

II. PROFILE OF RABI CROPS UNDER PRICE SUPPORT

WHEAT

The production of wheat in 2004-05 estimated at 74.05 million tonnes (Third Advance Estimates as on 23-3-2005 of the Directorate of Economics and Statistics) is 1.94 million tonnes higher than that of 72.11 million tonnes achieved in 2003-04, but lower than the peak production of 76.37 million tonnes reached in 1999-2000. Deficient rainfall of about 13 per cent during the South West monsoon left little residual soil moisture at the time of sowing wheat but the plentiful winter rainfall raised hopes for a good crop of wheat and so also in the overall rabi foodgrains output. However, unseasonal rains just at the time of harvesting dampened the crop prospects. Indications are that production of wheat in 2004-05 would be marginally lower than the Third Advance Estimates of 74.05 million tonnes. (Table 2.1)

2.2 Wheat has an important role in the food security of the country and efforts to raise production and productivity of wheat require to be renewed. The compound annual rate of growth of wheat production was a healthy 3.28 per cent between 1984-85 and 1994-95 which slowed down to 1.59 per cent during the period 1994-95 to 2003-04. Thus, production growth rate in the latter period has fallen below the rate of increase in population. What is particularly worrying is that the growth rate of yield has sharply decelerated from 2.78 per cent per annum from 1984-85 to 1994-95 to about 1.19 per cent in the period from 1994-95 to 2003-04. A smoothening of the time series on area, production and yield of wheat, based on their moving average of triennium ending (TE) base, show expansion of area by about one million hectare and augmentation of production by 9.3 million tonnes with no significant increase in yield in the period TE 1994-95 to 2003-04. The absolute increase in average wheat yield from TE 1994-95 to 2003-04 was only 273 kg per hectare whereas the corresponding increase from 1984-85 to 1994-95 was 580 kg per hectare. Since further expansion of area of wheat is unlikely, the future growth of wheat production will depend on whether the rate of growth of yield can be stepped up. (Table 2.2)

2.3 An examination of the yield profile across major wheat growing states in conjunction with their share in all-India acreage brings out the constraints in stepping up yield substantially at the national level in the short to medium term. During 1994-95 to 2003-04 there is deceleration in the compound growth of wheat yield in all the states as compared to 1984-85 to 1994-95 except Rajasthan and West Bengal. In Punjab and Haryana, there is less scope for raising yields. The yield levels in Punjab and Haryana at 4313 kgs and 4041 kgs per hectare in 2003-04 remained fairly close to the yield potential possible with the existing technology. Punjab and Haryana together account for one fifth of the acreage under wheat in the country. To make significant impact on the production in these states, yield would need to rise steeply which is increasingly difficult to achieve. However, considerable scope for raising productivity exists in the states of Uttar Pradesh, Rajasthan, Bihar and Madhya Pradesh. Production in these states can be increased through location specific varietal improvement of seed, higher replacement rate as well as improved cultural practices such as zero tillage, raised bed cultivation etc. apart from increased coverage of area under irrigation.

Table 2 (A) : Yield Profile of Wheat

State	Average Yield T.E. 2003-04 Kg. per hectare	Yield Growth Rate 1984-85 to 1994-95 to 1994-95 2003-04		Percentage share in Acreage T.E. 2003-04	Percent Irrigated Area
1. Punjab	4313	2.46	0.96	13.11	97.40
2. Haryana	4041	3.67	1.17	8.79	98.75
3. U.P.	2681	2.32	1.49	36.72	92.24
4. M.P.	1617	3.82	0.08	14.62	73.85
5. Rajasthan	2769	2.51	2.80	7.93	97.85
6. Bihar	1907	2.62	-0.39	8.43	89.46
All India	2696	2.78	1.19	100.00	87.98

2.4 Raising yield is also important for sustaining profitable production. This is best illustrated with what happened in the past in Punjab and Haryana. When the yield was increasing rapidly, the increases in cost of production of wheat in this region were much less than that in the overall price level and so real price of

wheat to the consumers could be reduced without reducing the margin of profit for farmers. But with yield growth slowing down, the cost of production of Punjab and Haryana has been increasing faster than the overall price index with the result that it is no longer possible to reduce the real price of wheat, while maintaining the margins of farmers in this region. Further, the assurance of purchase by public agencies has led them to neglect the quality of grain. Having reached this stage in Punjab and Haryana, efforts should be made to promote the cultivation of 'A' category wheat in accordance with the quality preferences seen in international markets. This will bring better returns to farmers and also ensure a place in the global market for premium quality wheat of the country.

2.5 Even with the existing average low yields, the country had been comfortable with production and supply vis-a-vis domestic consumption of wheat in recent years and had exportable surplus. However, in recent years, the comfort level is diluting. This is illustrated by the balance sheet of wheat which has been updated using the latest available data as given below: -

Table 2(B) : Domestic Wheat Situation

(Million Tonnes)

Crop Year (July-June)	2002-03	2003-04	2004-05
Fiscal Year (April-March)	2003-04	2004-05	2005-06
1. Gross Production	65.76	72.11	74.05
2. Net Production (87.5% of Gross Production)	57.54	63.10	64.79
3. Procurement	15.80	16.80	15.00
4. Offtake (FY of which)	24.29	18.27	18.00
(a) Export Sale	4.07	1.71	0.00
(b) Open Sale	0.93	0.24	0.58
5. Addition to Stock (3-4)	-8.49	-1.47	-3.00
6. Supply (Gross) [2-3+4-4(a)]or[2-5-4(a)]	61.96	62.86	67.79
7. Average Stock in excess of Buffer Norm	22.82	7.66	2.23@
8. Supply Potential (6+7)	84.78	70.52	70.02
9. WPI (1993-94=100)	181.40	184.2	
10. Consumption demand	60.33	61.44	62.60

@ : Using buffer norms w.e.f. 1.4.2005

Source : Food Bulletin-April 2005, DGCIS and FCI.

- a. Offtake: Figures for 2003-04 and 2004-05 are rounded off actuals as reported by the Department of Food and Public Distribution. For 2005-06 offtake has been projected at 18 million tonnes. The Commission's projections are based on the offtake trends under different categories and on the assumption that offtake as a percentage of allotment would continue in the same manner as the year progresses. Exports are likely to come down since the government has stopped release of wheat at subsidized price for exports.
- b. Supply : Defined as Net production minus Procurement plus Offtake minus Export sale. It is assumed that export sales do not find its way back to the domestic market.
- c. Average stock in Excess of the Buffer norm : Defined as average of actual stock minus average of buffer norms at four points of time, namely, 1st April, 1st July, 1st October and 1st January. This is perceived by the market not as a dead stock but as a source of potential supply, which tends to curb speculative expectation against prices moving up.
- d. Maximum supply perceived by the market : Defined as a sum of (b) and (c) above.
- e. Consumption demand : the consumption demand is derived as a product of average per capita consumption based on NSS 55th Survey on Consumer Expenditure (1999-2000) and projected population. Details have been explained in Commission's Report on price policy for kharif crops of 2005-06 season.

2.6 The domestic wheat situation brings out that in the past few years, there has generally been an excess supply of wheat in relation to its demand but the gap between supply and demand has been shrinking over the years. In future, unless production is stepped up, this margin is likely to further contract and may extinct as the procurement during 2005-06 is likely to fall short of last year's offtake level by 3 million tonnes. Demand for wheat and wheat products is likely to rise with a change in dietary habits with urbanization. From 1993-94 onwards, the per capita consumption of wheat and wheat products in urban areas has been rising. In 2003-04, the per capita monthly consumption of wheat and wheat products stood at 4.59 kg per capita in urban areas compared to the per capita consumption of 4.22 kgs of wheat in rural areas as brought out by the data on household consumer expenditure of 59th Round (January-December 2003) of NSSO. While wheat accounts for 46.36 per cent of total cereal consumption in urban areas, it constitutes only 34.2 per cent of the same in rural areas. Along with urbanization, the change in diet in favour of wheat and wheat products in the consumption basket by including bread and biscuits and other processed food items is likely to emerge stronger in coming years. To meet the enhanced demand, it is essential to ensure adequate supplies.

For this to happen, renewed efforts to raise production and productivity of wheat are urgently required.

Table 2(C):Per Capita Consumption of Wheat in Rural and Urban Areas in 30 days

	(Kg)						
	1987-88	1993-94	1999-00	2000-01	2001-02	2002-03	2003-04
Rural	4.48	4.32	4.45	4.59	4.12	4.34	4.22
Urban	4.37	4.44	4.45	4.57	4.51	4.59	4.59

Source : NSSO

2.7 There are also other areas that are equally important which would require intervention by the government. Since close to 96 per cent of market arrivals in Punjab and Haryana are procured by government agencies, they have been made to bear the cost of the institutional support received from mandis for undertaking MSP operations. This is not the case in most of the other states because of lack of any institutional support. In Punjab and Haryana, the private initiatives by corporate groups to buy directly from farmers had been weak due to regulations on licensing, payment of tax etc. The removal of restrictions in some other states has seen the entry of corporate groups and large trading companies like ITC and Cargill entering business of the purchase and sale of wheat and wheat flour. In Uttar Pradesh, the corporate bodies have been allowed to directly purchase from farmers at any price above MSP. Meanwhile, the domestic market is poised to witness further changes with possible entry of international agencies. The Australian Wheat Board (AWB) has received Government of India's permission to set up a wholly owned subsidiary in India. The Board intends to purchase and sell wheat, rice, maize and other permitted agricultural commodities. The AWB also perceives India as a prospective market for Australian wheat in the medium term and is certain that India would start importing wheat in future. Corporate groups enter the market with the profit motive which determine their operations. They purchase such produce for which they foresee a ready market. During a visit to Madhya Pradesh, the members of the Commission observed that ITC purchases at e-chaupal were restricted to Lok - 1 variety of wheat. Durum wheat was quoted at prices less

than MSP because of poor local demand. At local level, the existence of a corporate purchaser lulled the state government into believing that all wheat would be purchased by private entities. In a scenario, where buying and trading in grain is witnessing the entry of new players, the Commission feels that government, both at central and state levels, have to be vigilant to ensure that farmers get remunerative prices for their produce.

2.8 Thus, the domestic wheat market during the marketing season 2005-06 witnessed more active role of private trade. Due to subdued production of foodgrains in kharif 2004 followed by normal crop of wheat in rabi, there was a considerable demand from trade for grain in the market. Resultantly, procurement was lower than last year in most of the states. Procurement of wheat during 2005-2006 marketing season stood at 14.7 million tonnes (30/5/05), 8.58 per cent lower than the procurement in the corresponding period of 2004-05 and 8 per cent less than the targeted procurement by the Department of Food & Public Distribution at the onset of marketing season. As compared to the previous year, procurement was lower in the states of Punjab by 2.5 per cent at 9.0 million tonnes, Haryana by 11.6 per cent at 4.5 million tonnes, and Uttar Pradesh by 70.6 per cent at 0.51 million tonnes. Punjab, Haryana and Uttar Pradesh accounted for 61.18 per cent, 30.73 per cent and 3.48 per cent in the total procurement of wheat. In Madhya Pradesh however procurement touched a new record of 4.79 lakh tonnes.

2.9 In 2004-05, for the third consecutive year, the offtake of foodgrains remained higher than accretion. Ever since the drought in 2002-03, offtake in subsequent years has been higher than accretion. This is due to increased allocation for BPL, Antyodaya and also to various employment and welfare schemes and also releases for exports. The export was in the nature of stock evacuation process. The offtake of foodgrains during 2004-05 was 41.3 million tonnes as compared to 49.3 million tonnes in 2003-04. Of the total foodgrain offtake of 41.3 million tonnes in 2004-05, the offtake of wheat was 18.3 million tonnes compared to 24.3 million tonnes in 2003-04. From this wheat offtake, 13.0 million tonnes was distributed under TPDS and 5.2 million tonnes under various welfare schemes. Similarly, of the total offtake of 22.98 million tonnes

of rice in 2004-05, 16.4 million tonnes was distributed under TPDS and 6.6 million tonnes under welfare schemes. In recent years, many new welfare schemes have come up. Since TPDS and employment guarantee schemes more or less ensure food security at the household level, the time has now become ripe to re-examine the need for as many as nine welfare schemes. When households are given more grain than they can possibly consume, the excess grain flows to private trade and in turn cause distortions in open market
(Table 2.12)

2.10 The stocks of rice and wheat held by FCI on 1st April 2005 stood at 17.4 million tonnes comprising 13.34 million tonnes of rice and 4.07 million tonnes of wheat. The stocks were higher than the buffer norm of 12.2 million tonnes of rice and 4 million tonnes of wheat by 1.1 million tonnes for rice and less than 0.1 million tonnes for wheat. Stocks are maintained by the government to meet the prescribed minimum buffer stock for food security and for the monthly release of foodgrains for public distribution system and for welfare schemes. Stocks are also maintained to meet emergency situations such as crop failures, natural disasters and market intervention to augment supply to keep prices stable in the open market. The buffer norms were revised in April 2005 based on the recommendations of a Technical Group constituted to lay down stock requirement in the Tenth Five Year Plan. The new norms for stocks are similar to the earlier stock norms which was in place during the Tenth Five Year Plan period. In the case of wheat, there has been no change in the minimum level of stocks at the start of the procurement season in April. However, the minimum level of stocks of wheat on completion of the procurement season on 1st July has been raised to 17.1 million tonnes compared to 14.3 million tonnes required in the earlier norms.
(Table 2.11)

2.11 In the case of rice, the minimum level of stocks has been reduced to 5.2 million tonnes from 6.09 million tonnes for October at the commencement of the procurement season. However, the norm for 1st April has been raised to 12.2 million tonnes as compared to 11.8 million tonnes earlier.
(Table 2.11)

The position with regard to procurement distribution and stocks is given in Table 2 (D) below:-

Table 2 (D) : Procurement, Offtake and Stocks (Central Pool)

Fiscal Year	(Lakh Tonnes)							
	WHEAT				RICE			
	2002-03	2003-04	2004-05	2005-06	2002-03	2003-04	2004-05	2005-06
Opening Stock	260.39	156.45	69.31	40.66	249.12	171.57	130.69	133.41
Procurement	190.55	158.02	167.96	150.00#	164.23	228.28	216.75	203.09
Offtake	249.92	242.93	182.67	180.00	248.53	250.39	229.80	182.40
BPL	63.41	67.74	74.21	68.45*	73.83	90.30	98.60	87.58*
APL	17.98	22.51	33.44	24.64*	12.80	19.74	33.42	21.99*
Antyodaya	16.38	17.83	22.64	18.95*	19.00	23.82	31.94	24.92*
Other welfare	44.13	53.40	41.24	46.25*	69.67	81.61	64.85	72.04*
Open Sale	52.74	9.26	2.39	5.83**	3.87	4.05	0.08	2.07**
Export Sale	54.50	72.20	8.76	0.00	69.35	30.88	0.90	0.60
Carry over stock	201.02	71.54	54.60	10.66	164.82	149.46	117.64	154.10

Source :- Foodgrains Bulletin, April 2005 (and Commission's estimate for 2005-06.)

Ministry of Consumer Affairs, Deptt. of Food & Public Distribution.

* Average of last three years

** Average of last two years

Expected from emerging trend.

2.12 The wheat balance sheet is helpful in understanding the factors leading to the upturn in prices from September 2002 onwards, with decline in available supplies. In 2002-03, the index number of wholesale prices (base 1993-94=100) for wheat for the year averaged 175.7, which was higher by 0.2 per cent than in the previous year. In 2003-04, the price rise was as much as 3.2 per cent. In 2004-05, the price rise was moderated to 1.6 per cent, when the average index for the year was 184.2. However, the price buoyancy was much lower than the overall inflationary trend that existed in the economy. In April 2005, there was a seasonal decline in prices and the index stood at 181.3 (1993-94=100), 0.6 per cent higher than in the previous year at the corresponding time. In the coming months, the prices may rise due to squeeze on supplies. (Table 2.20)

2.13 In April-May of 2005-06 marketing season, the MSP of wheat at Rs.640 per quintal was virtually the ruling price across the markets of Punjab and Haryana. In Rajasthan, the market was more active and the prices in most part

of the state ruled above MSP. The depletion of crop size due to shift in area from wheat to rapeseed and mustard lowered the production resulting in less marketable surplus. This had direct bearing on the MSP procurement in the state for marketing season 2005-06 and it was lowest in the past ten years. In Uttar Pradesh also, the procurement in the marketing year 2005-06 was around one-fourth of the past three years average procurement. One possible reason for this subdued performance of procurement could be the market reform in the state, enabling corporates to purchase directly from farmers with the incentive of market fee exemption, provided these purchases were made at a price not lower than MSP. However, in several markets of the state, prices ruled below MSP. There were some reports that these corporates did not adhere to their commitment of paying MSP to farmers for their purchase of wheat. In Madhya Pradesh also, there were instances of prices of wheat quoted at less than MSP for certain varieties, which required MSP intervention by the state. However, due to lack of vigil on the part of state agencies, the farmers lost on the price front while the procurement also remained subdued. (Table 2.9)

2.14 A number of shortcomings in the price support/procurement system have surfaced in recent years which need immediate correction. First and foremost, MSP should be announced well before the sowing season so that the farmers know in advance the guaranteed price for different crops and plan accordingly. The Commission has time and again emphasised the need for timely announcement of MSP. The situation in this respect improved during 2005-06 marketing season. For example, the Commission submitted its Rabi Report for 2004-05 to be marketed in 2005-06 season on 28.7.2004. The government announced the price on 03.11.2004 which was a marked improvement over the previous years. Timely announcement allows the farmers time for important decision making and enhances government's ability to influence their decisions on crop pattern adjustments. Secondly, the non-price policies should be pursued vigorously to improve productivity, enhance farm efficiency and upgrade quality. Thirdly, excessive fiscal levies on MSP purchase in some states should be rationalized so that levies and prices are uniform across regions. In a market with active interplay of private trade, the buyers preference shifts to the states where levies and taxes are low. In such

market scenario, these levies and taxes may act against farmers interest. Fourthly, there should be wider awareness amongst farmers on quality norms for public procurement and the procedures for quality checks should be realistic and transparent. Finally, the implementation of MSP should be broad based, rather than allowing it to remain confined to a few states.

2.15 The government decided to release wheat for exports from its stocks at BPL issue prices in 2000. From August 2003, the issuance of release orders for wheat export have been stopped, however, the releases on the orders issued in the past were made at the applicable release prices. For the period 1-1-2005 to 30-6-2005, the release price for export of wheat is Rs.9350 per metric tonne which is close to the economic cost. Given the limited scope of exportable surplus in the ensuing season, this release price will also be discouraging the export. However, there had been some imbalance in the releases for exports and actual export of wheat giving apprehension that such releases might have made their way back to the domestic markets as seen in Table 2 (E).

Table 2 (E) : Exports of Wheat

(Million tonnes)

	2001-02	2002-03	2003-04	2004-05
A. Releases for exports by Department of Food	2.7	5.5	7.2	0.88
B. Actual exports	2.6	3.7	4.1	1.7*

* : upto December 2004

Source : Ministry of Food and DGCIS

2.16 While the exports of wheat is constrained by shrinking stocks and rising prices within the country, internationally, there has been plentiful supplies following a record world wheat crop in 2004. This was coupled with generally subdued world import demand which continued to depress international prices. According to FAO's forecast (Food Outlook No.1 April 2005), world wheat production in 2005 stands at 612 million tonnes, 15 million tonnes lower than the record in 2004, but well above the average of the past five years. FAO's

estimate of 2004 crop has been revised upwards to 627 million tonnes which is an all time record. In 2005 as compared to 2004, Asian countries recorded higher output of wheat but it has been lower for the rest of the world. World stocks of wheat for the year ending 2005 is forecast at 164 million tonnes. This represents nearly 4 million tonnes increase in the opening stock levels and constitutes the first expansion of stocks in five years.

2.17 Wheat trade in the current 2004-05 marketing season (July-June) is forecast at 103 million tonnes. This season's large exportable supplies and generally subdued world import demand continued to depress international prices. In March, 2005, the US wheat No.2 (HRW, fob) averaged US\$ 157 per tonne, down by US\$5 per tonne since November, 2004 and also by US\$14 per tonne, or 8 per cent, below the corresponding month in 2004. The EU Commission reintroduced export refunds (subsidies) after a gap of two years. The EU export refunds were initially (in early February) granted at Euro 4 per tonne, but since world prices remained low and Euro was strengthening, it was increased to Euro 6 per tonne and to Euro 10 per tonne in early March. The export refund was brought back to Euro 4 per tonne in the end of March, 2005.

2.18 Wheat futures at the Chicago Board of Trade (CBOT) continued to trade below the previous year's levels. By late March, the July 2005 wheat futures contracts were quoted at US\$126 per tonne, still US\$25 per tonne below the corresponding period in 2004.

BARLEY

2.19 According to Third Advance Estimates of Crop production (23-03-2005) released by the Directorate of Economics & Statistics, 2004-05 has been an exceptional year in which rabi foodgrains touched a new record of 106.36 million tonnes and the production of barley, a minor constituent of rabi foodgrains, too followed the rhythm to rise to a record level of 1.80 million tonnes. This performance was noteworthy, because the production of barley had been declining steadily from 1.68 million tonnes in 1997-98 to 1.42 million tonnes in 2001-02 and further to 1.31 million tonnes in 2003-04. (Table 2.1)

2.20 Barley is grown mainly in Uttar Pradesh and Rajasthan, which together account for around 70 per cent of total area and production in the country. The other states where barley is cultivated on a large scale are Madhya Pradesh, Haryana, Punjab, Bihar and Himachal Pradesh. The crop has been experiencing decline in both area and production in every major state mainly due to its gradual elimination as an item of direct household consumption.

2.21 Barley steeply lost area at about 4.5 per cent per annum in the period 1984-85 to 1994-95. This deceleration had, however, slowed down to 2.8 per cent in the period from 1994-95 to 2003-04. Consequently, the production of barley declined at the rate of 1.4 per cent per annum in the period for 1984-85 to 1994-95 and at 1 per cent per annum in the period 1994-95 to 2003-04. The ICAR and its affiliated institutions have developed a number of high yielding varieties of barley, suitable for the malt and brew industry. Annually about 25 varieties are taken up for breeder seed production to fulfill the demand of various indenters through the Department of Agriculture and Cooperation. As a consequence, the yield of barley has witnessed increase from 1275 kgs in TE 1984-85 to 1751 kgs in TE 1994-95 and to 2049 kgs per hectare in TE 2003-04. However, the yield growth, which was impressive at over 3.2 per cent per annum in the period 1984-85 to 1994-95, has decelerated to 1.8 per cent per annum during 1994-95 to 2003-04. This calls for a renewed thrust in boosting the yield of barley. Since this crop is now catering to the raw material needs of the malt and beverage industry in increasing quantities, and is likely to do so in future, an all round cooperation of the private industrial sector should be enlisted for mutual benefits of both the cultivators and the industry. (Table 2.2)

2.22 Barley is consumed as foodgrain, feedgrain and an intermediate product mainly as malt in the drinks and beverage industry, but detailed statistics on its diversified usages are not available. Based on NSS 55th Round (1999-2000), the Commission has estimated the household consumption to be about 0.5 million tonnes as compared to a production level of around 1.40 million tonnes. The balance goes to manufacture of beer and other industrial uses, apart from seed and animal feed. In recent years, the fact that there has been excess production/supply of barley vis-à-vis demand, is borne out by the movement of

prices of barley, represented by its index number of wholesale price (WPI base 1993-94=100). Price of barley declined in large measure in 3 out of the past 5 years. During 2003-04, WPI of barley declined by 7.4 per cent over 2002-03. In 2004-05, prices recovered to some extent by 5.1 per cent and the average index for the year stood at 188.6. The WPI for barley in April 2005 stood at 190.1 as compared to 172.2 in April, 2004 i.e. higher by 10.4 per cent. However, with the bumper crop coming into the market from April 2005 onwards, prices of barley are likely to remain subdued in the rest of the year. (Table 2.20)

2.23 In some earlier reports, including that for the 2000-2001 season, the Commission had reported that the open market prices of barley in major producing states generally ruled above the MSP and that this obviated the need for any price support operations. The situation has changed since 2001-02 marketing season, since the supplies had been in excess of demand. Neither FCI nor the State agencies had intervened to provide price support to this crop as mentioned in the last three rabi reports. As a consequence, open market prices of barley in many markets of the country ruled even below the MSP of Rs.525 per quintal during 2004-05 marketing season. Based on the recommendations of the Commission, the government fixed the MSP of Barley at Rs. 540 for 2004-05. The price ruled below the MSP at several places. The Commission is dismayed to note that the government failed to streamline the arrangement for price support for barley during 2005-06 marketing season after announcing its MSP. (Table 2.9)

2.24 The volume of world trade of barley is quite sizeable at around 16 million tonnes (FAO, Food Out Look No.1 April 2005), most of which is imported by developing countries. Although, global price quotes on barley is not available, traded prices of barley cannot be much different than those of maize or sorghum. In March 2005, prices of both sorghum and maize (US NO.2 yellow) averaged US \$ 98 per tonne FOB about 34 dollars lower than in March 2004. The FAO (Food Out Look No.1 April 2005) expects coarse grains prices generally to be weak and below the levels in the previous season, against a background of ample supplies of wheat as well as coarse grains. India is a marginal player in the world barley scenario with less than 2% share in production and acreage.

Though, barley is moderately traded commodity with about 15 percent of the world production being traded, India's presence in this respect is negligible. Of late, there is some export of barley in recent years, but export competitiveness appears to be weak. Interestingly, almost half of 20 million tonnes of the total barley import in the world during 2003 was destined to three of the Asian countries namely China, Japan and Saudi Arabia.

2.25 Given the scope of value addition and processing and the trade opportunity for Indian barley, the Commission recommends that **government should strengthen the price support operations for barley and should formulate specific programme for integration of this crop with the value chain and export.**

Rabi Pulses

2.26 India's pulses sector has not grown much in recent years, in terms of either area or production. During the past one decade or so, the area under total pulses remained stagnant at about 23 to 24 million hectare and the peak level of production never crossed 15 million tonnes, while in the drought years of 2001-02 and 2002-03, the production was about 11 million tonnes. According to the Third Advance Estimates by the Directorate of Economics & Statistics, the total production of pulses in 2004-05 was 15.01 million tonnes, comprising 5.47 million tonnes of Kharif pulses and 9.54 million tonnes of rabi pulses. Even though, pulses have been one of the thrust areas in the agricultural development agenda since 1980's when the Technology Mission on Oilseeds and Pulses (TMOP) was initiated and National Pulses Development Project (NPDP) was launched in the year 1990, the productivity of pulses has not shown any significant improvement. Also, the per capita domestic availability of pulses has declined sharply over time and as a result, dependence on import has risen. (Table 2.1)

2.27 Rabi pulses account for about 50 per cent of total pulses area and about 59 per cent of total pulses production. This share has more or less remained stable in the past few years. During 2004-05, the rabi pulses production is expected to be 9.54 million tonnes, about 8.7 percent higher than last year and

3.7 per cent higher than the target of 9.2 million tonnes fixed for the year, but about 3 per cent lower than the peak production of 9.77 million tonnes achieved in 1998-99. (Table 2.1)

Gram

2.28 Gram occupies a dominant place in the pulses economy with nearly 30 per cent share in the acreage and 39 per cent share in production. Among the rabi pulses nearly two-third of the production is contributed by gram. The production of gram has been hovering around 5 million tonnes in the past ten years. According to the Third Advance Estimates, the gram production during 2004-05 is estimated at 6.3 million tonnes which is about 8.8 per cent higher than 5.8 million tonnes produced during 2003-04. Though the production level is the best in the past five years, yet it is lower than 6.8 million tonnes achieved during 1998-99. Incidentally, the only time when gram production exceeded seven million tonnes in the country was more than four decades back in 1958-59.

(Table 2.1)

2.29 The area under gram has shrunk by nearly 30 per cent from the coverage of about ten million hectares in early sixties. During 2003-04, the gram area was 7.12 million hectare i.e. about 16 per cent lower than peak area coverage during the decade of nineties. Over the years, not only the area under gram but also its productivity has shown a declining trend, as indicated below. Also the relative importance of states in the gram production has significantly shifted in the past ten years. (Table 2.1)

Table 2 F : Annual Compound Growth Rates of Gram Area, Production and Yield (1995-96 to 2003-04)

States	Irrigation % 2000-01 ⁴	Growth Rate (% per Annum)			Yield (kg/ha) TE 2003-04	Share in production %	
		Area	Prod.	Yield		TE	TE
						1995-96	2003-04
Uttar Pradesh ¹	14.8	-2.59	-0.96	1.67	963	15.72	15.40
Bihar ²	8.4	-8.53	-7.78	0.83	1002	2.38	1.32
Madhya Pradesh ³	44.1	1.06	1.35	0.30	850	39.21	46.20
Rajasthan	50.8	-6.73	-7.08	-0.38	703	19.57	11.51
Maharashtra	34.9	1.32	0.49	-0.82	580	8.17	8.98
Karnataka	10.9	4.44	4.37	-0.07	481	3.02	4.49
West Bengal	11.3	8.63	7.76	-0.80	884	0.43	0.83
Haryana	32.6	-15.06	-17.51	-2.88	819	7.48	1.70
Punjab	35.1	-12.52	-12.36	0.18	910	0.32	0.12
All India	30.9	-0.97	-0.70	0.27	797	100.00	100.00

Notes: 1. Including Uttaranchal 2. Including Jharkhand 3. Including Chattisgarh

4. Source : Agricultural Statistics at a Glance 2004, Directorate of Economics and Statistics, Ministry of Agriculture, Govt. of India

2.30 The share of Rajasthan and Haryana in the total production during TE 1995-96 was 19.6 and 7.5 per cent (Table 2 F). Between 1995-96 and 2003-04 the gram acreage declined in these states by annual compound rate of 6.7 per cent and 15.1 per cent respectively and the gram productivity also declined in these two states by an annual rate of 0.4 per cent and 2.9 per cent respectively. As a result, production of gram in Rajasthan and Haryana decelerated sharply at the annual rate of 7.1 per cent and 17.5 per cent respectively and their respective share in the total gram production in the country shrunk to 11.5 per cent and 1.7 per cent. Both these states incidentally had sizeable area under gram with protective irrigation. The area under gram in Bihar also decelerated at a faster annual rate of 8.5 per cent during the corresponding period even though productivity level was 25 per cent higher than national average with positive growth trend. However, the gram acreage in Karnataka, a low productivity state, increased by 4.4 per cent per annum during the corresponding period, thereby improving its share in country's production from 3 per cent to 4.5 per cent from 1995-96 to 2003-04. The gram acreage and production improved in Madhya Pradesh during this period and its share in the country's gram production substantially increased from 39.2 per cent to 46.2 per cent. While Punjab

remained unattractive domain for gram cultivation, there had been positive response to its cropping in West Bengal. Uttar Pradesh retained its share in the total production with 15 per cent, despite decreasing trend of area but increasing trend of productivity. Thus, in the past 10 years the concentration of gram production has shown a distinct change which needs to be further studied and synthesized for formulating the policy for augmenting its production and bridging the supply-demand gap in the pulses economy in the country. (Table 2.2)

2.31 The susceptibility of gram crop to the insects and pests like pod borers, cut worms, aphids etc. and to diseases such as wilt, rust, stem rot, root rot, bacterial blights etc. besides the weather conditions render its cultivation a risky proposition for farmers. The agricultural research system in the country has not been able to effectively address these problems faced by gram cultivators. The non-availability of high yielding variety of seeds is one of the major constraints in pulses economy in general and particularly in case of gram. The seed replacement rate is abysmally low in the major producing states. Despite the claims made by the ICAR on development of disease resistant HYV of gram with potential yield of 18 to 20 quintals per hectare, the gap between research achievements and field conditions persists.

2.32 Notwithstanding a large gap in the country's technology transfer programme, certain varieties of gram from unconfirmed sources appear to be quietly entering in the production system. The Commission have recently observed that farmers in certain parts of Madhya Pradesh have started cultivating a variety of gram, termed by local farmers as "*Dollar Chana*". This variety, in the traditional semi arid gram producing regions of the state is reportedly yielding about two times the yield of varieties normally sown and is fetching more than two and half times the price of ordinary gram. As a result, the return per hectare in the cultivation of gram is expected to be higher than any alternative crop choice in foodgrains and oilseeds in the country. Notwithstanding the genetic origin, the quiet inroads made by "*Dollar Chana*" in the cropping system demonstrate entrepreneurship of Indian farmers in an environment of institutional inertness to deliver viable technology.

2.33 With upward revision in the official estimates of pulses production during 2004-05 by 1.34 million tonnes from Second Advance Estimates to Third Advance Estimates of the Directorate of Economics & Statistics, the assessment of net supply of pulses, (net of imports/exports and seed feed and wastage) made in the Report on Price Policy for Kharif Crops 2005-06, submitted by the Commission to the government on 2nd March, 2005, improves to 14.31 million tonnes. This level is 8 per cent higher than the average pulses supply for TE 2003-04. The augmentation of supply in 2004-05 is substantially contributed by good production of gram. The gross availability of pulses during 2004-05 is also likely to be marginally higher than the behavioristic demand projection of 15.74 million tonnes, made by the Working Group on Demand and Supply Projection for Tenth Five Year Plan. Thus gram experienced the pressure of supply, like some other crops in the recent past such as cotton and rapeseed and mustard. The constraints in the marketing system to manage such pressure resulted into erosion of prices to the disadvantage of farmers. (Table 2.1)

2.34 The gram prices in the wholesale market had already been in a prolonged depressive phase. The average wholesale price index (WPIbase 1993-94 =100) of gram during 2001-02 was 170.3. Since then, it had been declining over the years and for 2004-05, it fell to 137.1. The annual fall in WPI in 2002-03, 2003-04 and 2004-05 was 12.1 per cent, 4.9 per cent and 3.7 per cent respectively. While the depressive trend of prices was evident for most of the pulses, the magnitude of slide in prices in case of gram was much more pronounced. The impact of lower price in the market was directly borne by the farmers. The gram prices in most of the markets in the producing states ruled below MSP. At the onset of marketing season 2005-06, the wholesale price of gram ruled around Rs.1300 per quintal as against the MSP of Rs.1425 per quintal in markets of major gram producing states. The international prices of gram however have been ruling firm. According to NAFED, the gram prices in April 2003 were 300/320 USD/Tn (C&F). After falling to 280/320 USD/Tn in April 2004, the international prices recovered to 300/310 USD/Tn by April, 2005. Thus, the domestic gram prices were not aligned with the trend of international prices.

(Table 2.21)

2.35 There was thus need for proactive market intervention for defending the Minimum Support Prices of gram. National Agricultural Cooperative and Marketing Federation (NAFED) is the designated agency for procurement of pulses and oilseeds in the event of prices falling below MSP. Though the preparation for procurement of gram was undertaken earnestly by NAFED by opening as many as 551 centres for procurement yet the level of market intervention this year was highly inadequate. The responsibility of market intervention during the current rabi season was compounded by the equally serious market glut situation of rapeseed and mustard. Till 26th May, 2005, NAFED procured only 1.07 lakh tonnes of gram, because of lack of financial resources. The additional allocation received by NAFED in May, 2005 was consumed in settlement of dues for procured rapeseed and mustard and the producers of gram were left in lurch. The asymmetry in management of surplus supply of gram is evident from the fact that the level of MSP intervention during 2004-05 was about 60 per cent lower than last year, whereas the crop size this year was 9 per cent higher. Further, the distribution of gram procurement was highly skewed with more than 85 per cent procurement by NAFED made in Madhya Pradesh. Another 10 per cent gram procurement was made in Chhattisgarh, where the crop size is less than 2 per cent in the country, whereas, in Rajasthan, the second largest producer of gram, the market intervention was symbolic as only 4355 tonnes gram was procured in MSP operation. (Table 2.10)

2.36 While the gram production in the country have suffered this year on price front, the consumers also appear to be no gainers. The retail prices of gram in most of the centres, as reported by the Ministry of Consumer Affairs, are higher than last year, indicating that the market margins have been higher this year. Such paradoxical behaviour of commodity supply chain reinforces the concern of the Commission expressed in the Report on the Price Policy for Kharif Season 2005-06 that vulnerability of producer at the receiving end of the non remunerative price is an increasingly recurring phenomenon and hence Government should formulate an appropriate, albeit integrated policy for surplus management.

Masur (Lentil)

2.37 Masur (Lentil) is an important rabi pulse crop next only to gram. Its share in the acreage and production of total rabi pulses is about 12 per cent, whereas in overall pulses production, its share is about 6 per cent. In the global context, India is the largest producer of masur. During 2004, about 25 per cent of 3.8 million tonnes world's masur production was contributed by India from about 35 per cent of 4.1 million hectare harvested area in the world. Besides, the important position held by Indian lentil crop in domestic economy and global profile of lentil production, it has another distinctive significance of holding net exportable surplus, in an otherwise import dependent pulses economy. (Table 2.1)

2.38 Masur is widely grown in the country. Uttar Pradesh, Madhya Pradesh and Bihar are the leading producing states with about 42 per cent, 35 per cent and 13 per cent share in acreage respectively. Unlike other pulses, the trend of area and production of masur has been positive in the last decade. The area under masur was 0.97 million hectares in TE 1984-85, which increased to 1.18 million hectares in 1994-95 and 1.41 million hectares in TE 2003-04. During 1994-95 to 2003-04, the area under masur recorded an annual growth of 2.01 per cent, a trend in contrast to negative growth of 0.28 per cent per annum of the area of total pulses. It is also remarkable to note that the growth of area under masur was witnessed in all the three major producing states. While in Uttar Pradesh, masur area in the corresponding period increased by an impressive rate of 2.88 per cent per annum, the area increase in Madhya Pradesh and Bihar was at 1.44 per cent and 1.19 per cent per annum respectively. Some other states like West Bengal and Rajasthan also have shown encouraging response to masur cultivation in the recent years. (Table 2.2)

2.39 Owing to impressive growth of area, the masur production has been increasing. During 2003-04, the production of masur stood at 1.04 million tonnes. This is almost double the level of production during eighties. The major producing states viz. Uttar Pradesh, Madhya Pradesh and Bihar contributed about 49 per cent, 13 per cent and 15 per cent in the production basket respectively, During 1995-96 to 2003-04, the production of masur in the country

registered the annual growth of 3.17 per cent, as against the negative production trend of total pulses. The trend of masur production growth in Uttar Pradesh had been an impressive at 4.47 per cent per annum in the corresponding period. Bihar also maintained robust growth of 2.67 per cent per annum, but in Madhya Pradesh, the trend of production was negative. (Table 2.6)

2.40 In 2003-04, masur productivity in Uttar Pradesh and Bihar was 907 kg per hectare and 892 kg per hectare respectively, higher than all India productivity of 741 kg per hectare. The productivity in these two states maintained a growth of 1.54 per cent and 1.47 per cent per annum respectively during 1995-96 to 2003-04, and consequently, all India productivity also registered a growth of 1.08 per cent per annum during this period. But the productivity level of masur in Madhya Pradesh is nearly half that of national average and its growth trend is negative. Some other states like Rajasthan and West Bengal, where masur area and production is increasing, their productivity levels are either better or at par with national average. Moreover, masur productivity has remained consistently better than the total pulses productivity in the country and in case of Uttar Pradesh and Bihar, it is close to the average world productivity. (Table 2.6)

2.41 The domestic production of masur gets positive response from the market, both from trade as well as prices. Unlike several other agricultural commodities, the masur prices have remained consistently buoyant in the past three years. The average Wholesale Price Index (WPI – base 1993-94=100) of masur during FY 2001-02 was 203.9. During 2002-03 and 2003-04, it recorded annual increase of 5 percent and 9 percent respectively. During FY 2004-05 the average WPI remained firm at 234.8. Although, in February and March 2005, WPI marginally declined to 230.4 and 228.3, it could be attributed to seasonal price fluctuations at the on set of new crop arrival. The wholesale price of masur in the marketing season of 2005-06 has generally ruled above the recommended MSP of Rs. 1525 per quintal and the international prices according to NAFED, also remained firm at last years level of USD 400-450 per tonne(C&F). Thus, the market forces could hold the prices of masur (lentil) and there was no necessity for procurement agencies to enter the market for MSP operations. The

commercial operations of NAFED in purchase of masur was also subdued during 2005-06 marketing season. (Table 2.21)

2.42 The domestic masur market was heralded by domestic demand and improved trading performance. India is the net exporter of masur. During 2003-04, India exported 83 thousand tonnes of masur at unit value of Rs. 21.01 per kg as compared to import of 38 thousand tonnes at unit value of Rs. 19.62 per kg. Although the masur export has gradually declined from the peak level of 191 thousand tonnes in 2000-01, it is likely to improve during 2004-05, as about 99 thousand tonnes export of masur has already taken place in the first nine months (April –December) of the year. This is about 35 percent higher than the export in the corresponding period of last years. Also, the import of masur has been declining in recent years. Masur imports had invariably been at the lower unit value than exports, but the gap between the imported and exported unit values of masur had been narrowing. This factor in conjunction with augmented domestic supply of masur is likely to improve the competitiveness of Indian masur (lentil).

2.43 Globally, masur (lentil) has high trade intensity with nearly one third of the global production being the trade surplus. India is the fifth largest exporter of masur after Canada, Australia, Turkey and USA. However, the market access of Indian masur is not wide spread. Nearly fifty percent of Indian masur is exported to Bangladesh followed by Sri lanka and Nepal. Indian masur has also been consistently exported to Gulf countries but its presence in European and Latin American market is negligible. It is note worthy that Pakistan is a major importer of masur. With the strengthening of the trade with Pakistan, Indian masur can foresee an expansion of its marketing opportunity. Against the background of positive production response, comparative advantage in masur production and trade prospects, the Commission recommends that **government should provide all support and facilitation for enhancing production and market integration of masur. An exclusive masur export promotion programme should also be taken up at the earliest for harnessing the emerging market opportunities abroad.**

Rabi Oilseeds

2.44 The oilseeds crops in the country have performed relatively better in the last two years. The peak level production of nine major oilseeds moved from 24.38 million tonnes in 1996-97 to 24.75 million tonnes in 1998-99 and 25.29 million tonnes in 2003-04. But the vulnerability of these semi arid crops to subdued monsoon was exposed once again during 2004-05, when Kharif oilseeds production declined by 12.4 per cent to 14.69 million tonnes. However, the total oilseed production during 2004-05, according to Third Advance Estimates of DES, was expected to be 25.15 million tonnes, close to last year's record production. This feat could be possible due to remarkable performance of rabi oilseeds, the production of which was likely to cross 10 million tonnes mark in 2004-05, posting an increase of 22.8 per cent over last year's rabi oilseed production. (Table 2.1)

Rapeseed & Mustard

2.45 Rapeseed & Mustard is the major oilseed crop grown in the rabi season. The peak level of production of rapeseed and mustard moved from 60.00 lakh tonnes in 1995-96 to 66.60 lakh tonnes in 1996-97 and 76.40 lakh tonnes in 2004-05. In the remaining years, it ranged from 38.80 lakh tonnes in the drought year of 2002-03 to 57.90 lakh tonnes in 1999-00. Besides, the abnormality of weather, some other factors such as spread of dropsy had hampered the sentiments of its area coverage and production. However, there was a definite turn around in the rapeseed/mustard economy during 2004-05. The production of 76.4 lakh tonnes of rapeseed and mustard in 2004-05 season (Third Advance Estimates of Directorate of Economics & Statistics) surpassed the previous record production of 66.6 lakh tonnes achieved in 1996-97. As a result, rapeseed/mustard emerged the largest segment amongst the various oilseeds produced in the country with 30 per cent share in the seed production and over 35 per cent share in terms of oil content. This production milestone of rapeseed/mustard, 23 percent higher than last years production, had been instrumental in sustaining the total oilseeds production during 2004-05 nearly at the last year's record level. (Table 2.1)

2.46 The area, production and yield of rapeseed/mustard in eighties showed substantial growth due to the availability of new varieties of seeds and expansion in irrigation facilities. The respective compound growth rates of 4.7 per cent, 7.3 per cent and 2.4 per cent for area, production and yield respectively of rapeseed/mustard during the period 1984-85 to 1994-95 was impressive but this growth momentum could not be sustained in the later period. The area and production growth receded to 2.3 per cent and 0.5 per cent per annum respectively during 1994-95 to 2003-04, despite positive growth of productivity at 1.8 per cent per annum. However, this scenario witnessed a change in 2004-05. The area and production went up in major rapeseed/mustard seeds producing states of Rajasthan, Haryana, Uttar Pradesh and Gujarat. The area in Rajasthan, the leading rapeseed/mustard seed producing state in the country, increased by 5.5 lakh hectares from 20.63 lakh hectares in 2003-04 to 26.14 lakh hectares in 2004-05, and with yield also improving marginally, the production went up from about 27 lakh tonnes in 2003-04 to 35 lakh tonnes in 2004-05. The production and area under rapeseed and mustard also increased significantly in Haryana. (Table 2.2)

2.47 The progressive increase in its acreage and production in 2003-04 and in 2004-05 is the reflection of farmers' renewed preference to rapeseed and mustard over other competing crop options of the season in the core production regions. The attraction to higher price regime, expected from the substantially increased MSP for rapeseed and mustard, triggered the farming response. Resultant crop area shift to rapeseed/ mustard was indeed in consonance with the objective of bridging demand supply gap in edible oil economy and for sustainable agricultural development through crop diversification. However, despite a healthy trend of productivity increase in rapeseed and mustard, which was by far best as compared to foodgrain crops and other oilseeds during the period 1994-95 to 2003-04, the average national yield during 2003-04 at 1151 kg per hectare was well below the world average of 1540 kg per hectare. In some of the progressive states like Haryana and Gujarat, the average yield during 2003-04 was of the order of 1500 kg per hectare. But in several other states, the rapeseed yield was well below the national average. There has been wide disparity in the application of farming technology in the country causing inequities

in the overall production system. The ICAR claimed that it has developed area specific high yielding, rich in oil content and pests and disease resistant varieties of rapeseed/mustard seed, the yield of which varies between 15 and 24 quintal per hectare with oil content as high as 40 per cent in some of the varieties. However, the farmers during their interaction with the Commission complained of non-availability of quality seeds. Therefore, the yield potential of rapeseed/mustard should be harnessed with focussed programme for high yielding varieties, seeds multiplication, certification and distribution to the farmers at a reasonable price.

2.48 The prices of rapeseed and mustard had a cyclical trend of high and low in recent years. Its average WPI for the year 1998-99 climbed to 163.6 registering an increase of 40 per cent over the previous year. In subsequent two years, wholesale prices declined by 15 per cent per year, pulling down the index to 118.0 in 2000-01. Thereafter, the trend of prices of rapeseed/mustard seeds as well as rapeseed/mustard oil reversed upward during 2001-02, 2002-03 and 2003-04. The wholesale price index of rapeseed/mustard increased by 7.4 per cent in 2001-02, 13.1 per cent in 2002-03 and 28.6 per cent in 2003-04, whereas the respective rise in rapeseed/mustard oil in the same years was 8.0 per cent, 21.7 per cent and 31.6 per cent. The WPI of seeds climbed to 184.3 in 2003-04. The indices of seeds as well as oil thereafter showed a decline in 2004-05 due to higher production of rapeseed/mustard seeds. The wholesale price index of oilseeds and oil in 2004-05 showed a respective decline of 6.2 per cent and 8.5 per cent respectively. The signals of supply pressure due to better crop prospects during 2004-05 were picked up by the market fairly in advance and WPI started slipping from 182.2 in November, 2004 to 162.1 in April 2005, a decline of 11 per cent in just five months. (Table 2.2)

2.49 In recent years, the Commission recommended a substantial increase in the MSP of oilseeds and pulses in order to induce the farmers to shift area from unsustainable rice-wheat cropping system to oilseeds and pulses. The MSP of rapeseed/mustard was increased by Rs. 270 per quintal to Rs 1600 in 2003-04 and by another Rs 100 to Rs. 1700 per quintal in 2004-05. The farmers responded positively to the signals of increase in MSP. The area under

rapeseed/mustard crop increased by 8.43 lakh hectares from 45.44 lakh hectares in 2002-03 to 53.87 lakh hectares in 2003-04. The shift in area from wheat to rapeseed and mustard, noticed in Rajasthan, was the clear indication that farmers were sensitive to the issue of sustainability and water use efficiency. In anticipation to high production, prices of rapeseed and mustard started falling from December, 2004/January, 2005 onwards. According to NAFED, the wholesale prices of mustard in Rajasthan which were in the range of Rs. 1820-1850 per quintal in November 2004 declined to Rs. 1760-1780 in December, 2004. The prices ranged between Rs. 1705-1800 per quintal in January, 2005. With the arrival of new crop in the month of February/March 2005, the wholesale prices fell below the MSP ranging from Rs. 1630-1670 per quintal in February, 2005 and further to Rs. 1500-1600 per quintal in March, 2005 in the mandis of Rajasthan. The Directorate of Economics and Statistics data also revealed a similar trend. The wholesale prices recorded at Rs. 1450 per quintal in March, 2005 in the Hapur and Hathrus mandis and Rs.1325 per quintal in Gonda mandi in U.P were much below the MSP. (Tables 2.9 & 2.28)

2.50 NAFED, the sole agency of the Central Government carrying out the price support operations in the event of prices of oilseeds and pulses falling below MSP, intervened in the market to stabilize the prices. It procured about 20.19 lakh tonnes of rapeseed/mustard seeds under the price support scheme (PSS), of which 13.83 lakh tonnes (as on 26.5.2005) were in the state of Rajasthan alone. Although NAFED's interventions helped in improving the prices to some extent, the market prices remained below the MSP. In the absence of NAFED's intervention in the market, the prices might have fallen further. (Table 2.10)

2.51 The Government of India arranges funds for procurement operations under PSS for NAFED by recommending cash credit limit to the Reserve Bank of India (RBI). In 2004-05, the NAFED was given credit limit of Rs. 1631 crores against 100 percent government guarantee which included Rs. 1423 crores for carrying out PSS operations for rapeseed/mustard seed. With the said credit limit, it was possible for NAFED to procure just about 8 lakh tonnes of rapeseed/mustard seeds. However, the NAFED had to continue with procurement operations beyond 8 lakh tonnes due to higher production and the

market prices ruling below MSP. It created problems not only for NAFED but also delayed payments to farmers due to non-availability of sufficient funds with NAFED. The problems of NAFED got further augmented due to pressure of procurement of other rabi crops viz. gram and safflower. After exhausting all its funds, NAFED suspended its procurement operations on 7th May, 2005. The NAFED required additional funds to resume its marketing operations. NAFED could get credit limit of Rs. 2000 crores from SBI led consortium of banks against hypothecation of its stock and on the basis of the 'Comfort Letter' of the Government of India. Further, funds to the tune of Rs. 500 crores have been arranged from NCDL. NAFED, as on 3rd June, 2005, has procured 20.66 lakh tonnes of rapeseed/mustard. In view of the fact that NAFED on account of limited funds at its disposal cannot undertake large-scale price support operations, the Commission recommended in its previous reports that the government should set up a Revolving Fund for NAFED to enable it to undertake MSP operations. The diversification strategy of inducing farmers to shift their cropping pattern in favour of oilseeds and pulses might not succeed in the absence of elaborate arrangements for procurement of oilseeds and pulses in the event of prices falling below MSP.

2.52 The government has allowed futures trading in rapeseed/mustard seeds through National Multi Commodity Exchange since November, 2003. The spot price of rapeseed/mustard seed for delivery at Alwar exchange, after remaining below the MSP in March and April, 2005 moved above MSP after 10th May, 2005 due to procurement operations undertaken by NAFED in different states. The spot price on 31st May, 2005 for delivery at Alwar was Rs. 336.90 for 20 kg. The futures prices as contracted through National Commodity and Derivatives Exchange Ltd. (NCDEX) on 31st May, 2005 for deliveries in the month of July, August and September 2005 were quoted in the range of Rs. 345.15 to Rs. 346.65, Rs. 347.55 to Rs. 349.45 and Rs. 350.35 to Rs. 351.85 for 20 kg. This gives an indication that the prices of rapeseed/mustard seed may not fall below MSP in the coming months, though farmers may not necessarily benefit from higher futures prices due to their low holding capacity and lack of awareness.

2.53 The export of excess production of rapeseed/mustard seeds is not feasible because of the international prices ruling much below the domestic prices of rapeseed/mustard seeds as well as of oil. However, import of rapeseed/mustard seed or oils is not foreseen as the international prices of rapeseed/mustard seeds and oil (Source : NAFED) were Rs. 11704 and Rs. 29128 per tonne respectively in March,2005 and the landed cost of seeds as well as oil is not competitive after levy of import duty of 30 percent and 75 per cent respectively. Still the domestic price of rapeseed and mustard was not insulated from the edible oil imports as the overall supply through imports of other edible oil was substantially higher and there was not enough policy intervention to safeguard the domestic producers delivering record production. The adverse import impact on prices of rapeseed/mustard seeds pushing it below MSP caused hardship to farmers as well as put extra pressure on procurement machinery of the government.

2.54 Since the imported edible oils enjoy price advantage over the domestic prices due to various factors, the trade liberalisation enabled the import of edible oils to increase substantially from 1 to 5 lakh tonnes in early nineties to more than 40 lakh tonnes in 1999-2000, and 53 lakh tonnes worth Rs 11683 crore in 2003-04. The latest available data of DGCI&S Kolkata have recorded the import of 39.60 lakh tonnes of edible oils amounting to Rs.9563 crores between April, 2004 to February, 2005 which are still very high. The international prices of most of the edible oils were thirty to forty percent lower than last year in the beginning of year 2005, neutralizing the border protection available from prevailing import duty. There was no policy intervention to strengthen the tariff protection, in the wake of bumper crop of rapeseed and mustard. This had affected the domestic prices of oilseeds adversely. Thus, there was an urgent need to increase the rate of import duty in respect of crude and refined palm oil/palmolein which at present are 80 per cent and 90 per cent respectively, given the ample cushion available in the WTO binding rate of 300 percent. The Commission feels that to make the diversification strategy in favour of oilseeds a real success, there is urgent need for checking unabated flow of imported edible oils. The Commission, therefore, recommends that **government should review its import policy on edible oils and increase import duty on crude and refined palm**

oil/palmolein significantly so as to keep the domestic prices of oilseeds well above the MSP.

2.55 Lower demand for the rapeseed/mustard seeds is also on account of inadequate number of processing units. Despite rapeseed/mustard being used as a spice/condiment for seasoning dishes and pickles, the demand for rapeseed/mustard seeds is highly dependent on the requirement of processing units. This fact was observed by the Commission during its visit to Rajasthan mandis where only the representatives of oil mills were participating in auction. In fact, the State Governments of major oilseeds producing states should assess the present capacities of processing units and take necessary steps to create new capacities or enhance the present capacities if required.

SAFFLOWER

2.56 The production of safflower, which is a rainfed crop, has been fluctuating from year to year. After reaching the peak level of 4.5 lakh tonnes in 1996-97, the production of Safflower declined substantially to 1.2 lakh tonnes in 1997-98 then rose to 2.4 lakh tonnes in 1998-99 and 2.6 lakh tonnes in 1999-2000 and again came down to 2 lakh tonnes in 2000-01 and after remaining stable at 2 lakh tonnes in 2001-02 declined to 1.8 lakh tonnes in 2002-03 and further to the lowest level of 1.3 lakh tonnes in 2003-04. The production of safflower seeds (Third Advance Estimates of Directorate of Economics and Statistics) estimated at 1.62 lakh tonnes for 2004-05 was slightly better than last year's production of 1.3 lakh tonnes. The decline in production of this crop may be attributed to a sharp decline in area under this crop and a fall in productivity. It is mainly grown in Maharashtra and Karnataka as these two states account for about 95 percent of production. The area under this crop has declined considerably in both these states from 5.0 lakh hectares in 1996-97 to 2.34 lakh hectares in 2003-04 in Maharashtra and from 1.78 lakh hectares to 0.95 lakh hectares in Karnataka. The yield per hectare of this crop has also gone down in both the states from 6.38 quintal in 1996-97 to 3.46 quintal in 2003-04 in Maharashtra and from 6.82

quintal to 4.32 quintal in Karnataka. The decline in productivity of safflower might have compelled farmers to shift from safflower cultivation to other alternate crops. (Table 2.1 & 2.8)

2.57 An analysis of growth of area, production and yield of safflower during the period ranging between 1984-85 and 2003-04 showed a declining trend. The area declined at a compound rate of 0.9 percent during the period 1984-85 to 1994-95 and 7.7 per cent during 1994-95 to 2003-04. Similarly, the compound rate of decline recorded in case of production was 0.9 percent during 1984-85 to 1994-95 and 9.48 percent in 1994-95 to 2003-04. The yield showed a compound rate of decline of 1.9 per cent during 1994-95 to 2003-04. The decline in growth rates of area, production and yield has occurred despite safflower oil being rich in polyunsaturated fatty oil which is considered to be good for the heart. Further, the farmers not responding favourably to a significant increase in the MSP of safflower seeds by the government becomes a cause of concern. (Table 2.2)

2.58 The decline in production of safflower seeds could be largely attributed to decline in area in recent years. Also, safflower has been susceptible to many pests and fungal diseases like wilt, rust, aphids etc. thereby affecting yield. Though the ICAR claimed to have developed some varieties giving a yield of 15-17 quintal per hectare and more tolerant to one or the other pests and diseases, the production and productivity showed a decline which may be due to the fact that these varieties were not made available to the farmers or they were too costly. The availability of quality seed is the most crucial input and key to productivity growth. The scientists at ICAR, SAU and research institutions should make sincere efforts to develop new high yielding varieties of seeds and provide good quality seeds in sufficient quantities to the farmers at a reasonable price.

2.59 The wholesale price index of safflower increased successively during 2001-02, 2002-03 and 2003-04. Compared to an average annual increase of 6.4 per cent, 16.4 percent and 11.0 per cent in the oilseed group in 2001-02, 2002-03 and 2003-04 respectively, a much more steep increase of 14.5 per cent, 16.8 per cent and 25.5 per cent was recorded in case of safflower. The wholesale

price index of safflower placed at 143.1 was lower by 36.2 points than 179.3 recorded during same month of last year. The average fall in wholesale price index of safflower in 2004-05 was 8.9 percent as against an increase of 1.8 percent recorded in case of oilseed group as a whole. (Table 2.30)

2.60 In a strategic move to induce farmers to shift cultivation in favour of pulses and oilseeds, the government increased the Minimum Support Price of safflower seeds by Rs 200 from Rs.1300 per quintal in 2002-03 to Rs. 1500 per quintal in 2003-04 and further by Rs. 50 to Rs. 1550 per quintal in 2004-05. The market prices of safflower seeds, however ruled much below the MSP declared for 2004-05 season. According to the Directorate of Economics and Statistics, the wholesale price of Rs. 1525 per quintal recorded in December, 2004 at Jalna mandi of Maharashtra declined to Rs. 1411 per quintal in February, 2005 and further to Rs. 1325 per quintal in March, 2005. The position was much worse in Karnataka. The wholesale prices at Raichur mandi of Karnataka were recorded at Rs. 1225 per quintal in December 2004 and Rs. 1309 per quintal in February, 2005. As per information furnished by the NAFED, the wholesale prices remained in the range of Rs. 1400 and Rs. 1450 per quintal in January, 2005, Rs. 1050 and Rs. 1200 per quintal in February, 2005 and Rs. 1180 and Rs. 1300 per quintal in March, 2005. The fall in domestic prices in 2004-05 in the absence of global trade of safflower cannot be attributed to international factors. However, the prices of other edible oils and the volume of imports affect the domestic prices of oilseeds including safflower seeds to a significant extent. In view of the urgent need to hike import duties on imports of edible oils especially on crude and refined palm oil/palmolein, which constitute about 75 percent of total imports, the Commission reiterates its earlier recommendation that the import duties on edible oils should be kept at such a level that the market prices of oilseeds remain above the MSP. (Tables 2.9 & 2.30)

2.61 The NAFED intervened in the market and carried out support operations under price support scheme (PSS) to stabilize the market prices of safflower seeds and help farmers. It procured 0.29 lakh tonnes worth Rs 48.96 crores of safflower seeds (upto 26.5.2005) from the various mandis of Maharashtra (0.20 lakh tonnes), Karnataka (0.05 lakh tonnes) and Andhra Pradesh (0.04 lakh

tonnes). Despite NAFED's intervention, the market prices remained below the MSP. (Table 2.10)

2.62 The government has since allowed futures trading in safflower seeds as well as oil at National Multi Commodity Exchange. The futures prices of safflower seeds on 31st May, 2005 were quoted at Rs. 309.50, Rs.312.60 and Rs.315.50 for 20 kg. for the months of June, July and August, 2005 respectively which gave an indication that the market prices of safflower seeds would continue to rule below the MSP in the coming months.