

## Agricultural mechanization

8.40 Power availability for carrying out various agricultural operations has been increasing to reach a level of 1.4 kw per hectare (kw/ha) in 2003-04 from only 0.3 kw/ha in 1971-72. This increase was the result of increasing use of tractor, power tiller, and combine harvesters, irrigation pumps and other power-operated machines. The share of mechanical and electrical power has increased from 40 per cent in 1971-72 to 84

per cent in 2003-04. The State of Uttar Pradesh recorded the highest average sales of tractors during the five year period ending 2003-04, and West Bengal recorded the highest average sales of power tillers during the same period (Table 8.21). Efforts are on to encourage the farmers to adopt technologically advanced agricultural equipments in order to carry farm operations timely and precisely, and to economise the agricultural production process.

**Table 8.21 : Sale of tractors and power tillers (Nos)**

States	Tractors		States	Power tillers	
	Total sale (1999-2000 to 2003-04)	Average annual sale		Total sale (1999-2000 to 2003-04)	Average annual sale
Uttar Pradesh	290513	58102	West Bengal	25537	5107
Uttar Pradesh	268958	53791	West Bengal	23149	4630
Madhya Pradesh	138722	27744	Tamil Nadu	8278	1655
Punjab	104584	20916	Assam	6874	1375
Rajasthan	89087	17817	Karnataka	5499	1100
Haryana	78313	15662	Kerala	4562	912
Gujarat	63286	12657	Orissa	5183	1037
Bihar	71528	14305	Andhra Pradesh	3002	600
Andhra Pradesh	69421	13884	Maharashtra	2408	482
Maharashtra	57406	11481	Tripura	1932	386
Karnataka	44837	8967	Gujarat	1427	285
Tamil Nadu	37510	7502	Bihar	1149	230
Orissa	16391	3278	Manipur	884	177
Other States/UTs and Export etc.	76647	15329	Other States/UTs	5455	1091
<b>All India</b>	<b>1116690</b>	<b>223333</b>	<b>All India</b>	<b>68034</b>	<b>13606</b>

Source: Ministry of Agriculture.

### Capital formation in Indian agriculture

8.41 The decline in the share of agriculture sector's capital formation in GDP from 1.92 per cent in the early 1990s to 1.28 per cent in the early 2000s is a matter of concern (Table 8.22). This declining share was mainly due to the stagnation or fall in public investment in agriculture, particularly since the mid-1990s. However, there is indication of a reversal of this trend of late, with the public sector investment in agriculture reaching the highest level since the early nineties at Rs 5,249 crore in 2003-04. This has helped in improving the share of agriculture sector's capital formation in GDP from 1.28 per cent in 2001-02 to 1.31 per cent in 2003-04.

### III. Agri-trade

8.42 India, in recent years, has been a net exporter of agricultural goods. The exports of agricultural products from India, which stood at US\$6,734 million and US\$7,533 million in 2002-03 and 2003-04, respectively, were more than two times the import of agricultural

products in the corresponding years. During the first half of the current year 2004-05, the exports of agricultural products were US\$3,511 million, which were slightly less than double of the imports of the agricultural products during the same period.

### Agri-exports

8.43 Despite an increase of 11.87 per cent during 2003-04 and 14.43 per cent during the first six months of 2004-05, the share of agri-exports in total merchandise exports came down from 12.8 per cent in 2002-03 to 11.8 per cent in 2003-04 and further, to 9.7 per cent during the first six months of 2004-05 (Table 8.23). The decline in the share of the agri-exports to total exports, notwithstanding the growth in its volume in the range of 12-14 per cent, was because of a much faster growth in the volume of merchandise exports, which ranged between 21 and 32 per cent during the same period. Marine products, with a share of 17.6 per cent in 2003-04 and 15.6 per cent in agri-exports during the first half of 2004-05, continued to dominate the agri-exports,

**Table 8.23 : Agricultural exports**

	2002-03		2003-04		2003-04 (Apr.-Sept.)		2004-05 (Apr.-Sept.)	
	Million US dollar	Percent share of agri- exports	Million US dollar	Percent share of agri- exports	Million US dollar	Percent share of agri- exports	Million US dollar	Percent share of agri- exports
Tea	343.6	5.1	356.3	4.7	155.5	5.1	197.2	5.6
Coffee	205.5	3.1	236.3	3.1	116.0	3.8	111.0	3.2
Rice	1218.1	18.1	907.0	12.0	458.4	14.9	456.3	13.0
Wheat	363.6	5.4	520.4	6.9	227.9	7.4	220.7	6.3
Sugar & molasses	375.1	5.6	269.0	3.6	189.3	6.2	14.8	0.4
Tobacco	212.5	3.2	238.6	3.2	113.6	3.7	131.7	3.8
Spices	342.8	5.1	336.1	4.5	141.7	4.6	222.1	6.3
Cashew	424.2	6.3	370.0	4.9	159.1	5.2	240.2	6.8
Sesame and niger seeds	93.2	1.4	164.2	2.2	47.3	1.5	47.1	1.3
Guargum meal	100.6	1.5	110.5	1.5	60.2	2.0	51.0	1.5
Oil meals	308.8	4.6	728.7	9.7	78.5	2.6	298.4	8.5
Fruits & vegetables	300.2	4.5	453.2	6.0	176.7	5.8	200.5	5.7
Processed fruits & vegetables	118.8	1.8	74.8	1.0	32.5	1.1	38.4	1.1
Meat & meat preparations	284.6	4.2	373.1	5.0	142.8	4.7	170.4	4.9
Marine products	1431.6	21.3	1328.7	17.6	625.2	20.4	549.5	15.6
Others	611.1	9.1	1066.1	14.2	343.3	11.2	561.7	16.0
Agricultural exports	6734.0	100.0	7533.0	100.0	3068.0	100.0	3511.0	100.0
Total exports	52719.4		63843.0		27412.0		36235.0	
Agri-export as per cent of total exports	12.8		11.8		11.2		9.7	

Source : Ministry of Industry & commerce.

although its share in agri-exports remained much below the level of 2002-03 at 21.3 per cent. The export of oil meals gained substantially, both in volume and share, during 2002-03. The growth was also sustained during the first half of 2004-05, because of the increasing demand for Indian oil meals in world market, which is mainly flooded with oil meals of genetically modified (GM) oil seeds. Indian oil meals command a premium because of its non-GM nature. Despite an impressive growth of basmati rice exports, especially during the first half of the current year (from \$ 426 million in 2002-03 to \$ 433 million in 2003-04, and from \$ 170 million in the first half of 2003-04 to \$ 256 million in the corresponding period of 2004-05), there was a fall both in the volume of rice exports and its share in agri-exports in 2003-04 and the first half of 2004-05, in view of the decision of the Government to ban fresh export of foodgrains from the FCI since August 2003, in the light of the declining stock of foodgrains. The export of wheat also declined both in volume and share in the first half of 2004-05 as compared to the corresponding period of 2003-04.

8.44 The Foreign Trade Policy 2004-09, emphasized the importance of agricultural exports and announced the following policy measures to boost agri-exports:

#### Box 8.6 : Vishesh Krishi Upaj Yojana

##### Objective

The objective of the scheme is to promote export of fruits, vegetables, flowers, minor forest produce, and their value added products, by incentivising exporters of such products.

##### Entitlement

Exporters of such products shall be entitled for duty credit scrip equivalent to 5 per cent of the FOB value of exports for each licencing year commencing from April 1, 2004. The scrip and the items imported against it would be freely transferable.

##### Imports allowed

Duty credit may be used for import of inputs or goods including capital goods, as may be notified, provided the same is freely importable under ITC(HS). Imports from a port other than the port of export shall be allowed under TRA (Telegraphic Release Advice) facility as per the terms and conditions of the notification issued by Department of Revenue.

##### Cenvat/ Drawback

Additional customs duty/excise duty paid in cash or through debit under Vishesh Krishi Upaj Yojana shall be adjusted as CENVAT Credit or Duty Drawback as per rules framed by the Department of Revenue.

- A new scheme called the Vishesh Krishi Upaj Yojana (Special Agricultural Produce Scheme) for promoting the export of fruits, vegetables, flowers, minor forest produce, and their value added products has been introduced (Box-8.6).
- Funds shall be earmarked under ASIDE

Table 8.24 : Agricultural imports

	2002-03		2003-04		2003-04 (Apr.-Sept.)		2004-05 (Apr.-Sept.)	
	Million US dollar	Percent share of agri- imports	Million US dollar	Percent share of agri- imports	Million US dollar	Percent share of agri- imports	Million US dollar	Percent share of agri- imports
Cereals	24.5	0.9	19.4	0.5	8.8	0.5	12.4	0.7
Pulses	565.6	20.2	497.2	13.9	254.3	13.0	181.8	10.2
Milk & cream	2.0	0.1	19.5	0.5	1.36	0.1	1.48	0.1
Cashew nuts	255.4	9.1	298.5	8.4	158.99	8.2	226.74	12.7
Fruits & nuts excluding cashew nuts	132.6	4.7	174.6	4.9	67.73	3.5	71.27	4.0
Sugar	6.8	0.2	13.6	0.4	0.17	0.0	56.12	3.1
Oilseeds	2.4	0.1	3.0	0.1	0.81	0.0	2.58	0.1
Vegetable oils fixed (edible)	1814.2	64.7	2542.5	71.3	1456.8	74.7	1235.6	69.1
Agricultural imports	2803.4	100.0	3568.3	100.0	1948.96	100.0	1787.99	100.0
Total imports	61412.1		78149.1		34777.0		47755.9	
Agri-imports as per cent of total imports		4.6		4.6		5.6		3.7

Source : Ministry of Industry & commerce.

(Assistance to States for Infrastructure Development of Export) for development of Agri Export Zones (AEZ).

- Capital goods imported under EPCG shall be permitted to be installed anywhere in the AEZ.

### **Agri-imports**

8.45 The import of agricultural products, which increased by 27 per cent in 2003-04, showed signs of softening in 2004-05, with the agri-imports declining by 8 per cent during the first half of 2004-05 from US\$1,949 million in the corresponding period of 2003-04 (Table 8.24). The import of edible oils, which is the most dominant item of agri-imports, accounting for almost two-third of the total agri-imports in recent years, registered a sharp increase of nearly 40 per cent in 2003-04, following low production of oilseeds in 2002-03 at 15.1 million tonnes. This was mainly responsible for the large increase in the volume of agri-imports in 2003-04. With the record production of oilseeds in 2003-04 at 25.1 million tonnes, the import of edible oils declined during the first half of 2004-05 by 15.2 per cent from US\$1,457 million during the corresponding period of 2003-04, which mainly contributed to the decline in the agri-imports during the first half of 2004-05. Despite the increase in the volume of agri-imports in 2003-04 by 27 per cent over 2002-03, the share of agri-import in the total merchandise imports remained unchanged at 4.6 per cent. The share of agri-imports to total merchandise imports declined to 3.7 per cent in the first half of 2004-05 from 5.6 per cent in the corresponding period of 2003-04.

### **Agricultural marketing**

#### *Agricultural marketing reforms*

8.46 The Inter-Ministerial Task Force on Agricultural Marketing Reforms, which submitted its report in June 2002, had made a number of recommendations to make the agricultural marketing system more vibrant and competitive. The major recommendations of the Task Force related to amendment to the State APMC Act for promotion of direct

marketing and contract farming, development of agricultural markets in private and cooperative sectors, stepping up of pledge financing, expansion of future trading to cover all agricultural markets, introduction of negotiable warehouse receipt system and use of information technology to provide market-led extension services to the farmers. As a follow-up measure, the Central Government, in order to guide the States in the implementation of the suggested reforms, drafted a Model Act on Agricultural Marketing which, inter-alia, provided for the establishment of direct purchase centers and farmers' markets for direct sale to consumers, complete transparency in the pricing system, and payment to farmers on the same day, public-private partnership for professional management of existing markets and setting up of Market Standards Bureau for promotion of standardization, grading and quality certification of produce. In the National Conference of State Ministers on Agricultural Marketing and Land Reforms held on January 7, 2004, all the State Governments agreed to adopt the Model Act on Agricultural Marketing in their respective States. The feedback received in the Agriculture Ministry indicates that 18 State Governments/UTs have initiated action for amending their State Agricultural Produce Marketing (Regulation) Acts.

#### *Construction of rural godowns*

8.47 With a view to create scientific storage in rural areas, the Government is implementing a central sector scheme for the construction of rural godowns. The scheme, which is being implemented since March 2001, provides subsidy to private and cooperative bodies on the capital cost of the storage projects. By the end of 2003-04, 4851 storage projects were sanctioned by the banks involving an investment of Rs. 1,300 crore to create 105 lakh tonnes of rural storage capacity in the country. The scheme is continued for the period 2004-07, with certain modifications, involving a central outlay of Rs.115 crore, for creation of new storage capacity of 32 lakh tonnes and renovation of capacity of 4 lakh tonnes. During the current year 2004-05, projects with a capacity of 10.1 lakh tonnes

have been sanctioned till end-September as against the target of 38 lakh tonnes of capacity. The scheme has helped the farmers to store their commodities near their fields and obtain

**Table 8.25 : Value of trading in agricultural commodities**

Name of the Exchange	Value of Trade ( till Nov. 2004) (Rs crore)
National Commodity and Derivative Exchange, Mumbai.	91470
Multi Commodity Exchange, Mumbai.	4384
National Multi Commodity Exchange, Ahmedabad.	9325
<b>Source : Ministry of Consumer Affairs.</b>	

pledge loans and marketing credit from the banks, thereby avoiding distress sale at the time of harvest.

#### **Futures trading in agricultural commodities**

8.48 The Government of India in 2003-04 had initiated major steps towards introduction of futures trading in commodities, which included removal of prohibition on futures trading in all the commodities by issue of a notification and setting up of the National Level Commodity Exchanges. The momentum gathered in 2003-04 continued in 2004-05 and manifested itself in increases in volumes, participation, number of commodities traded and various new initiatives taken by the National Exchanges (Table 8.25).

8.49 The major agricultural commodities traded at these exchanges were soya oil, guar seed, guar gum, chana, jute, rubber, pepper, turmeric, wheat, kapas (cotton) etc. These exchanges have introduced various innovations which would increase efficiency of agricultural marketing in the country. The development of a system of physical delivery of commodities backed by warehouse receipt system is expected to help eliminate rigidities inherent in the trading of physical goods by providing for a judicious mix of protection against both price and quality risks. The National Commodity and Derivative Exchange,

Mumbai has launched pilot projects in the States of Gujarat, Madhya Pradesh and Andhra Pradesh to help farmers understand the concept and benefits of hedging the price risk on the trading platform of an Exchange prior to harvesting.

#### **IV. Outlook**

8.50 Agriculture production in the current year has been adversely affected by the erratic and delayed monsoon with uneven distribution of rainfall over time and regions. As per quarterly estimates of GDP by the CSO, value added in agriculture and allied sector registered a growth rate of 3.4 per cent in the first quarter followed by a negative growth of (-) 0.8 per cent in the second quarter, resulting in a modest growth of 1.5 per cent in the first half of the current year 2004-05. Although the prospects of Rabi crops are good, the second advance estimates of foodgrains production made by the Ministry of Agriculture, indicate a fall by 6 million tonnes from last year's level at 212 million tonnes. The CSO, in its advance estimates of National Income released on February 7, 2004, has projected a growth rate of 1.1 per cent for the agriculture and allied sector in 2004-05.

8.51 Past performance of agricultural credit reveals that though the overall flow of institutional credit has increased over the years, there are several gaps in the system like inadequate provision of credit to small and marginal farmers, paucity of medium and long-term lending and limited deposit mobilisation and heavy dependence on borrowed funds by major agricultural credit purveyors. These have major implications for agricultural development as also the well being of the farming community. Efforts are, therefore, required to address and rectify these issues.

8.52 Special emphasis needs to be given on micro-finance, as it is a valuable tool for fighting poverty and unemployment in rural areas. By putting credit, savings, insurance and other basic financial services within their reach, micro finance can provide thousands of poor people with opportunities to overcome poverty and unemployment. It is, in fact, such an



important tool in fighting poverty in rural areas that it has got the attention of International Fund for Agricultural Development (IFAD), which has declared 2005 as “The International Year of Micro credit “.

8.53 The development of efficient commodity futures markets requires establishment of a sound regulatory framework. The international experience shows that in all major countries, commodity futures trading is regulated as a part of all derivatives trading, with a unified regulator. This “convergence” between commodity futures markets and other derivatives markets would induce economies

of scale. It would help in the utilisation of capital investments and institution building, which has already taken place for the derivatives markets, for the purposes of India’s agricultural sector.

8.54 As regards the WTO agreement on agriculture, some of the important issues concerning the Indian farmer remain unresolved. The major challenge is to remain within the system and protect the interests of Indian farmers effectively. More than 65 per cent of Indians derive their livelihood from agricultural activities. Lack of financial resources constrain India from matching the level of support provided to agriculture by the developed countries. In such a situation, the only option available is to seek inclusion of those provisions in the agreement, which would provide sufficient protection to Indian agriculture.

8.55 Indian agriculture faces both opportunities and challenges with liberalization of domestic and global markets. There is a need to develop a new strategy for the agriculture sector. Appropriate measures are required to move away from the subsidy-based regime and to build a productive and internationally competitive agriculture structure. Promoting more rapid agriculture growth is important not only to achieve higher economic growth, but also to lift large number of households in rural areas out of the poverty and unemployment circle.