System (ZUS), provided they perform farming activities themselves. Family members including spouses and children of more than 16 years old, but also relatives benefit from KRUS provided they live on the farm. Contributions into the KRUS are lower than under the ZUS scheme, although farmers receive similar benefits with regards to health care, education, and social welfare. Some benefits are, however, lower in the KRUS Scheme (pensions).

In 2017, according to the KRUS data more than 1.2 million people were insured under KRUS, while more than 1.1 million were receiving benefits (pension and disability allowance combined). Moreover, 987 007 pay premiums to KRUS. The total expenditure for all benefits combined amounted to PLN 20 394 million (including pensions and disability allowances as well as benefits paid from maternity, illness and accident funds).

Health insurance covers farmers (spouses), household members, retirees and pensioners. In 2017, the total number of people covered by health insurance was just over 2.4 million. In 2018, the premium for health insurance paid by each person insured on the farm amounts to PLN 1 per month for each conversion hectare (*hektar przeliczeniowy*) exceeding 6 hectares of utilised arable areas. Farmers with farms smaller than 6 hectares do not pay health insurance contributions. It should be noted that the average size of an agricultural holding is 18 hectares. This health insurance premium is a very low charge in comparison to the premiums for health insurance paid by self-employed in non-agricultural business activities covered under the ZUS.

Chapter 32. Slovak Republic

This chapter contains a description of tax provisions applied to agriculture in 2019, unless otherwise specified. They include taxes on income and profit, property, good and services, environmental taxes, and tax incentives for R&D and innovation.

32.1. Overview

In 2004, the Slovak Republic introduced a major change into its tax system to encourage investors, strengthen work incentives as well as tackle low level of tax revenues and help low-income workers by introducing a health security contribution allowance.

Following these reforms tax treatments that were previously available to farmers were removed. Tax rules applies generally and there are no specific tax exemptions for sectors including agriculture, apart from the fuel tax rebate for famers reinstituted at the beginning of 2019. Currently farmers benefit from lower municipal property taxes on buildings and an exemption from the motor vehicle tax.

32.2. Income taxation

Individuals who have their permanent residence or habitual abode in Slovakia are treated as tax residents. All other individuals are treated as non-residents.

Tax residents in Slovakia are taxable on their worldwide income. Taxable income of an individual is usually calculated by aggregating the separate net results of employment income, business, independent professional activities, rental income and income from the use of work and art performance and other income (e.g. income from occasional activities) and from the sale of real estate if the seller is the owner for less than five years.

The tax year is a calendar year. For the income of natural persons, there are two tax brackets of 19% and 25%. For income up to EUR 36 256 (this amount is the equivalent to 176.8 times the 2019 minimum wage of EUR 210.20) the tax rate is 19% and for income above this amount the tax rate is 25%. Income from capital is taxed at a flat rate of 19%. All self-employed and employees can claim the following tax rebates that are all, with the exception of the tax bonus for children, means tested:

- Basic personal allowance (non-taxable subsistence minimum).
- Allowances for a dependent spouse.
- Resident taxpayers are entitled to a so-called tax bonus for each child living in the same household.
- Employees benefit from a health insurance contribution (HIC) allowance.

A company is treated as resident for the tax purposes if it has its legal seat or place of effective management in the Slovak Republic. Resident companies are taxable on their worldwide income, including capital gains. The taxable income is computed on the basis of accounting profits and is adjusted for several items as described in the tax law. Non-resident companies are taxed only on income derived from Slovak sources. Corporate income tax is levied at a rate of 21% (also 21% and 35% of a special tax base in accordance with tax law). All corporations can carry-forward tax losses over four consecutive years in equal parts (up to 25% of incurred tax loss volume per year).

32.3. Property taxation

There is no real estate transfer tax in Slovakia on property sales (if the seller has been the owner of the property for at least 5 years) or by gift, or inheritance.

Property taxes in Slovakia impose taxation only on immovable property. Under legislation there are eight different regimes for local taxes. Real estate taxes include land tax, building tax, flat tax and non-residential tax. The tax base for estates (arable land, permanent grassland) is the area of plots multiplied by land value of 1 m^2 stated in the Appendix no. 1 of the Act of Local Taxes and Local Fee for Municipal Waste and Minor Construction

Waste. Land values differ by region as every municipality (tax administrator) can set its tax rate (reduce or increase) according to local conditions (with some restrictions). The annual rate of land tax is 0.25% of the land tax base (values and areas). There are no special provisions stated in the Act related to agricultural buildings however, tax rates on agricultural buildings are usually set well below those applying to other buildings. The annual rate of building tax is EUR 0.033 for each m^2 of built-up area.

32.4. Tax on goods and services

There is a standard value added tax (VAT) rate of 20% of the tax base applicable to most goods and services. A reduced VAT rate of 10% applies to a selected number of goods, including basic food, i.e. meat, fish, butter, bread, milk, and cream, some medical aids and drugs, printed books and brochures.

As of January 2019, the Slovak Republic reinstituted its regime of fuel tax rebates for farmers having abolished the programme in 2011.

The Slovak Republic applies a motor vehicle tax to which vehicles used in agriculture and forestry are exempt from. Exemption is applied only for usage in agriculture; if the vehicle is used for another activity, it is subject to motor vehicle tax.

Mineral oils, tobacco products, spirit, beer and wine (including other fermented beverages and intermediate products) and tobacco are all subject to excise taxes. Some small breweries and spirits producers are subject to reduced rates.

Additionally, energy use is subject to excise duties in the Slovak Republic. Several exemptions apply to energy usage. Some of them are obligatory exemptions, others are for high energy demanding sectors and for households, but none of the exemptions are specifically for the agricultural sector.

32.5. Environmental taxes

There are no tax incentives to encourage provision of environmental goods.

32.6. Tax incentives for R&D and innovation

All companies are able to deduct R&D costs from their tax base provided they meet certain conditions. In 2018, corporations could deduct the following R&D tax incentives:

- 100% of actual expenses on R&D in the respective tax period
- 100% from the average increase of R&D expenses over the last two tax periods.

During 2015 and 2016, only 10 corporations in the agriculture sector claimed the tax incentives to support their R&D projects and in 2017 only one agriculture corporation claimed the tax incentives.

32.7. Other taxes

There is no other special tax treatment for the agriculture sector in the Slovak Republic.

Chapter 33. Slovenia

This chapter contains a description of tax provisions applied to agriculture in 2019, unless otherwise specified. They include taxes on income and profit, property, good and services, environmental taxes, and tax incentives for R&D and innovation.

33.1. Overview

In Slovenia 536 000 individuals own agricultural and forest land most which is small holdings with less than 1 hectare of land. The average size of agricultural land is 6.9 hectares per farm household.

For tax purposes persons conducting agricultural activity as a company (a legal person) or as a registered self-employed person are generally treated in the same manner as other persons with a business activity.

However there are specific provisions in tax legislation to define a farm for tax purposes. A farm household (tax definition of a farm) has to have at least EUR 200 of annual taxable income from agriculture and forestry. Taxable income is determined based on a presumptive income from the farm's activities which is significantly lower than the actual market rate. According to the definition, of about 450 000 households with agricultural land and forest only 70 000 to 80 000 households can be considered as farm households. For most farms (more than 95%), the taxable income is based on presumptive income, which includes cadastral income (calculated every three years from statistical economic account) as well as subsidy payments of which some are tax exempt (e.g. investment supports, green subsidies) so around 50% of income received as subsidies is not taxed. Low income farm households with a total presumptive income of less than EUR 7 500 (accounting for nearly 98% of all farm households taxed on presumptive income in Slovenia) have the possibility of applying a flat rate as compensation for value added taxes they pay on inputs (approximately 32 000 farms apply this flat rate). Farmers are mostly exempt from paying property taxes and inheritance tax on the conditions that the benefactor is already engaged in farming and is a landowner. Farmers from family farms have their social security contributions partially paid for them by the state. Small wine and spirit producers on a farm are partially exempt from paying the full excise duties for alcohol. All farmers are entitled to 70% rebates on excise duties for fuel used on-farm.

33.2. Income taxation

For income taxation, agro-food companies are treated as any other company and are subject to tax on profits according to the Corporate Income Tax Act. Corporate income tax is levied on the taxable profit at a rate of 19%. As of 1 January 2013, there is an optional flat rate taxation regime where the tax base is determined on lump-sum costs accounting for 80% of income. Under the lump-sum regime taxpayers cannot claim any allowances or deductions.

Personal income tax (PIT) applies to an individual's annual net income. There are five tax brackets in the progressive tax schedule with tax rates ranging from 16% up to 50%. The annual taxable base is computed after compulsory social security contributions and certain allowances have been deducted.

The Personal Income Tax Act contains the following six categories of income: income from employment, business income, income from basic agriculture and forestry, income from rents and royalties, income from capital and other income.

For individuals registered as self-employed persons undertaking an agricultural and forestry activity, income is determined using the same rules as for other self-employed persons. The tax base is the business income which is subject to a tax rate of 20%. Taxable income is levied on profit determined by deducting actual expenditures from actual revenue for a given calendar year. Personal business income may also be taxed using the lump-sum deduction regime whereby costs are assumed to be 80% of income.

Owners and users of agricultural and forest land who are not registered as self-employed persons and who are members of a household with a total income from basic agricultural and forest activity of at least EUR 200 per year, are considered as persons conducting "basic agriculture and forest activity" under the Personal Income Tax Act. Their household is considered as a "farm household".

This distinction links to the fact that in Slovenia a family farm is not regulated as business but is defined by the Agriculture Act. A family farm is defined as a special entity without legal subjectivity – as a group of natural persons including the head of the holding and other members of the family, who are also owners or tenants of the agricultural land, as well as those employed on the farm are all engaged in agricultural activity.

Taxable income from "basic agricultural and forest activity" includes presumptive income and other income such as subsidies and other state aid. Presumptive income is generally set by cadastral income and methodology for determining it is regulated by the Cadastral Income Act. Presumptive income represents a five-year average income of representative production per hectare of agricultural and forest land. Using data collected by the Statistical Office the presumptive income is recalculated every three years.

Subsidies are, in principle, treated as taxable income, except those, exempted by the law. To avoid double taxation of the same income the Personal Income Tax Act exempts from taxation investment subsidies and subsidies that cover non-standard costs or loss of revenue in the case of environmentally friendly production. These are subsidies for costs and revenues that are not included in cadastral income, like subsidies for quality schemes, for environmental climate payments etc. Based on these rules around 50% of all agricultural subsidies are excluded from taxation.

The Financial Administration calculates the tax liability for the farm household. The individual's annual taxable base (as the aggregate of all income) is computed after compulsory social security contributions and general allowances are deducted. The net amount is taxed at progressive rates from 16% to 50%. For all other types of income tax (e.g. income from real estate properties, activities, capital investments) farmers are treated like any other taxpayer.

Taxpayers deriving business income may claim a deduction of 40% of the amount invested in equipment and intangibles. For basic agricultural and forestry activity conducted by members of farm households the tax deduction applies to purchases of agricultural machinery and investments in plantations but not for purchasing land or buildings.

Income from basic agricultural and forestry activity calculated for tax purposes is used as an estimation of the farmer's income for all other official purposes, i.e. their social security contributions and allowances.

In Slovenia approximately 536 000 individuals own agricultural and forest land, but for tax purposes there are between 70 000 to 80 000 farm households comprising 140 000 individuals. Of the 140 000 individuals, only 3 700 are reliant on income from basic agricultural and forest activity as their sole source of revenue, with most farmers receiving income from other employment or pensions.

As opposed to other businesses, taxation of "farm households" does not require record keeping. Consequently, the tax regime for farmers is much less of an administrative burden. Also the methodology of calculating the cadastral income underestimates the market income of the agricultural and forestry activity (it is less than 15% of market income although this is expected to improve to 30% of market income by 2020) and reduces the tax base for all the farm households, so it is especially attractive for intensive, market oriented farms.

33.3. Property taxation

In Slovenia, the following three types of duties that can be considered as property taxes: tax on property, charge for the use of the building grounds and fee for the maintenance of forest roads.

Tax on property is an annual duty levied on buildings (which are not occupied by the owner) the value of which are ascertained administratively. The tax rates depend on the type of property and they are progressive according to the property's value. Buildings used for agricultural purposes are exempt from the taxation.

Charges for the use of building grounds is an annual duty set by municipalities levied on vacant building land and buildings. Agricultural and forest land is not subject to this tax, but agricultural buildings are taxed.

Fees for the maintenance of forest roads are payed annually by the owner of the forest parcel, who has access to the forest road. The tax base is cadastral income and the tax rate is 14.7%. Protected forests are exempt from this tax.

The goal of the Ministry of Finance in Slovenia is to replace these three duties with one real property tax in the near future. At the same time, it plans to expand the taxation to all kinds of real estate (including agricultural and forest land), set the tax base on market value, and set tax rates to ensure a similar revenue level from the three duties.

Inheritance and gifts are taxed in accordance with the Inheritance and Gift Taxation Act. The tax base is the value of inherited or donated property, reduced for debts, costs and other burdens in connection to the property. Tax rates are progressive (from 5% to 39%) according to benefactor's relationship to the deceased or donor and the value of the property.

Agricultural land or an entire farm is exempt from inheritance and gift tax if it is inherited or received as a gift by a natural person, who is considered by the special law on agricultural land to be a farmer. This status has no connection to the definition of a farmer, who is a member of a family farm under the Agricultural Act or the definition of the farmer (member of a farm household) for income tax purposes. In this case the "farmer" is a natural person with a certain amount of agricultural land and level of production of agricultural products. This can be any owner of agricultural land.

The transfer of real estate, if not taxed by VAT (building land and new constructions, if sold by VAT taxpayer), is taxed in accordance with the Real Property Transaction Tax Act. The seller pays a tax of 2% on the sale price of the land. The transfer of agricultural land within the agrarian bond operations is exempt from this tax, but all other transfers of agricultural and forest land or agricultural buildings are taxed.

33.4. Tax on goods and services

There are two value added tax (VAT) rates a standard rate of 22% and a reduced rate of 9.5%. The reduced rate applies to all edible agricultural products and for agricultural inputs like breeding animals, seeds and seedlings, fertilisers, phytopharmaceutical and biotic products, and veterinary and other services, intended exclusively for use in agriculture, forestry and fisheries.

All companies pay VAT except those carrying out certain defined activities, such as small businesses and farmers with a turnover and income below defined thresholds.

Members of the "farm households" (defined in the same way as under the income tax regime) with a total income of below EUR 7 500 can use a special common flat rate

scheme. Under the flat rate scheme, farmers, who are not VAT taxpayers, when selling agricultural or forest products to a VAT taxpayer, have a right to an additional payment of 4% of the total selling value, this is considered as farmer's revenue and is meant to cover part of their input VAT costs. Buyers can calculate this flat rate compensation as their input VAT. Approximately 32 000 family farms use the flat rate scheme.

Excise duties are charged for alcohol (spirits and wine), tobacco products, energy sources. "Farmers" as defined under the Agricultural Act are entitled to more favourable treatment under the excise duties system. For instance there is a special regime for small wine producers who are individuals or family farms with at least 0.1 hectare and maximum 20 hectares of vineyards producing not more than 100 000 hectolitres of wine per year. Their wine can be exported or sold to another EU country through a simplified procedure. Small wine producers with not more than 0.1 hectare of vineyards and not more than 600 litres of wine production are exempt from paying excise duty as the wine is considered for own consumption. Similarly, small spirit producers, which are individuals or family farm with the production no more than 150 litres of spirit (100% alcohol) per year, pay only 50% of the regular excise duty.

All agricultural businesses, including legal persons and family farms, can be refunded 70% of the excise duty payed on the purchase of fuel used for their agricultural and forest machinery. Reimbursements are limited to a certain quantity of fuel per hectare, i.e. 200 litres per hectare of cultivated land, 420 litres per hectare of vineyard, orchard or hop field, 50 litres per hectare of plantation of forest trees and 15 litres per hectare of forest. Fuel consumption has to be proved by submitting invoices to the tax authority. The refund can be claimed monthly or once a year. Family farms usually claim refunds on an annual basis due to the small size of their claims (on average EUR 600).

33.5. Environmental taxes

There are some charges for environmental pollution but in general these are not specifically for agriculture. Exceptions are environmental taxes on water where all water use that goes beyond the boundaries of general use is charged. Water charges are applied for irrigation of agricultural land, sports fishing in commercial ponds and aquaculture.

The National Environmental Protection Programme until 2030 (NEPP 2030) is under preparation. NEPP 2030 will establish long-term guidelines, goals and actions for protecting the environment. New policy approaches could also include environmental tax provisions.

33.6. Tax incentives for R&D and innovation

A general research and development (R&D) investment incentive is provided as a deduction from the tax base of 100% of the amount invested in internal R&D activities and the purchase of R&D services (not exceeding the amount of the taxable base).

The use of such incentives in agriculture is very limited. Although no official statistics exist, R&D activities in agricultural entities are not common and only large profitable agricultural companies are capable of using these tax incentives.

33.7. Other taxes

Both employers and employees pay compulsory social security contributions. The taxable basis for both is the gross wage. Employers withhold employees' contributions from wages or salaries and pay them together with their contributions every month as part of payroll

accounting. Self-employed individuals are obliged to remit both social security contributions (from employers and employees) on their own. The state budget pays the employers' social contributions for farmers with income from basic agricultural and forest activities.

Chapter 34. Spain

This chapter contains a description of tax provisions applied to agriculture in 2019, unless otherwise specified. They include taxes on income and profit, property, good and services, environmental taxes, and tax incentives for R&D and innovation.

34.1. Overview

In Spain there are over 945 000 farm holdings (2016) with an average size of 25 hectares and 96% of the farms were owner-operated businesses (as of 2003). Eighty per cent of the total land area is rural and 50% of the country is used in agriculture employing 4.2% of the labour force.

The agricultural sector has differential tax treatment which, in general, consists of special regimes to facilitate tax administration for small farms. Differences relate to the determination of taxable income which for most farms is calculated on the basis of estimated or national average incomes rather than on the actual incomes. Agriculture is often exempt from regional water use charges but is taxed for discharges of pollution.

In 2015, tax reforms were implemented modifying the main tax laws, i.e. personal income tax, value added tax, corporate tax. The reform aimed to reduce the tax burden on taxpayers, simplify and modernise the main taxes and address tax fraud. Concerning the agricultural sector, the reform did not substantially change tax concessions but did reduce the scope for eligibility for farmers using the estimation method (decreasing the threshold income from below EUR 300 000 to below EUR 250 000).

34.2. Income taxation

Taxable income is classified into the following five categories according to the source or origin: employment income, investment income, business income, capital gains and imputed income. Business income includes profits obtained from agricultural activities.

The following methods are available for the calculation of income:

- Direct income calculation (accrual based accounting)
- Direct income calculation (simplified using cash based accounting)
- Indirect income calculation using fixed index numbers for the calculation of the profit (the estimation method).

The first method is mandatory for farmers with income in the previous year over EUR 250 000. The Spanish income tax law offers all small entrepreneurs, including farmers, the opportunity to simplify their calculation of income by using the second or third options.

Approximately 94% of farmers use the estimation method. The calculation of income is made by multiplying sales by fixed index numbers that vary between 13% and 56% depending on the agricultural production system. These fixed index numbers set by government are exclusive to agricultural activities and estimate the average costs of each production system. All small businesses can use the estimation method applying modalities relevant for their economic activities.

Included in taxable income are sales, agricultural subsidies (with the exception of certain EU CAP subsidies) and other compensation received during the fiscal year. EU CAP subsidies excluded from taxable income include: definitive abandonment of vineyard cultivation; grubbing of apple plantations; grubbing of banana trees; definitive abandonment of milk production; definitive abandonment of pears, peaches and nectarines culture; grubbing of pear, peach and nectarine plantations; definitive abandonment of the cultivation of sugar beet and sugar cane. Many of these subsidies were paid in the past but are no longer granted.

Corrective multipliers are then applied to determine net income taking into account circumstances relating to production i.e. the cost of salaried labour, use of leased arable

land, purchases of supplementary feed for livestock, and whether the farm is organic. Given that income from EU CAP subsidies is adjusted by the corrective multiplier the entire subsidy is not included in taxable income.

Under the estimation method a reduction of 25% is applied to the taxable income of young farmers (aged between 18 and 40 years old) for five years following the commencement of their farming businesses.

Bookkeeping obligations for farmers using the estimation method are limited to recording sales and revenue thereby reducing farmers' administrative burden. Moreover, the resultant taxable income can be lower and therefore this method can be more favourable for farmers than using the actual income method. Alternatively, it could be argued that the calculated net yield indices do not adjust to the average of the farms when there are climatic adversities and so adjustments often have to be made to reduce the net yields calculated a priori.

Income from agricultural or forestry activities are subject to a special withholding tax rate of 1% for fattening pig and poultry and 2% for all other activities. Additionally, farmers must pay a 2% tax on their volume of sales obtained in each quarter.

34.3. Property taxes

An annual real estate tax is levied by the municipalities on immovable property. The taxable base is the cadastral value as determined by the General Directorate of the Cadastre. The tax rate for urban real estate is between 0.4% and 1.1% while for rural real estate tax rates range from between 0.3% and 0.9%.

Wealth tax is calculated on the basis of the net value of the assets and rights owned by natural persons. For real estate the tax base is the greater value of the following three: the cadastral value; the value verified by the government for the purposes of other taxes; or the sales price. A minimum exemption of EUR 700 000 is applicable to all net assets. The wealth tax rates are progressive and range from 0.2% to 2.5% and the autonomous regions are responsible for setting the wealth tax in their territory. There are no concessions for agriculture.

Inheritance and gift taxes are levied on property passed to individuals by way of gift or on death. Inheritance tax is payable on transfers of property and is based on the net value of the estate reduced by deductible charges, debts and expenses. The law allows a reduction in the taxable base depending on the heir's relationship to the deceased. Transferred assets are valued at their fair market value. As the autonomous regions are responsible for setting the tax rates and rules, these may vary from region to region. Where the recipient is the spouse or child of the deceased an additional deduction applies in the case of a family business or the permanent residence of the deceased. This deduction is 95% of the value of such property limited to EUR 123 000. There are no concessions for the agricultural sector.

The transfer tax applies to the transmissions of all kinds of assets, leases, sharecropping and sublease. Set by the autonomous regions, the tax rates charged on the purchase prices range between 6% and 8% for real estate and 4% for movable or semi-personal property. In the case of leases, rates range from 0.3% to 0.8% of the taxable base. There are no explicit concessions to taxes on the transfer of agricultural assets.

To enable the continuity of agricultural businesses in some instances where farms qualifying as 'priority holdings' are transferred between family members, the transfer is excluded or partial exempt from taxes.

34.4. Tax on goods and services

Value add tax is levied on most business and professional transactions carried out within Spain and on all goods imported into Spain. The standard VAT rate is 21%. A reduced rate of 10% applies to food, animals, some goods used in agricultural activities, water, most ornamental plants, medicines, first transfer of houses and many transport services. A super-reduced rate of 4% applies to various basic necessities i.e. bread, flour, milk, cheese, eggs, fruit and vegetables and cereals.

Approximately 90% of small-scale farmers in Spain are not VAT registered and operate under a Special Regime for Agriculture, Livestock and Fisheries (REAGP). REAGP is open to farmers with incomes from agricultural activities below EUR 250 000 (and total purchases of less than EUR 150 000). Under the REAGP producers can charge a flat rate of 12% on agricultural and forestry products and 10.5% on livestock and fishery products sold to VAT registered customers. These flat rate amounts allow farmers to be compensated for the VAT tax paid on inputs they have purchased for the running of their farming business.

Farmers can also choose to use the general VAT system.

An electricity tax applies to both agricultural and non-agricultural activities. Electricity used for agricultural irrigation receives an 85% reduction of the taxable base. This is to offset electricity price increases that have occurred in Spain since 2008.

The tax on hydrocarbons applies to both agricultural and non-agricultural activities. Fuel used in tractors and agricultural machinery is charged a reduced tax. The state charge for agricultural diesel is EUR 96.71 per 1 000 litres (2019) compared with the usual rate for diesel for general use of EUR 331 per 1 000 litres (2019). In addition, farmers using agricultural diesel are entitled to a tax refund of EUR 63.71 per 1 000 litres (2019). To receive the partial reimbursement of the tax farmers must be registered in the official business register.

34.5. Environmental taxes

Environmental taxes are imposed by the regions. For instance in the Extremadura and Asturias regions underutilised agricultural land is taxed. All of the autonomous regions have implemented charges for the use of water and wastewater discharges. In all regions, apart from Murcia, water for agricultural uses is exempt from charges. In Murcia livestock production must pay water use fees. Where water is contamination with fertilisers, pesticides and other organic matter from agricultural, forestry and livestock activities, most regions charge a fee. The fee is determined by different coefficients depending on the pollutant discharged.

A tax has been implemented on fluorinated greenhouse gases which have a global warming potential higher than CO_2. While agriculture is not directly effected by this tax, it does impact the food storage and distribution chain, since these gases are used in the operation of refrigeration systems.

34.6. Tax incentives for R&D and innovation

Tax deductions to the corporate tax exist for the for the realisation of R&D projects and/or technological innovation. The tax incentives are available for all companies, whatever their activity or size, undertaking R&D in all kinds of areas of knowledge and there are no limits on their R&D expenditure. Companies also receive reductions on the social security contributions they pay for research staff.

34.7. Other taxes

Employees in the agricultural sector are obliged to contribute to the social security system but they pay reduced contribution rates.

Self-employed agricultural workers benefit from a reduced rate of social security contribution only up to a certain limit of the contribution base. After that limit they are required to pay the same rate as other workers.

Chapter 35. Sweden

This chapter contains a description of tax provisions applied to agriculture in 2019, unless otherwise specified. They include taxes on income and profit, property, good and services, environmental taxes, and tax incentives for R&D and innovation.

35.1. Overview

The Swedish tax system remains the much the same since the reforms undertaken 1990/1991. At that time tax rates were lowered, the bases for taxation were broadened, taxation of capital income was separated from taxation of labour income and a uniform rate of taxation was applied to capital income. In 2019, corporate tax rates were reduced with a further reduction scheduled for 2021.

Farming plays a small role in the Swedish economy, employing less than 2% of the Swedish work force and contributing less than 2% to GDP. There are approximately 67 000 farms accounting for less than 10% of the total land area, 75% of these are commercial farms. Forests account for 69% of Sweden's total area, of which half is owned by private people (around 320 000 forest owners, often farmers) and 25% is owned by private stock companies.

The agricultural sector receives very few exemptions under the general tax legislation and the exemptions applied are mostly not exclusive to the sector. Farm buildings, and farm and forest lands are not charged property taxes. Farmers (as well as foresters and others) are reimbursed part of the tax on energy and carbon dioxide but must pay a tax on pesticides.

35.2. Income taxation

Income tax is levied on earned income from employment and on income from self-employment. Individual capital income is subject to income tax on interest, dividends and capital gains.

The individual tax on income comprises of tax on capital, which is a state tax and tax on labour, which is partly a local and partly a state tax. The state tax is progressive. There different taxation rates applied at the local level for local income tax and tax rates vary between municipalities. In 2019, the local tax is on average 32.19%. The state income tax is 20% on incomes over SEK 490 700 and 25% on those over SEK 689 300 after personal allowance is deducted.

Members of the Swedish Church are required to pay a small percentage of their income too.

In order to increase the employment rate, Sweden has a job tax deduction (earned income tax credit). It is a state reduction of the local tax. The reduction is different for different income levels, but it is designed so that the largest percentage reduction occurs for those with the lowest income.

On income, employers pay a general employee fee to the state of 31.42% on average (there are deductions for elderly people). Until the 31 December 2021, an owner-operator business that hires an employee pays an employee fee of 10.21%. This only applies to the first employee. Self-employed pay their own employee fee (called social fee) to the state, which in general is 28.97%.

Property transfers by sale are taxed as capital gains at 30%. Ninety per cent of gains are taxed in this manner. Agricultural land is, however, often sold through property regulation. For larger land areas, the fee that is paid for a property regulation is often smaller than what the corresponding capital gains tax would have been, if it had been sold through a property transfer.

Income from farming and forest activities is taxed as business income. Farmers, are mostly are self-employed in individual businesses. There are, however, companies organised as

either corporations or corporate private businesses, which affects the taxation of the company. As an example corporate businesses are (mostly) not allowed to own land in Sweden, which is solved by using a combination of both corporate and self-employed businesses. Agro-businesses are usually organised as corporate businesses (both privately owned, cooperatives and listed on the stock market).

Taxable business income is computed according to "generally accepted accounting standards" and the accounting records form the basis for taxation. The principles of accrual accounting apply to all businesses regardless of size. Tax rules for depreciation of buildings, machinery and inventories are also the same for all businesses, including farming. As of 1 January 2019 the corporate tax is 21.4% (reduced from 22%) which will reduce further to 20.6% from 1 January 2021.

Two options are available to businesses to plan their tax levels by depositing capital in profitable years and withdrawing it in years when they experience losses. For instance under the accrual fund, businesses can allocate up to 30% of net profits into a tax allocation reserve. Businesses can have a maximum of six funds at the same time (one for each year). To counteract an increase in income businesses can add a new fund. After a maximum of six years, the funds must be dissolved and added to income. Businesses can withdraw from multiple funds at the same time, but always from the oldest first. Placing a part of taxable income in an accrual fund helps with balancing tax costs for companies over time.

Alternatively all self-employed businesses may place a portion of their taxable income in an expansion fund. Capital placed in the expansion fund are taxed at the corporate tax rate. Capital that is withdrawn from the expansion fund is regarded as income and levied at normal tax rates while at the same time the corporate tax, levied at the time of the deposit, is refunded. The aim of the expansion fund is to free up capital for investments and to make the tax rules between self-employed and stock companies equivalent. There is no time limit for when capital put in an expansion fund should be returned. The maximum level for an expansion fund is 128.21% of the capital base (which is the same as the amount of capital in the business plus the expansion fund tax of 22%).

In order for the tax rules to be equivalent between individual business activities and stock companies, there is the possibility of a positive interest rate distribution. It can give individual businesses a lower tax by moving part of the profit in the individual business activity from taxation in the income category to business activity to taxation in the income category capital.

Positive interest rate distribution is possible if there is a positive capital base in the business of more than SEK 50 000. A certain interest rate (6.49% for 2018) on the capital (the allocation amount) is calculated and then the amount is moved from income from business activity to income from capital. The moved income is taxed at 30%, like other income in capital. The transferred amount is not included in the basis for calculating the social fee and is not pensionable.

Self-employed farmers with forest areas can make a tax deduction from the taxable business profit, similar to setting aside capital in an expansion/accrual fund. Under this mechanism the earned income will be taxed another year, at the latest ten years after the deduction, enabling owners of forest property to balance their income over time.

There is no depreciation on agricultural land. All businesses are subject to the same tax rules for depreciation of buildings, machinery and inventories, including farming. There is a special provision for depreciation for drainage and roads for forestry intended to encourage investment in these areas.

35.3. Property taxation

The taxation value of property is established via periodical real estate assessments. Residential houses on farms are subject to a property levy, while other farm buildings, farmland and forest land are not.

The tax on transfers by inheritance and gifts was abolished 1 January 2005.

A stamp duty is levied at the time of acquisition of real property and the registration of mortgages. There is no special treatment of agricultural land.

There are some restrictions on agricultural property acquisition and use but these are outside of taxation law.

35.4. Tax on goods and services

The standard value added tax (VAT) rate is 25% but a reduced rate of 12% applies to food including milk and cereals (sold to dairy farms or mills) and non-alcoholic beverages. and some other areas for example restaurant services, hotel accommodation and camping. The 25% rate applies to live animals, tobacco and alcoholic beverages.

Tax is levied on energy and carbon dioxide. Farmers (and a small selection of other sectors) have the possibility of being reimbursed 99% of the energy tax on electricity and part of the carbon dioxide on fuel. For example until 30 June 2019, farmers are reimbursed SEK 1 430 m^3 of the carbon dioxide tax on fuels used for tractors and harvesters. After that, the repayment is SEK 1 930 m^3. However, between 1 July 2019 and 31 December 2019, the repayment is SEK 2 430 m^3.

Whereas for coloured fuel used for heating and stationary engines on the farm, i.e. for grain dryers, farmers are reimbursed 70% of the energy tax and 0% of the carbon dioxide tax.

Farmers involved in commercial greenhouse farming have the possibility of buying fuel at a reduced tax level.

Exemptions from energy and carbon dioxide taxes apply to biogas used for vehicles or heating, vegetable oils used for heating, and bio-fuel in motor fuel. Energy taxes on electricity from renewable energy sources can be reimbursed.

35.5. Environmental taxes

See the section above for the description of the tax on energy and carbon dioxide.

Sweden was one of the first countries in the world to introduce taxes on pesticides based on the volume sold. The purpose of this tax, introduced in 1984, is to reduce the use of pesticides for health and environmental reasons. The tax was increased stepwise from SEK 4 per kilo active ingredient to SEK 34 per kilo active ingredient from 2015.

35.6. Tax incentives for R&D and innovation

All businesses employing staff to undertake R&D are able to pay an employer contribution discounted by 10% for these staff. However self-employed people, that pay their own social fee, are not allowed to make this discount which is only applicable for the employment contribution.

35.7. Other taxes

There are some special tax provisions, although not specific to agriculture, frequently used by self-employed businesses or small firms. For instance, small businesses can share profits with an assisting wife, husband or equivalent person. There is also the possibility for small businesses to be granted favourable tax conditions by employing a younger or older person.

Chapter 36. Switzerland

This chapter contains a description of tax provisions applied to agriculture in 2019, unless otherwise specified. They include taxes on income and profit, property, good and services, environmental taxes, and tax incentives for R&D and innovation.

36.1. Overview

The confederation structure of Switzerland contains three administrative levels, *Bund*, *Kanton* and *Gemeinde*. Each level has the right to collect certain taxes and fees.

The taxes levied in Switzerland can be divided into direct taxes (e.g. income and wealth taxes for individuals and profit and capital taxes for legal entities) and indirect taxes (consumption taxes and excise taxes).

Over the past twenty years there have been two corporate tax reforms with a third agreed by the Swiss Parliament in September 2018. The first corporate tax reform came into force in 1998 and reduced the tax burden for holding companies. The introduction of the second corporate tax reform was staggered in 2009 and 2011 and led to venture capital tax relief (partial taxation of investment income). The objectives of the most recent reform package are to provide a competitive corporate tax burden, restore international acceptance (particularly by abolishing the preferential taxation of status companies), and safeguard the financial viability of profit taxes for the Confederation, the cantons and the communes. A referendum on the agreed legislation is more than likely to be held in May 2019.

Agriculture is specifically mentioned by the Swiss Federal Constitution (Art. 104) which provides for the support of farms that cultivate the land in order to fulfil their duties, i.e. the provision of foodstuffs for the population, the conservation of natural resources and the upkeep of the countryside, and the decentralised population settlement of the country. The agricultural sector is regulated by the Federal Act on Agriculture (RS 910.1) with each canton having its own legislation to regulate the agricultural sector.

According to the 2017 farm structure census there are 51 620 farms in Switzerland covering 1.05 million hectares with 153 900 people employed in the agricultural sector.

In tax matters, agriculture is, with a few exceptions, not treated differently from other economic sectors. Although tax treatment of farmers can vary between cantons.

36.2. Income taxation

Income tax is collected by the regions (cantons) but split between the regions and the federal state. There is no special treatment for agricultural income, which is calculated according to bookkeeping records. An exception concerns capital gains on the sale of agricultural land.

There are no provisions to smooth taxable income, except if giving up self-employment (e.g. due to retirement). In this case preferential taxation of liquidation gains applies for farmers and other self-employed individuals under certain conditions.

The taxation of assets and capital gains varies between cantons. The legal requirements for the transfer of agricultural land are included in the *Loi fédérale sur le droit foncier rural du 4 octobre 1991* (LDFR, RS 211.412.11). This law determines who can buy agricultural land and what price can be charged for the land. For instance, if the farm is being sold to a family member (and this family member will continue farming) they are able to buy it at the capitalised earnings value (*Ertragswert*) which is significantly lower than the price that would be obtained through sale in real estate markets. In such cases the capital gains are often zero. On the other hand, if the farm is being sold to an outside person then the gain generated is subject of full taxation (i.e. income tax by the federal government and the cantons and real estate capital gains tax by the cantons). In this case the taxable capital gain is not zero but it is generally low, i.e. below CHF 10 per m^2.

36.3. Property taxation

Annual property tax is levied by the regions. The valuation of agricultural land for property tax purposes is based not on market price but on a method of economic valuation (capitalised earnings value) (*Ertragswert*). This method gives values that are one-third to a quarter of the actual market value for land including buildings, in the case of land without buildings the value is only one tenth of the market value.

36.4. Tax on goods and services

Generally, farm inputs, agricultural or agro-food products are subject to a reduced VAT rate. These include (and are not restricted to farming):

- The supply of certain goods (e.g. seeds, plant-protection materials, fertilisers, pesticides, animal feeding stuffs).
- Veterinary services for cattle, poultry and fish.
- The supply of food (including beverages) for human consumption.
- Field work supplied to farmers that is directly linked to agricultural production and cultivation.

The following activities are exempt from VAT (without credit):

- Supplies of agricultural, forestry and garden products cultivated by farmers in their own undertakings.
- The sale of cattle by cattle dealers.
- The sale of milk by milk collection centres to milk-processing plants.

It is possible to opt for VAT registration with the right to deduct input VAT. Small enterprises may apply for a flat rate scheme to fill in the VAT returns.

The mineral oil tax levied on fuel used for agricultural production is refunded on a lump-sum basis calculated based on fixed production indicators whereby the marginal costs of fuel consumption are not reduced.

Farm vehicles are exempt from Switzerland's heavy goods vehicle tax.

36.5. Environmental taxation

There are no tax incentives to encourage the provision of environmental goods, but direct payments are paid for the provision of public goods, including environmental goods. A CO_2 tax is imposed of all fossil heating and process fuels and the Greenhouse gas-intensive companies can be exempted from the CO_2 levy if they commit to a reduction in their greenhouse gas emissions in return (emissions trading scheme or obligation to reduce greenhouse gas emissions). For more information on the CO_2 tax, see https://www.bafu.admin.ch/bafu/en/home/topics/climate/info-specialists/climate-policy/co2-levy.html.

36.6. Tax incentive for R&D and innovation

There are no tax incentives for R&D and innovation in Switzerland.

36.7. Other taxes

Unlike other self-employed persons, farmers do not have to pay child allowance contributions.

Chapter 37. United Kingdom

This chapter contains a description of tax provisions applied to agriculture in 2019, unless otherwise specified. They include taxes on income and profit, property, good and services, environmental taxes, and tax incentives for R&D and innovation.

37.1. Overview

The agriculture sector in the United Kingdom accounts for 71.6% of land usage in 2018. Taxes from agriculture are collected by the central government as agriculture is mostly exempt from paying local taxes. For tax purposes, in general agriculture is treated the same as other businesses, however some tax concessions for agriculture and forestry exist. Concessions specific to agriculture provide tax relief for the capital taxation in inheritances encouraging the transfer and continuity of agricultural businesses between family members. Farmers also benefit from flat rate VAT schemes and income averaging provisions. The income averaging scheme is not only provided to the agriculture sector but farmers out-number the other groups able to benefit from the provisions. Intensive horticultural producers are able to claim back excise duty on heavy oil used for heating glasshouses and all farmers pay a special reduced excise tax on diesel fuel for use on-farm.

37.2. Income taxation

Owner-operators pay income taxes on farm profits subject to the normal progressive rates. However, farmers can average profits over two or five successive years when either the (average) profits of the earlier year(s) are 75% or less than the other or last year, or there is no profit in one of the years. In the averaging, profits are calculated after the deduction of net capital allowances (mostly the depreciation of capital assets according to rates determined by the taxation authorities less any proceeds on disposal of assets). Although not exclusive to agriculture, farmers (involved in the following activities: farming, market gardening or the intensive rearing of livestock or fish) use the averaging mechanism more than artists and writers, who are also entitled to average their incomes, simply because there are a larger number of farmers. The government aims to support farmers by smoothing fluctuating profits using the tax system to enable better business planning.

Special rules apply to “hobby” farmers in their ability to offset losses in agriculture against income from elsewhere; losses incurred by hobby farmers and market gardeners are not permitted to be set against income from elsewhere after five consecutive years of losses. Farm businesses arranged as companies are charged corporation tax on their profits and are not eligible to benefit from averaging. While the majority of farms are run as owner-operator businesses, there are a number of farm businesses arranged as companies, usually with tax minimisation in mind.

Farmers may also benefit from Herd Basis, which allows for treatment of livestock kept for the sake of the product (e.g. milk or eggs) or offspring (breeding livestock) as capital assets rather than trading stock, and any profit from the sale of the herd is not taxed as trading income. To qualify farmers must elect to use the herd basis mechanism when they commence keeping animals. Once in place the herd basis must be used for as long as the farmer continues to keep animals of the class specified under their herd basis application. However in the case where a herd or a substantial part of it (20% or more) is compulsorily slaughtered the farmer can claim the herd basis for tax purposes.

Current income from the occupation of forestry (both the cost and revenue sides) is not taxable. However, profits from the rental of commercial woodland are taxable.

37.3. Property taxation

Agricultural land and associated buildings used for production are exempt from the annual local property tax levied on other business assets (business rates).

Agricultural Property Relief (APR) provides tax relief from inheritance tax (the capital tax levied on transfers on death) for the agricultural value of land and property (rather than the market value of the land) at a rate of 100% (i.e. the land is not taxed) if owner-occupied, or by 50% if tenanted under the normal long-term letting arrangements. The tax relief is generous provided that the land is being farmed. If farm buildings have a development value, APR will not apply but Business Property Relief (BPR) may be possible. This mechanism encourages the business continuity of inherited agricultural operations.

Individuals disposing of assets for a gain may be subject to capital gains tax (CGT). The amount of CGT paid will depend on the type of asset being disposed of, the individual's overall income, and any reliefs available including the individual's annual tax-free allowance (the Annual Exempt Amount). Gains made on disposals of agricultural property are generally charged to the main rates of CGT (10% and 20%). Where used for the owners' trade, agricultural property is largely treated the same as any other business asset on which reliefs may be available. Capital gains realised by farms structured as companies are subject to corporation tax.

To encourage the preservation and protection of national heritage relief from inheritance tax and CGT is available to owners of heritage properties in certain cases. Land (including woodlands) and buildings, works of art and other objects can all qualify as national heritage. Under the 'Conditional Exemption Tax Incentive Scheme' landowners meeting certain criteria can claim conditional tax exemptions. Separate exemptions also apply to the value of commercial woodlands.

37.4. Taxes on goods and services

The standard rate of VAT is 20%. Almost all agricultural output (i.e. basic foodstuffs) has a VAT rate of zero. Farmers can choose to operate under the regular value added tax regime (but with output zero-rated, which implies that they can claim back tax paid on inputs). Alternatively, they if they are not VAT-registered they can use the Agricultural Flat Rate Scheme, under which they are not required to account for VAT, submit VAT returns or make claims for VAT paid. Instead they can charge a flat rate of 4% on their sales of goods and services to VAT registered customers. The flat rate is not VAT but compensates farmers for not being able to claim back input tax on items they purchased for their businesses.

Farmers whose primary activity is to buy and sell animals, or those who are engaged in an activity once removed from farming (for example, they process farm produce) or those with non-farming activities generating incomes of more than GBP 85 000 are not eligible to join the Agricultural Flat Rate Scheme.

Another administrative simplification option is for farmers to choose to participate in the Flat Rate Scheme, which is available to all VAT-registered businesses with turnover under GBP 150 000. Under this scheme there are sectoral flat rates including an agricultural rate.

For fuel for agricultural uses there is a special low rate of excise tax (GBP 110 per 1 000 litres of red diesel, compared with GBP 579.5 per 1 000 litres for road diesel). This is worth approximately GBP 0.66 billion per year.

Horticultural growers can claim back the repayment of excise duty on heavy oil used for heating to grow horticultural produce.

Vehicles used for agriculture, horticulture or forestry are exempt from annual vehicle tax. This includes tractors, agricultural engines and light agricultural vehicles used off-road and limited use' vehicles used for short journeys (not more than 1.5 kilometres) on the public road between land occupied by the same person.

The Climate Change Levy (CCL) is an environmental tax on energy supplies to industry, commerce, agriculture, local administration and a number of other services. It is intended to encourage the efficient use of energy by effectively increasing its price and is part of the United Kingdom's efforts to reduce greenhouse gas emissions.

The levy covers different forms of energy including electricity, gas, LPG, coal and coke. Oil-based fuels are exempt as they are either liable to road fuel duties or to other excise duties. In April 2019, the CCL rates charged on energy were increased. To ease the CCL's impact on energy-intensive business sectors a number of exceptions to the regime are in place. By entering into a climate change agreement (CCA) with the Environmental Agency businesses can pay a reduced rate on CCL charges. A CCA is a voluntary agreement to reduce energy use and CO_2 emissions. Businesses with CCAs receive a reduction of 90% of the CCL rate paid on electricity bills (increasing to 93% in 2019), and a 65% reduction on all other fuels (increasing to 78% in 2019).

The British National Farmers Union (NFU) has a CCA which its members growing crops in green or glasshouses can sign up to so as to receive CCL discounts in return for meeting agreed energy efficiency targets. The CCL tax discount is available until March 2023 for those producers achieving the targets.

37.5. Environmental taxes

See the description of the Climate Change Levy in the section above.

37.6. Tax incentives for R&D and innovation

To encourage greater investment in Research and Development (R&D), eligible companies can claim tax relief on eligible R&D expenditure. There are two types of R&D tax relief, the R&D Expenditure Credit (RDEC) and a more generous scheme for Small or Medium sized Enterprises (SMEs).

R&D tax reliefs are not specific to agriculture, they are available any eligible company undertaking R&D and are not limited to any one sector. Official statistics for 2017-18 suggests the agriculture industry accounted for less than one per cent of all tax claims submitted and received only GBP 10 million in tax relief. Industry breakdowns in the official statistics are based on Standard Industry Classification (SIC) codes, however this coding might not correspond to the actual industry sector of the R&D activity. The low usage of these tax reliefs by the sector is because most farmers are unincorporated (self-employed, or partnerships) and even those that are incorporated focus on production, rather than R&D.

37.7. Other taxes

There are no special provisions for social insurance used for agriculture.

Chapter 38. United States

This chapter contains a description of tax provisions applied to agriculture in 2019, unless otherwise specified. They include taxes on income and profit, property, good and services, environmental taxes, and tax incentives for R&D and innovation.

38.1. Overview

The tax system in the United States is characterised by a pronounced federalism. In addition to taxes at the federal and state levels, at the local level counties, municipalities and townships, school districts as well as special purpose authorities are allowed to raise taxes. The federation levies federal income tax on individuals, which is a uniform tax on gross income. Federal income tax is the main form of direct taxation on farm households, followed by social security and self-employment taxes. Some states do not have their own income tax and others raise it in a quite different form. Municipalities raise their own income taxes and in seven states municipalities are able to set corporate income taxes. All the states as well as most municipalities raise land and real estate property taxes. The Internal Revenue Code (IRC) of 22 October 1986 (including all later changes) is decisive for all federal taxes. The legal validity of the remaining taxes are the tax laws and the constitution of the respective federal states or municipalities. The differing approaches results in considerable variation in tax arrangements between states and between rural and urban areas. This complexity means that it is difficult to measure favourable treatment of agriculture at the national level.

Implemented in 2018, the Tax Cuts and Jobs Act (TCJA) 2017 has made extensive changes to the federal income tax system. Corporate tax rate is now simplified and levied at a single lower rate of 21% (instead of tiered rates) and the progressive individual income tax rates have been lowered and the seven tax brackets have been broadened. The TCJA will expire after 2025.

According to research undertaken by the ERS (2018) the biggest impact for farmers from the TCJA comes from the reduced marginal income tax rates. Analysis using farm household income data from 2016 indicates that instead of an average effective income tax rate of 17.2%, under the TCJA family farm households would face an average tax rate of 13.9%, with mid-sized farms (those with gross cash farm income of between USD 350 000 and USD 1 million) benefiting the most.

In the United States, the most important tax advantages for agriculture under federal income tax is income averaging and the deductibility of certain capital expenditures and the treatment of some income from asset sales as capital gains. However, the reduced tax on farm real estate for state and local property tax purposes may be the most significant tax expenditure overall. Also the opportunity to use cash accounting (in contrast to accrual accounting) reduces the administrative burden of bookkeeping for taxes for farmers with gross annual cash farm income of less than USD 25 million.

38.2. Income taxation

Under the current income tax structure, depending on how it is organised, a farm business can be taxed under the federal individual income tax or corporate income tax. State level tax treatment is the same as federal, meaning a business taxed at the federal level as a corporation would also generally be taxed as a corporation at the state level.

Farms can be organised as the following forms of businesses: C corporations, sole proprietorships, partnerships, limited liability company and subchapter S corporations. Farms may also choose to form a Limited Liability Company (LLC) which the Internal Revenue Service (IRS) treats as either a corporation, partnership or as an entity separate from its owner for income tax purposes.

Most agribusinesses are large corporations and are taxed under the corporate income tax structure. In 2017, only 2% of family farms operated as C corporations.

Sole proprietorships, the most common form of farm organisation, are taxed at the individual level. According to the 2017 Agricultural Resource Management Survey, sole proprietorship comprises 89% of all farms. Partnerships and subchapter S corporations are also taxed at the individual level with income from farms passing through to the individual partners or shareholders for taxation purposes. Partnerships comprise about 6% of farms while corporations account for about 4% (2% subchapter S corporations and 2% C corporations). Therefore, about 97% of all farms are taxed under the individual income tax rather than the corporate income.

Farmers benefit from both general tax provisions available to all taxpayers and from provisions specifically targeted to farmers. In general, income from farming is taxed more favourably than income from many other businesses. Some of the specific provisions that are responsible for this treatment include the current deductibility of certain capital costs, capital gains treatment of proceeds from the sale of farm assets, cash accounting, and farm income averaging. These and other provisions reduce the farm income tax base, allow some farm income to be taxed at reduced rates, and contributes to smoothing annual income variations.

National subsidies for soil, groundwater or environmental protection, care for wild animals or forests are sometimes tax-free for the farmer. For example the Conservation Reserve Program (CRP) targets the removal from environmental sensible land from production. Payments from CRP are not considered as part of rental income. However, CRP is used in net income to calculate Self-Employment taxes but it is not subject to federal income taxes.

Capital gains treatment for assets used in farming. Under certain conditions income generated by the sale of assets used in farming businesses is not subject to income tax and is instead taxed as capital gains or losses. Among the farm assets eligible for such treatment are farmland, buildings, machinery and livestock held for draft, dairy, breeding, or sporting purposes. To be eligible livestock must be held for a minimum amount of time (the required holding period) before income generated from the sale is eligible for long term capital gain treatment and is taxed at a lower or zero rate. By planning farmers can move income to the most favourable tax rates

Current deduction for development costs. Another feature of the federal income tax that applies specifically to farmers is the ability to deduct the cost of developing certain farm assets in the tax year when the costs are incurred or paid. Examples of pre-productive development costs include raising dairy, draft, breeding, or raising livestock to their age for mature use, caring for orchards and vineyards before they are ready to produce crops, and clearing land and building long-term soil fertility by applying lime, fertiliser, and other materials.

Cash accounting. While businesses are generally required to use the accrual method of accounting for tax purposes, most farm sole proprietors are allowed to use the cash method of accounting. A large number of farm partnerships and small business corporations also are allowed to use the cash method. Only corporations (other than a family corporation) that had gross receipts of more than USD 1 million for any tax year beginning after 1975 or a family corporation that has gross receipts of more than USD 25 million for any tax year after 1985 are required to use the accrual method of accounting. The main advantage of using cash accounting relates to the mismatch of incomes and expenses in different tax years since it is always beneficial to receive a benefit sooner rather than later.

Current deduction for soil and water conservation expenditures. Since 1954, farmers have been allowed to claim immediate federal income tax deductions for certain types of expenditures on soil and water conservation or for the prevention of erosion of land used in farming. Examples of expenses have included levelling, grading, terracing, custom

furrowing, planting windbreaks, and constructing, controlling, and protecting diversion channels, drainage ditches, irrigation ditches, earthen dams, watercourses, outlets, and ponds.

Income averaging. Under the current law, a farmer can elect to shift a specified amount of farm income, including gain on the sale of farm assets except land, to the preceding three years and pay tax at the rate applicable in each year. The current income shifted back is spread equally among the three years. If the marginal tax rate was lower during one or more of the preceding years, a farmer may pay less tax than without income averaging. This helps to reduce the potential higher taxes that might otherwise occur as a result the combination of variable farm income and a progressive tax rate structure. The TCJA retains this provision.

In addition to targeted provisions, farmers and agribusinesses benefit from various general provisions including the tax treatment of capital investments which have been modified by TCJA to effectively allow the write-off of capital purchases in the first year of purchase. Capital purchases include breeding livestock and milking sheds as well as farm equipment.

Under section 179 of the TCJA the amount of capital purchases that can be immediately deduced is increased to USD 1 million (from USD 510 000). In additional until 2022, businesses making investments above the section 179 limit can deduce 100% of the difference between their investment and the USD 1 million limit in the first year of purchase ("100% bonus depreciation"). This measure applies to new and used farming equipment bought and put into use after September 2017. The bonus depreciation percentage will be phased out starting from the end of 2022, by 20% each year until it is completely eliminated by 2027. Allowing a large share of investment to be recovered in the first year of the investment and thereafter at an accelerated rate reduces the tax rate and encourages additional capital investment.

According to ERS (2018) the new section 179 provisions are unlikely to have a major effect on the majority of farms because most make investments in depreciable capital assets that are below the previous maximum thresholds of section 179. In 2009-2016, less than 1% of farms made investments above the USD 1 million limit.

38.3. Property taxation

At the state and local level, annual property taxes are of the greatest significance.

Local property taxes in particular are generally associated with provision of community services, particularly education, so that lower tax rates for less dense uses of land, such as agriculture, may be related to lower use of those services per taxable land unit.

All states have adopted some special assessment programme designed to reduce the amount that farmers are required to pay in state and local property taxes. The most common type of programme is known as the "use-value assessment" whereby property taxes are based on some version of the hypothetical value of land if it were to remain in agricultural use in perpetuity. This can provide significant property tax relief, lowering farm operating expenses and reducing the potential that financial pressures could force some farmers to sell their land for development purposes. In 2018, foregone federal estate tax revenue from the "special use valuation" programme for farmers is estimated as being USD 59.7 million according to the ERS.

Federal estate tax applies a unified tax rate structure to gifts and transfers of money and property at death. The taxes have been amended numerous times (and were even repealed for one year in 2010), most recently by the TCJA which maintains the basis structure of the tax. A progressive rate is applied above the threshold level of USD 11.18 million as

amended (and doubled) by the TCJA. There are additional rules that reduce gift and estate tax in small family business; special use valuation of farmland and instalment payment of estate taxes. Although these provisions apply to both farms and other small businesses, in their application the primary beneficiaries of the special use value provision are farms.

Generally, the value of a property for estate tax purposes is the fair market value at the date of death. For real property devoted to farming or other closely held business, special rules apply and the value of the farm is set to its use value. To qualify for this use value, the property must:

- be transferred to a qualified heir
- must have been used as a farm for five years during the last eight years
- the decedent or a member of the decedent's family must have participated in the farm business
- the value of the qualified real property must equal at least 25% of the estate
- the combined value of real and other business property must be at least 50% of the gross estate.

For most farms, the special use value is 40-70% lower than the fair market value.

Also farmers are able to donate part of their land to an easement on which development is restricted. The value of the proportion of the land under the easement is then excluded from the value of the property, creating extra tax savings.

38.4. Tax on goods and services

Sales tax is a state and local consumption tax and thus varies widely ranging from less than 1% to over 10%. Most states provide partial or full relief from sales taxes on food for household consumption.

Both the federal and state governments impose an excise or sales tax on fuel (gasoline, diesel fuel, etc.). In many jurisdictions, including federal, fuel tax exemptions are granted to a range of off-road fuel uses, including construction, marine, and agriculture, on the basis that the fuel tax is intended to support the development and maintenance of road-based infrastructures. Fuel used on a farm for farming purposes is fully or partially exempt from the excise tax. No tax is charged on dyed diesel fuel for farming. Farmers can claim a tax refund or tax credit for gasoline and undyed diesel used in agricultural production.

Estimates of the value of the tax expenditures are supplied by the United States to the OECD for inclusion in its PSE/CSE database. Table 38.1 contains the figures for single years from 2013 to 2018.

Table 38.1. Estimates of tax expenditures, 2013 to 2018

USD million

Form of concession	2013	2014	2015	2016	2017	2018
Tax concession (income)	1 260	1 683	1 795	2 068	1 936	2 153
Fuel tax exemption for farms	678	751	777	777	777	777
Total	1 938	2 434	2 572	2 845	2 713	2 930
Producer Support Estimate (PSE)	28 714	39 335	37 386	36 442	33 813	44 308
Total tax exemptions % of PSE	*7*	*6*	*7*	*8*	*8*	*7*
Form of concession	2013	2014	2015	2016	2017	2018

Source: OECD PSE/CSE database.

38.5. Environmental taxes

There are no taxes in the United States to improve the environmental impact of agriculture-related activities.

38.6. Tax incentives for R&D and innovation

The United States offers tax incentives for R&D or the introduction of innovation. There are three provisions: a deduction from taxable income for research expenses, a tax credit for increasing research activities, and an exemption for donations to charitable agricultural research organisations. These tax credits for R&D are retained under the TCJA however after 2021 R&D expenses must be recorded in the balance sheet and depreciated over a five year period.

The deduction for research expenses allows businesses to elect to deduct from taxable income the entire amount of eligible R&D expenditures in the year which they were incurred. These costs include salaries for researchers, operational costs and costs for materials and supplies used for the research experimentation.

Under the tax credit businesses are allowed to reduce their federal income tax by an amount equal to 20% of their qualified R&D expenditure over a certain threshold (based on a complex calculation). Alternatively, simplified credit allows a credit equal to 14% of research expenses in excess of 50% over the average qualified research expenditures for three prior years.

Qualified research expenses must be experimental for the purposes of discovering information that is technological in nature and used in the development of a new or improved product, process, formula or invention. Eligible expenditures are limited to direct wage and salary, supplies, costs for equipment and from 65% to 100% of contract research expenses. The credit is not refundable. However it can be carried forward for 20 years to reduce future tax liability.

A variety of farming and food manufacturing and processing activities are potentially eligible for the credit. However in 2008 only 0.1% of the credit was received by firms involved in agricultural production. The credit primarily benefits large corporations with about 87% of the credit going to firms with over USD 50 million in assets in 2008.

Thirty-six states offer tax credits for R&D expenses too and as of 2005 the average effective rate of the various state level credits had reached 6% of qualified R&D expenditure.

38.7. Other taxes

Estimates of federal tax expenditures for agriculture under the federal income tax can be found in a report by the Joint Committee on Taxation (Estimates of Tax Expenditures for Fiscal Years 2018-2022, JCX-81-18, October 2018). The report acknowledges that concessions exist under other forms of tax but confines itself to those within income tax. It lists seven tax expenditures and provides estimates for the annual amount of the tax expenditure for fiscal years 2018 to 2022. The JCT figures are used for scoring Federal legislation.

JCT estimates of the total expenditure (in USD billion) for the five-year period 2018-22 are listed in Table 38.2.

Table 38.2. Estimates of tax expenditure to agriculture 2018-22

USD billion

Tax expenditure	Estimate for 2018-22 (total) USD billion
Income averaging for farmers and fishers	0.9
Exclusion of cost-sharing payments	0.2
Expensing by farmers for fertiliser and soil conditioner costs	0.8
Expensing of soil and water conservation expenditures	0.7
Exclusion of cancellation of indebtedness income of farmers	0.5
Two-year carry back period for net operating losses attributable for farming	0.3
Cash accounting for agriculture	0.1

Source: Joint Committee on Taxation (2018) Estimates of Federal Expenditures for the Fiscal Years 2018-2022. Prepared for the Committee on Ways and Means and the Committee on Finance. US Government Printing Office, Washington. JCX-81-18.

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Taxation in Agriculture

This review of taxation in agriculture in 35 OECD countries and emerging economies outlines the diversity of tax provisions affecting agriculture, provides an overview of cross-country differences in tax policy, and confirms the widespread use of tax concessions specifically for agriculture, although their importance and modalities differ across tax areas and countries. Potential effects on innovation, productivity, and sustainability in the agricultural sector are also discussed.

Consult this publication on line at ***https://doi.org/10.1787/073bdf99-en***.

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