8

Agriculture

Production and growth

Monsoon – 2005

The South–West monsoon (June-September 2005) arrived late over peninsular and eastern India but early over the northwestern parts. India Meteorological Department (IMD) had predicted in April 2005 and early July 2005 that the rainfall for the country as a whole would be near normal, at 98 per cent of the long period average (LPA) with a model error of ± 4 per cent. The season ended with the all-India area-weighted rainfall at 99 per cent of the LPA although its regional spread was not uniform. The uneven distribution of the precipitation resulted in North-East India being the worst affected region with a rainfall deficiency of 20 per cent followed by North-West India with a deficiency of 9 per cent. Rainfall was above normal in Central India and the Southern Peninsula by 10 per cent and 12 per cent, respectively. Out of 36 meteorological sub-divisions, monsoon rainfall was normal in 25, excess in 8 and deficient in the remaining 3 sub-divisions (Table 8.1). At the end of the monsoon season, only two meteorological sub-divisions, namely, Jharkhand and Assam & Meghalaya experienced moderate drought conditions (seasonal rainfall deficiency of 35 per cent and 27 per cent respectively). Out of 499 meteorological districts, 126 districts (25 per cent) experienced moderate drought and 10 districts (2 per cent) experienced severe drought conditions at the end of the season.

Table 8.1 : Monsoon Performance — 1998 to 2005 (June – September)

Year	Number of meteorological sub-divisions			Percentage of districts with normal / excess rainfall	Percentage of long period average rainfall for the country as a whole
	Normal	Excess	Deficient / scanty		
1998	20	13	2	83	105
1999	25	3	7	67	96
2000	23	5	7	66	92
2001	28	1	6	68	91
2002	14	1	21	39	81
2003	26	7	3	75	102
2004	23	0	13	56	87
2005	25	8	3	73	99

Excess: +20 per cent or more of LPA; Normal: +19 per cent to –19 per cent of LPA;
Deficient: -20 per cent to –59 per cent of LPA; Scanty: -60 per cent to –99 per cent of LPA.
Source : India Meteorological Department.

Reservoir storage

8.2 The total designed storage at full reservoir level (FRL) in the 76 important reservoirs monitored by the Central Water Commission is 133 Billion Cubic Meter (BCM). The total availability of water in these reservoirs was 109.8 BCM at the end of the monsoon of 2005 against 84.8 BCM at the end of the monsoon last year. Not only is the increase in monsoon storage in the current year higher than the increase last year by about 27 per cent, but even the storage level is considerably higher than the last ten years' average storage of 91.4 BCM (Table 8.2). The comfortable reservoir position augurs well not only for the rabi crop but also for hydroelectricity generation.

Growth in Agriculture

8.3 Low and volatile growth rates in Indian agriculture and allied sectors was reflected in the average annual growth rate of value added in the sector declining from 4.7 per cent during the Eighth Plan (1992-1997) to 2.1 per cent during the Ninth Plan (1997-2002) (Table 8.3). As against the target of annual growth rate of 4 per cent during the Tenth Plan (2002-2007), agricultural growth rate in the first year (2002-03) was negative (-6.9 per cent) due to a severe drought of 2002. With a favourable monsoon, growth was an impressive 10.0 per cent in 2003-04. But deficient rainfall in 2004-05 again caused a decline of food grains production as well as rate of growth of Agriculture and allied sectors to 0.7 per cent.

Table 8.2 : Reservoir storage

	2005		2004		Avg. of last 10 years	
	Storage BCM	Percent of FRL	Storage BCM	Percent of FRL	Storage BCM	Percent of FRL
Beginning of monsoon season (as on June 1, 2005)	17.0	13	14.7	11	18.8	14
End of monsoon season (as on September 30, 2005)	109.8	83	84.8	64	91.4	69
Increase in storage during monsoon season	92.8	70	70.1	53	72.7	55

Source : Ministry of Water Resources.

Table 8.3 : Annual average growth rate (at constant prices)

(per cent)

Five Year Plan	Overall GDP growth rate	Agriculture & Allied Sectors
Seventh Plan (1985-1990)	6.0	3.2
Annual Plan (1990-92)	3.4	1.3
Eighth Plan (1992-97)	6.7	4.7
Ninth Plan(1997-2002)	5.5	2.1
Tenth Plan (2002-07)		
2002-03	3.8	-6.9
2003-04(P)	8.5	10.0
2004-05(Q)	7.5	0.7
2005-06(A)	8.1	2.3

P: Provisional, Q: Quick estimates, A: Advance estimates

Note : Growth rates prior to 2001 based on 1993-94 prices and from 2000-01 onwards based on new series at 1999-2000 prices.

Source : CSO

The advance estimates of National Income for 2005-06 released by the CSO on February 7, 2006 has estimated a growth rate of 2.3 per cent for the agriculture and allied sectors based on New Series (at 1999-2000 prices).

8.4 Low productivity has afflicted growth of Indian agriculture (Table 8.4). For example, though India accounted for 21.8 per cent of global paddy production, the yield per hectare in 2002 was less than that in neighboring Bangladesh and Myanmar, and only about a third of that in Egypt, which had the highest yield level in the reference year. India, while accounting for 12 per cent of global production in wheat, had average yield levels higher than the global average, but only a third of the highest level achieved in the UK in 2002. However, in maize and groundnut, while accounting for 2 per cent and 18 per cent of global output, yield levels were only 39 per cent and 57 per cent of the global levels. In sugarcane, yield was in excess of average global levels.

8.5 While there is some scope for wasteland reclamation, there are obvious limitations to the extensive margins (expansion of acreage) in Indian agriculture. Enhancement of agricultural growth is essential for achieving an overall GDP growth rate in the range of 8 to 10 per cent, and improved productivity is critical for achieving accelerated agricultural growth.

Agricultural production and growth in 2005-06

8.6 Prospects of agricultural production in 2005-06 are considered to be bright with near normal rainfall. The delayed monsoon and its somewhat uneven distribution over time and space had some limited adverse impact on the kharif crops (sown in June-July and grown mainly under unirrigated conditions). Coarse grains, pulses, oilseeds, cotton and plantation were affected the most, while the impact was less on the production of rice and sugarcane, where access to irrigation is the greatest. However, loss of kharif crop is expected to be compensated by the rabi output. Total food grains production is estimated to increase marginally in 2005-06.

Table 8. 4 : International comparisons of yield
Selected commodities – 2002

Kg/hectare

Rice/paddy		**Wheat**		**Maize**	
Bangladesh	3448	Bangladesh	2164	China	5022
Egypt	9135	China	3885	Egypt	7789
India	*2915*	France	7449	France	8813
Japan	6582	*India*	*2770*	*India*	*1705*
Myanmar	3532	Iran	1905	Italy	9560
Pakistan	2882	Pakistan	2262	Pakistan	1769
Thailand	2597	U.K	8043	Philippines	1803
U.S.A	7372				
World	**3916**	**World**	**2720**	**World**	**4343**
Sugarcane		**Tobacco Leaves**		**Groundnut (in shell)**	
Bangladesh	39890	Bangladesh	1233	Argentina	2329
China	66353	Canada	2600	Brazil	2043
Colombia	94789	France	2778	China	2986
Egypt	119893	*India*	*1353*	*India*	*794*
Guatemala	94032	Indonesia	829	Sudan	630
India	*68049*	Italy	3333	U.S.A	2869
Pakistan	48042	Pakistan	1848	Uganda	701
World	**65802**	**World**	**1589**	**World**	**1381**

Source : Ministry of Agriculture and Cooperation.

8.7 Horticulture, floriculture, fishery, poultry and animal husbandry, which account for 30 per cent of production in agriculture and allied sectors, are expected to achieve a growth rate of 6 per cent. Production of commercial crops like jute, tea, coffee, oilseeds and sugarcane is also expected to increase, although by a lower rate. Consequently, overall value added in the primary sector is expected to increase by 3 per cent in 2005-06.

Crop production in 2004-05 and prospects for 2005-06

8.8 Total foodgrains production declined from 213.5 MT in 2003-04 to 204.6 MT in 2004-05. Output of jute and mesta and sugarcane was also lower in 2004-05 than in 2003-04. However, there was better performance in oilseeds and cotton production in 2004-05 relative to 2003-04.

8.9 The first advance estimates of foodgrains production for 2005-06 released by the Ministry of Agriculture on September 19, 2005 put kharif production at 105.3 MT, up by 2 MT from the previous year's level (Table 8.5). Production of rabi foodgrains would be around last year's level of 101.3 MT provided the weather remains favourable.

8.10 Kharif oilseeds production for 2005-06 is estimated at 14.6 MT as per the first advance estimates. The rabi oilseeds production may reach the target level of 10.4 MT with favourable weather. The first advance estimates for 2005-06 put sugarcane output at 257.7 MT against 232.3 MT in 2004-05. However, prospects of cotton production in 2005-06 are not considered better than in 2004-05 (Table 8.6).

Table 8.5 : Foodgrains production

(Million tonnes)

Crop/ Year	2000-01	2001-02	2002-03	2003-04	2004-05*	2005-06 $
Rice	85.0	93.3	71.8	88.3	85.3	73.8
Wheat	69.7	72.8	65.8	72.1	72.0	-
Coarse Cereals	31.1	33.4	26.1	38.1	33.9	26.4
Pulses	11.1	13.4	11.1	14.9	13.4	5.0
Foodgrains						
(i) Kharif	102.1	112.1	87.2	116.9	103.3	105.3
(ii) Rabi	94.7	100.8	87.6	96.6	101.3	-
Total (i)+(ii)	196.8	212.9	174.8	213.5	204.6	-

***4th advance estimates. $ 1st advance estimates (kharif only).**
Source : Ministry of Agriculture.

Table 8.6 : Commercial crops production

(Million tonnes)

Crop/year	2000-01	2001-02	2002-03	2003-04	2004-05 @	2005-06 $
Groundnut	6.4	7.0	4.1	8.2	7.0	5.9
Rapeseed & Mustard	4.2	5.1	3.9	6.2	8.4	-
Soyabean	5.3	6.0	4.7	7.9	7.5	6.6
Other Oilseeds	2.5	2.6	2.1	3.0	3.2	2.1
Total nine oilseeds	18.4	20.7	14.8	25.3	26.1	14.6
Cotton*	9.5	10.0	8.6	13.9	17.0	15.9
Jute & Mesta**	10.6	11.7	11.3	11.2	10.5	10.1
Sugarcane	296.0	297.2	287.4	237.3	232.3	257.7

*** Million bales of 170 kgs. each . ** Million bales of 180 kgs. each .**
@ 4th advance estimates $ 1st advance estimates (kharif only).
Source : Ministry of Agriculture.

Horticulture

8.11 Acreage under horticulture–which includes fruits, vegetables, spices, floriculture and coconut – increased to 17.8 million hectares or about 10 per cent of gross cropped area of the country in 2004-05 from 16.3 million hectares in 2002-03 (Table 8.7). With a production of 164 million tonnes in 2004-05, the sector contributed 28 per cent of GDP from agriculture. The targeted growth rate during the Xth Plan for the sector is 8-9 per cent.

8.12 The importance of horticulture in improving the productivity of land, generating employment, improving economic conditions of the farmers and entrepreneurs, enhancing exports and, above all, providing nutritional security to the people, is widely acknowledged. With fruit and vegetable production of 49 MT and 85 MT, respectively in 2003-04, India was the second largest producer of both fruits and vegetables in the world. For example, India occupies first position in the production of cauliflower, second in onion and third in cabbage. The National Horticulture Mission (NHM) was launched in May, 2005 as a major initiative to bring about diversification in agriculture and augment income of farmers through cultivation of high value horticultural crops. The programme which seeks to double horticultural production by 2011 has a target, in the 10th Plan, of bringing an additional area of 5.4 lakh hectare under horticulture, besides taking up programmes of rejuvenation, quality planting materials, high-tech cultivation, post harvest management, processing and marketing. Total outlay is Rs. 2,300 crore for the Tenth Plan and Rs. 630 crore for the financial year 2005-06.

8.13 Under the NHM, Action plans for 18 States and 4 National level agencies have been approved. Rs. 579.7 crore has been released to operationalise these action plans. New schemes for promotion of micro-irrigation, National Bamboo Mission and Central Institute of Horticulture for the North-Eastern Region are at advanced stages of approval.

Livestock, Poultry and Fisheries

Livestock sector

8.14 In the livestock sector, the success in the area of dairying is well-known. Production of milk has gone up more than five-fold since independence, resulting in near doubling of per-capita milk availability (Table 8.8). The entire livestock sector plays an important role in the national economy and the socio-economic development of the country by contributing significantly to not only value added in allied sectors and providing employment and incomes to millions of people in both urban and rural areas but also nutritional security to the people (Box 8.1).

Table 8.7 : Area and production of major horticultural crops

(Area-Million hactare, Production-Million tonnes)

Crops	2002-03		2003-04		2004-05*		2005-06*	
	Area	Production	Area	Production	Area	Production	Area	Production
Fruits	3.8	45.2	4.8	49.2	5.0	53.1	5.2	57.6
Vegetables	6.1	84.8	5.9	84.8	6.1	91.6	6.3	99.4
Spices	2.4	2.9	2.4	3.8	2.5	4.1	2.6	4.4
Plantation Crops	3.0	9.7	3.1	13.1	3.2	14.1	3.3	15.3
Flowers	0.1	0.2	0.1	0.2	0.1	0.2	0.1	0.2
Others	1.0	1.6	0.9	0.9	0.9	1.0	1.0	1.1
Total	16.3	144.4	17.2	152.0	17.8	164.1	18.6	178.1

Source : National Horticulture Board. * Estimated

Table 8.8 : Production and per-capita availability of milk

Year	Milk Production (Million tonnes)	Per capita availability (gms/day)
1950-51	17.0	124
1960-61	20.0	124
1970-71	22.0	112
1980-81	31.6	128
1990-91	53.9	176
2000-01	80.6	220
2001-02	84.4	225
2002-03	86.2	230
2003-04	88.1	231
2004-05	90.7	232

Source : Department of Animal Husbandry, Dairying and Fisheries.

Poultry

8.15 Landless labourers often derive more than 50 per cent of their income from livestock, especially poultry. The value of output from poultry sector is nearly Rs. 15,000 crore, and the sector provides direct or indirect employment to over two million people. With output of 45 billion eggs in 2004-05, India ranks among the top six egg producing countries in the world. Furthermore, poultry today is one of the fastest growing segments in the economy.

8.16 India is among the top five chicken meat producing countries in the world (FAO Data 2004, provisional). Around 1.65 MT of chicken-meat was produced in 2004. For poverty alleviation, nutritional nourishment and gender empowerment, Government is promoting the development of the poultry sector, particularly of the rural backyard variety. Under 'Assistance to State Poultry Farms', a Centrally sponsored scheme, the North Eastern States are being provided with 100 per cent financial assistance, while the other States receive 80 per cent of their funds requirement.

8.17 In view of the threat of Bird Flu, the Government has taken various steps for prevention of spread of the disease into the country (Box 8.2).

Box 8.1 : Livestock Sector – Importance for Employment and Income

According to the 17th Livestock Census (reference date: Mid-October 2003) released in January 2005, India owns one of the largest livestock populations in the world. It accounts for 57 per cent of the world's buffalo population and 16 per cent of the cattle population. It ranks first in respect of cattle and buffalo population, third in sheep and second in goat population in the world. While a majority of the animals continue to be reared under sub-optimal conditions, still India is the largest producer of milk in the world.

Total export earnings from livestock, poultry and related products was Rs. 5,120 crore in 2004-05, of which leather accounted for Rs. 2,660 crore and meat and meat products for Rs. 1,720 crore. Besides, the sector also plays an important role in utilization of agricultural by-products, such as hay, which are unfit for human consumption. The livestock sector produced 90.7 MT of milk, 45.2 billion eggs, 2.12 MT of meat and 44.5 million kgs. of wool in 2004-05.

In dairying, an important source of livelihood to a large proportion of landless labourers and small and marginal farmers, milk production has risen more than five fold since 1950-51. As a result of Operation Flood, presently, more than 1.10 lakh village-level co-operative societies, functioning with about 13 million producer members, are procuring more than 200 lakh kgs of milk per day. These cooperatives form a part of the National Milk-Grid, which links the milk producers throughout India with consumers in over 700 towns and cities. The Grid not only bridges the gaps between the seasonal and regional variation in the availability of milk, but also ensures a remunerative price to the producers and a reasonable price and quality for milk and milk products to the consumers.

An Intensive Dairy Development Project (IDDP) was launched in the country in the non-operation flood, hilly and backward areas with the objectives of development of milch cattle, increased milk production by providing technical input services, procurement, processing and marketing of milk in a cost effective manner, ensuring remunerative price to the milk producers and generating additional employment opportunities in the rural areas. The programme is currently being implemented in 25 States and one Union Territory. 62 projects with an outlay of Rs. 334 crore have been approved since inception of the scheme and an expenditure of Rs. 234 crore has been incurred up to end-March 2005.

Box 8.2 : Measures to prevent Avian Influenza

- Import of poultry and poultry products from affected countries has been banned.
- Customs authorities have been asked not to clear any baggage of livestock/livestock products without getting it cleared by the quarantine officer.
- States have already taken steps to tackle any eventuality in the event of an outbreak by activating the State Animal Disease Emergency Committees (SADEC).
- The samples from the suspected flock are collected and sent to High Security Animal Disease Laboratory (HSADL), Bhopal for testing to rule out the possibility of the disease in the country.
- An action plan has been prepared by the Ministry of Environment and circulated to the State Animal Husbandry Departments for preparedness planning in respect of bird flu.
- Surveillance has been intensified, with regular screening of samples of poultry and wild/migratory birds.
- For collection and dispatch of samples, especially from the migratory and wild birds, training has been organized by the Regional Disease Diagnostic Laboratories (RDDL).
- A strategic reserve of vaccine against H5 and H7 types of Avian Influenza virus has been built up by importing 1.5 million doses of vaccines.
- A central reserve of Personal Protective Equipment (PPE) has been set up. Five samples each of PPE have been dispatched to all the States/RDDLs with a request that they may procure further supplies of kits of PPE as per their requirements.
- The State Governments have been requested to form Rapid Response Teams (RRTs) for culling the birds and for vaccination, if required.
- Weekly update on the situation is put up on the website www.dahd.nic.in and till end-January there has been no report of occurrence of bird flu in the country.

Fisheries

8.18 India is the third largest producer of fish and second largest producer of inland fish in the world. It is a source of cheap and nutritious food besides being a major foreign exchange earner (Table 8.9). The fisheries sector is a source of livelihood of over 11 million people engaged fully, partially or in subsidiary activities pertaining to the sector. Marine Fishing Policy (2004) laid the foundation for a sustainable level of marine fish production keeping in view ecological and bio-diversity considerations.

Plantation sector

Tea

8.19 India, the largest producer and consumer of tea in the world, accounts for

Table 8.9 : Production and export of marine products

Year	Fish production (Million tonnes)			Export of marine products	
	Marine	Inland	Total	Quantity ('000 tonnes)	Value (Rs. crore)
1950-51	0.5	0.2	0.7	20	2
1960-61	0.9	0.3	1.2	20	4
1970-71	1.1	0.7	1.8	40	35
1980-81	1.5	0.9	2.4	80	235
1990-91	2.3	1.5	3.8	140	893
2000-01	2.8	2.8	5.6	503	6296
2001-02	2.8	3.1	5.9	458	5815
2002-03	3.0	3.2	6.2	521	6793
2003-04	3.0	3.4	6.4	412	6086
2004-05	2.8	3.5	6.3	474	6188

Source : Department of Animal Husbandry, Dairying and Fisheries.

Table 8.10 : Tea production, consumption and trade

(Qty: million kgs, Value: Rs crore)

Year	Production	Exports		Imports		Domestic consumption $
	Quantity	Quantity	Value	Quantity	Value	Quantity
1997-98	835.6	211.3	2003.2	2.6	17.8	597
1998-99	855.2	205.9	2191.8	8.9	64.7	615
1999-00	836.8	188.9	1796.3	10.4	62.0	633
2000-01	848.4	203.6	1889.8	15.2	95.5	653
2001-02	847.4	190.0	1695.8	16.8	86.7	673
2002-03	846.0	184.4	1665.0	22.5	105.3	693
2003-04	850.5	183.1	1637.0	11.1	67.0	714
2004-05	830.7^	205.8	1924.7	32.5	145.0	735#
2005-06	666.8^	101.1	954.2	7.9	51.5	NA
(Apr-Oct) @	(623.1)	(125.0)	(1175.7)	(19.8)*	(85.9)*	NA

^ Preliminary Estimates @ Estimated * (April-September) NA : Not available
$ Relates to calendar year # For the complete calendar year
Note : Figures in parentheses relate to April-October 2004-05.
Source : Ministry of Commerce and Industry.

Box 8.3 : Initiatives taken to boost the plantation sector

Tea

- Withdrawal of the additional excise duty of Re.1 per kg on tea in the Union Budget 2005-06.
- Sanctioning of two schemes viz. grant of subsidy for production of orthodox teas and assistance to the two R&D Institutions viz. Tea Research Association at Tocklai (Assam) and United Planters' Association for Southern India – Tea Research Foundation (UPASI-TRF) with an estimated outlay of Rs.93 crore for financing from the special fund created with the additional duty of excise of Re.1 per kg on tea collected during 2003-05.
- Issue of a new Tea (Distribution and Export) Control Order, 2005 on 1st April 2005 under the provisions of the Tea Act, 1953 in supersession of the Tea (Distribution and Export) Control Order, 1957 to maintain quality and retain the brand equity of Indian teas.

Coffee

- Sharing the total interest burden of Rs. 287.10 crore on Special Coffee Term Loan (SCTL) for the three year moratorium period equally amongst the banks, the Government and the grower loanees.
- Requesting the Banks to lower the interest rates charged on SCTL from the existing 11 per cent to 9 per cent or rate applicable to agriculture sector whichever is lower, during the remaining repayment period of SCTL loans.
- Writing off of coffee developmental loans along with interest amounting to around Rs. 24 crore, due from the Coffee Board to the Government – the Coffee Board will in turn waive the old developmental loans amounting to around Rs. 64.59 crore extended by the Board to the coffee growers having holdings (below 10 hectares).
- Continuing the interest subsidy scheme on working capital loans for small growers (below 10 ha) at the rate of 5 per cent and large growers at the rate of 3 per cent for the remaining years of the Tenth Plan. The interest subsidy would be reduced by 1 per cent for a period of 3 years in the case of those growers who received the benefit of reduced interest burden on SCTL during the moratorium period. The package will reduce the debt burden of a large number of coffee growers.
- Cess on coffee exports which was levied @ Rs. 500/tonne has been brought down to zero level.
- For promoting coffee export to Russia and CIS countries, Government has approved a proposal at a total cost of Rs. 15.32 crore under Market Access Initiative (MAI) scheme.

Rubber

- The Government through Rubber Board is implementing seven Plan Schemes for development of rubber plantations during the 10th plan period with an outlay of Rs. 415 crore.
- The objective of the Price Stabilisation Fund is to provide relief to the growers of tea, coffee and rubber when the prices of these commodities fall below a specified level, without resorting to the practice of procurement operations by the Government agencies. The Price Stabilisation Fund was established with a corpus of Rs. 500 crore, which includes Rs. 482.88 crore by the Central Government and Rs. 17.12 crore as a non refundable initial contribution by the participating growers @ Rs. 500 per grower.
- An Expert Committee has been constituted by the Department for reviewing the PSF Scheme for making it more useful and attractive to the growers. The Committee has submitted its report and action has already been initiated on the modified scheme.

Table 8.11 : Coffee production, consumption and trade					
Year	Production	Export			Domestic
	Quantity (lakh tonnes)	Quantity (lakh tonnes)	Value (Rs crore)	Value US$ million	Consumption (lakh tonnes)
1997-98	2.28	1.79	1708	477	0.50
1998-99	2.65	2.12	1752	431	0.50
1999-00	2.92	2.45	1901	372	0.55
2000-01	3.01	2.47	1374	243	0.60
2001-02	3.01	2.14	1050	216	0.64
2002-03	2.75	2.07	1051	234	0.68
2003-04	2.70	2.33	1158	262	0.70
2004-05	2.75	2.11@	1224@	295@	0.75*
2005-06*	2.81	1.27@	925@	219@	0.80

*** provisional @ including re-exports**
Source : Ministry of Commerce and Industry

around 27 per cent of world production and 13 per cent of world trade. Export of tea for 2004-05 was about 25 per cent of domestic production (Table 8.10). In the recent years, some quantity of tea is also imported for blending and re-exports. The problem of high cost of production and stagnant productivity needs to be addressed on an urgent basis. Several steps have been taken for development and modernisation of the sector (Box 8.3).

Coffee

8.20 Coffee has made significant contribution to the Indian economy during the last 50 years. Although India contributes only 4 per cent of the world production, Indian coffee — particularly Indian Robusta — has created a niche for itself in the international market. Indian Robusta is highly preferred for its good blending quality. Arabica coffee from India is also well received in the international market. The details on production, consumption and trade in recent years is in Table 8.11. Several steps, including restructuring of loans and creation of markets in Russia and the CIS countries have been taken for the development of Indian coffee (Box 8.3).

Natural rubber

8.21 In addition to the State of Kerala and adjoining Kanyakumari district of Tamil Nadu, the traditional natural rubber growing areas of the country, rubber is also grown in Assam, Goa, Karnataka (coastal), Manipur, Meghalaya, Mizoram, and Tripura. Rubber plantations are spread over 5.7 lakh hectares in 16 States of the country. Production is dominated by small holdings, which accounts for 88 per cent of the production as well as area with an average holding size of 0.5 hectare. The details on production, consumption and yield of natural rubber in recent years are in Table 8.12. The Price Stabilisation Fund scheme is being

Table 8.12 : Natural Rubber-Consumption, production & yield			
Year	Consumption ('000 tonnes)	Production ('000 tonnes)	Yield (kg/ha)
1997-98	572	583	1549
1998-99	592	605	1563
1999-00	628	622	1576
2000-01	631	630	1576
2001-02	638	631	1576
2002-03	695	649	1592
2003-04	719	711	1663
2004-05	755	749	1705
2005-06 *	799	780	1745

***Anticipated**
Source : Ministry of Commerce and Industry.

restructured to make it more useful to the growers (Box 8.3).

National Commission on Farmers

8.22 National Commission on Farmers set up in 2004 to suggest an action plan for farmers and farm sector has submitted three interim reports in December 2004 and August and December 2005.

8.23 The First Interim Report of the Commission covers a wide range of recommendations dealing with integrated life-saving support programme for farm families facing acute distress; productivity and livelihood enhancement in rainfed areas; a new deal for women in agriculture; strengthening and expanding the horticulture revolution; enhancing productivity, quality and global competitiveness of cotton; sustaining and expanding trade in farm commodities and its sanitary and phytosanitary dimensions; village knowledge centres; and nutrition security of livestock and livelihoods. The Report also covers rehabilitation and alleviation of fishermen and farm families from distress due to tsunami, empowerment of community-based organizations and Panchayati Raj institutions, and administrative initiatives like creation of a Gram Panchayat Mahila Fund for women.

8.24 The Second Interim Report deals with food for all, fish for all, enhancing productivity, profitability, stability and sustainability of hill and arid agro-ecosystems, coastal zone agriculture, mission for the prosperity of sugarcane farmers, conservation, cultivation and marketing of medicinal plants, organic farming, bio-fuels and agricultural market reforms. The Third Interim Report deals mainly with strengthening of agricultural research, towards an Indian single market and technology missions. Action has already been initiated for firming up Government's decision on the recommendations made in these reports.

Agricultural Inputs

Irrigation

8.25 A large number of river valley projects, both multi-purpose and for irrigation, have spilled over from plan to plan, mainly because of financial constraints being faced by the State Governments. There were 171 major, 259 medium and 72 extension, renovation and modernization (ERM) on-going irrigation projects in the country at various stages of construction at the end of the VIII Plan with spillover cost of Rs. 75,690 crore. Consolidation of the benefits of the sunk investments in these projects requires their timely completion through prioritization and vigorous resource allocations.

8.26 Government launched the Accelerated Irrigation Benefit Programme (AIBP) during 1996-97 for accelerating implementation of ongoing irrigation/multi-purpose projects on which substantial progress has been made and which were beyond the resource capability of the State Governments or at advanced stages of construction and could yield irrigation benefits in the next four agricultural seasons.

8.27 The central loan assistance (CLA) under AIBP is being provided in the ratio (Centre:State) of 2:1 to general category States and in the ratio of 3:1 to special category States and Koraput, Bolangir and Kalahandi (KBK) districts of Orissa. The 'reforming States' characterised as the ones, which agree to revise their water rates to cover operation and maintenance costs in the next five years under general category, get CLA in the ratio of 4:1 and under special category in the ratio of 1:0. A grant component in the programme, to be released together with loan component, was introduced from 2004-05. The grant component for projects both under fast track (which can be completed in 2 financial years) and normal programmes is 30 per cent for general category States and 90 per cent for special category States. However, effective from April 1, 2005, only the grant component of the Central Assistance (CA) would be released by the Central Government, while the loan component of CA is to be raised by the State Governments through market borrowing. In cases of fiscally weak states, Central Government could also help raise the loan component.

8.28 During 2005-06 till end-November, against a Budget provision of Rs. 4,500 crore, Rs. 565 crore has been released as grant. Rs. 18,103 crore has so far been released as CLA/grant under this programme for 189 major/medium irrigation projects and 4,472 minor irrigation schemes. Out of these 189 projects, 45 major/medium irrigation projects have been completed under AIBP till end-November. An additional irrigation potential of 3.25 million hectare has been created through major/medium projects. Under minor irrigation, 3,179 schemes have been completed and 121.15 thousand hectare potential created up to November 2005.

8.29 The Centrally-sponsored Command Area Development (CAD) Programme currently known as Command Area Development and Water Management (CAD&WM) programme was launched in 1974-75 with the objective of bridging the gap between irrigation potential created and that utilized through efficient utilization of created irrigation potential and optimizing agricultural production from irrigated lands on a sustainable basis. The programme, with a multidisciplinary team under an Area Development Authority, envisaged integration of all activities relating to irrigated agriculture in a coordinated manner. Initially, 60 major and medium irrigation projects were taken up under the CAD Programme, covering a Culturable Command Area (CCA) of about 15 million hectare. Between 1974-75 until end-November 2005, 310 projects with a CCA of 28.85 million hectare have been included under the programme.

8.30 Under a massive scheme for repair, renovation and restoration of water bodies directly linked to agriculture launched by the Union Finance Minister in the Budget Speech of 2004-05, it is proposed to restore water bodies throughout India to their original glory resulting in a significant enhancement of their storage capacity. For this purpose, a pilot scheme to be implemented during the remaining period of the Tenth Plan was approved by Government in January 2005 with an estimated cost of Rs. 300 crore. It is a State Sector Scheme, with a proposed funding pattern of Centre:State of 75:25. Ministry of Water Resources has approved pilot projects in 23 districts of 13 States — Andhra Pradesh, Chattisgarh, Gujarat, Himachal Pradesh, Jammu & Kashmir, Jharkhand, Karnataka, Kerala, Madhya Pradesh, Orissa, Rajasthan, Tamil Nadu, and West Bengal—at an estimated cost of Rs. 262.91 crore till end-December 2005. Central share of Rs. 82.88 crore has been released to the States till end-December. For the balance of Rs. 37 crore more projects will be approved.

8.31 Irrigation is one of the six components for development of rural infrastructure under 'Bharat Nirman'. The irrigation component of 'Bharat Nirman' aims at creation of irrigation potential of 10 million hectare in the four years from 2005-06 to 2008-09. Keeping in view the present status, the target for creation of irrigation potential under 'Bharat Nirman' has been proposed to be met largely through completion of on going major and medium irrigation projects. Due emphasis has also been given to enhancing the utilization of completed projects/schemes. Development of new projects of minor irrigation to cater to the requirement of specific areas, particularly to provide benefit to small and marginal farmers and dalits and tribals, has also been included in Bharat Nirman.

Agricultural Credit

Flow of Institutional Credit to agriculture

8.32 The total ground level credit flow for agriculture and allied activities increased from Rs.46,268 crore in 1999-00 to Rs.86,981 crore in 2003-04, and further to Rs.1,25,309 crore in 2004-05. The target of agriculture credit flow for the year 2005-06 was fixed at Rs.1,41,000 crore. The achievement on December 31, 2005 was 83.6 per cent with such credit at Rs.1,17,899 crore (Table 8.13). Around 58.3 lakh new farmers have been financed by all the banks. An amount of Rs. 2,939 crore was provided as debt relief by all agencies to farmers in distress, farmers in arrears and under One Time Settlement (OTS) during 2005-06 up to November 30, 2005. Under special OTS scheme, old and chronic loans

Table 8.13 : Institutional credit to agriculture

(Rs. crore)

Agency	2000-01	2001-02	2002-03	2003-04	2004-05	2005-06*
Cooperative Banks	20,800	23,604	23,716	26,959	31,231	28,947
RRBs	4,220	4,854	6,070	7,581	12,597	11,146
Commercial Banks	27,807	33,587	39,774	52,441	81,481	77,806
Total	52,827	62,045	69,560	86,981	1,25,309	1,17,899

*** Upto December 31, 2005**
Source : NABARD.

amounting to Rs. 342 crore have been settled. Commercial banks have provided Rs.14 crore as advances to 4,074 farmers to enable them to redeem their debts from money lenders. The corresponding figures for Cooperative Banks and Regional Rural Banks (RRBs) are Rs. 1.30 crore and Rs. 4.44 crore, respectively.

Kisan Credit Card Scheme

8.33 The Kisan Credit Card (KCC) Scheme, introduced in 1998-99, has made rapid progress with the banking system issuing more than 556 lakh cards (November 30, 2005). The scheme has helped in augmenting the flow of short-term crop loans for seasonal agricultural operations to farmers. Besides the existing facilities of providing crop loan, the scope of KCC Scheme has been enlarged to include term loans for agriculture and allied activities along with a component to meet the consumption needs. Further, to provide adequate and timely credit support from the banking system to the farmers for their cultivation needs and to improve their accessibility to bank credit, the credit delivery mechanism is being simplified with more flexibility in the use of KCC.

Cooperative Credit

8.34 As per the recommendations of the Task Force on Reviving the Cooperative Credit Structure (Chairman: Prof. Vaidyanathan), Government has finalized actions with regard to short-term cooperative credit structure. Government's share of the total financial package has been increased from 53 per cent to 68 per cent on an aggregate basis.

Self-Help Groups (SHG) Bank Linkages Programme

8.35 The SHG Bank Linkage Programme has emerged as the major micro finance programme in the country. By December 2005, 18.30 lakh SHGs had been provided credit aggregating Rs.8,319 crore by the banking system. The focus under the SHG bank linkage programme is largely on those rural poor who have no sustained access to the formal banking system. The target-group, therefore, broadly comprises small and marginal farmers, agricultural and non-agricultural labourers, artisans and craftsmen and other poor engaged in small businesses like vending and hawking.

Agricultural Insurance

National Agricultural Insurance Scheme

8.36 The National Agricultural Insurance Scheme (NAIS) is being implemented from rabi 1999-2000 season with the objective of providing insurance coverage and financial support to the farmers in the event of failure of any of the notified crops as a result of natural calamities, pests and disease, and to help to stabilize farm incomes, particularly in disaster years. The scheme is available to all the farmers (both loanee and non-loanee) irrespective of their size of holding.

8.37 The NAIS envisages coverage of all the food crops (cereals, millets and pulses),

oilseeds and annual commercial/horticultural crops in respect of which past data on yield is available for adequate number of years. Sugarcane, potato, cotton, ginger, onion, turmeric, chilies, pine-apple, banana, jute, tapioca, coriander, cumin and garlic have already been covered under the scheme. The scheme is operating on the basis of 'area approach' (defined areas for each notified crop for widespread calamities), and on 'an individual basis' for localized calamities such as hailstorm, landslide, cyclone and flood. At present, 23 States and 2 Union Territories are implementing the scheme. Cumulatively, 7.51 crore farmers have been covered under NAIS in the last twelve seasons from rabi 1999—2000 to kharif 2005 (Table 8.14).

8.38 The premium rates are 3.5 per cent (of sum assured) for bajra and oilseeds, and 2.5 per cent for other kharif crops; 1.5 per cent for wheat, and 2 per cent for other rabi crops. Actuarial rates are being charged in case of annual commercial/horticultural crops. Small and marginal farmers were entitled to a subsidy of 50 per cent of the premium, which was shared on 50:50 basis by the Central and State Governments. The subsidy on premium has gradually been phased out and at present only 10 per cent subsidy is available to small ans marginal farmers.

Seeds

8.39 Quality seed is the most critical and basic input for agricultural output, and accounts for 25-30 per cent of yield increase. In India, 80 per cent of the farmers rely on farm-saved seed, and the low seed replacement rate results in low yields. The production and distribution of seeds is a complex process involving farmers, growers, government agencies, research institutions and other stakeholders. While the public sector continues to play a dominant role in production and distribution of low-value high-volume seeds like cereals, pulses and oilseeds, the private sector seed industry is growing in high-value, low-volume segments like vegetables and horticultural crops. Private seed industry's role in promoting genetically modified (Bt) cotton has been particularly significant. India is now a mega cotton producing country. The National Seed Policy 2002 envisaged a symbiotic relationship between the public and the private sector.

Table 8.14 : Performance of National Agricultural Insurance Scheme

Sl. No.	Season	Number of farmers covered (lakhs)	Area (lakh ha.)	Sum assured (Rs. crore)	Premium (Rs. crore)	Total claims (Rs. crore)
1	Rabi 1999-00	6	8	356	5	8
2	Kharif 2000	84	132	6903	207	1222
3	Rabi 2000-01	21	31	1603	28	59
4	Kharif 2001	87	129	7502	262	494
5	Rabi 2001-02	20	31	1498	30	65
6	Kharif 2002	98	155	9432	325	1824
7	Rabi 2002-03	23	40	1838	39	188
8	Kharif 2003	80	124	8114	283	649
9	Rabi 2003-04	44	65	3049	64	490
10	Kharif 2004	127	243	13170	459	760
11	Rabi 2004-05	35	53	3774	76	157*
12	Kharif 2005*	126	208	13416	446	N.A.
	TOTAL	751	1219	70655	2223	5917

*** Provisional figures as on December 31, 2005. N.A. Not available**

Source: Ministry of Finance.

Now, an enabling environment exists for promoting quality seed production in India. Establishment of Protection of Plant Varieties and Farmers' Rights Authority for protection of rights of farmers and rights of plant breeders is expected to promote investment in development of new varieties. Seed export and import regime have been simplified to facilitate availability of quality seed to Indian farmers and help India emerge as a global hub for seed production.

8.40 Indian seeds programme recognizes three kinds of seed generation, namely breeder, foundation and certified seeds. While the production of breeder seeds is expected to decline in 2005-06, production of foundation seeds and distribution of certified/quality seeds is likely to increase. The annual rate of growth of certified/quality seeds distribution is targeted to accelerate from 4.1 per cent in 2004-05 to 22.5 per cent in 2005-06 (Table 8.15).

Fertilizers

Consumption

8.41 Consumption of chemical fertilizers (in terms of nutrients) at 18.4 MT during 2004-05 was higher than that in 2003-04 by 9.5 per cent. Urea consumption in 2004-05 was higher by 4.5 per cent on year-to-year basis (Table 8.16).

8.42 Consumption of fertilizers varied significantly among the States. In the plains, per hectare consumption was high in Punjab, Haryana, Uttar Pradesh and Andhra Pradesh, but low in Rajasthan, Orissa and Madhya Pradesh, and the States in the north-east (Table 8.17). The all India average consumption of fertilizers per hectare increased from 88.2 kg. in 2003-04 to 96.6 kg. in 2004-05.

8.43 Domestic production of nitrogenous (N) and phosphatic (P) fertilizer showed an increasing trend over the years and was estimated to be 156.03 lakh tonnes in 2005-06 (Table 8.18). A joint venture project between IFFCO and KRIBHCO and Oman Oil Co. has been set up under the name of OMIFCO at Oman for production of 16.52 lakh tonnes of urea and 2.48 lakh tonnes of ammonia per annum. The Government has entered into a long-term contract with OMIFCO to buy this urea at fixed predetermined prices for a period of 15 years. The execution of the project commenced on August 15, 2002 and commercial production started in July 2005. The urea is priced at US dollar 150 per tonne FOB against international prevailing price of US dollar 235 per tonne FOB. This has led to substantial savings in subsidy estimated to be around US$ 88 million till December 2005. In addition to urea, the surplus ammonia will also be available under a long term ammonia offtake agreement with IFFCO.

Pricing, Control and Subsidy

8.44 To encourage balanced fertilizer use and make available fertilizers to farmers at affordable prices, the Central Government notifies the selling price of urea as well as decontrolled P&K fertilizers, such as the Diammonium phosphate (DAP), Muriate of potash (MOP) and eleven complex fertilizers, excluding single super phosphate (SSP) in

Table 8.15 : Production of Breeder and Foundation Seeds and Distribution of Certified Seed

Year	Production of Breeder Seed (quintals)	Production of Foundation Seed (lakh quintals)	Distribution of Certified/Quality Seed (lakh quintals)
2003-04	61,826	6.5	108.59
2004-05	66,460	6.9	113.10
2005-06	54,700 (Indent)	7.4 (Anticipated)	138.5 (Target)

Source : Ministry of Agriculture.

Table 8.16 : Consumption of major fertilizers

(in lakh tonnes)

Fertiliser	2000-01	2001-02	2002-03	2003-04	2004-05	2005-06 (Apr-Sep)*
Urea	191.9	199.2	184.9	197.7	206.6	112.8
DAP	58.8	61.8	54.7	56.2	62.6	33.1
MOP	18.3	19.9	19.1	18.4	24.1	13.8
N	109.2	113.1	104.7	110.8	117.1	64.4
P	42.2	43.8	40.2	41.2	46.2	25.1
K	15.7	16.7	16.0	16.0	20.6	11.5
Total (N,P,K)	**167.1**	**173.6**	**160.9**	**168.0**	**183.9**	**101.0**

*** Estimated**

Source : Ministry of Chemicals & Fertilizers.

respect of which the maximum retail price (MRP) is fixed by the State Governments. There has been no increase in selling prices of fertilizers since February 28, 2002 (Table 8.19). Since the selling prices of fertilizers are less than the cost of production, the difference as assessed by the Government is borne as subsidy. Subsidy on urea during 2005-06 was estimated at Rs. 11,053.90 crore and on decontrolled phosphatic and potassic fertilizers at Rs. 5,200.00 crore. However, due to increased production/consumption during 2005-06 and steep increase in feedstock/raw material costs, this is likely to go up.

8.45 The erstwhile individual unit oriented Retention Price Scheme (RPS) in respect of urea had been replaced in stages by a group based pricing scheme under New Pricing Scheme (NPS) with effect from April 2003 and April 2004. For reviewing the effectiveness of Stage-I and II of the NPS and for formulating policy for urea units beyond Stage-II (April 1, 2006 onwards) including the milestones for conversion of existing Naptha and FO/LSHS based units to LNG/NG and method of determination and payment of concessions to urea units, the Department of Fertilizers constituted a Working Group under the Chairmanship of Dr. Y.K. Alagh on December 10, 2004.

Table 8.17 : Per hectare consumption of N.P.K. fertilizers

(Based on 2001-02 provisional gross cropped area)

S.No.	State/U.T.	2004-05	2003-04
1	Uttar Pradesh+	125.5	125.7
2	Punjab	192.5	190.1
3	Haryana	166.2	161.7
4	Andhra Pradesh	155.8	145.3
5	Tamil Nadu	152.9	114.5
6	Bihar++	85.7	81.0
7	West Bengal	129.0	114.1
8	Karnataka	110.8	78.8
9	Gujarat	106.8	94.7
10	Manipur	94.4	126.3
11	Maharashtra	77.7	64.2
12	Jammu & Kashmir	68.0	72.0
13	Kerala	67.4	64.2
14	Chhatisgarh	64.8	44.2
15	Madhya Pradesh	56.0	51.6
16	Himachal Pradesh	48.4	49.0
17	Assam	41.6	47.5
18	Orissa	40.4	37.1
19	Tripura	39.8	37.1
20	Rajasthan	36.6	37.4
21	Meghalaya	20.4	19.5
22	Mizoram	16.3	16.9
23	Sikkim	4.7	3.4
24	Arunachal Pradesh	3.1	2.9
25	Nagaland	1.6	1.8
	All India	**96.6**	**88.2**

+ includes Uttranchal ++ includes Jharkhand

Source : Ministry of Chemicals and Fertilizers.

Table 8.18 : Fertilizer- production, imports and subsidies							
Year	Production		Imports	Subsidy			
	N	P	N+P+K	Imported Urea	Domestic Urea	Decontrolled P&K Fertilizers	Total
	('000 tonnes)			(Rs crore)			
1960-61	98	52	419	-	-	-	-
1970-71	830	229	629	-	-	-	-
1980-81	2164	842	2759	335	170	-	505
1990-91	6993	2052	2758	659	3730	-	4389
2000-01	11004	3748	2090	1	9480	4319	13800
2001-02	10771	3861	2398	47	8044	4504	12595
2002-03	10562	3906	1757	0	7790	3224	11014
2003-04	10634	3631	2019	0	8521	3326	11847
2004-05	11338	4067	2753	493.9	10243.2	5142.2	15879.2
2005-06	11480#	4123#	3718**	943.5*	10110.4*	5200*	16253.9*

 # Estimated * Budget estimate Up to Nov. 2005**
Source : Ministry of Chemicals & Fertilizers

8.46 Fluctuations in the prices of phosphoric acid have, in the last one or two years, led to difficulties in its procurement and resultant bottlenecks in production of DAP. The Department of Fertilizers had also constituted an Expert Group under the Chairmanship of Prof. Abhijit Sen, Member, Planning Commission, for benchmarking phosphoric acid price with international price of DAP for purposes of determining the concession on DAP. The Expert Group has recommended that the domestic DAP subsidy should be benchmarked with international DAP prices in a transparent manner. The Department of Fertilizers is in the process of formulating a revised policy for DAP keeping in view the recommendations of the Expert Group.

8.47 SSP is referred to as poor man's fertilizer and is the most important source for providing sulphur to the soil. SSP helps correct the agronomic, imbalances which create a deficit of phosphates and sulphur in the soil. Due to increase in the price of inputs and no change in MRP and subsidy, the production of SSP became unviable and the capacity utilization in this industry came down sharply to 37 per cent. As a measure of relief, the Government has increased the adhoc concession rate in respect of all types of SSP from Rs. 650 per tonne to Rs. 975 per tonne with effect from September 1, 2005.

Table 8.19 : Selling price of fertilizers (February 2002)		
S.No.	Name of the fertilizer	Maximum retail price (Rs. per tonne)
1.	Urea	4830
2.	DAP	9350
3.	Complex fertilizers	6980-9080
4.	SSP	Varies from State to State

Source : Ministry of Chemicals & Fertilizers

Capital Formation in Indian Agriculture

8.48 The decline in the share of the agricultural sector's capital formation in GDP from 2.2 per cent in the late 1990s to 1.7 per cent in 2004-05 is a matter of concern (Table 8.20). This declining share was mainly due to the stagnation or fall in public investment in irrigation, particularly since the mid-1990s. However, there is indication of a reversal of this trend with public sector investment in agriculture reaching its highest level of Rs. 12,591 crore in 2004-05 since the early nineties. The share of public investment in gross investment increased by over 11 percentage points to reach 29.2 per cent in 2004-05 relative to 1999-2000.

Table 8.20 : Gross capital formation in agriculture						
Year	Investment in Agriculture (Rs. crore)			Share in agricultural gross investment (per cent)		Investment in Agriculture as a per cent of GDP at constant prices
	Total	Public	Private	Public	Private	
			Old Series (at 1993-94 prices)			
1990-91	14836	4395	10441	29.60	70.40	1.92
1995-96	15690	4849	10841	30.90	69.10	1.57
1996-97	16176	4668	11508	28.90	71.10	1.51
1997-98	15942	3979	11963	25.00	75.00	1.43
1998-99	14895	3870	11025	26.00	74.00	1.26
1999-00	17304	4221	13083	24.40	75.60	1.37
			New series (at 1999-00 prices)			
1999-00	43473	7754	35719	17.8	82.2	2.2
2000-01	38176	7018	31158	18.4	81.6	1.9
2001-02	46744	8529	38215	18.2	81.8	2.2
2002-03	45867	7849	38018	17.1	82.9	2.1
2003-04	47833	12809	35024	26.8	73.2	2.0
2004-05*	43123	12591	30532	29.2	70.8	1.7

* Quick Estimates.
Source : CSO

8.49 The improved availability of credit for agriculture and liberalized trade for agricultural products should enhance private investment in agriculture. The Budget for 2005-06 also stepped up public investment significantly for rural roads and rural employment programmes. Major measures taken for agricultural development through enhanced capital formation include the following:

- A roadmap for agricultural diversification has been prepared with focus on horticulture, floriculture, animal husbandry and fisheries.
- Strengthening of agriculture marketing infrastructure.
- National scheme for the repair, renovation and restoration of water bodies.
- Focus on micro irrigation, micro finance, micro-insurance and rural credits.
- Setting up a Knowledge Centre in every village.
- Setting up a National Fund for strategic agricultural research.
- Provision of urban amenities in rural areas through creation of new growth poles.

Agricultural Marketing

8.50 Progress in the production of food grains, commercial crops and horticultural products depends critically on the marketing infrastructure available to the farmers. The number of regulated agricultural markets stood at 7,521 as on March 31, 2005. Besides, there were 27,294 rural periodic markets, of which about 15 per cent function under the ambit of regulation. Ministry of Agriculture had formulated a model law on agricultural marketing in consultation with State/UT Governments to deal with emerging trends in agricultural marketing. This model legislation enables establishment of private markets/ yards, direct purchase centres, consumers/ farmers markets for direct sale, and promotion of public-private-partnership (PPP) in the management and development of agricultural markets in the country. It also

provides for exclusive markets for onions, fruits, vegetables, and flowers. Regulation and promotion of contract farming arrangement has also been a part of this legislation. A provision has also been made for constitution of State Agricultural Produce Standards Bureau for promotion of grading, standardization and quality certification of agricultural produce. Several State/UT Governments have initiated steps for amending the Agricultural Produce Marketing Committee (APMC) Act.

8.51 For development of marketing infrastructure, four Central Sector Schemes have been introduced for: (i) developing a Marketing Research and Information Network (MRIN), (ii) a scheme with 25 per cent back-ended subsidy component for construction of rural godowns, (iii) strengthening of agricultural marketing infrastructure, grading and standardization in those States that have amended the APMC Act on the lines of Model Act, and (iv) Venture Capital Assistance scheme by Small Farmers' Agri-Business Consortium (SFAC) to promote agri-business projects. Besides, initiative has been taken by the National Institute of Agricultural Marketing (NIAM) to promote PPP in establishment of state of the art terminal markets for fruits, vegetables and other perishables in important urban centres.

Agri-Trade

Agri- Exports

Vishesh Krishi Upaj Yojana (Special Agricultural Produce Scheme)

8.52 The objective of the scheme is to promote export of fruits, vegetables, flowers, minor forest produce, dairy, poultry and their value added products produced and processed domestically, by incentivising exporters of such products. Exporters of such products shall be entitled for duty credit scrip equivalent to 5 per cent of the FOB value of exports for each licensing year commencing from 1st April, 2004. However, dairy, poultry and their value added products qualify for benefits in respect of exports made on or after 1st April 2005. The scrip and the items imported against it would be freely transferable. Under the scheme, export of all items as given in Appendix-37-A of Handbook of Procedure (Vol.1) of Foreign Trade Policy shall qualify for export benefits under VKUY Scheme. Items that are restricted or prohibited for export under Schedule-II of the Export Policy in the ITC (HS) Classification of export and import items shall not be eligible for any benefits under the Scheme.

8.53 The proportion of agri exports to total exports came down from 11.9 per cent in 2003-04 to 10.2 per cent in 2004-05. The same for April-October 2005 is 9.6 per cent as against 9.9 per cent during April-October 2004. Major exports during April-October 2005 included marine products (US$ 773.6 million), meat and meat products (US $ 291.5 million), fruits and vegetables (US $ 207.1 million) and processed food (US $ 224.8 million) (Table 8.21).

Agri-imports

8.54 The import of agricultural and allied products during 2004-05 was at US $ 3811 million as compared to US$ 3708.2 during 2003-04. The proportion of agri imports to total imports came down from 4.7 per cent in 2003-04 to 3.5 per cent in 2004-05. Major imports during April-October 2005 included vegetable oils (US $1237.3 million), raw cashew nut (US $287.8 million), pulses (US $ 281.8 million) and sugar (US $ 138.7 million). Vegetable oils and pulses are largely imported to augment domestic supplies and raw cashew is imported for processing and re-exports as domestic production is not adequate to meet the demand of processing capacity installed in the country (Table 8.22).

Table 8.21 : Agricultural Exports

Items	2003-04		2004-05		2004-05*		2005-06*	
	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	356.3	4.7	397.1	5.0	236.0	5.6	209.3	4.3
Coffee	236.3	3.1	224.3	2.8	125.0	3.0	173.1	3.5
Rice	907.1	12.0	1478.2	18.5	592.6	14.2	936.6	19.2
Wheat	520.4	6.9	322.3	4.0	243.5	5.8	116.0	2.4
Sugar & molasses	269.0	3.6	33.2	0.4	17.2	0.4	17.3	0.4
Tobacco	238.6	3.2	277.5	3.5	150.0	3.6	163.5	3.3
Spices	336.1	4.5	399.3	5.0	237.8	5.7	239.5	4.9
Cashew	370.0	4.9	520.0	6.5	282.2	6.7	308.3	6.3
Sesame	154.3	2.0	147.5	1.8	51.3	1.2	68.8	1.4
Niger seeds	9.9	0.1	13.5	0.2	7.0	0.2	6.5	0.1
Guargum meal	110.5	1.5	146.0	1.8	64.6	1.5	111.8	2.3
Oil meals	728.7	9.7	690.1	8.6	327.0	7.8	337.2	6.9
Fruits and vegetables	378.2	5.0	361.7	4.5	203.8	4.9	207.1	4.2
Processed foods (fruits and vegetables)	368.6	4.9	344.2	4.3	189.5	4.5	224.8	4.6
Meat and meat preparation	373.1	5.0	386.0	4.8	222.9	5.3	291.5	6.0
Marine products	1328.8	17.6	1267.6	15.8	676.8	16.2	773.6	15.8
Others	846.1	11.2	993.2	12.4	554.4	13.3	700.8	14.3
Agricultural Exports	7532.0	100.0	8001.7	100.0	4181.4	100.0	4885.5	100.0
Total Exports	63049.0		78205.3		42132.2		51114.4	
Agri-Exports as % of Total Exports		11.9		10.2		9.9		9.6

*** April-October**
Source : Department of Commerce (DGCI&S)

Table 8.22 : Agricultural Imports

Items	2003-04		2004-05		2004-05*		2005-06*	
	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	19.4	0.5	24.9	0.7	14.3	0.6	15.1	0.7
Pulses	497.2	13.4	382.5	10.1	227.0	10.2	281.8	12.8
Milk and Cream	19.5	0.5	2.9	0.1	1.8	0.1	1.4	0.6
Cashew nuts (raw)	298.5	8.0	391.1	10.4	244.2	11.0	287.8	13.1
Fruits and nuts ex. Cashew nuts	174.6	4.7	235.3	6.2	109.2	4.9	144.4	6.6
Sugar	13.6	0.4	212.4	5.6	83.6	3.8	138.7	6.3
Oil seeds	3.0	0.1	5.7	0.2	2.6	0.1	4.0	0.2
Vegetable oils (fixed edible)	2542.6	68.6	2393.9	63.4	1456.3	65.5	1237.3	56.1
Others	139.8	3.8	162.4	3.4	84.6	3.8	93.2	4.2
Agricultural imports	3708.2	100.0	3811.1	100.0	2223.6	100.0	2203.6	100.0
Total Imports	78151.8		107069.7		56787.8		76473.9	
Agri-Imports as % of Total Imports		4.7		3.5		3.9		2.8

*** April- October**
Source : Department of Commerce (DGCI&S).

Outlook

8.55 Prospects of agricultural production in 2005-06 are considered to be reasonably bright due to near normal monsoon. It is expected that foodgrains production may increase to 209 million tonnes in 2005-06.

8.56 The emerging areas in agriculture like horticulture, floriculture, organic farming, genetic engineering, food processing, branding and packaging, and futures trading have high potential of growth. Development of rural infrastructure, rural extension services and agro-based and food processing industries are essential for harnessing this potential. Indian agriculture suffers from low yields per hectare, volatility in production and wide disparities of productivity over regions and crops. Domestic production of pulses and oilseeds are still below the domestic requirements. A distinct bias in agricultural price support policies in favour of food grains in the past may have distorted cropping pattern and input usage, and may require corrections. Market for farm output continues to depend heavily on expensive government procurement and distribution systems. A shift from the current MSP and public procurement system and developing alternative product markets are essential for crop diversification and broad-based agricultural development.