

Chapter 5

India

This chapter is based on an OECD review of agricultural policies in India undertaken in 2005. The Government of India did not participate in this review and it was therefore not possible for the draft report to undergo the in-country or OECD review process. Consequently, estimates of agricultural support for India are not available.

Evaluation of policy developments

- Agricultural policies in India remain targeted to ensuring food self sufficiency and alleviating poverty of the second largest population in the world. Increasing rural income to support macroeconomic growth is a key government objective that will impact agriculture.
- Based on available budget and tariff information, the level of agricultural support for India would appear to be slightly below the OECD average but considerably higher than that for other emerging economies reviewed by the OECD. Moreover, most of the support is provided in the form of market price support and input subsidies which are the least efficient and the most trade distortive forms of support.
- Reform is taking place in different areas of the economy. Trade barriers are being progressively lowered, there is a floating exchange rate for the Indian Rupee and a value-added tax on commodities was introduced in 2005. Opening to foreign direct investment is proceeding.
- There have not been major changes to agricultural policies in India in the past two years. Recent developments include increased volumes of credit to a greater number of farmers and relief measures for indebted farmers facing crop failure. Investment in irrigation has been doubled over the period and budgets to encourage production diversification and improved commodity marketing have been increased. Income insurance schemes are being developed. Several research and development programmes have been launched in 2006 to enhance agricultural productivity.
- Measures taken to improve the functioning of commodity markets; to reduce excessive regulations; and to liberalise agricultural trade contribute to the improvement of the economic environment for private initiatives.
- The fight against poverty raises important issues of policy coherence. A significant challenge facing the government is to adopt alternative ways of reducing rural poverty from the current commodity price support and tariff measures which penalise the growing population of urban consumers with higher prices.
- Under-pricing of fertilisers, power and irrigation does not improve income distribution in rural areas and is environmentally harmful. One of the key emerging challenges is how to improve competitiveness on both the domestic and export markets. Redirecting resources from input subsidies to infrastructure, while reforming land ownership and formal leasing frameworks that constrain agricultural production, could efficiently address this challenge.

Policy context

Five year plans set the framework for government action in India by identifying objectives and ways of reaching them. Based on a draft Plan prepared by the Planning Commission where development and growth targets for each sector and allocation of resources are set, the National Development Council, chaired by the Prime Minister, approves the five year plans. Currently, the Tenth Five Year Plan (2002-07) is coming to an end.

Agriculture accounted for 20% of GDP in 2005-06 and employs nearly 60% of the workforce, but this figure conceals seasonal unemployment. The sector is key in feeding and providing subsistence to the world's second largest population. In recent years its importance in trade has diminished, although the decline in the share of exports slowed in 2005. India is a net exporter of agricultural products, supported by export subsidies and the low value of the Indian Rupee.

Macroeconomic situation

The economy has benefited from strong growth since 2003, led by the return to normal rainfall and a consequent rise in agricultural output and incomes. The progressive development of a middle class influences demand and changes consumption patterns. While GDP has been growing at around 8% in recent years, supply has not been able to match a robust domestic demand, increasing dependence on imports and leading to a negative current account balance for 2004 and 2005.

Rising international oil prices were the main driver of inflation in India. Government intervention limited the full pass through to domestic prices and thereby contained inflation at just above 4%. The introduction in most states of a value-added tax in 2005 has been a major development contributing to the reform in the taxation system, but eliminating exemptions and moving to a nationwide goods and services tax would further broaden the tax base.

High variations of year to year GDP growth have compromised realising the average annual target growth of 8% set in the Planning Commission's tenth plan. In 2005-06 real GDP grew by 8.4%, but overall growth figures mask sectoral disparities. Services grew by 10.3%, while growth was 7.6% in industry and 3.9% in agriculture. This compares to less than 1% growth in agriculture in 2004-05, and 10.2% and 7.4% for services and industry respectively.

Agriculture and agri-food situation

India is divided into 20 major states, 10 small states and 5 union territories which vary significantly in terms of the economic importance of agriculture, from almost 40% of GDP in Punjab to less than 2% in Delhi. State governments retain constitutional authority over the agricultural sector.

Although the share of rural population has been declining in the past 25 years, more than 70% of the population still live in rural areas. In 2004, 305 million persons (28% of the population) were below the national poverty line, estimated at INR 327 per month (USD 7.22 per month) by the Planning Commission, while 39% of children suffered from

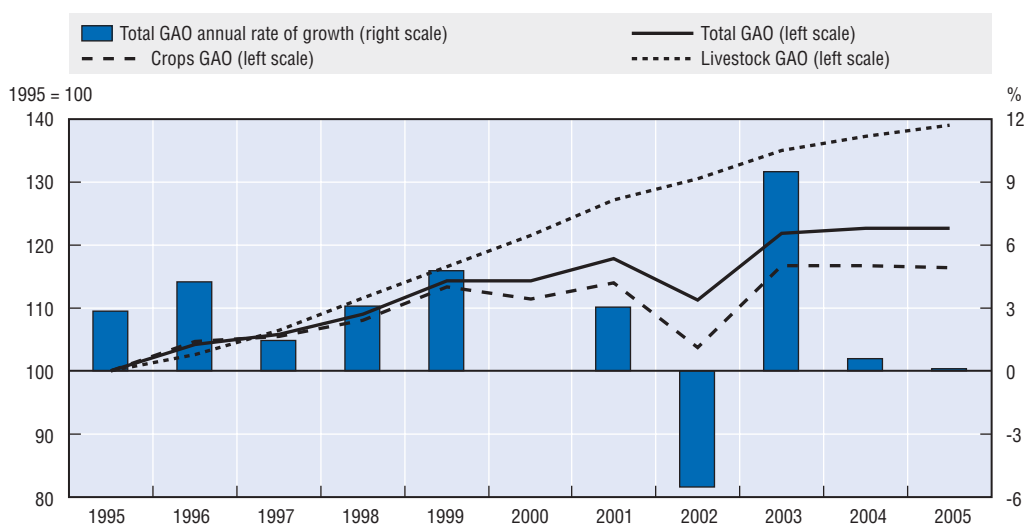
malnutrition. The fight against poverty and malnutrition remains an essential aspect of policy making.

Output


Gross Agricultural Output growth for the past four years is mainly attributable to favourable climatic conditions. A record high 9% growth in real terms occurred in 2002-03, followed by two years of near stagnation at 1% and a forecast growth of 4% in 2005-06 (Figure 5.1).

Crops represent the bulk of agricultural production at more than 70% of total production. A slow reallocation between commodities has been taking place since 2001. The share of crops in value of output is gradually declining, mainly reflecting a decline in the share of grains. The increased share of livestock in agricultural production has mitigated climate impact on agricultural output in recent years. This was the case in 2002, for example, when crops output fell by 9% as a result of a severe drought whereas livestock production grew by 2% leading to an overall real decline of 6%.

Figure 5.1. **Evolution and annual changes of agricultural output in India, 1995-2005**



Source: OECD Secretariat, 2006.

StatLink  <http://dx.doi.org/10.1787/357508736340>

Crops

Cereals, fruits, vegetables and oilseeds are the main crops produced as measured by the 2005 value of production. With limited purchasing power of a large part of the population and strong preference for vegetarian food, cereals are the staple food, pulses rank second in the food basket and are the major source of protein for the population, edible oils come third.

Fifty per cent of agricultural area is planted to rice and wheat. Some slight area reallocations have occurred; food grains and pulses have been declining at a slow pace (3 percentage points over the past ten years), while coverage of plantations (tea, cotton, coffee, rubber and potatoes) increased in the mid and late 1990s, and has been stable since.

These commodities account for only 2% of agricultural area. Area under maize has increased in the past ten years by an annual 2% on average, with an acceleration in the past two years.

After a drop in 2002-03, volumes of grains produced have recovered in the past three years at around 235 million tonnes, although not reaching the 2001 record production of 242 million tonnes. Rice and wheat account for 18% of agricultural output. Fruits and vegetables have grown from 14% of the value of production in 1993 to 19% in 2004. Oilseeds and pulses are also important contributors to the value of agricultural output accounting for 19% and 8% of value of production, respectively.

Livestock

The livestock sector has been growing by an annual average rate of 3% in real terms for the past ten years, reaching some 27% of agricultural value of production. The main products are milk, with 18% of agricultural output, poultry and mutton. Starting from very low levels, pork and eggs have been the fastest growing animal products in the past 15 years. Poultry and milk have also grown rapidly, by a yearly average of 3%. India is now the world's largest producer of milk. Increased animal numbers have in turn increased demand for feed crops.

Structures

Indian agriculture is dominated by a large number of small scale holdings that are predominantly owner occupied. The number of farms continues to increase due to the system of inheritance and the limited opportunities to move out of agriculture. There were 116 million farmers in India in 1995 operating on an average holding size of 1.55 hectares. More than two-thirds of households operate on less than 1 hectare of agricultural land, while only about 1% of land holders operate farms in excess of 10 hectares. Many of the small holdings are not economically viable due to their size and composition of production. About three-fifths of the cultivated land is used to produce only one crop in a season and the land remains idle for a large part of the year. Furthermore, there are major constraints to modernising and organising production and to undertaking the marketing of produce from these farms. From 1993-94 to 2002-03, the ratio of gross capital formation in agriculture to real GDP originating in agriculture, increased only by one percentage point from 6.1% to 7.1%. This compares to an overall ratio of 26% in the economy in 2002-03.

About 40% of the crop area is irrigated, with the remainder dependent on the natural rains, thus causing sharp year-to-year fluctuations in crop output. Use of irrigation varies according to commodity. Sugar, wheat, rice and cotton are the major commodities under irrigation. Ninety-two per cent of area sown to sugar is irrigated, 88% for wheat, 52% for rice and 33% for cotton.

Inputs

The input mix has been stable in the past few years. Animal feed is the main item in costs of inputs in domestic production. In 2005, they accounted for 49% of input expenditure. Chemical fertilisers made up 14%. Market charges, diesel fuel, seed and manure each accounted for 6% to 8% of input expenditure.

The use of chemical fertilisers, high yielding seeds and irrigation has risen over the last three decades. Currently, almost 80% of the area under cereals is sown to high yielding varieties. Nevertheless, cereal yields are quite low and there remains a large gap between

actual and potential yield. High levels of nitrogen fertiliser use resulting from support distortions have caused environmental harm in specific areas.

Credit

A move towards more expensive inputs has increased farmer borrowing needs in an environment where access to credit is identified as one of the main impediments to the development of agriculture. On the basis of a survey carried out in 2003, only 21% of rural households reported an outstanding formal loan while the corresponding statistic for informal loans was 40%. The remaining households, mainly small and marginal farmers, have no access to credit. The same survey found that 59% of rural households did not have a deposit account in a financial institution. The credit-deposit (C-D) ratio of the rural branches of commercial banks declined from 49% in 1995 to 42% in 2002. The proportion of medium/long-term loans in direct finance to agriculture and allied activities has declined from over 41% in 1990-91 to about 31% in 2000-01. The share of small and marginal farmers receiving direct finance fell from 54.5% in 1990-91 to around 51% in 2000-01. There have been wide disparities in the flow of credit across regions.

Infrastructure

Many opportunities for developing the agricultural sector are hampered due to the lack of modern infrastructure, such as the regular supply of power and availability of good roads, markets, warehouses and processing facilities. In particular, the post harvest losses for grains, fruits and vegetables resulting from inadequate storage and processing facilities, are extremely high (25% to 30%). Improvements in the storage and post-harvest handling of agricultural products combined with an increase in value-added processing could have a significant positive impact on raising incomes in rural areas.

The low rate of land mobility in all states continues to be a major obstacle to improving the farm structure in India. This is particularly difficult given the relatively small holding size that a farmer can own, and the absence of any formal land leasing system in most states. The development of a well functioning land sale and lease market would facilitate an improvement in farm structure, and consequently, enhance productivity and overall production.

Food industry

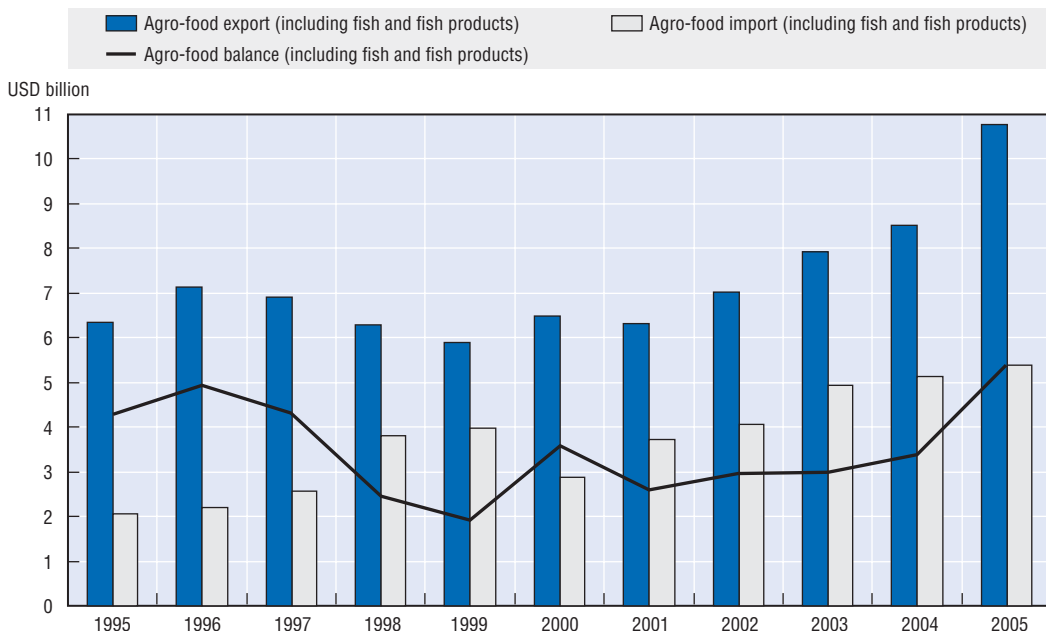
The level of agricultural processing is low by international standards, estimated at less than 2% of production. Most of the food produced is consumed directly in the households or sold in primary commodity markets. This in turn lowers the return producers receive for their products on the domestic market.

In 2005, there were 6.4 million firms engaged in agricultural activities other than crop production or plantation, slightly more than 15% of all enterprises. Large scale co-operatives exist at the national level. The National Federation of Co-operative Sugar Factories is one of them. It provides advice to member co-operatives on technical and financial management, materials development, and inventory control. The National Milk-grid has been successful in developing milk production and linking milk producers with consumers, thus creating a nationwide milk-grid of 43 000 village co-operatives covering 4.25 million milk producers. More recently the network has been consolidating veterinary services together with feed and artificial insemination services for co-operative members, along with intensified member education.


Agro-food trade flows

India's participation in world markets has grown at a rapid pace. Total merchandise imports grew by 43% in 2003-04 compared to the previous year and by another 28% in 2004-05. In the same period, exports of goods grew by 31% and 23% respectively. Trade in agricultural products has grown too, although at a much slower pace, thus leading to a decline in the agro-food share of trade. India has remained a net exporter of agricultural products, with a growing agro-food trade surplus in 2004 and 2005 (Figure 5.2).

Figure 5.2. **Agro-food trade in India, 1995-2005**



Source: UN, UN Comtrade database, 2006.

StatLink  <http://dx.doi.org/10.1787/670648162521>

Agricultural imports neared 4% of total imports in 2005. The basket of commodities most traded has not changed much in the past ten years. However, the individual and overall weights of commodities in it have evolved. Edible oils, although decreasing in recent years, are still the largest group of commodities imported in 2005-06 at USD 2 billion, accounting for 70% of bulk consumption goods imported and, together with cashew nuts (USD 472 million) and pulses (USD 530 million), make up most of the basket of imported agricultural commodities. Raw cashew nuts are imported for processing before export. Similarly, imports of sugar occur when domestic supply cannot satisfy processing needs. Imports of manufactured fertilisers have tripled in the past three years, reaching an estimated USD 1.6 billion in 2005-06. In 2005, Indonesia and Argentina alone accounted for 36% of Indian agro-food imports. Both countries were the main providers of edible oils, accounting for 60% of total imports of that commodity. The other main countries of origin of agro-food imports were Brazil, Myanmar, the United States and Sri Lanka, together bringing coverage to 60% of agro-food imports.

Buoyant growth of exports in other sectors has nearly halved the relative share of agricultural exports in total merchandise exports from 19% in 1995 to about 10% in 2005. But the decline slowed in 2005, when agricultural exports grew at a pace comparable to that

of total exports. Cereals, together with oil meals, cashew nuts, tea, fruits and vegetables are the main exported agricultural commodities. Cereals represent 20% of total agro-food exports. In 2005, about USD 1.5 billion of rice was exported, reflecting government intervention to reduce domestic stocks. Export destinations are more diversified than import partners and in 2005 the United States, Saudi Arabia, Japan, the United Arab Emirates and Bangladesh together accounted for one-third of agro-food exports.

Domestic agricultural policies

Overall structure

India has a highly regulated agriculture, with declared objectives of food security and alleviation of poverty. The regulatory controls are shared between the central government; through the Essential Commodities Act (ECA, 1955) and the state governments with the Agricultural Produce Market Regulation Act (APMRA). In many states additional legal instruments are in place. Agriculture has only indirectly been affected by reform initiated by the central government and taking place in other areas of the economy. Regulations on prices have prevented the full transmission of monetary reforms.

Cereals, pulses, edible oilseeds, oilcakes, raw cotton, sugar, and jute are included in the list of essential commodities regulated under the ECA through instruments like licenses, permits and orders to control prices and storage which limit the movement, distribution and disposal of products. In addition, compulsory purchases and sales by the central government are also regulated by this Act.

In its Tenth Five Year Plan, government focus has moved to raising output by increasing crop productivity. In order to achieve this objective, a four step strategy has been adopted and includes: increasing crop intensity through multi-cropping in the same season; adopting modern technologies; increasing the use of productivity; enhancing inputs; and diversifying production by replacing low value crops by high value crops and by moving from crops to livestock. Diversifying the crop sector and moving from crops to livestock can be seen as contradicting measures in place under the ECA, where low value crops have been the focus of support for many years.

Adjustments have been made to ECA, including removing the licensing requirement of dealers and restrictions on the storage and movement of food grains, sugar, oilseeds and edible oils. Similarly, the sugar control order and the milk and milk products order have also been amended to encourage greater participation by the private sector in the marketing of these commodities.

The involvement of many government institutions blur the global picture of government policies. Commodity specific institutions regulate markets through an array of measures including minimum support prices, import subsidies, public procurement and distribution of food grains. The Agricultural Produce Marketing Committee (APMC) Acts in the states also restrict the growth of agricultural marketing and do not allow co-operatives and private parties to set up modern markets. Government institutions also control and distribute inputs, develop infrastructures, and provide general services.

Prices and income support

Minimum Support Prices (MSP) are instruments of the ECA. They are declared on the basis of advice from the Commission on Agricultural Costs and Prices. Some state governments further augment the MSP, typically by 20% to 25%. Initially aimed at rice and

wheat, the MSP policy now covers about 24 crops. However, in practice, MSP are effectively used for rice, wheat and sugar cane in a small number of states. The purchase of other crops occurs sometime, either because MSP are typically well below market prices or because of the lack of administrative capacity to procure the commodity. This was the case in 2004-05 when raw cotton prices fell to the MSP.

Agricultural market prices were relatively high in 2005, in a context where the CPI grew by 4.2%. High agricultural prices were explained by a fall in stocks for wheat and excessive rain for vegetables (for which prices grew by 14%) and a rise in oil prices. The highest growths occurred for pulses (19%), eggs, fish and meat (16%). Cotton reflected the rise in international prices, growing by 9%. On the contrary, oilseeds prices declined by 5% on account of improved crop prospects and milk prices declined by 1.5%.

Rice procurement has reached record heights in the past three years. It amounted to 26 million tonnes in 2005-06. This compares to a total production of 131 million tonnes. Concurrently, wheat procurement has been declining since 2001-02 to 15 million tonnes in 2005-06, while production has been stable in the past few years at around 72 million tonnes.

Emphasis is being put on non-agricultural rural employment as a source of income that could be spent on agricultural commodities and thereby increase outlet volumes. Developing public/private partnerships and attracting private investment in agricultural processing industries would procure jobs to the rural unemployed and hence increase rural income. Though originally intended to raise agricultural productivity and output by promoting the use of modern inputs; in recent years input subsidies are seen more as an income support measure for farmers.

Crop insurance

In 2005, farmers from 23 states and 2 union territories participated in the National Agricultural Insurance Scheme (NAIS) and 16 million farmers were insured. This crop insurance is only available for a limited number of crops. Premium rates, based on area, vary from 1.5% of the sum assured for wheat to 3.5% for oilseeds. Small farmers benefit from a 10% subsidy on their premium payments, the subsidy is borne equally by central and state governments. Under this scheme, claims exceeded premiums by INR 7 billion (USD 159 million) in 2004-05.

Infrastructure

The government has played a leading role in creating the core infrastructures like irrigation projects, rural roads, rural electrification, and the setting up of agricultural markets. Rural development and agricultural objectives are often combined in large infrastructure projects. However, the problem of inconsistent power supply continues to be a serious cause of concern for farmers and rural industries in several states, aggravated by the fluctuation of oil prices in international markets.

INR 121 billion (USD 2.7 billion) were spent in 2005-06 to develop programmes covering six components of infrastructure development: Accelerated Irrigation Benefit Programme (AIBP), rural water supply, rural roads, rural houses, rural electrification and telephone connectivity.

The AIBP was modified in 2004 to add a grant component to the existing loan component. The grant component can be either 10% or 30%, according to state. The remainder is covered by the loan. Outlays have substantially increased from INR 28 billion (USD 618 million) in 2004-05 to INR 45 billion (USD 1 billion) in 2005-06 and INR 71 billion

(USD 1.6 billion) in 2006-07. The programme has covered 189 large irrigation projects and nearly 4 500 minor irrigation schemes. An extra INR 30 billion (USD 680 million) was budgeted in 2005 to restore and repair existing structures. Recent evaluation of the AIBP suggests that the programme has not had sufficient tangible benefit. The area under irrigation is expanding very slowly despite additional allocation of funds.

INR 2 billion (USD 45 million) are budgeted in 2005-06 to improve rainwater harvesting efficiency, soil moisture conservation, use of manures and adoption of improved dryland farming technologies in the arid and semi-arid regions of the country, particularly in the districts receiving annual rainfall less than 750 mm and with assured irrigation coverage less than 30% of the net sown area.

Irrigation projects and rural infrastructure development in general have also been supported by foreign grants. For example, the EU contributed to the development of 12 infrastructure projects with an overall funding volume of INR 11.5 billion (USD 253 million) over the past ten years in a general context of local rural development projects, ranging from land rehabilitation and irrigation to agricultural and watershed management projects.

Credit

Several initiatives have been taken in recent years to improve the agricultural credit delivery mechanism. These, *inter alia*, include simplifying procedures, encouraging decentralised decision-making and encouraging self-help groups under micro finance programmes. In 2004, commercial banks (including Regional Rural Banks) and co-operative banks were mandated to increase the flow of credit by 30% and the number of borrowers by 5 million in 2005-06. Yet an increasing number of indebted farmers have faced crop failures. Credit relief measures are now in place for an amount equal to two percentage points of the borrower's interest liability on the principal amount, up to INR 100 000 (USD 2 300), with an overall budget of INR 17 billion (USD 385 million). Furthermore, the rate for short-term credit has been set at 7% on loans up to INR 300 000 (USD 6 800) on the principal amount in effect from late 2006. Expenditures on interest subsidies exceeded the budget estimates by INR 18 billion (USD 408 million) on account of provision for interest subsidy to farmers.

Governance in the credit sector should benefit from a USD 1 billion loan issued at the end of 2006 by the Asian Development Bank to the Government of India to reform the rural co-operative credit sector. This loan is topped by a USD 180 million loan from several European sources. The three year Rural Cooperative Credit Restructuring and Development Program aims at improving governance and putting an end to recurring losses of the existing system. The programme has a 15 year term with a three year grace period.

Marketing and diversification

Innovative marketing strategies have been developed in some states to get a better share of the consumer price for farmers. Some experiences with direct marketing have been quite successful in reducing risks of deficient market demand and adverse price fluctuation. These arrangements are on the increase and can be further enhanced by providing an appropriate legal and regulatory framework. Nine states and three union territories have amended the APMC Act to facilitate marketing of agricultural products. It should, however, be emphasised that a dispute settlement framework should be developed to assist small farmers in contract farming to deal with contract enforcement and other transaction costs.

INR 6.3 billion (USD 143 million) was allocated in 2005-06 to the National Horticultural Mission (NHM) to develop agricultural marketing of fruits, vegetables, flowers, dairy, poultry, fisheries, pulses, oilseeds. A budget of INR 700 million (USD 16 million) for 2005-06 was allocated to developing public/private partnerships in setting up agricultural markets, marketing infrastructure and support services such as grading, standardisation and quality certification. The NHM budget was doubled in 2006-07 to INR 15 billion (USD 34 million). There are, at present, three multi-commodity exchanges and 22 regional exchanges in India.

Inputs

Input subsidies are provided primarily through subsidising fertilisers, irrigation water, and electricity used for irrigation and other agricultural purposes. From time to time, input subsidies have also been provided on seeds, as well as on herbicides and pesticides. In addition, commercial banks, co-operatives and regional rural banks are required to provide credit to agricultural producers for input purchase at interest rates below the market rate. Excess use of subsidised inputs has negatively impacted the environment, creating imbalances between nutrients and water logging in many areas.

In 2001-02 fertiliser subsidies accounted for 34.7% of input subsidies, irrigation and electricity 36.7% and 27.8%, respectively. But a recent report from the Planning Commission pointed to the undervaluation of agricultural electricity consumption and implicit subsidy directly resulting from the pricing and supply methods. Consumer prices for electricity are set by state Electricity Regulatory Commissions. The agricultural sector is supplied un-metered power in almost all states and the farmers pay a highly subsidised lump sum based on the declared horse power of their irrigation pumps. This leads to a zero marginal cost of power which promotes inefficient use and over exploitation of ground water leading to degradation. Fertiliser subsidies are seen as a means of alleviating the impact on agricultural producers of the high cost of an inefficient domestic fertiliser industry. As a result of lower trade barriers on agricultural inputs, increased imports of fertilisers occurred. Market openness should enhance efficiency gains in domestic industry.

General services

The Indian Council of Agricultural Research (ICAR) is in charge of public agricultural extension and R&D. Under ICAR, the National Fund for Strategic Agricultural research was set up in 2006 with a budget of INR 50 million (USD 1.1 million) and the objective of building capacity for basic and strategic research of national and long term importance to break yield and quality barriers and make India a global leader in research for development. This fund complements other research and extension structures.

The National Agricultural Initiative Programme (NAIP) was launched in July 2006 to pilot innovation in conducting research with a total budget of INR 11 billion (USD 250 million), financed by a USD 200 million loan from the World Bank and USD 50 million funded by the Government of India. The NAIP will function through four components: the ICAR; the Research on Production to Consumption Systems; the Research on Sustainable Rural Livelihood Security (SRLS); and the Basic and Strategic Research in the Frontier Areas of Agricultural Sciences (BSR).

As in the case of R&D, the funding of extension services has remained primarily in the public domain. Estimates indicate that public expenditure on agricultural extension amounts to a mere 0.17% of the value of agricultural output. This may explain low

commodity yields and sub-optimal input use. Public expenditure on agricultural education, research, and extension is low, but private sector interest in research is increasing.

Box 5.1. **India: the transition to the Eleventh Five Year Plan, (2007-12)**

In its preparatory work for the Eleventh Five Year Plan, the Planning Commission invited comments on a preliminary document, "Towards Faster and More Inclusive Growth". In this proposal, and on the basis of macroeconomic projections, six objectives are identified for government action:

- Providing essential public services for the poor.
- Regaining agricultural dynamism.
- Developing human resources.
- Protecting the environment.
- Improving rehabilitation and resettlement practices.
- Improving governance.

The second objective, "regaining agricultural dynamism", directly targets agriculture, while the implementation of several other objectives will impact this sector. Agriculture is expected to feed the nation. It must also support non-agricultural growth and employment through farmer spending.

The main instruments considered in this proposal are already in place in the tenth plan, but adjustments are suggested based on the results of the mid-term evaluation carried out by the Planning Commission. Investment in infrastructure; improvement of utility pricing for water and electricity; adjustment in support to fertilisers to improve the fertiliser mix; and extension of general services to the provision of seeds, fertilisers and veterinary services, are the main measures that target agricultural production. The creation of a buffer stock of milk powder is also proposed.

Economic growth will be supported by measures that increase rural income; improve and extend existing insurance schemes to more farmers; and extend social welfare programmes to all India. The reform of the legal framework for marketing of agricultural products will allow development of modern agricultural markets and contract farming.

In the government economic projection assumptions, the additional income generated by the Employment Guarantee Act, which promises a hundred days of wage employment annually to one adult in every rural household, will be spent on agricultural and non-agricultural products, and hence will support overall domestic production. Similar results are expected from the improved provision of public schooling and health services which will allow reallocation of disposable income of lower income groups to expenditure on consumption goods. Infrastructure development schemes will be pursued and enhanced. At the local level, these infrastructure schemes could serve the purposes of the Employment Guarantee Act, and thus limit budgetary spending.

The proposal suggests that there will be a move away from distorting subsidies such as fertiliser subsidies that currently focus excessively on nitrogenous fertilisers or power subsidies that encourage over exploitation of groundwater.

Improvements to the formal credit system will be pursued and the co-operative credit system strengthened. Livestock and fisheries will be encouraged. Mention is made of protecting traditional pastures that are losing grounds to other land and water uses.

Source: Planning Commission (2006b) and (2006c).

Commodity specific research and extension is also funded through levies on sales. This is the case for sugar cane where a fee is levied on production and used to conduct various research, extension, and technological improvement activities in support of sugar cane and sugar production. In recent years these funds have been diverted from general services to market intervention.

Consumer measures

Consumer measures have played an important role in alleviating the effects of price support on consumers, allocating food grains to the poor and reducing under nourishment. The Public Distribution System (PDS) is an instrument under the ECA. It manages supply of the major food grains, pulses and sugar through procurement, storage and public distribution. During periods of shortage, procurement operations are often augmented with compulsory procurement, a levy on millers, and restrictions on the movement of commodities between states. Commodities procured at Minimum Support Prices feed in buffer stocks. These stocks are used to distribute supplies to the poorer sections of the population at subsidised rates, as part of social welfare programmes, or to release supplies onto the domestic or export markets in order to stabilise prices. To illustrate this with an example, of the 42 million tonnes of grains that were procured in 2004-05, 31 were distributed through the PDS, ten were distributed through other welfare schemes and one was sold on the open market. No exports occurred on procured grains, in this year.

The PDS imposes levies on the food industry, *e.g.* Indian sugar mills are required to supply 10% of their production to the government as “levy sugar” at below market prices, which is then sold through the PDS or other welfare programmes to consumers who are below the poverty line. The Mid-day Meal Scheme is one example of food distribution programmes. The budget for this programme was increased to INR 30 billion (USD 680 million) to cover 25 million (below poverty line) families in 2005-06, an increase of 5 million families as compared to previous year. The total expenditure on food subsidies was estimated at INR 47 billion (USD 1.1 billion) for 2005-06.

With the introduction of VAT in 2005 and its further implementation in more states in 2006, consumer prices of food would typically be taxed at 4%; remaining commodities are taxed at 12.5%. Essential commodities, *i.e.* grains, are exempt from VAT. To date only two states (Tamil Nadu and Uttar Pradesh) have not implemented VAT.

Agro-food trade policies

Import policy

A complex system of taxation applies to agricultural imports. A basic duty applies to imports of wheat, rice, maize, coffee, tea, vegetable oils, tobacco and dairy products. An additional countervailing duty, equal to VAT and other taxes applicable to similar products produced domestically, is levied on the aggregate of the assessed value and the basic duty. A 2% surcharge on all direct and indirect taxes has been added since July 2004. Revenue from this surcharge would be used for primary education and pupils’ mid-day meals. Total import tariffs on most consumer food products range from 35.9% to 58.4%. A basic duty of 30% applies to most processed food products. For example, applied import tariffs on oilseeds are at 30% and at 60% for sugar. Imports are encouraged in cases where domestic supply cannot satisfy demand either continuously, as is the case for pulses, or to cover temporary domestic supply failures that would handicap local processing industries, as occurs for cotton and sugar.

In February 2006, a renewable six months ban on imports from all countries of birds and products of avian species, excluding poultry, was announced. This ban was extended to poultry, eggs and pig, live or meat, from countries reporting the outbreak of Highly Pathogenic Avian Influenza. This ban was extended for another six months in August 2006.

In 2006-07, duties on packaging machines were reduced from 15% to 5%. Complete exemption from excise duty is provided for condensed milk, ice cream, preparations of meat, fish and poultry, pasta and yeast; while excise duty on ready-to-eat packaged foods and instant food mixes were reduced from 16% to 8%.

Box 5.2. India's recent trade agreements

In March 2005, the operational aspects of the India and Mercosur Preferential Trade Agreement (PTA) were signed. Both partners offered a list of commodities which would receive preferential treatment in the form of percentage tariff abatement on the applied tariffs. According to India's offer list, 14 agro-food commodities out of a total 250 commodities exported from Mercosur countries into India, would benefit from this preference. A 10% margin applies to meat commodities and 15% to soybean oil with an annual quota. Reciprocally, Mercosur countries offer a preference to 11 agro-food commodities including: milk and fruits and some processed food products, some of which with quota. Ratification by Mercosur legislations will bring the PTA into force.

Singapore and India signed a Comprehensive Economic Co-operation Agreement (CECA) in June 2005. The agreement includes trade liberalisation in a number of agro-food products under a framework of tariff schedules. A 290 page tariff schedule based on the Harmonised Tariff Schedule of the Republic of India reciprocates a one sentence schedule for Singapore according to which: "Singapore shall eliminate customs duties on all originating goods of India as from the date of entry into force of this Agreement."

Four sets of commodities are identified in the Indian schedule. The first set lists the 506 commodities for which tariffs were eliminated on 1 August 2005, There are only eight agro-food products in this set, all of which are grains.

The second set identifies the 2 202 products for which a progressive annual reduction is scheduled leading to complete phase out of tariffs by 2009; 158 agro-food products are included, mainly fish and processed food.

The third set identifies 2 407 products for which a progressive annual reduction of tariffs is planned up to 50% in 2009. Fifty-five agro-food commodities are listed, mainly live animals and meat.

The fourth set identifies 6 551 products excluded from any concession in duty. Of the 6 551 products listed, 1 225 are agro-food products.

India and Chile signed a PTA in March 2006 that will come into force upon accomplishment of the constitutional requirements. Both countries have offered fixed tariff preferences on a list of products. For India, this list includes 178 products at the eight digit HS level, of which 84 are agro-food, mainly meat and fish products. These products would receive a 10% or 20% preference. Reciprocally, Chile has offered a similar range of tariff preferences on 296 tariff lines at the eight digit level, of which seven relate to agro-food. These are onion, spices and tea.

Source: Department of Commerce, 2006.

Export policy

Agricultural export earnings are mostly exempt from income and other taxes. Export promotion measures include duty exemptions or concessional tariffs on imports of raw material and capital inputs and transport subsidy for exports. In this context, exporters may benefit from a variety of import tariff incentives and a promotional import licensing schemes on imported inputs, some of which are contingent upon value-added processing and export of the final product. Commercial banks also provide export financing on concessional terms. Export promotion in the form of an advisory and facilitating role has been put in place. Agricultural Export Processing Zones have been set up.

Effective in 2005, a Special Agricultural Produce Scheme (Vishesh Krishi Upaz Yojana), was set up to promote exports of fruits, vegetables, flowers, minor forest produce, dairy, poultry and their value-added products. These products qualify for duty free credit scrip of 5% of value of export fob in respect of exports made on or after 1 April 2005. The duty credit can be used for imports of inputs or goods, including capital goods, provided the same are freely importable. Cost of freight for floriculture and horticulture is subsidised, similarly, poultry transport costs for exports benefit from a subsidy of INR 3 000 to INR 15 000 (USD 68 to USD 340) per tonne.

Surpluses of cereals procured at MSP are exported at prices lower than the domestic price. In 2005, the Cotton Corporation of India was allowed to export cotton with a subsidy of up to USD 66 per tonne toward the cost of handling, processing, and internal transportation under condition that the export price realisations should be above the domestic prices, and that only the cotton procured at the MSP should be exported.

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