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COMMISSION FOR AGRICULTURAL COSTS AND PRICES

REPORT ON PRICE POLICY FOR KHARIF CROPS OF 2011-2012 SEASON

SUMMARY OF RECOMMENDATIONS

In this report, the Commission for Agricultural Costs and Prices presents its views on the Price Policy for Kharif Crops of 2011-2012 Season. The Commission recommends that the minimum support prices for the kharif crops of 2011-2012 season be fixed at the following levels:

Recommended MSP for 2011-12 Kharif Crops (Rs. per quintal)

Sl. No.	Crops	MSP fixed by the Government for 2009-10 Season	MSP recommended by CACP for 2010-11 Season	MSP fixed by the Government for 2010-11 Season	Recommended MSP for 2011-12 Season	Remarks
1	Paddy Common Paddy Grade-A	950@ 980@	1000 1030	1000 1030	1080 1110	If exports remain banned and levy is not reduced, Government should give a bonus of Rs 80/quintal on top of the recommended MSP
2	Jowar (Hybrid) Jowar (Maldani)	840 860	880 900	880 900	980 1000	
3	Bajra	840	880	880	980	
4	Maize	840	880	880	980	
5	Ragi	915	965	965	1050	
6	Tur (Arhar)	2300	2800	3000	3100	
7	Moong	2760	3170	3170	3400	
8	Urad	2520	2900	2900	3300	
9	Groundnut-in-shell	2100	2300	2300	2700	
10	Soyabean (Black) Soyabean (Yellow)	1350 1390	1400 1440	1400 1440	1650 1690	
11	Sunflower-seed	2215	2350	2350	2800	
12	Sesamum	2850	2900	2900	3400	
13	Nigerseed	2405	2450	2450	2900	
14	Cotton Staple length					

	(mm) (i) 24.5 -25.5 and micronnaire value of 4.3-5.1 (ii) 29.5-30.5 and micronnaire value of 3.5-4.3	2500 3000	2500 3000	2500 3000	2800 3300	
15	VFC Tobacco Black soil F2 Grade Light soil L2 Grade	-- --	5000 5200	-- --	5300 5500	

@ Rs 50 incentive bonus for paddy procurement during 2009-10 is payable over the MSP.

(Para 4.8)

The recommended MSP policy has a meaning only if MSPs are made effective. But in several states market prices go below MSP. The Government needs to invite the private sector in procurement operations on its behalf, on same terms and conditions as to FCI, to make MSP effective. Any loss accruing to farmers not able to sell at MSP may be compensated for by the Government through cash transfers via UID route.

A proper policy mix may be initiated to liquidate excess stocks beyond the buffer stock norms by off-loading in the domestic market and opening up exports to the tune of 3 to 5 million tonnes of rice and wheat each, and reduction of levies on rice millers in a phased manner from 75 per cent to 25 per cent. Failing to liquidate excess stocks, beyond the buffer stock norms, is costing the nation more than Rs 40,000 crore without serving much purpose.

It needs to be realised that paddy farmers are facing “implicit taxation” of 16-25 percent on account of levies and export bans. If exports are not opened and levies not reduced, the government should announce a bonus of Rs 80/quintal on top of MSP to compensate the farmers for this “implicit taxation”.

The Commission further recommends that:

i.) the Government strategy aimed at keeping prices under control should have both short term and long term components. The flaws in the retail food marketing may be remedied through improved public distribution system and encouragement of active private retail chains, reforming the mandi system related to taxes, fees and commissions, extending the Mother Dairy safal model to cereals, and provision of adequate commercial intelligence in Government. For the medium and long term, structural reforms in the farm sector should receive priority.

(Para 1.28)

ii.) concerted efforts should be brought in to increase productivity in the agricultural sector and bridge the prevalent yield gaps through technology development and dissemination as well as adoption of yield-enhancing agronomic practices and crop varieties, by following region and crop-specific initiatives.

(Para 1.31)

iii.) the country should attempt to increase the production of pulses by attaining a major rise in productivity through the increasing adoption of high-yielding varieties suiting the Indian conditions.

(Para 1.34)

iv.) alongwith laying emphasis on the improvement of productivity and production in oilseeds, there should be equal emphasis on the technology upgradation and modernization of the edible oil processing units to ensure their enhanced efficiency and capacity utilization.

(Para 1.36)

v.) alongwith the efforts for increasing irrigation potential in the country, there should be greater thrust on enhancing the agricultural water

productivity through adoption of modern methods of irrigation as a national priority. (Para 1.40)

vi.) the NBS policy should cover all fertilizer items, supported with measures aimed at price stabilization, preferably through operating a strategic reserve, and actions on priority are warranted to set up a chain of soil testing laboratories across the country to advise farmers on soil needs and requirements. (Para 1.43)

vii.) the Government should follow a two-pronged strategy in the seeds sector: increase SRR to the advisable levels in respect of various crops, and lay equal emphasis on the production of quality/hybrid seeds through increased association of private sector, with adequate checks and control. (Para 1.44)

viii.) alongwith accelerating the flow of agriculture credit, thrust should be laid on the inclusion of more number of small and marginal farmers, particularly through cooperative banks and RRBs, and the pending reforms for promoting the progress of cooperative sector should get expedited. (Para 1.48)

ix.) the Government should on priority carry out a review of the state of procurement operations in the non-traditional areas of the country, for initiating improvement measures. Associating appropriate agencies available in the States other than the usually enlisted organizations (ex: cooperative organizations, SHGs) for procurement operations, needs to be given serious consideration. (Para 1.50)

x.) the agri-marketing reforms are to be effectively pursued further across the country, so that free and competitive markets for farmers come up at the earliest, supported with adequate infrastructural facilities.

(Para 1.51)

xi.) considering the inadequacy of storage facilities currently available with Government agencies, an advisable option could be to actively associate private interests to enhance storage capacity, with adequate support of bank credit and assured return over the effective life time of the godown.

(Para 1.53)

xii.) farm mechanization should be promoted under an appropriate framework, research efforts are to be oriented towards farm machinery suiting the requirements of diverse crops and regions, and farmers are to be enthused for their adoption.

(Para 1.55)

xiii.) integrated farming systems need to be promoted among small and marginal farmers, with support for skill formation, appropriate infrastructure and collective marketing, and stress on use of local resources and inputs, for ensuring regular and adequate flow of income to them.

(Para 1.56)

xiv.) at least to protect the oilseed plants from drying up, increased availability of water for irrigation through appropriate recharge technologies, such as moving surface water channels to improve water tables in deficient areas besides adequate irrigation facilities, easy accessibility to improved technology, farm implements, quality seeds, credits and extension facilities to the farmer would bring remarkable improvement in production and productivity of the oilseeds.

(Para 2.93)

xv.) rigorous efforts from the Government and other related organizations are warranted to exploit the full potential of oil palm plantation along with post harvest marketing and its price arrangements in all the identified states/regions with assured funds making it an important component under the forthcoming Technology Mission on Oilseeds (TMO).

(Para 2.100)

xvi.) keeping in view the urgent need to augment availability of edible oils through domestic sources, the productivity enhancement of all the oilseed crops especially of tree borne oilseeds and oil palm as a plantation crop should be given special attention while formulating a new Technology Mission for Oilseeds replacing the existing Integrated Scheme of Oilseeds, Pulses, Oil palm and Maize (ISOPOM) along with clear accountability and monitoring.

(Para 2.101)

*Agriculture
passing
through
challenging
times.*

I. AN OVERVIEW

Agriculture continues to be an important sector of the Indian economy. It accounted for 14.2 percent of the GDP (2010-11, advance estimates of CSO) and 58 percent of employment in the country (as per 2001 census). At present, Indian agriculture is passing through challenging times. In recent times, growth rate in the sector has slowed down. As against a growth rate of 3.7 percent during 1991-92 to 1996-97, the growth rate has been 2.5 percent during 1997-98 to 2006-07 (IX and X Plan), and 2.87 percent during the first four years of the XI Plan. There is an urgent need to elevate yields to a higher growth trajectory. For this, the requisite technology development and dissemination are yet to come through. Further, the weather factors are still governing the country's agricultural performance. In the main, this is since the irrigation coverage has, by and large, stagnated to about 40 percent of the gross cropped area. Even within this, efficient modes of irrigation such as micro irrigation, are confined to an insignificant extent. For quite some time, market prices remained buoyant in the economy, mainly driven by food inflation. Pulses and oilseeds continue to be in short supply. The supply response has to balance the changing demand patterns. The enactment of National Food Security Bill that is in the offing, may strain the available foodgrain reserves and steeply raise the incurrence on subsidy. For enhancing production and supply, the critical inputs are to be in position. However, fertilizers have been only partially freed from controls and urea prices are yet to be decontrolled; good quality/hybrid seeds are not adequate; and credit distribution is not substantially in favour of newer small and marginal farmers. While the coverage under procurement remains inadequate, and agri-marketing reforms have not progressed to the requisite extent, the deficient storage facilities lead to deterioration of foodgrains. Alongwith all these, farm mechanization to ensure agri-efficiency, and integrated farming to enhance and stabilize farmers' income are featured by major deficits. Needless to say, the whole agriculture sector requires major improvement.

*Proposed
Second Green
Revolution
requires greater
efforts,
resources and
vision.*

1.2 The Government proposes to usher in a second green revolution focussed on the eastern region. The initiative was brought in during 2010-11 with an allocation of Rs. 400 crore. The Union Budget, 2011-12 has proposed to continue with the initiative in 2011-12 with a further allocation of Rs. 400 crore. The intent is to actualize the potential of the region. For this, the programme would target improvement in the rice based cropping system of Assam, West Bengal, Orissa, Bihar, Jharkhand, eastern Uttar Pradesh, and Chhattisgarh. It is no doubt advisable to arrive at a shift of paddy cultivation from the north west to the eastern region of the country. However, the task is really challenging. The earmarked resources seem to be too limited before the task and the requirements of the region. There has to be a proper strategic framework to translate the intent into results and achievement. For this, a clearer vision has to emerge, so that accordingly the task could get carried forward. Alongwith, the experiences that emerged from the first green revolution should serve as guidance. Hence, concerted, substantial efforts supported with adequate resources and vision are to come together to progress towards the second round of green revolution.

*2010-11
was a
normal
rainfall
year.*

1.3 The prospects of Indian agriculture continue to be controlled by weather factors, particularly the monsoon. During 2010, the south-west monsoon set in over Andaman Sea around 17th May, three days before its normal date. Subsequently it reached Kerala on 31st May, one day before its normal date. The further advance of monsoon acquired rapidity and by middle of June, its coverage was complete across half the country. By July, the whole nation came under the sweep of monsoon. The cumulative rainfall during this monsoon season (1st June to 30th September) for the country as a whole was above normal, 102 per cent of its long period average (LPA). However, there was unevenness in the temporal and spatial distribution of rainfall that impacted the crop situation. Out of 36 meteorological sub-divisions in the country, 31 meteorological sub-divisions received excess/normal rainfall and the rest received deficient rainfall during the season.

Whereas, the cumulative rainfall during the north-east monsoon (October 1 to December 31, 2010) was 21 per cent above normal as compared to 8 per cent above normal during the corresponding period of the previous year. Among the meteorological sub-divisions in the country, 25 sub-divisions were endowed with excess/normal rainfall and 11 sub-divisions received deficient/scanty rainfall. As on 10th March, 2011, the live storage of 81 important/major reservoirs monitored by the Central Water Commission, as percentage of Full Reservoir Level (FRL), remained as 46 per cent which is 144 per cent of the corresponding period of the previous year and 153 percent of 10 years average level.

*Crop
production in
2010-11
encouraging,
with kharif
area up by
7.08 percent.*

1.4 As a result of the good monsoons, around 99 percent of the normal area under crops during kharif season were sown. The total area under all kharif crops in the country was reportedly 1039.00 lakh hectares as compared to 970.26 lakh hectares in the corresponding period of 2009. Increase was in respect of crops such as rice, maize, cotton, sugarcane, tur, urad, moong, and groundnut. While soyabean and sunflower came down in area coverage. As regards area sown under rabi season (as on March 11, 2011), this has been about 109 percent of the normal area under rabi crops. Area sown under all rabi crops has been reported to be 652.73 lakh hectares as compared to 629.35 lakh hectares in the corresponding period of 2010. This enhancement has been mainly from the increase in area coverage under wheat, gram, and rapeseed & mustard, while jowar and sunflower have gone down in area coverage. Endowed with the above normal rainfall, as a whole, the agricultural crop production in 2010-11 is expected to be encouraging vis-à-vis the depressed output levels attained in the previous year. The improvement in pulses stands out as significant. However, any perspective on the rise in production has to keep in view the fact that the year 2009-10 was afflicted by drought that brought down production levels, and improvement in the current year is mainly brought in by recovery. The prospects have been boosted more by the kharif output than the rabi portion.

Foodgrains production recovers to 232.07 million tonnes from 218.11 million tonnes. Rice production would be 94.01 million tonnes, up by 5.5 percent.

1.5 According to the Second Advance Estimates of Crop Production released on 09-02-2011 by the Directorate of Economics and Statistics (DES), Department of Agriculture and Cooperation (DAC), the total foodgrain production during the year 2010-11 would be 232.07 million tonnes, registering an increase of 6.40 per cent relative to the production of 218.11 million tonnes (Final Estimates) in the previous year, albeit below the record production of 234.47 million tonnes achieved in 2008-09. The improvement appears considerable mainly because of the relatively lower level of production recorded in the previous year. It should also be kept in view that the estimated foodgrain production for 2010-11 falls short of the target of 244.50 million tonnes set for the year, by 5.08 per cent. The rice production in 2010-11 is expected to be 94.01 million tonnes, a rise of 4.92 million tonnes, over that of the previous year. The increase is emanating mainly from the kharif output. The production of wheat is estimated to marginally increase from the record output of 80.80 million tonnes (2009-10) to 81.47 million tonnes (2010-11). This is in accord with the consistent increase over the years after 2004-05. Also, this would be approaching the output of 82.00 million tonnes targetted for the year.

Coarse cereals indicate improvement; maize sets a new record at 20.03 million tonnes.

1.6 As regards coarse cereals, there would be marked improvement during 2010-11 vis-à-vis the output levels attained in 2009-10. The total production of coarse cereals is expected to go up from 33.55 million tonnes (2009-10) to 40.08 million tonnes (2010-11). The increase is imparted by the kharif crops, whereas the rabi component is heading for a marginal decline. In respect of individual crops, the position in 2010-11 related to 2009-10, would be as follows: jowar would increase from 6.70 to 6.79 million tonnes (1.34 percent); bajra from 6.51 to 9.38 million tonnes (44.09 percent); maize from 16.72 to 20.03 million tonnes (19.80 percent); ragi from 1.89 to 1.93 million tonnes (2.12 percent); and barley from 1.35 to 1.60 million tonnes (18.52 percent). *The production of maize, since 1998-99, would surpass the peak of 19.73 million tonnes attained in 2008-09.* But when the expected output

levels of 2010-11 are contrasted with the performance in 2008-09, the significance gets eroded. This indicates that the increase in output in 2010-11 is mainly because of recovery from the depressed output of the previous year (2009-10) and not because of any substantial improvement. For cereals as a whole, the production profile corresponds to the aforesaid position. The total cereals output in 2010-11 is forecasted to be 215.56 million tonnes as against the output of 203.45 million tonnes in 2009-10, an increase of 5.95 percent. However, this is still behind the record output of 219.90 million tonnes attained in 2008-09.

Pulses production significantly improves, sets a new record at 16.51 million tonnes.

1.7 For pulses, there is visible improvement in production. For pulses as a whole, the production would climb from 14.66 million tonnes (2009-10) to 16.51 million tonnes (2010-11). There would be remarkable increase in respect of tur: from 2.46 million tonnes (2009-10) to 3.18 million tonnes (2010-11). However, the output of gram would marginally dip from 7.48 to 7.37 million tonnes; urad would exhibit an increase from 1.23 to 1.45 million tonnes; and moong from 0.69 to 1.12 million tonnes. The group of other kharif and rabi pulses would register increase from 2.80 to 3.40 million tonnes. *Thus, the production indications on the pulses front are encouraging. It is significant to note that with a record crop expected, the pulses production may surpass the previous peak level of 14.91 million tonnes recorded since 1998-99.*

Oilseeds output indicates all-round improvement at 27.8 million tonnes.

1.8 In respect of oilseeds, it would be a tale of all-round improvement. For the nine oilseeds as a whole, the output is expected to increase from 248.82 to 278.48 lakh tonnes. For major oilseeds, barring sunflower, there is going to be increase in the year 2010-11, compared to the year 2009-10: groundnut from 54.29 to 68.11 lakh tonnes; castorseed from 10.09 to 11.64 lakh tonnes; sesamum from 5.88 to 8.32 lakh tonnes; rapeseed & mustard from 66.08 to 74.26 lakh tonnes; safflower from 1.79 to 2.02 lakh tonnes; and soyabean from 99.65 to 104.68 lakh tonnes. *Since 1998-99, the output of sesamum*

would be touching a new record in production. Sunflower remains as a lone case that would take a dip from 8.51 to 6.97 lakh tonnes. However, in comparison with the production of 2008-09, the increase in output turns out to be marginal. Thus, as in the case of other crops, for oilseeds also, the statistical effect would partially explain the major increase expected in the year 2010-11. Further, for all oilseeds, excepting castorseed, the output expected is trailing behind the targets set for the year 2010-11.

Among commercial crops, cotton creates a new record in production at 34 million bales, up by 40.05 percent.

1.9 Amongst the commercial crops, there would be remarkable increase in output in respect of cotton as well as sugarcane. From the enhanced output of 242.25 lakh bales of cotton in 2009-10, the output in the year 2010-11 would be 339.27 lakh bales, an increase of 40.05 percent. *This is creating a new record in cotton production.* For sugarcane, from the output of 2923.02 lakh tonnes in 2009-10, there would be improvement to 3366.98 lakh tonnes (2010-11). However, for jute & mesta, the output would drop from 118.17 lakh bales (2009-10) to 100.77 lakh bales (2010-11). The decline pertains mainly to jute and marginally to mesta.

Government godowns overflowing; stock of foodgrains more than double the buffer stock requirements.

1.10 The rice procurement for Central Pool during the Kharif Marketing Season (KMS) 2010-11 (October-September) has indicated a marginal increase (0.12 percent) to 24.44 million tonnes, as on 21.03.2011, as against 24.41 million tonnes recorded during the corresponding period of the previous year. In respect of wheat, there has been reduction in procurement. The procurement during Rabi Marketing Season (RMS) 2010-11 has been 22.51 million tonnes as against 25.38 million tonnes during the previous year. The stock level of rice in the Central Pool has increased during 2010 relative to 2009, from 15.35 million tonnes to 18.44 million tonnes. Whereas, the stock level of wheat has decreased from 28.46 million tonnes to 27.78 million tonnes (as on 1st October, 2010). This is against the buffer norm of 7.2 million tonnes for rice and 14.0 million tonnes for wheat. Buffer norms of wheat include Food Security Reserve of 30 lakh tonnes from

1.7.2008 onwards and 20 lakh tonnes for rice from 1.1.2009 onwards. As on December 1, 2010, the stock of rice was estimated at 24.53 million tonnes and that of wheat at 23.91 million tonnes. The likely stock of rice is estimated at 28.73 million tonnes as on April 1, 2011, compared to the stipulated buffer norm of 14.20 million tonnes. A similar situation would emerge with respect to the stock of wheat which is estimated at 13.04 million tonnes as on April 1, 2011, as against the buffer norm of 7.0 million tonnes. While the offtake of rice, after decreasing to 24.62 million tonnes in 2008-09 increased to 27.37 million tonnes in 2009-10, is projected to marginally improve to 28.74 million tonnes in 2010-11, that of wheat increased to 14.88 million tonnes in 2008-09, 22.35 million tonnes in 2009-10, but may marginally decline to 22.00 million tonnes in 2010-11.

Food security has to be viewed in the light of proposed National Food Security Bill.

1.11 On perceiving the stock position and the prospects for foodgrains production in the current year, the economy appears to be in the comfort level of food security. However, a final view in this regard could emerge only in the light of the enactment of National Food Security Bill and the grains requirement therein, which is likely to be introduced in the Parliament during this year. For the time being, since the stock of foodgrains available in FCI godowns is far in excess of the prescribed buffer stock requirements, storage and management of the accumulated surplus are posing problems for the procuring agencies. Storing huge surpluses in godowns and simultaneously witnessing inflation across the national economy, may not be in national interest. As discussed in details later, the conditions and quality of storage are also causing concerns.

Market prices of agricultural commodities remain buoyant, increasing by 16.5 percent in 2010-11.

1.12 During 2010-11, the market prices of all agricultural commodities including foodgrains in the country kept up the buoyancy that was registered in the recent past. The index of average wholesale prices (WPI) of agricultural commodities (base 2004-05 = 100) which was 133.5 in 2008-09 increased to 151.0 in 2009-10 and further increased to 175.8 in 2010-11 (up to February, 2011), and that of foodgrains from

145.3 to 166.4 and 174.0 during the same period. The rise of 14.5 per cent for foodgrains during 2009-10, has been the highest in recent years. The increase of 16.4 per cent in the case of agricultural commodities in 2010-11 stands out as a record, and is in tandem with the movement of WPI for all commodities.

Increase of foodgrain prices is on lower scale, but not insignificant; rice prices increased by 5.6 percent (2010-11).

1.13 The increase in the case of foodgrains in 2010-11 (till February, 2011) of 4.6 per cent is on a lower scale as compared to 14.5 per cent in the previous year, but still is not insignificant. The WPI of rice went up from 140.6 in 2008-09 (14.8 per cent) to 157.9 in 2009-10 (12.3 per cent) and further to 166.7 in 2010-11 (5.6 per cent). The rate of increase at 14.8 per cent and 12.3 per cent during the years 2008-09 and 2009-10, has been sharp. In the case of wheat, the WPI increased from 147.6 (2008-09) to 166.5 (2009-10) and 171.0 (2010-11). In fact, the WPI of all cereals increased over the said period. For cereals as a whole, the increase was 11.9 per cent (2008-09), 12.6 per cent (2009-10) and 4.9 per cent (2010-11). For barley, the climb was considerable during 2008-09 (11.9 per cent) which was followed by a decline of 1.5 per cent (2009-10), but again rose by 8.9 per cent (2010-11). As regards jowar, there was a moderate increase of 2.2 per cent in 2008-09 that gave way to significant increases of 11.5 per cent (2009-10) and 11.0 per cent (2010-11). Bajra exhibited a considerable increase of 8.7 per cent (2008-09), followed by a record increase of 20.8 per cent (2009-10) and another increase, albeit lower, of 4.2 percent (2010-11). For maize, the increase of 6.8 percent (2008-09) was transformed into a major increase of 10.2 percent (2009-10) and another increase of 8.3 percent (2010-11). In respect of ragi, there was a major increase of 9.4 percent in 2008-09 which became a steep rise of 29.5 percent in 2009-10, and thereafter there was a marginal decline of 0.6 percent. (2010-11).

Prices of pulses have moderated, 3.5 percent in 2010-11 against 22.4 percent in 2009-10.

1.14 The wholesale prices of pulses, barring Gram, drastically went up during the year 2009-10 and the increase continued in 2010-11 even though the extent of increase has come down. For pulses as a

whole, the WPI increased from 155.8 (2008-09) to 190.8 (2009-10) and to 197.5 (2010-11). Regarding individual items, the position has been as follows: tur (arhar) increased from 14.4 percent (2008-09) to 48.8 percent (2009-10) but gave way to a decline of 4.4 percent (2010-11); moong registered an increase of 6.5 percent (2008-09), and thereafter hefty increase of 55.4 percent (2009-10) and 21.5 percent (2010-11); urad from a stationary level in 2008-09 exhibited a robust rise of 43.0 percent (2009-10) and 19.9 percent (2010-11); and masur (lentil) moved from an elevated level of 34.6 percent (2008-09) to a relatively lower level of 16.3 percent (2009-10) and thereafter a considerable decline of 14.0 percent (2010-11). However, the state of Gram has been distinct: from a moderate increase of 3.2 percent (2008-09) there was steady decline of 1.1 percent (2009-10) and 1.8 percent (2010-11).

Oilseed prices register modest increase, by 3.9 percent in 2010-11.

1.15 Among oilseeds, the past couple of years have recorded modest increases. For oilseeds as a whole, the WPI moved from 131.2 (2008-09) to 135.0 (2009-10) and to 140.2 (2010-11), indicating increase of 2.9 and 3.9 percent. This is since some of the major oilseeds registered either dips or only moderate increase. After a rapid rise of 28.3 percent (2008-09), the price index of rapeseed/mustard dropped by 3.6 (2009-10) and 3.0 percent (2010-11). For soyabean, from a drastic increase of 28.9 percent (2008-09), there was a lower increase of 8.9 percent (2009-10), followed by a considerable decline of 10.0 percent (2010-11). In respect of sunflowerseed, there was a moderate decline of 0.9 percent in 2008-09, an enhanced decline of 4.7 percent (2009-10) and a major increase of 10.7 percent (2010-11). In the case of nigerseed, the major increase of 23.7 percent (2008-09) gave way to a sharp decline of 25.9 percent (2009-10) and to another decline of 15.1 percent (2010-11). The two major oilseeds that exhibited continued increase are safflower seed and groundnut: safflower increased significantly by 16.9 percent (2008-09), and thereafter by 1.4 percent (2009-10) and 8.9 percent (2010-11). The price level of groundnut delivered increase of 2.8 percent (2008-09), 2.5 percent (2009-10) and an elevated rise of 11.2 percent (2010-11). There has

been up and down movement in the WPI of raw cotton. After a major increase of 26.3 per cent (2008-09), there was a nominal decline of 1.9 per cent (2009-10), that gave way to another major increase of 34.0 per cent (2010-11).

1.16 Generally, the agricultural scenario in the country has been featured by overall price increase. The increase in respect of agricultural commodities has outpaced that of all commodities together and is raising the overall level of inflation in the country. The price buoyancy has persisted since 2008-09. In fact, the level of inflation observed in the economy has been a matter of great concern. Fast-increasing food prices are denting family budgets across the country, especially of people in the low-income brackets.

International agricultural prices on the rise. FAO Food Price Index averaged a record 236 points in February, 2011, an increase of 34.09 percent over past year.

1.17 As brought out in the FAO Food Outlook, November, 2010, the global agricultural markets are raising concerns about possible price escalation. International prices of most agricultural commodities have undergone considerable increase in the recent months, because of several factors. Crucially, the crop outlook in key producing countries has worsened, delivering tightness to the global supply and demand balances in 2010-11. The weakening of US Dollar has been another important factor that played up prices. As per the newsreport released by FAO in early March, 2011, global food prices registered rise for the eighth consecutive month in February. Prices of all commodity groups monitored by them witnessed increase, barring sugar. The FAO Food Price Index averaged 236 points in February, 2011. This stands out as a record in real and nominal terms since 1990. The increase over the corresponding period of 2010 has been 34.09 percent.

1.18 Regarding cereals, the FAO Food Outlook indicates unexpected production shortfalls caused by adverse weather conditions that depressed cereals output during the 2010-11 marketing season. As against the estimated global production of 2263.4 million tonnes for 2009-10, the forecasted production during 2010-11 is 2216.4 million

tonnes, a reduction of 2 percent. The decline mainly relates to wheat and coarse grains, following reduced output from major grain producing countries. The export restrictions imposed by some countries in the wake of decreased production as well as the slide in US Dollar also adversely affected market sentiments and inspired surge in international prices. With the result, prices of most cereals have risen sharply. The FAO Cereal Price Index that covers main food items such as wheat, rice, and maize, averaged 254 points in February, 2011, a rise of 54.88 per cent from February, 2010. This happens to be the highest level reached since July, 2008.

1.19 The world wheat markets have been observed to be turbulent in 2010-11. As against the estimated production of 682.6 million tonnes in 2009-10, the production in 2010-11 may slide to 647.7 million tonnes, a reduction of 5 per cent. However, the global wheat stocks are perceived to make up this decline in output. The market tightness has pushed up prices. In October, 2010, the benchmark US No.2 Hard Red Winter, f.o.b., averaged USD 291 per tonne, 37 per cent higher than in July. During November, wheat futures in Chicago for March delivery were quoted at around USD 280 per tonne, 39 per cent higher than in July. However, a welcome feature is that despite weather-related setbacks, global rice output in 2010-11 is forecasted to reach a record level of 466.7 million tonnes, from 455.6 million tonnes estimated for 2009-10. Prompted by the good prospects, global rice prices moved southward; the FAO rice price index declined by 12.5 per cent from 253 (2009) to 223 (January-October, 2010). The price of “thai white rice 100% B” benchmark stood at USD 510 per tonne in October, 2010, reflecting renewed sales and strength of the Thai baht, but still remaining short of the October 2009 level of USD 535 per tonne. However, the rice Chicago futures registered rise, with quotes for delivery in January 2011 gaining over 40 percent since July.

1.20 Globally, the production of coarse grains has been consistently declining after 2008-09. From the estimated reduced output of 1125.2

million tonnes in 2009-10, the forecasted production in 2010-11 would further decline to 1102.0 million tonnes, a drop by 2 per cent. The anticipated production being behind the forecasted utilization of 1125.7 million tonnes, there is tightening of global supply and demand balance which is raising the price level of coarse grains. The feed barley and maize prices in October, 2010 are up by 70 and 40 per cent, respectively, from October, 2009. Regarding the major coarse grain of maize, production in 2010 is now forecast at 831 million tonnes, only one percent higher than in 2009. The production of barley in 2010 is lower by 7 percent from that of previous year at 125 million tonnes. The forecast of world sorghum output in 2010 is 59 million tonnes, 2.6 per cent up from the previous year's output. There is anticipation that prices may rise even further. The price of the benchmark US maize prices (Yellow, No.2, f.o.b.) averaged USD 236 per tonne in October, 2010, 40 per cent higher than in October, 2009. During November, 2010, Chicago maize futures for March delivery stood at USD 232 per tonne, 47 per cent above that of the corresponding period last year. The tight supply position for wheat and barley is contributing to the price rise. The current uptrend in the international fuel prices may further raise maize prices, keeping in view the diversion of maize for bio-fuels. Sorghum (Yellow Gulf) prices are also on the rise, averaging USD 231 per tonne in October, 33 per cent above that of the same period in 2009.

*Oilseeds
output
looks up,
but prices
may
remain
firm.*

1.21 The FAO forecast for 2010-11 is that oil crop output would be 453.7 million tonnes, nearing the 2009-10 record level of 454.8 million tonnes. The anticipated decline for soyabean, rapeseed and copra would be made up by the rising cottonseed, groundnut and palm kernel output. Internationally, prices of oilseeds, meals and oils may remain firm, keeping in view the anticipated expansion in the utilization of meal and oil. Soyabean futures in Chicago exceeded USD 460 per tonne in the first week of November, 2010, compared with USD 360 one year earlier. As regards sugar, the global production is expected to reach 168.8 million tonnes in 2010-11, an increase of 7.7 per cent over the

production level of 156.6 million tonnes in 2009-10. This is mainly because of the expansion in area, inspired by the elevated international sugar prices that prevailed over recent times. However, the recovery in world sugar consumption may keep the international sugar prices relatively high and volatile.

*Food price
increase
driving
overall
inflationary
pressures.*

1.22 In practical terms, the food problem is back in the country, in the form of unduly high food prices. Inflation in primary articles, particularly food articles, was the main contributor to the inflationary pressures witnessed in the economy. The overall weight of the composite food index in the WPI is 24.31 percent, with primary food articles having a weight of 14.34 percent and manufactured food products a weight of 9.97 percent. The inflation in food articles which had moderated to single digit in November, 2010 again jumped to double digits and stood at 13.6 percent in December, 2010. The average inflation in primary articles was reported at 18 percent on an average during the period April to December, 2010 as compared to 10 percent last year for the same period. The overall average inflation from April to December, 2010 at 9.4 percent, is the highest recorded in the last 10 years. It has been observed that the indigenous inflationary pressures are likely to be exacerbated by the higher levels of international commodity prices and easy money policies under implementation in several industrial nations. This sharp rise in food prices remains as a source of major concern in the national economy. Among food items, of late, major increase in prices was observed in fruits and vegetables, meat and fish, and milk. (source: Economic Survey, 2010-11). This would be evident from the Table 1.1. There is an imperative need for containing prices.

Table 1.1: Contribution of Various Commodities to Food Inflation

Groups	2006	2007	2008	2009 Q1	2009 Q2	2009 Q3	2009 Q4	2010 Q1	2010 Q2	2010 Q3	2010 Q4
Manuf. food	26.2	18.5	41.3	32.3	37.8	32.2	37.6	34.3	18.2	15.8	6.8
Other primary food	12.7	6.4	4.6	4.2	5.3	3.2	5.4	4.8	5.0	7.8	9.6
Meat group	10.4	7.2	6.8	9.9	5.7	13.9	14.7	16.7	24.4	24.3	27.1
Milk	11.6	11.4	11.1	12.3	16.1	15.3	15.8	17.8	22.9	27.0	29.3
Fruits & veg	5.0	33.0	13.8	16.4	11.5	15.6	7.7	10.3	16.5	12.9	26.9
Foodgrains	34.1	23.4	22.4	24.9	23.6	19.8	18.9	16.0	12.9	12.2	0.3

Source: NCAP, Policy Brief, 35.

Both demand and supply factors responsible for price rise.

1.23 Both demand and supply side factors are responsible for keeping the price level high for food items. The supply constraints arising from lower production and resultant reduced supply in the economy in the wake of drought conditions had led to the high price of pulses, sugar and a few other commodities. Alongwith this, increasing population, rising income emanating from economic growth, growing urbanization and unfolding globalization are pushing demand for food commodities faster than before. The implementation of MNREGS programmes has also assisted in improving the income of poor to some extent and their demand for food commodities in rural areas. Moreover, demand and consumption patterns are changing in the country. Supply has to get balanced with emerging demand patterns, to keep prices under control.

Revamp food management, with greater role for private retailing.

1.24 It also needs to be appreciated that the rise in prices is disproportionate to the shortage in supplies, indicating hoarding and speculative activities. There are also inherent flaws in the market distribution system, evidenced by the high price differential between retail and farmgate prices. The retailing of food items in the country is afflicted by market imperfections and is in urgent need of improvement. Market expectations should not be given room to play havoc with rising prices. It is high time the Government revamped its entire system of food management. Parallel to the public distribution system, there should be an active private retail trade. Expansion of the organized private retail chains, both domestic and foreign, needs to be

encouraged, to tie up with the farmer producers with the requisite back-end infrastructure, so that wastage and inefficiency in the supply chain could be brought down.

Government took measures to check price rise.

1.25 It is true that Government has taken several measures, both structural and macroeconomic, to keep prices in check. The price control measures taken by the Government include selective ban on exports and futures trading in foodgrains, zero import duty on selected food items, distribution of imported pulses and edible oils through PDS, and release of higher quota of non-levy sugar. As part of this, more of rice and wheat were released from buffer stocks, export of onions was banned, the ban on pulses export was extended and the stockholding limit on sugar is continued. Still, any effective control over the price level is not in sight.

Strategies for improvement: expand Mother Dairy's safal model; rationalize market charges.

1.26 Among the strategies for improvement, it may be considered for greater expansion the experiment of Mother Dairy's safal model, with inclusion of cereals also. There should also be rationalization of taxes and fees in the mandi system which is quite high in certain States. As reported by the State Governments, the position in this regard of certain States is given in the Table 1.2, that is inclusive of purchase tax, market fees, rural development cess, Arthia Commission, etc.

Table 1.2: Mandi Charges

Name of State	Mandi Charges (%)
Punjab	13.5
Haryana	10.58
Maharashtra	1.55-7.05
Delhi	4.5
Uttarakhand	4
Kerala	1-4
Rajasthan	1.5-3.6
Karnataka	3.5
Andhra Pradesh	3
Chhattisgarh	1-2
Madhya Pradesh	1-2
Assam	1-2
Himachal Pradesh	1
Goa	1
Tamil Nadu	1
Gujarat	0.5-1

Source: State Replies.

In larger public interest, all food products should be exempt from taxes or fees at the first stage of marketing. Also, the commissions in the mandi system, especially for fruits and vegetables, should not exceed one percent, which is at present substantial in certain major markets. The crisis of food prices currently experienced should yield an opportunity to reform the mandi system. Pursuing further the perspective of reforming APMC, Government must encourage direct buying by organised retailers from farmer groups, removing all taxes and fees. This would impart efficiency in the value chains.

For long term solution, focus on structural reforms.

1.27 However, for long term solution, there is a need for basic reforms in the farm sector: India needs to develop a medium and long term strategy to meet the demand for food. Resorting to large-scale imports may not be taken as a long-term solution. Even in the short term, imports cannot mitigate the domestic prices when international food prices are ruling high. Initiatives are warranted to eliminate wastage of fruits and vegetables due to non-development of farm-to-store cold chains, and of foodgrains due to inadequate storage facilities and issues in food management. The structural elements should not get underplayed, keeping in focus the seasonal elements.

Set up/strengthen commercial intelligence in government.

1.28 It is also time to set up/ strengthen commercial intelligence in Government to gather and process vital information on sensitive commodities, such as state of production, market prices, stocks, tariffs and trade, and global market situation, to recommend policy action well in time. The recent rise in onion prices instances this failure in coordination. Despite knowing that unseasonal rains have damaged a major portion of the onion crop in Maharashtra, no action was taken in time to foresee the possible problems and solutions. The country should anticipate and act well in time, enabled by good commercial intelligence. In view of the position discussed above, the Commission recommends that **the Government strategy aimed at keeping prices under control should have both short term and long term components. The flaws in the retail food marketing may be**

remedied through improved public distribution system and encouragement of active private retail chains, reforming the mandi system related to taxes, fees and commissions, extending the Mother Dairy safal model to cereals, and provision of adequate commercial intelligence in Government. For the medium and long term, structural reforms in the farm sector should receive priority.

It is imperative to improve farm productivity.

1.29 There is an imperative need to improve farm production. As already mentioned, the average agricultural growth has slowed down. In order to realize an overall national economic growth rate of 9 per cent, the agricultural sector must be made to grow at 4 per cent. It is true that the Advance Estimates of CSO have placed the growth in agriculture and allied sectors at 5.4 percent in 2010-11, but the full XI Plan period target of 4 percent per annum is unlikely to be achieved. Moreover, what is required is not a good harvest once in a few years, but a steady and sustained improvement in agricultural output. Hence, revitalizing the agricultural sector and raising its growth rate is the challenge to be met with policy and programme responses. The sector is in urgent need of yield-enhancing reforms, so as to ensure improved earnings for farmers. Since the low productivity of farm sector and high incidence of rural poverty are highly correlated, any measure to dent poverty cannot exclude agricultural improvement. The rising labour costs alongwith stagnating yields per hectare are raising the per unit cost in farm production. As rightly brought out in the XI Plan, agricultural development is an important component for inclusive growth.

Bridge yield gaps to elevate productivity.

1.30 It is contextual to observe that the yields of crops in India are low relative to those in many other countries. There are also large yield gaps in India's farm front: vertical gaps between actual yield and that achieved in front-line field demonstrations as well as horizontal gaps between various geographically differentiated regions/districts/states in different crops. These are to be bridged, failing which any major

increase in production and productivity in the sector may not materialize.

*Accelerate
technology
development
and
dissemination to
enhance
productivity.*

1.31 Interfaced with the state of more or less static extent of land and water resources available for cultivation, the thrust should be towards adoption of technological innovations to boost up production, particularly of foodgrains. In order to attain higher productivity levels, newer and better crop varieties or package of practices are to be made available to farmers, for which technology development and dissemination hold the key. Only a technology-led growth could cater to the requirements of increasing agricultural production. It should be strategised to adopt technologies that are more adaptable to wide regional variations prevalent in India alongwith effective extension linkages with farmers. The country cannot afford to leave the existing architecture in the agriculture sector undisturbed. It is unfortunate that the recent past has not witnessed the adoption of any major high-yielding crop varieties. Accelerated efforts are warranted in this regard. The challenge of raising productivity of crops in States like Punjab and Haryana, experiencing water stress, is to ensure increasing productivity with reduced water consumption, through adoption of appropriate crop and agronomic practices. The North-West India should abdicate the thrust on water-intensive crops like paddy and opt for relatively less water-demanding crops such as pulses. Farmers in the region should be confronted with both incentives and disincentives to speed up this change-over in their cropping pattern. Accordingly, the Commission recommends that **concerted efforts should be brought in to increase productivity in the agricultural sector and bridge the prevalent yield gaps through technology development and dissemination as well as adoption of yield-enhancing agronomic practices and crop varieties, by following region and crop-specific initiatives.**

1.32 Pulses, the essential commodity of mass consumption that provides vegetable protein, have become unaffordable for the poor. In

The record pulses production in 2010-11 needs to be sustained.

fact, pulses had contributed a good deal to the current food inflation in the country. Domestic production has stagnated at about 140-150 lakh tonnes while the rising purchasing power and demographic pressures are driving up demand. The supply shortfall is met through imports. There may be a crisis in pulses, in the backdrop of estimated major increase in demand for pulses. The silver lining is that there would be record pulses output in 2010-11. However, this increase in production is primarily from area expansion. The pulses yield remains low at around 600 kg a hectare. Hence, there has to be sharp productivity gains to sustain the growth.

Pulses grown largely under rainfed conditions, with limited supply response to higher MSPs.

1.33 Higher MSPs may be a motivating factor, but not sufficient to influence production. Under Indian conditions, the supply response to prices is rather limited. Pulses are grown in the country largely under rainfed conditions, with smallholder cultivation, and lack of breakthrough in seed technology. Unlike that for rice or wheat, the pulse growers are devoid of an assured marketing outlet. The government should buy pulses on commercial basis for supply through PDS, that would fulfill the interests of growers and PDS-dependent consumers. In the pulses market, it is observed, there is a huge difference between farmgate and retail prices. This is because of supply chain inefficiencies as well as involvement of intermediaries.

Accelerate pulses production by raising productivity.

1.34 There is a need to accelerate the production of pulses. This must be achieved by raising the average productivity to at least 1.0 tonne per hectare. For this, genetic breakthrough in pulse crops suiting the Indian context, is required. In the meantime, the available good varieties need to be promoted for large scale adoption. Also, efforts may be made to bring more area under pulse crops, especially in rice-fallows and through inter-cropping. It is welcome that the Union Budget, 2011-12 has indicated that while consolidating the gains, it would be strived to attain self-sufficiency in production of pulses within next five years. An amount of Rs. 300 crore has been provided to promote 60,000 pulses villages in rainfed areas for increasing crop

productivity and strengthening market linkages. Keeping in view the present state and future requirement of pulses, the Commission recommends that **the country should attempt to increase the production of pulses by attaining a major rise in productivity through the increasing adoption of high-yielding varieties suiting the Indian conditions.**

Oilseeds sector is confronting several constraints; initiative to promote oil palm cultivation a welcome step.

1.35 The major oilseed crops in India are groundnut, rapeseed and mustard, soyabean, castor and sunflower. Total oilseed production is much less than demand, and the sector is confronting several constraints. High yielding varieties tolerant to abiotic and biotic stresses are limited. There is inadequate availability of quality seed, especially of groundnut. Disease and insect pest problems are also afflicting oilseed crops. The country should develop high yielding varieties of oilseeds. There is also urgent need to improve the seed replacement rate of oilseed crops. IPM should be toned up among the crops. Policy and programme initiatives should lay emphasis on improvement of productivity levels across oilseed crops through technological interventions. Keeping in view the huge quantum of import, increased indigenous production enabled by technology boost is the present requirement. It is timely that in the Union Budget, 2011-12, the Government has proposed that, to achieve a major breakthrough, special attention would be paid to oil palm, being one of the most efficient oil crops. An amount of Rs. 300 crore has been provided to bring 60,000 hectares under oil palm plantation, by integrating the farmers with the markets; and with expected yield of about 3 lakh metric tonnes of palm oil annually in 5 years. Considering the predominance of palm oil in edible oil imports, the initiative would be a venture in the right direction, provided the requisite strategic framework is built into it.

1.36 The inadequate production of oilseeds curtails the raw material availability for processing units who are contending with under capacity utilization. The oilseed processing sector is characterized by outdated

Oilseed processing units in urgent need of modernization/technology upgradation.

processing units. The wide gap between the new and old technology levels makes technology upgradation in 'ghanies' difficult, which require massive fixed capital for replacing equipment and changeover to entirely new technology, and skill levels. Increasing efficiency and capacity utilization of the existing processing sector through modernization is important to reduce the cost of processing oilseeds. Therefore, the Commission recommends that **alongwith laying emphasis on the improvement of productivity and production in oilseeds, there should be equal emphasis on the technology upgradation and modernization of the edible oil processing units to ensure their enhanced efficiency and capacity utilization.**

Inadequate irrigation continues to constrain Indian agriculture.

1.37 Water is a crucial input in agriculture. It is well known that the first green revolution owed much to the spread of irrigation. The remarkable improvement registered by Gujarat in the agricultural sector in recent times further testifies the role of irrigation. Inter alia, enabled by increased access to water resources, particularly through check-dams and watershed, the drought-prone State has brought agriculture on a high growth trajectory. However, inadequate irrigation continues to be the critical constraint in Indian agriculture. Around 60 percent of the cultivated land in the country is still rainfed. With depleting water resources, the nation is in a water stress zone. The intensively irrigated regions in the country are currently facing resource fatigue as well as environmental stress. The changing weather pattern due to climate change could compound the water woes, considering the vulnerabilities of India.

There is over-exploitation of groundwater and attendant issues.

1.38 The groundwater potential in India which constitutes about 60 percent of the irrigation, has been over-exploited in several places, with the rate of extraction exceeding the rate of replenishment, and resultant lowering of the water table. As recently brought out by the Ministry of Water Resources, highly intensive development of groundwater in certain areas in the country has resulted in over-exploitation leading to decline in groundwater levels and sea water intrusion in coastal areas. Out of 5723 numbers of assessment

administrative units, 839 units are “over-exploited”, 226 units are “critical”, 550 units are “semi-critical”, 4078 units are “safe” and 30 units are “saline”. Some of the States leading in this regard are Punjab, Haryana, Rajasthan, Tamil Nadu and Karnataka. Further, since groundwater is receding, wells have to be more and more deepened causing greater cost incurrence, and increasing the possibilities of well failures in peninsular India.

*Lay stress
on efficient
irrigation,
follow
modern
micro-
irrigation
methods.*

1.39 In the face of emerging severe water shortage, the need of the times is serious irrigation planning. Proactive policies are to be in position to make more efficient and efficacious use of water resources. The emphasis should be towards elevating agricultural water productivity by increasing ‘crop per drop’. Alongwith the endeavours for enhanced irrigation coverage, in fact, there should be greater stress on increased efficiency in irrigation to realize better agricultural output from the same quantity of water. The motto should be benchmarking water efficiency and promoting water literacy. As per estimate, with 10 percent increase in water use efficiency, an additional 14 million hectares can be brought under irrigation. It is time for the Government to think in terms of institutional and pricing issues in providing irrigation, to facilitate efficient use of water. Traditional modes of irrigation involving wastage and ecological issues should give way to more efficient modern methods. However, the penetration of these micro-irrigation methods under the Scheme of Micro Irrigation, is very low in the country. Since the Scheme has been under implementation from January, 2006, it would be appropriate to study the factors limiting its spread among the farmers and arrive at remedial measures. The centrally sponsored National Mission on Micro Irrigation launched in January, 2010 in addition to the Micro Irrigation Scheme, should be vigorously implemented as a national priority.

1.40 There have been initiatives from the Government for increasing efficiency in water usage. The National Water Mission under the National Action Plan on Climate Change, envisages a 20 percent increase in efficiency of water use by the end of XII Plan. State

A few Government initiatives already there for increasing water use efficiency.

Governments have also initiated measures including that of renovating canals, and micro irrigation. Watershed development and water conservation by the community should be integral to water management. The National Rainfed Area Authority should effectively fulfill their responsibilities in matters relating to water conservation and watershed development. It is welcome that in the Union Budget, 2011-12, the basic customs duty on micro-irrigation equipment has been reduced from 7.5 to 5 percent. Since the availability of fresh water for agriculture is on the decline, there should be greater use of waste water in the sector through development of appropriate technologies. Keeping in view the position stated above, the Commission recommends that **alongwith the efforts for increasing irrigation potential in the country, there should be greater thrust on enhancing the agricultural water productivity through adoption of modern methods of irrigation as a national priority.**

Extend NBS to all fertilizers, and directly provide fertilizer subsidy to farmers via UID system.

1.41 The nutrient based subsidy (NBS) policy is under operation in the fertilizer sector from April, 2010. Pursuant to this, the Government has freed potassic and phosphatic fertilizers from the old system of controls. But urea that predominates fertilizer consumption in the country, is still retained under the previous control system. For fostering balanced use of fertilizers, urea should also be brought under NBS. It has been stated in the Union Budget, 2011-12, that extension of the NBS regime to cover urea is under active consideration of the Government. This has to be expedited. Otherwise, mismatch in the pricing of different fertilizers would persist, and the potential to promote competition among fertilizer producers and arrive at competitive prices may not get actualized. For facilitating the provision of fertilizer subsidy directly to the farmers, recourse may be made to the UID system that is under implementation.

1.42 Another issue facing the Government under NBS on fertilizers, is keeping prices under control. Prices of fertilizers have been on the rise, and affordability is confronting farmers. This would, in turn, push

Keep fertilizer prices under control, preferably by providing an appropriate strategic reserve of fertilizers.

up agricultural prices, fuel food inflation and ultimately consumers would have to bear the brunt. There are observations that it would take considerable time before prices get stabilized. An advisable option could be to provide for an appropriate strategic reserve of such fertilizers. This supply back-up is all the more required in respect of DAP or MoP – the two most consumed fertilizers after urea. Such a reserve maintained by the Government could ensure that no undue price volatility or supply disruptions occur under the de-controlled regime. Pending price stabilization, such market intervention to guarantee timely availability may go a long way in alleviating the woes of farmers. Moreover, given the kind of import-dependence of the country for sourcing fertilizers, the strategy of India for its import needs to be re-designed. India's buying should be concentrated early, say, October-December, when the demand from other countries is not forthcoming, as against the present late entries.

Set up a chain of soil testing labs. across the country, to impart advisory services

1.43 As earlier observed by the Commission, adequate number of soil testing laboratories and health centres is a pre-requisite for successfully operationalising NBS and arriving at the most suitable fertilizer for delivery to the farmer. Only a few States in India such as Andhra Pradesh, Karnataka and Gujarat are relatively better equipped with soil health centres. Many States are not even endowed with rudimentary services of this sort. With improper understanding, or misunderstanding of soil needs and requirements, abuse in the use of fertilizer would persist, telling upon soil conditions. Accordingly, the Commission recommends that **the NBS policy should cover all fertilizer items, supported with measures aimed at price stabilization, preferably through operating a strategic reserve, and actions on priority are warranted to set up a chain of soil testing laboratories across the country to advise farmers on soil needs and requirements.**

1.44 Seed is the basic input in agriculture. The lack of adequate availability of good quality seeds at affordable prices, continues to be a

Increase diffusion of high-yielding, hybrid seeds at reasonable prices with greater private sector association

problem for Indian farmers. Seed replacement rate, particularly among the category of pulses and oilseeds, is below the desired levels. The use of hybrid seeds is limited to a few crops such as cotton and maize. It is the inadequacy of high quality and good seeds, inter alia, that lowers the average productivity of crops in the country. Necessarily, the machinery for provision of quality seeds needs to be strengthened on priority. The achievement in the cotton sector where India has been able to double the production in 5 years enabled by the adoption of better seed varieties, viz., Bt. Cotton, should be considered as an encouraging instance. There should be generation and diffusion of seeds of high yielding varieties and hybrids at reasonable prices. The Government of India is assisting quality seed production under the scheme of 'Strengthening and Development of Infrastructure Facilities for the Quality Seed Production' which needs to be geared up further. Keeping in view the national requirements and deficits involved, it would be advisable to associate more of private interests in the production of quality/hybrid seeds. At present, while public sector mainly caters to the requirements of self-pollinating crops, the private sector is meeting that of hybrid seeds. The private entrepreneurs may be made to play a greater role for crops which have low seed-multiplication ratio. Accordingly, the Commission reiterates its earlier recommendation that **the Government should follow a two-pronged strategy in the seeds sector: increase SRR to the advisable levels in respect of various crops, and lay equal emphasis on the production of quality/hybrid seeds through increased association of private sector, with adequate checks and control.**

Carry forward the thrust in new Seeds Bill for supply of quality seeds.

1.45 The Seeds Bill, 2004 that was to replace the Seeds Act, 1966, was introduced in the Rajya Sabha in December, 2004. After reconsideration and resultant amendments, this was again placed before the Rajya Sabha only in April, 2010, and is pending consideration. The new Bill contains provisions for mandatory registration of all seeds as well as for addressing the major concerns of stakeholders in the seed supply chain. Its rules for implementation should ensure farmers'

access to quality seeds at reasonable prices and incentivise the private interests towards this by promoting conditions for competition. The thrust in the Bill for boosting production and supply of quality seeds needs to be carried forward, so that the present yield gaps in India's crop sector could be controlled to the requisite extent.

Provision of farm credit has improved, by 206.85 percent from 2004-05 to 2009-10.

1.46 Agriculture credit plays an important role in improving agricultural production and productivity as well as mitigating the distress of farmers. It is appreciated that credit flow to the sector has remarkably improved since 2004-05 when the comprehensive credit policy was announced by the Government. As against Rs.86981 crore agri-credit provided in 2003-04, the achievement in later years has been Rs. 125309 crore (2004-05), Rs. 180485 crore (2005-06), Rs. 229400 crore (2006-07), Rs. 254658 crore (2007-08), Rs. 301908 crore (2008-09), and Rs. 384514 crore (2009-10). From 2004-05 to 2009-10, the increase in credit flow has been 206.85 percent. For the year 2011-12, the target of credit flow to farmers has been raised to Rs. 4,75,000 crore from Rs. 3,75,000 crore (2010-11). The additional interest subvention to those farmers who repay their crop loans on time has been enhanced to 3 percent, that brings down the effective rate of interest for such farmers to 4 percent per annum (ref: Union Budget, 2011-12).

Farm credit expansion not leading to financing more number of new farmers.

1.47 However, as already observed by the Commission in an earlier Report, the scenario that emerges after examination of the number of new farmers who were financed since 2004-05 is not so encouraging. Against 78.84 lakh new farmers provided with credit from institutional sources during 2004-05, the corresponding numbers during the subsequent years were 78.73 lakhs (2005-06), 83.5 lakhs (2006-07), 85.19 lakhs (2007-08), 94.9 lakhs (2008-09), and 90.92 lakhs (2009-10). With the result, the total number of accounts during the period could look up only from 4.13 to 4.82 crores. Thus, the remarkable expansion in the flow of agriculture credit is not getting translated into the financing of more number of new farmers and fulfillment of

increasing financial inclusion. The lag mainly pertains to RRBs and cooperative banks. The RRBs financed 18.58 lakh new farmers in 2004-05, slowly progressed and reached upto 23.23 lakh numbers in 2008-09 but considerably declined to 17.62 lakh new farmers in 2009-10. In the case of cooperative banks, there were ups and downs, and the number of new farmers financed increased only from 12.52 lakhs (2004-05) to 13.43 lakhs (2009-10). The composition of credit flow and lending pattern in the provision of farm credit should be more oriented towards opening of new accounts to cover small and marginal farmers. Failing this, they would fall an easy prey to the exploitation by informal sources that would perpetuate distress in the farm sector. As per available estimates, the institutional coverage of farm credit is only about 40 percent. The informal sources of finance who fill in the gaps reportedly charge about 36 to 60 percent rate of interest. State Governments should regularly monitor not only the quantum of credit flow from the institutional sources, but also its distributional aspects among farmers.

Revival and progress of cooperative sector should get expedited.

1.48 While the disbursal of agriculture credit by the commercial banks substantially increased from Rs. 81,674 crore (2004-05) to Rs. 2,85,800 crore (2009-10) (249.93 percent) and that by RRBs from Rs. 12,404 crore (2004-05) to Rs. 35,217 crore (2009-10) (183.92 percent), that from cooperative banks increased only from Rs. 31,231 crore (2004-05) to Rs. 63,497 crore (2009-10) (103.31 percent). The share of cooperative banks remains as only 16.51 percent. Needless to state that a vital entity for enhancing the access of small and marginal farmers to the institutional sources of credit, is the agency of cooperative banks who are expected to have focussed operations in the rural areas. The package of measures, short-term, that was brought in pursuant to the recommendations of Vaidyanathan Committee, is under implementation. However, the long-term measures, are awaiting Government approval. This needs to be expedited. The revival and progress of cooperative sector should gather further momentum through expeditious action plans, in the

context of promoting the lot of Indian farmers. In view of the position stated above, the Commission recommends that **alongwith accelerating the flow of agriculture credit, thrust should be laid on the inclusion of more number of small and marginal farmers, particularly through cooperative banks and RRBs, and the pending reforms for promoting the progress of cooperative sector should get expedited.**

Coverage of procurement operations inadequate; market prices dip below MSP.

1.49 The 'Agricultural Price Policy—A Long Term Perspective', November, 1986, brought out by the Government of India, had highlighted the following three basic foundations needed for building a sound agricultural economy, viz., productive technology package, efficient delivery services alongwith remunerative and stable market prices for produce. The National Policy on Farmers, 2007, states that assured and remunerative marketing opportunities hold the key to continued progress in enhancing farm productivity and profitability, for which the MSP mechanism would be implemented effectively across the country. To facilitate MSP operations and its intended benefits to farmers, adequate number of procurement centres needs to be functional. The Commission has been repeatedly highlighting this essential requirement. Unfortunately, this is still remaining as a constraint in several places. This was confirmed in one of the quick studies on implementation of MSP conducted by the Commission during 2008, in the States of Madhya Pradesh, Uttar Pradesh, Punjab, Rajasthan, Bihar and Uttarakhand. Also, the Commission's interactions with farmers indicate that during times of heavy crop arrival, the farmers are to resort to distress sales at prices below MSP. As per data available from the Directorate of Economics & Statistics, against the MSP of paddy at Rs. 1000 per quintal, the market price went down to Rs.850 (Mysore, Karnataka). For jowar (MSP Rs. 880 per quintal), the market price dipped to Rs.820/- (Kanpur, UP), for bajra (MSP Rs.880 per quintal), the market price declined to Rs.770 (Hissar, Haryana). But the position revealed by the price data given by State Governments, is more telling: for paddy the price touched Rs. 780 per quintal

(Dayanagere, Karnataka), jowar Rs. 500 (Burhanpur, MP), and Bajra Rs. 650 (Bagalkote, Karnataka).

Expand procurement network, especially to unreached areas.

1.50 New initiatives were taken by government through the decentralized procurement of foodgrains. However, the coverage of procurement operations is neither adequate nor effective. Certain parts of the country are still left out of the procurement network, and in the process denying the benefits of MSP to the target group. It seems the procurement mechanism of the official agencies continues to be largely confined to operations in the traditional procurement areas. As reported by the FCI, against 15151 and 15357 procurement centres available in 2008-09 and 2009-10 respectively, this number declined to 11049 in 2010-11. It is imperative to expand the reach of procurement network, especially to the unreached areas. Wherever the FCI may not be in a position to increase its coverage, appropriate agencies may be enlisted from the States for the task of procurement. It is advisable for the Government to evaluate the cooperatives, SHGs, and private sector, to take up procurement operations. Therefore, the Commission reiterates that **the Government should on priority carry out a review of the state of procurement operations in the non-traditional areas of the country, for initiating improvement measures. Associating appropriate agencies available in the States other than the usually enlisted organizations (ex: cooperative organizations, SHGs) for procurement operations, needs to be given serious consideration.**

Only half-way progress in agri-marketing reforms; expedite APMC reforms for competitive modern markets.

1.51 Well functioning markets are fundamental to the growth of agriculture sector. However, the state of marketing in the sector is still far from this. Several States have made amendments in the APMC in the light of the Model Act that was circulated by the Central Government. However, Uttar Pradesh, Uttarakhand, Jammu & Kashmir, West Bengal, Meghalaya, and Puduchery are yet to amend their APMC Act. The States of Punjab and Haryana, and UTs of Chandigarh and Delhi have effected only partial amendments of their APMC Acts. Barring the States of Maharashtra, Andhra Pradesh,

Rajasthan, Tamil Nadu, Orissa, Himachal Pradesh, and Karnataka, other States who acted on the Model Act have not notified the required rules, so that the changes would become operational. Similarly, the Warehousing (Development & Regulation) Act, 2006 has been brought into force enabling the introduction of a regulated system of warehouse receipts. But the rules under this Act are still to be notified. In this way, the state that exists currently in agri-marketing is that of half-way progress. Pending completion of these steps, the marketing reforms would not deliver the intended benefits. Moreover, in most places, the markets are devoid of basic infrastructure such as adequate drying yards, cold storages, facilities for grading, loading and unloading, correct weighing, and platform for auctions. In consequence, farmers are still contending with non-transparent methods of pricing the fruits of their hardwork. The programmes for market reforms should have a necessary component for improving infrastructural facilities. As earlier observed by the Commission, it is time to network the country with a system of spot electronic markets, so that electronic auctioning will not remain as an exception in the agriculture marketing system. In fact, if adequately institutionalized, spot exchanges could facilitate the development of a national price and trading monitoring and information system. When internationally agriculture is getting increasingly knowledge-intensive, Indian farmers should also be given access to market information through modern ICT tools and techniques that would enable the farmers to sell their produce at appropriate time and in appropriate market. In fact, the States should not only adopt and operationalise the model APMC reforms, but also attempt to go beyond that and usher in a free and competitive market to farmers. The aim should be farmers' markets where they could freely sell to consumers, without confronting infrastructural inadequacies. Accordingly, the Commission recommends that **the agri-marketing reforms are to be effectively pursued further across the country, so that free and competitive markets for farmers come up at the earliest, supported with adequate infrastructural facilities.**

Inadequate storage facilities lead to deterioration of foodgrains.

1.52 Food security and food production are the national priorities. Despite this, no substantial progress has been registered for augmenting the grain storage facilities. As on 31-3-2010, the storage capacity with FCI and State agencies has been reported to be 58.39 million tonnes. Out of this, only 70.18 percent are covered, and the rest have been termed as CAP (covered and plinth). Even for FCI, 10.32 percent of the total storage capacity is CAP. But in the face of accumulated stocks with the Government and likely procurement of about 50 million tonnes grain annually, this turns out to be inadequate. There are newspaper reports that about 10 million tonnes of wheat, amounting to about half the FCI's wheat stock, were stored in the open and runs the risk of getting spoilt. While the government is the biggest 'hoarder', its warehousing capacity is short of requirements. The government would be procuring a significant portion of the expected record output of about 82 million tonnes of wheat in the coming season. Following this, huge quantum of grains stock will come up and possibly deteriorate, in the absence of adequate storage and timely disposal. This is not in national interests, especially amidst rising food inflation.

Enhance storage facilities with increased association of private investors.

1.53 It is high time to make up the deficits in storage facilities. For this, the resources available with private interests need to be made proper use of, supported with adequate provision of bank credit. To translate the present plans/programmes into real achievement of enhanced storage facilities, a reasonable rate of return has to be assured over the full life span of a godown, so that the probable investors may not get disincentivised and look for better options like investments in real estate. These investment-related issues are to be kept in view for creation of storage. Accordingly, the Commission recommends that **considering the inadequacy of storage facilities currently available with Government agencies, an advisable option could be to actively associate private interests to enhance storage capacity, with adequate support of bank credit and assured return over the effective life time of the godown.**

Improve farm mechanization for promoting agriculture efficiency; move towards appropriate farm tools and machinery suiting the country requirements.

1.54 For promoting efficiencies in India's agriculture, it is essential to improve the intensity of farm mechanization. This would facilitate timely and scientific farm operations, and elevate efficiency in the use of farm inputs and labour. Mechanization has become a must, in view of the emerging labour shortage emanating from expansion of employment programmes and migration of labour to urban areas. However, farm mechanisation in India is still in the early stages of development and dominated by the use of tractors and tractor-mounted implements. This over-capitalisation of farms through big tractors, often financed through loan, against predominant number of small and marginal farm holdings, could lead to indebtedness and other problems. As regards farm equipment market, it is dominated by unorganised players. The country should move towards developing appropriate farm tools and machinery that could take over traditional labour-based work like transplanting, inter-cultural operations, planting, harvesting, etc. Simultaneously, there should be effective extension services to impart education and training for efficient usage of such farm equipment. There are Government programmes to provide farm mechanisation under schemes such as Rashtriya Krishi Vikas Yojna and Macro Management of Agriculture. However, the sector is devoid of concerted efforts to the requisite extent. Greater thrust is required to accelerate the growth of this sector and fully utilize the potential it holds. It is welcome that the concessional rate of basic customs duty of 5 percent provided to specified agricultural machinery has been reduced further to 2.5 percent, in the Union Budget, 2011-12.

Have proper framework for promoting farm mechanization.

1.55 A proper framework, legislative and structural, must be brought into position to facilitate custom hiring (renting) services for better capacity utilisation of farm equipment. Encouragement may be given to Self-Help Groups (SHGs) of farmers, user groups, agri-entrepreneurs, and cooperative societies for establishing agri-business centres to purchase, maintain and provide farm machinery to farmers under custom hiring arrangements. Research efforts aimed at design and

development of farm machinery, particularly small tools and implements, that would cater to the needs and requirements of diverse crops and agro-climatic conditions in the country, need to be focussed. Concrete measures are to be taken to propel farmers towards adoption of efficient farm mechanisation practices especially in the farm equipment space. Accordingly, the Commission is of the considered view that **farm mechanization should be promoted under an appropriate framework, research efforts are to be oriented towards farm machinery suiting the requirements of diverse crops and regions, and farmers are to be enthused for their adoption.**

As individual crop based approach inadequate to impart livelihood security to majority of farmers, promote integrated farming systems.

1.56 India's farm sector is featured by small and marginal holdings. Nearly 50 per cent of the farmers in India have land holdings of less than one hectare. Individual crop/commodity based approach does not provide livelihood security to them. A recent farm situation survey by the NSSO revealed that in most places farms below 4 hectares do not earn enough income from crop farming to stay above the poverty line. Therefore, there is a need to develop and upscale integrated farming system including crops, animal husbandry (especially dairying), piggery/poultry/fish culture and allied business. For ensuring adequate revenue realisation to farmers, a regular income flow has to be generated both from on-farm and off-farm employment. Alongwith farming, parallel emphasis has to be laid on non-farm development. Empirical studies indicate that larger non-farm participation has improved the resilience of rural areas towards drought and other natural calamities and also lent contribution to reduction in poverty levels. But for such activities to register pick-up, the farm populace, particularly youth, are to be provided with the requisite education and training as well as skill formation and also appropriate rural infrastructure and institutions. The youth should be enabled to bring out agriculture transformation centres in the villages. With effective agriculture-industry linkages, agro-processing would come up. Experience brings out that non-farm activities would attain success only when such activities provide employment to local people directly

and use the local resources and produce as inputs. Many regional non-farm development strategies such as industrial estates, have failed because of this lacunae. Furthermore, there should be adequate support to organize the marketing network for success of any policy for crop diversification targetted towards small and marginal farmers. Models for collective marketing by them such as Self Help Groups, co-operatives and small producer cooperatives may be set up. There should be effective initiatives to link the growers' groups/companies to the organized retailers/exporters. Accordingly, the Commission recommends that **integrated farming systems need to be promoted among small and marginal farmers, with support for skill formation, appropriate infrastructure and collective marketing, and stress on use of local resources and inputs, for ensuring regular and adequate flow of income to them.**

Need for risk management.

1.57 The agriculture sector is featured by the frequent visit of floods, drought, hailstorm and attack of pests and diseases which make farming a risky occupation. At times, these events have not only a crippling effect on farmers' ability to save and invest in agriculture, but also make them more indebted and poor. Hence, there is need for an appropriate system of risk management in the sector. Accordingly, the Government sponsored crop insurance scheme, viz., National Agricultural Insurance Scheme (NAIS) has been under implementation in the country since Rabi 1999-2000 season as part of risk management in agriculture with the objective of providing financial support to farmers in the event of failure of crops as a result of natural calamities, pests and diseases. It has envisaged coverage of all the food crops (cereals, millets and pulses), oilseeds and annual commercial/horticulture crops in respect of which past yield data is available for adequate number of years.

1.58 Over the years, limitations/shortcomings were observed in the operation of NAIS, and a modified NAIS, was under consideration of the Government. After considerable delay, Government has approved

*Modified
NAIS
approved
as an
improvement
over
NAIS.*

the Modified NAIS for implementation on pilot basis in 50 districts from Rabi 2010-11 season in the country. Administrative approval and operational guidelines for the scheme were issued in September, 2010. The scheme has been notified by 12 States in 34 districts for the Rabi 2010-11 season. The major improvements made in this modified version are: actuarial premium with subsidy in premium at different rates, i.e. 40 to 75 per cent, depending upon the slab that is provided to farmers; all claims liability would be on the insurer; unit area of insurance reduced to village panchayat level for major crops; indemnity for prevented sowing/planting risk and for post harvest losses due to cyclone; on account payment up to 25 percent advance of likely claims as immediate relief; more proficient basis for calculation of threshold yield; minimum indemnity level of 70 per cent instead of 60 per cent; and allowing private sector insurers in implementation of the scheme. The scheme provisions seem to improve over the shortcomings of its earlier version, and the implementation has to ensure this. Further, the pilot basis should get graduated to fullfledged implementation across the country without delay, enlisting increasing number of farmers and all eligible farm items.

1.59 On the whole, the Indian agricultural sector is finding itself in challenging times. The sector is confronted with several problems and issues with varying severity across crops and regions. These relate to aspects such as production, availability of inputs, infrastructure, and prices. First, the issue of food inflation that is yet to get contained, is a matter of concern. The problem has to be tackled by resorting to both short term as well as long term measures. The yield growth in agriculture sector has to be boosted through appropriate technology development followed up with its effective dissemination. Alongwith this, other major supportive factors are to play a critical role. There should be greater thrust on irrigation, in particular the propagation of modern methods of irrigation such as micro irrigation. Seeds being the basic input in agriculture, it should be endeavoured to increase the availability of good quality, high-yielding seeds at affordable prices

through enhanced association of private sector. There should be balanced application of fertilizers, by pursuing further the NBS policy, as brought out in the Overview. As already discussed in details, for translating the intent of MSP into actual results and achievement, the network of procurement operations has to be spread across the country. Reforming the mandi system has to be in tandem with this. The proposed second green revolution in the eastern region of the country is a welcome and required policy initiative, but the action plans for this need to be infused with the requisite vision and strategic framework. Indeed, the agriculture sector has to be imparted with the deserving priority, so that a rapid growth in the sector would not remain as elusive.

II. PRICE SUPPORT OPERATIONS, CROP SITUATION, MARKET BEHAVIOUR, PROCUREMENT, DISTRIBUTION AND STOCKS

Minimum Support Price

In its Report on Price Policy for Kharif Crops of 2010-11, the Commission recommended, *inter alia*, Minimum Support Prices (MSP) for fair average quality (FAQ) of various crops to be fixed at the following levels:

(Rs. per quintal)

Commodity	MSP Reco by CACP	MSP Fixed By Government			% change in 2009-10 over 2008-09	% change in 2010-11 over 2009-10
	2010-11	2010-11	2009-10	2008-09		
Paddy Common	1000	1000	1000*	900*	11.11	0.00
Paddy (F)/Grade'A'	1030	1030	1030*	930*	10.75	0.00
Jowar-Hybrid	880	880	840	840	0.00	4.76
Jowar-Maldandi	900	900	860	860	0.00	4.65
Bajra	880	880	840	840	0.00	4.76
Ragi	965	965	915	915	0.00	5.46
Maize	880	880	840	840	0.00	4.76
Tur (Arhar)	2800	3000	2300	2000	15.00	30.43
Moong	3170	3170	2760	2520	9.52	14.86
Urad	2900	2900	2520	2520	0.00	15.08
Groundnut	2300	2300	2100	2100	0.00	9.52
Sunflower Seed	2350	2350	2215	2215	0.00	6.09
Soyabean (Black)	1400	1400	1350	1350	0.00	3.70
Soyabean (Yellow)	1440	1440	1390	1390	0.00	3.60
Sesamum	2900	2900	2850	2750	3.64	1.75
Nigerseed	2450	2450	2405	2405	0.00	1.87
Cotton						
F414/H777/J 34 (Raj.)#	2500	2500	2500	2500	0.00	0.00
Bunny/Brahma##	3000	3000	3000	3000	0.00	0.00
VFC - Tobacco (Rs/Kg)						
F2	5000					
L2	5200					

*Includes bonus of Rs. 50/- per quintal

#: staple length (mm) 24.5 -25.5 and micronaire value 4.3-5.1

##: staple length (mm) 29.5 -30.5 and micronaire value 3.5-4.3

2.2 The Government announced the kharif price policy for cereals, pulses, oilseeds and raw cotton on June 24, 2010, fixing MSP at levels recommended by the Commission except Tur (Arhar) wherein

Government has fixed its MSP at higher rate of Rs.3000/- as against Rs.2800/- recommended by the Commission. The Textile Commissioner fixed the MSPs for different varieties of raw cotton on 15.09.2010, keeping in view the normal market price differentials and other relevant factors, namely, staple length and micronnaire value. The Government has not announced the MSP for tobacco since 2008-09 season.

Price Support Arrangements

2.3 The uniform specifications of paddy, rice, and coarse grains for procurement for the Central Pool during the kharif marketing season 2010-11, were notified by the Government on 16th June, 2010. These specifications have fixed the maximum limit for moisture content at 17 percent for paddy except 20 percent relaxed for Tamil Nadu, 14 percent for rice, jowar, bajra and maize, and 12 percent for ragi. The levy prices of rice common as well as grade-A varieties, were also notified by the Central Government to the State Governments.

2.4 The uniform specifications of paddy, rice and coarse grains for the central pool, as mentioned above, have been notified by the Government, keeping in view the intent for improving the quality as well as for enabling smooth procurement. Accordingly, other than for moisture content, the specifications lay down the maximum limits for refractions such as foreign matter, damaged, discoloured, sprouted and weevilled grains, immature grains, etc. The limits prescribed vary from item to item. Relaxation in specifications was granted on the requests of Punjab, Tamil Nadu and Andhra Pradesh Governments in the case of paddy relaxing limit from uniform specification of 4 percent to 10 percent, 5 percent and 7 percent respectively for damaged/slightly damaged grains including pin-point damaged grains/discoloured red grains in order to mitigate the hardship of farmers and to avoid distress sale. Relaxation in specification of rice (Grade 'A' & Common) was granted to Andhra Pradesh relaxing limit from uniform specification of 3 percent in case of raw rice for custom

milled and levy price for damaged/slightly damaged grains including pin-point damaged grains relaxed up to 4 percent and in case of broken grains relaxed up to 30 percent against the existing limit of 25 percent.

Rice

Kharif production in 10-11 to surpass 09-10 production, but below 08-09 achievement the best so far in the current century.

2.5 Rice, as a staple food for about 65 per cent of the Indian population and the major constituent, along with wheat, in providing short term and long term solution to food security, faces major challenges, among others, due to (i) increasing population which is projected to reach 1.6 billion by 2030 (ii) consequent increase in demand for rice estimated at 125 million tonnes by 2030 (Department of Agri.& Cooperation) and (iii) plateauing of area expansion, depletion in water levels, decline in soil fertility and climate concerns. Productivity enhancement is the only feasible solution for increasing production in the coming years, which bring to the forefront the importance of continuous improvement in rice technology in the country.

2.6 The kharif rice production during 2010-11 is projected to surpass the 2009-10 achievement due to, among other factors, overall favourable weather conditions witnessed during the period. As per the Second Advance Estimates of Directorate of Economics and Statistics, the kharif rice production during 2010-11 is envisaged at 80.16 million tonnes, an increase of 5.58 percent over the kharif production of 2009-10, however, less than the achievement of 2008-09, which was the best production year so far in the current century. The reasons for not surpassing the 2008-09 production achievement can be attributed to drought experienced in Jharkhand, Bihar and West Bengal, which affected area under rice in these states and floods in Punjab and Haryana which necessitated replanting of paddy. These factors might have affected productivity in these areas. Area under kharif rice is envisaged to marginally increase from 37.60 million hectares in 2009-10 to 37.80 million hectares in 2010-11, an increase of 0.53 percent. As indicated above, area got affected due to drought in some of the

eastern states. Since the crop year 2010-11 witnessed only marginal increase in rice area, the 5.58 percent growth in rice production was mainly accounted for by increased productivity, which increased by 5.05 percent over the previous year.

(Table 2.1)

Production increase driven by productivity increase at the rate of 1.34 percent annually during 1999-2000 to 2009-2010

2.7 An analysis of trends in rice production shows that the production increase in the last ten years or so were mainly driven by increase in productivity, rather than area expansion. Rice production had increased at a rate of 1.14 percent per annum during 1999-2000 to 2009-10, during which period area reduced at a rate of 0.20 percent while productivity increased at a rate of 1.34 percent annually. This is a positive development considering the limitations in area expansion in the coming years. Another feature of rice cultivation is the continuing importance of climate/weather in determining the production, which is true of other agricultural crops also. The performance of the crop during 2009-10 is an example of how important weather conditions are in the cultivation of the crop. The country had been experiencing consistent increases in rice production since 2005-06. Production had increased from 91.79 million tonnes in 2005-06 to 93.36 million tonnes in 2006-07 and further to 96.69 million tonnes and 99.18 million tonnes in 2007-08 and 2008-09 respectively. However, this trend was disrupted in 2009-10 and production declined by 10.17 percent over the previous year to reach a level of 89.09 million tonnes. This was attributed to the major drought that affected the country during the year. Reduction in production by 10.09 million tonnes in one single year can derail the food management, though fortunately it did not happen in 2009-10 due to bumper harvests during the previous years and increased scale of procurements. The yearly fluctuations in the production levels of rice, especially in the first half of the last decade also point to the continuing dependence of the crop on weather conditions. To minimise such natural disruptions, research needs to focus on drought resistant varieties of seeds and on practices which require less water like the System of Rice Intensification (SRI)

technique, in which case the water saving is found to be to the extent of 25-50 per cent. (Table 2.2)

States where water tables are declining show increase in area while water abundant states show area decline

2.8 Area under rice has been remaining stagnant. During T.E 2009-10, area coverage was 43.79 million hectares compared to 44.47 million hectares registered during T.E 1999-2000. Among the major rice growing states, Tamil Nadu witnessed area decline with the area coverage under rice falling to 1.86 million hectares during T.E 2009-10, compared to 2.23 million hectares in T.E 1999-2000. Diversification to horticulture crops is cited as one reason for the decline. The states in the eastern region have also been showing decline in the area under rice cultivation. The T.E 2009-10 for Bihar and Jharkhand (combined) was 4.87 million hectares, a decline of 3.94 percent from the T.E 1999-2000 of 5.07 million hectares. In respect of Orissa and West Bengal, the area decline was to the extent of 2.01 and 3.72 per cent for the same period. In respect of Punjab and Haryana, the continuous wheat-rice rotation has become environmentally undesirable due to decline in soil fertility and fall in water table. However, in spite of the above condition, the states have shown growth in area; Punjab with an area of 2.72 million hectares during T.E 2009-10 compared to 2.47 million hectares in T.E 1999-2000 and Haryana with 1.16 million hectares and 1.03 million hectares respectively for the same period. The assured returns from rice cultivation in view of the active procurement operations could be one reason for farmers to continue with the rice cultivation.

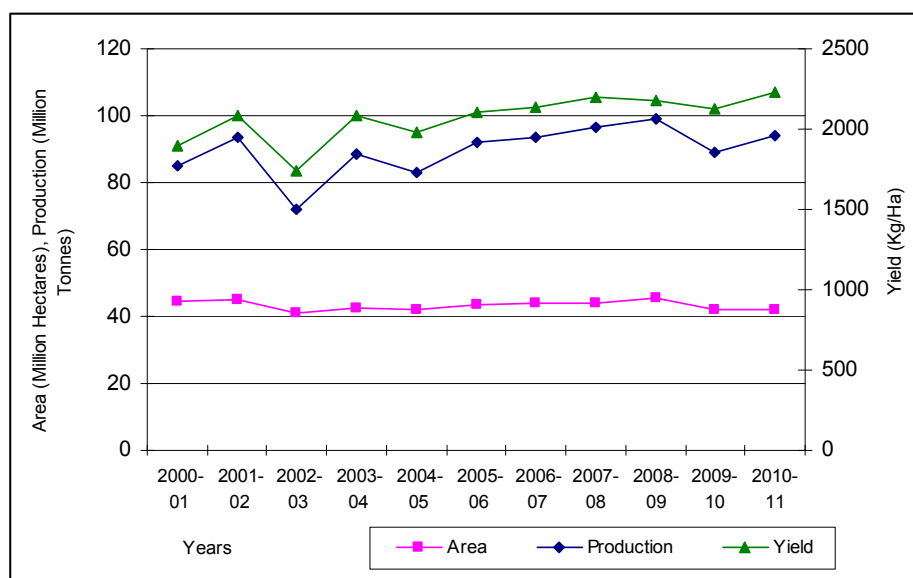
(Tables 2.1 & 2.2)

2.9 Yield levels of rice have improved, though marginally, during recent years. The productivity in T.E 2009-10 was 2169 kg/hectare as against the productivity of 1936 kg/hectare of T.E 1999-2000. The growth rate of yield during the period 1999-2000 to 2009-10 was higher at 1.34 percent per annum compared to 1.27 percent of the earlier period 1989-90 to 1999-2000.

(Tables 2.1 & 2.2)

The trend of growth in area, production, and yield is shown in the Chart -1.

Chart -1: Trends in Area, Production and Yield of Rice



Source: Directorate of Economics & Statistics, Ministry of Agriculture.

2.10 Productivity of the crop is still behind the world average and that of major producing countries, as shown in the Table 2.1.

Table 2.1: Country-wise Yield of Paddy in 2008

Country	Yield (kg/ha)
Egypt	9731
USA	7672
China	6556
Japan	6488
Vietnam	5223
Indonesia	4895
Brazil	4229
Bangladesh	3995
Philippines	3770
Pakistan	3520
India	3370
Thailand	2973
World	4309

Indian rice productivity still behind world average and that of major producing countries

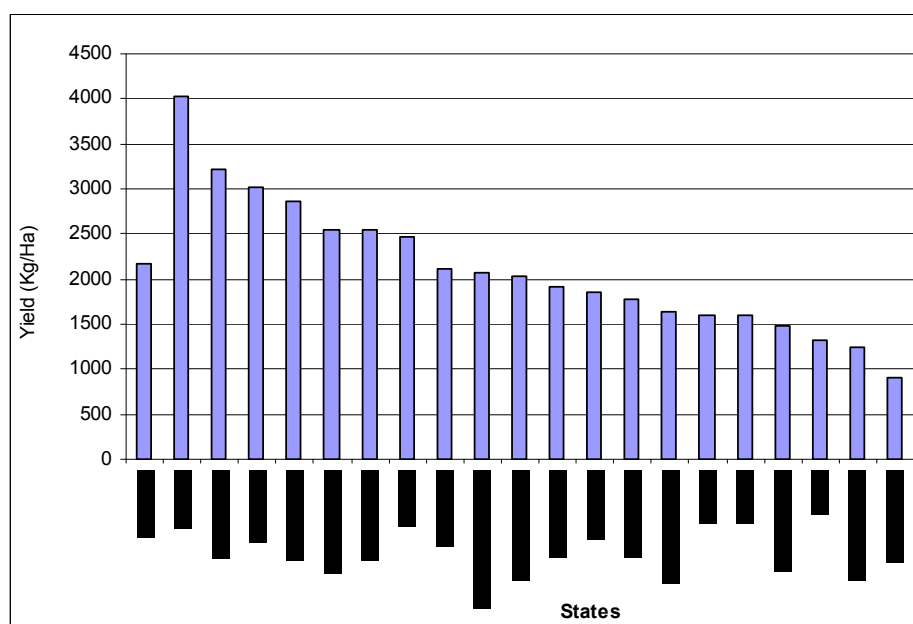
Source: Agricultural Statistics at a Glance, 2010

2.11 There are wide differences in the yield levels across states. The states with high yield levels include Punjab, Haryana, Andhra Pradesh

and Tamil Nadu. All the eastern states except West Bengal have much lower productivity levels than the All-India level of 2125 kg/hectare (2009-10) – Bihar 1120; Jharkhand 1546; Orissa 1585 and Assam 1737 kg/hectare. The inter-state disparity in yield levels is captured in the Chart 2.

Chart 2: State-Wise Yield of Rice T.E 2009-10

Rice productivity below all India average in all eastern states, except West Bengal



Source: DES, Ministry of Agriculture.

2.12 The yield potential of a technology is not fully achieved in many cases when it is transferred to the farmers' field as shown in the Table 2.2.

Table 2.2: Gap in potential and realized yield
(yield t/ha)

State	FLD yield	Farmers' level yield	Yield gap (%)
Assam	2.55	1.53	66.7
Bihar	4.15	1.51	174.8
Chhattisgarh	3.13	1.45	115.9
Uttar Pradesh	5.20	2.18	138.5

Source: Department of Agri. & Cooperation ;

FLD=Front Line Demonstrations

2.13 The yield gap between the two situations highlights the lack of awareness among the farmers in the application of technology, which

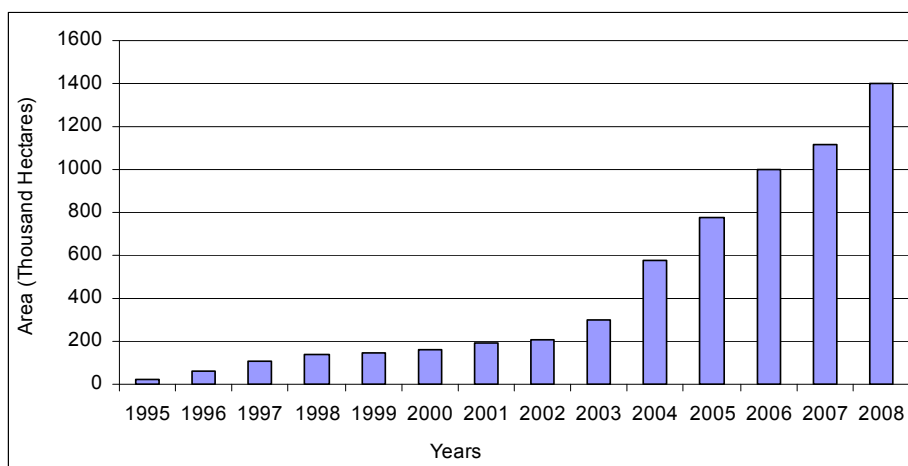
Lack of extension prevents achieving full potential of technology at the farmer level

Hybrid rice cultivation only in 3 per cent of the rice area in the country

should have been addressed by the extension mechanism in the country, administered through ATMA and Krishi Vigyan Kendras (KVKs). There is tremendous scope for making the extension agencies in the country more dynamic to meet the requirements of the farmers through a more effective Public-Private Participation (PPP) model.

2.14 While more than 70 per cent of the rice area is presently planted under modern rice varieties, the spread of hybrid rice technology has been very slow in the country considering the fact that intensified research programme on rice hybrids was started way back in 1989 by ICAR and by 2001, it could release, in collaboration with private agencies, about 19 hybrid varieties. As on 2009, the hybrid rice varieties released and commercialized in the country rose to 42, while only 3 per cent of the area under rice was covered under hybrid seeds (2009). Area under hybrid rice during the last 10 years is shown in the Chart -3.

Chart-3: Area under Hybrid Rice in India



Source: Directorate of Rice Research, Hyderabad.

2.15 The yield advantage under hybrid varieties has been established, ranging from 10-45 per cent over corresponding high yielding inbred varieties, as shown in the Table 2.3.

Table 2.3: Comparison of Yield of some of the Hybrids and Inbred varieties

Hybrid yield advantage to the extent of 10-45 % over high yielding inbred varieties

Name of the hybrid	Yield of hybrid in OFT# (t/ha)	Yield of inbred varieties in OFT (t/h)	Yield advantage over inbred (%)
APHR-1	7.14	5.27(chaitanya)	35.4
KRH-2	7.40	6.10 (Jaya)	21.3
Pant Sankar Dhan-1	6.80	6.20 (Pant Dhan-4)	9.7
ADTRH-1	7.10	4.90 (ASD-18)	44.9
Sahyadri	6.64	4.89 (Jaya)	35.8
PA 6201	6.18	5.03	22.9
Pusa RH-10	4.35	3.11	39.9

Source: ICAR # OFT= On Farm Trials

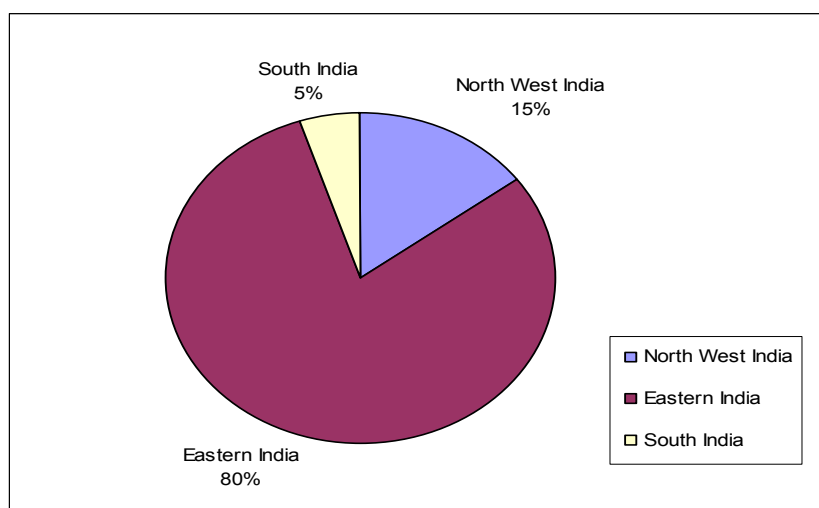
Thus, the established yield superiority of rice hybrids needs to be fully exploited through proper extension programmes and timely availability of seeds to the farmers at reasonable costs.

Eighty percent of the hybrid adoption in eastern states, 15% in north-west states and 5% in southern states.

2.16 The spread of the use of hybrid varieties among states has also not been even. About 80 per cent of the adoption has so far taken place in the eastern part of the country in the states of U.P (eastern), Bihar, Chhattisgarh and Jharkhand, while it has been only around 5 per cent in the southern states of Karnataka, Tamil Nadu and Andhra Pradesh and about 15 per cent in the North-West States of Punjab, Haryana and Maharashtra. The popularity of hybrids in the eastern states could be attributed to the existing very low yield levels of local varieties and the significant yield increase which the hybrids provide. In West Bengal, which has the highest area under rice, the hybrids have yet to make a dent, reportedly because of the absence of the preferred variety hybrid seeds. In southern states also the area under hybrids is negligible since stickiness, which some of the varieties exhibit and the aroma of the hybrids is found to be unpopular with the food tastes of southern India. The existing deterrents in expansion of hybrids in various parts of the country need to be removed through research and commercialization of locally preferred hybrid varieties. Scope for

partnership with private sector in seed production, multiplication and distribution should be taken advantage of to the maximum extent. Region-wise use of hybrid rice varieties are shown in the Chart-4:

Chart-4: Region-Wise use of Hybrid Rice Varieties -2009



Source: Directorate of Rice Research, Hyderabad.

2.17 The National Food Security Mission (NFSM-Rice) has components for hybrid rice production. However, achievement rates against targets have been significantly low, except in the component on “Demonstrations on Hybrid Technology”, as indicated in the Table-2.4.

Table-2.4: Achievement (in %) against Targets under NFSM Hybrid Rice Components

Item	2007-08		2008-09		2009-10	
	Phy.	Fin	Phy.	Fin	Phy.	Fin
Demo. on hybrid technology	34.8	34.7	117.5	100.2	108.7	73.6
Assist. for prod. of hybrid seed	5.5	5.5	246.8	0.50	0.00	0.00
Assist. for distribution of hybrid seed	7.1	7.1	19.3	17.2	12.5	11.5

Source; Department of Agri. & Cooperation

China's successful hybrid story a lesson for India

2.18 India's slow expansion of hybrid rice varieties is in sharp contrast to the experience of China with respect to adoption of hybrid rice varieties. Though China had started way ahead than India on the research and development of hybrid rice ie. as far back as 1964, the increase in China's hybrid rice acreage and yield has been consistent

and phenomenal to reach a level of more than 60 percent (of the total rice area) area coverage and yield of more than 6 tonnes/ha (2008). China has achieved this success through a number of measures like enhancing the financial allocation for agricultural R&D, developing dynamic multi-tiered research institutes, seed production and extension agencies, demonstrations and trainings, increasing seed production and lowering seed costs, adhering to quality standards in seeds etc. China also had the advantage of effective leadership which led the nation in the research on hybrid rice in 14 provinces in 1970's.

Assured
procurement, pre-
requisite
for
adoption
of hybrids

2.19 The success and sustainability of hybrid rice technology in India would require immediate attention on various fronts. (i) Availability of quality seeds, adhering to local tastes at reasonable prices. Quality and taste can be improved through research. Private sector plays an active role in the production of rice hybrid seeds with about 90 per cent of the requirement met by the private sector seed agencies. PPP in seed manufacturing should develop in a healthy way with level playing field for both sides. (ii) High cost of hybrid seed is a deterrent for farmers in adopting the technology. Government would need to subsidise the seed cost so that farmers get their seed requirement at reasonable cost. (iii) Government should procure hybrid rice so that farmers will have assurance of returns. (iv) Extension activities for improving the awareness regarding the benefits of hybrid cultivation.

Market Behaviour, Procurement, Stocks, Distribution, Demand & Supply Balance and Trade Practices:

Moderation
in the price
increase of
rice

2.20 The wholesale price index of rice for 2009-10 averaged at 157.9 (Base: 2004-05=100) showing an increase of 12.3 per cent over 2008-09 index. For the current year, upto February 2011, the average price index stood at 166.7, an increase of 5.6 per cent over the previous year, an indication of moderation in price increase. The year to year inflation in rice during the last four years is shown in the Table 2.5.

Table 2.5: Year to Year Inflation in Rice WPI (%)

Year\Month	April	July	October	February
2007-08	9.6	9.8	12.9	13.1
2008-09	14.6	13.7	15.0	15.9
2009-10	13.8	13.1	10.5	9.9
2010-11	8.3	9.6	5.3	1.8

Procurement

2.21 Government announced MSP of Rs.1000 and Rs. 1030 per quintal for common and Grade A varieties of paddy for the kharif marketing season 2010-11. The Food Corporation of India (FCI), together with other agencies, has procured 24.44 million tonnes of rice, as on 21.03.2011 as against the procurement of 24.41 million tonnes procured during the corresponding period of 2009-10, an increase of 0.12 per cent. Procurement from Punjab was 8.63 million tonnes, which accounted for about 35.33 per cent of the total procurement so far. The state of Andhra Pradesh had the second highest procurement (3.79 million tonnes), followed by Chhattisgarh (3.49 million tonnes), Haryana (1.66 million tonnes), Uttar Pradesh (2.08 million tonnes), Bihar (0.44 million tonnes), and Orissa (1.54 million tonnes). States like Assam, West Bengal, and Jharkhand continue to have very low procurement. State Government of Assam, during discussions with the Commission had highlighted the need for more FCI centres in the state. FCI reportedly opened only twelve procurement centres in the state during the current procurement season, which was grossly inadequate to meet the requirements. While increase in procurement in states like Bihar, Orissa and Chhattisgarh is encouraging; FCI should focus more on less developed rice producing regions and spread its centres to cover more farmers. (Table 2.8)

*Chhattisgarh
emerging as a
high
procurement
state*

2.22 In spite of MSP, various centres have reported prices ruling below MSP during the current kharif marketing season.

Table 2.6: States/ Centres where price of paddy dipped below MSP during 2010-11 KMS.

(Rs./quintal)

Prices ruled below MSP in many markets during KMS 2011

State	Centre	MSP	Prices in Oct,2010	Nov	Dec	Jan 2011
		1000				
I. As per Directorate of Economics and Statistics						
Karnataka	Mysore		850	890	990	895
Maharashtra	Gondia		982	968	973	973
Orissa	Sambalpur		900	900	900	
UP	Shahjahanpur		865	880	890	975
	Attara		975	980		
West Bengal	Sainthiya				955	
	Indas					980
II. As per State Replies						
Assam	Nagaon			900		
	Golpara			950		
	Nalbari			800		
Chhattisgarh	Raipur		990			
	Kavardha		950			
Gujarat	Bavla		992	921		
	Salal			965		
	Sanand		785	853		
Karnataka	Dayanagere		780	800	860	
	Tumkur		900	900		
Madhya Pd.	Balaghat		925			
	Varasivani		850			
	Dabra		850			

Source: DES, Ministry of Agriculture and State Governments' replies.

Farmers were forced to sell below MSP and thereby incur loss which is a shortcoming of the implementation of MSP. MSP operations should be geared in such a way that the farmers all over the country get at least MSP for their product.

2.23 During discussions with the State Government of Maharashtra, the State Government argued for a re-look into the FAQ norms of rice prescribed by the FCI. It was indicated that due to particular agro-climatic and soil conditions of the state, only local varieties of rice can be grown, in which the broken percentage is more than the FAQ norms of FCI and thus get eliminated for procurement. State Government of Punjab also had a similar request for inclusion of a

variety of rice, which is predominantly grown in South-West Punjab, however not confirming to the FAQ norms, in the procurement operations of FCI. Region-wise FAQ norms, as suggested by the State Government of Maharashtra may have operational problems. Relaxation to such variants, every season may be a solution. FCI and the state government should through discussions, sort out such issues in the procurement operations.

2.24 The economic cost of procurement to FCI has been increasing over time as can be seen from the Table- 2.7.

Table -2.7: Economic Cost of Rice to FCI

Increasing trend in Economic Cost.

Year	Economic cost (Rs./quintal)
2006-07	1391.18
2007-08	1549.86
2008-09	1732.48
2009-10 (RE)	1873.58
2010-11 (BE)	2043.14

Source: Foodgrains Bulletin, December 2010.
RE: Revised Estimate, BE: Budget Estimate

While most of the costs and incidentals are inevitable considering the sheer size of the operations and the vastness of the country, savings can be effected in one or two areas, with due cooperation from the state governments. One area is the various charges to be paid by the FCI while procuring the grains. In respect of Punjab and Haryana, these charges amount to about 13.5 and 10.5 percent respectively of the MSP. Since other states like Gujarat, Tamil Nadu, M.P etc are participating in the scheme with low charges ranging from 0.5 per cent to 2 percent, the states which have high market fees should be persuaded to reduce the same. Expansion of decentralized procurement to other states can reduce the overall transport costs involved in the procurement operations. Decentralised procurement also has the advantages of covering more farmers under MSP operations, procurement and distribution of locally preferred crops etc.

Levy
requirement
up to 75 per
cent and levy
prices below
market prices

2.25 Rice is also procured by the Government through compulsory levy quotas on rice millers and dealers. The quantum of levy is determined by the state governments, according to the requirements under various welfare schemes and the price of the levy rice is fixed by the Government of India, at the beginning of the marketing season. Concerns with respect to levy are that the levy share stipulated for different states are quite high ranging between 10 per cent to 75 per cent and the generally depressed levy prices. Considering the quantity involved, it can disrupt the operation of market forces. The status with regard to levy stipulations in the four states of Andhra Pradesh, Haryana, Punjab and Tamil Nadu, which account for the highest rice procurement, is shown in the Table 2.8.

Table 2.8: Levy Price, Levy Quantity and Market Price of Rice

(Rs. per quintal)

		Andhra Pd.			Haryana		
		Levy Price	Levy Quantity	Mkt. Price	Levy Price	Levy Quantity	Mkt. Price
		(Oct-Sept)	%	(Oct-Sept)	(Oct-Sept)	%	(Oct-Sept)
2007-08	Common	1414.20	75	1354	1243.90	75+15(optio nal)	1295
	Grade-A	1461.60		1850	1291.60		1416
2008-09	Common	1492.60	75	1572	1498.90	75	1395
	Grade-A	1540.10		2479	1546.60		1618
2009-10	Common	1667.30		1771	1676.00		1405
	Grade-A	1714.70		2445	1723.70		1675
2010-11	Common	1679.70		1800	1687.10		1938
	Grade-A	1727.10		2260	1734.80		1875
		Punjab			Tamil Nadu		
		Levy Price	Levy Quantity	Mkt. Price	Levy Price	Levy Quantity	Mkt. Price
		(Oct-Sept)	%	(Oct-Sept)	(Oct-Sept)	%	(Oct-Sept)
2007-08	Common	1243.90	75 to 90	968	1338.10	50	1429
	Grade-A	1291.60		1124	1382.90		1863
2008-09	Common	1499.00	75	1100	1416.60	30	1634
	Grade-A	1546.70		1413	1461.40		3009
2009-10	Common	1704.40		1215	1583.20		1878
	Grade-A	1753.00		1711	1628.00		2970
2010-11	Common	1717.00		1420	1590.20		2067
	Grade-A	1765.60		1888	1635.00		2800

Mkt. Price for Grade-A : Andhra Pd. : Fine-Masuri (Nandyal), Haryana : Fine (Karnal), Punjab : A-Grade (Batala), T.Nadu : Ponni-Fine (Thiruchirappalli)

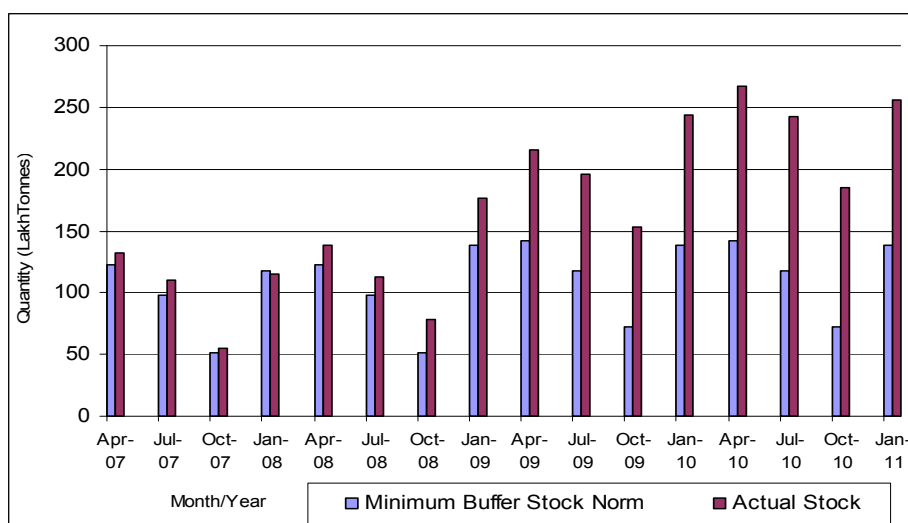
Source: 1. Food Bulletin, Deptt of Food & 2. DES, Ministry of Agriculture

Stock

Excessive stocks aggravate stocking and wastage issues

2.26 Large scale procurements during the last three years, lack of adequate storage with the procurement agencies have again brought to the front the issue of an optimum level of stock in the central pool. Rice stock held by the FCI and the state agencies as on 01.01.2011 was 25.58 million tonnes, while the stock requirement was only 13.8 million tonnes.

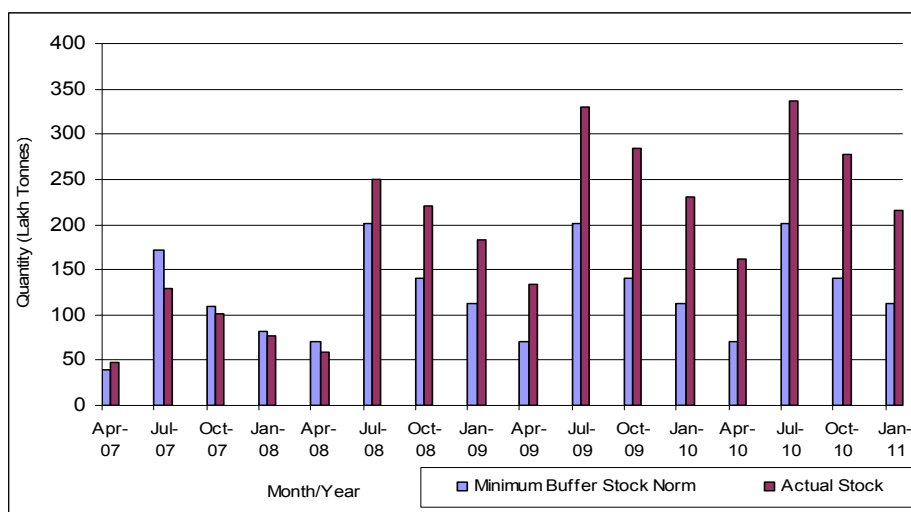
Chart- 5A: Minimum Buffer Stock Norms and Actual Stocks of Rice held by FCI



Source: Foodgrains Bulletin; * Buffer stock from January 2009 includes food security reserve.

Excessive stock with FCI is the story of not rice only. In respect of wheat also, the actual stock has been much higher than the buffer stock norms during the last two years. The wheat stock held by FCI and other state agencies, as on 1.1.2011 was 215.4 lakh tonnes as against a norm of 112.0 lakh tonnes.

Chart- 5B: Minimum Buffer Stock Norms and Actual Stocks of Wheat held by FCI



Source: Foodgrains Bulletin; * Buffer stock from January 2009 includes food security reserve.

Government should take a decision to limit the stock position to the buffer stock norms at any point of time and liquidate the excess regularly, which will minimize the issues of stocking, wastages etc. After taking into consideration the likely procurement and offtake during 2009-10, the estimated stock of rice as on April 1, 2011 is likely to be 28.73 million tonnes, 14.53 million tonnes more than the requirement under strategic reserve and buffer stock norm of 14.20 million tonnes. The position is illustrated in the Table- 2.9.

Table -2.9: Projected Stocks of Rice in the Central Pool

Particulars	Rice (Million tonnes)
Official Stock as on 01.01.2011	25.58
Projected procurement during Jan. 2011- March 2011	10.07
Projected Offtake during Jan 2011-March 2011	6.92
Projected Stock as on 01.04.11	28.73
Projected Procurement during 2011-12	33.06
Projected Imports during 2011-12	0.00
Projected Offtake during 2011-12	26.91
Projected Stock as on 01.04.12	34.88
Buffer Norm requirement for 1 st April	14.20*

Source: Projected by CACP; * including the strategic reserve (2 million tonnes).

Offtake

2.27 Offtake of foodgrains from the central pool during 2009-10 was 49.72 million tonnes, of which rice comprised of 27.37 million tonnes. Offtake of rice under Targetted Public Distribution System (TPDS) was 23.41 million tonnes and that under various welfare schemes of the government was 3.96 million tonnes. During 2010-11, (up to December 2010), the offtake totalled 21.82 million tonnes.

(Table 2.11) Demand and Supply

2.28 The Commission makes use of the latest Round of the NSSO household consumption data and the Population Census (2001) data to calculate the yearly demand for rice. Accordingly, the household consumption demand for rice for 2011-12 is projected at 86.85 million tonnes, as indicated in the Table 2.10.

Table 2.10: Annual (365 days) Consumption of Rice

	(Million tonnes)			
	Per Person Per Month Consumption (Kg.)*		2010-11**	2011-12**
	Rural	Urban		
Population (Million)	72%	28%	1193	1208
Rice	6.36	4.75	85.77	86.85

*Weighted average of rural and urban consumption with respective population size as weights i.e. 72% for rural and 28% for urban.

**Consumption figures for 2010-11 and 2011-12 are on the basis of 64th Round of NSSO (July 2007-June 2008).

2.29 The domestic rice balance sheet based on the above demand projections and on the overall supply of rice during 2010-11 and 2011-12 is presented in the Table 2.11.

Table 2.11: Domestic Rice situation

(Million tonnes)		
Crop Year (July-June)	2009-10	2010-11
Fiscal Year (April-March)	2010-11	2011-12
1. Gross Production	89.09	94.01
2. Net Production	82.32	86.87
(92.4% of Gross Production)		
3. Procurement**	32.03	33.06
4. Offtake, of which	28.74	26.91
Open Sale	0.16	2.11
5. Addition to Stock (3-4)	3.29	6.15
6. Export Sale	2.11	-
7. Supply [2-3+4-6]\$	76.92	80.72
8. Consumption Demand #	85.77	86.85
9. WPI, Fiscal year (1993-94=100)	166.7*	

Source: Foodgrains Bulletin and DGCIS

Note: Production figures are crop year- wise and consumption demand is fiscal year-wise.

*: Till February 2011;

#: Based on 64th Round (July 2007-June 2008) of NSSO;

** Marketing year (October- September) \$ Excluding opening stock

A bumper rice production during 2010-11 will ensure increased availability of the cereal during 2011-12 (fiscal). The supply gap is expected to reduce from 8.85 million tonnes to 6.13 million tonnes. This has not taken into account the opening stock available with FCI.

Global outlook

Global production during 2010-11 to increase by 2 % to 467MT.

2.30 The global rice production during 2010-11 is estimated at 467 million tonnes, an increase of 2.4 percent over the production of 2009-10 (FAO Food Outlook, November 2010). The increase is expected to arise from a 3 percent increase in the world rice area, while yields are expected to fall marginally. Much of the global production recovery is expected to come from India, due to its favourable monsoon conditions during 2010, compared to the previous year.

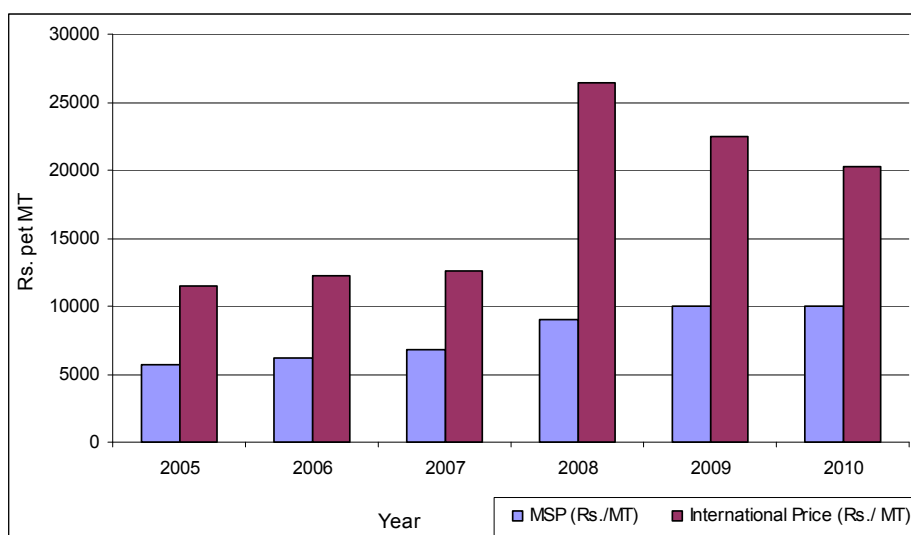
2.31 International rice prices underwent moderate increases since July 2010 compared to the sharp price rise witnessed in other

Increase in global price moderate; however prices to remain firm

agricultural commodities. According to the FAO All Rice Price Index, rice prices gained 14 percent between July-October 2010, far less than other cereals. Prices in the first ten months of 2010 averaged 12 percent less than of the corresponding period in 2009. The forecast indicates world rice prices to be on the rise on account of firm agricultural commodity prices and a weak US Dollar. Movement of international prices of rice (Thai 25%) and MSP of comparative common variety of rice in India is given in the chart 6.

Chart 6: Movement of International Price and MSP of Rice

MSP, on an average, 50% of the international price



Source: International prices: World Bank & FAO

* US\$ Converted to Rupees as per the annual average exchange rate

2.32 The movement of the international price of rice has far outpaced that of the MSP, especially since 2008, when global prices witnessed unprecedented increase. This has to be expected since MSP is envisaged to be a back-up mechanism and a floor level price, which is ensured to the farmers in case of a crash in price. While international price is a factor which is looked into, the single major factor in the determination of MSP is the cost of production of the crop. Also, strictly following the upward movement of market price, both domestic and international, may not be feasible, since MSP as it is operationalised currently is uni-directional upwardly. Hence, in a scenario of falling international price, it can make the domestic produce uncompetitive in the global market and in a situation of falling domestic price a high

MSP can create problems of over procurement, stocking and disposal.

2.33 Global rice consumption, including food, feed and other uses, is estimated at 460 million tonnes in 2011, 1.6 percent more than the current estimate for 2010 (FAO). Of the above, about 394 million tonnes would be utilized for human consumption; 12 million tonnes for animal feed and the rest for other purposes like seed and industrial use. Expansion in world population is considered as the major factor pushing the rice food consumption growth, with per capita food intake projected to remain stable at about 57 kg. per year.

2.34 World rice trade in calendar year 2011 is projected at 30.3 million tonnes, about 1.7 percent less than the 2010 estimate. The slight contraction in trade is projected in view of anticipations of reduced import needs from countries like Bangladesh, Sri Lanka, Philippines and some Latin American countries and due to tightening supplies in key exporting countries like Pakistan and Viet Nam. World rice balance sheet is indicated in the Table 2.12.

Table 2.12: World Rice Market

WORLD BALANCE (milled basis) million tonnes	2008-09	2009-10 estimated	2010-11 forecast	% Change: 2010-11 over 2009-10
Production	458.3	455.6	466.7	2.4
Trade	29.3	30.8	30.3	-1.7
Total utilization	445.1	452.9	460.2	1.6
Food	382.1	388.0	393.9	1.5
Ending stocks	124.1	126.2	133.2	5.6
SUPPLY AND DEMAND INDICATORS				
Per capita food consumption:				
World (kg/year)	56.5	56.7	56.9	0.4
LIFDC* (kg/year)	68.8	68.9	69.0	0.1
World stock-to-use ratio (%)	27.4	27.4	28.5	3.8
Major exporters' stock-to-disappearance ratio (%)	21.3	16.6	17.6	6.0
FAO Price Index (2002- 2004=100)	2008	2009	2010 Jan-Oct	% Change Jan-Oct. 10 over Jan-Oct. 09
	295	253	223	-12.5

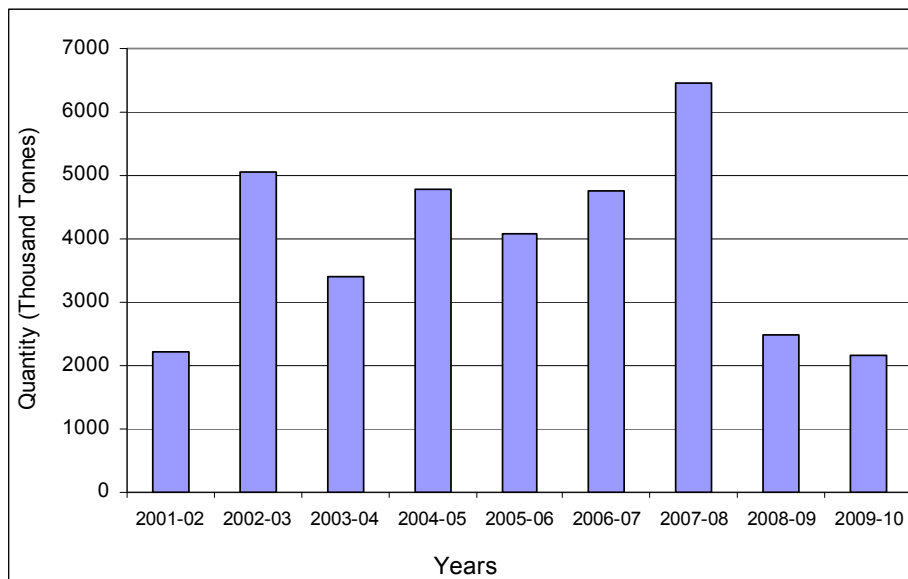
Source: FAO, Food Outlook, November, 2010. * : Low Income Food -Deficit Countries.

2.35 India has been a major exporter of rice. Till 2008, when India imposed restrictions on export of rice, it was the third largest exporter of rice, after Thailand and Vietnam, constituting about 20 per cent of the total global rice export (2006-07). However, after 2008, India has

slipped in its position in the global export market, lower to Pakistan and USA. India's export of rice since 2001-02 is given in the Chart- 7.

Chart -7: Export of Rice

Drop in exports after 2007-08 due to export bans



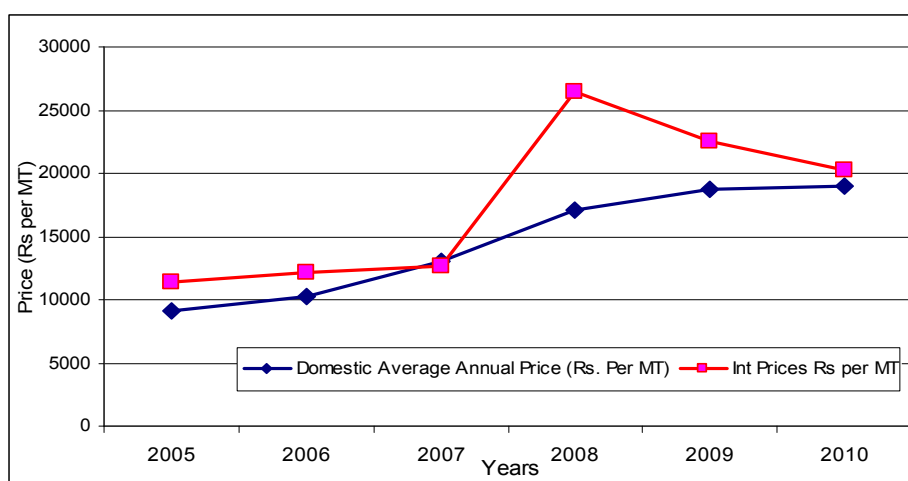
Source: DGCIS, Kolkata.

Strong case for lifting the export ban on rice

2.36 India's export of rice was at a peak of 64.69 lakh tonnes in 2007-08, the highest in the recent years and the export ban from April 2008 had reduced the exports to 24.88 lakh and 21.56 lakh tonnes in 2008-09 and 2009-10 respectively. The immediate reason for the measure was the accelerating global rice prices which started in 2007. The international price of standard Thai rice, 5 per cent broken increased from US\$ 362/MT in December 2007 to US\$ 1000/MT in April 2008. Though the prices showed some deceleration in May 2008, the August prices were still 128 per cent higher than the average 2006 price (World Bank). In India also the wholesale prices of rice increased with the average index showing an increase of 11.3 and 14.8 per cent in 2007-08 and 2008-09 respectively over the previous year. The ban in export was expected to increase the overall supply and contain the price level. On February 9, 2010, Government partially relaxed the ban to allow exports, up to 1.5 lakh tonnes, of three varieties of non-basmati rice. India has had export competitiveness in rice during this period can be seen from the Chart 8. The domestic price was ruling

below the global reference price (Thai rice 25 per cent broken) except for short periods, the difference was quite significant during 2008 and 2009. The producers could not take advantage of the international price advantage due to the export restrictions. However, considering the bumper harvest of 2009-10 and the stock advantage, there is a strong case for lifting the ban on export of rice. If not done so, it will lead to large and avoidable losses.

Chart -8: International and Domestic Prices of Rice



Source: World Bank, FAO and DES, Ministry of Agriculture
 * USD Converted to Rupees as per the annual average exchange rate

Coarse Cereals

Production and productivity in 2010-11 increase by 28 per cent.

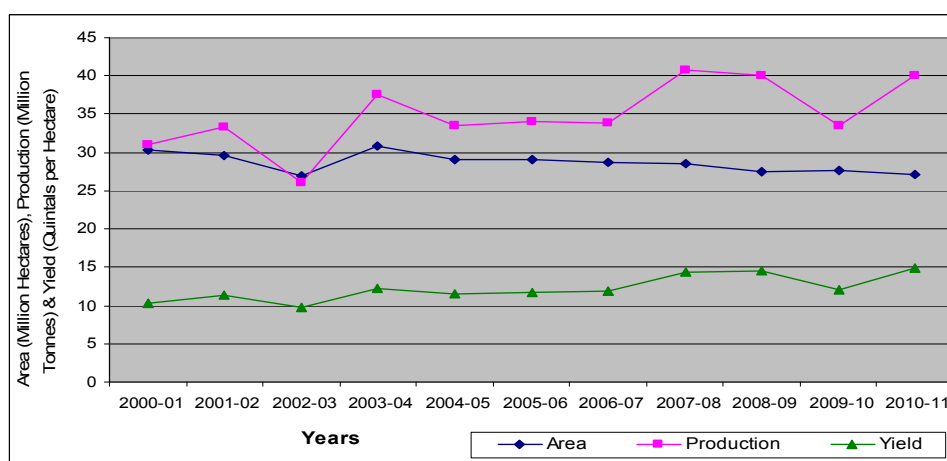
2.37 As per the Second Advance Estimates of DES, production of kharif coarse cereals for 2010-11 is projected at 30.56 million tonnes, an increase of 28.24 per cent over the production of 23.83 million tonnes achieved in 2009-10. The area coverage has slightly increased, from 21.30 million hectares in 2009-10 to 21.33 million hectares in 2010-11. The production increase during 2010-11, hence, can be mainly accounted for by increase in yield levels, which shows an increase of about 28 per cent over the 2009-10 level. As regards individual items, production of kharif maize is estimated at 15.71 million tonnes, bajra 9.38 million tonnes, kharif jowar 3.19 million tonnes and ragi 1.93 million tonnes, all crops exhibiting increase over previous year's production level, primarily due to good monsoon.

(Table 2.1)

Declining trend in area.

2.38 Area under coarse cereals has been declining. Area coverage during T.E 2009-10 was 27.87 million hectares compared to 29.84 million hectares registered during T.E 1999-2000 and 37.64 million hectares during T.E 1989-90. The decline had been more pronounced during the period 1989-90 to 1999-00 (2.31 per cent) compared to the period 1999-00 to 2009-10 (0.66 per cent). Production, on the other hand, increased by about 24 per cent at 38.11 million tonnes during T.E 2009-10 from the level of 30.69 million tonnes reached during T.E 1999-2000. The production increase had been at the rate of 2.34 per cent during 1999-00 to 2009-10. The yield levels increased at the rate of 1.82 per cent during the period 1989-90 to 1999-00 and 3.02 per cent during the period 1999-00 to 2009-10, giving an overall growth rate of 2.11 per cent during the entire period 1989-90 to 2009-10. The kharif coarse cereals, which account for about 77 per cent of the area and 71 per cent of the production of total coarse cereals, also showed the same pattern during this period, with decline in area and production increase brought about by yield growth. The trends in area, production and yield in respect of coarse cereals are shown in the chart- 9.

Chart -9: All India- Area, Production and Yield of Coarse cereals



Source: Directorate of Economics and Statistics, Ministry of Agriculture.

High volatility in yield.

2.39 The volatility in area and yield of coarse cereals (as reflected by the coefficient of variation (CV)) shows higher volatility in respect of

yield which had also increased during 1999-2000 to 2009-10 compared to 1989-90 to 1999-2000 as indicated in the Table- 2.13.

Table- 2.13: CV of Area and Yield of Coarse Cereals

Period	CV of area	CV of yield
1989-90 to 99-00	8.20	9.31
1999-00 to 09-10	4.03	13.04

Data Source: DES, Ministry of Agriculture.

The high and the increasing volatility in the yield of coarse cereals can be attributed to the conditions under which they are cultivated. These crops are predominantly cultivated in rain-fed areas, with irrigated area constituting only about 14 per cent. Supply of quality seeds at proper time, improvement of irrigation facilities, application of fertilizers at recommended doses, and control of insects, pests and diseases are some of the crucial areas requiring attention if production and productivity of coarse cereals are to be increased.

*Rajasthan
tops in area
and
production,
Punjab
highest in
Yield.*

2.40 During 2010-11, Rajasthan registered the highest production and largest area under kharif coarse cereals, while productivity is highest in Punjab at 3601 kg/ha. Even though the yield rates of states like Andhra Pradesh (2824 kg/ha), Karnataka (2443 kg/ha), West Bengal (1993 kg/ha), Tamil Nadu (1870 kg/ha), Bihar (1713 kg/ha), Haryana (1684 kg/ha), J&K (1624 kg/ha), Maharashtra (1586 kg/ha) are greater than the national average of 1433 kg/ha, some of the major producing states like U.P (1418 kg/ha), Gujarat (1109 kg/ha), Madhya Pradesh (971 kg/ha) and Rajasthan (920 kg/ha) have lower yield rates than the national average. (Table 2.2)

2.41 The export of coarse cereals during 2009-10 registered a decline of 25 per cent over the year 2008-09. The export of jowar, bajra, maize and ragi in the year 2009-10 has fallen to 2720 thousand tonnes from 3648 thousand tonnes in 2008-09. Out of this, maize export constituted the largest chunk of 2600 thousand tonnes (96 per cent). The highest export earning of Rs. 2554 crore was realised from

*Exports decline
25 per cent
over 2008-09.
Highest export
earnings from
Maize.*

maize, followed by jowar of Rs. 98 crore and ragi of Rs. 6.5 crore. The sustainability of coarse cereals cultivation in India depends largely on increasing linkage to the world export market.

(Tables 2.25 & 2.26)

*World
coarse
cereals
production
lowers by
2 per cent.*

2.42 As per the FAO forecast, (November, 2010) given in table 2.12 world coarse cereal production for 2010-11 stands at 1102 million tonnes, 2 per cent lower than the previous year due to unfavourable weather conditions in several major producing countries. World total utilization of coarse grain in 2010-11 is forecast to increase to 1126 million tonnes, up 1.1 per cent from the estimate for 2009-10 and nearly 2 per cent, or 24 million tonnes, above the 2010 anticipated production. World trade in coarse grains is forecast to expand by 1.2 per cent to 116 million tonnes in 2010-11 (July-June), reflecting an increase in maize import demand that is expected to drive up trade to 91 million tonnes, up 3 million tonnes from the previous season but still 11 million tonnes below the all time high reached in 2007-08. Exports of all other major coarse grains are likely to remain unchanged or even fall slightly below 2009-10 levels. Food use of coarse grains is forecast to reach 196 million tonnes, 2 per cent higher than in 2009-10. Developing countries account for 80 percent of the food use of coarse grains. Coarse grains are largely used for animal feed in developed countries and, for 2010-11, world feed utilization of coarse grains is currently forecast to reach 627 million tonnes, up marginally (less than 1 per cent) from 2009-10. Among different industrial usages of coarse grains, growth in recent years has stemmed mainly from the ethanol sector. According to the International Grain Council (IGC), total industrial use of coarse grains in 2010-11 could approach 263 million tonnes, up around 2 percent from the previous season. World coarse grain stocks are forecast to reach 198 million tonnes by the close of the 2011 season, down as much as 11.2 percent, or 26 million tonnes, from their opening levels. Unfavourable weather conditions have driven up prices of most coarse grains since the start of the 2010-11 season in July 2010.

Table - 2.14: World Coarse Grain Market at a Glance

	2008-09	2009-10 <i>estimated</i>	2010-11 <i>forecast</i>	Change: 2010-11 over 2009-10
WORLD BALANCE	<i>million tonnes</i>			%
Production	1142.4	1125.2	1102.0	-2.1
Trade	113.0	114.7	116.0	1.2
Total utilization	1089.4	1113.3	1125.7	1.1
Food	192.2	191.5	195.6	2.1
Feed	625.0	626.6	626.8	0.0
Other uses	272.1	295.1	303.2	2.7
Ending stocks	216.5	225.3	198.4	-12.0

Source: FAO Food Outlook November, 2010

The major Kharif coarse cereals in India are Maize, Jowar, Bajra and Ragi. The position regarding individual coarse cereals are given below:-

Maize

India contributes two per cent to world production

2.43 Maize occupies third position in cereal production in India and among the coarse cereals, it has 49 per cent share in production and 30 per cent share in area. Quality Protein Maize (QPM) has a very high potential for improving the nutritional balance in humans and animals. It has significance as a human food, animal feed and industrial product. India contributes only 2 per cent to world maize production. The major maize producing states are Rajasthan, Andhra Pradesh, Karnataka, Uttar Pradesh, Maharashtra, Bihar and Punjab. In India, maize is cultivated in both kharif and rabi seasons.

Kharif Maize Production increased by 28 per cent over 2009-10

2.44 As per the Second Advance Estimates of production for 2010-11, production of kharif maize is estimated at 15.71 million tonnes, an increase of 27.83 per cent over the 2009-10 production of 12.29 million tonnes. Kharif area coverage estimated at 7.18 million hectares is also a marginal increase over 7.06 million hectares achieved in 2009-10. The state-wise area, production and yield of maize during 2009-10 and 2010-11 is given in Table- 2.15.

Table 2.15: Area, Production & Yield of Kharif maize

Area (000, hectares)
 Production (000, tonnes)
 Yield (Kg per hectare)

States	Area		Production		Yield	
	2009-10	2010-11*	2009-10	2010-11*	2009-10	2010-11*
Rajasthan	1096	1143	1145	1685	1044	1474
Karnataka	1108	1092	2676	3893	2415	3565
A. P.	502	441	997	1635	1986	3707
Tamil Nadu	161	128	693	512	4301	3985
Maharashtra	673	686	1531	2013	2275	2934
Punjab	139	135	475	493	3417	3652
U. P.	704	747	1025	1050	1456	1406
M. P.	832	821	1045	1078	1256	1313
Gujarat	411	431	396	513	964	1190
H. P.	295	300	543	741	1839	2466
All India	7063	7179	12293	15710	1740	2188

*Second Advance Estimates. Source: DES, Ministry of Agriculture

Growth rate of production and productivity highest in Tamil Nadu.

2.45 Growth rate of production and productivity of maize was highest in Tamil Nadu during the period 1999-2000 to 2009-10. Maharashtra and West Bengal also experienced remarkable increase in production and yield of maize during the same period. There are several reasons for the increase in production and productivity. Both public and private sector are involved in the development of hybrid maize, which has helped in increasing production and productivity in many states. Majority of the hybrid seeds of maize has been contributed by the private sector.

30 percent maize area under hybrid maize.

2.46 Hybrid technology on maize is gaining popularity due to its high yield potential and nutritional security. Some private seed companies and government organizations are undertaking hybrid seed production. Number of hybrid varieties are available in India which are giving good results in different agro climatic conditions. Hybrid maize is cultivated mainly in the States of Karnataka, Punjab, Maharashtra and Tamil Nadu. In India around 30 percent of the maize area is under hybrid maize. The focused research in Single Cross Hybrids (SCH) helped in addressing several issues of biotic and abiotic stresses viz., lowering water table, rising temperature, etc. The year 1988-89 has been a threshold year with the launching of SCH breeding programme and adoption of New Seed Policy. In order to harness its yield potential

several genetic and agro-technique improvement strategies have been suggested in the past and present viz., open pollinated varieties(OPVs), composites, double top cross, double cross, three way crosses, four way crosses etc. Since none of these strategies was able to harness full heterotic potential finally, single cross hybrid technology has been advocated. After shifting to single cross hybrid technology (2006-2008), India has witnessed 30 percent increase in production and 27 percent increase in productivity within two years with the coverage of 20 percent area under single cross hybrid. There is also 15 percent annual increase in production and more than 12 percent increase in productivity (Source : Directorate of Maize Research). This is the visible impact of single cross hybrid technology. More than 3 dozen single cross hybrids of normal, Quality Protein Maize and specialty corn from public and private sectors have been released and are under cultivation in farmers' fields. Adoption of SCH technology in maize is most profitable as compared to rice and wheat due to scarcity of water and increase in temperature. Although hybrid maize is a profitable crop it may be difficult to cultivate the crop for the poor/small farmers as it requires high investment. Therefore input subsidy and credit facility with low interest rate may be given to the poor farmers for hybrid maize cultivation.

Increasing trend in area, production and yield.

2.47 Area coverage under kharif maize has been increasing. It increased from 5.69 million hectares in 1999-00 (TE) to 7.03 million hectares in 2009-10 (TE). During the period 1999-00 to 2009-10, the area increased at an annual rate of 2.29 per cent. The production of maize recorded an annual growth of 3.47 per cent during the period 1999-00 to 2009-10. This is substantially higher than the growth of rice during the same period. The annual growth rate of production was as high as 37.76 per cent in Tamil Nadu, 19.63 per cent in Maharashtra and 8.71 per cent in Karnataka. At the all India level, the yield of maize recorded a growth rate of 1.16 per cent per annum during 1999-00 to 2009-10. The yield of maize is higher than that of rice in some of the states like Andhra Pradesh, Himachal Pradesh and Maharashtra.

However, compared to other major producing countries and world average, India's yield is one of the lowest as shown in the Table 2.16.

India's low yield -a cause of concern.

Table 2.16: Country-wise Yield of Maize in 2008

Country	Yield (kg/ha)
USA	9658
Italy	9010
Argentina	6452
Turkey	7198
China	5556
Brazil	4086
Indonesia	4078
Mexico	3307
India	2324
World	5109

Source: Agricultural Statistics at a Glance, 2010

Prices of Maize ruling above MSP in general.

2.48 The Index of Wholesale Prices of maize stood at 153.1 in April 2010, an increase of 3 per cent over the April 2009 index. The increase over the 2009 prices was maintained in the later months also, with the February 2011 index reaching a level of 175.3, an increase of 14.2 per cent over the corresponding period of the previous year. The Government announced an MSP of Rs. 880 per quintal for maize for 2010-11 season. The price of maize was ruling above MSP in general. However, according to replies received from state governments, the prices of maize dipped below MSP in some centres of the states like Madhya Pradesh, Karnataka and Uttar Pradesh during the period October-December 2010 as shown in Table 2.17. The total procurement of maize during 2010-11 (as on 21.03.2011) was 51.27 thousand tonnes.

Table 2.17: Prices of Maize below MSP (Rs. 880 per Quintal) during 2010-11

States	Centre	Oct	Nov	Dec
Karnataka	Devanagere	720	720	725
	Shikaripura	800	700	700
	Ranibennur	810	800	820
	Nargund	850	850	860
Madhya Pradesh	Badnawar	830	-	-
	Chindwara	700	-	-
	Chorai	750	-	-
	Neemach	620	-	-
	Burhanpur	400	-	-
Uttar Pradesh	Varanasi	-	779	-

Source : Replies of the State Government

2.49 A comparison of the international price of maize US no.2 yellow, f.o.b. and MSP of maize in India is shown in Chart- 10.

Chart- 10: Comparison of International Price, MSP and Domestic Price of Maize.

MSP closely tracking International prices.



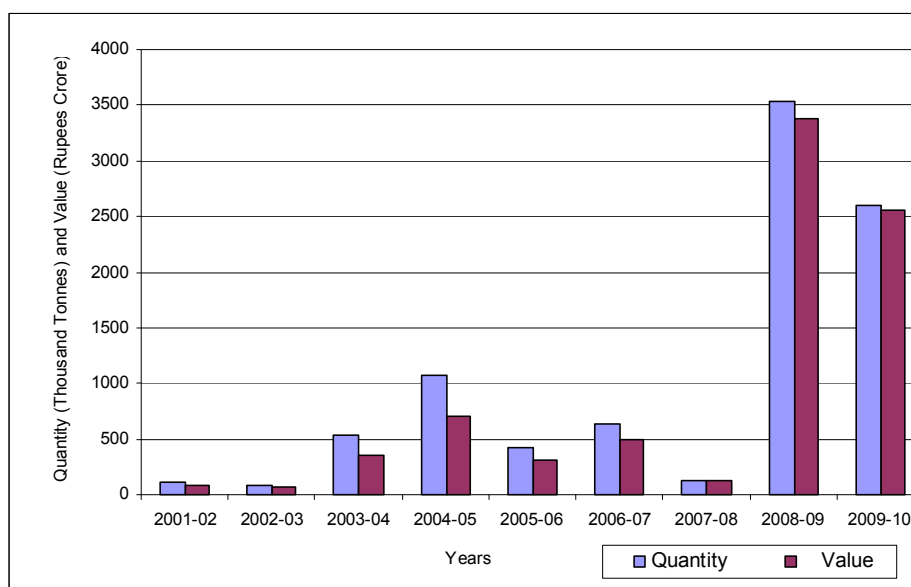
* US\$ has been converted to Rupees as per Average Annual Exchange Rate.
Source: World Bank and DES, Ministry of Agriculture.

2.50 Maize MSP has been moving in tandem with the international prices. In 2008 the domestic price of maize was ruling below international price and there was a significant increase in the export of maize during that year, as can be seen in chart-10. Export during years when the domestic prices were higher than international prices could be attributed to freight advantages etc.

2.51 The world trade in maize is forecast to increase in 2010-11 to reach 91 million tonnes, up around 3 per cent from the previous season. The increased demand is expected to come from the industrial applications of maize. The increase will be driven largely by the continued strong demand for ethanol, most from USA, where about 119.4 million tonnes of maize are expected to be procured during 2010-11 for this purpose. During 2009-10 India exported about 26.01 lakh tonnes of maize, which is about 96 per cent of the total export of coarse cereals from India. Export earnings of Rs. 2554 crore were realised from maize during 2009-10. The highest export earnings were during 2008-09 and 2009-10. The export of maize increased manifold both in quantity and value terms, the details of the same are shown in chart -11.

Chart-11: Export of Maize

Significant increase in exports during last two years.



Source: DGCI&S, Kolkata, Ministry of Commerce and Industry.

Jowar

2.52 Jowar is cultivated in an area of 6.95 million hectares in India with a production of 6.79 million tonnes in 2010-11(Second Advance Estimates). Of the above, kharif jowar accounts for about 43 per cent of the total area and 47 per cent of the total production. The crop is grown in arid and semi-arid regions of Gujarat, Uttar Pradesh, Karnataka,

Maharashtra, Rajasthan and Andhra Pradesh and is mainly used as food, fodder and for production of alcoholic beverages.

Sixteen per cent increase in kharif production over the previous year.

2.53 Production of jowar in kharif 2010-11 is estimated at 3.19 million tonnes (Second Advance Estimates, DES), about 16 per cent increase over the production of 2.76 million tonnes in 2009-10. Area, on the other hand, is projected to register a decline of about 7 per cent during 2010-11 at 3.00 million hectares. Area and production of jowar kharif have been declining over a period of time. Production declined from 8.28 million tonnes in T.E 1989-90 to 5.02 million tonnes in T.E 1999-00 and further to 3.31 million tonnes in T.E 2009-10. The decline in production was attributed to significant acreage shifts away from jowar in the states of Madhya Pradesh, Karnataka and Andhra Pradesh. Area declined during this period from 9.10 million hectares in T.E 1989-90 to 5.02 million hectares in T.E 1999-2000 and to 3.20 million hectares in T.E 2009-10. All these states have reported increase in area under maize during the above period and hence it can be believed that the area reduction under jowar has gone to crops like maize, due to technological advances and consequent higher comparative returns. The decline in area has been more pronounced than the decline in production. Positive yield performance could slow down the production decline. Yield levels increased at the rate of 0.58 percent and 0.30 per cent respectively during 1989-90 to 1999-00 and 1999-00 to 2009-10.

2.54 Maharashtra is the largest producer of the crop, in terms of area (3.64 million hectares) and production (3.66 million tonnes) in 2010-11 (Second Advance Estimates), followed by Karnataka, Rajasthan and Andhra Pradesh. Inter-state variations in yield are observed. During 2010-11, Chhattisgarh is expected to register the highest yield (1731 kg/ha), followed by Andhra Pradesh (1258 kg/ha), Karnataka (1099 kg/ha), Gujarat (1091 kg/ha), Bihar (1041 kg/ha) and Maharashtra (1006 kg/ha). States like Haryana (508 kg/ha), Orissa (610 kg/ha), Rajasthan (727 kg/ha), Madhya Pradesh (751 kg/ha), Tamil Nadu (856

kg/ha) and Uttar Pradesh (960 kg/ha) have lower yield levels compared to national average yield (977kg/ha).

Prices of Jowar dipped below MSP in MP and UP

2.55 The average WPI of jowar (base 2004-05=100) increased by 11.5 percent in 2009-10 over the previous year. In April 2010-11, the index stood at 172.3 compared to 151.9, an increase of 13.4 percent. The increase was maintained all through the current year, with the percentage increase (over the corresponding period of 2009-10) reaching to the level of 19.1 percent in February 2011. The prices of jowar were ruling above MSP, in general during 2010-11. However, prices of jowar dipped below MSP in some centres of the states like Karnataka, Madhya Pradesh, Rajasthan and Uttar Pradesh during October 2010 - January 2011, as shown in table-2.18.

Table- 2.18: Prices of Jowar dipped below MSP (Rs. 880 per Quintal) during 2010-11

States	Centre	Oct	Nov	Dec	Jan
I. As per Directorate of Economics and Statistics					
Madhya Pradesh	Chhindwara	850			
Uttar Pd.	Kanpur			820	860
II. As per State Replies					
Karnataka	Belgaum		800	800	
	Mysore	750	800	850	
	Basavakalyan	600	700	700	
Madhya Pradesh	Burhanpur	500			
	Khargaon	644			
	Shiyopur	601			
	Pachor	750			
Rajasthan	Kota		851		

Source : Directorate of Economics & Statistics, Ministry of Agriculture, and State Replies.

Bajra

Area and production increase in 2010-11.

2.56 The production of bajra in 2010-11 is estimated at 9.38 million tonnes (Second Advance Estimates, DES) which is 2.87 million tonnes higher than the production in 2009-10. During the period between 1999-00 and 2009-10, production of bajra registered a growth rate of

2.71 per cent per annum as compared to the growth rate of 0.60 per cent observed during 1989-90 to 1999-00. The state with highest production is Rajasthan with 4.57 million tonnes, followed by Uttar Pradesh (1.4 million tonnes), Haryana (1.15 million tonnes), Maharashtra (1.05 million tonnes) and Gujarat (0.51 million tonnes).

Positive trend in yield growth

2.57 The area under bajra during 2010-11 is expected to reach 9.2 million hectares, a marginal increase of 3.3 percent over 2009-10. The long term trend has been one of decline. The total acreage under bajra declined by 0.71 per cent per annum during the period 1989-90 to 2009-10. The yield levels, on the other hand, have shown better performance, with yield rates increasing from 560 kg/ha in T.E 1989-90 to 732 kg/ha in T.E 1999-2000 and further to 932 kg/ha in T.E 2009-10. The state with highest yield is Haryana (1.80 tonnes/ha), followed by Uttar Pradesh (1.53 tonnes/ha), Tamil Nadu (1.16 tonnes/ha), Punjab (1.33 tonnes/ha) and Bihar (1.20 tonnes/ha) during 2010-11. While production of bajra is highest in Rajasthan, its productivity (0.83 tonne per hectare) is lower than the national average of 1.02 tonnes per hectare. The seed replacement rate of hybrid bajra is 100 per cent in Maharashtra, Karnataka and Gujarat and for all other varieties it is 92 per cent in Maharashtra, 77 per cent in Uttar Pradesh, 75 per cent in Haryana, 69 per cent in Madhya Pradesh and 46 per cent in Rajasthan.

(Table 2.2)

Although states have made attempts to procure, prices of Bajra dipped below MSP in Haryana, Rajasthan and UP.

2.58 The year 2009-10 witnessed 20.8 per cent increase in the index of wholesale prices of bajra (base 2004-05=100) over 2008-09. The index stood at 172.4 in April 2010, registering an increase of 6.6 per cent over the corresponding period of the previous year. The trend continued till October 2010. However, the indices for November 2010 to January 2011 showed decline by 0.4, 1.9 and 0.8 per cent respectively over the corresponding period of 2009-10. But, the index stood at 176.0 in February 2011, registering an increase of 1.3 percent over the previous year. The month-end wholesale prices of bajra quoted during October 2010 – January 2011 ranged between Rs.905-

995 per quintal in Rajkot (Gujarat) and Rs. 900-950 per quintal in Hathras (Uttar Pradesh) as against the MSP of Rs.880 per quintal. However, prices dipped below MSP in some centres of the states like Gujarat, Haryana, Karnataka, Rajasthan and Uttar Pradesh during October 2010-January 2011.

Table-2.19: Prices of Bajra dipped below MSP (Rs.880 per Quintal) during 2010-11

States	Centre	Oct	Nov	Dec	Jan
I. As per Directorate of Economics & Statistics					
Haryana	Hissar	771	775	770	785
Rajasthan	Jaipur	800	800		820
Uttar Pradesh	Agra	850	-	810	870
II. As per State Replies					
Gujarat	Jamnagar	860			
Karnataka	Bagalkote	650	732	705	
	Bijapur	735	725	801	
	Gulbarga	725	705	790	
	Lingsugur		720		
Rajasthan	Jaipur	800	793		
	Jodhpur	850	870		
Uttar Pradesh	Kanpur	822	780		

Source : Directorate of Economics & Statistics, Ministry of Agriculture, and State Replies

Ragi

Marginal Production increase in 2010-11.

2.59 Ragi production in 2010-11, according to the Second Advance Estimates, is projected at 1.93 million tonnes as against the production of 1.89 million tonnes in 2009-10, a marginal increase of 2.12 per cent. The long term trend in production has also been one of decline from 2.50 million tonnes in T.E 1989-90 to 2.33 million tonnes in T.E 1999-2000 and 2.03 million tonnes in T.E 2009-10. The production of ragi has fallen by 1.86 per cent per annum during 1999-00 to 2009-10.

Declining trend in area and increasing trend in yield.

2.60 The area under ragi cultivation has been on the decline over the years. During the period 1989-90 to 2009-10, this decline was to the extent of 2.54 per cent per annum. This happened mainly in the states of Orissa, Bihar, Jharkhand, Andhra Pradesh, Tamil Nadu and

Maharashtra. The yield of ragi has been increasing over time. The yield of ragi has increased by 2.07 per cent per annum during the period 1989-90 to 1999-00. But it has registered a lower growth rate of 1.04 per cent per annum during 1999-00 to 2009-10. The yield of ragi is 1.48 tonnes per hectare in 2010-11. The state with highest yield is Tamil Nadu (2.00 tonnes/ha) followed by Karnataka (1.66 tonnes/ha) Andhra Pradesh (1.45 tonnes/ha) and Uttrakhand (1.33 tonnes/ha).

Prices of Ragi dipped below MSP in Karnataka and A.P.

2.61 The annual average index number of wholesale prices (Base 2004-05=100) of ragi had increased by 29.5 per cent in 2009-10 over 2008-09. While April and May 2010 index showed 0.6 per cent increase over the corresponding periods of the previous year, during June – December 2010, the index declined in the range of 2.8 per cent to 1.2 percent. January and February 2011 price index have shown an increase of 1.8 per cent and 4.2 percent respectively over the corresponding periods of 2009-10. However prices dipped below the MSP of Rs.965 per quintal in some centres of the states like Andhra Pradesh and Karnataka during the period October-December 2010, as shown in table-2.20.

Table-2.20: Prices of Ragi dipped below MSP (Rs. 965 per Quintal) during 2010-11

States	Centre	Oct	Nov	Dec
I. As per Directorate of Economics and Statistics				
Andhra Pradesh	Vizianagram	-	950	900
II. As per State Replies				
Karnataka	Tumkur	900	750	700
	Huliyar	730	700	800
	Nagamangla	800	700	750
	Arsikere	720	680	780

Source: Directorate of Economics & Statistics, Ministry of Agriculture, and Replies of the State Governments.

Low procurement a cause of concern.

2.62 Cultivation of coarse cereals suffers from a number of limitations, which may be one of the reasons for the fall in area and production of all major coarse cereals, except maize. Firstly, there are no assured returns to the farmers. Though Government announces MSP for major coarse cereals, procurement has always remained low. Reasons cited for the low procurement are the very low shelf life of these cereals and difficulties in disposal of the crop. The procurement trend is indicated in the Table 2.21.

Table-2.21: Marketing Season-wise Procurement of Coarse Cereals

('000 tonnes)

State/UT	2007-08	2008-09	2009-10	2010-11*
Andhra Pradesh	61	178	7	-
Chhattisgarh	2	9	1	2.53
Gujarat	-	-	-	-
Haryana	123	310	77	71.42
Karnataka	14	712	316	39.38
Madhya Pradesh	1	60	-	8.91
Maharashtra	2	107	6	2.68
Punjab	-	-	-	-
Rajasthan	-	-	-	-
Total	203	1376	407	124.94

*as on 21.03.2011, Source: Department of Food and Public Distribution.

Some issues & suggestions

2.63 The cultivation is also taken up in marginal lands in rainfed conditions, with irrigation coverage at a meagre 14 per cent of the cultivated area. Considering the predominance of small and marginal farmers in this category, the capability to take up investments is very little. Primitive farming technology and lack of improved varieties are major constraints in many coarse cereal growing areas. In view of the high nutritive value of these crops and the high potential demand in non-conventional areas like baby food, breakfast cereals etc, growth potential of coarse cereals is very high. Multi-pronged action covering aspects like consumer awareness, greater investment in research for development of High Yielding Varieties (HYV) possessing resistance to drought, insects and pests, facilities for processing, storage and marketing and effective extension facilities may be taken up on a

mission mode approach to get the full potential of this category of crops.

Pulses

Pulses are high protein crop for the large section of population

2.64 The balanced crop rotation requires that the soil fertility is maintained in a sustainable manner. For that purpose pulses provide an important alternative as they have symbiotic relationship with nitrogen fixing soil bacteria (Rhizobium) which after getting established inside the root nodules of pulses (host) converts atmospheric nitrogen to ammonia and provides organic nitrogenous compound to the plant and soil. This helps in maintaining and improving the soil fertility which is being depleted by continuous growing of crops on the field. Pulses are important food crops because of their high protein and amino acid content for the large section of population. In addition, pulses provide livelihood opportunities for the poor mostly living under marginal rainfed conditions. The importance of pulses in the Indian diet can be further judged as India is the largest producer, consumer and importer in the world. In spite of various governmental programmes for increasing the area and production of pulses the sector continues to face problems of stagnant acreage and low yield levels thereby preventing production to improve to the targetted levels. The Government of India has been implementing various schemes with the objective to increase production and productivity of pulses.

Government's strategy for improving production and productivity of Pulses

2.65 National Food Security Mission (NFSM) – Pulses was started from Rabi 2007-08 comprising rice, wheat and pulses as its three components and an allocation of Rs. 1295.14 crore was collectively made during 2009-10. The prime objectives of the pulses component of the mission are to increase its production by 2 million tonnes in the terminal year of XI Plan (2011-12) through increased adoption of improved and proven crop production and protection technologies such as hybrids and high yielding varieties, integrated management of nutrients, pests, weeds and improved tillage and other farm

implements. Government of India has also extended support under NFSM for two more DAC –ICARDA – ICAR collaborative projects on pulses, viz., (i) enhancing lentil production for enhanced livelihood in rice fallow areas of eastern India; (ii) pre-breeding research project for breaking yield barriers in lentil and kabuli chickpea in India.

2.66 A new programme “Accelerated Pulses Production Programme (A3P) covered under RKVY has been launched as a part of NFSM Pulses from 2010-11. Under this programme 1 million hectares of potential pulses areas for the major pulses crops-tur, urad, moong, gram and lentil has been taken up for large scale demonstration of technology in compact blocks. It is expected that the production of pulses would achieve the target of 16.5 million tonnes primarily by good monsoon rains and initiatives taken under Accelerated Pulses Production Programme. An amount of Rs. 300 crore has also been provided in the Union Budget 2011-12 for Integrated Development of 60,000 villages of pulses in rainfed areas for raising productivity and strengthening of market linkages.

*Area
cultivation
under
pulses – a
jump in
acreage
during
2010-11*

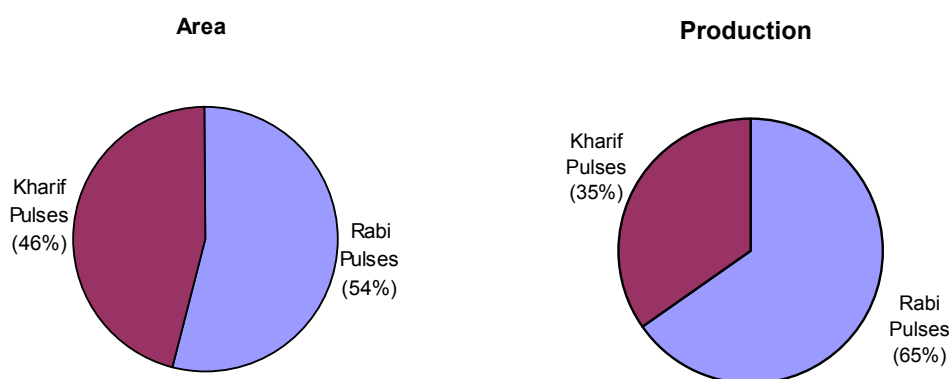
2.67 The area under pulses cultivation in India remained virtually stagnant (fluctuating between 20–25 million hectares) for the last six decades. The peak level of 24.83 million hectares area achieved in 1959-60 could not as yet be attained. However, the area coverage during 2007-08 was at 23.63 million hectares, the highest coverage achieved since 1990-91. Subsequently, the area declined to 22.09 million hectares in 2008-09 and increased marginally to 23.28 million hectares in 2009-10. However, due to good monsoon rains in Kharif 2010 and plenty of moisture in soil for growing in rabi, the area coverage under pulses is estimated to increase by 9.6 percent in 2010-11, reaching to an all time high at 25.51 million hectares.

2.68 The total area under kharif pulses at the level of 10.89 million hectares in T.E. 1989-90 decreased to 10.22 million hectares in T.E.

Kharif pulses sowing area increased during 2009-10

1999-2000 but increased to 10.63 million hectares in T.E. 2009-10. The area of Rabi and Kharif pulses in T.E. 2009-10 is given in Chart-12. The growth rate of area which was negative at 1.45 percent per annum in earlier decade (1989-90 to 1999-2000) has changed into a positive growth rate of 0.28 percent in the present decade (1999-2000 to 2009-10). There has been an increase in the area of kharif pulses, in Andhra Pradesh, Karnataka, Madhya Pradesh, Maharashtra, Orissa, Rajasthan and Uttar Pradesh, while the states of Bihar, Gujarat, Haryana, Punjab and West Bengal witnessed a decline during 2009-10. The kharif area under pulses increased at the level of 10.58 million hectares in 2009-10 as compared to 9.81 million hectares during 2008-09 which is further estimated to increase in kharif 2010-11 at 12.19 million hectares. The all-India area and production of Kharif and Rabi pulses in TE 2009-10 is given in Chart – 12.

Chart-12: All India Area and Production of Kharif and Rabi Pulses (TE 2009-10)



Instability in production of Pulses: Rajasthan has highest (43.99%) volatility

2.69 The instability in production of pulses has been most pronounced showing significant year-to-year fluctuations as large proportion of cropped area under pulses is rainfed which increases instability in yield due to uncertainty of rainfall. Instability of pulses was abnormally high in the state of Rajasthan having coefficient of variation

43.99 percent for the decade 1999-2000 to 2009-10. This has fluctuated due to non-availability of monsoon rain and frequent drought like conditions in the state. Range of instability in production of total pulses during the decade (1999-2000 to 2009-10) was as high as 31.85 percent in Gujarat. In contrast, coefficient of variation of Bihar was 11.72 percent (low uncertainty in the production). Majority of states have indicated pulses production instability above the All-India level i.e. 10.00 percent in the present decade (1999-2000 to 2009-10). The poor production of pulses at the state level could be attributed to non-availability of monsoon rains and frequent droughts on one hand and inadequate adoption of improved technology and uncertainties related to pulses farming on the other side.

Pulses output to cross 16.51 million tonnes during 2010-11

2.70 The year 2003-04 was a record production year of 14.91 million tonnes, which dropped to 13.13 million tonnes during 2004-05. The production of pulses has been increasing consistently since then to reach the level of 14.76 million tonnes during 2007-08. The production of pulses during 2008-09 declined to 14.57 million tonnes, a decrease of 1.29 per cent over the production of 14.76 million tonnes in 2007-08. As per final Estimates for 2009-10, the total production of pulses is recoded at 14.66 million tonnes marginally up from 2008-09 levels. Pulses production is expected to cross the record of 14.91 million tonnes achieved in 2003-04 reaching at 16.51 million tonnes during 2010-11.

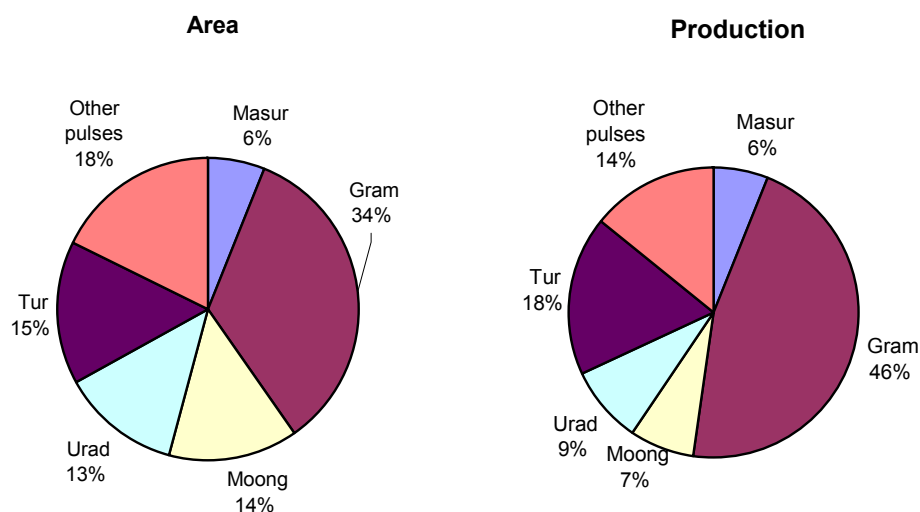
Kharif pulses set to hit a record of 6.45 million tonnes in 2010-11

2.71 The production of kharif pulses during 2009-10 was down at 4.20 million tonnes as against the production of 4.69 million tonnes in kharif 2008-09. As per 2nd Advance Estimates of 2010-11, the production of kharif pulses is projected to reach at 6.45 million tonnes (against the target of 5.71 million tonnes) being substantially higher than 4.20 million tonnes in 2009-10 and closer to 6.40 million tonnes of 2007-08.

*Kharif
production
of tur, urad
and
moong
estimated
to
increase in
2010-11*

2.72 In the kharif season the major harvested pulses are tur (Arhar), moong and urad. During the year 2008-09, the level of output of kharif pulses was 4.69 million tonnes, which constituted 32.19 per cent of the total pulses production, a decrease of 1.71 million tonnes (26.7 percent) over the previous year. The production of pulses during kharif 2009-10 has been estimated at 4.20 million tonnes. However, during 2008-09, the rabi pulses recorded production of 9.88 million tonnes (an increase of about 18 per cent) over the previous year, but as per final Estimates for 2009-10, the rabi pulses production is estimated at 10.46 million tonnes, an increase of 5.87 per cent over 2008-09. Since 1989-90, Tur (arhar-Pigeonpea) being the major crop in kharif pulses recorded highest production at 3.08 million tonnes in 2007-08, which subsequently declined to 2.27 million tonnes in 2008-09 (a decrease of about 26 per cent). The production of Tur during 2009-10 was recorded at 2.46 million tonnes. The production of urad/blackgram (black mapte), another major kharif pulse crop moved in a range between 0.77 million tonnes (2000-01) to 1.12 million tonnes (2007-08) from the period 1998-99 to 2008-09, except the highest production at 1.20 million tonnes achieved in 2003-04. The highest production of urad (kharif and rabi) at 1.50 million tonnes recorded in 2001-02 could not be achieved since then. The production of urad (Kharif and Rabi) further declined to its lowest level at 1.11 million tonnes during 2008-09. The total production of urad during 2009-10 is estimated at 1.24 million tonnes, an increase of 11.71 per cent from the production level of 2008-09. Similarly, in case of moong (green gram), highest production (kharif and rabi) was recorded in 2003-04 at 1.70 million tonnes, and the production during 2007-08 and 2008-09 was lower at 1.52 million tonnes and 1.01 million tonnes respectively, which further dropped to 0.69 million tonnes during 2009-10. However, for the year 2010-11, the kharif production of tur, urad and moong is estimated at 3.18, 1.14 and 1.01 million tonnes respectively. Chart-13 exhibits all-India percentage share of individual pulses (area and production) in T.E. 2009-10.

Chart-13 : All India percentage share of Individual Pulses (Area and production) in T.E. 2009-10



Marginal increase in yield during 2010-11

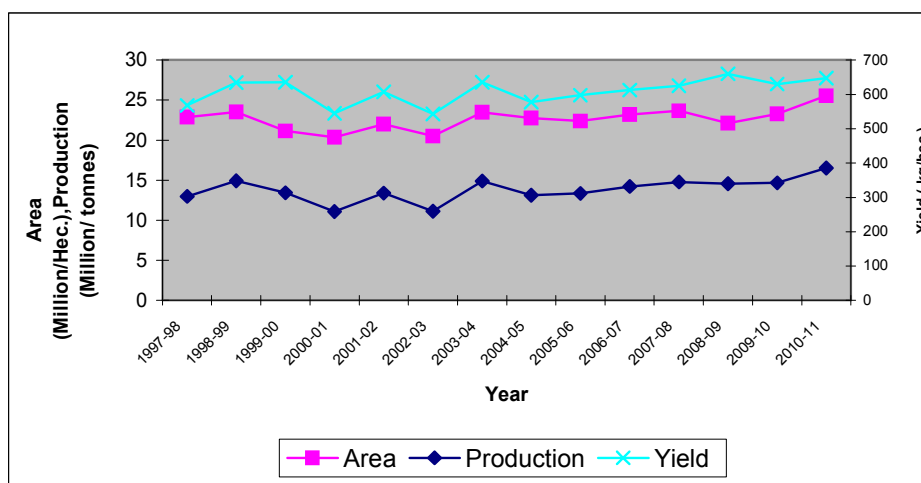
2.73 The yield level under pulses increased, though with ups and downs and attained the higher yield level at 635 kg/ha in 1996-97, 1999-2000 and 2003-04. While the yield level reduced to 577 kg/ha in 2004-05, it increased thereafter and reached to 659 kg/ha in 2008-09 and declined to 630 kg./ha in 2009-10 and further estimated to improve marginally at 647 kg./ha in 2010-11.

Annual growth rate in area and production increased during the decade 1999-2000 to 2009-10

2.74 The trend in the rate of growth of area and production under pulses shows better performance during the period 1999-2000 to 2009-10 compared to 1989-90 to 1999-2000. During the years 1989-90 to 1999-2000, the annual growth rate in area was negative at 0.60 percent per annum as compared to 1.12 percent per annum achieved during 1999-2000 to 2009-10. Similarly, annual growth rate of production was 0.69 percent during 1989-90 to 1999-2000 as compared to 2.03 percent achieved during the period 1999-2000 to 2009-10. Contrary to increase in area and production, the growth rate of yield has decreased at 0.90 per cent during 1999-2000 to 2009-10, as compared to 1.29 per cent during 1989-90 to 1999-2000. The major

constraints in pulses cultivation is stagnancy in area and persistent low levels of yield. The trends in area, production and yield in respect of pulses are shown in the Chart -14.

Chart -14: Total Pulses- Area, Production and Yield



Source: Directorate of Economics & Statistics, Ministry of Agriculture.

Proportion of kharif and rabi production

2.75 Pulses are grown in both kharif and rabi seasons. Kharif pulses in terms of total production of pulses, accounted for 43 per cent in 2007-08 and decreased substantially to 32 per cent due to unfavourable weather conditions during 2008-09. The share of kharif pulses has further reduced to about 29 per cent during 2009-10 due to drought. The rate of growth under kharif production which was negative at 1.06 per cent during the period 1989-90 to 1999-2000 has turned into a positive growth rate of 0.38 per cent during 1999-2000 to 2009-10, mainly due to increase in area. The area grew at 0.28 per cent and productivity also increased by 0.10 per cent during the same period.

Seven states have 87% share of the production

2.76 Pulses are grown mainly in the states of Madhya Pradesh, Maharashtra, Uttar Pradesh, Andhra Pradesh, Karnataka, Rajasthan and Gujarat accounting for about 87 per cent of the production and 86 per cent of the area under pulses in the country during the year 2009-10. Among the States, Madhya Pradesh leads in the production of pulses accounting for 32.69 percent production followed by

Maharashtra (16.16 percent), Uttar Pradesh (13.18 percent), Andhra Pradesh (9.75 percent) and Karnataka (7.63 percent). While analysing the production under kharif crops, the State of Maharashtra is the largest producer in the country contributing to 28.78 percent of total kharif production in the year 2009-10, followed by Madhya Pradesh (14.53 percent), Uttar Pradesh (11.61 percent) and Karnataka (11.23 percent). There was a significant decline in the production under kharif crops in spite of highest area recorded in Rajasthan due to severe drought. The State-wise estimates of area, production and yield of pulses are given in the Table- 2.22.

Table- 2.22 : State-wise Area, Production and Yield of Pulses (2009-10)

Area – (000 ha.),
Production (000 tonnes)
Yield - Kg /ha

S.No	State	Total Pulses			Kharif Pulses		
		Area	Production	Yield	Area	Production	Yield
1.	Andhra Pradesh	1932 (8.30)	1429(9.75)	740	780 (7.37)	253 (6.02)	324
2.	Bihar (including Jharkhand)	881 (3.78)	696 (4.75)	790	256 (2.42)	196 (4.66)	767
3.	Gujarat	733 (3.15)	517 (3.53)	705	580 (5.48)	377 (8.97)	650
4	Haryana	132 (0.57)	100 (0.68)	758	42 (0.40)	33 (0.78)	786
5	Karnataka	2479(10.65)	1118(7.63)	451	1341(12.67)	472 (11.23)	352
6	M.P.(including Chhattisgarh)	5749(24.69)	4793(32.69)	834	1198 (11.32)	611 (14.53)	510
7	Maharashtra	3376(14.50)	2370(16.16)	702	1985 (18.76)	1210(28.78)	610
8	Orissa	867 (3.72)	399 (2.72)	461	550 (5.20)	249 (5.92)	453
9	Punjab	20 (0.09)	18 (0.12)	896	14 (0.13)	12 (0.29)	840
10	Rajasthan	3501(15.04)	714 (4.87)	204	2581(24.39)	145 (3.45)	56
11	Tamil Nadu	535 (2.30)	204 (1.39)	382	134 (1.27)	56 (1.33)	414
12	U.P.(including Uttarakhand)	2604(11.18)	1947(13.18)	748	968 (9.15)	488 (11.61)	504
13	West Bengal	182 (0.78)	150 (1.02)	826	47 (0.44)	33 (0.78)	706
Total	All India	23282	14662	630	10582(45.45)	4204(28.69)	397

Source:- Directorate of Economics & Statistics, Ministry of Agriculture.

Note: Figures in brackets relate to percentage share of Area and Production.

Constraints in pulses production

2.77 In India, pulses are grown generally on marginal less fertile lands after taking care of food needs from high productivity high input crops like paddy and wheat by most farmers. The levels of production, productivity and area under pulses are generally determined by the weather/climatic conditions, primarily the coverage of monsoon and moisture content in soil. The yield of pulses crops remains lower than that of other crops. Climate change has an adverse impact on

productivity on account of reduction of total crop cycle. Another reason for low yield is the high protein content, due to which the crop is highly vulnerable to pests and diseases. Hence farmers tend to shift from pulses to other better income generating crops. An analysis done by Central Research Institute for Dryland Agriculture (CRIDA), Hyderabad revealed that major constraints in pulse production leading to low productivity and production are erratic rainfall, non-availability of good quality seeds, degraded soils, neglect on input applications, poor crop management, high incidence of pest and diseases, lack of proper extension services and poor credit availability.

Promote the usage of yellow peas which is cheaper alternative of protein

2.78 In order to control the prices of pulses in the domestic market, the government subsidized import via PSUs in 2008-09 for PDS by giving a subsidy of Rs 10/kg. to state governments for all pulses and peas. Tamil Nadu, Andhra Pradesh, Maharashtra and Kerala states procured pulses through PSUs. Myanmar is the main supplier of tur pulses to India. Yellow peas are being imported from Australia, Russia, Ukraine and Canada. Private sector is also importing yellow peas which needs to be promoted on a large scale as a substitute of tur dal. It has the same protein content at one fourth of the price. In this way, a more promising solution is to encourage a shift to yellow peas dal, which is a cheaper alternative of protein against the traditional pulses.

The status with regard to import of pulses in the recent years is shown in the Table 2.23.

Table 2.23: Import of Pulses

Year	Quantity	Quantity --(000 tonnes)	
		Value-- (Rs.in Crore)	
		Value	Unit Value (in Rs./ Kg)
2006-07	2270.98	3891.91	17.14
2007-08	2830.53	5367.89	18.96
2008-09	2481.10	6246.40	25.18
2009-10	3509.58	9813.37	27.96
2010-11 (April-July, 10 (P))	675.96	2328.12	34.44

Source: DGCI&S, Kolkata, P-Provisional

The status with regard to demand and supply of pulses in the country is provided in the Table- 2.24.

Table- 2.24: Demand and Supply of Pulses

(Qty-million tonnes)

Crop Year (July-June)	2006-07	2007-08	2008-09	2009-10	2010-11
Fiscal Year (April-March)	2007-08	2008-09	2009-10	2010-11	2011-12
<i>Gross Production</i>					
Tur	2.31	3.08	2.27	2.46	3.18
Other kharif pulses	2.49	3.32	2.42	1.74	3.27
Gram	6.33	5.75	7.06	7.48	7.37
Other Rabi Pulses	3.07	2.61	2.82	2.98	2.69
All Pulses	14.20	14.76	14.57	14.66	16.51
Net Production (87.5% of Gross Production)	12.43	12.92	12.75	12.83	14.45
Procurement All Pluses (NAFED)	Nil	Nil	Negligible	Nil	Nil
Export(FY) All Pulses	0.17	0.14	0.10	0.30*	N.A
Import (FY) All Pulses	2.83	2.48	3.51	2.03*	2.03@
Supply (FY)	15.09	15.26	16.16	14.56	16.48
Consumption Demand	17.71	16.77	17.51	18.29	19.02

*Assumed for the whole year, in proportion to April-July, 2010 imports.

@ Projected the similar quantity of last year

Source:- Production data from Directorate of Economics & Statistics and Export
Import data from DGCI&S, Kolkata.

*The net
availability
of pulses is
declining*

2.79 The production of pulses has failed to keep pace with the increase in population of the country. The per capita per year net availability of pulses, during the period from 1951 to 2009 was reduced considerably from 22.1 kg to 13.5 kg. During the 1951 and upto 1966, it was fluctuating in the range of 22.1 to 17.6 kg. During 1971 to 1991, it further declined and remained in the range of 18.7 to 15.2 kg and thereafter it was continuously fluctuating in a low range of 12.5-13.5 kg upto the year 2009.

*Prices of
pulses
increased
sharply in
2009-10 but
softened
during
2010-11*

2.80 The average Wholesale Price Index (WPI) of pulses (base 2004-05=100) released by the Office of Economic Adviser, Ministry of Commerce & Industry has been fluctuating widely in recent years. The WPI of pulses increased to 113.3 points in 2005-06 and reached at

149.2 points in 2006-07 (31.6 per cent) but dropped to 144.9 points (2.8 percent) in 2007-08. Thereafter it further gained upto 155.8 points (7.5 percent) in the year 2008-09 and 190.8 points (22.4 per cent) during 2009-10. During 2009-10 prices of tur were all time high ranging in between Rs 70 to Rs 90 at the retail level. The average WPI of Tur at 144.3 in 2008-09 sharply increased to 214.7 in 2009-10 indicating an increase of 48.8 percent over the previous year. Prices of pulses have shown substantial increase during the year 2009-10 due to short supply. However, the prices softened during 2010-11. The WPI of Tur declined to 202.2 up to February, 2011 (5.8 percent) as compared to average WPI of 214.7 in 2009-10. Moong and Urad have shown declining trend in 2010-11 since November 2010.

2.81 Procurement operations of pulses are undertaken by NAFED. Except 129.6 tonnes of urad procured in 2010-11, no procurement of pulses has been made by NAFED under the price support scheme (PSS) as the prices of pulses continuously remained above the levels of MSP. However, NAFED made commercial purchases of 985 tonnes of tur and 501 tonnes of moong in 2010-11 (upto 31.12.2010).

*Research and
technology
development
programmes*

2.82 On technology front, India has involved International Crop Research Institute for Semi-Arid Tropics (ICRISAT) to develop better technological solutions to make pulses crops more productive. ICRISAT's improved chickpea varieties have been widely adopted in a poor tribal area in Gujarat, with favourable impacts on its yield, unit production costs and net returns per hectare. Two pilot projects on pulses are being launched in Madhya Pradesh and Chhattisgarh by this research body: (i) improved production and protection technology on growing chickpea in rainfed rice fallows. (ii) demonstrating potential of pigeonpea hybrid. The major research work on pulse crops being carried out by Indian Institute of Pulses Research (IIPR) established by ICAR are as follows; (i) genetic enhancement for yield, quality and resistance to biotic and abiotic stresses, (ii) development of transgenic in chickpea and pigeonpea and (iii) harnessing hybrid vigour through

*Technology
for pulses
production*

development of CMS based hybrids in pigeonpea. All India Coordinated Research Project on Dryland Agriculture (AICRPDA) has evaluated improved varieties of pulses and recorded yield gains to the extent of 40-50 per cent compared to local cultivars of different pulses. There is a need to provide quality improved seeds of pulses to the farmers by adopting seed village concept with active participation of the farming community. Development of Rural Entrepreneurship through adoption by promoting small scale Dal Processing Units in participatory mode through Self-Help-Groups (SHGs) may be encouraged to give better income to the farmers.

Oilseeds

*Heavy
dependence
on imports
of edible oils*

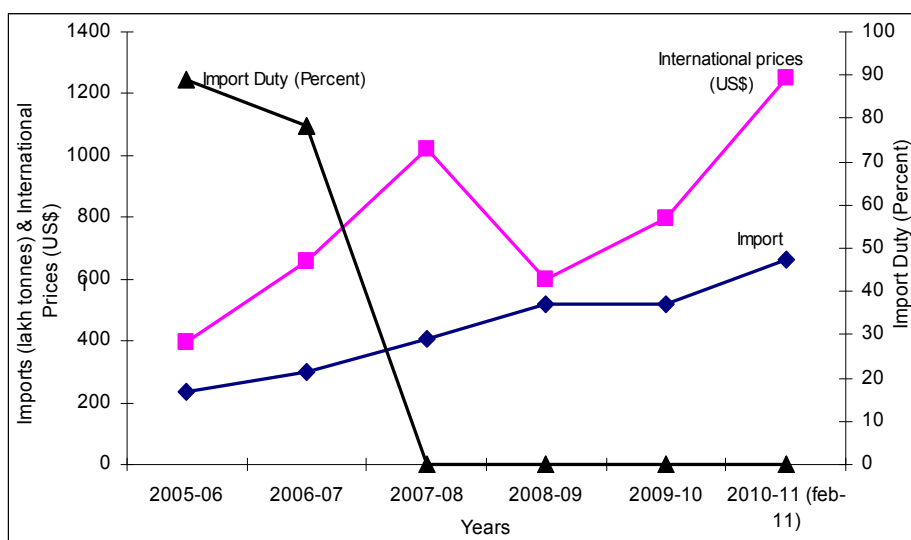
2.83 Oilseed crops have very important place in Indian agricultural economy and rank second biggest group in cultivated area after food grains. Taking into account the recent four years average, oilseed crops are cultivated in about 26.8 million hectares, with total production of 27.5 million tonnes representing yield of 1026 kg/ha. India occupies a prominent position in the world, both in regard to acreage and production. The production of oilseed crops is attributable basically to provide edible oils as essential cooking oil and other food products supplementing nutritional requirements. Although India ranks among one of the largest producers of oilseed crops in the world yet it is unable to meet its requirement of edible oils due to very low productivity of oilseeds. The lower productivity and production of oilseeds is mainly attributed to their cultivation in rainfed conditions, lack of varietal replacement through development of high yielding drought resistant seed varieties, and production losses due to vagaries of nature and pests and diseases. India's dependence on import of edible oils/vegetable oils has been increasing gradually and during 2009-10 (FY) India has imported edible oils of Rs. 26500 crore equivalent to US \$ 6 billion. In 1993-94 with the domestic availability of edible oils at 69.3 lakh tonnes, the country was almost self-sufficient and only 5 per cent of the requirement was being imported. Since then,

the domestic availability of edible oils also gradually increased up to 86.76 lakh tonnes in 2010-11 though fluctuating but the country is able to meet only 50 per cent of its consumption demand of edible oils. Such a higher dependence on imports has its own disadvantages and also had an adverse impact on indigenous efforts in this direction, such as global price fluctuation based on production prospect as happened in Indonesia and Malaysia where prices of crude palm oil spurted by 66 percent upto February, 2011, domestic price instability owing to global price fluctuation, adverse balance of trade/payment, lack of initiative to augment production and improve research and development in oilseed and oils sector.

*Zero duty
regime
fuelled
imports to
increase*

2.84 The international prices of crude palm oil (consists about 80 percent of total edible oil imports) has been fluctuating which increased to new highs at US \$ 1249 per tonne in February 2011 as compared to US \$ 754 per tonne in the corresponding month of the last year (66 percent). Crude Palm Oil (CPO) being imported from Indonesia and Malaysia and soya oil from Argentina, USA and Brazil. Import duties are reviewed from time to time by the Government which had drastically reduced from 88.2 percent in 2005-06, 78.2 percent in 2006-07 to zero duty in 2007-08 in order to reduce inflationary pressure. The reduction of import duty to zero percent further fuelled increased import of edible oils and volatile increases in international prices could not make any impact in reducing import of CPO mainly because of inelastic demand of edible oils which is shown in the Chart-15.

Chart- 15: Crude Palm Oil-International Prices, Import Duty & Imports



Indigenous supply quite short of demand

2.85 The proportion of availability of edible oils from domestic sources to the total requirement has been gradually declining and the gap between consumption demand and indigenous supply of edible oils is largely being met through imports as indicated in the Table- 2.25.

Table- 2.25: Demand and Supply of Edible Oils

(In lakh Tonnes)

Oil year (Nov-Oct)	Production of Oilseeds	Net availability of edible oils from domestic sources	Imports	Total availability of edible oils (col.3+ col.4)	Consumption demand of edible oils (estimated) **	%age between consumption demand & net domestic availability (col.3/ col.6)
1	2	3	4	5	6	7
2001-02	206.63	61.46	43.22	104.68	NA	-
2002-03	148.39	46.64	43.65	90.29	NA	-
2003-04	251.86	71.40	43.97	115.37	NA	-
2004-05	243.54	72.47	50.42	122.89	NA	-
2005-06	279.79	83.16	44.17	127.33	118.50	42.50
2006-07	242.89	73.70	47.15	120.85	124.10	68.39
2007-08	297.55	86.54	56.08	142.62	127.57	47.41
2008-09	277.19	84.56	81.83	166.39	132.80	57.05
2009-10	248.82	79.46	88.23	167.69	138.18	73.90
2010-11	278.48	86.76	82.96 *	169.72	143.75	65.69

Source: Directorate of Vanaspathi, Vegetable Oils & Fats NA : Not Available

*: Annualised in proportion to estimated import of three months (Nov-Jan) in the current year

**: Projections made by the Expert Group based on behaviouristic approach

Total supply in excess of consumption demand

It may be seen from Table 2.25 that the gap between consumption demand of edible oils and net availability from domestic sources has been increasing, resultantly its imports had increased two fold since 2003-04. The edible oils are being imported regularly to bridge the wide gap between the consumption demand and domestic availability but the imports during the last three years since 2007-08 have been in excess of the estimated demand substantially attributable to imports of crude edible oils made on zero duty basis.

2.86 The trend in the imports of edible oils during the last ten years is shown in the Table- 2.26.

Table- 2.26: Imports of Edible Oils

Imports increased two fold in quantity & four times in value

Year (April-March)	Quantity (in lakh tonnes)	Value (in Rs. crore)	Unit Value (Rs./kg)
2000 – 2001	41.77	5976.53	14.31
2001 – 2002	43.22	6464.97	14.96
2002 – 2003	43.65	8779.64	20.11
2003 – 2004	52.90	11683.24	22.08
2004 – 2005	47.51	11076.89	23.31
2005 --2006	42.88	8960.99	20.90
2006 --2007	42.69	9539.90	22.34
2007--2008	49.03	10301.08	21.01
2008 --2009	67.19	15837.47	23.57
2009 --2010	80.34	26483.32	32.96
2010-11 (Apr-July)	23.09	8816.52	38.19
2009-10 (Apr-July)	26.20	7471.19	28.51

Source: DGCI&S, Kolkata, Ministry of Commerce & Industry

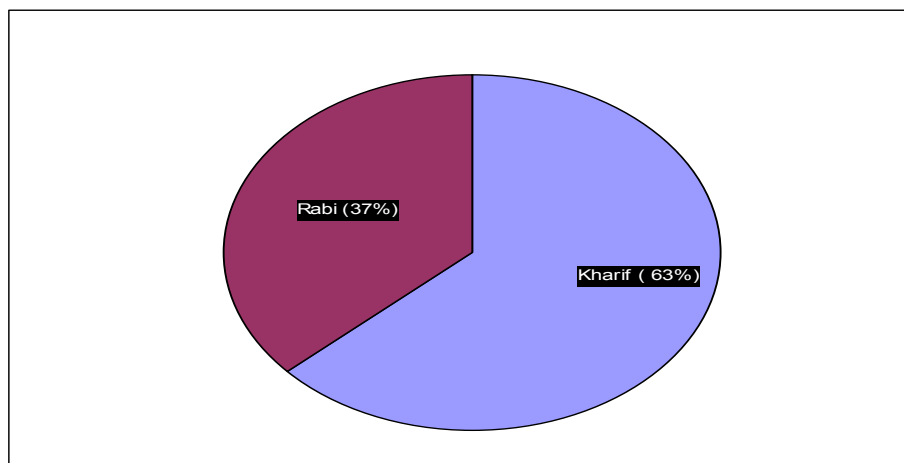
It may be seen from Table 2.27 that quantity of imports of edible oils has been increased two fold from 2001 to 2010 while its value increased to four times which clearly indicates that import prices have increased more than 200 percent.

*Kharif and
Rabi propor-
tion in
production*

2.87 The production of oilseeds in India during the year 2009-10 at 24.88 million tonnes, has registered a decline of 10.25 per cent over the 2008-09 production at 27.72 million tonnes. The oilseeds production target for 2010-11 kharif crops has been fixed at 20.70 million tonnes. However, production of kharif oilseeds is estimated at 18.22 million tonnes (Second Advance Estimates of DES), short by 2.48 million tonnes (12 percent), from the targets but higher by 15.83 percent over the previous year's kharif production of 15.73 million tonnes. The target for total production of oilseeds during 2010-11 (kharif+rabi) is kept at 33.20 million tonnes, against which total production is estimated to reach at 27.85 million tonnes (Second Advance Estimates) showing a shortfall of about 16 percent to the targets but higher by about 12 percent from the previous drought year. The share of India's oilseed production to the total production of oilseeds in the world improved at 6.14 percent in 2010-11 as against 5.47 percent share in 2009-10 but still lower than the 7 percent achieved in 2007-08. India ranks fourth largest producer of oilseeds in the world after USA, China and Brazil. However, owing to low productivity of oilseeds and higher domestic consumption/demand, India has to depend largely on imports and become the largest importer of edible oils in the world. Share of Rabi and Kharif production of oilseeds in 2009-10 is given in the Chart-16.

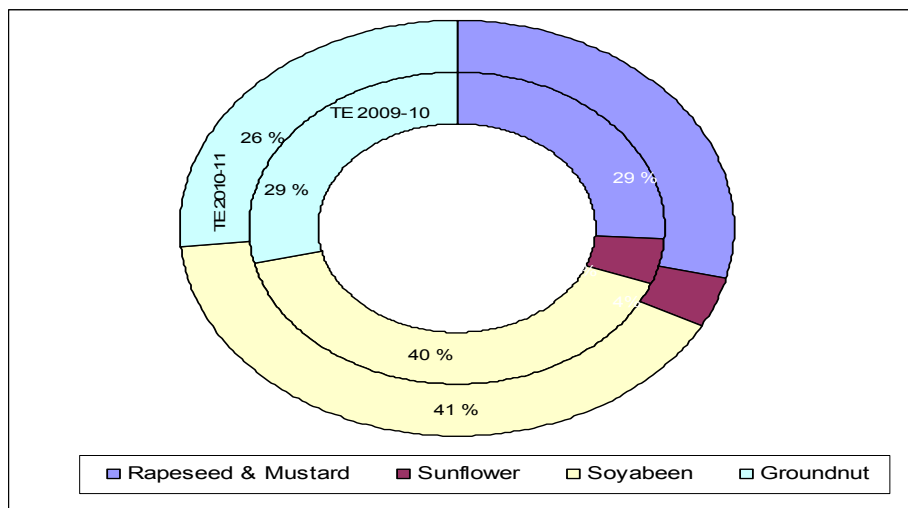
(Table 2.1)

Chart-16: All India Production of Oilseeds in 2009-10



2.88 The oilseeds cultivated in different agro-climatic zones in India mainly are groundnut, soyabean, sunflower, nigerseed, sesamumseed, castorseed, linseed, rapeseed/mustard and safflower. Groundnut and sunflower are cultivated in both kharif and rabi seasons. Soyabean, nigerseed, sesamumseed and castorseed are being grown only in the kharif season. In case of sunflower, rabi crop accounts for the major share in its total production. Groundnut, soyabean, sunflower and rapeseed/mustard are the major oilseed crops in India both in terms of area and production accounting for about 85 per cent of total oilseeds area and about 92 percent of its total production. The production of these four major crops in TE 2009-10 and TE 2010-11 is given in the Chart-17. The major oilseeds producing states are Madhya Pradesh, Rajasthan, Maharashtra, Gujarat, Andhra Pradesh, Karnataka, Uttar Pradesh, Tamil Nadu and Haryana. Groundnut and soyabean contributed about 88 per cent of the total Kharif oilseed production in 2009-10.

Chart-17: All India Oilseeds: Crop wise Production



2.89 The production of oilseeds has been fluctuating and ranged between 20-29 million tonnes since 1992-93, except in 2000-01 and 2002-03 when it dipped to 18.44 million tonnes and 14.84 million tonnes respectively. With the latter being all time low level of oilseeds

History of gradual growth in production though with fluctuating

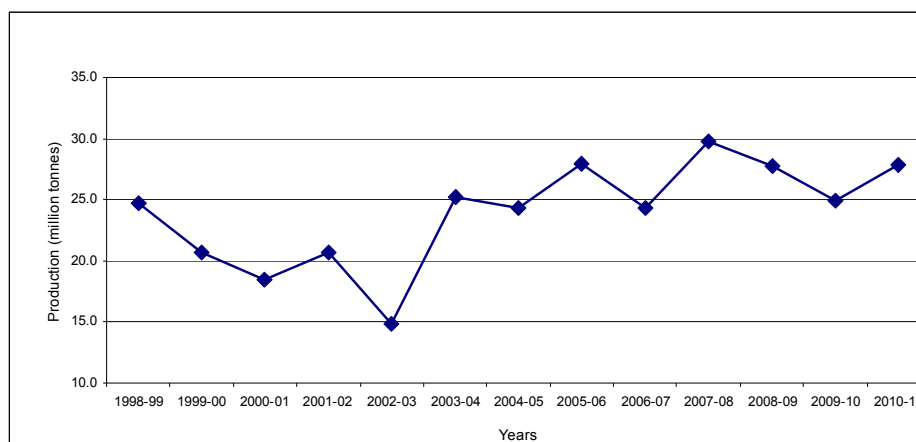
production since 1988-89. Earlier from 1954-55 to 1980-81, oilseeds production generally fluctuated in the range of 7-9 million tonnes, which moved upward in the range of 10-13 million tonnes from 1981-82 to 1987-88. Thereafter, during the period 1988-89 to 1998-99, the production of oilseeds marked a significant improvement, ranging between 17-25 million tonnes, which might be attributed to the successful implementation of the Technology Mission on Oilseeds (TMO), introduced in 1986. However, no further improvement over the production of 24.75 million tonnes achieved in 1998-99 could be made in subsequent four years, instead the production declined. The year to year fluctuations in production of oilseeds in the country clearly indicate that oilseed crops are mainly dependant on monsoon rains as around 73 per cent of the oilseeds crop is grown in rainfed conditions. The sharp decline in oilseeds production to 14.84 million tonnes in 2002-03 was mainly due to failure of monsoon and the increase in production to 25.19 million tonnes in 2003-04, 27.98 million tonnes in 2005-06 and 29.76 million tonnes (ever highest) in 2007-08 again were primarily due to good, timely and evenly distributed monsoon rains. Further, the production declined to 27.72 million tonnes in 2008-09 due to unfavorable weather conditions and again declined by 10 per cent at 24.88 million tonnes in 2009-10 due to drought like conditions and flood witnessed in oilseed producing states, which is further estimated to increase by 12 percent at 27.85 million tonnes in 2010-11, witnessing somewhat similar production level as achieved in 2008-09.

Historical position of oilseeds production

Performance in current decade promising

2.90 The oilseeds production in the current decade has shown better performance than the earlier decade. The present decade (1999-2000 to 2009-10) has an annual growth rate of 4.40 per cent as compared to 2.74 percent of the previous decade (1989-90 to 1999-2000). The better growth achieved in the present decade was primarily due to favourable monsoon behaviour and improvement in inputs used by farmers to some extent. The trend in production of oilseeds is shown in the Chart -18.

Chart -18: Production Trends in Oilseeds

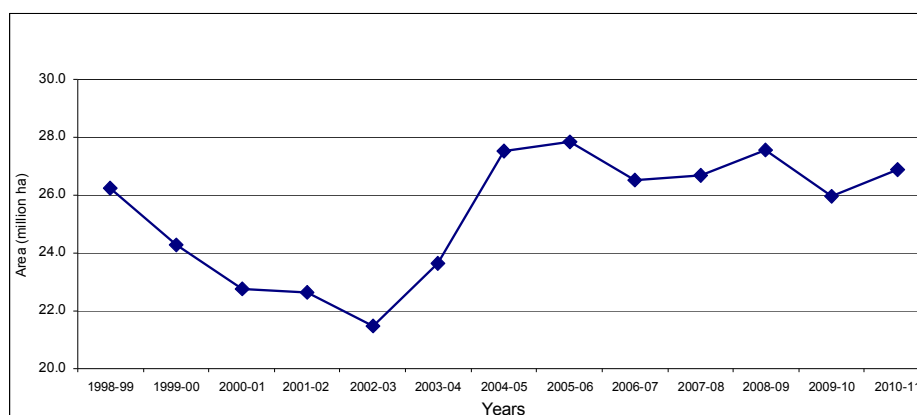


Source: Directorate of Economics & Statistics, Ministry of Agriculture.

*Area
increase
in
current
decade*

2.91 Area coverage under oilseeds reflects year-to-year fluctuations. The years 2004-05 and 2005-06 witnessed the highest coverage under the crop at 27.52 million hectares and 27.86 million hectares respectively. However, this could not be sustained as the area coverage declined to 26.51 million hectares during 2006-07(4.8 percent). Subsequently, it increased marginally to 26.69 million hectares in 2007-08 and further to 27.56 million hectares in 2008-09 (3.3 percent). However, the area under oilseeds declined by 5.8 per cent to 25.96 million hectares in 2009-10 but further estimated to increase by 3.5 percent reaching at 26.87 million hectares in 2010-11 (Second Advance Estimates). The average growth rate in area in the present decade (1999-2000 to 2009-10) was higher at 2.00 per cent as compared to 0.66 per cent growth achieved in the previous decade (1989-90 to 1999-2000) The better growth achieved in the present decade was primarily due to favourable monsoon behaviour and improvement in inputs used by farmers to some extent. The trend in area coverage under oilseeds is indicated in the Chart -19.

Chart -19: Area Sown under Oilseeds



Source: Directorate of Economics & Statistics, Ministry of Agriculture.

Yield of oil seeds lower than other countries & world average

2.92 Similar to the improvements in area and production, productivity of oilseeds has also performed better in the present decade. The annual growth of yield during 1999-2000 to 2009-10 was 2.35 per cent as compared to 2.07 per cent growth achieved in previous decade (1989-90 to 1999-2000). In fact, the productivity of the oilseed crops increased at an annual growth rate of 1.46 percent since 1989-90 to 2009-10 (two decades) even though the productivity levels are much lower than that of other oilseeds producing countries and world average (year 2009), which can be seen from Table 2.28. The productivity of groundnut was about 28 percent, 24 percent and 61 percent of the yield in China, USA and world average respectively. Similarly, the productivity of soyabean was about 36, 41 and 47 percent of the yield in USA, Brazil and world average respectively. In case of sunflower also the productivity is about 24, 33 and 43 percent of the yield in Germany, USA and world average. The higher productivity of soyabean in Argentina, Brazil and USA is attributed to GM varieties of soyabean cultivated by these countries and in respect of groundnut the other geographical factors, hybrid seeds and improved farm techniques may be the reasons as there is no evidence of GM groundnut in these three countries and China where the groundnut yield is significantly higher than India and world average. It is further observed that productivity fluctuates worldwide but India has

the lowest productivity among seven major oilseeds producing countries.

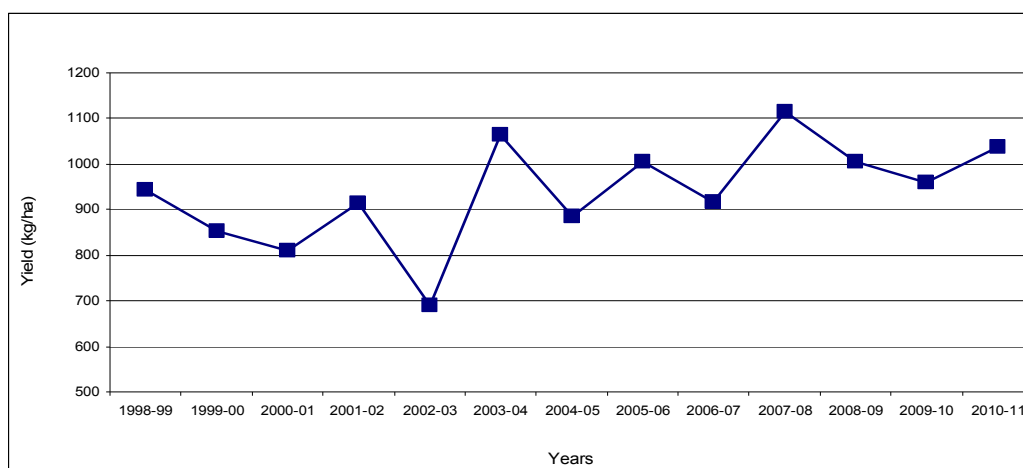
Table- 2.27: International Comparison of Productivity of Major Kharif Oilseeds

Country	Soyabean		Groundnut		Sunflower	
	2008	2009	2008	2009	2008	2009
Argentina	2822	1848.4	2750	2352	1802	1364.5
Brazil	2817	2617.6	2623	2637.8	1337	1254.6
China	1703	1647.7	3102	3316.5	1779	1701.0
Germany	1000	1000.0	-	-	1964	2411.0
India	942	1064.2	1071	920.8	542	580.0
Nigeria	970	968.2	1696	1695.6	-	-
U.S.A	2666	2957.8	3829	3824.2	1601	1741.9
World	2384	2249.0	1554	1511.0	1424	1341.3

Source: FAOSTAT

The movement in the yield levels of oilseeds is shown in the Chart -20.

Chart-20: Yield levels of Oilseeds



Source: Directorate of Economics & Statistics, Ministry of Agriculture.

Dependence on monsoon, lack of best farm practices and relative low prices main causes of low yield

2.93 The causes of low yields for oilseed crops are broadly the same as in the case of other crops, viz., lack of modern farm practices, cultivation in rainfed conditions and the consequent dependence on rainfall, non-availability of quality seeds/hybrid seeds, lack of disease and pest management practices, poor extension services and lack of remunerative prices to the farmers. As there is inadequate/non availability of irrigation, majority of the oilseed crops (about 73 per cent)

is grown in rainfed conditions without irrigation; productivity and production outlook to a great extent depends on monsoon behaviour. Though oilseed crops generally require much less water for irrigation in comparison with other competing crops, but protective irrigation, if arranged it can reduce the wider fluctuation occurring in productivity and production and improve the productivity of oilseed crops to a great extent. Resultantly, the over dependence on imports of edible oils may be curtailed and the precious foreign exchange can be saved substantially. Therefore, the Commission recommends that **at least to protect the oilseed plants from drying up, increased availability of water for irrigation through appropriate recharge technologies, such as moving surface water channels to improve water tables in deficient areas besides adequate irrigation facilities, easy accessibility to improved technology, farm implements, quality seeds, credits and extension facilities to the farmer would bring remarkable improvement in production and productivity of the oilseeds.**

*Moderate
3.9
percent
increase
in prices
of major
oilseeds*

2.94 The wholesale price index (base 2004-05=100) of oilseeds as a whole, which averaged at 131.2 in 2008-09, registered an increase of 15.90 percent over the previous year and increased marginally to 135.0 (2.9 per cent) in 2009-10. Further, the average price index during 2010-11 (April 2010 to February 2011) also showed an increase of 3.9 percent marginally up from the previous year. The prices of oilseeds except groundnut, safflower, sesamum seed and sunflower seed declined during the current year i.e. soyabean (10.0 percent), rapeseed/mustard (3.0 percent) and niger seed (15.1 percent), as compared to average prices in 2009-10.

*Moderate
4.4
percent
increase in
prices of
edible oils*

2.95 The WPI in case of edible oils declined by 5.9 per cent from the average Index at 121.6 in 2008-09 to 114.4 in 2009-10. The WPI for edible oils at 119.4 during 2010-11 (upto February, 2011) has shown an increase of 4.4 percent over 2009-10, marginally higher to that of oilseeds. In respect of individual oils, except for mustard oil which

increased only by 0.2 percent, the average WPI for all other edible oils viz., soyabean oil, sunflower oil and sesamum oil increased between 4 to 6 percent. However, groundnut oil increased by 13.9 percent in current year (upto February 2011) due to decline in its production from the last three years and surging international prices.

(Table 2.17)

2.96 The prices of edible oils as a whole in the country declined by 6 percent in 2009-10 even though the domestic availability was lower due to drought and the same have increased by 4.4 percent in the current year up to February 2011 primarily because of strong influence of international prices of edible oils/vegetable oils. Globally, the prices of edible oils increased by about 35-40 percent in recent 4 months up to October 2010 and about 70 percent from last one year (FAO) while the price in the country has been moderate at 4.4 percent only.

2.97 Since market prices of all kharif oilseeds covered under Price Support Scheme (PSS) during kharif season 2010-11 have been ruling above the MSP, market intervention by NAFED for procurement of oilseeds has not been necessitated. However, NAFED has reported purchase of 845 tonnes of sunflower seed in the states of Haryana and Orissa and 1892 tonnes of Sesamum seed in West Bengal under PSS.

import duty rates to be reviewed periodically in view of volatility in international prices

2.98 The import duty structure of edible oils has been reviewed from time to time, depending on the domestic requirement and supply positions. Keeping in view the rising prices of edible oils in 2007-08, the import duties were significantly reduced from 88.9 percent in 2005-06 and 78.2 percent in 2006-07 to 7.5 per cent in the case of refined and zero percent for crude edible oils since 1st April 2008. Besides this, export of major edible oils was banned from 17.3.2008 except for a small quantity in 5 kg packages. Moreover, the tariff values for import of edible oils, which were fixed in 2006 have not been reviewed and revised even though the import prices of oils have increased more than two fold. This encouraged import of refined oils because actual import

duties paid become much less than the 7.5 percent fixed. Presently when food prices have been increasing at a yearly average rate of more than 15 per cent, the increase in prices of edible oils have been moderate at 4.4 percent and that too influenced by rising world prices. In such a situation, the farmers as well as the domestic oil sector find themselves in a disadvantageous position. As the international prices of edible oils are volatile in nature, Government needs to review the import duty and tariff structure periodically in view of international scenario as well as in the interest of stakeholders of domestic oil sector.

*Potentiality
of oil palm
as edible oil*

2.99 As regard to the need and potential to augment the domestic supply of edible oils through secondary sources and tree borne oils including oil palm, the suggestions in detail have already been mentioned in Commission's kharif price policy reports of 2009-10 and 2010-11. Oil palm has high potential as a prospective and long-term source of edible oils. Oil Palm Development Programme (OPDP) which was launched during 1991-92 under the Technology Mission on Oilseeds and Pulses (TMOP) and subsequently from 2004-05 being implemented as a part of Integrated Scheme of Oilseeds, Pulses, Oil Palm and Maize (ISOPOM) provides support for oil palm cultivation in 12 states viz. Andhra Pradesh, Assam, Gujarat, Goa, Karnataka, Kerala, Maharashtra, Mizoram, Orissa, Tamil Nadu, Tripura, and West Bengal. The states of Assam, Maharashtra, West Bengal and Tripura did not undertake oil palm cultivation so far. As on 2009-10 oil palm has covered gross area under cultivation of 1.73 lakh hectares, out of which about 18000 hectares were uprooted being non-remunerative to the farmers and the net area remained at 1.55 lakh hectares as against the estimated potential area of 10.30 lakh hectares (Chadda Committee). Presently, only about 70000 tonnes of Crude Palm Oil (CPO) is being produced annually in the country which is a meagre quantity keeping in view our larger dependence on imported CPO. The reasons behind the programme could not achieve success as envisaged 'inter alia' were; non availability of quality seed and planting

material, improper and inadequate guidance for new plantations, poor water availability, remunerative competitive crops, inadequate pricing formula for Fresh Fruit Bunches (FFBs) and Market Intervention System (MIS), inadequate financial support by Government and lack of marketing arrangements by the processing plants along with frequent changes of import duty on crude edible oils.

*Efforts made
in current
year budget
for oil palm
not
adequate*

2.100 The Budget proposals 2011-12 provide for area expansion of 60000 hectares for oil palm covered under Rashtriya Krishi Vikas Yojana (RKVY) preferably in the areas of existing processing mills for CPO in order to augment the production of palm oil by 2.5-3.0 lakh tonnes in the next five years with an outlay of Rs. 300 crore. The funds and the area expansion as envisaged in the budget proposal for oil palm development seem to be a piece-meal step towards development of oil palm which is not adequate for tapping the potential. Keeping in view the larger requirement of edible oils which palm oil may be able to provide of about 4-5 million tonnes; thus enabling to reduce dependence on imports considerably, an integrated approach covering all the identified potential areas and to assess other potential areas with sufficient funds ensuring adequate and timely supply of quality seed/planting material, full compensation for loss of income of the farmers during the gestation period (four years) strengthen and expansion of seed gardens, germplasm base, inter-cropping, drip irrigation, remunerative price of FFBs to farmers with assured marketing and development of existing and new processing mills for CPO in the required regions at one go is the need of the times. An Action Plan fixing proper accountability in implementation be prepared and its quarterly monitoring be assured. In order to tap the full potential of oil palm, first Government may declare it as a plantation crop and then choose any one of the two policy options; (i) corporate farming and (ii) household cultivation. Therefore Commission recommends that **rigorous efforts from the Government and other related organizations are warranted to exploit the full potential of oil palm plantation along with post harvest marketing and its price**

arrangements in all the identified states/regions with assured funds making it an important component under the forthcoming Technology Mission on Oilseeds (TMO). Since out of the total imports of edible oils in the country, palm oil alone accounts for about 72 per cent (crude-81 per cent and refined-19 per cent), the domestic potential of oil palm needs to be fully tapped.

*Need of
technology
mission for
oilseeds*

2.101 As discussed in Commission's earlier reports, setting up a Technology Mission separately for oilseeds including all oil crops such as traditional oilseeds, secondary sources including tree borne oilseeds and oil palm replacing the existing ISOPOM would boost the productivity of oilseeds and resultant increased availability of domestic edible oils. Therefore, the Commission reiterates its earlier recommendation that **keeping in view the urgent need to augment availability of edible oils through domestic sources, the productivity enhancement of all the oilseed crops especially of tree borne oilseeds and oil palm as a plantation crop should be given special attention while formulating a new Technology Mission for Oilseeds replacing the existing Integrated Scheme of Oilseeds, Pulses, Oil palm and Maize (ISOPOM) along with clear accountability and monitoring.**

*Stagnant
world
production
of oilseeds*

2.102 Global production and prices have a significant impact on domestic oilseed/edible oil economy in view of India's position as one of the largest importers of edible oil in the world. Global oilseed production in 2010-11 is forecast to remain close to last seasons (2009-10) record production of 442.2 million tonnes. As regards individual oilseeds crops, shortfall in production is expected for soyabeans, rapeseed and copra but it would almost be compensated by increased cottonseed, groundnut and palm kernel production. Table 2.28 depicts the world production of major oilseeds.

Table- 2.28: World Production of Major Oilseeds

(Million tonnes)

Crops	2008-09	2009-10 estimate	2010-11 forecast
Soyabeans	211.7	260.5	257.6
Cottonseed	41.8	39.9	44.3
Rapeseed	58.4	60.8	56.5
Groundnuts (unshelled)	35.4	32.8	34.2
Sunflower seed	34.7	32.4	32.4
Palm kernels	11.6	12.0	12.6
Copra	5.2	5.8	5.3
Total	398.8	442.2	442.9

Source: Food outlook, FAO- November 2010

World prices under pressure to increase in current year

2.103 FAO price indices (Oct-Sep) for oilseeds and oils/fats increased from 156 and 144 in 2008-09 to 162 and 173 in 2009-10 showing 3.8 per cent and 20.1 per cent increase. Although the overall supply and demand situation eased in 2009-10, the international prices did not relax for a number of reasons such as shortfall in world production of oils/fats compared to global demand, weakness of US Dollar and relative strength of mineral oil prices. FAO's supply and demand forecast for 2010-11 (October-September) suggests possible firmness in the global prices of oils/fats as world consumption is anticipated to increase by 4.7 per cent. However, due to further expansion in utilization of oils and oil products, the reduction in stocks may build a pressure on prices to increase during 2010-11. The global demand growth is mainly accounted for by increase of food uses in China, India and the other emerging economies in Asia and by non-food uses primarily for bio-diesel production.

2.104 The world supply and demand position in respect of oilseeds and products is shown in the Table- 2.29.

Table- 2.29: World Oilseeds and Products Market

(Million tonnes)

Product	2008-09	2009-10 estimate	2010-11 forecast
Total Oilseeds Production	409.5	454.8	453.7
Oils and Fats Production	161.5	172.0	174.6
Supply	184.8	194.2	198.8
Utilisation	163.6	169.9	178.0
Trade	86.2	88.9	90.8
Stock-to-utilization ratio (%)	13.6	14.2	13.2
FAO Price Indices (Oct-Sep)	2008-09	2009-10	% Change
Oilseeds	156	162	3.8
Oils/fats	144	173	20.1

Source: FAO, Food Outlook, November 2010.

2.105 The Commission recommends MSP for five oilseeds crops viz., Soyabean, Groundnut, Sunflower seed, Sesamum seed and Niger seed during the kharif season. The status of these crops in respect of area, production, yield, prices etc. is indicated below:

Soyabean

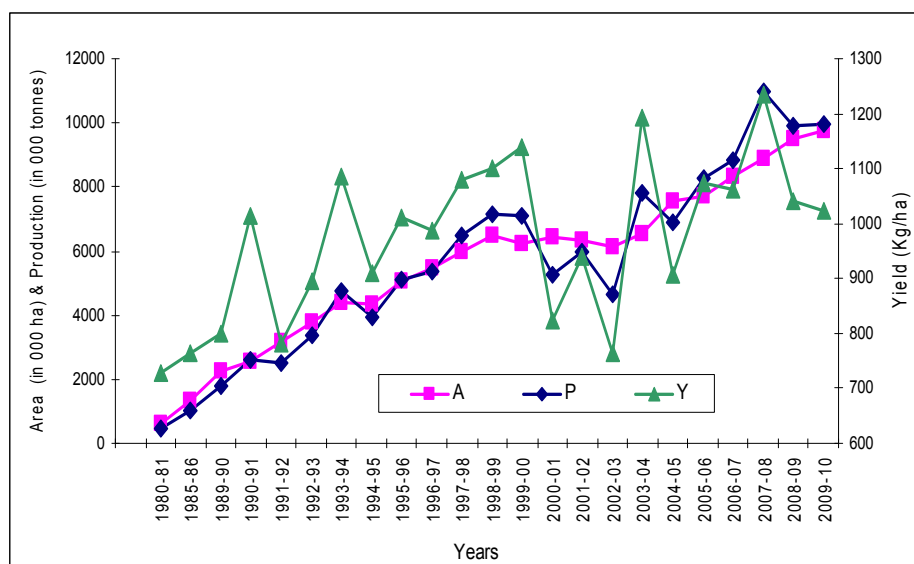
*Massive
growth in
area and
production*

2.106 Soyabean is the single largest oilseed crop cultivated in India. In terms of area and production under oilseeds (kharif + rabi together), it accounts for about 37 percent and 40 per cent in 2009-10 as against 35 percent in area and 36 percent in production during 2008-09, showing an increase both in area and production. Soyabean is a major oilseed crop of Kharif, which contributes about 63 per cent in total production of kharif oilseeds. The area under the soyabean crop expanded significantly, which jumped from merely 3 lakh ha in 1978-79, and 15.4 lakh ha in 1987-88 to 97.35 lakh ha in 2009-10, an increase of more than 30 times. The growth rates of area and production during 1989-90 to 1999-2000 were at 11.08 per cent and 14.32 per cent respectively which however reduced to 5.23 per cent and 6.96 per cent respectively in 1999-2000 to 2009-10. Such a massive increase in soyabean cultivation and its production is a result of well coordinated and collaborative efforts of a number committed

individuals, Governments and national, international and private sector organizations for the development of varieties resistant to yellow mosaic, marketing and research in order to tackle the protein shortage of the country. The fallow and marginal lands mostly available in Madhya Pradesh went for cultivation of soyabean. The exploration of the soyabean crop has also been contributed by its increasing potentiality of soyameal exports. The yield rates grew at much lower rate of 2.92 per cent and 1.64 per cent during the same period. The low growth in yield may be due to the predominance of the crop under rainfed conditions (98.3 per cent) and heavy dependence on weather conditions besides lack of drought resistance hybrid seeds. Area, production and yield of soyabean are given in the Chart -21.

(Tables 2.1 & 2.2)

Chart-21: Area, Production and Yield of Soyabean



Declining prices due to excess import

2.107 Considering the growing importance of the crop domestically and globally as a protein food (49-50 percent protein) for nutritional health and in feed, energy and bio-fuel sectors and oil extraction- 18-20 percent, steps should be taken to enhance the yield levels through inclusion of more area under protective irrigation and scientific farm practices including improved seeds. The higher productivity of

soyabean in Argentina, Brazil and USA attributed to their adoption of GM varieties may be considered for improving the yield of the crop, if found suitable in Indian conditions. The production at 99.65 lakh tonnes in 2009-10 has marginally increased by 0.60 lakh tonnes over the previous year's production of 99.05 lakh tonnes but further estimated to increase by about 5 percent at 104.68 lakh tonnes in 2010-11 (Second Advance Estimates) from the previous year, though still below from the highest level of 109.68 lakh tonnes achieved in 2007-08. The wholesale price index of the soyabean has been continuously showing upward trend from 2007-08 to 2009-10. The average WPI from 100.7 in 2007-08 rose up to 129.8 in 2008-09 and 141.2 in 2009-10 showing an average increase of 28.9 percent and 8.8 per cent respectively. However, the average WPI in 2010-11 (up to February, 2011) declined to 127.1 showing a decrease of 10.0 per cent. World production of soyabean is expected to fall marginally in 2010-11 to 257.6 million tonnes from the 2009-10 estimated level of 260.5 million tonnes. Internationally, the prices of soyabean and soya oil which were higher up to July 2008 started declining since August 2008 due to world economic slowdown and reached down at 2007 levels in March 2009 but the prices again picked up from April 2009 due to some sort of surge in demand from the importing countries like India.

(Tables 2.1 & 2.16)

*Exports of
soya meal*

2.108 Soyabean produced in India contain more protein (49-50 percent) compared to China, American countries (44-48 percent) and its extracted cake i.e. soyameal has been well accepted in world markets. Soyameal is mainly being exported to Japan, South East Asia (Vietnam, Thailand, Indonesia, Philippines, Malaysia, Singapore, Myanmar, Cambodia), Taiwan, China, South Korea and Middle East countries. The exports of soyameal are given in the Table-2.30.

Table- 2.30: Exports of Soya meal

Financial Year	Quantity (Million Tonnes)	FOB Value (Rs. Million)	Unit Value (Rs /Tonne)
1993-94	2.381	1321	554.81
1994-95	1.637	1000.3	611.06
1995-96	2.558	2988.5	1168.30
1996-97	2.585	3634.2	1405.88
1997-98	2.481	4738.8	1910.04
1998-99	3.081	6564.4	2130.61
1999-00	2.462	11144.2	4526.48
2000-01	2.367	15006.6	6339.92
2001-02	2.802	10277.6	3667.95
2002-03	1.49	18035.3	12104.23
2003-04	2.636	23977	9095.98
2004-05	1.972	24290	12317.44
2005-06	3.495	18037.96	5161.08
2006-07	4.196	16805.73	4005.18
2007-08	3.987	18400	4615.00
2008-09	4.245	24377.4	5742.61
2009-10	2.136	13410	6278.09
2010-11	2.891	30973	10713.59

Source: Soybean Processors Association (SOPA)

*Explore
soyameal
as
suppleme
nt to 'Dal'*

2.109 It may be seen from the Table- 2.31 that prices of Soya meal has been fluctuating frequently due to demand and supply imbalances and the prices received (Rs.12317/tonne) in 2004-05 have not been fetched so far. As per reports, Soya meal exports increased about 94 percent to 25.87 lakh tonnes (Oct-Feb) in 2010-11 as against 13.34 lakh tonnes in the corresponding period of last year. Considering the high content of protein in soyameal, there is a need to develop soya meal in the form of 'Dal' and to distribute it through PDS and other welfare and nutritional schemes such as 'mid day meal' etc. in order to provide better nutrition to our people.

Groundnut

*Declining
area and
production
shift to
competing
crops i.e.
cotton,
maize &
tobacco*

2.110 Groundnut which has traditionally been a leading oilseed crop, accounting for about 39 per cent of the area under total oilseeds and about 54 per cent of the total oilseeds production in 1988-89, have been continuously losing its ground reaching the low at 21 per cent of the area and 22 per cent of the oilseeds production in 2009-10

primarily because of continuous decline in area by competing mainly with cotton, maize and tobacco in A.P. and Karnataka besides low income realization to the farmers. It needs special attention to augment the production and productivity of the crop. The production level at 96.59 lakh tonnes, way back in 1988-89 had never been attained. The production of groundnut in 2009-10 declined sharply by about 24.3 per cent at 54.29 lakh tonnes from 71.68 lakh tonnes in 2008-09. In the 2010-11, as per Second Advance Estimates, the production of groundnut is estimated to increase by about 25 percent to 68.11 lakh tonnes over the previous drought year but still lower by about 5 percent from the production of 2008-09. (Table 2.1)

*Increase
in yield
offset area
decrease*

2.111 The growth rate of area under the crop has been negative both in kharif as well as total for kharif and rabi crops during the current decade (1999-2000 to 2009-10) and also in the previous decade (1989-90 to 1999-2000). However, the intensity of decline was less at (-) 1.22 per cent per annum in the current decade than the performance in the previous decade at (-) 2.25 per cent per annum which is depicted in the Chart-22. A positive factor is the gradual increase in yield because of which the reduction in area has been compensated by yield growth and achieved positive growth in production in the current decade. The growth in yield and production during the present decade (1999-2000 to 2009-10) was at 2.83 per cent and 1.58 per cent per annum as against 1.06 per cent and (-) 1.22 per cent achieved in the previous decade (1989-90 to 1999-2000) respectively shown in Chart-23. This shows that the increase in production has been mainly due to increase in productivity. Gujarat, Andhra Pradesh and Karnataka are the three major states contributing to about 72 per cent of area and about 60 per cent of production of Groundnut (2009-10). During 2009-10, among the major groundnut growing States, Tamil Nadu ranked first in the yield (2113 kg/ha), followed by Maharashtra (1160 kg/ha) and Rajasthan (1087 kg/ha) with the All India average yield of 1007 kg/ha. On the other hand, the yield

of groundnut was lower than the All India average yield in Andhra Pradesh (816 kg/ha) Gujarat (950 kg/ha) and Karnataka (666 kg/ha).

Chart- 22: Trend of Growth in Area under Groundnut

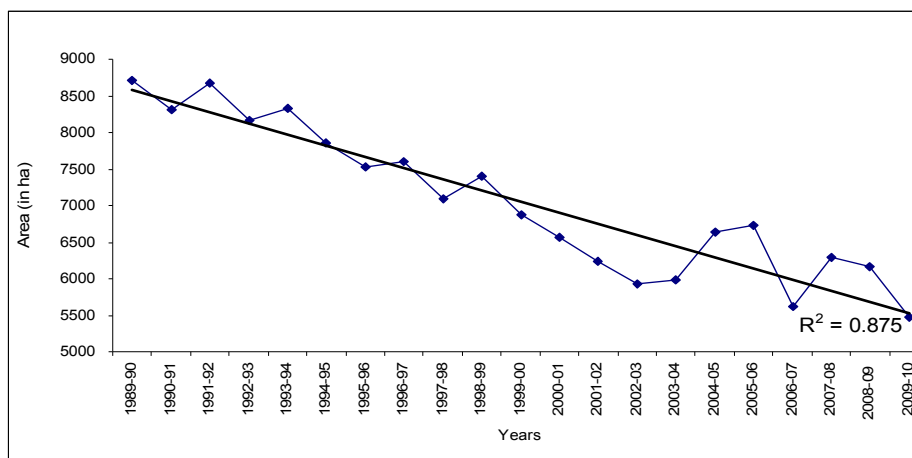
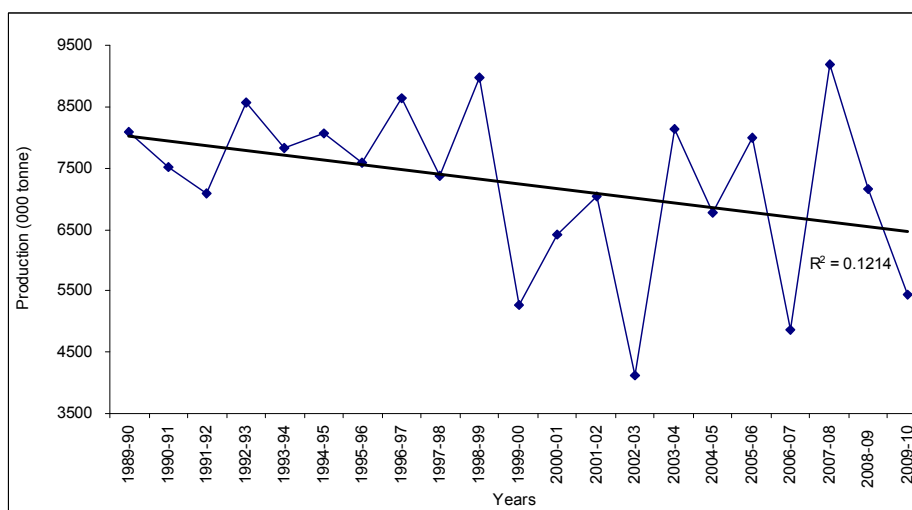


Chart- 23: Trend of Growth in Production under Groundnut



Prices of groundnut increased by 11.2 percent and 13.9 percent in its oil during 2010-11

2.112 The average Wholesale Price Index (WPI) showed an increasing trend since 2005-06 and increased to 144.3 in 2008-09. In 2009-10 it reached to 148.0 registering an increase of 2.56 per cent over 2008-09. Similarly, the average price index during 2010-11 (up to February 2011) was 164.5 registering an increase of 11.2 percent over the previous year. However, the WPI for groundnut oil which increased 22.1 percent in 2007-08 continuously declined by 1.8 percent and

2.6 percent during 2008-09 and 2009-10 respectively. In 2010-11 (upto February, 2011) it increased by 13.9 percent marginally up with increase of WPI of groundnut. (Tables 2.1, 2.2 & 2.16)

Niger seed

*Significance
of niger
seed
declining
due to very
low yields*

2.113 Niger seed is widely used as a nutritious bird feed though it is an oilseed crop with high oil (52-56 percent) and protein content. India is considered to be the main Niger seed producing country in the world with an area of 3.75 lakh hectares and production of 1 lakh tonnes in 2009-10. The crop is mainly grown in the states of Madhya Pradesh including Chhattisgarh, Maharashtra, Bihar and Tamil Nadu. The area under the crop declined gradually over the last two decades from the highest level of 6.40 lakh hectares in 1991-92 to 3.75 lakh hectares in 2009-10. Similarly, the productivity has also registered a declining trend primarily due to low yield in rainfed areas besides being non-competitive with other crops. The area, production and yield have been consistently decreasing over the years. According to 2009-10 estimates, area, production and yield were at 3.75 lakh hectares, 1.00 lakh tonnes and 267 kg/ha respectively. As per the Second Advance Estimates for 2010-11, the production of the crop has been estimated to be 1.06 lakh tonnes, 0.06 lakh tonnes higher to the previous year but short by 0.59 lakh tonnes from the targeted production for 2010-11. Since 1999-2000, the production shows significant year-to-year fluctuations ranging between 1.0 lakh tonnes and 1.5 lakh tonnes barring 2002-03 (0.86 lakh tonnes). The prices of the crop during 2009-10 and 2010-11 (up to February, 2011), has declined by 25.9 percent and 15.1 percent respectively as against the average increase of 80.6 percent and 23.7 percent in WPI during 2007-08 and 2008-09 respectively. Though Niger seed share in the total production of oilseeds is not significant but considering its export potential and also impact on tribal lives, its production needs to be emphasized. The volume of niger seed exported during 2000-01 to 2009-10 is given in the Table- 2.31. (Tables 2.1, 2.2 & 2.16)

Table- 2.31: Export of Niger seed

Year	Quantity (000'tonnes)	Value (Rs. Crore)	Unit value (Rs./kg.)
2000-01	29.49	80.35	27.25
2001-02	22.22	47.85	21.53
2002-03	36.13	77.99	21.59
2003-04	17.89	45.41	25.38
2004-05	24.60	61.14	24.85
2005-06	28.42	60.25	21.20
2006-07	30.02	66.89	22.28
2007-08	21.68	90.03	41.52
2008-09	13.72	64.23	46.81
2009-10 (P)	6.00	24.23	40.38

Source: DGCI&S, Kolkata, Department of Commerce P: Preliminary

Sesamum

*Status of
sesamum
in terms of
area,
production
and yield*

2.114 Sesamum seed also known as sesame, til and gingelly is a rich source of oil containing about average 50 percent oil which accounts for about 7.5 per cent of the area and 2.4 per cent of the total production of oilseeds in the country in 2009-10 and further estimated to increase in 2010-11 to 7.6 percent and 3.0 percent respectively. India ranks first both in production and area under the crop in the world. The major growing states of the crop are Rajasthan, Uttar Pradesh, Gujarat, West Bengal, M.P., Andhra Pradesh, Karnataka, Maharashtra, and Orissa. The area under the crop during the last two decades had shown year-to-year fluctuations. Its coverage declined from 23.29 lakh ha (TE 1989-90), to 16.10 lakh ha (TE 1999-2000) and increased to 19.00 lakh ha (TE 2009-10). The growth in area during the current decade (1999-2000 to 2009-10) increased by 2.01 percent per annum as compared to negative growth of 4.98 per cent per annum in the previous decade (1989-90 to 1999-2000). Similarly, production has also increased in the current decade though with year-to-year

fluctuations. The peak level at 0.78 million tonnes achieved in 2003-04 was never attained thereafter; however, the production reached to the level of 0.76 million tonnes in 2007-08. Subsequently, it declined to 0.64 million tonnes in 2008-09 and further dipped to 0.59 million tonnes in 2009-10. However, the production is estimated to increase sharply by about 41.5 per cent reaching at the highest level of 0.83 million tonnes from the previous year's low level and may exceed the target of 0.75 million tonnes fixed during 2010-11 (Second Advance Estimates). Though yield of the crop is at low level of 406 kg/ha in 2010-11, it showed wide variations among different states, from 847 kg/ha in West Bengal to 158 kg/ha in Uttar Pradesh.

(Tables 2.1 & 2.2)

*Export
potentiality
of sesamum*

2.115 The production of sesamum seed has more significance due to its export potential. The crop has been in demand by the importers, which had increased from 1.83 lakh tonnes in 2000-01 to 3.17 lakh tonnes in 2007-08 though exports decreased to 1.97 lakh tonnes in 2008-09 due to decline in production and estimated to increase to 2.16 lakh tonnes in 2009-10. The unit value of exports has shown a steady increasing trend, which had increased to about 245 per cent in 2009-10 over 2000-01 prices. The position of exports is given in the Table 2.32.

Table 2.32: Export of Sesamum seed

Year	Quantity (000'Tonnes)	Value (Rs. Crore)	Unit Value (Rs./ kg.)
2000-01	183.31	517.57	28.24
2001-02	218.97	562.23	25.68
2002-03	118.38	373.01	31.51
2003-04	189.11	708.89	37.48
2004-05	156.66	662.45	42.28
2005-06	199.81	746.60	37.37
2006-07	233.34	939.58	40.27
2007-08	317.02	1642.29	51.80
2008-09	196.98	1494.26	75.86
2009-10 (P)	215.98	1495.38	69.24

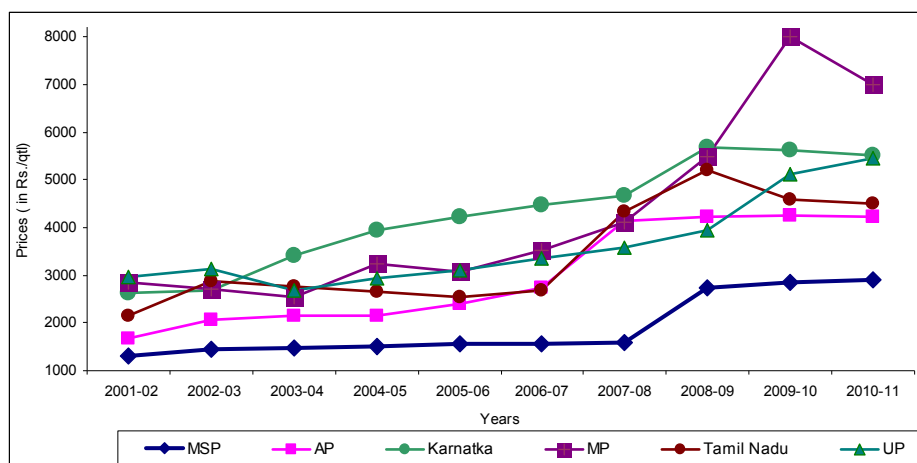
Source: DGCI&S, Kolkata, Department of Commerce

*Prices
moderately
increased
in current
year*

2.116 The average WPI for sesamum seed, which registered a sharp increase of 18.1 percent in 2006-07, increased by 9.4 percent in 2007-

08. Thereafter steep hike of 23.2 percent and 40.6 per cent was recorded in 2008-09 and 2009-10 respectively. However, for 2010-11 (upto February, 2011) it has increased by 6.30 per cent with average WPI at 248.2. The average wholesale prices of sesamum in Uttar Pradesh, M.P., Andhra Pradesh, Tamil Nadu and Karnataka against the level of MSP's is given in the Chart -24. (Table 2.6)

Chart-24: Average Prices of Sesamum in States and MSP



Sunflower

*Unirrigated
sunflower
yield
declining*

2.117 The area coverage and productivity of sunflower have been showing an increasing trend though with year-to-year fluctuations since long but more significantly during the period of Technology Mission on Oilseeds (TMO). The area, production and yield increased to 26.68 lakh ha, 13.48 lakh tonnes and 505 kg/ha in 1993-94 from 7.52 lakh ha, 2.81 lakh tonnes and 374 kg/ha in 1985-86 respectively, with area being the highest under the crop till date. As per 2009-10 estimates, it ranks fifth in terms of area and production after groundnut, rapeseed-mustard, soyabean and castorseed. Karnataka, Andhra Pradesh and Maharashtra are three major states producing sunflower. It is also grown in some other states like Bihar, Punjab, Tamil Nadu, Orissa, U.P., and Haryana. Though Karnataka occupies 54 per cent of the area under the crop, it contributes only about 36 per cent in the production due to lower yield at 383 kg/ha during 2009-10. It has been further

observed that states with less acreage mostly under rabi crop have fared well in productivity such as Punjab (1787 kg/ha), Haryana (1667 kg/ha), Tamil Nadu (1329 kg/ha), Bihar (1403 kg/ha) and West Bengal (1211 kg/ha) as compared to Andhra Pradesh (771 kg/ha) and Maharashtra (521 kg/ha). Since 2001-02, the area coverage under the crop had shown steady increase from 11.77 lakh hectares to 23.40 lakh hectares in 2005-06 and continuous decline thereafter reaching at 14.86 lakh hectares in 2009-10 which is further estimated to decline sharply at 9.05 lakh hectares (39 percent) in 2010-11. Production also showed consistent increase during the period from 2001-02 to 2005-06, from 6.8 lakh tonnes to 14.39 lakh tonnes. However, similar to area, production also declined thereafter reaching to 8.51 lakh tonnes in 2009-10 except that it increased to 14.63 lakh tonnes in 2007-08 due to favourable weather conditions and further estimated to decline by 18 percent in 2010-11. (Table 2.1)

*Trend
growth in
area and
production
increased
in current
decade*

2.118 The growth rates in area and production were much higher during the current decade (1999-2000 to 2009-10) at 4.59 percent and 6.35 percent per annum as compared to earlier decade (1989-90 to 1999-2000) at (-) 0.12 per cent and (-) 0.06 per cent per annum respectively. Similarly, the growth rate of yield at 1.68 percent per annum was significantly higher during current decade than the negligible growth of 0.05 percent of the earlier decade. The yield rates also fluctuated significantly from year to year depending upon the prevailing weather conditions. However, rabi sunflower yield rates were much higher than the kharif crop because of cultivation under irrigated conditions, The crop is being grown in some parts of Haryana, Punjab, Uttar Pradesh and West Bengal in Rabi season, the yield of which are at 1667 kg/ha, 1800 kg/ha, 1714 kg/ha and 1227 kg/ha respectively accounting more than double as compared to All India composite yield of 770 kg/ha estimated for 2010-11. Considering the higher potential of sunflower in the rabi season and its growth potential in general as compared with other oilseed crops, special thrust should be given to increase its rabi acreage making it remunerative to the farmers through

adoption of proper marketing and processing arrangements.

(Tables 2.1 & 2.2)

2.119 The Average WPI for sunflower at 132.0 increased significantly by 30 per cent in 2007-08, which decreased thereafter marginally by 0.9 per cent in 2008-09, by 4.7 per cent at 124.7 in 2009-10 and increased by 10.7 percent at 138.0 in 2010-11 (up to February, 2011).

(Table 2.16)

Cotton

2.120 Cotton is a major commercial crop in India, providing the main raw material for the domestic textile industry, which contributes about 14 percent of the industrial production, 4 percent of the GDP and provides direct employment to about 33 million people. In the international cotton market, India plays a major role as the second largest producer and exporter of cotton. The crop also has the distinction of pioneering adoption of genetically modified varieties of seeds viz. Bt cotton which have so far given positive results in terms of production and yield.

Area under cotton is increasing consistently over the years

2.121 In India, cotton is produced in the states of Punjab, Haryana and Rajasthan in the northern zone; Gujarat, Maharashtra and Madhya Pradesh in the central zone and Andhra Pradesh, Tamil Nadu and Karnataka in the southern zone. The Cotton Advisory Board (CAB) has estimated the area under cotton during 2010-11 (October 2010-September 2011) at 110.00 lakh hectares as against the area of 103.29 lakh hectares covered in 2009-10, registering an increase of 6.50 per cent. The year 2009-10 also witnessed major increase in the area by about 9.61 percent over the previous year's area coverage. Remunerative returns, lower cost of production of Bt cotton and timely availability of adequate quality seeds are some of the reasons reported for the consistent increase being witnessed in the area coverage under cotton. The central zone contributes the highest towards the area, accounting for about 66 percent of the total area coverage. Among the central zone states, the area expansion in Maharashtra needs a

special mention, considering the cultivation of the crop predominantly under rainfed conditions. Area coverage in Punjab and Haryana has been almost stagnant. This is in spite of the fact that all the states comprising the North zone have more than 95 per cent of the cotton area under irrigation. In the south zone, comprising of Andhra Pradesh, Tamil Nadu and Karnataka, the area coverage has shown consistent increase in the recent years. The status is explained in the Table- 2.33.

Table- 2.33: State -wise Area under Cotton

(in Lakh ha)

State	2008-09	2009-10	2010-11	% area irrigated (2007-08) @
Punjab	5.27	5.11	5.30	99.9
Haryana	4.56	5.07	4.33	99.7
Rajasthan	3.02	4.44	2.90	95.8
Total North zone	12.85	14.62	12.53	
Gujarat	23.54	26.25	26.33	49.0
Maharashtra	31.42	35.03	39.73	02.7
Madhya Pradesh	6.25	6.11	6.51	43.2
Total Central zone	61.21	67.39	72.57	
Andhra Pradesh	13.99	14.75	17.40	19.1
Karnataka	4.08	4.55	5.25	14.0
Tamil Nadu	1.09	1.04	1.30	35.7
Total South zone	19.16	20.34	23.95	
Others	0.84	0.75	1.50	
All India*	94.06	103.10	110.55	

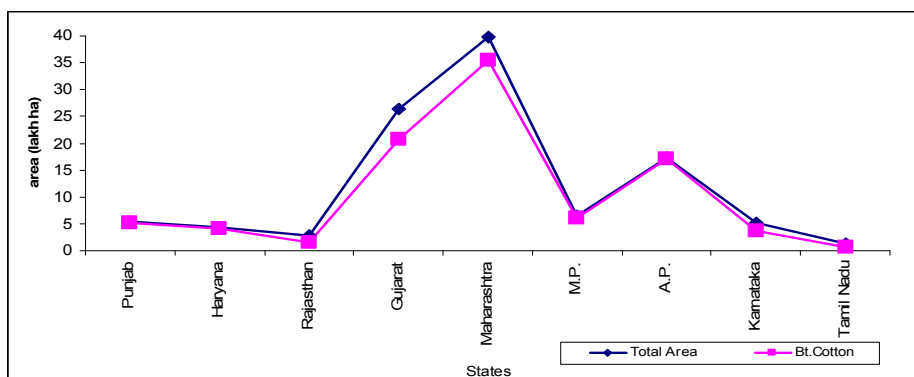
* including "others";

@ Source: Agriculture at a Glance, 2010.

*Farm Bt.
Technology
revolution
in
production
of Cotton.*

2.122 One single most technological development in cotton cultivation in the recent years is the introduction of Bt cotton. Coverage under Bt cotton has consistently increased and estimated to reach a level of 94.55 lakh hectares in 2010-11, which constitutes about 86 per cent of the total coverage. The status as on 2010-11 is shown in Chart- 25.

Chart-25: State-wise Area under Bt. Cotton



2.123 Farmer's acceptance of the GM variety is evident from the manifold increase in its use, from 29000 hectares in 2002-03 to 94.55 lakh hectares in 2010-11. South zone has the highest acreage under Bt cotton (89 per cent); 87 per cent in North zone and 86 per cent in Central zone. Andhra Pradesh has the largest area under Bt cotton (98 per cent), followed by Haryana (97 per cent), Punjab (96 per cent), MP (92 per cent) and Maharashtra (89 per cent). States which are still lagging behind in the use of Bt cotton are Rajasthan (55 per cent) and Tamil Nadu (48 per cent). The status of the use of Bt cotton is shown in the Table 2.34.

Table 2.34: Area Coverage under Bt Cotton during 2008-09 to 2010-11*

(in lakh ha)

State	Bt area 2008-09	% of the total cotton area	Bt area 2009- 10	% of the total cotton area	Bt area 2010- 11	% of the total cotton area	% area irrigated (2007-08)
Punjab	04.76	90	05.10	99	05.10	96	99.9
Haryana	03.80	83	04.90	97	04.18	97	99.7
Rajasthan	03.21	40	02.80	63	01.60	55	95.8
Gujarat	14.50	62	15.40	59	20.83	79	49.0
Maharashtra	25.72	82	30.50	87	35.43	89	02.7
M.P.	05.14	82	05.68	93	06.00	92	43.2
A.P.	11.43	82	12.50	85	17.01	98	19.1
Karnataka	01.72	42	01.90	42	03.73	71	14.0
Tamilnadu	0.72	66	0.30	29	0.62	48	35.7
Total**	69.00	73	79.08	77	94.55	86	

Source: Directorate of Cotton Development, Mumbai

Office of the Textile Commissioner, Mumbai

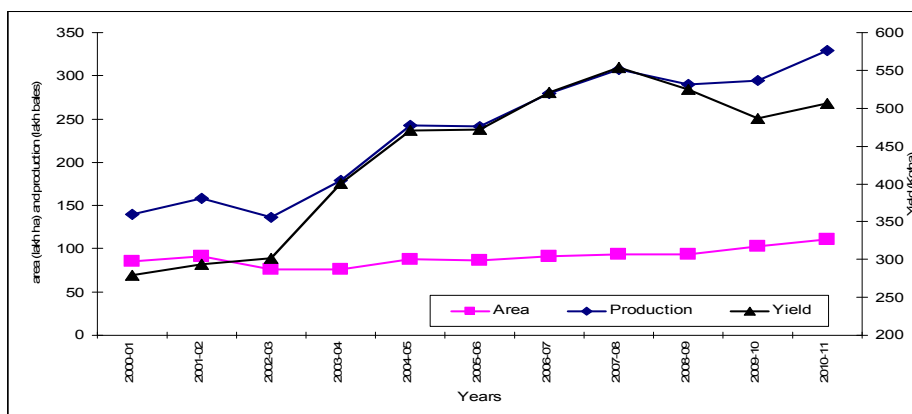
Note: * Bt area coverage as per official estimates **Total includes "others" also.

*Marked
increase
in yield
with
adoption
of Bt.
seeds.*

2.124 The productivity of cotton in India has improved significantly in the recent years. From 278 kg/ha in 2000-01, the productivity has increased to a level of 520 kg/ha in 2006-07 and further to 554 kg/ha in 2007-08. During 2008-09 and 2009-10, the yield levels have reduced to 524 and 486 kg/ha respectively, mainly due to drought conditions that prevailed in the country. The projection for 2010-11 is 506 kg/ha, an increase of about 4 per cent over the previous year. Widespread use of Bt cotton and adoption of improved methods of cultivation assisted by the Technology Mission on Cotton have tremendously helped in

improving the productivity levels. The trend of area, production and yield is shown in the Chart -26.

Chart-26: All India-Area, Production and Yield.



Source: Office of the Textile Commissioner and Dte. of Cotton Development, Mumbai

India's yield still lagging behind the world cotton yield.

2.125 The productivity of Indian cotton is still below the world average of 748 kg/ha and significantly behind that of major producing countries like China (1265 kg/ha) and USA (985 kg/ha) as given in the Table- 2.35.

Table- 2.35: Average Yield of Indian and World Cotton

Year	China	USA	India	World (kg/ha)
1980-81	550	453	169	411
1990-91	807	711	267	574
2000-01	1093	1008	278	612
2006-07	1245	894	520	733
2007-08	1225	976	554	794
2008-09	1265	985	524	763
2009-10	-	-	486	734
2010-11	-	-	506	748

Source: Directorate of Cotton Development, Mumbai

Variation in yield levels among states

2.126 Variations in state yield levels range between 394 kg/ha in Maharashtra to 665 kg/ha in Gujarat (2010-11). The high yield in Gujarat could be attributed to several factors like relatively larger land holdings in the range of 6-10 hectares, nearly half of the area under irrigation and increase in water levels across the state due to large scale rain water harvesting through construction of check dams. As in June, 2007, a total of 126127 check dams and boribunds were constructed in the state. Last but not least the entrepreneurial nature of the people of the state also has

contributed to the development of the sector. Dismally low yield in Maharashtra is despite a large spread of Bt cotton, which is used in about 89 per cent of the cotton area in the state. Cultivation of the crop under rain-fed conditions is cited as one of the major reasons for the low yield in Maharashtra. Coverage of cotton under irrigation during 2007-08 was as low as 2.7 per cent in the state. The huge decline in the yield levels in Tamil Nadu during 2010-11 needs to be looked into especially since it had surpassed the world average of 763 and 734 kg/ha by achieving yield rates of 780 and 817 kg/ha in 2008-09 and 2009-10 respectively. Rajasthan's yield rate, which was at 325 kg/ha in 2005-06 increased in the recent years to reach a level of 586 kg./ha. In case of Rajasthan, the spread of Bt cotton was not very spectacular, with an area coverage under Bt cotton at 55 per cent in 2010-11. However, Rajasthan has been increasing the cotton area under irrigation and as in 2007-08, it stood at 95.8 per cent. Thus, instead of just one factor, say Bt. Cotton, a few factors like spread of Bt cotton, assured water supply, impact of Technology Mission on Cotton etc worked together to bring about overall improvement in yield in different cotton growing areas in the country. The state-wise average yields in 2009-10 and 2010-11 are indicated in the Table- 2.36.

Table 2.36: State-wise Average Yield

State	(Kg/ha)	
	Average yield 2009-10	Average yield 2010-11
Punjab	474	513
Haryana	495	589
Rajasthan	421	586
Gujarat	635	665
Maharashtra	306	394
MP	417	470
AP	599	537
Karnataka	336	421
Tamil Nadu	817	523

Source: Cotton Corporation of India

Record
production
of Cotton
projected
during
2010-11

2.127 As per the estimates of Cotton Advisory Board (CAB), the production of cotton during 2010-11 is projected at 329.00 lakh bales, an increase of 11.53 percent over the production of 2009-10 at 295 lakh bales. The production increase is brought about by 6.00 percent increase in area and 4 percent increase in yield over the respective achievement of 2009-10. In contrast to the unfavourable weather and rainfall pattern experienced during 2009-10, the agro-climatic conditions across the cotton belt during 2010-11 have been satisfactory, which assisted in increasing the cotton production. The production in central zone, which includes the two major cotton producing states of Maharashtra and Gujarat, has shown the highest increase of about 21 percent over the previous year, while the southern zone has shown an increase of 9 percent. North zone has projected a marginal increase in production from 40 lakh bales in 2009-10 to 41 lakh bales in 2010-11, which can be attributed to reduction in area and damage of an area of 12,000 ha in Haryana due to flood. The State-wise production estimates are given in the Table 2.37.

Table 2.37: State-wise Production of Cotton

(in lakh bales of 170 kg)

State	2009-10	2010-11 (P)
Punjab	14.25	16.00
Haryana	14.75	15.00
Rajasthan	11.00	10.00
Northern Zone	40.00	41.00
Gujarat	98.00	103.00
Maharashtra	63.00	92.00
Madhya Pradesh	15.00	18.00
Central Zone	176.00	213.00
Andhra Pradesh	52.00	55.00
Karnataka	09.00	13.00
Tamil Nadu	05.00	04.00
Southern Zone	66.00	72.00
Other States	1.00	03.00
Loose cotton	12.00	-
Total (All India)	295.00	329.00

Source: Cotton Corporation of India, Mumbai
(P) Estimated by CAB as on 6.1.2011

2.128 The Commission has been highlighting the huge variation in the production statistics brought out by the Department of Agriculture and Cooperation and the Cotton Advisory Board, as shown in the Table-2.38.

Table- 2.38: Production Estimates of DES and CAB

(in lakh bales)

*Variation
in
production
estimates
of DES &
CAB-
needs to
reconcile*

Year	Production estimates -DES	Production estimates-CAB
2005-06	185.00	241.00
2006-07	226.96	280.00
2007-08	258.84	307.00
2008-09	222.76	290.00
2009-10	240.22	295.00
2010-11	339.27	329.00

Source: DES and CAB.

2.129 The difference in the estimates is mainly due to difference in the method of calculation of the data. While DES estimates are based on crop cutting experiments, the trade data is based on market arrivals. As long as the two sources use different set of data, the differences are set to continue. Both the organisations should come to an agreement to use one methodology for calculating the production estimates.

2.130 It has been reported that since 2006 the Government of Andhra Pradesh has been restricting the maximum sale price of 450 gms of Bt Cotton seed required for an acre to Rs. 750. Governments of several other states have followed suit asking companies to maintain the level of prices, thus impacting the cotton seed operations across the country. The capping of prices of Bt cotton seeds has led to indirect control on technology fees resulting in significant loss of research investments and industry value erosion. This has adversely impacted innovation and a competitive environment. Seed producers mainly from Gujarat, Andhra Pradesh and Maharashtra which together produce around 70 per cent of cotton in India have demanded a hike in prices from Rs. 750 per packet (450gms) to Rs. 925 per packet. The cost hike has come from higher prices paid to seed farmers, increased labour cost and other input costs. The WPI has increased by 38.7 percent and

the average wage rate has increased by about 90 percent at all India level during the period January, 2006 to January, 2011, whereas the seed prices have remained constant during the same period. The growing and multiplication of hybrid seeds being a labour intensive process increases the costs thereby making the whole process less remunerative to the farmers and industry involved which in turn is causing the shortage of seeds. Bt Cotton seed production stands at 28 million packets apart from carry over stock of 6-7 million packets as against the projected demand of a minimum of 42 million packets in the next kharif season. There is an impending danger of acute shortage of seed in the ensuing year that looms large and threatens to have an adverse effect on the yield of cotton. This can further aggravate the illegal and spurious market for Bt cotton seed which may be cheaper than the legal varieties but of poor quality in terms of germination, percent viability and plant establishment. So Seed Quality Control is more important in enhancing farmers welfare than ineffective and ill advised price control orders. Therefore the Commission is of the view that Government should deregulate the Bt cotton seed market so that the prices are determined by the cost of inputs and demand-supply factors.

Need to reduce gap between MSP of two varieties of Cotton.

2.131 Varietal imbalance in various categories of cotton was brought to the notice of the Commission during discussions with stakeholders. It was indicated that short and medium staple varieties are in short supply and the current gap of Rs.500 in MSP between medium and long category varieties has further disincentivised farmers from cultivating short and medium staple varieties. There was a suggestion, mainly from Cotton Corporation of India and from Textile Commissioner's Office to reduce the gap in MSP between the two categories from the existing Rs.500 to Rs.200-300.

Public Sector Research Institutions not successful in Bt. Cotton

2.132 Public sector research institutions have not been successful in the development and commercialization of Bt cotton varieties. This is in spite of devoting one mini-mission under Technology Mission on

Cotton exclusively for research and development. ICAR may throw light on the low success rate of development of Bt varieties of cotton.

Mechanical devices needed to overcome shortage of labour

2.133 One issue which came up prominently during discussions with stakeholders is the scarcity of labour and increasing cost of labour. The delay in the arrival of cotton in the beginning of the current season was reportedly, to a large extent, due to non-availability of labour for cotton picking. The problem was attributed mainly to availability of alternate employment avenues under MNREGA. Department of Agriculture and Co-operation may hold consultations with Ministry of Rural Development on the possibility of managing the operations under MNREGA in such a way that the peak time requirements of cotton cultivation do not experience any shortage of labour force. Another option is to mechanise some of the operations of cotton cultivation like cotton picking. Suitably developed mechanical devices for cotton picking can be used by the small farms of the country, which can go a long way in solving this problem.

Boost in domestic consumption in 2009-10 and 2010-11

2.134 The general economic recovery witnessed in 2009-10 had its impact on the demand for cotton also. The demand for cotton increased by about 26 percent in 2009-10 compared to 2008-09, to reach a level of 333 lakh bales. Consumption by mills as well as small scale units increased during the year; by 8.9 percent and 15.00 percent respectively compared to the previous year. This occurred in spite of the high cotton prices during the period, surpassing even the high prices that prevailed in 2008-09. Even at the high domestic prices of cotton during 2009-10, the Indian cotton remained competitive and considered cheaper compared to global prices. Consequently exports increased from 35 lakh bales in 2008-09 to 83 lakh bales in 2009-10. For 2010-11 cotton season, the indications are towards further increase in domestic consumption and reduction in exports and the year would end up with a closing stock of 44.50 lakh bales. The cotton balance sheet for 2010-11 is given in the Table 2.39.

Table 2.39: Cotton Balance Sheet

(in lakh bales of 170 kg)

Items	2008-09	2009-10	2010-11(Prov.)
Supply			
Opening Stock	35.50	71.50	40.50
Crop	290.00	295.00	329.00
Imports	10.00	07.00	05.00
Total Supply	335.50	373.50	374.50
Demand			
Mill Consumption	190.00	207.00	230.50
SSI consumption	20.00	23.00	24.50
Non-mill Consumption	19.00	20.00	20.00
Exports	35.00	83.00	55.00
Total Demand	264.00	333.00	330.00
Closing Stock	71.50	40.50	44.50

Source: Cotton Corporation of India, Mumbai. (as on 6.1.2011)

*Domestic
prices
increasing*

2.135 The year 2009-10 witnessed an increase in the domestic price of major varieties of cotton, with the average increase ranging from 26.13 percent in case of H-4 to 32 percent in respect of DCH-32. The economic recovery in many countries together with low global production was responsible for the substantial increase. The crop year 2010-11 also started with high prices; Rs. 36424 per candy for J-34 in October 2010-11 compared to Rs. 21450 during the corresponding period in 2009-10; Rs. 39596 compared to Rs. 21745 for H-4; Rs. 40543 compared to Rs 23205 for S-6 and Rs.47261 compared to Rs 32900 for DCH-32. The uptrend in the world cotton prices is reported to be exerting burgeoning influence on domestic cotton prices and is expected to continue in the coming months also. The movement of prices during 2009-10 cotton season is indicated in the Table- 2.40.

Table- 2.40: Market Prices of Lint during 2009-10 and 2010-11

(in Rs. per candy)

Month	J-34		H-4		S-6		DCH-32	
	2009-10	2010-11	2009-10	2010-11	2009-10	2010-11	2009-10	2010-11
Oct	21450	36424	21745	39596	23205	40543	32900	47261
Nov	23495	-	23768	-	24955	-	37068	-
Dec	24848	-	25713	-	26843	-	42022	-
Jan	25678	-	25570	-	26722	-	40296	-
Feb	24943	-	25448	-	26452	-	39652	-
March	26148	-	26683	-	27957	-	41826	-
April	27005	-	27577	-	28277	-	42068	-
May	27987	-	27678	-	28770	-	42739	-
June	28652	-	28396	-	29422	-	41817	-
July	28758	-	28225	-	29388	-	41083	-
Aug	30667	-	30321	-	31792	-	42167	-
Sept.	34577	-	36050	-	37205	-	44536	-

Source: Cotton Corporation of India; 1 candy= 3.5562 quintals

No
procurement
in 2010-11.

2.136 Government of India fixes MSP for medium and long staple length of cotton of specific staple length and micronnaire value. For the cotton season, 2010-11, the Government has retained the same MSPs as were fixed for cotton season 2009-10, viz. Rs.2500 per quintal for medium staple length cotton having staple length of 24.5 to 25.5 mm with micronnaire value of 4.3 to 5.1 and Rs.3000 per quintal for long staple length cotton having staple length of 29.5 to 30.5 mm with micronnaire value of 3.5 to 4.3. The kapas prices at the beginning of the current cotton season were ruling above MSP level by 6 to 23 percent and as of December 2010, the kapas prices were ruling above MSP level by 37 to 65 percent in all the cotton growing areas. In view of above, there have been no procurement operations required to be conducted so far.

Significant
increase in
international
cotton prices
during
current year.

2.137 The international cotton prices i.e. Cotlook A Index averaged at 77.54 US cents / lbs during the cotton year 2009-10, which was an increase of 26.82 percent over the 2008-09 average global prices. The year 2010-11 started with higher prices, with the Cotlook A index for August 2010 registering a price increase of about 40 percent over the

corresponding period of the last year. The year also witnessed a historic high price of 172.40 cents on November 10, 2010. The average index over the first four months of the current year was 120 cents per pound, almost twice as high as the average of the same period of the previous year. The increase in international prices has been attributed to low global cotton stocks, drop in production in Pakistan and China due to unfavourable weather conditions, continued demand and weakening of US dollar. The month-wise Cotlook A Index for 2009-10 and 2010-11 (upto 9.12.2010) are indicated in the Table- 2.41.

Table- 2.41: Cotlook A Index of Cotton (in US cents per lb)

Month	Cotlook A index 2009-10	Cotlook A index 2010-11
August	64.25	90.35
September	64.05	104.73
October	66.80	126.55
November	71.80	155.47
December	76.00	168.22
January	77.40	178.93
February	80.05	213.18
March	85.80	
April	88.08	
May	90.07	
June	93.04	
July	N/A	
Year Average	77.54	

Source: Office of the Textile Commissioner, Mumbai.

2.138 Global cotton production during 2010-11 is projected to increase by about 15 percent over the previous year's output to reach a level of 24.91 million tonnes. The increase in production is accounted for by countries like USA, India, Australia, Brazil and Argentina. Countries like China and Pakistan have reported decline in production due to unfavourable weather conditions. World cotton mill use is expected to remain almost at the same level at 24.70 million tonnes compared to 24.61 million tonnes in 2009-10, mainly due to high prevailing prices. China, which constitutes about 40 percent of the world consumption, is expected to reduce consumption during the current year due to difficulties in sourcing cotton. The global ending stocks are projected to

increase to 9.06 million tonnes from the level of 8.9 million tonnes of 2009-10. The global cotton balance-sheet is shown in the Table- 2.42.

Table- 2.42: World Demand & Supply of Cotton

(Quantity in million tonnes)

Cotton season (Aug- July)	2009-10	2010-11	2011-12
Beginning stocks	11.95	8.87	9.25
World Cotton Production	21.78	24.91	27.30
World Cotton Consumption	24.61	24.70	25.31
World Cotton Exports	7.77	8.36	8.41
World Ending Stocks	8.91	9.06	11.23

(As per ICAC release dated March 1, 2011)

VFC (Virginia Flue Cured) Tobacco

India is third largest producer of VFC Tobacco globally.

2.139 Tobacco is cultivated in about 4.00 lakh hectares in the country, of which VFC tobacco accounts for about 2.57 lakh hectares (2009-10). The cultivation is spread over the states of Andhra Pradesh, Karnataka, Tamil Nadu, Maharashtra, Orissa, Bihar, Uttar Pradesh, West Bengal and Gujarat. Despite efforts to drastically reduce the demand and supply of tobacco, in view of its serious adverse health repercussions, it continues to be an important commercial crop from the point of view of employment and revenue generation. The sector provided about 36 million employment, both direct and indirect, contributed about Rs. 13,300 crore as excise duty and Rs. 3388 crore as foreign exchange (in 2008-09). Globally, India occupies the second position in the production of all varieties of tobacco and third largest producer of VFC tobacco, after China and Brazil. The trends in area, production and yield of VFC tobacco are indicated in the Table 2.43.

Table 2.43: Area, Production and Yield of VFC Tobacco

Year	Area in ha.	Marketed Produce (million kg)	Average Yield (kg/ha)	Unauthorised Production (million kg)
2005-06	191222	228.27	1194	29.01
2006-07	205050	269.00	1312	36.61
2007-08	212455	253.00	1191	22.59
2008-09	231185	318.00	1376	62.47
2009-10	256834	323.25	1259	-
2010-11	222902	300.00*	-	-

Source: Tobacco Board, * Estimated

Efforts to reduce the area under tobacco.

2.140 As per the estimates of Tobacco Board, area under VFC tobacco during 2010-11 is projected at 2.23 lakh ha, a decline of 13 per cent over the 2009-10 area of 2.57 lakh ha, thus reversing the trend of increasing area coverage witnessed during the last five years or so. The area reduction is the result of serious attempts taken by the Board to put a cap on the cropped area.

Consumption of tobacco shows an upward trend.

2.141 Overall tobacco consumption in the country is estimated to be going upward, with the tobacco market in the country projected to grow over 2 per cent by 2013, on the assumption of status-quo on taxation rates. India's demography in view of its predominant young population, rising incomes, low aversion to smoking, and low per capita cigarette consumption (0.3 cigarette per day- 118th position in the world) compared to global average are some of the reasons given for prospects of growth of tobacco consumption in the coming years. The supply and demand position of VFC tobacco are shown in the Table-2.44.

Table- 2.44: VFC Tobacco – Balance Sheet

(Qty: million kg)

Year	Opening stock	Production	Wastage and farm retention	Domestic consumption	Net exports	Carry-over stocks
2005-06	84.60	228.27	45.65	75.00	109.57	82.65
2006-07	82.65	269.00	53.80	82.00	120.30	95.55
2007-08	95.55	253.00	50.60	83.00	137.78	77.12
2008-09	77.12	318.00	63.60	82.00	151.04	98.48
2009-10	98.48	323.25	64.65	80.00	174.27	102.81
2010-11(E)	102.81	300.00	60.00	75.00	165.00	102.81

Source: Tobacco Board; E- estimated

High
domestic
prices

2.142 Supply has been higher than the demand in the last few years, with the carry-over stocks ranging between 82.65 million kg. to 102.81 kg. During 2010-11, domestic consumption and exports are expected to be at slightly low levels compared to 2009-10. The year is expected to close with a surplus stock of 102.81 million kg. similar to that of last year. Even a situation of higher supply could not dampen the prices of tobacco. Prices have been increasing, domestically, as is indicated in the Table- 2.45.

Table- 2.45: Average Prices of Tobacco

Year	Andhra Pradesh			Karnataka	
	Average price for total crop (Rs/kg)	Average Price (Rs/Kg)		Average Price for total crop (Rs/Kg)	Average Price for (L2L grade)
		F2 Grade	L2L Grade		
2004-05	36.16	40.08	47.55	47.42	55.63
2005-06	46.33	45.44	61.42	48.06	62.05
2006-07	47.47	48.26	61.37	55.94	65.13
2007-08	84.75	87.22	105.64	59.23	67.40
2008-09	103.39	110.35	155.07	109.71	132.33
2009-10	80.06	104.46	133.83	110.88	138.29

Source: Tobacco Board

Global
demand for
tobacco to
remain
steady in the
years to
come

2.143 Globally, production VFC tobacco in 2010 is expected to reach a level of 4545 million kg, an increase by 5 per cent over the 2009 production. The global demand for VFC tobacco is expected to remain firm in the coming five years. The WHO and the World Bank, after

several studies, came to the conclusion that even assuming the more optimistic scenario of a reduction on smoking prevalence, the current 1.1 billion smokers in the world are predicted to rise to 1.64 billion by 2025, mainly due to increase in population in developing countries. Even if global tobacco control efforts are highly successful, the world is likely to have 1 to 1.2 billion tobacco users by 2030.

2.144 Tobacco Board, during discussions with the Commission, indicated differences in the cost of cultivation data provided by the Directorate of Economics and Statistics, Ministry of Agriculture and the data collected by the Board. Also Directorate of Tobacco Development data, which is being used by the DES, covers only Andhra Pradesh, while Karnataka is also a major tobacco growing state. This issue was raised in the earlier meetings also and Commission in the earlier reports had highlighted the need to reconcile the data differences and extension of the coverage of the DES data to Karnataka also. Commission is of the view that the above outstanding issue needs to be sorted out on an urgent basis.

III. MOVEMENT OF INPUT PRICES, COST OF PRODUCTION, TERMS OF TRADE AND INTER CROP PRICE PARITY

Cost of human labour in agricultural wage rate has gone up within a range of 18 to 43 per cent across the states.

3.1 Of all the factors considered for determination of minimum support price, cost of cultivation/production remains a crucial one. In order to arrive at likely cost of production of different kharif crops for 2011-12, the Commission received the latest estimates of cost of cultivation/production available for the year 2008-09 as well as gathered several sets of data on farm inputs. It went about examining the estimates of cost of cultivation/production generated under the Comprehensive Scheme (CS) state-wise for each crop in order to project the cost of production for the kharif season 2011-12. The cost on account of human labour being substantial in the input cost of production, it is essential that an analysis be made of the likely increase in wage rate of agricultural labour. The latest data available from Labour Bureau, Shimla on agricultural wage rate relate to December, 2010. The increase in wage rate in percentage terms during December, 2010 compared to the corresponding month of the previous year falls within a range of 18 to 43 per cent. The highest wage rate increase is reported for Orissa by 42.97 per cent, and lowest wage rate increase, for Himachal Pradesh by 8.21 per cent. Following Orissa with the highest wage rate increase by 42.97 per cent are Punjab (32.01 per cent), Rajasthan (28.19 per cent), Andhra Pradesh (27.79 per cent), Karnataka (27.67 per cent), Kerala (27.25 per cent), Maharashtra (25.51 per cent). In absolute terms the highest wage rate is reported from Kerala at Rs.319.13 per man day and it is worth remarking here that almost all the reporting states have each of its wage rate at least around Rs.100 per man day.

3.2 There has been an upswing in the level of input prices since the submission of last kharif report for 2010-11. During the period January 2010 to February 2011, the prices of major agricultural inputs in terms of their respective wholesale price indices (base year 2004-05=100) have shown upward trend, with fertilizer recording increase by 9.09 per

The majority farm inputs have increased in prices in the order of 9 to 18 per cent

cent, electricity for irrigation purposes by 9.11 per cent, high speed diesel oil (HSDO) by 14.71 per cent, light diesel oil (LDO) by 18.50 per cent, pesticides by 2.81 per cent, tractors by 1.94 per cent, lubricants by 11.29 per cent, fodder by 7.13 per cent, cattle feed by 3.93 per cent. As is evident from the increase in input prices of farm inputs, the majority farm inputs have reported increase in price in the order of 9 to 18 per cent. (Table 3.1)

The farmers in general clamor for higher MSP for their produce in view of increasing cost of inputs

3.3 It is important to refer to the meetings the Commission held with State Government officials, farmers and farmers representatives and other stakeholders on 18.2.2011 to get to their respective concerns over the ensuing price policy formulation for kharif crops for 2011-12. One of the concerns expressed from the side of farmers was that unlike the bonus which has been usually declared late to the fixation of minimum support price (MSP), it should be announced with MSP to really benefit the farmers. The rising phenomenon of contract farming came under criticism by the farmers that in such an arrangement in which farmers' land is leased out over a longer time frame to the multinationals, the farmers are left with no other option than working as daily labourers in their own field. There was demand that Government might contemplate on putting in place a well defined policy framework for setting up agro processing units around production sites, especially for fruits and vegetables, to both substantially minimize the post harvest wastage and loss arising therefrom and ensure adequate returns to the farmers. However, equally vital problems like availability of labour, increase in input cost, supply of quality certified seeds that were raised in the said meeting, have already featured in the earlier reports of the Commission. One of the important issues that cropped up in the meeting was the problem of procurement during the harvest period in the far flung regions of the country, particularly in the states of West Bengal, Maharashtra, Bihar, Eastern UP, etc. There was unanimity among farmers that MSPs of all kharif crops need to be increased to a considerable extent so that they may continue with their occupation.

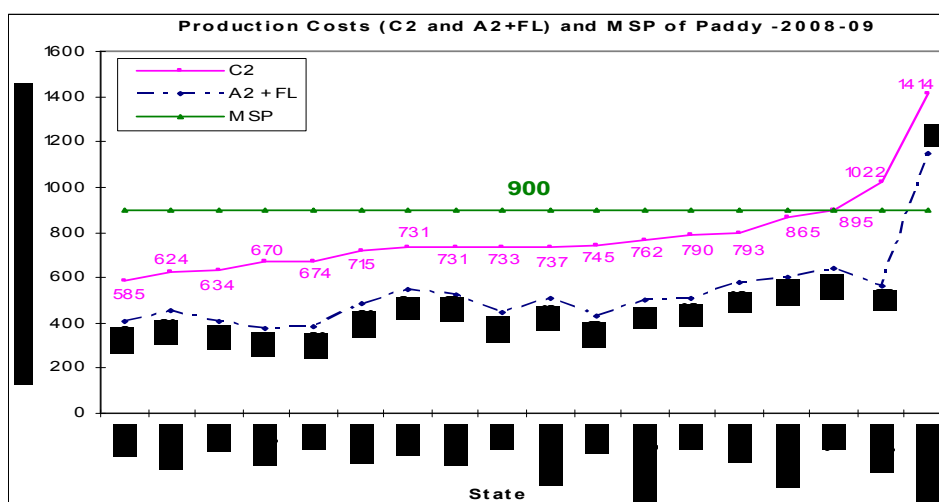
PADDY

Actual cost estimates from DES for 2008-09 have shown upward increase in cost of cultivation for majority of paddy growing states

Punjab and Haryana have recorded decline in yield and increasing cost of production, 2008-09

3.4 The Directorate of Economics & Statistics has provided estimates of cost of cultivation/production of paddy for the year 2008-09 in respect of Andhra Pradesh, Assam, Bihar, Chhattisgarh, Gujarat, Haryana, Himachal Pradesh, Jharkhand, Karnataka, Kerala, Madhya Pradesh, Maharashtra, Orissa, Punjab, Tamil Nadu, Uttar Pradesh, Uttarakhand and West Bengal. The details of the latest available estimates of paddy and those pertaining to the previous year of 2007-08 are presented in Table 3(A). There has been recorded upward movement in per hectare cost of cultivation in all the states excepting Himachal Pradesh where it has gone down by (-) 11.93 per cent during 2008-09 over the preceding year. Himachal Pradesh's is a case where alongwith per hectare cost of cultivation, per quintal cost of production has also shown a decline by (-) 31.26 per cent. This decline in per quintal cost of production is due to increase in yield by 20.30 per cent. Among the states showing relatively higher yield performance, Himachal Pradesh and Madhya Pradesh are distinguished. These two states have reported decrease in per quintal cost of production. Punjab and Haryana with their respective yield levels having decreased by (-) 0.88 per cent and (-)19.51 per cent respectively, have recorded increase in their respective per quintal costs of production by 32.40 per cent and 19.51 per cent. This establishes the fact that agriculturally advanced states of Punjab and Haryana have reached the stagnation in their yield performance despite increase in per hectare cost of cultivation. The minimum support price for paddy at Rs.900 per quintal for 2008-09 did not cover the production cost in C₂ for the states of Haryana and Maharashtra. Chart 1 shows the relation of production costs (C₂ and A₂+FL) of paddy and its MSP for the year 2008-09.

Chart 1



(Tables 3(A), 3.3 & 3.4)

3.5 The Commission has arrived at the likely levels of cost of production of paddy in different states for the ensuing season 2011-12, on the basis of the cost of production/cultivation data available for the year 2008-09. In order to make the projections consistent and as comprehensively accurate as possible, each of the latest 3 years data pertaining to each state is projected and their projected averages are taken. To carry out the projection exercise, state specific composite variable input price index for each crop has been constructed to capture the movement of input prices between the base year and the year of projection (2011-12). Lastly, the all India weighted average cost is computed, with weights being the shares of production of each state in the total production.

(Table 3.5)

3.6 In accordance with the aforesaid methodology, the projected per quintal paid out cost of production of paddy plus imputed cost of family labour (A_2+FL) for 2011-12 works out to an average of Rs.655.46 for Andhra Pradesh, Rs.751.50 for Assam, Rs.573.53 for Bihar, Rs.557.38 for Chhattisgarh, Rs.485.11 for Gujarat, Rs.696.16 for Haryana, Rs.717.95 for Himachal Pradesh, Rs.665.16 for Jharkhand, Rs.598.48 for Karnataka, Rs.982.18 for Kerala, Rs.687.93 for Madhya Pradesh, Rs.1271.91 for Maharashtra, Rs.741.27 for Orissa, Rs.488.34 for

The projected weighted average cost of paddy is Rs. 887.72 per quintal in C₂ and Rs. 627.53 per quintal in A₂+FL

Punjab, Rs.790.52 for Tamil Nadu, Rs.679.70 for Uttar Pradesh, Rs.471.59 for Uttarakhand and Rs.713.15 for West Bengal. As against this, the projected per quintal C₂ cost of production stands at Rs. 896.47 for Andhra Pradesh, Rs. 944.37 for Assam, Rs. 732.37 for Bihar, Rs.777.00 for Chhattisgarh, Rs.629.37 for Gujarat, Rs.1022.57 for Haryana, Rs.968.45 for Himachal Pradesh, Rs.870.01 for Jharkhand, Rs.797.08 for Karnataka, Rs. 1168.74 for Kerala, Rs.937.77 for Madhya Pradesh, Rs.1482.13 for Maharashtra, Rs 940.80 for Orissa, Rs.734.72 for Punjab, Rs.998.01 for Tamil Nadu, Rs.898.88 for Uttar Pradesh, Rs.688.39 for Uttarakhand, Rs.896.27 for West Bengal. The weighted average per quintal cost of production of paddy for all these states works out to Rs.672.53 on A₂+FL basis and Rs.887.72 on C₂ basis.

[Table 3(G)]

Punjab and Bihar approximate each other in cost of production with varying levels of yield, 26.91 quintals per hectare for Bihar and 66.17 quintal per hectare for Punjab

3.7 Of all the paddy growing states, Himachal Pradesh has the estimated yield level at 16.37 quintals per hectare that remains the lowest. In parallel to this, Madhya Pradesh has the estimated yield level of 19.40 quintals per hectare. These two states have more or less the same estimated per quintal cost of production with a difference being higher on the side of Himachal Pradesh by about Rs.30 per quintal due to the prevailing low wage rate in Madhya Pradesh. The state estimated to have the lowest per quintal cost of production is Bihar and the per quintal cost of production is put at Rs.732.37 with estimated yield level of 26.91 quintals per hectare. The closest in approximation to the estimated cost of Bihar is Punjab whose estimated per quintal cost of production is put at Rs.734.72 with relatively higher yield level of 66.17 quintals per hectare. Punjab and Bihar show wide difference in the levels of yield, given their more or less same cost of production, with Punjab estimated to have yield higher than that of Bihar by about 146 per cent. The State estimated to have the highest per quintal cost of production is Maharashtra and it is put at Rs.1482.13 and the state with the lowest per quintal cost of production is Uttarakhand with cost of production at Rs.688.39 per quintal.

[Table 3(G)]

3.8 The Commission also receives cost of cultivation estimates from various state Governments. These are examined in detail in the Commission and compared with the corresponding CS data and also with the projected costs of production of various crops for the ensuing kharif season. Although these estimates are not strictly comparable with the CS estimates because of certain conceptual and methodological differences, the comparison exercise serves the useful purpose of cross-validation of the cost data. In some cases these state estimates pertain to more recent years and information therein is used for the purpose of projections.

3.9 Andhra Pradesh, Maharashtra, Uttar Pradesh, Uttarakhand, Haryana, Gujarat, Madhya Pradesh, Tamil Nadu and West Bengal have furnished cost of production figures in their respective state replies for the year 2008-09 and for the succeeding years. For the sake of comparison between the cost of production figures furnished in the state replies and in the Comprehensive Scheme estimates, a little adjustment wherever necessary has been made to make two sets of figures comparable. Andhra Pradesh has reported the cost of production for paddy at Rs.921.00 per quintal for the year 2008-09 in its reply as against Rs.789.90 in the CS estimates. The difference in the levels of cost of production estimate for the state of Andhra Pradesh in the two data sets is due to comparatively low yield level reported in the state reply and relatively higher yield level reported in the CS estimates. Haryana in its state reply has furnished the cost of production figure at Rs.957.28 per quintal as against Rs.1021.90 per quintal in the CS estimates. So CS estimate for Haryana at Rs.1021.90 per quintal is higher than state reply estimate at Rs.957.28 per quintal despite the fact that state reply furnishes an yield level lower than that given in the CS estimates. Gujarat's is an instance where the cost of production figure given in the state reply is at Rs.750.00 per quintal as against Rs.624.37 per quintal in the CS estimates. The two different cost figures given in the two sets of data are brought close to each other if yield levels as reported in the two

For Paddy, Haryana in its state reply has furnished cost at Rs. 957.28 per quintal as against Rs. 1021.90 per quintal CS estimates

data sets are considered. The state reply of Gujarat furnishes yield of 37.39 quintals per hectare as against 38.15 quintals per hectare in the CS estimates. In regard to the state of Madhya Pradesh due to the state reply furnishing yield level lower at 9.78 quintals per hectare than at 26.64 quintals per hectare in the CS estimates, the state reply furnishes higher cost of production figure of Rs.970 per quintal vis-a-vis Rs.745.22 per quintal in CS estimates. CS estimates for Maharashtra report per quintal cost of production at Rs.1413.59 as against Rs.743 per quintal in state reply. This can be explained as due to higher yield level reported in the state reply at 29.2 quintals per hectare as against 21.74 quintals per hectares in the CS estimates. In the case of Tamil Nadu cost of production as reported in the state reply is at Rs.1019 per quintal, compared to which CS estimates furnish Rs.894.99 per quintal. The higher difference on the side of state reply of Tamil Nadu is due to yield level lower at 26.83 quintals per hectare in the state reply than at Rs.42.00 quintals per hectare in CS estimates. The state reply of Uttar Pradesh has furnished cost of production figure at Rs.894 per quintal higher than Rs.732.62 per quintal in the CS estimates. This is due to comparatively lower yield reported in the state reply at 30.09 quintals per hectare than in the CS estimates at 36.61 quintals per hectare. In regard to West Bengal, CS estimates furnished cost of production figure Rs.731.25 per quintal higher than Rs.667.57 per quintal given in the state reply.

[(Table 3(H))]

*Cost
projection
for Haryana,
for 2011-12
in state reply
is at Rs.
1277 per
quintal
against Rs.
1023 per
quintal in
CACP
projection*

3.10 The projected costs of production of paddy for the year 2011-12 have been received from the states of Andhra Pradesh, Haryana, Punjab, Uttarakhand, Maharashtra and West Bengal. Per quintal cost of production estimate as projected by the state of Andhra Pradesh stands at Rs.1270 which is higher than Rs.896 projected by the Commission. The difference in level of projection for the year 2011-12, done separately by the Government of Andhra Pradesh and the Commission can be explained in terms of difference in yield levels being higher on the side of CS estimates. The Government of Andhra Pradesh has estimated the lower yield level of 48.00 quintals per

hectare compared to 54.07 quintals per hectare in the CS estimates. The cost projections for Haryana are Rs.1277 per quintal in the state reply and Rs.1023 per quintal done by CACP. And this is due to the difference in yield estimated lower in the state reply than in the CS estimates. The state of Punjab has furnished projected per quintal cost of production at Rs.1500 against which the CACP has given the projection at Rs.735. The difference in projected costs of production in the two data sets is largely due to the yield reported lower at 58.95 quintals per hectare in the state reply than at 66.17 quintals per hectare in the Commission's projected estimates. Maharashtra presents a case where the cost projection of Rs.1780 per quintal in the state reply is higher than Rs.1482 per quintal projected by the Commission and the yield projected by the Commission is at 25.64 quintals per hectare as against the projected yield of 28.59 quintals per hectare in the state reply. For West Bental, projections in the state reply and as given in CACP projection on cost of production are Rs.950 per quintal and Rs.876 per quintal. This difference in cost projection is due to higher yield estimated in the Commission's projection. [Table 3 (I)]

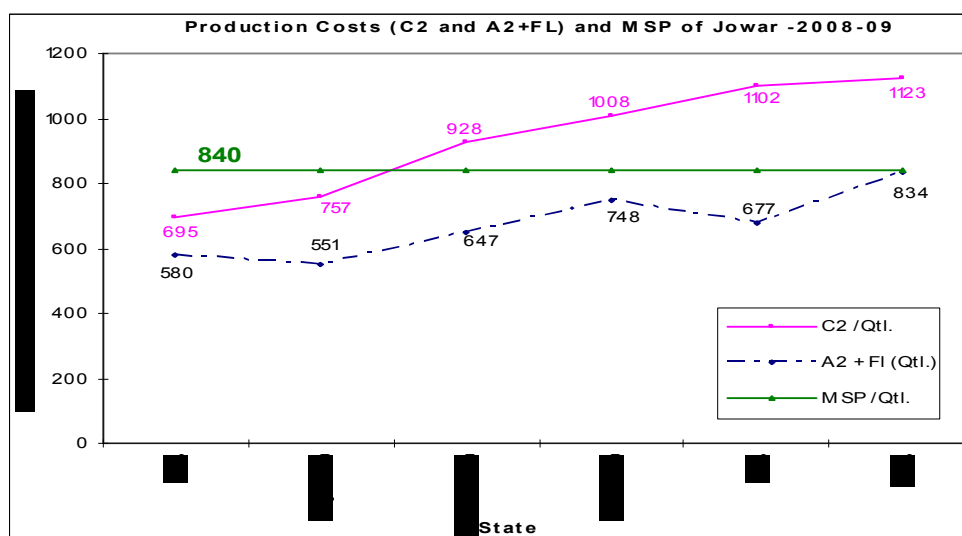
COARSE CEREALS

C2 cost of cultivation per hectare for jowar is estimated to have increased in all states excepting M.P. (decline by (-) 6.16 percent), during 2008-09 compared to 2007-08

3.11 Jowar, bajra, maize and ragi are the major kharif coarse cereal crops for which cost estimates are available under CS. For jowar, CS estimates of cost of cultivation/production are available for 2008-09 in respect of Andhra Pradesh, Karnataka, Madhya Pradesh, Maharashtra, Rajasthan and Tamil Nadu. It may be observed from Table 3(C) that between 2007-08 and 2008-09, the actual C₂ cost of cultivation per hectare for jowar is estimated to have increased in all the above jowar growing states excepting Madhya Pradesh, where it has declined by about (-)6.16 percent. Not only per hectare cost of cultivation has declined for Jowar for Madhya Pradesh, but also there has been a decline in the yield level by (-)40.24 per cent. This has resulted in increase in per quintal cost of production by 66.90 per cent during 2008-09 over 2007-08. Andhra Pradesh, Karnataka, Rajasthan

have shown improvement in yield performance with Andhra Pradesh recording increase in yield by 90.24 per cent, followed by Rajasthan, by 51.63 per cent and Karnataka, by 5.45 per cent. Cost of production of Andhra Pradesh and Rajasthan has declined due to increase in their respective levels of yield. The minimum support price fixed at Rs.840 per quintal for jowar during 2008-09 has only covered the overall cost of production for Rajasthan and Tamil Nadu, the remaining states having their respective costs of production higher than the MSP for 2008-09. Chart 2 shows the relation of production costs (C_2 and A_2+FL) of jowar and its MSP for the year 2008-09.

Chart 2



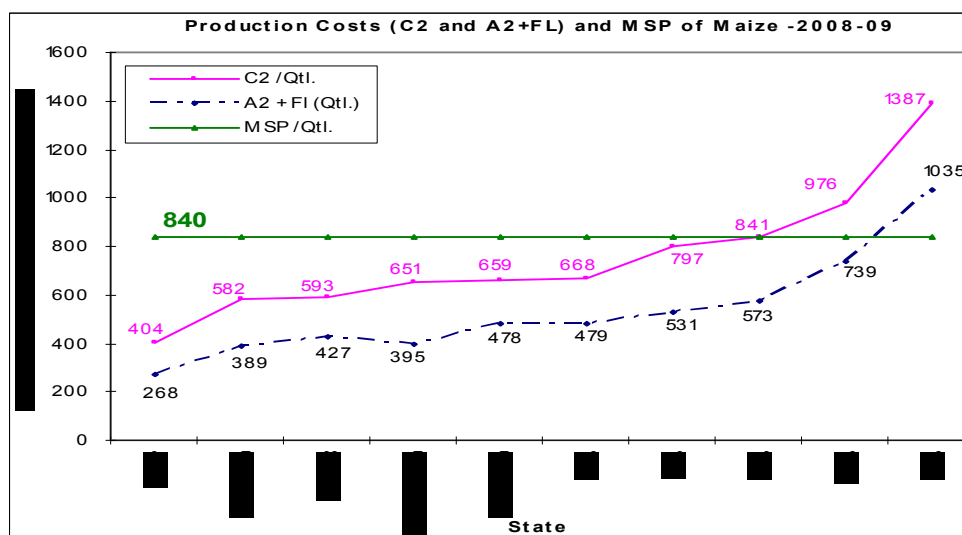
[Table 3 (c)]

3.12 The maize crop has recorded increase in yield during the year 2008-09 for Andhra Pradesh by 2.84 percent, for Bihar by 13.26 percent, Karnataka by 3.84 percent, Rajasthan by 11.82 percent, Tamil Nadu by 23.83 percent. In the state of Andhra Pradesh, the increase in yield has not resulted in decline in C_2 cost due to substantial increase in per hectare cost of cultivation for the year 2008-09 vis-à-vis 2007-08. For the states of Bihar and Rajasthan, increase in their yield levels have resulted in decline in their respective costs of production. The state of Bihar has recorded decrease in cost of production by (-)5.74 per cent and Rajasthan by (-)4.64 per cent. Tamil Nadu and Karnataka

For maize, increase in yield is observed for the year 2008-09, compared to 2007-08 for A.P. (2.8 per cent), Bihar (13.26 per cent), Karnataka (3.84 per cent), Rajasthan (28.3 per cent)

present cases that show that increase in yield in these states has not resulted in decline in their cost of production. Chart 3 shows the relation of production costs (C_2 and A_2+FL) of maize and its MSP for the year 2008-09.

Chart 3



[Table 3 (C)]

For bajra yield increase is observed to be highest for Gujarat during 2008-09 over 2007-08, at 28.76 per cent followed by Haryana at 12.99 per cent

3.13 The cost of production estimates under CS for bajra have been received for the states of Gujarat, Haryana, Karnataka, Maharashtra, Rajasthan and Uttar Pradesh for the year 2008-09. As can be seen from Table 3 (C), the cost of cultivation per hectare has increased in all the states ranging from 13.90 per cent for Uttar Pradesh to 33.62 per cent for Gujarat during 2007-08 to 2008-09. Next to Gujarat is Maharashtra recording an increase in cost of cultivation per hectare by 30.78 per cent, followed by 23.61 per cent for Rajasthan, by 18.43 per cent for Haryana. The yield performance is observed to be highest for Gujarat at 28.76 per cent followed by Haryana at 12.99 per cent. The remaining states have recorded declining yield levels. In regard to Ragi, the cost estimates have been received from the states of Karnataka, Maharashtra and Tamil Nadu, for the year 2008-09, with Tamil Nadu reporting increase in per quintal cost of production by 44.50 per cent and Maharashtra, Karnataka reporting decline in cost of production per quintal by (-)16.93 per cent

For ragi, there is decline in cost of production per quintal in Karnataka and Maharashtra due to increase in yield

and (-)2.56 per cent respectively. The decline in cost of production per quintal of these states of Karnataka and Maharashtra is due to increase in yield of these states. It is remarkable here that the minimum support price of Rs.915 per quintal fixed for 2008-09 has not covered the cost of production for Maharashtra and Karnataka. Chart 4 and 5 shows the relation of production costs (C_2 and A_2+FL) of bajra, ragi and their MSP for the year 2008-09.

Chart 4

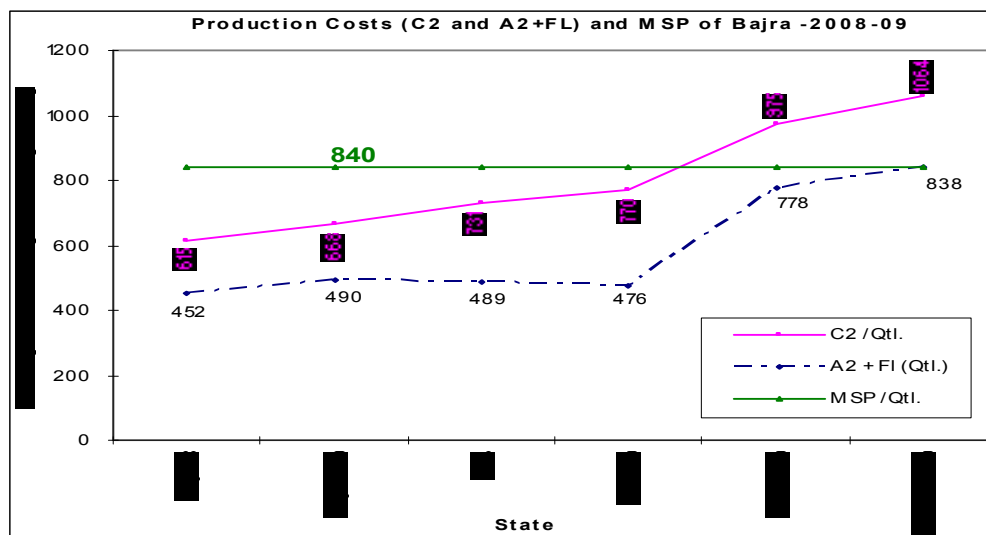
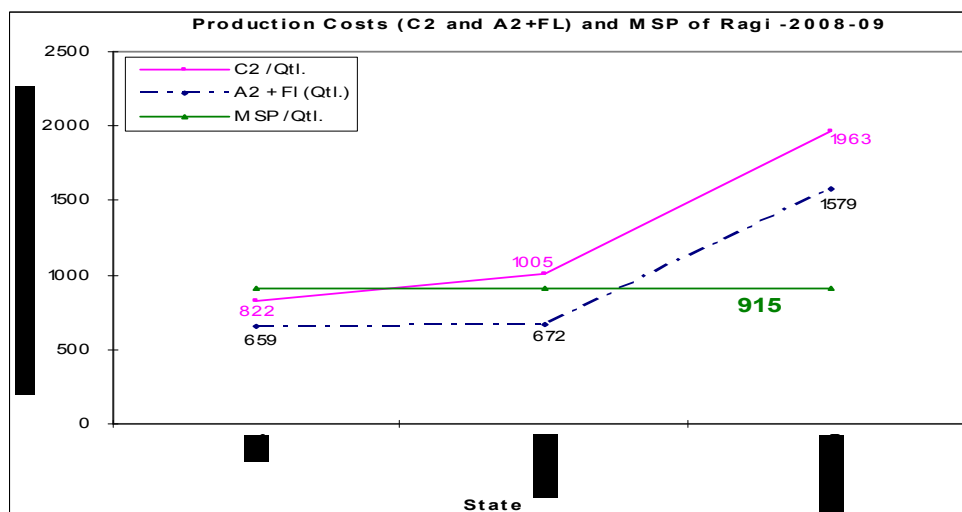


Chart 5



[Table 3 (c)]

3.14 The cost estimates for jowar, bajra and maize have been made available from the states of Andhra Pradesh, Haryana, Gujarat,

The cost of production variation in two data sets for jowar varies between 17.15 per cent and 55.89 per cent across states. For bajra, the variation in cost in two data sets is mixed in that sometime CS estimates are higher. Similarly, for maize.

Maharashtra, Tamil Nadu and Uttar Pradesh for the years 2008-09 and 2009-10. The comparable estimates given in the state replies and those given under Comprehensive Scheme are for the year 2008-09 for the states of Andhra Pradesh, Maharashtra and Uttar Pradesh. For jowar, the cost of production per quintal as reported in the state reply of Andhra Pradesh stands at Rs.941.00 as against Rs.1102.37 in the CS estimates for the year 2008-09. The difference in the per quintal cost of production in the two sets of data is difficult to explain in the sense that in the state reply both the per quintal cost of production and yield level of 12.50 quintals per hectare are less than the both the cost of production and the yield level of 20.07 quintals per hectare in the CS estimates. It is clarified that in the CS estimates the yield level for jowar in the years earlier to 2008-09 was in the range of 10-12 quintals per hectare. Madhya Pradesh in its state reply has reported cost of production per quintal at Rs.899 with the yield level of 12.02 quintals per hectare, as against cost of production of Rs.1123.22 per quintal with the yield level of 8.33 quintals per hectare in the CS estimates. These two data sets in respect of Madhya Pradesh reveal that cost of production in the state reply is lower than that in the CS estimates due to its higher yield at 12.02 quintals per hectare as against 8.33 quintals per hectare in the CS estimates. The state reply of Maharashtra has furnished per quintal cost of production at Rs.595 as against Rs.927.53 in the CS estimates. The difference in the cost of production higher on the side of CS estimates can be explained by comparatively lower yield of 14.54 quintals per hectare in the CS estimates as against 18.01 quintals per hectare in the state reply.

[Table 3 (H)]

3.15 In regard to bajra, Haryana state reply gives per quintal cost of production at Rs.749.76 as against Rs.769.59 in the CS estimates. Gujarat's is a case of cost of production of Rs.756 per quintal in the state reply, compared to Rs.615.04 per quintal in the CS estimates. The relatively higher cost of production in the state reply of Gujarat is due to its lower reported yield. In regard to Uttar Pradesh, the state

reply furnishes for bajra cost of production of Rs.808 per quintal as against Rs.731.21 per quintal in the CS estimates. The difference is higher on the side of state reply and it is due to a lower yield of 14.05 quintals per hectare in the state reply as against 19.53 quintals per hectare in the CS estimates. As far as maize is concerned Andhra Pradesh in its state reply has furnished per quintal cost of production of Rs.881 as against Rs.840.58 in the CS estimates. The difference in cost higher on the side of state reply is attributed to lower yield of 32 quintals per hectare in the state reply and higher yield of 42.68 quintals per hectare in the CS estimates. In the similar vein, Gujarat's is a per quintal cost of production of Rs.1003 in the state reply, higher than that in the CS estimates at Rs.593.48. This is attributed to lower yield of 13.71 quintals per hectare reported in the state reply of Gujarat and relatively higher yield of 23.68 quintals per hectare in the CS estimates. The per quintal cost of production at Rs.920 in the state reply of Madhya Pradesh is way below that given in the CS estimates at Rs. 975.69. The relatively higher cost of production in the CS estimates is due to lower yield of 10.81 quintals per hectare in the CS estimates and relatively higher yield of 13.69 quintals per hectare in the state reply. Tamil Nadu gives the per quintal cost of production of Rs.647 in the state reply as against Rs.668.32 in the CS estimates. The difference in cost in the case of Tamil Nadu, higher on the side of CS estimates, is due to yield level of 43.88 quintals per hectare in the state reply lower than that of 45.05 quintals per hectare in the CS estimates. Uttar Pradesh in its state reply has furnished yield level higher at 15.24 quintals per hectare than at 13.7 quintals per hectare in CS estimates. This has resulted in cost of production relatively low in the state reply and relatively high in the CS estimates. [Table 3 (H)]

3.16 For coarse cereals like jowar, bajra, maize and ragi, the comparative projections for 2011-12 have been furnished in the state replies of Andhra Pradesh, Haryana and Maharashtra. Andhra Pradesh has furnished projected cost of Rs.1145 per quintal as against projected cost of Rs.1393 per quintal in CACP projection. The

projection made by CACP for jowar is higher not only on cost but also on yield compared to that given in the state reply. In regard to Maharashtra, the projection in the state reply is put at Rs.1319 at yield level of 18.49 quintals per hectare and that in the CACP projection, at Rs.1036 at yield level of 15.47 quintals per hectare. In regard to maize, Andhra Pradesh in its state reply has given projected cost of Rs.1114 per quintal for 2011-12 as against Rs.935 per quintal projected by CACP. [Table 3 (I)]

The weighted average cost of jowar for 2011-12 is Rs. 904.90 per quintal on A₂+FL and Rs. 1141.12 per quintal on C₂.

For bajra, projected cost is Rs. 644.43 per quintal on A₂+FL and Rs. 839.89 per quintal on C₂.

For maize, the projected cost is Rs. 723.00 per quintal on A₂+FL and Rs. 921.13 per quintal on C₂.

3.17 The projected cost of production (A₂+FL) for jowar for 2011-12 in respect of Andhra Pradesh, Karnataka, Madhya Pradesh, Maharashtra, Rajasthan and Tamil Nadu are Rs.1043.62, Rs.1067.05, Rs.882.95, Rs.821.27, Rs.866.90 and Rs.947.75 per quintal respectively while the projected cost of production per quintal on C₂ basis for these states are Rs.1392.99, Rs.1327.45, Rs.1124.68, Rs. 1035.85, Rs.1094.82 and Rs.1139.14 respectively. The weighted average A₂+FL and C₂ cost of production for jowar works out to Rs.904.90 and Rs.1141.12 per quintal respectively. The projected cost of production for bajra for the year 2011-12 for the states of Gujarat, Haryana, Karnataka, Maharashtra, Rajasthan and Uttar Pradesh on A₂+FL basis works out to Rs.625.89, Rs.648.31, Rs.973.80, Rs.876.07 and Rs.620.35 and Rs.516.23 per quintal respectively, while the C₂ cost of production per quintal for these states are Rs.762.75 Rs.896.69, Rs.1150.01, Rs.1073.76 and Rs.798.81 and Rs.760.02 respectively. The weighted average A₂+FL and C₂ costs of production of bajra for the year 2011-12 works out to Rs.644.47 and Rs.839.89 per quintal respectively. The A₂+FL projected cost of production of maize for the states of Andhra Pradesh, Bihar, Chhattisgarh, Gujarat, Himachal Pradesh, Karnataka, Madhya Pradesh, Rajasthan, Tamil Nadu and Uttar Pradesh are Rs. 708.90, Rs.426.26, Rs.464.63, Rs.933.06, Rs.701.26, Rs.523.11, Rs.923.16, Rs.981.41, Rs.652.58, and Rs.1142.44 per quintal respectively, while the projected C₂ cost of production for these states works out to Rs. 935.22, Rs. 552.15, Rs. 654.32, Rs. 1096.66, Rs. 925.52, Rs.693.15, Rs.1164.13, Rs.1164.18,

For ragi, the projected cost is Rs. 1031.74 per quintal on A₂+FL and Rs. 1271.46 per quintal on C₂.

Rs.838.76, and Rs.1424.52 per quintal respectively. The weighted average A₂+FL and C₂ costs of production of maize on the basis of these costs work out to Rs. 723.00 and Rs.921.23 per quintal respectively. For ragi, projection has been carried out for Karnataka, Maharashtra and Tamil Nadu for 2011-12. The projected A₂+FL cost of production for ragi for Karnataka works out to Rs.951.95 per quintal, Rs.2108.78 per quintal for Maharashtra and Rs.933.04 per quintal for Tamil Nadu. The projected C₂ costs of production for 2010-11 for these states are Rs.1192.47 per quintal, Rs.2391.19 per quintal and Rs.1136.09 per quintal respectively. The weighted average cost of production of ragi works out to Rs.1031.74 per quintal on A₂+FL basis and Rs.1271.46 per quintal on C₂ basis respectively.

The productivity performance of urad among the states of Andhra Pradesh, Chhattisgarh, Madhya Pradesh, Maharashtra, Orissa, Rajasthan, Tamil Nadu, Uttar Pradesh for the year 2008-09 compared to the year 2007-08 profiles mixed response, with Madhya Pradesh reporting increase in yield by 32.48 per cent, Orissa by 8.00 per cent, Tamil Nadu by 1.23 per cent.

PULSES

3.18 The latest available estimates of cost of cultivation/production for 2008-09 for major kharif pulses of tur (arhar), moong and urad are presented in Table 3 (D). As can be seen from Table 3 (D), the cost of production per quintal for tur(arhar) is observed to have increased in 2008-09 over 2007-08 by 67.38 per cent for Andhra Pradesh, by 67.05 per cent for Gujarat, 29.15 per cent for Karnataka, 19.40 per cent for Madhya Pradesh, 40.64 per cent for Maharashtra, 6.49 per cent for Uttar Pradesh. This increase in per quintal cost of production is largely due to decline or marginal increase in yield excepting the states of Uttar Pradesh and Orissa where increase in yield is by 9 to 10 per cent. The increase both in yield and cost of production for Uttar Pradesh may be attributed to substantial increase in per hectare cost of cultivation, particularly in that of investment. The states that have reported drop in per quintal cost of production are Bihar and Orissa where increases in yield are 3.04 per cent and 10.44 per cent respectively. The minimum support price for tur for 2008-09 was fixed at Rs.2000 per quintal and it did not cover the overall cost of production for the states of Andhra Pradesh, Karnataka, Maharashtra, Orissa and Tamil Nadu. Going by implicit prices for tur in the year 2008-09, it appears that it ranged

First-time,
Tamilnadu has
been considered
by Commission
for projection of
cost in regard to
Tur (arhar)

between Rs.2600 and Rs.3000. Moong is reported to have increased in cost of production for the states of Andhra Pradesh, Karnataka, Orissa and Rajasthan. It is evident that the yield levels in these states have either declined or marginally improved excepting Maharashtra where the yield level has gone up by 21.60 per cent in 2008-09 over the previous year. The minimum support price of Rs.2520 per quintal fixed for the year 2008-09 did not cover cost of production of Karnataka and Orissa. The productivity performance of urad among the states of Andhra Pradesh, Chhattisgarh, Madhya Pradesh, Maharashtra, Orissa, Rajasthan, Tamil Nadu, Uttar Pradesh for the year 2008-09 compared to the year 2007-08 profiles mixed response, with Madhya Pradesh reporting increase in yield by 32.48 per cent, Orissa by 8.00 per cent, Tamil Nadu by 1.23 per cent. Charts 6, 7 and 8 given below show the relation of production costs (C_2 and A_2+FL) of tur, moong, urad and their MSPs for the year 2008-09.

Chart 6

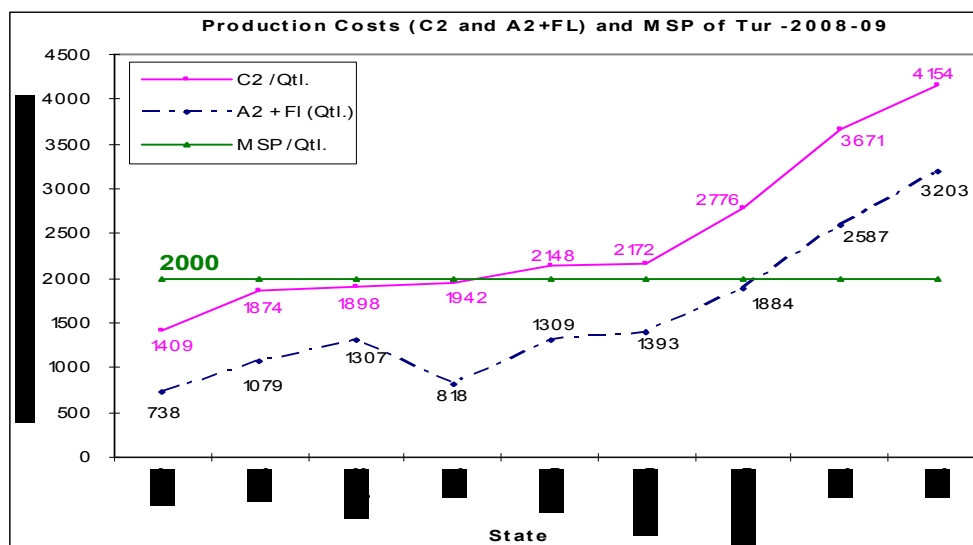


Chart 7

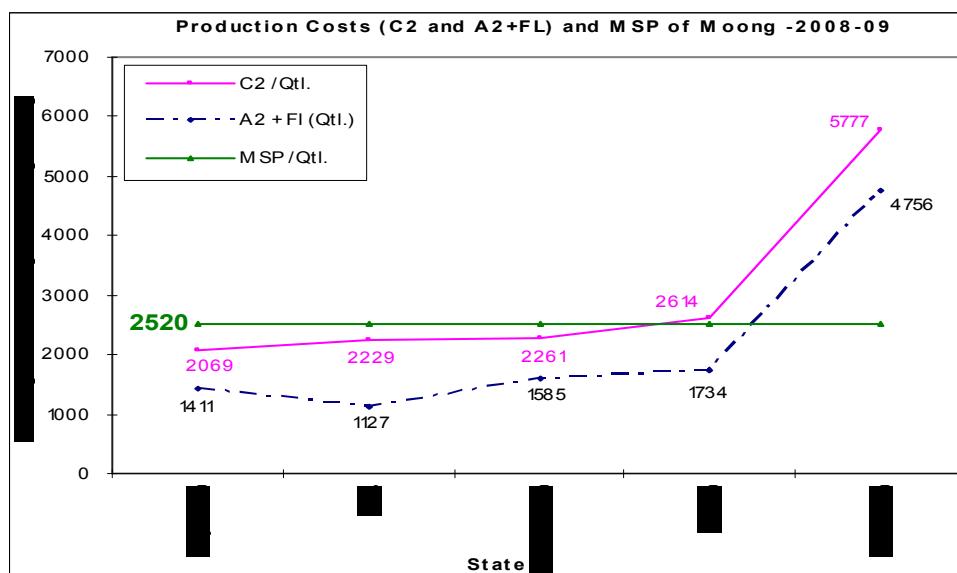
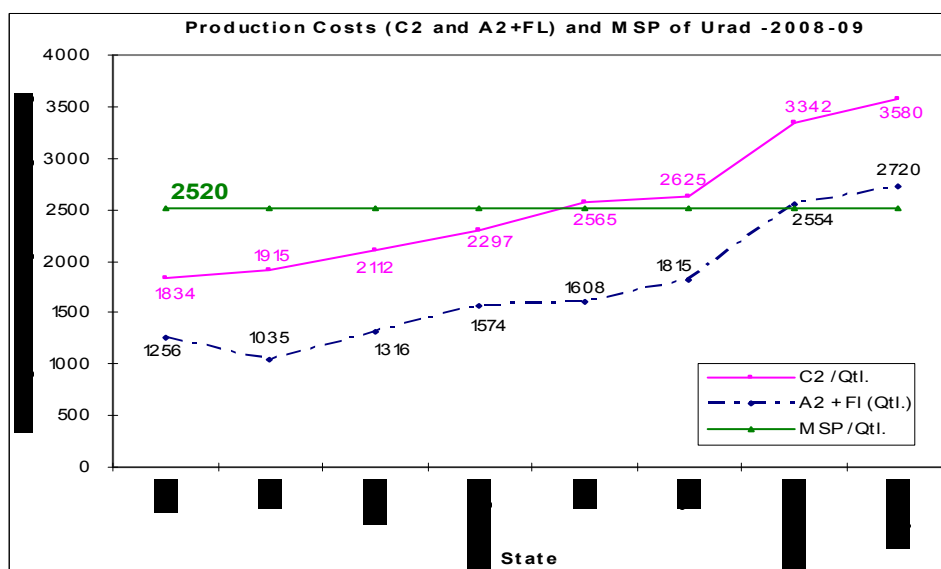


Chart 8



Maharashtra remains comparatively higher productivity state in tur compared to Madhya Pradesh, Gujarat and Andhra Pradesh. Next in the productivity performance of tur is Gujarat having its yield level around 9.8-10 quintals per hectare.

[Table 3(D)]

3.19 As far as kharif pulses are concerned, the cost estimates have been furnished by the states of Andhra Pradesh, Maharashtra, Madhya Pradesh, Gujarat, Tamil Nadu and Uttar Pradesh. The comparison of cost figures as given in the state reply and CS reveals for tur that the per quintal cost of production is less in state reply at Rs.2565.00 per quintal than in the CS estimates at Rs.3670.54 per quintal for Andhra

Pradesh for the year 2008-09. The difference in cost figures is observed despite the closeness of yield levels in the two data sets. It is remarkable to mention here that in respect of Gujarat and Maharashtra, the cost of production figures reported in the CS estimates is higher than in the state reply. In the state of Gujarat, the yield level in the two sets of data are more or less close to each other at 9.6 to 9.8 quintals per hectare. In Maharashtra state reply reports higher yield level at 10.47 quintals per hectare than yield level in the CS estimates at 8.72 quintals per hectare. Maharashtra remains comparatively higher productivity state in tur compared to Madhya Pradesh, Gujarat and Andhra Pradesh. Next in the productivity performance of tur is Gujarat having its yield level around 9.8-10 quintals per hectare. In regard to moong, for Andhra Pradesh there is a difference in cost of production per quintal in the two data sources, higher cost of production being reported in the state reply than in the CS estimates due to lower yield level in the former. Maharashtra's is a case of comparable closeness in cost of production. Invariably the cost of production figures for tur are reported higher in CS estimates in the states of Maharashtra, Tamil Nadu and Uttar Pradesh than in the state replies. [Table 3 (H)]

3.20 The projected per quintal cost of production of tur for the year 2011-12 averaged at Rs.1912.93 per quintal on A_2+FL basis at all-India level, with Madhya Pradesh having its projected cost lowest at Rs.1172.09 and Tamil Nadu having its projected cost highest at Rs.3613.66. The overall C_2 cost is projected at Rs.2702.31 per quintal for the year 2011-12 at all-India level and the individual cost figures of states vary within a range of Rs.1879.10 per quintal for Madhya Pradesh and Rs.3672.82 per quintal for Andhra Pradesh.

*For moong,
 A_2+FL cost
 projected at
 all-India level
 for moong is
 Rs. 2026.79
 per quintal and
 C_2 cost
 projected is
 Rs. 2798.93
 per quintal.*

3.21 A_2+FL cost of moong at all-India level stands projected at Rs.2641.49 per quintal, with maximum cost projected for Karnataka at Rs.4563.25 per quintal and minimum cost, for Andhra Pradesh, at Rs.2973.58 per quintal. For urad, all-India projected A_2+FL cost is

Rs.2026.79 per quintal and projected C₂ cost, Rs.2798.93 per quintal.

[Table 3(G)]

OILSEEDS

In regard to Sunflower, excepting the state of Karnataka, the states of Andhra Pradesh and Maharashtra have recorded increase in yield by 22.26 per cent and 32.20 per cent respectively.

3.22 The latest estimates of cost of cultivation/production for groundnut for the year 2008-09 have been made available for the states of Andhra Pradesh, Gujarat, Karnataka, Maharashtra and Tamil Nadu. The yield performance of groundnut for the year 2008-09 has not shown any improvement over that of the previous year excepting for Gujarat where the yield has shown marginal improvement by 3.07 per cent. This has necessarily resulted in increasing cost of production in C₂ for all the states. So also is the case of yield performance in soyabean and there has been a drop in yield in all the reported states of Madaya Pradesh, Maharashtra and Rajasthan. This has led to rise in C₂ cost of production in these states. In regard to Sunflower, excepting the state of Karnataka, the states of Andhra Pradesh and Maharashtra have recorded increase in yield by 22.26 per cent and 32.20 per cent respectively. Even though the yield performance of the states of Andhra Pradesh and Maharashtra has witnessed improvement, it has not resulted in reduction in C₂ cost of production. In regard to Sesamum, the states of Gujarat, Orissa and West Bengal have increased their yield level in 2008-09 by 9.11, 10.44 and 21.99 per cent respectively, West Bengal being the highest performer in yield compared to other states. It is remarkable to mention for Gujrat that even though the yield has gone up by 9.11 per cent it has not led to decline in cost of production due to considerable increase in per hectare cost of cultivation. In West Bengal, increase in yield by 21.99 per cent has been accompanied by increase in C₂ cost of 7.45 per cent. Orissa for which cost estimates of nigerseed is available for the year 2008-09 has recorded increase in yield by 6.62 per cent, together with increase in C₂ cost by 29.24 per cent. The minimum support price of Rs.2100 fixed for groundnut for 2008-09 has not covered the C₂ cost of Andhra Pradesh, Karnataka, Maharashtra and Tamil Nadu. The MSP for soyabeen for the year 2008-09 at Rs.1390 per quintal has not

For nigerseed, Orissa for which cost estimates of nigerseed is available for the year 2008-09 has recorded increase in yield by 6.62 per cent together with increase in C₂ cost by 29.24 per cent.

covered C_2 cost of Maharashtra and Rajasthan. Excepting Maharashtra, the states of Andhra Pradesh and Karnataka could not be covered in C_2 cost by the MSP for sunflower for 2008-09 at Rs.2215 per quintal. In sesamum, MSP of Rs.2750.00 per quintal for the year 2008-09 has not covered the C_2 cost of Gujarat, Orissa, Rajasthan, Tamil Nadu and has covered the C_2 cost of West Bengal only. Lastly the only state of Orissa with the actual C_2 cost of Rs.2802.99 per quintal for 2008-09 could not be covered by the MSP of Rs.2405.00 per quintal for nigerseed in that year. Charts 9, 10, 11 and 12 show the relation of production costs (C_2 and A_2+FL) of groundnut, sesamum, sunflower and soyabean and their MSPs for the year 2008-09.

Chart 9

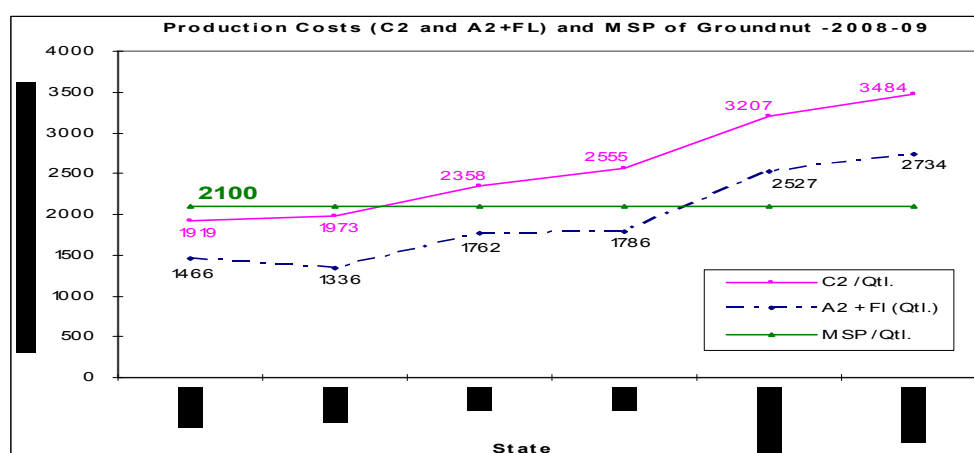


Chart 10

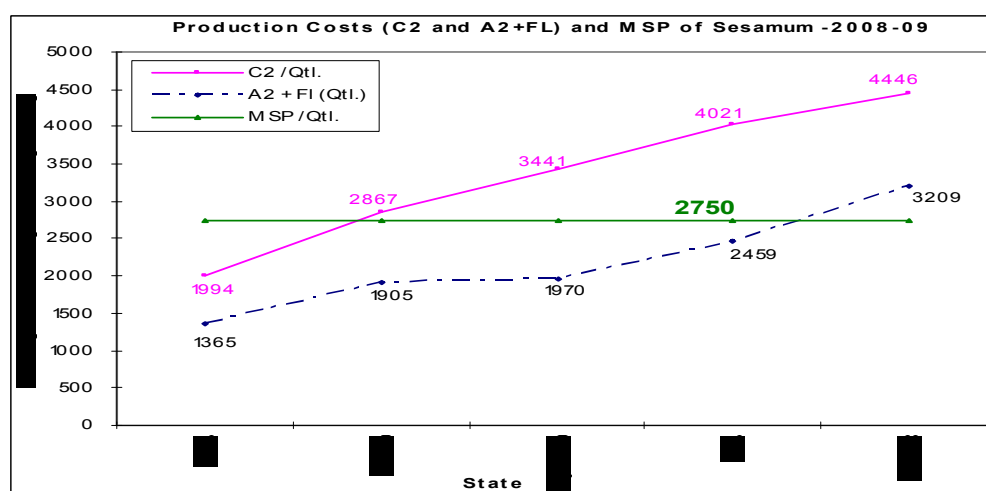


Chart 11

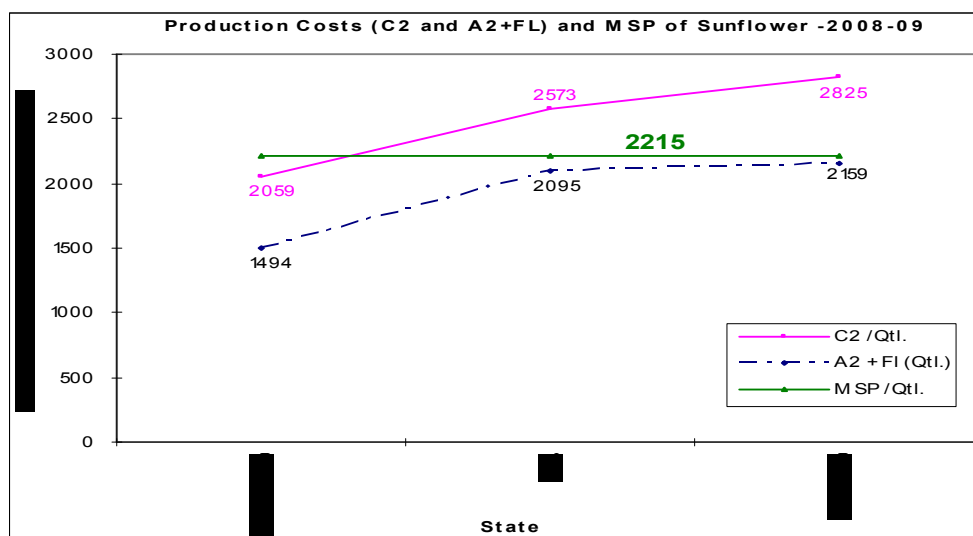
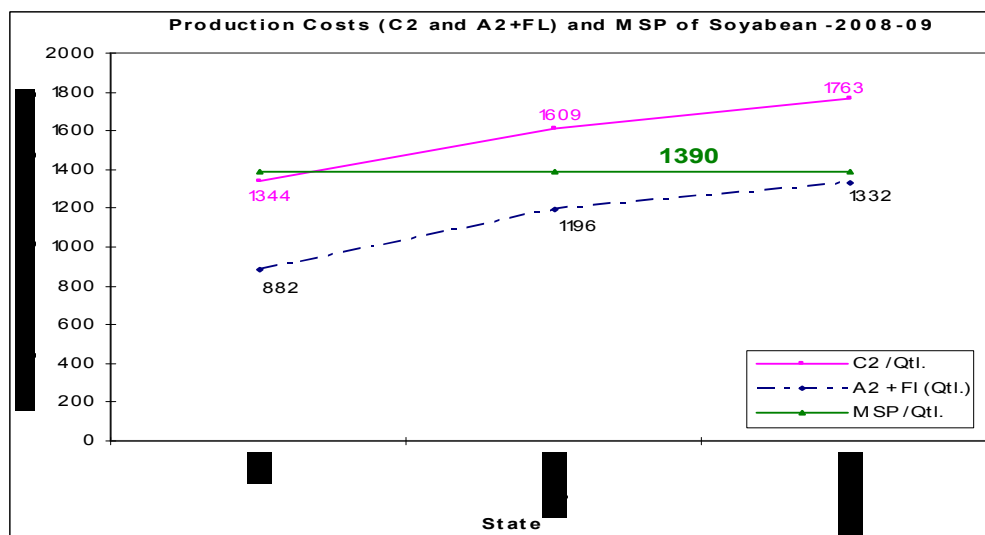


Chart 12



[Table 3(E)]

3.23 The cross comparison of two data sets on cost projections furnished separately by the State Governments and as made by CACP reveals that the cost of production estimates and the yield rates vary between them. The state reply of Andhra Pradesh in respect of groundnut has furnished the per quintal cost of production at Rs.3324.00 against which the CS estimates have furnished Rs.3185.00 per quintal. The difference higher on the side of state reply of Andhra Pradesh is due to the lower yield given in the state reply at 8 quintals

For sunflower, CACP projection is at Rs.26521.00 per quintal on C₂ cost as against Rs.2228.00 per quintal given in the state reply.

per hectare than in the CS estimates at 11.05 quintals per hectare. Maharashtra's projected cost in the state reply for 2011-12 is Rs.3044.00 per quintal and that in the CACP's projections, Rs.3211.00 per quintal. In regard to soyabean, the Maharashtra state reply has furnished projected cost of Rs.2032 per quintal as against Rs.1830 per quintal given in CACP's projections. The difference higher on the side of state reply is due to yield reported lower at 12.08 quintals per hectare in the state reply than at 14.28 quintals per hectare in CACP's projections. For sunflower, CACP projection is at Rs.26521.00 per quintal on C₂ cost as against Rs.2228.00 per quintal given in the state reply. In respect of Andhra Pradesh state reply has furnished higher projected cost of Rs.3440.00 per quintal as against CACP's projections of Rs.2799.00 per quintal. The higher projected cost in the state reply of Andhra Pradesh is attributable to somewhat lower yield given in the state reply.

[Table 3(E)]

For sunflower, in respect of A.P. state reply has furnished higher projected cost of Rs.3440.00 per quintal as against CACP's projection of Rs.2799.00 per quintal.

The all-India weighted average C₂ cost for groundnut for 2011-12 is projected at Rs.2633.18 per quintal and Rs.2103.25 per quintal is projected for A₂+FL cost.

3.24 The all-India weighted average C₂ cost for groundnut for 2011-12 is projected at Rs.2633.18 per quintal and Rs.2103.25 per quintal is projected for A₂+FL cost. The projected C₂ cost vary in groundnut between Rs.2653.86 per quintal for Tamil Nadu and Rs.3184.75 per quintal for Andhra Pradesh. Similarly, the projected weighted average C₂ cost for soyabean is Rs.1560.22 per quintal and Rs.1182.37 per quintal on A₂+FL cost. For sunflower the all-India weighted average C₂ cost is Rs.2795.10 per quintal and Rs.2218.38 per quintal on A₂+FL cost. The all-India weighted average C₂ costs of nigerseed and sesamum are Rs.2945.18 per quintal and Rs.3392.60 per quintal respectively. The all-India weighted average costs on A₂+FL basis of nigerseed and sesamum are Rs.2388.66 per quintal and Rs.2531.60 per quintal respectively. It is worth mentioning here that for nigerseed only one estimate for Orissa has been received.

The all-India weighted average costs on A₂+FL basis of nigerseed and sesamum are Rs.2388.66 per quintal and Rs.2531.60 per quintal respectively.

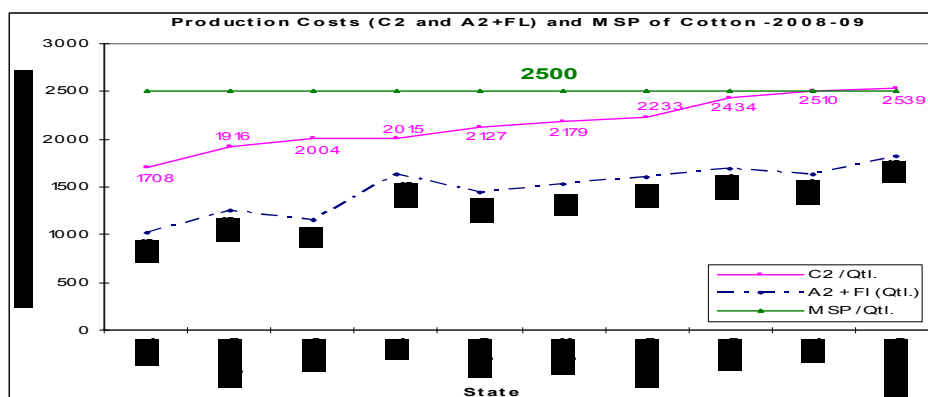
[Tables 3(H) & 3(I)]

COTTON (Kapas)

For cotton, the decline in cost of production in these two states of Madhya Pradesh and Tamil Nadu is observed to have been due to increase in yield levels considerably.

3.25 The actual cost estimates for cotton have been received for the year 2008-09 in respect of Andhra Pradesh, Gujarat, Haryana, Karnataka, Madhya Pradesh, Maharashtra, Punjab, Rajasthan, Tamil Nadu and Orissa. As can be seen from Table 3(B), the C₂ cost of production has gone up in almost all the states excepting that of Madhya Pradesh and Tamil Nadu where it has gone down by (-)15.68 per cent and (-)9.67 per cent respectively. The decline in cost of production in these two states of Madhya Pradesh and Tamil Nadu is observed to have been due to increase in yield levels considerably. In Madhya Pradesh, the increase in yield for the year 2008-09 is 19.49 per cent and that in Tamil Nadu, 73.42 per cent. The MSP fixed at Rs.2500.00 per quintal for the year 2008-09 has covered the cost of production of all the states except Andhra Pradesh and Maharashtra. Chart 13 shows the relation of production costs (C₂ and A₂+FL) of cotton and its MSP for the year 2008-09.

Chart 13



[Tables 3 (B), 3.6 & 3.7]

3.26 The cost of production estimates for cotton have been provided by the states of Andhra Pradesh, Gujarat, Haryana, Madhya Pradesh, Maharashtra and Tamil Nadu. The cross comparison of two data sets for cotton in respect of Andhra Pradesh shows that for medium staple cotton, CS estimate and state reply come close to each other in regard to cost, with CS estimates giving Rs.2509.99 per quintal as against

For cotton, in Maharashtra, CACP's projection at Rs.2961 per quintal is closely comparable to Rs.3048 per quintal in the state reply and yield is higher on the side of the CACP's projection at 11.58 quintals per hectare than 10.89 quintals per hectare in the state reply.

Rs.2607.00 per quintal in the state reply. The difference that is more on the side of state reply is due to yield of 14.84 quintals per hectare in the state reply and 17.83 quintals per hectare in the CS estimates. Similarly for Gujarat CS estimates furnished the C2 cost of Rs.2179.26 per quintal vis-à-vis Rs.1930 per quintal given in the state reply. For Haryana and Madhya Pradesh, the C2 costs in the state replies are Rs.2393 per quintal and Rs.2692 per quintal respectively vis-à-vis Rs.2127.35 per quintal and Rs.1708.32 per quintal in CS estimates respectively. As far as projection for 2011-12 is concerned, the Haryana state reply has furnished projected cost of Rs.2365.00 per quintal as against Rs.2651 per quintal projected by CACP. In Maharashtra, CACP's projection at Rs.2961 per quintal is closely comparable to Rs.3048 per quintal in the state reply and yield is higher on the side of the CACP's projection at 11.58 quintals per hectare than 10.89 quintals per hectare in the state reply. Punjab presents a case of furnishing projected cost of Rs.2800 per quintal as against Rs.2397 per quintal projected by CACP. This difference in projected cost in two different data sets results from higher yield given in CACP's projections at 22.31 quintals per hectare than 20.70 quintals per hectare given in the state reply. [(Tables 3(H) & 3(I)]

3.27 Following the same methodology, the A_2+FL cost of cotton per quintal is projected for 2011-12 to an average of Rs.1892.09 for Andhra Pradesh, Rs.1674.66 for Gujarat, Rs.1994.37 for Haryana, Rs.2089.18 for Karnataka, Rs.1801.45 for Madhya Pradesh, Rs.2458.64 for Maharashtra, Rs.1647.59 for Punjab, Rs.1472.10 for Rajasthan and Rs.2612.07 for Tamil Nadu. The corresponding C_2 costs per quintal are projected at Rs.2579.15, Rs.2216.55, Rs.2650.82, Rs.2663.49, Rs.2536.49, Rs.2960.69, Rs.2396.61, Rs.1966.52 and Rs.3076.29 per quintal respectively in these states. The weighted average cost of production of cotton for 2011-12 works out to Rs.1941.43 per quintal on A_2+FL basis and Rs. 2528.37 per quintal on C_2 basis. [(Table 3(G)]

VFC (Virginia Flue Cured) Tobacco

3.28 The latest estimates of cost of cultivation/production for VFC tobacco have been made available by the Directorate of Economics & Statistics (DES), which pertains to Andhra Pradesh for the year 2007-08. Karnataka, the only other important VFC tobacco producing state, is not covered under the CS. The data presented in Table 3(F) show that both the cost of cultivation and unit cost of production between 2007-08 and 2008-09 has increased. The cost of production of tobacco in respect of Andhra Pradesh has been projected to an average of Rs.6770.71 and Rs. 7923.53 per quintal on cost A_2+FL and C_2 basis, respectively. [Tables 3(G) & 3(F)]

Terms of Trade

3.29 The Commission in its earlier reports made a reference to the deteriorating terms of trade between agriculture and non-agriculture sectors in recent years. The Index of Terms of Trade (ITT) with base triennium ending 1990-1991=100 stood at 105.6 in the year 1991-92 and deteriorated further until the year 1994-95 when it rose to 106.6. Since then it has dipped to around 101-103 excepting the years 1997-98 and 1998-99 – the years in which ITT recovered considerably well showing on an average 105. According to the figure released by the Directorate of Economics & Statistics, the index of terms of trade is provisionally fixed at 102.0 for the year 2006-07, up from 101.9 for the year 2005-06. This is corroborated by decline in input-output price parity index to 99.9 in 2006-07 from 102.7 in 2005-06. The drop of 2.8 basis points in input output price parity index during the period 2005-06 to 2006-07 shows that the input use efficiency has performed well relative to the value of output. (Appendix I & II)

Restructuring the cost of production

3.30 In spite of Government having given approval for including crop insurance premium paid by the farmers, marketing and transportation cost incurred by them, as part of input cost of production to arrive at the

overall cost of production, a proper methodological approach to collecting data at farm holding level has not been formulated. However, the Directorate of Economics and Statistics has already initiated the groundwork for redesigning the schedules of enquiry to capture such information and for changing the old FARMAP software to a more user friendly software. Until such time as would enable the Directorate to scientifically collect and disseminate the information on aforesaid inputs, the Commission would continue to rely on information being supplied by the state Governments in their replies. Based on available information received, an all India projected cost of production for kharif crops for 2011-12 has been derived and given in the Table 3(J).

Table- 3(J): Estimated cost of production for Kharif Crops for 2011-12, inclusive of marketing, transportation and insurance premium All India).

(In Rs/qrtl)

Crop	Projected C2 cost of Production (2011-12)	% Change over last Year Cost	Estimated cost of Marketing	Estimated Cost of Transportation	Estimated Cost of Crop Premium	Modified Cost*
Paddy	887.72	19.57	5.17	10.87	13.15	916.91
Cotton	2528.37	18.78	5.17	10.87	106.22	2650.63
Jowar	1141.12	18.25	5.17	10.87	15.91	1173.07
Bajra	839.89	9.36	5.17	10.87	26.67	882.60
Maize	921.23	16.66	5.17	10.87	12.94	950.21
Ragi	1271.46	14.84	5.17	10.87	18.70	1306.20
Tur (Arhar)	2702.31	11.58	5.17	10.87	30.39	2748.74
Moong	3372.50	8.48	5.17	10.87	30.65	3419.19
Urad	2798.93	12.42	5.17	10.87	23.59	2838.56
Groundnut	2633.18	25.37	5.17	10.87	46.22	2695.44
Soyabean	1560.22	21.17	5.17	10.87	22.98	1599.24
Sunflower	2795.10	23.81	5.17	10.87	39.33	2850.47
Sesamum	3392.60	19.16	5.17	10.87	54.72	3463.36
Nigerseed	2945.18	30.09	5.17	10.87	9.00	2970.22
Tobacco	7923.53	27.20	5.17	10.87	Not Available	7939.57

* Modified cost is projected cost inclusive of transportation, insurance premium and marketing charges.

3.31 Most of the state governments have provided crop wise premium per hectare and this information proportionately reduced to premium per quintal based on crop wise yield levels of these states, is arrived at by the Commission. It is still admitted that this approach has been adopted in order to arrive at some view on the premium for each crop on per quintal basis. It is again noted that the data supplied by

Agriculture Insurance Company of India Ltd. under National Agriculture Insurance Scheme provide the actuarial premium rates for various crops and for various states. Wherever the information is lacking for certain crops in regard to premium the use has been made of the data provided by Agriculture Insurance Company of India together with the replies of the states. Table 3(J) gives an account of estimated cost of production for kharif crops for 2010-11 inclusive of marketing, transportation and crop premium at all India level. Based on the above exercise undertaken by the Commission, the table gives a broad view of what overall C_2 cost would look like for different crops after accounting for the charges of transportation, marketing and insurance premium. Since the figures as arrived at on these items are broad aggregates both at the state and at the national level, these may contain a certain amount of deviation from if these would have been collected from the farmers like on other inputs and aggregated upwards to arrive at the state and national estimates.

3.32 While approving the Alagh Committee recommendations, the Government has indicated that the Commission would consider quality aspects of the produce in their price and non-price recommendations. In this regard, it may be noted that the Commission in its price policy reports normally takes into account quality and varietal aspects in respect of crops, such as paddy, jowar, soyabean, cotton, jute, sugarcane and tobacco. In the absence of any further details available in this respect, the Commission has continued to follow the earlier pattern of recommendations.

Inter-Crop Price Parity:

WPI for foodgrains in absolute number has remained stable at 174 to 179 during the period November, 2009 to February, 2011.

3.33 One of the objectives of price policy is to allocate judiciously area amongst different crops with a view to maintaining their parity in returns. The determination of price parity among crops is crucial not only for balanced development of agriculture but also for evening out the inequitable distribution of per hectare returns from different crops

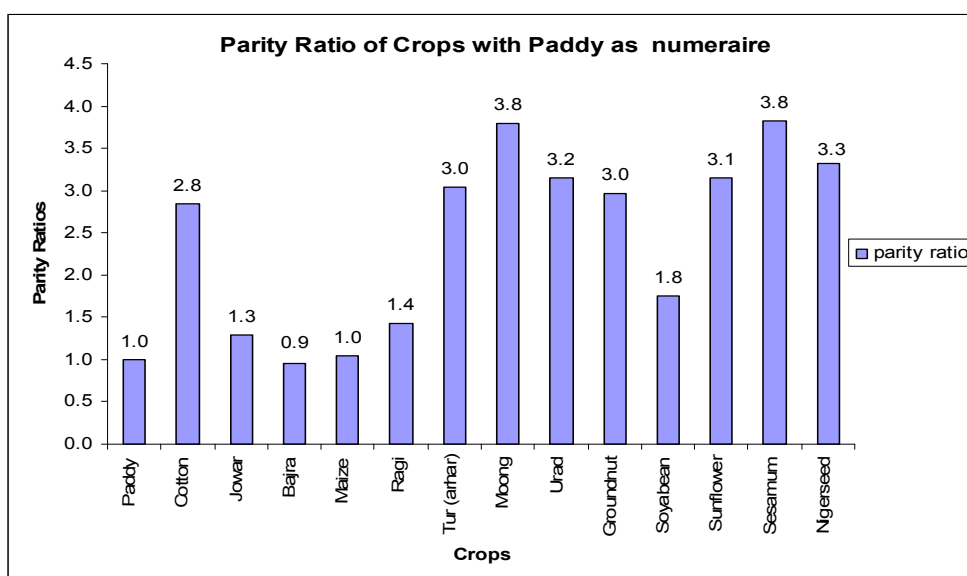
In the group of kharif coarse cereals the major contribution to rise in prices is made by maize and jowar, with maize recording 14.2 per cent during February, 2010-11 and jowar recording increase by 19.1 per cent during February, 2010-11, as against the corresponding month of the previous year.

grown by the farmers. The Commission factors in the element of inter-crop price parity in setting minimum support prices. As the price movement stands right now, agricultural commodities have recorded spurts in prices, as can be seen in the increase in its wholesale price index (WPI, with base year of 2004-05=100) by 14.6 per cent during February, 2011, compared to the corresponding month of the previous year. Most importantly, since 2008-09 the contribution of agricultural commodities including food articles to the inflationary expectations has been quite pronounced during the period November, 2009 to February, 2011. WPI for foodgrains in absolute number has remained stable at 174 to 179 during the same period and hence it is noticeable that the inflationary trends have eased since October, 2010 onwards. In the group of kharif coarse cereals the major contribution to rise in prices is made by maize and jowar, with maize recording 14.2 per cent during February, 2010-11 and jowar recording increase by 19.1 per cent during February, 2010-11, as against the corresponding month of the previous year. In pulses, the inflation that was so high during 2009-10 for moong, urad, tur has gradually come down, with tur recording decline by (-)12.5 per cent, moong, by (-)12.2 per cent, urad by (-)5.9 per cent during February, 2011, compared to the corresponding month of the previous year. Excepting sunflower seed which has high inflationary expectation at 40.5 per cent during February, 2011, vis-à-vis the corresponding month of the previous year, nigerseed has witnessed decline in prices by (-) 16.3 percent. With WPI movement as the basis for working out inter-crop price relation for the year 2011-12, tentative inter price relations amongst kharif crops has been reworked into paddy equivalent price parity ratios of crops. Into these price parity ratios, cost coefficients of each crop have been expressed in terms of unit cost of paddy. Table 3(K) and chart 14 show price parity ratios of kharif crops.

Table 3(K): Inter-crop price parity of Kharif crops with paddy as numeraire for 2011-12

Crop	Projected C2 Cost (Rs/Qtl)	Average WPI(Apr-Feb 2010-11) (Base: 2004-05=100)	Paddy equivalent WPI	Price parity ratio
Paddy	887.72	166.7	166.7	1.0
Cotton	2528.37	185.6	474.8	2.8
Jowar	1141.12	187.1	214.3	1.3
Bajra	839.89	175.2	157.7	0.9
Maize	921.23	166.0	173.0	1.0
Ragi	1271.46	173.6	238.8	1.4
Tur (arhar)	2702.31	205.3	507.5	3.0
Moong	3372.50	284.2	633.3	3.8
Urad	2798.93	273.8	525.6	3.2
Groundnut	2633.18	164.5	494.5	3.0
Soyabean	1560.22	127.1	293.0	1.8
Sunflower	2795.10	138.0	524.9	3.1
Sesamum	3392.60	248.2	637.1	3.8
Nigerseed	2945.18	143.6	553.1	3.3

Chart 14



The structure of relative prices of different kharif crops may be such that for a unit price of paddy, the cotton price is expected to be 2.8 times that of paddy and that of groundnut, 3.0 times that of paddy and, so on.

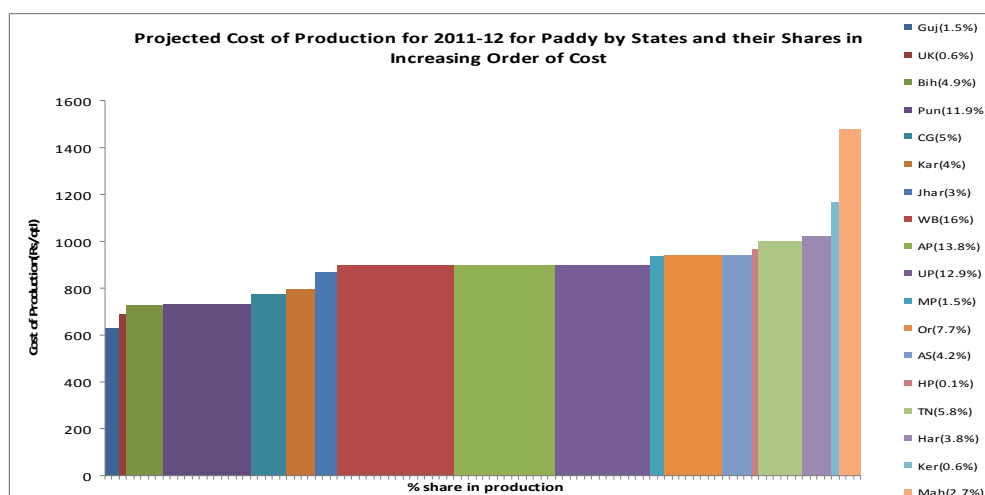
3.34 Reference to this paddy equivalent parity ratio expected for the year 2011-12 provides a somewhat firsthand insight into the manner in which setting MSPs for kharif crops for the season 2011-12 would necessarily follow with consideration of other crucial factors. The demand-and-supply side forces are so unpredictable and the prices of agricultural commodities so prone to wide swings, it is not economically so sound a hypothesis to adhere strictly to a set of worked out parity numbers, excepting using it as a heuristic device to understand the inter-crop price relation of crops to which parity in returns stands. As is

evident from the table, what emerges is that to a lesser or greater degree, the structure of relative prices of different kharif crops may be such that for a unit price of paddy, the cotton price is expected to be 2.8 times that of paddy and that of groundnut, 3.0 times that of paddy and, so on.

Analysis of cost distribution for paddy and cotton for 2011-12

3.35 The Commission makes an attempt at mapping the distributions of cost projected of paddy and cotton separately by deciles of quantum of production, share of production in each state and cumulative percentage of farmers in increasing order of cost to understand both the pattern of cost variation across deciles, states according to their respective production shares and cumulative percentage of farmers.

Chart 15



3.36 As presented in the chart 15, Gujarat with mere 1.5 per cent share of paddy production gravitates to the lowest cost of production estimated at Rs.629.37 per quintal, and at the other extreme, Kerala and Maharashtra with shares of 0.6 and 2.7 per cent are moving towards the costs as high as Rs.1168.74 and Rs.1482.13 per quintal. The fact that cost of production figures fluctuate among states on their respective yield levels by the year, the chart 15 throws up a somewhat broad representation of behaviour of cost with respect to share of the

For paddy, major contributors in terms of production share are Punjab, Chhattisgarh, W.B, A. P, U. P Orissa and T.N. These states constitute more than 70 per cent of paddy production and have their estimated cost of production ranging from Rs.734.72 (Punjab) to Rs.998.01 per quintal (T.N.), for 2011-12.

states. Major contributors in terms of production share are Punjab, Chhattisgarh, West Bengal, Andhra Pradesh, Uttar Pradesh, Orissa and Tamil Nadu. These states constitute more than 70 per cent of paddy production and have their estimated cost of production ranging from Rs.734.72 (Punjab) to Rs.998.01 per quintal (Tamil Nadu).

Chart 16

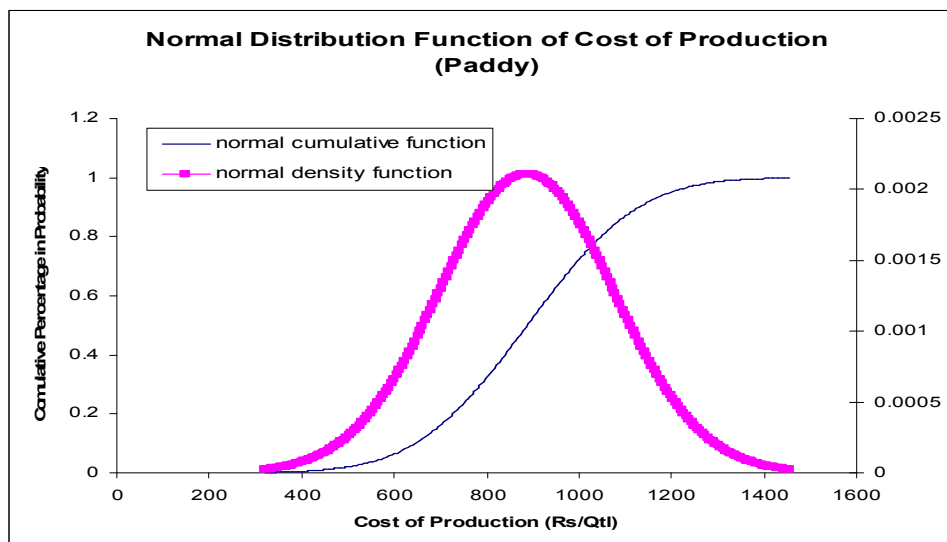
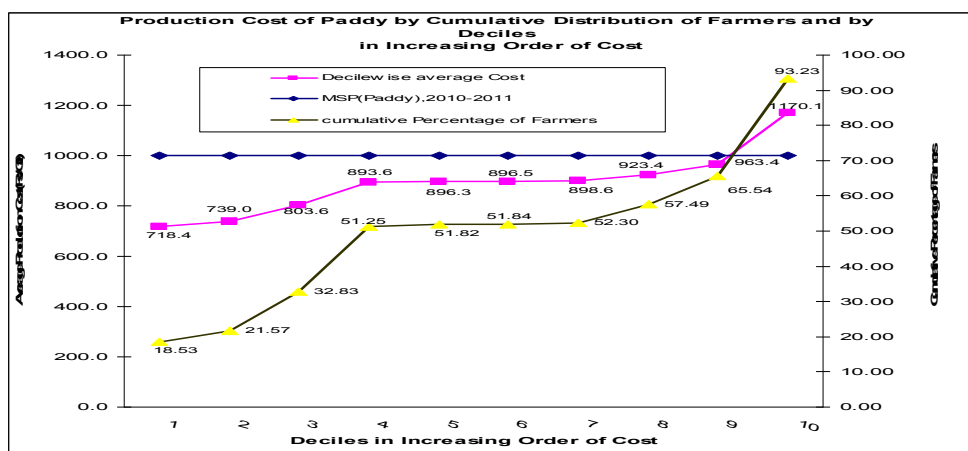


Chart 17



3.37 Normal distribution of cost of paddy is diagrammatically shown in chart 16. The premise of normal distribution of cost rests on the principle of millions of farmers being faced with widely varying levels of cost on cultivation, given the diversity of agro-climatic conditions, agronomic practices, input-technology usage, landholding size, etc.

18.53 percentage of farmers upto 10 per cent of production share is covered with cost of production of Rs.718.4 per quintal; 21.57 percentage of farmers upto 20 per cent of production share is covered with that of Rs.739.0 per quintal. Upto 90 per cent production share, with average cost of production of Rs.963.4 per quintal, about 65.54 per cent far

The upper tenth production share for paddy yields margins in the negative terrain (-) 14.54 per cent with MSP of Rs. 1000 per quintal fixed 2010-11.

The cumulative percentage of farmers in probability has been derived in cumulative deciles of production shares, corresponding to their estimated average costs of production. This is graphically represented in chart 17. As is shown in Table 3(L), 18.53 percentage of farmers upto 10 per cent of production share is covered with cost of production of Rs.718.4 per quintal; 21.57 percentage of farmers upto 20 per cent of production share is covered with that of Rs.739.0 per quintal. Upto 90 per cent production share, with average cost of production of Rs.963.4 per quintal, about 65.54 per cent farmers is covered.

3.38 With MSP of Rs.1000 per quintal fixed for the year 2010-11, and given the estimated cost distribution derived from the year 2011-12, a little more than 65.54 percentage of farmers would be covered. Since the 10th decile has the estimated average cost of Rs.1170, the present MSP of Rs.1000 per quintal would leave the extreme 10 per cent of production with 28 per cent of farmers without price support. As is evident from Table 3(L), the 10th decile of production yields margins in the negative terrain (-) 14.54 per cent.

Table -3(L): Production Cost of Paddy Cumulative Distribution of Farmers & by Deciles in Increasing Order of Cost

Decile-wise shares in production	Decile-wise average Cost (Rs/qlt)	MSP(Paddy) , 2010-11 (Rs/qlt)	Cumulative Number of farmers(Fractions of Unity) covered	Cumulative Number of farmers(%) covered	Margin of MSP over Cost (%)
1	718.4	1000	0.19	18.53	39.20
2	739.0	1000	0.22	21.57	35.33
3	803.6	1000	0.33	32.83	24.43
4	893.6	1000	0.51	51.25	11.90
5	896.3	1000	0.52	51.82	11.57
6	896.5	1000	0.52	51.84	11.55
7	898.6	1000	0.52	52.30	11.28
8	923.4	1000	0.57	57.49	8.29
9	963.4	1000	0.66	65.54	3.80
10	1170.1	1000	0.93	93.23	-14.54
Wt Av. Cost	887.72				19.57

With the existing MSP of Rs.2500 for cotton, only 50 per cent of production would be catered to, remaining 50 per cent to be left not covered in the likely cost structure for 2011-12.

3.39 Chart 18 outlines that for cotton the lowest cost state Rajasthan with 3.5 per cent share of production has the estimated average cost of Rs.1966.52 per quintal in contrast to which Tamil Nadu with 0.9 per cent share has the highest estimated cost of Rs.3076.29 per quintal.

The states that contribute a sizeable chunk of production to the extent of about 80 per cent are Gujarat, Punjab, Andhra Pradesh and Maharashtra. Of these states, and given the economy of scale, Gujarat ranks first in cost efficiency and production size. Similar assumption of normal distribution of cost is made for cotton, and it is seen that, with the MSP of Rs.2500 per quintal for the year 2010-11, the number of farmers in probability that would be covered for the ensuing year of 2011-12 is 47 per cent. The normal distribution of cost for cotton for 2011-12 is given in Chart 19. Chart 20 shows that with the estimated average cost of Rs.2217 per quintal for 2011-12, the lower 20 per cent production is expected to be covered with 16.78 per cent farmers. About 90 per cent cost of production and 91 per cent of farmers would be covered with the estimated average cost of Rs.2961 per quintal. With the existing MSP of Rs.2500 only 50 per cent of production would be catered to, remaining 50 per cent to be left not covered in the likely cost structure for 2011-12.

Chart 18

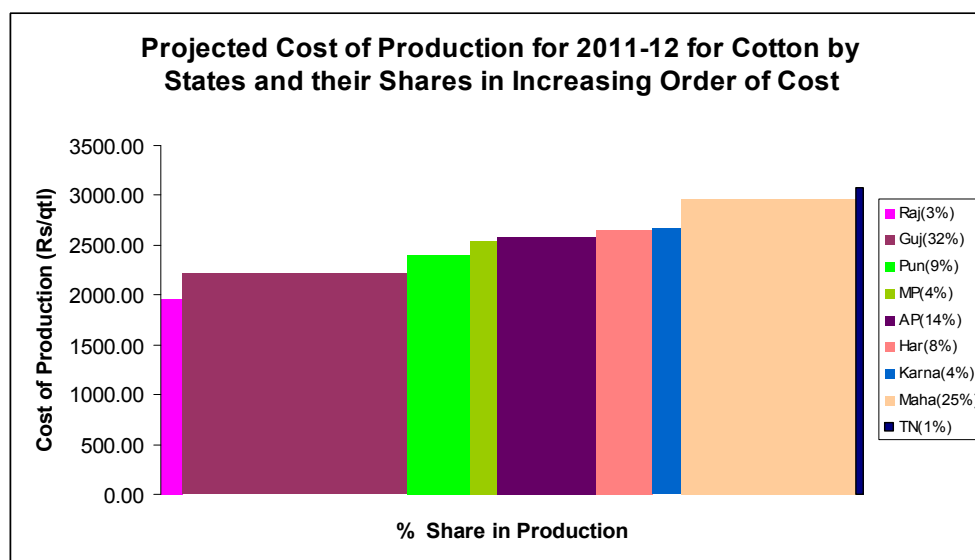


Chart 19

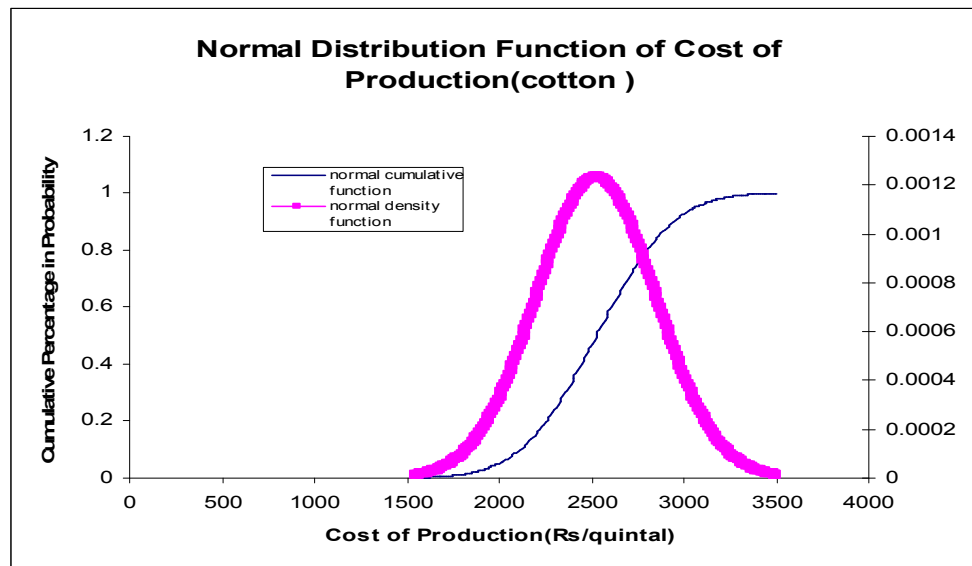


Chart 20

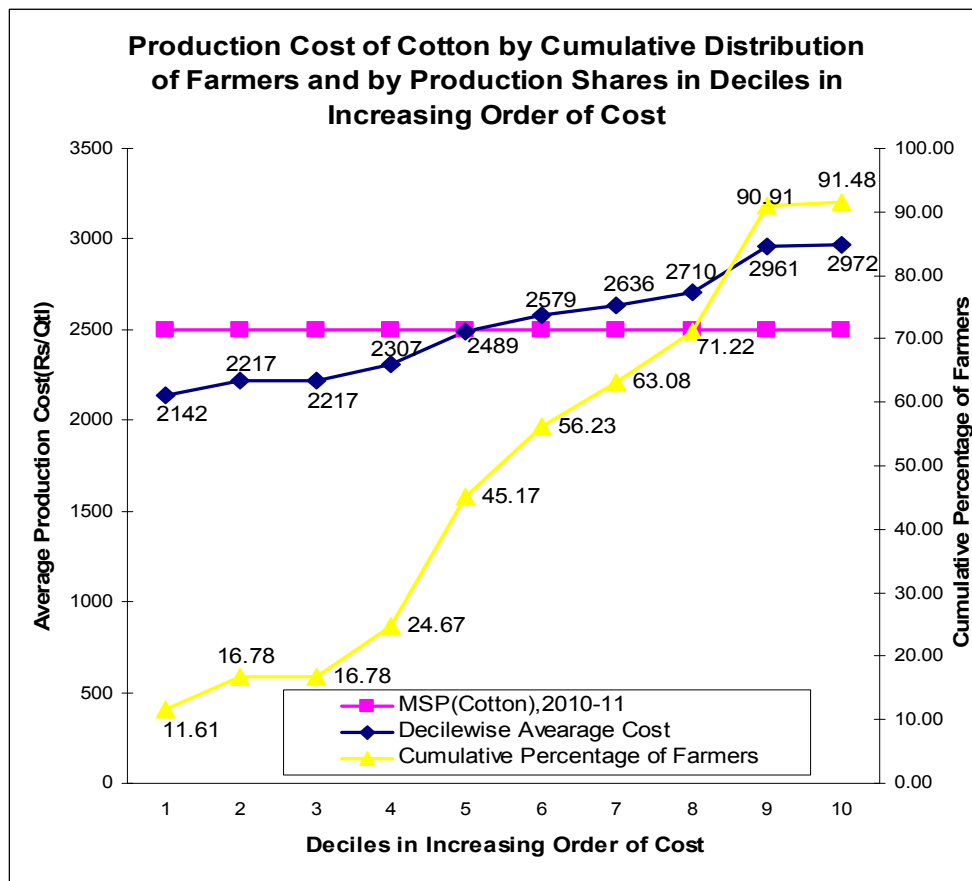


Table 3(M): Production Cost of Cotton Cumulative Distribution of Farmers & by Deciles in Increasing Order of Cost

Decile-wise shares in production	MSP (Cotton), 2010-11 (Rs./qtl)	Decile-wise average Cost	Cumulative Number of farmers(Fractions of Unity) covered	Cumulative Number of farmers(%) covered	Margin of MSP over Cost (%)
1	2500	2142	0.12	11.61	16.74
2	2500	2217	0.17	16.78	12.79
3	2500	2217	0.17	16.78	12.79
4	2500	2307	0.25	24.67	8.39
5	2500	2489	0.45	45.17	0.44
6	2500	2579	0.56	56.23	-3.07
7	2500	2636	0.63	63.08	-5.18
8	2500	2710	0.71	71.22	-7.74
9	2500	2961	0.91	90.91	-15.56
10	2500	2972	0.91	91.48	-15.89
Wt. Av. Cost		2528			18.78

For the ensuing season 2011-12, the likely increase in per quintal cost of production on C₂ over the preceding year would be 20 per cent for paddy, 18.78 percent cotton, 9 to 12 percent for pulses, 20 to 30 percent for oilseeds

3.40 There are comfortable margins of minimum support price for 2010-11 for paddy, bajra, maize, tur, urad, groundnut, soyabean, nigerseed and cotton, in regard to their respective costs of production. Margins in MSP over cost of production was 34.69 per cent for paddy, 14.59 per cent for bajra, 11.44 per cent for maize, 23.87 per cent for tur, 16.48 per cent for urad, 9.51 per cent for groundnut, 11.83 percent for soyabean, 8.22 per cent for nigerseed, and 17.45 per cent for cotton. For the ensuing kharif season, 2011-12, the expected increase in per quintal cost of production on C₂ over the preceding year would be about 20.0 per cent for paddy, 18.78 per cent for cotton, 18.25 per cent for jowar, 9.36 per cent for bajra, 16.66 per cent for maize, 14.84 per cent for ragi, 11.58 per cent for tur, 8.48 per cent for moong, 12.42 per cent for urad, 25.37 per cent for groundnut, 21.17 per cent for soyabean, 19.16 per cent for sesamum, 23.81 per cent for sunflower, and 30.09 per cent for nigerseed.

Table 3(A): Cost Estimates for Paddy

Paddy		Rupees							
States	Year	A2+FL /Hect	C2 /Hect	A2+FL /Qtl.	C2 /Qtl.	C3 /Qtl.	Yield (Qtl.)/Hect..	Implicit Price(Qtl.)	MSP /Qtl.
Andhra Pradesh	2007-08	23285.29	37443.61	397.56	638.56	704.98	55.11	762.02	745
	2008-09	29664.84	46450.20	504.87	789.90	874.20	56.00	960.22	900
Assam	2007-08	12482.56	16704.49	463.29	619.81	696.69	25.38	647.35	745
	2008-09	14727.69	20713.00	520.25	731.41	804.55	26.75	725.49	900
Bihar	2007-08	10192.18	15199.29	292.52	435.48	504.26	29.00	631.65	745
	2008-09	12632.02	18209.81	405.62	584.82	647.45	26.65	725.86	900
Chhattisgarh	2007-08	10822.91	17638.53	339.20	552.74	620.59	29.12	736.91	745
	2008-09	12764.95	19382.21	501.37	761.74	848.85	24.22	863.34	900
Gujarat	2007-08	13801.15	19457.84	321.78	456.76	503.49	35.00	715.36	745
	2008-09	20024.65	27647.06	452.18	624.37	688.06	38.15	947.09	900
Haryana	2007-08	20502.56	36005.79	385.78	676.86	744.55	52.19	1268.83	745
	2008-09	23950.82	43622.77	561.25	1021.90	1124.09	42.01	1422.35	900
Himachal Pradesh	2007-08	12327.22	17604.60	647.28	922.45	1014.70	14.63	828.05	745
	2008-09	9905.26	15504.62	407.39	634.08	749.06	17.60	857.46	900
Jharkhand	2007-08	11509.77	15710.98	526.56	718.11	789.92	18.48	701.74	745
	2008-09	12399.18	17786.75	602.77	865.26	951.79	17.36	792.84	900
Karnataka	2007-08	21159.04	31586.35	392.57	581.66	639.83	50.53	828.78	745
	2008-09	24148.05	35858.66	503.49	737.44	811.18	45.38	1048.03	900
Kerala	2007-08	24332.27	31999.36	571.45	747.73	822.50	37.14	868.53	745
	2008-09	26673.74	36767.64	575.48	792.61	871.87	42.67	1056.41	900
Madhya Pradesh	2007-08	9881.56	13650.51	569.79	783.31	861.64	15.36	700.27	745
	2008-09	12482.71	21954.50	429.43	745.22	821.43	26.64	1150.70	900
Maharashtra	2007-08	24462.29	30396.56	718.61	894.01	983.41	30.60	788.67	745
	2008-09	28399.87	35206.03	1150.73	1413.59	1554.95	21.74	1015.77	900
Orissa	2007-08	14487.47	21713.38	400.08	599.68	697.87	32.03	674.35	745
	2008-09	17478.05	25909.05	482.13	715.04	795.16	32.42	788.68	900
Punjab	2007-08	18951.70	34781.20	275.63	505.92	556.51	68.01	823.96	745
	2008-09	25154.75	45291.24	372.07	669.86	736.85	67.41	990.87	900
Tamil Nadu	2007-08	27148.18	37182.96	509.69	696.79	766.47	49.36	756.09	745
	2008-09	28880.74	40242.38	642.66	894.99	984.49	42.00	1016.41	900
Uttar Pradesh	2008-09	15464.87	22301.17	416.69	600.73	660.80	35.00	745.99	745
	2008-09	17022.00	28144.50	443.19	732.62	859.14	36.61	921.28	900
Uttarakhand	2007-08	12640.82	19811.51	337.49	527.66	580.43	33.32	710.93	745
	2008-09	15369.32	27106.11	381.83	674.05	751.38	36.95	933.72	900
West Bengal	2007-08	20043.64	28141.88	476.06	668.34	736.67	36.70	680.59	745
	2008-09	24731.06	33046.12	546.80	731.25	804.38	39.04	721.25	900

Table 3(B): Cost Estimates for Cotton(Kapas)

States	Year	Rupees							
		A2+FL /Hect	C2 /Hect	A2+FL /Qtl.	C2 /Qtl.	C3 /Qtl.	Yield (Qtl.)/Hect..	Implicit Price(Qtl.)	MSP /Qtl.
Andhra Pradesh	2007-08	26856.97	40019.86	1138.53	1697.09	1879.89	23.55	2203.93	2030
	2008-09	29140.77	44756.72	1634.29	2509.99	2760.99	17.83	2716.19	3000
Gujarat	2007-08	20708.96	29107.74	1222.05	1716.67	1888.34	16.68	2563.78	2030
	2008-09	29616.09	42070.44	1535.03	2179.26	2399.66	19.05	2913.21	3000
Haryana	2007-08	22592.11	34877.09	1215.14	1875.80	2063.38	18.09	2265.77	2030
	2008-09	29918.97	44018.18	1446.38	2127.35	2340.09	19.90	2991.64	3000
Karnataka	2007-08	11344.22	17488.16	1021.12	1575.12	1844.61	10.77	2312.84	2030
	2008-09	15942.69	22239.46	1605.32	2233.26	2456.59	9.61	2560.75	3000
Madhya Pradesh	2007-08	18219.31	28193.69	1306.80	2026.09	2238.70	13.44	2320.09	2030
	2008-09	17027.27	28749.29	1012.53	1708.32	1933.39	16.06	2382.00	3000
Maharashtra	2007-08	18677.86	24398.91	1538.01	2010.50	2211.55	11.82	2178.63	2030
	2008-09	23711.44	33116.82	1818.24	2539.47	2793.42	12.69	2730.45	3000
Punjab	2007-08	23934.84	40490.82	1079.78	1826.48	2009.13	21.08	2228.59	2030
	2008-09	29047.10	50828.83	1145.04	2003.76	2204.14	24.39	2768.60	3000
Rajasthan	2007-08	16295.65	24072.48	964.94	1424.81	1593.83	16.51	2304.68	2030
	2008-09	16649.91	25375.16	1258.43	1915.73	2107.30	12.79	2992.49	3000
Tamil Nadu	2007-08	20738.71	26881.47	1721.03	2231.17	2454.29	11.89	2475.13	2030
	2008-09	34128.96	42145.21	1632.51	2015.38	2216.92	20.62	2285.95	3000
Orissa	2008-09	17818.75	25758.86	1684.13	2433.65	2839.54	10.23	2824.10	3000

Table 3(C): Cost Estimates for Coarse Cereals

States	Year	Rupees							
		A2+FL /Hect	C2 /Hect	A2+FL /Qtl.	C2 /Qtl.	C3 /Qtl.	Yield (Qtl.)/Hect..	Implicit Price(Qtl.)	MSP /Qtl.
Andhra Pradesh	2007-08	10727.16	14808.41	845.84	1166.40	1283.04	10.55	805.70	600
	2008-09	14921.48	24200.43	676.63	1102.37	1212.61	20.07	1251.96	840
Karnataka	2007-08	6551.69	9368.42	671.64	956.40	1074.17	8.44	1196.13	600
	2008-09	7925.12	10662.15	747.93	1007.52	1108.27	8.90	917.29	840
Madhya Pradesh	2007-08	8625.57	12522.19	464.83	672.98	740.28	13.94	713.58	600
	2008-09	8730.12	11750.48	833.52	1123.22	1235.54	8.33	812.61	840
Maharashtra	2007-08	13527.46	18268.29	553.86	748.90	823.79	17.32	856.62	600
	2008-09	14355.32	20607.77	647.13	927.53	1020.28	14.54	898.00	840
Rajasthan	2007-08	5353.75	7279.40	711.76	850.81	938.91	3.68	879.57	600
	2008-09	6813.93	9283.45	551.15	756.72	822.39	5.58	818.32	840
Tamil Nadu	2007-08	7962.03	10605.84	478.49	582.93	641.22	10.49	867.53	600
	2008-09	8593.40	10795.57	579.53	694.87	764.36	8.58	840.76	840

Bajra

States	Year	Rupees							MSP /Qtl.
		A2+FL /Hect	C2 /Hect	A2+FL /Qtl.	C2 /Qtl.	C3 /Qtl.	Yield (Qtl.)/Hect..	Implicit Price(Qtl.)	
Gujarat	2007-08	12571.66	15593.37	500.02	611.09	672.20	19.47	778.84	600
	2008-09	15183.54	20836.18	451.65	615.04	676.54	25.07	839.79	840
Haryana	2007-08	10509.24	15803.22	452.21	678.98	746.88	18.98	602.52	600
	2008-09	11575.62	18716.33	476.30	769.59	846.59	21.43	808.24	840
Karnataka	2007-08	4683.29	6270.49	489.21	657.07	798.36	8.06	547.19	600
	2008-09	5760.57	7247.49	777.50	975.04	1072.54	6.39	735.54	840
Maharashtra	2007-08	12745.22	17036.74	554.94	742.88	817.17	19.14	717.64	600
	2008-09	17523.85	22280.63	838.44	1063.65	1170.02	16.67	890.62	840
Rajasthan	2007-08	5675.72	8358.52	370.87	549.38	616.64	9.25	639.52	600
	2008-09	7558.55	10331.69	489.93	668.23	740.36	9.24	676.91	840
Uttar Pradesh	2007-08	10328.55	15646.13	355.05	537.84	591.62	22.36	590.52	600
	2008-09	11892.17	17821.07	489.01	731.21	804.33	19.53	599.55	840

Maize

States	Year	Rupees							MSP /Qtl.
		A2+FL /Hect	C2 /Hect	A2+FL /Qtl.	C2 /Qtl.	C3 /Qtl.	Yield (Qtl.)/Hect..	Implicit Price(Qtl.)	
Andhra Pradesh	2007-08	17771.81	26728.22	406.86	611.10	675.17	41.50	628.81	620
	2008-09	25687.09	37801.85	572.50	840.58	931.56	42.68	788.33	840
Bihar	2007-08	12879.71	18586.90	296.81	429.07	500.88	37.92	586.10	620
	2008-09	13513.92	19857.70	268.18	404.43	445.86	42.95	828.05	840
Chhattisgarh	2007-08	4571.53	6568.97	343.75	494.02	609.00	10.11	549.92	620
	2008-09	4079.63	6730.63	394.98	651.33	784.99	9.31	791.73	840
Gujarat	2007-08	15072.90	20039.38	384.05	512.09	563.30	28.69	690.10	620
	2008-09	12679.77	17655.42	426.55	593.48	652.83	23.68	845.45	840
Himachal Pradesh	2007-08	11478.64	17135.27	445.57	669.95	736.95	17.85	784.88	620
	2008-09	9519.75	14271.62	530.88	796.56	897.79	12.64	723.79	840
Karnataka	2007-08	10364.96	15568.85	310.35	465.07	519.76	29.95	679.80	620
	2008-09	13792.85	20671.54	389.00	581.69	639.86	31.10	802.56	840
Madhya Pradesh	2007-08	10162.94	13403.09	671.67	885.37	973.91	12.61	709.87	620
	2008-09	9899.63	13055.50	738.89	975.69	1073.26	10.81	697.41	840
Rajasthan	2007-08	13338.48	17729.11	519.75	690.80	761.44	21.07	683.27	620
	2008-09	14421.46	19810.29	477.65	658.77	724.65	23.56	775.02	840
Tamil Nadu	2007-08	16167.61	22742.90	419.61	591.15	652.88	36.38	740.71	620
	2008-09	22846.06	31835.34	479.26	668.32	735.15	45.05	787.07	840
Uttar Pradesh	2007-08	11496.58	16709.03	570.98	842.75	927.03	17.01	727.96	620
	2008-09	15635.43	21045.11	1035.32	1387.36	1581.27	13.70	739.87	840

Ragi

States	Year	Rupees							MSP /Qtl.
		A2+FL /Hect	C2 /Hect	A2+FL /Qtl.	C2 /Qtl.	C3 /Qtl.	Yield (Qtl.)/Hect..	Implicit Price(Qtl.)	
Karnataka	2007-08	14391.66	17872.36	832.22	1031.39	1158.00	14.70	700.40	600
	2008-09	15383.52	18101.38	671.83	1005.02	1105.52	17.65	886.81	915
Maharashtra	2007-08	16963.53	19471.56	2046.78	2363.69	2600.06	7.40	1467.00	600
	2008-09	23606.40	29481.05	1578.93	1963.49	2224.46	13.63	1314.93	915
Tamil Nadu	2007-08	15310.86	22030.88	395.08	568.86	625.75	35.07	807.72	600
	2008-09	15379.12	19072.64	659.45	822.00	904.20	19.83	1030.94	915

Table 3(D): Cost Estimates for Pulses

Tur (Arhar)

Rupees

States	Year	A2+FL /Hect	C2 /Hect	A2+FL /Qtl.	C2 /Qtl.	C3 /Qtl.	Yield (Qtl.)/Hect..	Implicit Price(Qtl.)	MSP /Qtl.
Andhra Pradesh	2007-08	11243.12	18042.65	1372.85	2192.98	2412.28	8.05	2241.29	1590
	2008-09	17051.66	24171.65	2586.58	3670.54	4037.59	6.42	2691.06	2000
Bihar	2007-08	7985.40	16611.83	830.56	1723.63	1917.90	9.20	2667.24	1590
	2008-09	7670.26	14662.23	737.59	1408.75	1565.78	9.48	2540.83	2000
Gujarat	2007-08	9439.86	15315.23	699.10	1136.36	1291.30	12.61	2312.61	1590
	2008-09	13468.82	19551.90	1307.19	1898.30	2088.44	9.59	2959.10	2000
Karnataka	2007-08	8915.96	13006.98	1162.38	1682.16	1870.46	7.26	2170.93	1590
	2008-09	10593.15	16528.68	1393.14	2172.46	2389.71	7.47	3038.21	2000
Madhya Pradesh	2007-08	7433.23	13073.42	895.75	1569.41	1726.35	7.71	2220.50	1590
	2008-09	8184.71	14204.92	1078.95	1873.83	2061.21	7.16	2743.17	2000
Maharashtra	2007-08	16419.82	22102.50	1466.01	1973.68	2178.49	10.76	2172.65	1590
	2008-09	17130.55	25270.26	1884.33	2775.80	3072.59	8.72	3082.50	2000
Orissa	2007-08	7106.48	11247.73	1596.36	2527.40	2854.07	4.31	2079.14	1590
	2008-09	6539.60	10698.29	1308.68	2147.67	2407.98	4.76	2559.19	2000
Tamilnadu	2007-08	11486.57	14566.07	1037.10	1314.66	1446.13	10.11	1800.66	1590
	2008-09	12517.40	16205.47	3203.41	4154.22	4569.64	3.71	2936.89	2000
Uttar Pradesh	2007-08	8566.43	18166.82	863.49	1823.22	2005.54	8.95	2607.78	1590
	2008-09	9794.05	23076.74	818.38	1941.55	2223.76	9.83	2933.95	2000

Moong

Rupees

States	Year	A2+FL /Hect	C2 /Hect	A2+FL /Qtl.	C2 /Qtl.	C3 /Qtl.	Yield (Qtl.)/Hect..	Implicit Price(Qtl.)	MSP /Qtl.
Andhra Pradesh	2007-08	6534.22	12567.43	830.12	1604.53	1764.98	7.69	2473.11	1740
	2008-09	6684.18	13209.32	1127.22	2228.97	2451.87	5.90	2785.49	2520
Karnataka	2007-08	5053.14	6352.03	2067.60	2590.88	2962.78	2.35	2167.04	1740
	2008-09	6440.64	7868.64	4755.59	5777.48	6355.23	1.32	3405.55	2520
Maharashtra	2007-08	11140.39	13645.36	1980.48	2424.60	2667.06	5.51	2069.09	1740
	2008-09	10780.76	15371.45	1585.46	2261.24	2495.44	6.70	3043.29	2520
Orissa	2007-08	5243.39	7824.42	1569.08	2336.87	2705.83	3.18	2402.61	1740
	2008-09	5483.54	8266.98	1734.42	2614.14	2923.32	3.01	2848.48	2520
Rajasthan	2007-08	5434.79	7984.92	1268.80	1862.62	2156.94	3.96	2255.54	1740
	2008-09	6204.23	9165.59	1410.86	2068.67	2313.26	4.05	2890.67	2520

Urad

Rupees

States	Year	A2+FL /Hect	C2 /Hect	A2+FL /Qtl.	C2 /Qtl.	C3 /Qtl.	Yield (Qtl.)/Hect..	Implicit Price(Qtl.)	MSP /Qtl.
Andhra Pradesh	2007-08	5885.73	13120.08	653.65	1454.55	1603.18	8.99	2611.64	1740
	2008-09	7818.27	14468.70	1035.16	1914.90	2126.39	7.48	3012.86	2520
Chhattisgarh	2007-08	5233.40	7957.45	965.38	1468.28	1634.33	5.22	1801.79	1740
	2008-09	7105.40	10365.26	1573.95	2297.44	2565.07	4.40	2570.82	2520
Madhya Pradesh	2007-08	7218.45	10341.56	1355.02	1939.92	2133.91	5.05	1954.78	1740
	2008-09	8803.60	12873.10	1255.85	1833.65	2017.02	6.69	2101.85	2520
Maharashtra	2007-08	10533.64	13745.67	1357.61	1773.81	1951.19	7.62	2008.02	1740
	2008-09	11248.31	14760.08	2554.28	3342.29	3683.75	4.33	2839.01	2520
Orissa	2007-08	5241.10	8264.49	1286.86	2037.70	2362.13	3.75	2292.74	1740
	2008-09	5658.33	9066.74	1315.83	2111.87	2345.89	4.05	2512.72	2520
Rajasthan	2007-08	7607.30	10676.01	1531.34	2133.35	2346.69	4.50	2608.16	1740
	2008-09	8068.50	10723.41	2719.78	3579.51	4040.64	2.66	3058.99	2520
Tamil Nadu	2007-08	7024.13	10227.18	1708.09	2483.97	2732.37	4.06	2749.92	1740
	2008-09	7664.02	11097.26	1814.63	2625.29	2778.92	4.11	3214.32	2520
Uttar Pradesh	2007-08	5410.88	8785.36	1419.38	2304.17	2534.59	3.71	2727.52	1740
	2008-09	6768.52	10838.89	1608.30	2564.97	2888.10	4.07	2884.83	2520

Table 3(E): Cost Estimates for Oilseeds

Groundnut

States	Year	Rupees							
		A2+FL /Hect	C2 /Hect	A2+FL /Qtl.	C2 /Qtl.	C3 /Qtl.	Yield (Qtl.)/Hect..	Implicit Price(Qtl.)	MSP /Qtl.
Andhra Pradesh	2007-08	18269.75	28527.06	1323.06	2063.36	2282.92	13.12	2183.27	1550
	2008-09	21229.01	30434.61	1785.73	2554.91	2832.71	11.07	2122.74	2100
Gujarat	2007-08	17029.59	23564.01	1131.10	1566.36	1724.10	13.05	2453.67	1550
	2008-09	22951.28	30114.45	1465.65	1918.92	2112.94	13.45	2330.73	2100
Karnataka	2007-08	10193.95	14677.33	1167.22	1673.23	1946.85	8.35	2215.14	1550
	2008-09	13647.10	17314.20	2733.98	3484.01	3852.39	4.71	2599.49	2100
Orissa	2008-09	17119.11	25265.16	1336.01	1973.47	2170.82	12.42	2282.14	1550
Maharashtra	2007-08	19837.51	25514.90	1391.77	1801.98	1982.18	13.14	1904.44	1550
	2008-09	26078.66	32683.46	2527.20	3207.35	3528.09	9.33	2284.22	2100
Tamil Nadu	2007-08	19201.32	25890.21	1367.28	1832.25	2015.48	13.06	1716.66	1550
	2008-09	22507.86	30393.66	1762.46	2358.00	2593.80	11.98	2736.73	2100

Soyabean

States	Year	Rupees							
		A2+FL /Hect	C2 /Hect	A2+FL /Qtl.	C2 /Qtl.	C3 /Qtl.	Yield (Qtl.)/Hect..	Implicit Price(Qtl.)	MSP /Qtl.
Madhya Pradesh	2007-08	9653.92	15141.91	739.91	1159.79	1275.71	12.36	1491.47	1050
	2008-09	11372.00	17329.75	882.43	1343.92	1479.20	12.12	1569.75	1390
Maharashtra	2007-08	13968.58	19519.40	818.28	1140.73	1254.80	16.64	1617.26	1050
	2008-09	16768.58	22193.98	1332.07	1763.43	1940.99	12.25	1637.31	1390
Rajasthan	2007-08	10208.64	14096.80	753.70	1040.75	1152.82	12.92	1487.98	1050
	2008-09	11309.44	15199.75	1196.48	1609.30	1835.59	8.85	1977.78	1390

Sunflower

States	Year	Rupees							
		A2+FL /Hect	C2 /Hect	A2+FL /Qtl.	C2 /Qtl.	C3 /Qtl.	Yield (Qtl.)/Hect..	Implicit Price(Qtl.)	MSP /Qtl.
Andhra Pradesh	2007-08	9358.73	13627.55	1622.43	2364.30	2606.22	5.75	2227.81	1510
	2008-09	14734.04	18108.26	2094.52	2572.84	2838.28	7.03	1983.79	2215
Karnataka	2007-08	6949.46	10429.45	1064.84	1597.93	1829.50	6.44	2287.26	1510
	2008-09	9196.66	12033.36	2159.19	2825.24	3107.76	4.12	2166.09	2215
Maharashtra	2007-08	10249.00	13316.53	1564.13	2033.20	2236.52	6.49	2438.53	1510
	2008-09	12984.09	17905.92	1493.90	2059.11	2265.02	8.58	2243.78	2215

Sesamum

States	Year	Rupees							
		A2+FL /Hect	C2 /Hect	A2+FL /Qtl.	C2 /Qtl.	C3 /Qtl.	Yield (Qtl.)/Hect..	Implicit Price(Qtl.)	MSP /Qtl.
Gujarat	2007-08	8493.78	11327.97	2176.89	2900.60	3190.66	3.84	4003.70	1580
	2008-09	13571.30	18817.16	3209.07	4445.77	4937.88	4.19	6045.18	2750
Orissa	2007-08	6826.94	9368.37	2061.89	2830.05	3253.09	3.16	2398.95	1580
	2008-09	6975.45	10486.61	1904.57	2867.14	3205.18	3.49	2749.27	2750
Rajasthan	2007-08	5433.68	8442.70	1176.51	1825.08	2093.88	4.53	3061.61	1580
	2008-09	5376.71	9384.38	1970.44	3440.82	3784.90	2.68	6081.57	2750
Tamil Nadu	2007-08	8912.04	13440.71	2056.65	3096.38	3406.02	4.28	3232.78	1580
	2008-09	10148.14	16588.18	2459.30	4020.87	4422.96	4.12	4821.23	2750
West Bengal	2007-08	10365.39	14183.75	1356.29	1855.85	2041.44	7.32	1743.59	1580
	2008-09	12829.26	18749.65	1364.68	1994.03	2223.23	8.93	2254.22	2750

Nigerseed

States	Year	Rupees							
		A2+FL /Hect	C2 /Hect	A2+FL /Qtl.	C2 /Qtl.	C3 /Qtl.	Yield (Qtl.)/Hect..	Implicit Price(Qtl.)	MSP /Qtl.
Orissa	2007-08	5313.31	5934.56	1943.03	2168.89	2459.17	2.72	1921.78	1240
	2008-09	5464.63	8191.07	1872.95	2802.99	3083.29	2.90	2948.13	2405

Table 3(F): Cost Estimates for VFC Tobacco

VFC Tobacco

States	Year	Rupees							
		A2+FL /Hect	C2 /Hect	A2+FL /Qtl.	C2 /Qtl.	C3 /Qtl.	Yield (Qtl.)/Hect..	Implicit Price(Qtl.)	MSP /Qtl.
Andhra Pradesh	2007-08	55324.78	69028.90	4187.45	5224.70	57677.70	13.21	8805.84	3200
	2008-09	82761.02	102943.60	5984.17	7443.50	8222.66	13.83	10229.84	Not Declared

Projected Cost of Production of Kharif Crops (Rs./Qtl)								
Crop/States		PROJECTIONS FOR 2011-12						
		Composite Variable Input Index			Cost of Production			
		Base Year	2008-09	2010-11	2011-12	Yield	A2+FL	C2
		1	2	3	4	5	6	7
<u>Paddy</u>								
1	Andhra Pradesh	2004-05	175.31	210.86	228.80	54.07	655.46	896.47
2	Assam	2004-05	136.22	154.59	163.10	22.95	751.50	944.37
3	Bihar	2004-05	141.31	179.22	195.47	26.91	573.53	732.37
4	Chhattisgarh	2004-05	145.34	169.00	180.54	27.20	557.38	777.00
5	Gujarat	2005-06	125.12	144.86	151.93	35.31	485.11	629.37
6	Haryana	2004-05	127.26	164.66	184.35	48.56	696.16	1022.57
7	Himachal Pradesh	2005-06	127.94	152.34	165.19	16.37	717.95	968.45
8	Jharkhand	2004-05	135.52	147.96	153.63	18.82	665.16	870.01
9	Karnataka	2004-05	134.54	151.96	161.85	48.20	598.48	797.08
10	Kerala	2004-05	133.81	188.75	204.36	38.95	982.18	1168.74
11	Madhya Pradesh	2004-05	148.47	164.01	172.88	19.40	687.93	937.77
12	Maharashtra	2005-06	130.69	160.69	167.26	25.64	1271.91	1482.13
13	Orissa	2004-05	132.82	188.30	202.61	31.23	741.27	940.80
14	Punjab	2004-05	141.74	188.97	198.86	66.17	488.34	734.72
15	Tamil Nadu	2004-05	129.91	168.96	179.84	47.38	790.52	998.01
16	Uttar Pradesh	2004-05	146.90	185.90	195.52	34.08	679.70	898.88
17	Uttarakhand	2004-05	137.43	153.65	162.25	36.10	471.59	688.39
18	West Bengal	2004-05	133.98	163.41	175.11	37.59	713.15	896.27
Weighted Average							672.53	887.72
<u>Cotton</u>								
1	Andhra Pradesh	2004-05	180.83	215.10	235.59	21.05	1892.09	2579.15
2	Gujarat	2004-05	140.40	153.19	159.81	17.09	1674.66	2216.55
3	Haryana	2004-05	208.54	228.27	242.01	17.66	1994.37	2650.82
4	Karnataka	2004-05	221.51	277.43	283.71	9.54	2089.18	2663.49
5	Madhya Pradesh	2004-05	144.96	168.68	181.51	13.80	1801.45	2536.49
6	Maharashtra	2004-05	154.01	185.03	193.83	11.58	2458.64	2960.69
7	Punjab	2004-05	189.39	231.50	246.33	22.31	1647.59	2396.61
8	Rajasthan	2004-05	153.20	177.74	192.83	15.42	1472.10	1966.52
9	Tamil Nadu	2004-05	152.99	207.45	225.51	15.77	2612.07	3076.29
Weighted Average							1941.43	2528.37

Table - 3(G) Projected Cost of Production of Kharif Crops (Rs./Qtl)

Crop/States		PROJECTIONS FOR 2011-12						
		Composite Variable Input Index			Cost of Production			
		Base Year	2008-09	2010-11	2011-12	Yield	A2+FL	C2
		1	2	3	4	5	6	7
<u>Jowar</u>								
1	Andhra Pradesh	2004-05	197.42	201.29	216.03	14.51	1043.62	1392.99
2	Karnataka	2004-05	150.49	196.77	198.59	8.06	1067.05	1327.45
3	Madhya Pradesh	2004-05	171.19	208.59	229.01	11.11	882.95	1124.68
4	Maharashtra	2004-05	140.96	176.21	186.92	15.47	821.27	1035.85
5	Rajasthan	2004-05	137.47	183.35	193.95	4.62	866.90	1094.82
6	Tamil Nadu	2004-05	141.08	210.86	231.50	8.98	947.75	1139.14
Weighted Average							904.90	1141.12
<u>Bajra</u>								

1	Gujarat	2004-05	134.33	154.19	160.34	20.75	625.89	762.75
2	Haryana	2004-05	171.53	183.65	202.44	18.58	648.31	896.69
3	Karnataka	2005-06	154.66	207.47	210.72	7.18	973.80	1150.01
4	Maharashtra	2004-05	147.60	174.74	187.46	17.45	876.07	1073.76
5	Rajasthan	2004-05	148.19	174.43	186.23	8.83	620.35	798.81
6	Uttar Pradesh	2004-05	155.88	178.37	184.46	20.77	516.23	760.02
Weighted Average							644.67	839.89
<u>Maize</u>								
1	Andhra Pradesh	2004-05	190.83	211.23	232.33	39.36	708.90	935.22
2	Bihar	2004-05	129.28	166.94	178.50	38.58	426.26	552.15
3	Chhattisgarh	2004-05	109.17	124.21	131.87	9.91	464.63	654.32
4	Gujarat	2005-06	138.44	158.51	162.52	19.59	933.06	1096.66
5	Himachal Pradesh	2004-05	134.95	194.25	208.27	15.87	701.26	925.52
6	Karnataka	2005-06	137.27	169.04	182.44	29.53	523.11	693.15
7	Madhya Pradesh	2004-05	161.61	165.91	167.76	10.13	923.16	1164.13
8	Rajasthan	2004-05	138.09	189.44	203.92	18.64	981.41	1164.18
9	Tamil Nadu	2005-06	135.15	171.75	181.60	38.14	652.58	838.76
10	Uttar Pradesh	2004-05	198.96	245.60	265.58	15.64	1142.44	1424.52
Weighted Average							723.00	921.23
<u>Ragi</u>								
1	Karnataka	2004-05	140.06	163.82	169.91	16.82	951.95	1192.47
2	Maharashtra	2005-06	140.14	143.17	143.72	10.16	2108.78	2391.19
3	Tamil Nadu	2004-05	153.34	216.91	238.41	25.11	933.04	1136.09
Weighted Average							1031.74	1271.46

(contd..)

(Concluded)

Table - 3(G): Projected Cost of Production of Kharif Crops (Rs./Qtl)

Crop/States		PROJECTIONS FOR 2011-12						
		Composite Variable Input Index				Cost of Production		
		Base Year	2008-09	2010-11	2011-12	Yield	A2+FL	C2
		1	2	3	4	5	6	7
<u>Tur (arhar)</u>								
1	Andhra Pradesh	2004-05	208.92	245.61	266.28	7.20	2799.97	3672.82
2	Bihar	2005-06	120.74	162.42	175.16	8.35	1278.52	1950.88
3	Gujarat	2004-05	151.02	182.96	198.28	10.03	1669.89	2144.14
4	Karnataka	2004-05	145.36	165.88	171.48	6.97	1834.75	2453.71
5	Madhya Pradesh	2004-05	130.88	139.94	151.64	7.22	1172.09	1879.10
6	Maharashtra	2004-05	135.03	150.74	158.53	9.59	2079.09	2974.45
7	Orissa	2004-05	145.62	225.72	235.29	4.20	2610.75	3504.29
8	Tamil Nadu	2006-07	138.40	177.36	202.23	6.14	3613.66	4155.37
9	Uttar Pradesh	2004-05	155.79	195.21	207.31	9.19	1335.91	2317.10
Weighted Average							1912.93	2702.31
<u>Moong</u>								
1	Andhra Pradesh	2004-05	172.74	194.48	218.65	5.93	2016.18	2973.58
2	Karnataka	2005-06	136.80	176.68	193.85	2.07	4563.25	5324.03
3	Maharashtra	2004-05	146.68	172.69	187.29	5.44	3072.11	3686.32
4	Orissa	2004-05	129.85	194.52	214.53	3.05	2897.87	3737.84
5	Rajasthan	2004-05	157.95	192.72	207.70	3.86	2067.20	2781.33
Weighted Average							2641.49	3372.50
<u>Urad</u>								
1	Andhra Pradesh	2004-05	160.45	177.47	197.95	9.43	1083.63	1918.65
2	Chhattisgarh	2004-05	143.60	159.27	164.71	4.16	1776.57	2476.15
3	Madhya Pradesh	2004-05	147.31	180.34	198.99	5.69	1949.76	2627.56
4	Maharashtra	2004-05	167.24	188.14	197.61	5.35	2877.55	3550.83
5	Orissa	2004-05	136.86	163.44	179.09	4.00	1792.60	2568.15
6	Rajasthan	2004-05	225.58	274.11	300.65	5.13	2896.26	3587.74
7	Tamil Nadu	2004-05	150.02	202.47	220.62	4.30	2729.75	3525.99
8	Uttar Pradesh	2004-05	159.09	184.27	194.95	4.01	1997.17	2891.12
Weighted Average							2026.79	2798.93

Table 3(G): Projected Cost of Production of Kharif Crops (Rs./Qtl)

Crop/States		PROJECTIONS FOR 2011-12						
		Composite Variable Input Index			Cost of Production			
		Base Year	2008-09	2010-11	2011-12	Yield	A2+FL	C2
		1	2	3	4	5	6	7
<u>Groundnut</u>								
1	Andhra Pradesh	2004-05	164.35	207.33	221.79	11.05	2466.67	3184.75
2	Gujarat	2004-05	142.41	153.81	159.39	11.74	1659.41	2086.79
3	Karnataka	2004-05	171.21	203.08	227.35	5.92	3114.49	3743.05
4	Maharashtra	2004-05	139.14	175.83	189.38	10.47	2697.68	3210.70
5	Tamil Nadu	2004-05	156.59	194.92	207.61	13.21	2145.60	2653.86
Weighted Average							2103.25	2633.18
<u>Soyabean</u>								
1	Madhya Pradesh	2004-05	140.78	154.53	159.31	11.99	985.93	1391.15
2	Maharashtra	2004-05	126.70	157.83	170.07	14.28	1484.43	1829.98
3	Rajasthan	2004-05	140.62	178.83	190.87	12.14	1464.29	1771.53
Weighted Average							1182.37	1560.22
<u>Sunflower</u>								
1	Andhra Pradesh	2004-05	153.48	165.89	176.31	6.55	2196.20	2799.29
2	Karnataka	2004-05	145.82	181.77	186.15	5.01	2262.67	2840.50
3	Maharashtra	2004-05	123.98	154.42	161.41	7.28	2136.70	2652.34
Weighted Average							2218.38	2795.10
<u>Sesamum</u>								
1	Gujarat	2004-05	126.08	136.72	139.31	3.45	3341.39	4581.83
2	Orissa	2004-05	144.54	156.03	162.15	3.39	2336.12	3158.24
3	Rajasthan	2004-05	147.78	206.02	228.77	3.23	2651.70	3645.16
4	Tamil Nadu	2004-05	155.41	214.32	222.75	4.52	3377.00	4173.22
5	West Bengal	2005-06	137.46	168.36	177.68	8.13	1764.16	2288.34
Weighted Average							2531.60	3392.60
<u>Nigerseed</u>								
1	Orissa	2004-05	144.35	155.27	161.17	2.61	2388.66	2945.18
Weighted Average							2388.66	2945.18
<u>Tobacco</u>								
1	Andhra Pradesh	2004-05	206.81	217.45	232.42	13.39	6770.71	7923.53
Weighted Average							6770.71	7923.53

Table – 3 (H)

Comparative Statement of Cost Estimates provided under Comprehensive Scheme (C.S.)
and those by State Government

Crop/State	Year	Cost of Cultivation (Rs/Hect)		Yield (Qtl/Hect.)		Yield Variation (%) CS over States Estimates	Cost of Production (Rs./Qtl.)		Cost of Production Variation (%) CS over States Estimates
		C.S. Survey	State* Reply	C.S. Survey	State* Reply		C.S. Survey	State* Reply	
1	2	3	4	5	6	7	8	9	10
PADDY									
Andhra Pradesh									
Common	2008-09	46450.2	41466	56.00	45.02	24.38	789.90	921	-14.23
	2009-10	NA	50146	NA	48.31		NA	1038	
	2010-11	NA	52691	NA	48.25		NA	1092	
Grade A	2008-09	NA	42364	NA	43.99		NA	963	
	2009-10	NA	52681	NA	48.20		NA	1093	
	2010-11	NA	53755	NA	47.95		NA	1121	
Haryana									
	2008-09	43622.77	46188.86	42.01	27.26	54.11	1021.90	957.28	6.75
	2009-10	NA	47796.99	NA	46.63		NA	1025.03	
	2010-11	NA	49485.29	NA	45.47		NA	1088.31	
Gujarat									
	2008-09	27647.06	31412	38.15	37.39	2.03	624.37	750	-16.76
	2009-10	NA	41785	NA	36.79		NA	1021	
	2010-11	NA	36049	NA	36.42		NA	874	
Madhya Pradesh									
	2008-09	21954.5	NA	26.64	9.78	172.39	745.22	970	-23.16
	2009-10	NA	NA	NA	9.60		NA	1162	
	2010-11	NA	NA	NA	10.24		NA	1240	
Maharashtra									
	2008-09	35206.03	23742	21.74	29.32	-25.85	1413.59	743	90.25
	2009-10	NA	28462	NA	30.83		NA	842	
	2010-11	NA	30952	NA	28.64		NA	1021	
Tamil Nadu									
	2008-09	40242.38	38388	42.00	26.83	56.54	894.99	1019	-12.17
	2009-10	NA	43403	NA	49.00		NA	974	
Uttar Pradesh									
Common	2008-09	28144.5	28299	36.61	30.09	21.67	732.62	894	-18.05
	2009-10	NA	31734	NA	29.87		NA	1012	
Grade A	2008-09	NA	28800	NA	26.62		NA	1011	
	2009-10	NA	32445	NA	25.12		NA	1209	
Uttarakhand									
Coarse(Plain)	2008-09	27106.11	NA	36.95	NA		674.05	NA	
	2010-11	NA	31830	NA	37.00		NA	699	
Fine (Plain)	2010-11	NA	35728	NA	23.00		NA	1403	
West Bengal									
	2008-09	33046.12	25625	39.04	38.39	1.71	731.25	667.57	9.54
	2009-10	NA	32543	NA	NA		NA	871.36	

Crop/State	Year	Cost of Cultivation (Rs/Hect)		Yield (Qtl/Hect.)		Yield Variation (%) CS over States Estimates	Cost of Production (Rs./Qtl.)		Cost of Production Variation (%) CS over States Estimates
		C.S. Survey	State* Reply	C.S. Survey	State* Reply		C.S. Survey	State* Reply	
1	2	3	4	5	6	7	8	9	10
COTTON									
Andhra Pradesh									
Long Staple	2008-09	44756.72	41017	17.83	14.33	24.41	2509.99	2862	-12.30
Medium staple	2008-09	NA	38680	NA	14.84		NA	2607	
Long Staple	2009-10	NA	46002	NA	16.00		NA	2875	
Medium staple	2009-10	NA	43023	NA	16.00		NA	2689	
Long Staple	2010-11	NA	46306	NA	14.00		NA	3308	
Medium staple	2010-11	NA	43836	NA	14.00		NA	3131	
Gujarat									
Long Staple	2008-09	42070.44	56839	19.05	24.46	-22.12	2179.26	2295	-5.04
Medium staple	2008-09	NA	21209	NA	10.72		NA	1930	
Long Staple	2009-10	NA	66828	NA	23.85		NA	2772	
Medium staple	2009-10	NA	24097	NA	10.36		NA	2263	
Long Staple	2010-11	NA	60384	NA	25.02		NA	2383	
Medium staple	2010-11	NA	23897	NA	10.84		NA	2136	
Haryana									
	2008-09	44018.18	41450.32	19.9	16.82	18.31	2127.35	2393.00	-11.10
	2009-10	NA	45228.07	NA	20.08		NA	2192.63	
	2010-11	NA	47386.94	NA	20.04		NA	2297.25	
Madhya Pradesh									
	2008-09	28749.29	NA	16.06	7.19	123.37	1708.32	2692	-36.54
	2009-10	NA	NA	NA	7.00		NA	2900	
	2010-11	NA	NA	NA	7.31		NA	3025	
Maharashtra									
Long staple	2008-09	33116.82	25042	12.69	11.25	12.80	2539.47	2226	14.08
	2009-10	NA	32118	NA	12.34		NA	2603	
	2010-11	NA	33801	NA	12.51		NA	2702	
Medium Staple	2008-09	NA	18910	NA	8.44		NA	2241	
	2009-10	NA	21864	NA	8.84		NA	2473	
	2010.11	NA	24902	NA	9.47		NA	2630	
Tamil Nadu									
	2008-09	42145.21	36915	20.62	14.04	46.90	2015.38	2630	-23.37
	2009-10	NA	34541	NA	19.00		NA	1999	
JOWAR									
Andhra Pradesh	2008-09	24200.43	11759	20.07	12.50	60.61	1102.37	941	17.15
	2009-10	NA	14332	NA	13.41		NA	1069	
	2010-11	NA	14615	NA	12.55		NA	1165	
Madhya Pradesh	2008-09	11750.48	NA	8.33	12.02	-30.70	1123.22	899	24.94
	2009-10	NA	NA	NA	12.40		NA	960	
	2010-11	NA	NA	NA	12.77		NA	1050	
Maharashtra	2008-09	20607.77	15440	14.54	18.01	-19.27	927.53	595	55.89
	2009-10	NA	19192	NA	18.48		NA	762	
	2010-11	NA	19815	NA	18.39		NA	810	

Crop/State	Year	Cost of Cultivation (Rs/Hect)		Yield (Qtl/Hect.)		Yield Variation (%) CS over States Estimates	Cost of Production (Rs./Qtl.)		Cost of Production Variation (%) CS over States Estimates
		C.S. Survey	State* Reply	C.S. Survey	State* Reply		C.S. Survey	State* Reply	
1	2	3	4	5	6	7	8	9	10
BAJRA									
Haryana	2008-09	18716.33	16124.27	21.43	15.36	39.52	769.59	749.76	2.64
	2009-10	NA	19172.34	NA	17.53		NA	793.63	
	2010-11	NA	19646.29	NA	17.36		NA	801.76	
Gujarat	2008-09	20836.18	14859	25.07	16.44	52.49	615.04	756	-18.66
	2009-10	NA	19840	NA	16.82		NA	995	
	2010-11	NA	18699	NA	19.26		NA	810	
Maharashtra	2008-09	22280.63	12277	16.67	13.76	21.15	1063.65	715	48.76
	2009-10	NA	15566	NA	14.16		NA	857	
	2010-11	NA	17599	NA	14.28		NA	1014	
Uttar Pradesh	2008-09	17821.07	13681	19.53	14.05	39.00	731.21	808	-9.50
	2009-10	NA	15769	NA	13.18		NA	976	
MAIZE									
Andhra Pradesh	2008-09	37801.85	28191	42.68	32.00	33.38	840.58	881	-4.59
	2009-10	NA	33506	NA	35.64		NA	940	
	2010-11	NA	33994	NA	34.20		NA	994	
Gujarat	2008-09	17655.42	14751	23.68	13.71	72.72	593.48	1003	-40.84
	2009-10	NA	17264	NA	16.03		NA	1008	
	2010-11	NA	14861	NA	17.52		NA	1039	
Madhya Pradesh	2008-09	13055.5	NA	10.81	13.69	-21.04	975.69	920	6.05
	2009-10	NA	NA	NA	14.50		NA	975	
	2010-11	NA	NA	NA	15.45		NA	1020	
Tamil Nadu	2008-09	31835.34	29736	45.05	43.88	2.67	668.32	647	3.30
	2009-10	NA	28269	NA	45.00		NA	691	
Uttar Pradesh	2008-09	21045.11	13559	13.7	15.24	-10.10	1387.36	809	71.49
	2009-10	NA	15936	NA	14.92		NA	975	

Crop/State	Year	Cost of Cultivation (Rs/Hect)		Yield (Qtl/Hect.)		Yield Variation (%) CS over	Cost of Production (Rs./Qtl.)		Cost of Production Variation (%) CS over States Estimates
		C.S. Survey	State* Reply	C.S. Survey	State* Reply	States Estimates	C.S. Survey	State* Reply	
1	2	3	4	5	6	7	8	9	10
TUR (ARHAR)									
Andhra Pradesh	2008-09	24171.65	15647	6.42	6.10	5.24	3670.54	2565	43.10
	2009-10	NA	17314	NA	6.21		NA	2786	
	2010-11	NA	17982	NA	5.17		NA	3476	
Gujarat	2008-09	19551.9	17095	9.59	9.75	-1.64	1898.3	1600	18.64
	2009-10	NA	23558	NA	9.91		NA	2207	
	2010-11	NA	20322	NA	8.94		NA	2021	
Madhya Pradesh	2008-09	14204.92	NA	7.16	6.43	11.35	1873.83	2190	-14.44
	2009-10	NA	NA	NA	8.50		NA	2400	
	2010-11	NA	NA	NA	8.76		NA	3100	
Maharashtra	2008-09	25270.26	19140	8.72	10.47	-16.71	2775.8	1691	64.15
	2009-10	NA	25442	NA	11.93		NA	2022	
	2010-11	NA	28788	NA	12.36		NA	2234	
Uttar Pradesh	2008-09	23076.74	21873	9.83	7.14	37.68	1941.55	2532	-23.32
MOONG									
Andhra Pradesh	2008-09	13209.32	11414	5.9	4.30	37.24	2228.97	2655	-16.05
	2009-10	NA	12470	NA	4.30		NA	2900	
	2010-11	NA	13295	NA	4.00		NA	3324	
Maharashtra	2008-09	15371.45	11337	6.70	5.16	29.84	2261.24	2178	3.82
	2009-10	NA	13948	NA	5.45		NA	2520	
	2010-11	NA	15469	NA	5.16		NA	2961	
URAD									
Andhra Pradesh	2008-09	14468.7	12667	7.48	4.60	62.63	1914.9	2754	-30.47
	2009-10	NA	13700	NA	4.50		NA	3044	
	2010-11	NA	14209	NA	4.20		NA	3383	
Maharashtra	2008-09	14760.08	12677	4.33	5.98	-27.59	3342.29	2104	58.85
	2009-10	NA	16480	NA	6.45		NA	2513	
	2010-11	NA	16819	NA	6.51		NA	2546	
Tamil Nadu	2008-09	11097.26	8881	4.11	3.01	36.54	2625.29	2067	27.00
	2009-10	NA	9474	NA	4.20		NA	2481	
Uttar Pradesh	2008-09	10838.89	10840	4.07	4.84	-15.91	2564.97	2168	18.31
	2009-10	NA	11805	NA	4.50		NA	2530	

Crop/State	Year	Cost of Cultivation (Rs/Hect)		Yield (Qtl/Hect.)		Yield Variation (%) CS over	Cost of Production (Rs./Qtl.)		Cost of Production Variation (%) CS over States Estimates
		C.S. Survey	State* Reply	C.S. Survey	State* Reply	States Estimates	C.S. Survey	State* Reply	
1	2	3	4	5	6	7	8	9	10
GROUNDNUT									
Andhra Pradesh	2008-09	30434.61	24207	11.07	10.70	3.44	2554.91	2262	12.95
	2009-10	NA	27827	NA	10.20		NA	2728	
	2010-11	NA	28174	NA	8.65		NA	3257	
Gujarat	2008-09	30114.45	26182	13.45	13.19	1.97	1918.92	1698	12.98
	2009-10	NA	32916	NA	12.93		NA	2192	
	2010-11	NA	30186	NA	14.21		NA	1800	
Maharashtra	2008-09	32683.46	19319	9.33	10.61	-12.06	3207.35	1729	85.50
	2009-10	NA	22964	NA	10.65		NA	2013	
	2010-11	NA	23297	NA	10.15		NA	2186	
Tamil Nadu	2008-09	30393.66	27531	11.98	19.88	-39.74	2358	1523	54.79
	2009-10	NA	29137	NA	21.00		NA	1526	
SUNFLOWER									
Andhra Pradesh	2008-09	18108.26	15055	7.03	6.00	17.16	2572.84	2509	2.54
	2009-10	NA	16250	NA	5.50		NA	2955	
	2010-11	NA	16633	NA	5.00		NA	3327	
Maharashtra	2008-09	17905.92	16000	8.58	10.81	-20.63	2059.11	1456	41.42
	2009-10	NA	18786	NA	10.81		NA	1718	
	2010-11	NA	16910	NA	8.55		NA	1957	
SOYABEAN									
Madhya Pradesh	2008-09	17329.75	NA	12.12	11.43	6.04	1343.92	1522	-11.70
	2009-10	NA	NA	NA	11.55		NA	1657	
	2010-11	NA	NA	NA	11.95		NA	1750	
Maharashtra	2008-09	22193.98	15483	12.25	11.82	3.64	1763.43	1267	39.18
	2009-10	NA	21898	NA	14.83		NA	1432	
	2010-11	NA	22468	NA	13.04		NA	1677	
SESAMUM									
Gujarat	2008-09	18817.16	11595	4.19	3.50	19.71	4445.77	3313	34.20
	2009-10	NA	12578	NA	3.59		NA	3504	
	2010-11	NA	13925	NA	3.49		NA	3989	

Table-3(I): Comparison of Cost Projections

Cost in Rs.
Yield in Qtl/ha

Crop/State	Year	State Yield	Comparison of Cost Projections				Yield	Projections for 2011-12 (as done by CACP)	
			State Projections* (determined by state)		Comparable Estimates** (using state data)				
			Cost/ Hactare	Cost/ Quintal	Cost/ Hactare	Cost/ Quintal		Cost/ Hactare	Cost/ Quintal
			1	2	3	4		5	6
<u>Paddy</u>									
Andhra Pradesh Common	2011-12	48.00	60982	1270	60982	1270	54.07	51435	896
Haryana	2011-12	45.47	49485	1277	49485	1088	48.56	50464	1023
Punjab	2011-12	58.95	63245	1500	63245	1071	66.17	48977	735
Uttarakhand Coarse (Plain)	2011-12	NA	NA	769	NA	769	36.10	27740	688
Coarse (Hill)	2011-12	NA	NA	1682	NA	1682	NP	NP	NP
Maharashtra	2011-12	28.59	38288	1780	37930	1327	25.64	42709	1482
West Bengal	2011-12	34.00	32300	950	32300	950	37.59	38868	896
<u>Cotton</u>									
Andhra Pradesh Long staple	2011-12	15.00	57413	3828	57413	3828	21.05	54429	2579
Medium staple	2011-12	14.00	53316	3808	53316	3808	NP	NP	NP
Haryana	2011-12	20.04	47387	2667	47387	2365	17.66	58379	2651
Maharashtra Medium staple	2011-12	10.89	33444	4149	33194	3048	11.58	35297	2961
Punjab	2011-12	20.70	60954	3780	60954	2800	22.31	56057	2397
<u>Jowar</u>									
Andhra Pradesh	2011-12	12.00	13741	1145	14810	1145	14.51	23508	1393
Maharashtra	2011-12	18.49	24754	1471	24391	1319	15.47	23820	1036
<u>Bajra</u>									
Andhra Pradesh	2011-12	11.00	13836	1258	15586	1258	NP	NP	NP
Haryana	2011-12	17.36	19646	947	19646	1132	18.58	20049	897
Maharashtra	2011-12	14.80	21570	1697	21203	1433	17.45	22732	1074
<u>Maize</u>									
Andhra Pradesh	2011-12	35.00	38975	1114	39175	1114	39.36	38820	935
Haryana	2011-12	23.55	24657	1143	24657	1047	NP	NP	NP
Maharashtra	2011-12	31.56	31209	1203	30846	977	NP	NP	NP

Table-3(I) concluded

Cost in Rs.
Yield in Qtl/ha

Crop/State	Year	State Yield	Comparison of Cost Projections				Yield	Projections for 2011-12 (as done by CACP)	
			State Projections* (determined by state)		Comparable Estimates** (using state data)				
			Cost/ Hactare	Cost/ Quintal	Cost/ Hactare	Cost/ Quintal		Cost/ Hactare	Cost/ Quintal
1	2	3	4	5	6	7	8	9	10
<u>Ragi</u> Andhra Pradesh	2011-12	12.00	14126	1177	15026	1177	NP	NP	NP
<u>Tur(Arhar)</u> Andhra Pradesh	2011-12	6.00	22005	3668	22755	3668	7.20	27118	2373
Maharashtra	2011-12	13.07	36035	3672	35669	2729	9.59	29974	2974
<u>Moong</u> Andhra Pradesh	2011-12	5.00	17401	3480	17401	3480	5.93	17857	2974
Maharashtra	2010-11	5.79	20077	4675	19781	3416	5.44	20335	3686
<u>Urad</u> Andhra Pradesh	2011-12	5.50	19224	3495	19224	3495	9.43	18165	1919
Maharashtra	2011-12	7.16	22074	4174	21765	3040	5.35	19244	3551
<u>Groundnut</u> Andhra Pradesh	2011-12	8.00	26596	3324	31096	3324	11.05	37474	3185
Maharashtra	2011-12	9.77	30202	4004	29737	3044	10.47	36966	3211
<u>Soyabean</u> Andhra Pradesh	2011-12	15.00	28765	1918	28765	1918	NP	NP	NP
Maharashtra	2011-12	12.08	24917	2763	24551	2032	14.28	26860	1830
<u>Sunflower</u> Andhra Pradesh	2011-12	6.00	20637	3439	20637	3439	6.55	18382	2799
Maharashtra	2011-12	8.77	19919	3091	19539	2228	7.28	19515	2652
<u>Sesamum</u> Andhra Pradesh	2011-12	3.00	11201	3734	11201	3734	NP	NP	NP
Maharashtra	2011-12	3.71	16404	5880	16188	4363	NP	NP	NP

Note :

- * Cost on account of insurance charges, weather risk, marketing costs, transportation charges and other incidental charges have been added to the cost of production for computing total cost of production.
- ** Data supplied by the states have been recalculated to correspond to the current CACP concepts and methodologies
- NP - Not Projected due to non-availability of CS estimates.
- NA -Not Available from the states.

Chapter- 4

Price Policy for Kharif Crops of 2011-12 Season

Analysis performed for kharif crops for recommending price policy and non-price observations.

Agri-performance bounces back with agricultural GDP growth of 5.4 per cent, up from 0.4 per cent in drought year, 2009-10. Foodgrains production expected at 232 million tonnes; Pulses at 16.5 and maize at 20 million tonnes create new records. Cotton peaks at 34 million bales.

Crisis of plenty is in the offing, existing storage capacity not able to cope with surge of procurement of wheat in coming months. Rice-wheat policy of grains management needs a revisit, otherwise, excessive inventory would cost the nation Rs. 40,000 crore over and above buffer stocking norms.

In the previous three chapters, the Commission has analyzed in detail and depth the production performance of various crops in 2010-11, the stocking situation of rice and wheat, the domestic and international prices of relevant crops, global stocks of important commodities, the cost of production of relevant kharif crops in all important states where that crop is grown, the terms of trade, the inter-crop price/cost parity, etc. All these factors are important inputs into the Commission's major recommendations regarding price policy as well as non-price policies.

4.2 The good news is that in 2010-11 agricultural performance has bounced back with an expected agricultural GDP growth rate of 5.4 percent, up from 0.4 percent in the drought year of 2009-10. The production of food grains is expected to be 232 million tonnes (mt), with rice at 94 mt, wheat at 81.5 mt, coarse cereals at 40 mt, and pulses at 16.5 mt. New records are created in production of maize crossing 20 mt, and pulses at 16.5 mt. Cotton also scales a new peak with its production crossing 34 million bales (DES figure).

4.3 The other comforting news is that there are ample stocks of grains (rice and wheat) with the Central Government. In fact, the Commission estimates that by April 1, 2011, India may have a record stock of grains. With coming good crop of wheat in the market, there could be a 'crisis of plenty' in the coming months as the existing storage capacity may not be able to cope with the incoming procurement of wheat. By all counts, it appears that if the existing rice-wheat policies are not changed, quickly and significantly, the country would be saddled with an extra inventory of wheat and rice worth more than Rs 40,000 crore, over and above the buffer stock norms for these commodities. That would not reflect good on the grain management policies.

Despite good agricultural performance, food inflation remains high. Emerging imbalance in agri-basket with ample grain supplies, but shortage of edible oils and perishable commodities

4.4 However, despite a good crop and overflowing grain stocks, food inflation remained defiantly in double digits for almost the whole of 2010-11, and at one time even touched 20 percent. This is not a good news for the economy where an average household is still spending almost half of its expenditure on food. High rates of food inflation inflict a sort of hidden tax on the poor much more severely than on the rich as poor spend a larger percentage (almost 60 percent) of their household expenditure on food. The dissection of food inflation reveals that it is largely driven by price rise in perishable and high value commodities like fruits and vegetables, milk and milk products, eggs, meat and fish, and much less by price rise in grains or edible oils. Even the inflation rate in pulses has significantly come down. It indicates that the demand pressures are building much faster on high value perishable commodities, which is expected in an economy with fast growing incomes. However, these commodities are not in the mandate of CACP, and therefore, the Commission will not delve much on that. The moot point that the Commission would like to bring to notice is the imbalance that is emerging in the economy with respect to overall demand and supply situation for various agri-commodities. Whereas the grains are aplenty, high value perishables appear to be under demand stress and lagging supplies resulting in their higher rates of price inflation. The imbalance is also there in case of oilseeds and pulses although their prices in 2010-11 have been within manageable limits (5-6 percent). But their inflation is contained by sharply bringing down import duties to zero on edible oils and pulses in 2008-09, leading to large scale imports in 2009-10. Together, their imports crossed Rs 36,000 crore (approximately \$ 8 billion) in 2009-10 and seem to remain unabated in 2010-11 despite good crops of oilseeds and pulses in 2010-11. In case of edible oils, almost half of the consumption is being imported. This emerging imbalance needs to be corrected lest it blows out of proportion causing harm to the overall stability of the food system. The Government realizes this and has allocated Rs 300 crore for encouraging oil palm and another Rs 300

crore for boosting the production of pulses in the proposed budget of 2011-12.

The government launched second green revolution programme in the Eastern Belt of the country with an allocation of Rs. 400 crore, purportedly to relieve pressure on the north-western states.

4.5 Another important concern at the national level that has been assuming importance is the need to usher in second green revolution in the eastern states. This is primarily to relieve the pressure on the north-western states for growing rice, which is leading to fast depletion of water table in those states by almost a foot a year. Eastern states have abundant water supplies, but their productivity of rice hovers around 2 tonnes per hectare. This needs to be raised with the help of better technology (seeds), better farming practices, including water management, better infrastructure, and through appropriate price policy support. Keeping this in view, the Government launched a programme on second green revolution in eastern states in 2010 with a commitment of Rs 400 crore. In the Union Budget of 2011-12, the Government has committed another Rs 400 crore for the same purpose. This programme needs to be taken forward to deliver results in a time bound manner that can ensure India's grain security, especially with a special focus on rice.

The MNREGA has set off labour diversion from agriculture and this has contributed to rise in labour cost in agriculture and cost of production of crops in different states.

4.6 The Commission has also looked at the cost of production of various crops very carefully. There has been a substantial increase in cost of production almost across the board by roughly 20 percent, primarily because of rising labour and energy costs. The MNREGA seems to have set off a process of labour diversion away from agriculture, leading to sharp escalation in agricultural wages ranging from 18 to 43 percent across different states in 2010-11. This has the danger of making entire agriculture a high cost activity. Sharply increasing cost of food, fodder and fibre can raise the cost of living all over the country having ripple effects on the overall growth and competitiveness of the economy. Only way to tackle this is to increase efficiency and productivity in agriculture by adopting appropriate technologies and farm practices, or by dovetailing MNREGA activities with agricultural operations, or by ensuring that MNREGA employment

The rate of increase of agricultural wages varies between 18 and 43 per cent across states. Adoption of appropriate technology and better farm practices are the way out. Other option open is by dovetailing MNREGA activities with farm activity.

Decilewise average cost of paddy on C2 in the country stretches from Rs. 718 per quintal to Rs. 1170 per quintal. All-India weighted average cost on C2 is projected at Rs. 888 per quintal and Rs. 673 per quintal on A2+FL. Having regard to procurement point of view, the weighted average cost on C2 is Rs. 809 per quintal and Rs. 565 per quintal in A2+FL.

will be available only during the off-peak agricultural seasons in different states. This issue needs an urgent attention lest agriculture starts suffering from acute labour shortage, in an otherwise labour abundant economy.

4.7 The Commission has carried out in-depth analysis of paddy costs, which is the main crop of the kharif season, basic staple of the economy, and where procurement operations really mean a lot as procurement is done largely through a levy system on millers. If one looks at the estimated costs (C2) of paddy across states for the year 2011-12, they have a wide range stretching from Rs 718 per quintal to Rs 1170 per quintal (see Figure-4.1). Weighted by the production of respective states, one obtains C2 cost to be Rs 888/quintal and A2+FL cost to be Rs 673/quintal. However, if one looks at the five states (Andhra Pradesh, Chhattisgarh, Haryana, Punjab and Uttar Pradesh) that account for 84 percent of the rice procurement in the country, and attaches weights of relative procurement instead of production, the weighted average C2 cost is Rs 809/quintal and A2+FL cost is only 565/quintal (see Table 4.1). It may be noted that these costs (C2 and A2+FL) are somewhat lower (by 9 percent and 19 percent respectively) than those obtained by using production weights. We have used procurement as alternative weights because MSP is largely effective where the procurement is done, and the size of procurement in that case becomes a critical factor determining the returns to farmers.

Figure 4.1: Deciles-wise Cost of Production of Paddy arranged in an ascending order (Rs/quintal)

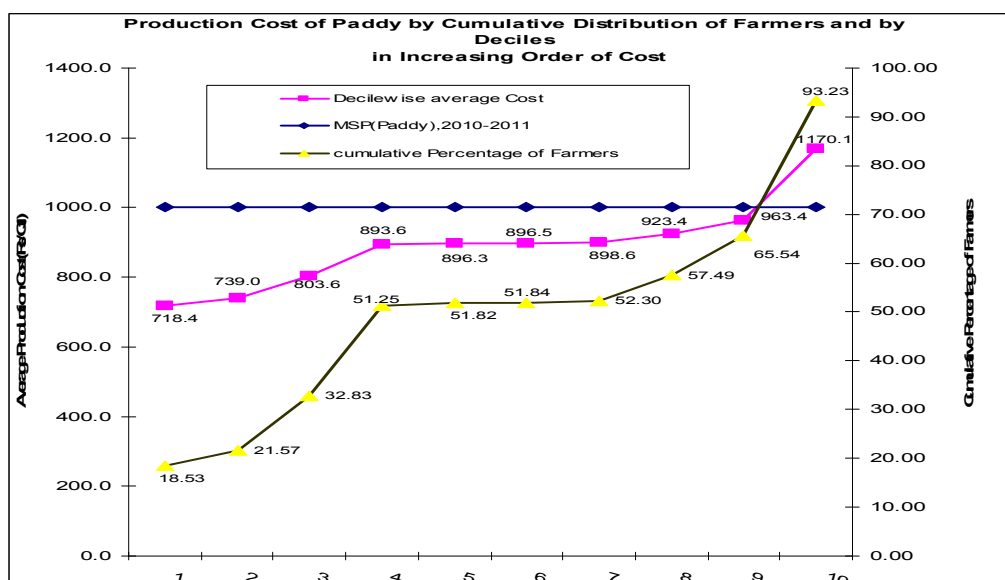


Table 4.1: Weighted Average Costs of Paddy with relative Procurement as Weights

Weighted average cost of paddy for states that account for bulk (84%) of rice procurement		
	(Rs/qttl)	
<i>PADDY</i>	A2+FL	C2
AP	655.46	896.47
PUNJAB	488.34	734.72
CHHATTISGARH	557.38	777.00
HARYANA	696.16	1022.57
UP	679.70	898.88
Weighted Average Cost (with relative share of procurement as weight)	564.89	809.35

It is interesting to see that even with last year's MSP of paddy at Rs 1000/quintal, the return over weighted average cost (C2) for 2011-12 crop would be 13 per cent and 23 percent depending upon whether the cost is weighted by relative shares in production or procurement. Similarly, the return over weighted average cost A2+FL would be 49 per cent and 77 percent respectively. Obviously, with any increase in MSP for the year 2011-12, the returns to farmers over their costs would go up. And if levies are reduced, and exports of common rice opened up, as argued later, the open market price for farmers will likely go up

and therefore the actual returns to farmers over cost would be much higher.

4.8 Keeping these factors in view, the Commission recommends the following MSP for various kharif crops:

Table 4.2 : Recommended MSP for 2011-12 Kharif Crops

(Rs. per quintal)						
Sl. No.	Crops	MSP fixed by the Government for 2009-10 Season	MSP recommended by CACP for 2010-11 Season	MSP fixed by the Government for 2010-11 Season	Recommended MSP for 2011-12 Season	Remarks
1	Paddy Common	950@	1000	1000	1080	If exports remain banned and levy is not reduced, Government should give a bonus of Rs 80/quintal on top of the recommended MSP
	Paddy Grade-A	980@	1030	1030	1110	
2	Jowar (Hybrid)	840	880	880	980	
	Jowar (Maldani)	860	900	900	1000	
3	Bajra	840	880	880	980	
4	Maize	840	880	880	980	
5	Ragi	915	965	965	1050	
6	Tur (Arhar)	2300	2800	3000	3100	
7	Moong	2760	3170	3170	3400	
8	Urad	2520	2900	2900	3300	
9	Groundnut-in-shell	2100	2300	2300	2700	
10	Soyabean (Black)	1350	1400	1400	1650	
	Soyabean (Yellow)	1390	1440	1440	1690	
11	Sunflower-seed	2215	2350	2350	2800	
12	Sesamum	2850	2900	2900	3400	
13	Nigerseed	2405	2450	2450	2900	
14	Cotton Staple length (mm) (iii) 24.5 -25.5 and micronaire value of 4.3-5.1	2500	2500	2500	2800	
	(iv) 29.5-30.5 and micronaire value of 3.5-4.3	3000	3000	3000	3300	
15	VFC Tobacco	--	5000	--	5300	
	Black soil F2 Grade Light soil L2 Grade	--	5200	--	5500	

@ Rs 50 incentive bonus for paddy procurement during 2009-10 is payable over the MSP.

The recommended MSP policy has a meaning only if MSPs are made effective. But in several states market prices go below MSP. The Government needs to invite the private sector in procurement operations on its behalf, on same terms and conditions as to FCI, to make MSP effective. Any loss accruing to farmers not able to sell at MSP may be compensated for by the Government through cash transfers via UID route.

A proper policy mix may be initiated to liquidate excess stocks beyond the buffer stock norms by off-loading in the domestic market and opening up exports to the tune of 3 to 5 million tonnes of rice and wheat each, and reduction of levies on rice millers in a phased manner from 75 per cent to 25 per cent. Failing to liquidate excess stocks, beyond the buffer stock norms, is costing the nation more than Rs 40,000 crore without serving much purpose.

It needs to be realised that paddy farmers are facing “implicit taxation” of 16-25 percent on account of levies and export bans. If exports are not opened and levies not reduced, the government should announce a bonus of Rs 80/quintal on top of MSP to compensate the farmers for this “implicit taxation”.

It is expected that the above set of prices, along with the non-price policies recommended below, will incentivize the farmers to help bring about some balance in the agri-basket of the country. It will align demand and supplies of various commodities, encourage rice production in the water abundant eastern states, encouraging coarse cereals, oilseeds and pulses in less irrigated tracts, and taking cotton to still a new record in production and exports. Also, it is hoped that it will not trigger another spiral of food inflation in the country.

4.9 The key recommendations complementing the MSP policy are the following:

4.9.1 *Honour MSP through effective procurement operations by involving the private sector or pay cash compensation to the farmers for the difference between MSP and open market price, if and when market price goes below MSP:*

On the recommendations of CACP, Government of India announces the Minimum Support Price (MSP) for as many as 25 agricultural commodities before the start of the sowing season of the particular crop. These prices are fixed by the Government to protect the producer from any precipitous fall in prices due to bumper production and glut in the market. Normally it is seen that the market prices, depending on the demand and supply conditions of a crop, prevail at higher level than MSP. However it is sometimes seen that in some centres the market prices fall below the MSP. This can happen even in commodities like paddy or other cereals, oilseeds and pulses. The paddy case is illustrated in Table 4.3.

Table 4.3 : States/ Centres where Prices of Paddy dipped below MSP during 2010-2011 Marketing Season

(Rs/quintal)

There are several commodities where open market prices often dip below MSP in major growing states. For Punjab already stressed for continuous depletion of water level and soil fertility, a gradual shift from reliance on paddy to oilseeds and pulses is a policy viability.

State	Centre	MSP	Oct.	Nov.	Dec.	Jan.
Karnataka	Mysore	1000	850	890	990	895
Maharashtra	Gondia		982	968	973	973
Orissa	Sampalpur		900	900	900	
Uttar Pradesh	Shahjanpur		865	880	890	975
	Attara		975	980		
West Bengal	Sainthiya				955	
	Indas					980

Source: Directorate of Economics & Statistics. Ministry of Agriculture.

The replies from the state governments often show even lower prices received by the farmers than collected by the DES. The details of open market prices vis-a-vis MSP of various commodities are discussed in Chapter-2. There are several commodities whose open market prices often dip below MSP even in major growing states. Here we give only

one more example of a developed state like Punjab, which wants to make a gradual shift from reliance on paddy to oilseeds and pulses etc which are nitrogen fixing and demand much less water. Prompted by high MSP of sunflower, many farmers in Punjab cultivated this non-traditional crop to ensure sustainability of their farming systems. Production of sunflower increased from 25.1 thousand tonnes in 2006-07 to 45.0 thousand tonnes in 2010-11. However, due to lack of Government procurement of sunflower, the market prices fell below the MSP fixed by the Government as is shown in the Table 4.4:

Lack of Govt. procurement of sunflower grown in Punjab; market prices went well below MSP (Table 4.5), making MSP policy unviable

Table 4.4: Sunflower Market Prices in Punjab going below MSP

(Rs. per quintal)

Year	Prices in Gehri centre in Punjab		MSP announced by the Government
	May	June	
2006-07	-	1305	1500
2007-08	1705	1980	1510
2008-09	2350	2450	2215
2009-10	1805	1740	2215
2010-11	1925	1925	2350

Source: Directorate of Economics & Statistics. Ministry of Agriculture.

Obviously, in such a situation the farmers are discouraged to diversify and efficacy of MSP operation is questioned.

It is ironic that the MSP announced by the government cannot be ensured, year after year. Sometimes a feeling is created that MSP operates only for rice and wheat and that too in states of Punjab, Haryana and Andhra Pradesh. As shown in the case of sunflower, even in Punjab, crops other than wheat and rice do not get an effective MSP support through procurement operations. In other states the situation is even worse. Perhaps, it is not a major problem if the markets were truly free, but when export controls abound, private trade is not allowed to stock beyond a limit, when there are still movement restrictions and levies on agricultural commodities, the markets for most of the agricultural commodities get tightly squeezed. Under that situation, it is only incumbent on the state to ensure that farmers do get at least the MSP that the government has announced, and that MSP should carry a reasonable rate of return. Allowing the open market prices to slip below the MSP does not lend much credibility to the

seriousness of the entire agricultural price policy of the government and defeats the very purpose of announcing MSP.

The govt. needs to rope in private sector in procurement operations on its behalf, making MSP effective. Any loss accruing to farmers not able to sell at MSP may be compensated for by the govt. through cash transfer via UID route.

The Commission therefore recommends that the government should intervene sufficiently and effectively in procurement operations by opening adequate procurement centres to ensure that farmers get at least the MSP for their produce. If it is not a feasible option for FCI, NAFED or other state agencies to open enough centres to ensure effective MSP, the government should invite the private sector to procure on government behalf and they may be given the same terms and conditions as are given to FCI with regard to the cost of procurement and stocking operations. This would help the government to build backend infrastructure for storage of different commodities through PPP mode, and give the farmers necessary incentives they deserve to diversify and adopt technological change to raise productivity. The Government can leverage the strengths of private sector, while duly monitoring and regulating the procurement by the private sector. If the government feels that even that is not feasible, then the Commission recommends that the farmers be compensated by cash transfer equivalent to the difference between open market price and MSP. The cash compensation should be directly transmitted to farmers' accounts through the UID route so that checks and balances can be maintained to stop any misuse. The government can think of setting up an expert group to work out the exact modalities of such a scheme. This will not only give enormous credibility to government's agri-price policy but also can be a catalyst in incentivizing the peasantry for change towards desired direction.

4.9.2 Liquidate excessive stocks of grains by unloading in the domestic market as well as opening up exports, and reduce levies on rice from 75 percent to 50 percent and then to 25 percent over two years:

The FCI is the largest food procurement arm of the Central Government undertaking three major functions:

- 1) Procurement of foodgrains to give an effective support to the MSP policy;
- 2) Supplying foodgrains to the Public Distribution System; and
- 3) Maintaining buffer stocks for food security reasons against any exigency, including the need to tame food inflation, if prices go beyond an acceptable range.

The data shows that the procurement by the FCI is much beyond the stipulated norms as well as its storage capacity. This is shown in Figure 4.2a in case of wheat and rice for the year 2010-11, and Figure 4.2 b for the two crops together since 1992-93 through 2010-11.

Figure 4.2 (a): Buffer Stock Norms and Actual Stocks of Rice and Wheat, 2010-11 (million tonnes)

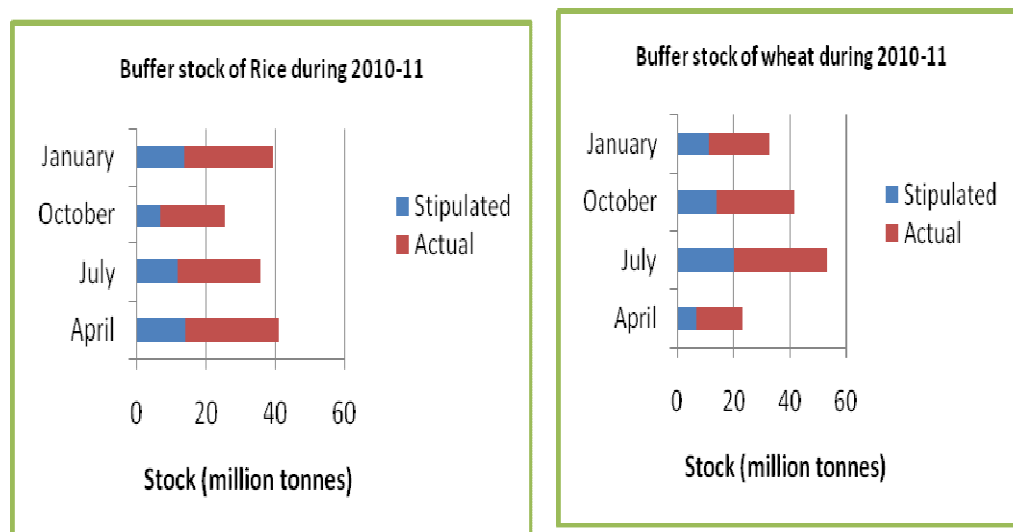
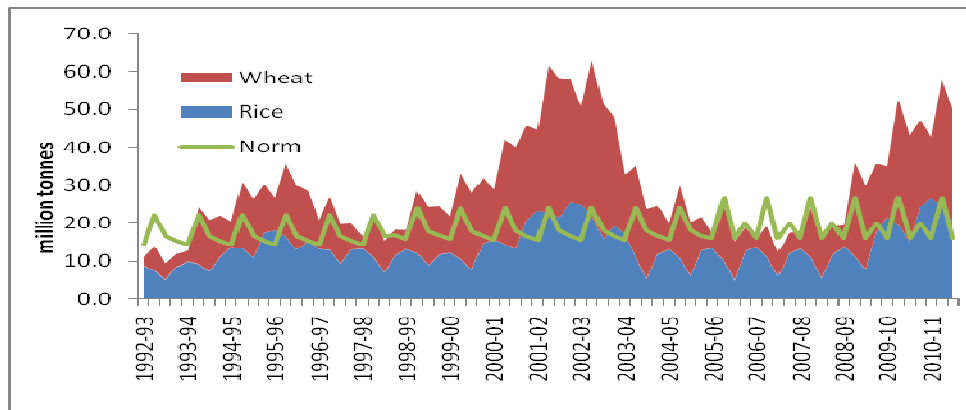


Figure 4.2(b): Buffer Stock Norms and Actual stocks of Rice and Wheat, 1992-93 to 2010-11

A proper policy mix may be initiated to liquidate excess stocks by off-loading in the domestic market and opening up exports to the tune of 3 to 5 million tonnes of rice and wheat each, and reduction of levies in a phased manner from 75 per cent to 25 per cent.



As depicted from Figures 4.2a and 4.2b, the stocks held by the FCI in 2010-11 are nearly double the norms set by the Government. And this is not the first time that it is happening. Figure 4.2b reveals that such a situation also occurred in 2002-03 when the nation had a huge stock of grains touching 63 million tonnes. The space for storage is made available to the FCI through its own godowns and those hired by state governments, the Central Warehousing Corporation, State warehousing corporation and private parties. 10 percent of the total storage is not in Cover and Plinth, therefore exposed to the vagaries of the climate, rodents and anti-social elements. Roughly half of the space is owned by the FCI and this proportion is declining. There has been very slow rate of increase in the FCI's storage capacity. It was able to add only 28000 tonnes of constructed space (1 percent of the total) between 2007 and 2010. The union government has been trying to get private parties to construct or hire storage space but due to the stringent conditions the response has been rather slow and limited.

If the economic cost of stored grain in 2010-11 is computed based on current economic cost of around Rs.20 per kg for rice and Rs.16 per kg for wheat, the cost comes out to be more than Rs 40,000 crore for the amount kept in excess of the buffer stock norms. This implies:

- 1) Due to this “excessive stocking”, that much money is circulating in the economy, creating “excess liquidity” which is putting pressure on prices. Moreover, since the corresponding grains are not in the market, artificial shortage of the food is created in the economy and a vicious circle of price rise is formed.
- 2) Due to improper and inadequate storage space, large wastages happen. The estimates of value loss differ widely from less than 1 percent to almost 10 percent by various sources. This situation is highly deplorable in India where a substantial portion of population (at least 27 percent by Planning Commission and 37 percent by Tendulkar Committee) is still below poverty line.

The irony is that a bumper wheat crop with expected output of 81.5 mt will worsen the situation of “excessive stocks”. All the efforts which go in increasing the production and yield will go in vain if the large inefficiencies in the food management system are not timely sorted out and removed. It is much more cost effective and environmentally benign to save a tonne of grain from spoiling due to bad storage than producing another tonne of grain on scarce land and scarcer water.

In this regard, the Commission recommends:

- 1) The excess stocks be liquidated either by selling in the open market within the country at an appropriate price not below the MSP, or timely use them for the welfare schemes at subsidized prices depending on the budget of those schemes.
- 2) The government had banned the export of wheat in October 2007 and prohibited the export of rice in April 2008. These restrictions need to be lifted and since the international market of wheat and rice is offering good prices, the country can export 3-5 million tonnes of rice and 3-5 million tonnes of wheat without any subsidy. In fact the government can make profits in exports which can be utilized to build storage infrastructure and/or finance a part of the food subsidy bill to the poor. But an early decision making in this regard is the need of the hour. The representatives of farmers from Andhra Pradesh and Punjab

Bumper wheat crop with expected output of 81.5 mt. will worsen the situation of excessive stocks, and increased production will go in vain without fine tuning food economy management move by protecting grains from damage due to inadequate storage than by producing of grains on scarce land and water.

particularly asked for removal of export controls on rice at the earliest. If the government opens exports with a limited export quota, it can allocate that export quota across various states in the same ratio in which they contribute to the central pool procurement.

- 3) The government imposes compulsory levy on rice millers/dealers to serve its procurement purpose. This levy varies from 50 percent to 75 percent across the states which is shown in Table 4.5:

Table 4.5: Levy and State Contribution to All India Procurement of Rice

State	Quantum of Levy (%)	% share in all India procurement
Andhra Pradesh	75	14
Chhattisgarh	50	16
Haryana	75	7
Punjab	75	39
Uttar Pradesh	60	8

If the export of rice is opened up, the farmers are likely to get the price prevailing in the international market of the comparable variety of rice minus the transportation cost from mandi/rice mill to port minus the exporters' margins. A rough calculation on these lines in Table 4.6 shows that Indian rice farmers have been getting approximately 16 to 25 percent less than what they would have got if the exports were open. In the technical parlance of trade theory, this is termed as "implicit taxation" due to export controls.

Table-4.6: “Implicit Taxation” on Rice Farmers with Export Controls: A Counter-Factual Scenario

States	Levy Price (Rs./tonne)	International Price (Thai 25%) per tonne (Rs/tonne)	Approximate transportation Cost plus exporters margin (Rs/tonne)	Reference Parity Price (Rs/tonne)	Difference between parity price and levy price (Rs/tonne)	Approximate Implicit Taxation on rice farmers (%)
(1)	(2)	(3)	(4)	(5)=(3-4)	(6)=(5-2)	(7)=(6)/(2) (%)
Andhra Pradesh	16797	21654	1100	20554	3757	22
Chattisgarh	16227	21654	1300	20354	4127	25
Haryana	16871	21654	1700	19954	3083	18
Punjab	17170	21654	1700	19954	2784	16
Uttar Pradesh	16146	21654	1500	20154	4008	25

Paddy farmers facing implicit taxation of 16-25 percent on account of levies and export bans

It needs to be realized that by banning the export of rice the government has closed the economy and unduly suppressed the domestic prices of rice for farmers. The difference between the parity price and levy price shows the loss in income to the domestic producers. In percentage terms this is the amount of “implicit taxation” to the extent of 16-25 percent. If the market for rice is opened for exports, it would benefit the paddy farmers. Farmers’ delegations to CACP repeatedly ask for removing export bans on rice.

The Commission therefore recommends a gradual approach:

- (1) Open up exports of rice: Open up exports of rice to the tune of 3-5 million tonnes of common rice. The export quotas to be distributed to rice states in the same proportion in which they contribute to central pool.
- (2) Reduce Levy on rice millers/dealers: The compulsory levy on rice millers should be reduced from 75 percent to 50 percent in states that have currently 75 percent levy and from 50 percent to 25 percent where currently it is 50 percent. The target should be that in maximum two to three years time, no state should have a levy of more than 25 percent. This 25 percent levy can be

Open up exports and reduce levies, failing which the government should announce a bonus of Rs 80/quintal on top of MSP to compensate the farmers for implicit taxation

justified to take back some of the subsidies that rice farmers get through fertilizers, power and cheap irrigation water. More than that would amount to unduly implicitly taxing the domestic paddy producers.

- (3) Announce a bonus of Rs 80 per quintal on top of MSP for paddy : If the government decides neither to open exports of common rice, nor to reduce the levy, then it is incumbent on the government to compensate the farmers fully for increasing costs of production or equivalent to the “implicit taxation” imposed on rice farmers through these market controls. This would amount to giving a bonus of Rs 80 per quintal over and above the recommended MSP.

The Commission further recommends that:

i.) the Government strategy aimed at keeping prices under control should have both short term and long term components. The flaws in the retail food marketing may be remedied through improved public distribution system and encouragement of active private retail chains, reforming the mandi system related to taxes, fees and commissions, extending the Mother Dairy safal model to cereals, and provision of adequate commercial intelligence in Government. For the medium and long term, structural reforms in the farm sector should receive priority. (Para 1.28)

ii.) concerted efforts should be brought in to increase productivity in the agricultural sector and bridge the prevalent yield gaps through technology development and dissemination as well as adoption of yield-enhancing agronomic practices and crop varieties, by following region and crop-specific initiatives. (Para 1.31)

iii.) the country should attempt to increase the production of pulses by attaining a major rise in productivity through the increasing adoption of high-yielding varieties suiting the Indian conditions. (Para 1.34)

iv.) alongwith laying emphasis on the improvement of productivity and production in oilseeds, there should be equal emphasis on the technology upgradation and modernization of the edible oil processing units to ensure their enhanced efficiency and capacity utilization. (Para 1.36)

v.) alongwith the efforts for increasing irrigation potential in the country, there should be greater thrust on enhancing the agricultural water productivity through adoption of modern methods of irrigation as a national priority. (Para 1.40)

vi.) the NBS policy should cover all fertilizer items, supported with measures aimed at price stabilization, preferably through operating a strategic reserve, and actions on priority are warranted to set up a chain of soil testing laboratories across the country to advise farmers on soil needs and requirements. (Para 1.43)

vii.) the Government should follow a two-pronged strategy in the seeds sector: increase SRR to the advisable levels in respect of various crops, and lay equal emphasis on the production of quality/hybrid seeds through increased association of private sector, with adequate checks and control. (Para 1.44)

viii.) alongwith accelerating the flow of agriculture credit, thrust should be laid on the inclusion of more number of small and marginal farmers, particularly through cooperative banks and RRBs, and the pending reforms for promoting the progress of cooperative sector should get expedited. (Para 1.48)

ix.) the Government should on priority carry out a review of the state of procurement operations in the non-traditional areas of the country, for initiating improvement measures. Associating appropriate agencies available in the States other than the usually enlisted organizations (ex: cooperative organizations, SHGs) for procurement operations, needs to be given serious consideration.

(Para 1.50)

x.) the agri-marketing reforms are to be effectively pursued further across the country, so that free and competitive markets for farmers come up at the earliest, supported with adequate infrastructural facilities.

(Para 1.51)

xi.) considering the inadequacy of storage facilities currently available with Government agencies, an advisable option could be to actively associate private interests to enhance storage capacity, with adequate support of bank credit and assured return over the effective life time of the godown.

(Para 1.53)

xii.) farm mechanization should be promoted under an appropriate framework, research efforts are to be oriented towards farm machinery suiting the requirements of diverse crops and regions, and farmers are to be enthused for their adoption.

(Para 1.55)

xiii.) integrated farming systems need to be promoted among small and marginal farmers, with support for skill formation, appropriate infrastructure and collective marketing, and stress on use of local resources and inputs, for ensuring regular and adequate flow of income to them.

(Para 1.56)

xiv.) at least to protect the oilseed plants from drying up, increased availability of water for irrigation through appropriate recharge technologies, such as moving surface water channels to

improve water tables in deficient areas besides adequate irrigation facilities, easy accessibility to improved technology, farm implements, quality seeds, credits and extension facilities to the farmer would bring remarkable improvement in production and productivity of the oilseeds. (Para 2.93)

xv.) rigorous efforts from the Government and other related organizations are warranted to exploit the full potential of oil palm plantation along with post harvest marketing and its price arrangements in all the identified states/regions with assured funds making it an important component under the forthcoming Technology Mission on Oilseeds (TMO). (Para 2.100)

xvi.) keeping in view the urgent need to augment availability of edible oils through domestic sources, the productivity enhancement of all the oilseed crops especially of tree borne oilseeds and oil palm as a plantation crop should be given special attention while formulating a new Technology Mission for Oilseeds replacing the existing Integrated Scheme of Oilseeds, Pulses, Oil palm and Maize (ISOPOM) along with clear accountability and monitoring. (Para 2.101)

-sd-

(Ashok Gulati)

CHAIRMAN

-sd-

R. VISWANATHAN)*

MEMBER

(on leave, consent taken over phone)

-sd-

(RAJ VIR SINGH)

MEMBER

-sd-

(K. G. RADHAKRISHNAN)

MEMBER SECRETARY

March 31, 2011.

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All India Estimates of Area of Agricultural Commodities															
											(Million hectares)				
Crops	1996-97	1997-98	1998-99	1999-00	2000-01	2001-02	2002-03	2003-04	2004-05	2005-06	2006-07	2007-08	2008-09	2009-10	2010-11*
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Rice															
Kharif	39.79	39.82	40.45	40.95	40.70	40.62	38.04	39.23	38.37	39.34	39.60	39.45	40.79	37.60	37.80
Rabi	3.64	3.62	4.35	4.21	4.01	4.28	3.14	3.36	3.54	4.32	4.21	4.46	4.74	4.32	4.42
Total	43.43	43.44	44.80	45.16	44.71	44.90	41.18	42.59	41.91	43.66	43.81	43.91	45.53	41.92	42.21
Wheat	25.89	26.70	27.52	27.49	25.73	26.34	25.20	26.59	26.38	26.48	27.99	28.04	27.75	28.46	28.25
Barley	0.76	0.86	0.79	0.73	0.78	0.66	0.70	0.66	0.62	0.63	0.65	0.60	0.71	0.62	0.71
Coarse Cereals															
Kharif	24.83	23.82	23.18	22.50	23.86	22.89	20.57	24.52	22.58	22.70	22.39	22.62	20.83	21.31	21.33
Rabi	6.98	7.01	6.16	6.84	6.40	6.63	6.42	6.28	6.45	6.36	6.31	5.87	6.62	6.37	5.74
Total	31.81	30.83	29.34	29.34	30.26	29.52	26.99	30.80	29.03	29.06	28.71	28.49	27.45	27.68	27.07
Cereals															
Kharif	64.62	63.64	63.64	63.45	64.56	63.51	58.61	63.75	60.94	62.04	62.00	62.07	61.62	58.91	59.12
Rabi	36.51	37.34	38.03	38.54	36.14	37.26	34.75	36.24	36.37	37.17	38.52	38.36	39.12	39.14	38.41
Total	101.13	100.98	101.67	101.99	100.70	100.77	93.36	99.99	97.31	99.21	100.52	100.43	100.74	98.05	97.53
Jowar															
Kharif	5.76	5.20	5.04	4.83	4.86	4.47	4.24	4.46	4.10	3.76	3.74	3.50	2.89	3.24	3.01
Rabi	5.67	5.60	4.75	5.42	4.99	5.32	5.06	4.87	4.99	4.90	4.73	4.26	4.64	4.55	3.95
Total	11.43	10.80	9.79	10.25	9.85	9.80	9.30	9.33	9.09	8.67	8.47	7.76	7.53	7.79	6.95
Bajra	9.98	9.67	9.30	8.90	9.83	9.53	7.74	10.61	9.23	9.58	9.51	9.57	8.75	8.90	9.20
Maize															
Kharif	5.71	5.76	5.59	5.73	5.99	5.93	5.98	6.59	6.59	6.76	6.96	7.12	6.89	7.06	7.18
Rabi	0.55	0.56	0.61	0.69	0.62	0.65	0.66	0.75	0.84	0.83	0.93	1.00	1.28	1.20	1.08
Total	6.26	6.32	6.20	6.42	6.61	6.58	6.64	7.34	7.43	7.59	7.89	8.12	8.17	8.26	8.26
Ragi	1.78	1.66	1.76	1.63	1.76	1.65	1.42	1.67	1.55	1.53	1.18	1.39	1.38	1.27	1.30
Tur (Arhar)	3.51	3.36	3.44	3.43	3.63	3.33	3.36	3.52	3.52	3.58	3.56	3.73	3.38	3.47	4.40
Moong	3.06	3.02	3.05	2.91	3.01	3.09	3.01	3.55	3.34	3.11	3.19	3.73	2.84	3.07	3.17
Urad	3.01	3.06	2.92	2.94	3.01	3.30	3.55	3.42	3.17	2.97	3.07	3.19	2.67	2.96	2.84
Gram	6.85	7.56	8.47	6.15	5.19	6.42	5.91	7.05	6.71	6.90	7.49	7.54	7.89	8.17	9.21
Pulses															
Kharif	10.72	10.51	10.35	9.80	10.66	10.72	9.95	11.68	11.32	10.68	10.68	11.49	9.81	10.58	12.19
Rabi	11.73	12.36	13.15	11.32	9.69	11.29	10.55	11.78	11.45	11.68	12.52	12.14	12.29	12.70	13.32
Total	22.45	22.87	23.50	21.12	20.35	22.01	20.50	23.46	22.77	22.36	23.19	23.63	22.09	23.28	25.51
Foodgrains															
Kharif	75.34	74.15	73.99	73.24	75.22	74.24	68.56	75.44	72.26	72.72	72.67	73.56	71.43	69.49	71.32
Rabi	48.24	49.70	51.18	49.86	45.83	48.54	45.30	48.01	47.82	48.85	51.04	50.51	51.40	51.84	51.73
Total	123.58	123.85	125.17	123.10	121.05	122.78	113.86	123.45	120.08	121.57	123.71	124.07	122.83	121.33	123.04
Groundnut															
Kharif	6.46	6.07	5.89	5.81	5.71	5.46	5.27	5.20	5.79	5.74	4.78	5.31	5.29	4.62	4.92
Rabi	1.14	1.02	1.51	1.06	0.85	0.78	0.66	0.79	0.85	1.00	0.83	0.98	0.88	0.86	0.82
Total	7.60	7.09	7.40	6.87	6.56	6.24	5.94	5.99	6.64	6.74	5.61	6.29	6.16	5.48	5.74
Soyabean	5.45	5.99	6.49	6.22	6.42	6.34	6.11	6.55	7.57	7.71	8.33	8.88	9.51	9.73	9.46
Sunflower															
Kharif	0.79	0.59	0.73	0.47	0.42	0.31	0.53	0.61	0.87	0.92	0.86	0.76	0.66	0.57	0.29
Rabi	1.14	1.15	1.09	0.82	0.66	0.87	1.11	1.39	1.29	1.42	1.30	1.15	1.15	0.91	0.61
Total	1.93	1.74	1.82	1.29	1.08	1.18	1.64	2.00	2.16	2.34	2.16	1.91	1.81	1.48	0.90
Sesamum	1.99	1.66	1.61	1.56	1.72	1.67	1.44	1.70	1.84	1.72	1.70	1.80	1.81	1.94	2.05
Nigerseed	0.55	0.55	0.52	0.50	0.44	0.48	0.41	0.43	0.43	0.41	0.47	0.41	0.39	0.38	0.38
Rapeseed/	6.55	7.04	6.51	6.03	4.48	5.07	4.54	5.43	7.32	7.28	6.79	5.83	6.30	5.59	6.85
Mustard															
Safflower	0.71	0.62	0.44	0.44	0.42	0.40	0.37	0.36	0.37	0.36	0.38	0.32	0.29	0.29	0.26
Nine Oilseeds															
Kharif	15.98	15.49	15.93	15.35	15.78	14.98	14.35	15.02	16.77	17.37	16.77	17.95	18.53	17.97	17.94
Rabi	10.36	10.63	10.30	8.93	6.99	7.66	7.14	8.64	10.45	10.49	9.74	8.74	9.03	7.99	8.93
Total	26.34	26.12	26.23	24.28	22.77	22.64	21.49	23.66	27.22	27.86	26.51	26.69	27.56	25.96	26.87
Cotton	9.12	8.87	9.34	8.71	8.54	9.13	7.67	7.60	8.79	8.68	9.14	9.41	9.41	10.13	11.06
Jute	0.90	0.91	0.85	0.85	0.83	0.87	0.86	0.85	0.77	0.76	0.79	0.81	0.79	0.81	0.75
Mesta	0.20	0.20	0.18	0.19	0.19	0.17	0.17	0.15	0.14	0.14	0.14	0.15	0.12	0.09	0.10
Jute & Mesta	1.10	1.11	1.03	1.04	1.02	1.04	1.04	1.00	0.91	0.90	0.94	0.96	0.90	0.91	0.84
VFC Tobacco#	0.15	0.15	0.18	0.18	0.04	0.14	0.15	0.18	0.18	0.19	0.21	0.21	0.23	0.26	0.22
Sugarcane	4.17	3.93	4.06	4.22	4.32	4.41	4.52	3.94	3.66	4.20	5.15	5.06	4.42	4.17	4.96
# : Tobacco Board. * : Second Advance Estimates															
Source : Directorate of Economics & Statistics, Ministry of Agriculture.															
(Contd..)															

P - 2																
Table - 2.1																
All India Estimates of Production of Agricultural Commodities																
(Million tonnes)																
Crops		1996-97	1997-98	1998-99	1999-00	2000-01	2001-02	2002-03	2003-04	2004-05	2005-06	2006-07	2007-08	2008-09	2009-10	2010-11*
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Rice																
	Kharif	71.32	72.53	72.72	77.48	72.78	80.52	63.08	78.62	72.23	78.27	80.17	82.66	84.91	75.92	80.16
	Rabi	10.41	10.01	13.36	12.20	12.20	12.82	8.74	9.91	10.90	13.52	13.18	14.03	14.27	13.18	13.85
	Total	81.73	82.54	86.08	89.68	84.98	93.34	71.82	88.53	83.13	91.79	93.35	96.69	99.18	89.09	94.01
Wheat		69.35	66.35	71.29	76.37	69.68	72.77	65.76	72.16	68.64	69.35	75.81	78.57	80.68	80.80	81.47
Barley		1.46	1.68	1.54	1.45	1.43	1.42	1.41	1.30	1.20	1.22	0.65	1.20	1.69	1.35	1.60
Coarse Cereals																
	Kharif	27.11	24.76	25.05	23.21	24.86	26.71	19.99	32.22	26.36	26.74	25.61	31.89	28.54	23.83	30.56
	Rabi	7.00	5.64	6.28	7.12	6.22	6.67	6.08	5.38	7.10	7.33	8.31	8.86	11.49	9.72	9.52
	Total	34.11	30.40	31.33	30.33	31.08	33.38	26.07	37.60	33.46	34.07	33.92	40.75	40.04	33.55	40.08
Cereals																
	Kharif	98.43	97.29	97.77	100.70	97.64	107.23	83.07	110.83	98.59	105.01	105.78	114.55	113.45	99.75	110.73
	Rabi	86.76	82.00	90.93	95.68	88.10	92.25	80.58	87.45	86.64	90.21	97.30	101.46	108.14	103.70	104.83
	Total	185.19	179.29	188.70	196.38	185.74	199.48	163.65	198.28	185.23	195.22	203.08	216.01	221.59	203.45	215.56
Jowar																
	Kharif	6.99	4.96	5.28	4.82	4.56	4.23	4.22	4.84	4.04	4.07	3.71	4.12	3.05	2.76	3.19
	Rabi	3.95	2.57	3.14	3.87	2.97	3.33	2.79	1.84	3.20	3.56	3.44	3.81	4.19	3.94	3.60
	Total	10.94	7.53	8.42	8.69	7.53	7.56	7.01	6.68	7.24	7.63	7.15	7.93	7.25	6.70	6.79
Bajra		7.87	7.64	6.95	5.78	6.76	8.28	4.72	12.11	7.93	7.68	8.42	9.97	8.89	6.51	9.38
Maize																
	Kharif	9.18	9.43	9.54	9.71	10.22	11.25	9.27	12.73	11.48	12.16	11.56	15.11	14.12	12.29	15.71
	Rabi	1.59	1.39	1.61	1.80	1.82	1.91	1.88	2.25	2.70	2.55	3.54	3.85	5.61	4.43	4.32
	Total	10.77	10.82	11.15	11.51	12.04	13.16	11.15	14.98	14.18	14.71	15.10	18.96	19.73	16.72	20.03
Ragi		2.34	2.09	2.61	2.29	2.73	2.37	1.32	1.97	2.43	2.35	1.18	2.15	2.04	1.89	1.93
Tur (Arhar)		2.66	1.85	2.71	2.69	2.25	2.26	2.19	2.36	2.35	2.74	2.31	3.08	2.27	2.47	3.18
Moong		1.32	0.95	1.16	1.08	1.02	1.11	0.87	1.70	1.06	0.95	1.12	1.52	1.03	0.69	1.12
Urad		1.46	1.29	1.35	1.33	1.30	1.50	1.47	1.47	1.33	1.25	1.44	1.46	1.17	1.24	1.45
Gram		5.57	6.13	6.80	5.12	3.86	5.47	4.24	5.72	5.47	5.58	6.33	5.75	7.06	7.48	7.37
Pulses																
	Kharif	5.49	4.29	5.14	4.81	4.45	4.84	4.15	6.17	4.72	4.86	4.80	6.40	4.69	4.20	6.45
	Rabi	8.76	8.68	9.77	8.60	6.63	8.53	6.98	8.74	8.41	8.50	9.40	8.36	9.88	10.46	10.06
	Total	14.25	12.97	14.91	13.41	11.08	13.37	11.13	14.91	13.13	13.36	14.20	14.76	14.57	14.66	16.51
Foodgrains																
	Kharif	103.92	101.58	102.91	105.51	102.08	112.07	87.22	117.00	103.31	109.87	110.57	120.96	118.14	103.95	117.17
	Rabi	95.52	90.68	100.70	104.29	94.73	100.78	87.55	96.19	95.05	98.70	106.71	109.82	116.33	114.16	114.90
	Total	199.44	192.26	203.61	209.80	196.81	212.85	174.77	213.19	198.36	208.58	217.28	230.78	234.47	218.11	232.07
Groundnut																
	Kharif	6.94	5.90	6.91	3.80	4.91	5.62	3.10	6.86	5.26	6.30	3.29	7.36	5.62	3.85	5.47
	Rabi	1.70	1.47	2.07	1.45	1.50	1.41	1.03	1.27	1.51	1.70	1.57	1.82	1.55	1.58	1.34
	Total	8.64	7.37	8.98	5.25	6.41	7.03	4.12	8.13	6.77	7.99	4.86	9.18	7.17	5.43	6.81
Soyabean		5.38	6.46	7.14	7.08	5.28	5.96	4.66	7.82	6.88	8.27	8.85	10.97	9.91	9.96	10.47
Sunflower																
	Kharif	0.39	0.24	0.24	0.20	0.24	0.16	0.27	0.31	0.43	0.46	0.37	0.46	0.36	0.21	0.17
	Rabi	0.86	0.65	0.71	0.49	0.41	0.52	0.60	0.62	0.76	0.98	0.86	1.00	0.80	0.63	0.52
	Total	1.25	0.89	0.95	0.69	0.65	0.68	0.87	0.93	1.19	1.44	1.23	1.46	1.16	0.85	0.70
Sesamum		0.64	0.57	0.53	0.48	0.52	0.70	0.44	0.78	0.67	0.64	0.62	0.76	0.64	0.59	0.83
Nigerseed		0.15	0.14	0.14	0.15	0.11	0.13	0.09	0.11	0.11	0.11	0.12	0.11	0.12	0.10	0.11
Rapeseed/ Mustard		6.66	4.70	5.66	5.79	4.19	5.08	3.88	6.29	7.59	8.13	7.44	5.83	7.20	6.61	7.43
Safflower		0.45	0.12	0.24	0.26	0.20	0.22	0.18	0.13	0.17	0.23	0.24	0.22	0.19	0.18	0.20
Nine Oilseeds																
	Kharif	14.40	14.14	15.80	12.48	11.94	13.22	8.98	16.52	14.15	16.77	14.01	20.71	17.81	15.73	18.22
	Rabi	9.98	7.18	8.95	8.23	6.50	7.44	5.86	8.67	10.21	11.21	10.28	9.04	9.91	9.15	9.63
	Total	24.38	21.32	24.75	20.71	18.44	20.66	14.84	25.19	24.35	27.98	24.29	29.76	27.72	24.88	27.85
Cotton\$		17.79	15.80	16.50	15.60	14.00	15.80	13.60	17.90	24.30	24.10	28.00	30.70	29.00	29.50	32.50
Cotton\$\$		14.23	10.85	12.29	11.53	9.52	10.00	8.62	13.73	16.43	18.50	22.63	25.88	22.28	24.02	33.93
Jute##		9.96	9.96	8.84	9.42	9.32	10.58	10.27	10.25	9.40	9.97	10.32	10.22	9.63	11.23	9.49
Mesta##		1.17	1.06	0.97	1.13	1.24	1.09	1.00	0.92	0.87	0.87	0.96	0.99	0.73	0.59	0.58
Jute & Mesta##		11.13	11.02	9.81	10.55	10.56	11.68	11.28	11.17	10.27	10.84	11.27	11.21	10.37	11.82	10.08
VFC Tobacco#		0.17	0.18	0.20	0.18	0.04	0.18	0.19	0.22	0.24	0.23	0.27	0.25	0.32	0.32	N.A.
Sugarcane		277.56	279.54	288.72	299.32	295.96	297.21	287.38	233.86	237.09	281.17	355.52	348.19	285.03	292.30	336.70
NA: Not Available															(Contd..)	
* : Second Advance Estimates ## : Million bales of 180 kgs each. # : Tobacco Board.																
\$: CAB estimates of million bales of 170 kgs each. \$ \$: Million bales of 170 kgs each.																
Source : Directorate of Economics & Statistics, Ministry of Agriculture.																

Table - 2.1 (Concluded)

All India Estimates of Yield of Agricultural Commodities

(Kgs per hectare)

Crops	1996-97	1997-98	1998-99	1999-00	2000-01	2001-02	2002-03	2003-04	2004-05	2005-06	2006-07	2007-08	2008-09	2009-10	2010-11*
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Rice															
Kharif	1792	1821	1798	1892	1788	1982	1658	2004	1882	1990	2024	2095	2081	2019	2121
Rabi	2860	2765	3071	2898	3042	2993	2784	2947	3080	3127	3129	3146	3011	3053	3137
Total	1882	1900	1921	1986	1901	2079	1744	2078	1984	2102	2131	2202	2178	2125	2227
Wheat	2679	2485	2590	2778	2708	2763	2610	2713	2602	2619	2708	2802	2907	2839	2884
Barley	1921	1953	1949	1986	1833	2155	2010	1975	1958	1938	1006	2000	2394	2172	2242
Coarse Cereals															
Kharif	1092	1039	1081	1032	1042	1167	972	1314	1168	1178	1144	1410	1371	1119	1433
Rabi	1003	805	1019	1041	972	1006	947	858	1102	1152	1316	1511	1735	1525	1657
Total	1072	986	1068	1034	1027	1131	966	1221	1153	1172	1182	1431	1459	1212	1481
Cereals															
Kharif	1523	1529	1536	1587	1512	1688	1417	1739	1618	1693	1706	1845	1841	1693	1873
Rabi	2376	2196	2391	2483	2438	2476	2319	2413	2382	2427	2526	2645	2716	2649	2729
Total	1831	1776	1856	1925	1844	1980	1753	1983	1904	1968	2020	2151	2184	2075	2210
Jowar															
Kharif	1214	954	1048	998	938	946	994	1085	987	1082	992	1177	1055	853	1062
Rabi	697	458	661	714	595	626	552	377	641	726	727	894	904	865	912
Total	957	697	860	848	764	772	754	716	797	880	844	1021	962	860	977
Bajra	788	791	747	649	688	869	610	1141	859	802	886	1042	1015	731	1020
Maize															
Kharif	1608	1637	1707	1695	1706	1896	1551	1932	1740	1799	1661	2123	2048	1740	2188
Rabi	2890	2482	2639	2609	2935	2948	2852	2987	3224	3076	3792	3855	4387	3694	3991
Total	1720	1712	1798	1793	1821	1999	1680	2041	1907	1938	1913	2336	2414	2024	2424
Ragi	1315	1257	1483	1405	1551	1439	933	1180	1567	1534	1002	1550	1477	1489	1481
Tur (Arhar)	758	551	788	784	620	679	652	670	668	765	649	827	671	713	722
Moong	431	315	380	371	339	360	288	482	317	304	351	364	360	225	352
Urad	485	422	462	452	432	454	415	430	420	419	470	440	427	418	511
Gram	813	811	803	833	744	853	718	811	815	808	845	763	895	915	800
Pulses															
Kharif	512	408	497	491	417	451	417	528	417	456	450	557	478	397	529
Rabi	747	702	743	760	684	756	662	742	734	727	751	689	804	823	756
Total	635	567	634	635	544	607	543	636	577	597	612	625	659	630	647
Foodgrains															
Kharif	1379	1370	1391	1441	1357	1510	1272	1551	1430	1511	1522	1644	1654	1496	1643
Rabi	1980	1825	1968	2092	2067	2076	1933	2004	1988	2020	2091	2174	2263	2202	2221
Total	1614	1552	1627	1704	1626	1734	1535	1727	1652	1716	1756	1860	1909	1798	1886
Groundnut															
Kharif	1074	972	1173	654	860	1029	587	1319	908	1097	689	1386	1063	835	1113
Rabi	1491	1441	1371	1368	1765	1801	1547	1608	1776	1702	1879	1857	1764	1830	1632
Total	1137	1039	1214	764	977	1126	694	1357	1020	1187	866	1459	1163	991	1187
Soyabean	987	1078	1100	1138	822	940	762	1194	909	1073	1063	1235	1041	1024	1106
Sunflower															
Kharif	494	407	329	426	571	502	511	508	494	496	426	605	540	378	597
Rabi	754	565	651	598	618	604	541	446	589	692	661	870	696	697	858
Total	648	511	522	535	600	577	532	465	551	615	567	764	639	574	773
Sesamum	322	343	329	308	302	418	305	459	364	372	363	422	354	303	406
Nigerseed	273	255	269	300	250	272	208	256	256	261	258	268	297	266	284
Rapeseed/ Mustard	1017	668	869	960	935	1002	854	1158	1037	1117	1095	1000	1143	1183	1084
Safflower	634	199	545	591	476	547	484	356	459	627	637	688	642	621	763
Nine Oilseeds															
Kharif	901	913	992	813	757	883	626	1100	837	965	836	1154	961	875	1016
Rabi	963	675	869	922	929	972	821	1003	989	1068	1055	1034	1097	1146	1078
Total	926	816	944	853	810	913	691	1065	895	1004	916	1115	1006	958	1036
Cotton \$	332	303	300	304	279	294	301	400	470	472	521	555	524	486	503
Cotton	265	208	224	225	190	186	191	307	318	362	421	468	403	403	522
Jute	1992	1970	1872	1995	2021	2190	2139	2175	2197	2362	2342	2271	2207	2492	2282
Mesta	1053	954	970	1071	1175	1132	1056	1104	1119	1136	1212	1188	1141	1121	1099
Jute & Mesta	1821	1787	1714	1826	1864	2013	1960	2014	2031	2176	2159	2102	2071	2349	2148
VFC Tobacco#	1133	1200	1111	1000	1068	1312	1276	1242	1329	1194	1312	1191	1375	1259	NA
Sugarcane	66561	71130	71113	70929	68572	67379	63575	59355	64778	66930	69033	68812	64553	70021	67855

: Tobacco Board.

\$: CAB estimates

* : Second Advance Estimates

NA: Not Available

Source : Directorate of Economics & Statistics, Ministry of Agriculture.

Table - 2.2

All India Trends in Area under Agriculture

Area (in '000 hectares)

Year	Gross Cropped Area*	Foodgrains			Cereals			Coarse Cereals			Pulses			Oilseeds			Cotton	Sugar-cane	Virginia Tobacco
		Kharif	Rabi	Total	Kharif	Rabi	Total	Kharif	Rabi	Total	Kharif	Rabi	Total	Kharif	Rabi	Total			
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
T.E.1989-90	178428	79443	45271	124714	68556	33547	102103	30528	7114	37642	10888	11930	22611	12826	8784	21609	7165	3349	93
T.E.1999-00	190011	73792	50248	124039	63575	37968	101543	23166	6672	29838	10216	12280	22496	15589	9956	25545	8973	4068	173
T.E.2009-10	194250	71493	51252	122744	60866	38876	99742	21582	6286	27869	10627	12376	23003	18149	8587	26736	9710	4548	233
Compnd. Gr Rate																			
89-90 to 99-00	0.63	-0.74	1.05	-0.05	-0.75	1.25	-0.05	-2.72	-0.64	-2.30	-0.63	0.29	-0.05	1.97	1.26	1.69	2.28	1.97	6.42
99-00 to 09-10	0.25	-0.32	0.20	-0.10	-0.43	0.24	-0.18	-0.71	-0.59	-0.68	0.39	0.08	0.22	1.53	-1.47	0.46	0.79	1.02	3.06
89-90 to 09-10	0.45	-0.53	0.62	-0.08	-0.59	0.74	-0.12	-1.72	-0.62	-1.49	-0.12	0.18	0.09	1.75	-0.11	1.07	1.53	1.47	4.72
Fitted Gr Rate																			
89-90 to 99-00	0.42	-1.02	1.21	-0.17	-0.95	1.56	-0.08	-2.87	-0.11	-2.31	-1.45	0.18	-0.60	1.01	0.12	0.66	2.35	2.16	4.19
99-00 to 09-10	0.66	-0.38	0.94	0.15	-0.49	0.65	-0.06	-0.69	-0.55	-0.66	0.28	1.91	1.12	2.22	1.56	2.00	1.66	1.35	10.29
89-90 to 09-10	0.25	-0.55	0.52	-0.14	-0.61	0.68	-0.15	-1.49	-0.53	-1.29	-0.25	0.04	-0.09	1.00	-0.90	0.30	1.09	1.55	3.29
CV :																			
89-90 to 99-00	1.59	3.72	4.67	1.62	3.55	5.44	1.39	10.20	5.00	8.20	5.27	6.26	3.97	4.94	6.07	4.74	9.39	8.57	19.22
99-00 to 09-10	3.07	2.97	4.44	2.35	3.08	3.83	2.41	5.29	3.85	4.03	6.04	7.63	5.25	8.61	13.62	9.06	8.78	10.14	32.02
89-90 to 09-10	2.52	4.25	4.75	2.24	4.45	5.21	2.13	11.09	5.50	9.26	5.31	7.12	4.57	8.18	12.75	7.16	9.83	12.52	30.73
*: In case of Gross Cropped Area, data available is up to 2006-07																			

Table - 2.2 (Continued)

All India Trends in Agricultural Production

Production (in '000 tonnes)

Year	Foodgrains			Cereals			Coarse Cereals			Pulses			Oilseeds			Cotton	Sugar-cane	Virginia Tobacco
	Kharif	Rabi	Total	Kharif	Rabi	Total	Kharif	Rabi	Total	Kharif	Rabi	Total	Kharif	Rabi	Total			
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19
T.E.1989-90	90397	70040	160437	85232	62649	147881	25799	5065	30864	5165	7391	12556	8857	7013	15871	11058	208977	92
T.E.1999-00	103334	98555	201889	98583	89538	188121	24343	6346	30689	4751	9018	13768	14144	8119	22263	15967	289196	188.147
T.E.2009-10	114350	113433	227783	109252	103868	213120	28091	10022	38113	5098	9565	14663	18083	9658	27452	29733	308506	298.053
Compnd. Gr Rate																		
89-90 to 99-00	1.35	3.47	2.32	1.47	3.64	2.44	-0.58	2.28	-0.06	-0.83	2.01	0.93	4.79	1.47	3.44	3.74	3.30	7.42
99-00 to 09-10	1.02	1.42	1.21	1.03	1.50	1.26	1.44	4.68	2.19	0.71	0.59	0.63	2.49	1.75	2.12	6.42	0.59	4.71
89-90 to 09-10	1.18	2.44	1.77	1.25	2.56	1.84	0.43	3.47	1.06	-0.07	1.30	0.78	3.63	1.61	2.78	5.07	1.87	6.05
Fitted Gr Rate																		
89-90 to 99-00	0.60	3.69	2.00	0.69	3.90	2.11	-1.27	2.83	-0.53	-1.06	1.79	0.69	4.55	0.27	2.74	3.49	3.52	5.52
99-00 to 09-10	1.05	1.79	1.42	1.08	1.70	1.38	1.40	5.41	2.34	0.38	2.84	2.03	4.65	4.15	4.40	9.35	0.69	12.19
89-90 to 09-10	0.76	2.00	1.34	0.81	2.12	1.40	0.26	2.79	0.80	-0.29	0.84	0.43	2.57	0.66	1.76	4.60	1.73	4.95
CV :																		
89-90 to 99-00	3.92	12.48	7.22	3.94	13.08	7.47	11.84	12.03	9.37	9.70	10.11	6.71	16.97	10.11	11.31	14.80	12.55	23.45
99-00 to 09-10	8.71	8.74	7.83	8.62	8.59	7.79	13.66	23.43	12.50	14.67	12.96	10.00	21.76	19.18	18.99	30.68	12.28	34.69
89-90 to 09-10	7.98	13.48	9.74	8.07	14.07	10.06	12.68	23.63	11.75	12.40	11.76	8.55	22.10	15.34	17.07	34.51	15.31	38.68
																	(Contd...)	

Table - 2.2 (Continued)

All India Trends in Agricultural Yield

Area (in '000 hectares)

Prod (in '000 tonnes)

Yield (in Kg/hectare)

Year	Foodgrains			Cereals			Coarse Cereals			Pulses			Oilseeds			Cotton	Sugar-cane	Virginia Tobacco
	Kharif	Rabi	Total	Kharif	Rabi	Total	Kharif	Rabi	Total	Kharif	Rabi	Total	Kharif	Rabi	Total			
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19
T.E.1989-90	1138	1547	1286	1243	1867	1448	845	712	820	474	620	555	691	798	734	262	62097	977
T.E.1999-00	1400	1961	1628	1551	2358	1853	1051	951	1029	465	734	612	907	816	872	302	71091	1092
T.E.2009-10	1599	2213	1856	1795	2672	2137	1302	1594	1368	480	773	637	996	1125	1027	521	67816	1275
Compnd. Gr Rate																		
89-90 to 99-00	2.10	2.40	2.38	2.23	2.36	2.49	2.20	2.94	2.29	-0.20	1.72	0.98	2.77	0.21	1.73	1.43	1.36	1.12
99-00 to 09-10	1.34	1.22	1.32	1.47	1.26	1.44	2.16	5.30	2.89	0.31	0.51	0.41	0.94	3.27	1.65	5.58	-0.43	1.56
89-90 to 09-10	1.72	1.81	1.85	1.85	1.81	1.96	2.18	4.11	2.59	0.06	1.11	0.69	1.85	1.73	1.69	3.49	0.42	1.34
Fitted Gr Rate																		
89-90 to 99-00	1.64	2.45	2.18	1.66	2.30	2.19	1.64	2.95	1.82	0.39	1.61	1.29	3.50	0.15	2.07	1.10	1.37	1.30
99-00 to 09-10	1.44	0.84	1.26	1.58	1.04	1.44	2.10	5.99	3.02	0.10	0.92	0.90	2.38	2.55	2.35	7.57	-0.65	1.72
89-90 to 09-10	1.32	1.48	1.47	1.42	1.44	1.55	1.77	3.33	2.11	-0.05	0.80	0.53	1.56	1.57	1.46	3.47	0.20	1.62
CV :																		
89-90 to 99-00	6.01	8.68	7.49	6.00	8.14	7.42	9.93	12.12	9.31	8.24	7.04	6.29	13.89	8.96	8.47	6.91	5.43	7.35
99-00 to 09-10	7.58	4.73	6.07	7.72	5.02	6.39	11.95	23.78	13.04	10.88	6.63	6.23	16.85	9.78	12.94	25.29	5.33	9.20
89-90 to 09-10	9.47	9.76	9.74	9.97	9.45	10.13	14.34	25.96	15.69	9.58	7.43	6.31	16.51	12.84	12.82	27.19	5.26	11.86
																	(Contd...)	

Table - 2.2 (Continued)

All India Trends in Area, Production and Yield of Cereals

Area (in '000 hectares)
 Prod (in '000 tonnes)
 Yield (in Kg/hectare)

Year	Rice			Jowar			Bajra			Maize			Ragi		
	Area	Production	Yield	Area	Production	Yield	Area	Production	Yield	Area	Production	Yield	Area	Production	Yield
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
T.E.1989-90	40903	66975	1637	15145	11755	776	10553	5909	560	5791	7867	1359	2307	2498	1083
T.E.1999-00	44470	86098	1936	10282	8209	798	9287	6794	732	6316	11158	1767	1683	2328	1383
T.E.2009-10	43790	94989	2169	7694	7290	947	9076	8455	932	8184	18469	2257	1346	2027	1506
Compnd. Gr Rate															
89-90 to 99-00	0.84	2.54	1.69	-3.80	-3.53	0.28	-1.27	1.41	2.71	0.87	3.56	2.66	-3.11	-0.70	2.48
99-00 to 09-10	-0.15	0.99	1.14	-2.86	-1.18	1.73	-0.23	2.21	2.45	2.63	5.17	2.48	-2.21	-1.38	0.86
89-90 to 09-10	0.34	1.76	1.42	-3.33	-2.36	1.00	-0.75	1.81	2.58	1.74	4.36	2.57	-2.66	-1.04	1.66
Fitted Gr Rate															
89-90 to 99-00	0.62	1.90	1.27	-3.71	-3.59	0.12	-1.58	0.60	2.21	0.85	2.56	1.69	-3.21	-1.21	2.07
99-00 to 09-10	-0.20	1.14	1.34	-3.05	-1.03	2.09	-0.12	2.71	2.84	2.87	5.15	2.21	-2.87	-1.86	1.04
89-90 to 09-10	0.13	1.25	1.12	-3.08	-2.74	0.35	-0.71	1.67	2.40	1.88	3.92	2.00	-2.54	-1.70	0.86
CV :															
89-90 to 99-00	2.41	6.92	4.81	13.31	19.21	11.82	6.27	19.66	17.72	3.13	10.74	8.32	12.06	7.79	8.94
99-00 to 09-10	3.39	8.34	6.56	10.40	7.76	10.99	7.84	25.68	20.19	9.56	19.20	11.04	12.16	20.30	14.47
89-90 to 09-10	2.85	9.76	8.03	20.08	22.89	11.42	7.61	24.58	22.59	12.53	26.82	14.60	17.30	16.75	12.67
															(Contd...)

Table - 2.2 (Continued)

All India Trends in Area, Production and Yield of Cereals

Area (in '000 hectares)

Prod (in '000 tonnes)

Yield (in Kg/hectare)

Year	Wheat			Barley			Gram			Lentil		
	Area	Production	Yield	Area	Production	Yield	Area	Production	Yield	Area	Production	Yield
1	2	3	4	5	6	7	8	9	10	11	12	13
T.E. 1989-90	23558	50043	2124	1072	1595	1488	6349	4324	681	NA	NA	NA
T.E. 1999-00	27235	71334	2619	792	1555	1964	7393	6017	814	NA	NA	NA
T.E. 2009-10	28083	80018	2849	644	1413	2194	7895	6759	856	NA	NA	NA
Compnd. Gr Rate												
89-90 to 99-00	1.46	3.61	2.12	-2.98	-0.25	2.81	1.53	3.36	1.80	NA	NA	NA
99-00 to 09-10	0.31	1.16	0.85	-2.04	-0.95	1.12	0.66	1.17	0.51	NA	NA	NA
89-90 to 09-10	0.88	2.37	1.48	-2.51	-0.60	1.96	1.10	2.26	1.15	NA	NA	NA
Fitted Gr Rate												
89-90 to 99-00	1.66	3.80	2.11	-2.69	-0.30	2.45	1.24	3.31	2.04	NA	NA	NA
99-00 to 09-10	0.79	1.23	0.43	-1.46	-0.33	1.14	3.78	4.88	1.05	NA	NA	NA
89-90 to 09-10	0.79	1.93	1.12	-2.37	-0.99	1.41	0.64	1.60	0.95	NA	NA	NA
CV :												
89-90 to 99-00	5.77	12.75	7.63	10.36	8.15	9.01	11.87	16.81	8.85	NA	NA	NA
99-00 to 09-10	3.90	6.94	3.59	8.03	10.41	7.33	13.27	18.89	7.24	NA	NA	NA
89-90 to 09-10	5.72	12.78	7.80	16.27	11.32	10.35	12.28	18.17	8.76	NA	NA	NA

Table - 2.2 (Concluded)

All India Trends in Area, Production and Yield of Oilseeds

Area (in '000 hectares)
 Prod (in '000 tonnes)
 Yield (in Kg/hectare)

Year	Groundnut			Soyabean			Sunflower			Nigerseed			Sesamum		
	Area	Production	Yield	Area	Production	Yield	Area	Production	Yield	Area	Production	Yield	Area	Production	Yield
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
T.E.1989-90	8028	7871	981	1843	1417	769	728	290	399	622	181	292	2329	670	288
T.E.1999-00	7117	7204	1012	6235	6896	1106	599	227	379	524	144	275	1610	525	326
T.E.2009-10	5978	7260	1214	9376	10279	1096	664	345	519	392	109	277	1900	705	371
Compnd. Gr Rate															
89-90 to 99-00	-1.20	-0.88	0.32	12.96	17.14	3.70	-1.93	-2.43	-0.51	-1.70	-2.27	-0.57	-3.63	-2.41	1.26
99-00 to 09-10	-1.73	0.08	1.84	4.16	4.07	-0.09	1.03	4.27	3.21	-2.85	-2.78	0.08	1.67	2.98	1.29
89-90 to 09-10	-1.46	-0.40	1.08	8.47	10.42	1.79	-0.46	0.87	1.33	-2.28	-2.52	-0.25	-1.01	0.25	1.28
Fitted Gr Rate															
89-90 to 99-00	-2.25	-1.22	1.06	11.08	14.32	2.92	-2.55	-3.85	-1.33	-2.07	-2.80	-0.72	-4.98	-4.52	0.49
99-00 to 09-10	-1.22	1.58	2.83	5.23	6.96	1.64	6.39	4.51	-1.76	-1.97	-1.50	0.48	2.01	3.03	1.01
89-90 to 09-10	-2.14	-1.22	0.94	6.41	7.35	0.88	-1.12	-0.22	0.92	-2.64	-3.45	-0.83	-1.31	-0.04	1.29
CV :															
89-90 to 99-00	7.90	12.98	13.35	32.41	41.12	12.29	31.52	28.62	13.59	7.50	12.50	7.41	17.93	18.10	9.90
99-00 to 09-10	7.25	23.48	22.22	17.99	26.17	14.55	31.47	35.87	28.78	8.85	13.91	8.85	9.17	18.78	14.68
89-90 to 09-10	14.38	18.89	17.89	35.44	42.09	13.36	32.33	30.51	26.21	17.19	24.71	9.91	16.29	17.46	15.33

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Table - 2.2 (Concluded)

All India Trends in Area, Production and Yield of Oilseeds

Area (in '000 hectares)
Prod (in '000 tonnes)
Yield (in Kg/hectare)

Year	Tur			Moong			Urad			Rapeseed/Mustard			Safflower		
	Area	Production	Yield	Area	Production	Yield	Area	Production	Yield	Area	Production	Yield	Area	Production	Yield
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
T.E. 1989-90	3474	2582	743	3198	1318	412	3251	1505	463	4806	3986	829	903	465	514
T.E. 1999-00	3409	2417	709	2892	1064	368	2973	1324	445	6527	5385	825	500	209	418
T.E. 2009-10	3523	2602	739	3200	1075	336	2916	1268	435	5904	6547	1109	292	186	635
Compnd. Gr Rate															
89-90 to 99-00	-0.19	-0.66	-0.47	-1.00	-2.11	-1.12	-0.89	-1.27	-0.39	3.11	3.06	-0.05	-5.75	-7.69	-2.05
99-00 to 09-10	0.33	0.74	0.41	1.01	0.10	-0.91	-0.19	-0.43	-0.23	-1.00	1.97	3.00	-5.22	-1.16	4.28
89-90 to 09-10	0.07	0.04	-0.03	0.00	-1.01	-1.02	-0.54	-0.85	-0.31	1.03	2.51	1.46	-5.48	-4.48	1.06
Fitted Gr Rate															
89-90 to 99-00	-0.64	0.03	0.68	-1.89	-2.63	-1.24	-1.70	-2.23	-0.53	1.66	1.95	0.29	-4.74	-4.88	-0.14
99-00 to 09-10	0.22	0.71	0.49	0.99	-1.27	-1.76	-0.99	-1.16	-0.17	2.30	4.46	2.12	-3.99	-1.34	2.76
89-90 to 09-10	-0.05	0.19	0.24	0.08	-1.31	-1.39	-0.34	-0.75	-0.41	0.08	1.70	1.62	-5.40	-4.23	1.23
CV :															
89-90 to 99-00	2.97	12.36	11.81	8.86	12.96	10.46	7.96	10.60	5.90	8.66	12.96	10.93	22.44	36.75	26.33
99-00 to 09-10	3.50	11.21	9.31	10.06	25.70	19.06	8.39	9.24	4.43	16.79	22.50	9.99	14.20	17.78	16.68
89-90 to 09-10	3.21	11.61	10.28	8.86	20.24	16.23	8.09	10.12	5.74	13.49	20.10	13.91	37.66	43.81	22.10

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Table- 2.3

State-wise Quantity and Value of Pulses Purchased under Price Support by NAFED

Quantity (in Tonnes)
Value (in Rs Lakh)

Pulses	State	2002-03		2003-04		2004-05		2005-06		2006-07		2007-08		2008-09		2009-10		2010-11*	
		Quantity	Value	Quantity	Value	Quantity	Value	Quantity	Value	Quantity	Value	Quantity	Value	Quantity	Value	Quantity	Value	Quantity	Value
TUR (ARHAR)	ANDHRA PRADESH	51.0	7.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	DELHI	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	KARNATAKA	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	Total (TUR)	51.0	7.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
URAD	UTTAR PRADESH	7748.0	1129.7	21758.0	3247.3	529.7	80.7	-	-	-	-	-	-	-	-	-	-	-	-
	MADHYA PRADESH	3335.0	481.4	1371.0	202.9	-	-	-	-	-	-	-	-	-	-	-	-	129.6	45.62
	CHHATTISGARH	258.0	36.7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	GUJARAT	3956.0	554.3	19874.0	2882.7	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	BIHAR	1311.0	185.0	5182.0	752.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	JHARKHAND	-	-	2578.0	367.6	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	ASSAM	541.0	75.0	2185.0	314.3	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	WEST BENGAL	-	-	4945.0	715.2	-	-	-	-	-	-	-	-	482.0	125.3	-	-	-	-
	ANDHRA PRADESH	-	-	4986.0	725.3	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	KARNATAKA	-	-	18665.0	2704.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	RAJASTHAN	-	-	34026.0	5159.7	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	MAHARASHTRA	-	-	34311.1	5003.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	ORISSA	-	-	910.9	137.5	1566.5	237.7	-	-	-	-	-	-	-	-	-	-	-	-
	TOTAL (URAD)	17149.0	2462.1	150792.0	22212.0	2096.2	318.4	-	-	-	-	-	-	482.0	125.3	0.0	0.0	129.6	45.6
MOONG	ANDHRA PRADESH	-	-	2294.8	333.3	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	MADHYA PRADESH	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	129.6	45.6
	KARNATAKA	-	-	14.0	2.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	RAJASTHAN	-	-	179.9	27.3	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	TOTAL (MOONG)	-	-	2488.6	362.6	-	-	-	-	-	-	-	-	-	-	-	-	-	-
* Note : Additional incentive of Rs.500 per quintal to the farmers if the pulses are sold by farmers to procuring agency during two months of harvest/arrival period.																			
Source : National Agricultural Co-operative Marketing Federation of India Ltd.(NAFED)																			

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Table-2.4

Commercial Purchases of Kharif Pulses by NAFED

Quantity (in Tonnes)

Value (in Rs Lakh)

Commodity	2002-03		2003-04		2004-05		2005-06		2006-07		2007-08		2008-09		2009-10		2010-11 *	
	Quantity	Value	Quantity	Value	Quantity	Value	Quantity	Value	Quantity	Value	Quantity	Value	Quantity	Value	Quantity	Value	Quantity	Value
PULSES(April-March)																		
TUR	2296.0	411.0	4383.0	706.0	4997.0	787.0	4347.0	702.4	6287.7	1247.1	6232.0	1470.9	458.2	124.4	11799.0	4601.4	985.0	463.0
(ARHAR)																		
MOONG	221.0	53.0	571.0	89.0	4409.0	781.0	3065.0	621.6	2623.9	785.4	3370.0	738.7	1093.1	321.2	32.0	21.5	501.0	185.6
URAD	349.0	56.0	1602.0	186.0	124.0	21.0	566.0	133.2	859.3	273.1	3178.0	632.1	25.0	8.3	289.0	129.5	0.0	0.0
* Upto 31.12.2010																		
Source : National Agricultural Co-operative Marketing Federation of India Ltd.(NAFED)																		

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Table-2.6

Commercial Purchases of Kharif Oilseeds by NAFED

Quantity (in Tonnes)

Value (in Rs Lakh)

Commodity	2001-02		2002-03		2003-04		2004-05		2005-06		2006-07		2007-08		2008-09		2009-10		2010-11*	
	Quantity	Value	Quantity	Value	Quantity	Value	Quantity	Value	Quantity	Value	Quantity	Value	Quantity	Value	Quantity	Value	Quantity	Value	Quantity	Value
OILSEEDS (April-March)																				
SOYABEAN	53298.0	5559.0	73306.0	9896.3	39779.0	4903.9	80848.0	9855.0	35021.0	4094.9	57698.0	7540.6	33222.0	5457.2	0.0	0.0	7165	1633.03	7601	1579.31
GROUNDNUT	-	-	5863.0	1174.4	3824.0	676.8	2200.0	398.0	2000.0	308.4	4418.0	872.8	4432.0	919.0	6592.0	1598.1	613	166	281	76.4
SESAMUM	-	-	-	-	83.0	27.4	1486.0	593.9	-	-	608.0	167.1	385.0	119.0	8.0	3.3	-	-	-	-
* Procurement figures of 2009-10 as on 31.12.2010																				
Source : National Agricultural Co-operative Marketing Federation of India Ltd.(NAFED)																				

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							Table - 2.7											
	Purchases made by CCI of Cotton under Support Price and Commercial Operations																	
												Quantity (in bales of 170 kg. each)						
State	1995-96	1996-97	1997-98	1998-99	1999-2000	2000-01	2001-02	2002-03	2003-04	2004-05	2005-06	2006-07	2007-08	2008-09	2009-10	2010-11*		
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17		
Andhra Pradesh																		
Support							468027			1210635	350058	527646	218694	3275754	445589	0		
Commercial	211260	177720	193593	118519	115891	179868		133438	184520	63	489		29882		0	318496		
Total	211260	177720	193593	118519	115891	179868	468027	133438	184520	1210698	350547	527646	248576	3275754	445589	318496		
Gujarat																		
Support							221602			482556	293167				162	0		
Commercial	231809	305417	248575	172073	112913	126774	14173	162779	231416	6895	45400	144764	130058	1236114	22912	218316		
Total	231809	305417	248575	172073	112913	126774	235775	162779	231416	489451	338567	144764	130058	1236114	23074	218316		
Haryana																		
Support							504			162917	4429			255342	21763	0		
Commercial	72783	85944	33509	5060	18533	34409	9459	3023	10780	3318	12549	15010	19441	3124	10009	72583		
Total	72783	85944	33509	5060	18533	34409	9963	3023	10780	166235	16978	15010	19441	258466	31772	72583		
Karnataka																		
Support							86274			146533	62564	4954		163123	4763	0		
Commercial	24159	52123	23632	17502	23767	14625	3924	17673	8718	150	1879	7271	17854	202	2448	16995		
Total	24159	52123	23632	17502	23767	14625	90198	17673	8718	146683	64443	12225	17854	163325	7211	16995		
Maharashtra																		
Support										167367	295206	381273		1997091	509	0		
Commercial					25500			202984	328246	3068	29883	2669	379320		104062	410848		
Total					25500			202984	328246	170435	325089	383942	379320	1997091	104571	410848		
Madhya Pradesh																		
Support							61606			153307	118267	248325		736526		0		
Commercial	223653	231786	189113	34821	44248	62108	1417	38530	25886	696	2361	2530	37935		5221	51819		
Total	223653	231786	189113	34821	44248	62108	63023	38530	25886	154003	120628	250855	37935	736526	5221	51819		
Punjab																		
Support					99					143018	52389			1043814	86597	0		
Commercial	122391	105279	23873	15501	35639	62074	12570	9097	24053	8472	5779	43201	78976	1604	9731	100784		
Total	122391	105279	23873	15501	35738	62074	12570	9097	24053	151490	58168	43201	78976	1045418	96328	100784		
Rajasthan																		
Support		10668			7775		43814			259815	70159			155217	4495	0		
Commercial	122958	145539	97429	62508	116400	117234	23658	26208	83852	20917	1526	60153	69653		24397	97626		
Total	122958	156207	97429	62508	124175	117234	67472	26208	83852	280732	71685	60153	69653	155217	28892	97626		
Tamil Nadu																		
Support										478				0	0	0		
Commercial	2354	2655	422	1537	2735	1154	250					90		0	0	0		
Total	2354	2655	422	1537	2735	1154	250			478		90		0	0	0		
Others																		
Support							17656			23839	6312	16257	4611	71849	16718			
Commercial	5424	2910	2054	2081	4572	4673	1874	5759	3859			727	6407			18247		
Total	5424	2910	2054	2081	4572	4673	19530	5759	3859	23839	6312	16984	11018	71849	16718	18247		
Grand Total																		
Support		10668			7874		899483			2750465	1252551	1178455	223305	7698716	580596	0		
Commercial	1016791	1120041	812200	429602	500198	602919	67325	599491	901330	43579	99866	276415	769526	1241044	178780	1305714		
Total	1016791	1130709	812200	429602	508072	602919	966808	599491	901330	2794044	1352417	1454870	992831	8939760	759376	1305714		
	Source : Cotton Corporation of India.						* : Position upto 28th Mar, 2011.											
	Note : Due to higher market prices, MSP Operation not undertaken.																	

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Table : 2.8							
Rice : Procurement (State-wise)							
						Quantity (in '000 tonnes)	
Marketing Season (October to September)							
State	2004-05	2005-06	2006-07	2007-08	2008-09	2009-10	2010-11*
A.Contributing to Central Pool							
Andhra Pradesh	3906.0	4972.0	5328.0	7417.0	9060.0	7555.0	3793.4
Assam		1.0			3.0	8.1	7.3
Bihar	343.0	524.0	475.6	512.0	1083.0	890.0	434.9
Chandigarh		13.0	10.0	9.3	10.1	14.3	9.8
Chhattisgarh	2837.0	3265.0	2865.0	2743.0	2848.0	3357.0	3490.1
Haryana	1662.0	2054.0	1777.0	1572.0	1425.2	1819.0	1658.9
Jharkhand	1.0	2.0	4.9	19.0	135.0	23.0	0.2
Karnataka	21.0	47.8	22.0	18.5	107.0	86.0	137.7
Kerela		94.0	151.0	168.4	237.4	261.0	120.5
Madhya Pradesh	42.0	136.0	74.0	69.0	245.0	255.0	295.5
Maharashtra	205.0	193.6	97.0	160.2	261.0	229.0	167.8
Orissa	1590.0	1785.0	2002.0	2338.0	2790.0	2496.0	1542.7
Punjab	9106.0	8855.0	7829.0	7908.0	8553.0	9275.0	8633.8
Rajasthan	22.0	23.0	10.0	18.7	11.0		
Uttarakhand	316.0	336.0	176.0	147.2	349.0	375.0	303.4
Uttar Pradesh	2971.0	3151.0	2559.0	2891.3	3687.0	2901.0	2079.4
West Bengal	944.0	1275.0	642.0	1508.0	1667.0	1240.1	711.1
Others	65.0		7.0	6.0	7.0	8.0	0.2
Total (A)	24031.0	26727.3	24029.5	27505.6	32478.7	30792.5	23386.4
B.Not Contributing to Central Pool							
Gujarat				19.0			
Jammu & Kashmir	1.0	3.0			6.0		5.1
Tamil Nadu	652.0	926.0	1077.0	968.0	1199.0	1241.0	1045.3
Total (B)	653.0	929.0	1077.0	987.0	1205.0	1241.0	1050.3
Total (A+B)	24684.0	27656.3	25106.5	28492.6	33683.7	32033.5	24436.8
(All India)							
* : As on 21.3.2011							
Source : Ministry of Consumer Affairs, Food & Public Distribution							

Table - 2.9

All-India: Monthly Procurement of Rice and Coarse Grains

Quantity (in '000 tonnes)												
Month	2005-2006		2006-2007		2007-2008		2008-2009		2009-2010		2010-2011*	
	Rice	Coarse grains	Rice	Coarse grains	Rice	Coarse grains	Rice	Coarse grains	Rice	Coarse grains	Rice	Coarse grains
1	2	3	4	5	6	7	8	9	10	11	12	13
September (Pre)												
October	7794.9	17.9	8138.8	0.2	7425.2	146.7	8100.8	311.3	8052.1	77.1	7109.4	70.5
November	2642.0	230.1	1925.1	0.0	1748.1	33.3	3100.0	30.2	3872.6	0.6	4062.1	6.1
December	3512.9	195.1	3317.7	0.0	3549.4	9.3	4169.8	100.8	3436.9	2.7	3057.8	4.1
January	3785.0	231.1	3833.0		4473.1	0.2	4602.1	227.1	4135.2	71.3	4351.3	32.0
February	2359.0	120.2	2163.9		2957.8	2.0	3836.0	175.4	3486.8	125.1	3840.0	10.0
March	1857.0	72.6	1223.8		1635.1	1.0	2327.0	273.3	2444.1	76.9	2016.2	2.2
April	1438.5	158.9	734.3		1113.9	3.0	1437.9	57.7	1388.1	44.4		
May	1582.0	102.6	1574.0		2098.9	7.0	1929.0	190.2	1405.2	4.9		
June	1404.0	12.0	1685.0		1238.4		1279.4	10.2	1223.6	4.5		
July	642.0	0.3	341.0		64.4		1346.1		689.0			
August	321.0	0.2	87.0		753.5		790.6		597.3			
September	318.0	9.9	82.9		1434.9		765.0		1302.6			
Total	27656.3	1151.0	25106.5	0.2	28492.6	202.5	33683.7	1376.2	32033.5	407.5	24436.8	124.9

State-wise Procurement of Coarse grains during 2010-11

Quantity (in '000 tonnes)					
State	Jowar	Bajra	Maize	Ragi	Total*
Andhra Pradesh					
Chhattisgarh			2.53		2.53
Haryana		71.42			71.42
Karnataka			37.58	1.80	39.38
Madhya Pradesh	0.04		8.88		8.91
Maharashtra	0.40		2.29		2.69
Rajasthan		0.01			0.01
Total	0.44	71.43	51.27	1.80	124.94

* : As on 21.03.2011

Source : Ministry of Consumer Affairs, Food & Public Distribution

			P-18 Table - 2.10				
Wheat : Procurement (State-wise)							
						Quantity (in '000 tonnes)	
Marketing Season (April to March)							
State	2004-05	2005-06	2006-07	2007-08	2008-09	2009-10	2010-11*
Bihar	15	1		8	500	497	183
Gujarat					415	75	1
Haryana	5115	4529	2229	3350	5237	6924	6347
Himachal Pradesh	neg	neg			neg	1	neg
Jammu & Kashmir	neg	neg			1	1	
Madhya Pradesh	349	484	neg	57	2410	1968	3538
Punjab	9240	9010	6946	6781	9941	10725	10209
Rajasthan	279	159	2	383	935	1152	476
Uttar Pradesh	1741	560	49	546	3137	3882	1645
Uttarakhand	54	40	neg	2	85	145	86
West Bengal							9
Delhi	2	2		1	7		10
Others	neg	neg			22	12	9
All-India	16795	14785	9225	11128	22689	25382	22514
* : As on 30.11.2010							
neg : Below 500 tonnes							
Source : Ministry of Consumer Affairs, Food and Public Distribution							

P-19
Table - 2.11

SCHEME-WISE OFFTAKE OF FOODGRAINS FROM CENTRAL POOL

(April - March)

Quantity (in '000 tonr

	2006-2007			2007-2008			2008-2009			2009-2010			2010-2011(upto De	
	Rice	Wheat	Total	Rice	Wheat	Total	Rice	Wheat	Total	Rice	Wheat	Total	Rice	Wheat
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
BPL	9470	4769	14239	10405	4724	15129	10031	5624	15656	10433	6113	16545	8450	4399
APL/ADDITIONAL	5815	2653	8468	5789	2933	8722	5710	3710	9420	6537	9526	16063	5250	7449
ANTYODAYA	5832	2830	8662	6258	3181	9439	6326	3199	9525	6442	3353	9794	4906	2369
SPECIAL ADHOC ALLOCATION										488	376	864	1160	999
TPDS	21117	10252	31369	22452	10838	33290	22068	12533	34601	23899	19367	43266	19766	15216
DEFENCE	132	138	270	117	128	245	119	125	245	120	128	248	85	79
ANNAPURNA	61	29	90	70	30	100	64	31	95	55	28	83	35	16
EARTHQUAKE														
WFP/EFP	57	89	146	32	40	73	25	22	48	22	52	75	15	9
SGRY	1166	477	1643	645	288	933								
SGRY(SPL.COMP.)	593	21	613	68	165	233								
JAWAHAR ROJGAR YOJNA														
INDEGENT PEOPLE														
WBNP	161	294	455	179	274	453	215	392	607	240	513	753	211	527
OPEN / TENDER SALE	9	3	11	9	9	18	14	1229	1244	511	1636	2147	157	362
PADDY SALE														
HOSTEL SC/ST/OBC/GB/ANGANWADI	275	25	301	161	33	193	243	41	284	267	66	333	93	39
NFFWP	123	21	144											
MODERN FOOD INDUSTRIES Ltd./UNITS														
MID-DAY-MEAL	1305	350	1655	1441	395	1836	1582	437	2019	1854	446	2300	1384	359
NPAG(*)	45	7	52	35	3	38	46	13	60	31	6	38	7	3
VGBS(\$)	16	2	18	21	2	23	5	5	10	5	6	11	7	0
RELIEF							238	49	287	368	97	466	63	9
EXPORT														
GRAND TOTAL	25059	11707	36766	25230	12205	37435	24620	14877	39497	27372	22347	49719	21823	16619

(*) : Scheme started from April,06

(\$): These schemes are included from June,06

Source : Ministry of Consumer Affairs, Food and Public Distribution

P-20												
Table - 2.12												
Buffer Stocks of Cereals with the Central Pool												
(As on the 1st of the Month)												
Quantity (in Million tonnes)												
Year	RICE				WHEAT				TOTAL			
	April	July	October	January	April	July	October	January	April	July	October	January
1	2	3	4	5	6	7	8	9	10	11	12	13
Stipulated	10.80	9.20	6.00	7.70	3.70	13.10	10.60	7.70	14.50	22.30	16.60	15.40
Actual												
1992-93	8.86	7.37	5.07	8.52	2.21	6.48	4.37	3.28	11.07	13.85	9.44	11.80
1993-94	9.93	9.27	7.22	11.17	2.74	14.89	13.67	10.82	12.67	24.16	20.89	21.99
1994-95	13.55	13.26	10.87	17.42	7.00	17.49	15.58	12.88	20.55	30.75	26.45	30.30
1995-96	18.08	16.44	13.00	15.41	8.72	19.22	16.95	13.15	26.80	35.66	29.95	28.56
1996-97	13.06	12.88	9.34	12.94	7.76	14.13	10.54	7.08	20.82	27.01	19.88	20.02
1997-98	13.17	10.95	7.04	11.49	3.24	11.42	8.30	6.76	16.41	22.37	15.34	18.25
1998-99	13.05	12.04	8.96		5.08	16.48	15.24		18.13	28.52	24.20	
Stipulated*	11.80	10.00	6.50	8.40	4.00	14.30	11.60	8.40	15.80	24.30	18.10	16.80
Actual												
1998-99				11.68				12.70				24.38
1999-2000	12.16	10.56	7.74	14.72	9.66	22.46	20.31	17.17	21.82	33.02	28.06	31.89
2000-2001	15.72	14.49	13.21	20.70	13.19	27.76	26.85	25.04	28.91	42.25	40.06	45.74
2001-2002	23.19	22.75	21.45	25.62	21.50	38.92	36.83	32.42	44.70	61.67	58.28	58.03
2002-2003	24.91	21.94	15.77	19.37	26.04	41.07	35.64	28.83	50.95	63.01	51.41	48.20
2003-2004	17.16	10.97	5.24	11.73	15.65	24.19	18.43	12.69	32.80	35.17	23.67	24.41
2004-2005	13.07	10.76	6.09	12.76	6.93	19.15	14.22	8.93	20.00	29.92	20.32	21.69
Stipulated**	12.20	9.80	5.20	11.80	4.00	17.10	11.00	8.20	16.20	26.90	16.20	20.00
Actual												
2005-2006	13.34	10.07	4.85	12.64	4.07	14.45	10.29	6.19	17.41	24.53	15.14	18.83
2006-2007	13.68	11.14	5.97	11.98	2.01	8.21	6.41	5.43	15.68	19.35	12.38	17.41
2007-2008	13.17	10.98	5.49	11.48	4.70	12.93	10.12	7.71	17.87	23.90	15.61	19.19
Stipulated\$	14.20	11.80	7.20	13.80	7.00	20.10	14.00	11.20	21.20	31.90	21.20	25.00
Actual												
2008-2009	13.84	11.25	7.86	17.58	5.80	24.91	22.03	18.21	19.64	36.16	29.89	35.79
2009-2010	21.60	19.62	15.35	24.35	13.43	32.92	28.46	23.09	35.03	52.54	43.81	47.45
2010-2011	26.71	24.27	18.44	25.58	16.13	33.58	27.78	21.54	42.84	57.85	46.22	47.12
* : The Minimum Stock to be maintained under the Buffer Stocking System with effect from 30 .10.1998												
** : The Minimum Stock to be maintained under the New Buffer Stocking System with effect from 29.03.2005												

P-21													
Table - 2.13													
Index Numbers of Wholesale Prices													
(Base : 2004-05=100)													
Commodity/Year	April	May	June	July	August	Sept.	Oct.	Nov.	Dec.	Jan	Feb	March	Aug
1	2	3	4	5	6	7	8	8	9	10	11	12	13
All Commodities													
2005-06	102.8	102.5	102.9	104.0	104.1	104.8	105.2	105.4	104.7	105.2	105.4	105.5	104.4
2006-07	107.6	108.5	109.7	110.6	111.3	112.0	112.5	112.4	112.1	112.3	112.4	112.7	111.2
2007-08	114.4	114.6	114.8	115.6	115.9	116.0	116.3	116.7	116.6	117.3	118.8	121.4	116.5
2008-09	123.5	124.0	127.3	128.6	128.9	128.5	128.6	126.7	124.3	124.2	122.9	123.2	125.9
2009-10	124.6	125.5	126.4	127.8	129.3	129.9	130.5	132.4	132.9	134.8	134.8	135.8	130.4
2010-11	138.3	138.8	139.4	140.6	140.7	141.5	142.4	143.1	145.4	145.9	146.0		142.0
Foodgrains													
2005-06	100.6	100.9	103.0	105.4	106.0	106.5	107.7	108.5	109.4	112.6	113.4	113.1	107.3
2006-07	112.9	114.9	116.6	116.6	117.8	122.2	126.2	128.8	129.4	128.8	128.8	125.9	122.4
2007-08	127.3	126.8	126.5	128.7	129.7	129.7	132.8	133.0	132.2	132.7	134.1	137.0	130.9
2008-09	139.5	139.0	139.5	141.3	143.2	143.2	147.3	148.3	148.4	149.8	152.0	152.1	145.3
2009-10	154.7	156.1	157.1	158.9	161.1	164.1	166.9	173.6	177.3	179.0	175.3	172.2	166.4
2010-11	171.8	172.2	173.4	174.2	174.4	174.0	173.4	174.4	175.2	175.0	176.1		174.0
Primary Articles													
2005-06	99.1	98.9	101.1	104.6	105.2	105.8	107.5	108.2	105.3	106.1	105.5	104.3	104.3
2006-07	106.7	108.4	111.3	112.5	114.5	115.6	117.5	117.6	117.0	116.2	117.0	117.6	114.3
2007-08	120.8	121.2	121.1	124.2	125.2	125.3	124.7	125.6	123.2	121.2	124.8	128.9	123.9
2008-09	132.1	134.2	138.3	141.1	139.2	138.3	140.8	141.4	137.5	137.2	134.4	135.8	137.5
2009-10	140.8	143.3	146.5	149.3	152.9	153.0	155.3	161.6	162.2	164.9	163.6	165.9	154.9
2010-11	171.0	172.6	176.0	177.8	177.3	180.8	183.4	185.3	192.0	193.4	187.8		181.6
Agricultural Commodities													
2005-06	99.1	99.2	100.8	104.1	103.7	104.1	106.3	107.2	103.7	104.8	104.7	103.1	103.4
2006-07	104.3	106.1	109.0	109.5	111.9	114.5	115.7	115.9	114.9	115.8	116.2	116.1	112.5
2007-08	119.0	119.3	119.0	121.7	123.3	123.0	123.1	123.0	120.4	119.1	121.6	125.3	121.5
2008-09	127.7	129.4	130.6	133.8	134.6	135.4	137.9	138.5	134.2	135.0	131.9	133.1	133.5
2009-10	137.4	139.4	142.0	146.2	148.9	149.7	151.9	158.2	159.0	160.0	158.6	160.6	151.0
2010-11	164.8	167.2	170.2	172.2	171.5	175.5	177.5	179.0	186.3	187.8	181.8		175.8
Food Articles													
2005-06	100.4	100.3	102.3	106.5	106.2	106.7	109.0	109.9	105.5	106.7	106.1	105.0	105.4
2006-07	106.4	108.3	111.8	112.2	114.9	118.1	119.8	119.9	117.8	118.9	119.2	118.9	115.5
2007-08	121.5	122.3	121.8	124.8	126.1	125.5	126.0	125.2	121.6	119.9	122.5	125.6	123.6
2008-09	128.9	130.2	130.3	133.4	134.4	135.8	140.3	141.1	136.3	137.2	134.1	135.6	134.8
2009-10	140.1	141.8	145.0	150.4	153.7	154.7	157.8	164.7	164.6	164.9	163.4	163.6	155.4
2010-11	168.8	172.1	175.4	178.2	176.7	179.9	180.9	181.4	189.4	190.7	180.8		179.5
Non - Food Articles													
2005-06	94.7	95.7	95.7	95.9	95.3	95.4	97.1	98.0	97.6	98.4	99.8	96.5	96.7
2006-07	97.3	98.8	99.7	100.6	101.6	102.3	102.0	102.3	105.0	105.3	105.9	106.7	102.3
2007-08	110.5	109.1	109.4	111.1	113.7	114.7	113.5	115.5	116.5	116.5	118.4	124.1	114.4
2008-09	123.5	126.8	131.6	135.1	135.1	134.2	129.8	129.8	127.0	127.4	124.7	124.8	129.2
2009-10	128.3	131.4	132.0	132.0	132.8	133.0	132.1	136.1	140.3	143.6	142.6	150.3	136.2
2010-11	151.5	150.8	152.9	152.2	153.8	160.6	166.1	170.8	176.0	177.9	185.1		163.4
Manufactured Products													
2005-06	102.9	102.5	102.1	101.9	101.9	102.0	101.9	102.0	101.8	102.3	102.8	103.2	102.3
2006-07	105.6	106.1	106.6	107.2	107.8	108.2	108.5	108.5	108.7	109.3	109.5	109.9	108.0
2007-08	111.5	111.6	111.9	112.1	112.2	112.3	112.8	113.0	113.3	114.9	115.8	117.8	113.3
2008-09	119.2	119.2	120.7	121.4	121.8	121.8	121.5	120.0	119.1	119.5	119.2	119.4	120.2
2009-10	119.7	120.2	120.4	120.5	121.4	122.0	122.2	122.8	123.4	125.2	125.4	125.6	122.4
2010-11	127.4	127.4	127.2	127.4	127.6	127.9	128.3	128.8	129.9	129.9	131.6		128.5
Source : Office of the Economic Adviser, Ministry of Commerce and Industry													

P-22														
Table -2.14														
Cereals : Index Numbers of Wholesale Prices														
(Base : 2004-05=100)														
Commodity	Year	April	May	June	July	August	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	March	Avg
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Wheat	2005-06	95.8	96.1	98.1	100.3	100.6	101.3	103.5	104.7	107.0	116.7	119.4	116.7	105.0
	2006-07	111.6	114.4	116.3	115.9	119.1	125.6	127.4	134.9	137.1	135.8	134.8	128.6	125.1
	2007-08	130.1	128.8	127.9	131.6	133.1	133.1	135.5	137.7	137.1	137.6	139.0	139.9	134.3
	2008-09	146.7	146.4	145.6	147.1	147.0	146.6	144.8	145.9	147.0	150.7	152.3	150.7	147.6
	2009-10	155.7	158.0	158.4	157.5	156.5	159.1	163.3	174.0	180.8	182.1	179.4	172.8	166.5
	2010-11	168.9	168.1	168.8	167.8	172.5	171.6	168.2	172.7	173.3	173.1	176.4		171.0
Barley	2005-06	101.1	102.0	105.4	108.6	108.9	111.6	114.7	121.5	124.4	129.0	129.3	121.6	114.8
	2006-07	115.4	122.4	121.1	121.1	121.2	122.0	123.4	127.1	129.9	127.7	126.9	126.3	123.7
	2007-08	123.9	122.3	121.7	121.6	123.8	134.2	141.7	143.6	144.7	151.2	152.7	157.7	136.6
	2008-09	152.6	150.1	158.0	155.4	152.2	151.0	150.1	155.0	153.0	152.4	151.9	152.6	152.9
	2009-10	151.4	151.6	151.1	148.8	149.7	148.7	148.9	149.6	150.3	152.7	151.8	152.6	150.6
	2010-11	152.3	152.4	151.0	153.3	158.5	157.7	165.7	169.6	176.6	179.7	187.5		164.0
Rice	2005-06	102.5	102.5	104.3	105.7	106.7	107.0	107.6	106.6	105.0	104.9	105.0	105.0	105.2
	2006-07	105.6	106.4	107.0	107.3	107.8	108.9	111.7	112.0	111.9	113.3	113.9	114.5	110.0
	2007-08	115.7	116.2	116.6	117.8	119.3	120.6	126.1	125.4	124.8	127.3	128.8	130.9	122.5
	2008-09	132.6	132.7	132.6	133.9	134.9	135.7	145.0	146.3	146.3	147.0	149.3	151.1	140.6
	2009-10	150.9	151.0	151.8	151.4	153.1	157.6	160.2	162.6	164.5	164.7	164.1	163.3	157.9
	2010-11	163.5	163.5	164.3	165.9	164.4	166.6	168.7	170.3	171.1	168.8	167.0		166.7
Jowar	2005-06	99.5	106.0	112.7	115.6	109.8	105.8	108.0	105.4	106.6	113.7	115.6	115.7	109.5
	2006-07	120.5	126.5	130.1	126.6	115.0	118.8	119.8	121.5	126.1	129.1	130.9	130.6	124.6
	2007-08	131.9	142.6	151.8	149.5	148.8	147.8	149.1	149.6	152.3	151.0	150.3	151.2	148.0
	2008-09	153.4	154.7	154.6	151.3	152.4	151.8	151.1	147.8	147.3	148.1	155.1	146.7	151.2
	2009-10	151.9	160.8	165.6	168.9	172.9	169.4	168.5	167.7	172.3	173.6	176.8	174.8	168.6
	2010-11	172.3	177.1	183.5	183.2	186.7	184.8	187.3	187.4	192.1	193.6	210.5		187.1
Bajra	2005-06	109.4	109.7	107.2	108.0	109.7	110.6	108.7	108.7	111.4	113.4	113.5	115.4	110.5
	2006-07	117.6	121.0	118.9	119.1	121.0	121.4	118.7	125.5	126.1	127.5	125.0	127.7	122.5
	2007-08	132.3	132.7	129.3	128.6	130.3	124.0	123.3	127.7	127.2	127.3	125.8	127.7	128.0
	2008-09	128.9	128.8	131.2	133.4	138.5	138.5	140.4	141.9	141.9	143.6	148.6	154.1	139.2
	2009-10	161.7	165.5	160.2	159.9	165.0	166.8	163.4	171.7	177.9	177.8	173.7	173.2	168.1
	2010-11	172.4	171.9	176.3	178.1	182.6	177.8	170.3	171.0	174.6	176.3	176.0		175.2
Maize	2005-06	111.1	109.6	110.6	112.6	111.2	112.0	111.4	110.7	115.4	117.5	118.2	116.9	113.1
	2006-07	115.9	116.2	118.2	116.5	118.8	119.0	117.6	122.0	126.5	130.6	133.3	135.3	122.5
	2007-08	134.9	131.9	131.6	131.9	130.4	126.9	127.3	126.9	125.9	130.0	131.1	134.0	130.2
	2008-09	134.5	134.7	137.7	137.4	138.2	136.9	138.2	140.5	138.8	142.4	144.6	145.3	139.1
	2009-10	148.6	150.1	151.8	153.0	156.2	155.6	154.5	155.3	154.3	154.1	153.5	153.1	153.3
	2010-11	153.1	152.8	157.8	166.2	169.4	168.1	167.2	171.1	171.9	173.2	175.3		166.0
Ragi	2005-06	101.8	101.6	100.7	101.0	99.7	100.2	99.4	101.8	102.5	102.3	102.7	102.6	101.4
	2006-07	102.3	102.9	105.5	108.2	108.3	110.7	113.7	114.9	116.3	117.0	122.4	123.8	112.2
	2007-08	125.4	123.1	122.1	124.9	123.9	123.7	124.3	121.6	122.1	122.8	122.5	123.9	123.4
	2008-09	123.9	123.9	127.9	123.3	125.1	126.9	137.1	137.0	138.1	139.5	144.2	172.3	134.9
	2009-10	172.6	172.9	177.9	177.1	177.0	176.2	172.4	172.8	174.1	174.2	174.0	174.9	174.7
	2010-11	173.6	174.0	172.9	172.5	173.2	171.5	170.4	170.8	172.0	177.3	181.3		173.6
Cereals	2005-06	101.0	101.2	103.0	104.7	105.1	105.4	106.5	106.3	106.7	110.3	111.3	110.4	106.0
	2006-07	109.1	110.8	111.9	111.8	112.9	115.9	117.8	121.1	122.2	122.9	123.0	121.5	116.7
	2007-08	122.8	122.8	122.8	124.6	125.8	126.1	129.9	130.4	129.9	131.7	132.9	134.6	127.9
	2008-09	137.9	137.9	137.9	139.0	139.8	140.0	144.5	145.6	145.9	147.8	150.1	150.7	143.1
	2009-10	152.9	154.1	154.8	154.5	155.5	158.7	161.2	166.4	169.9	170.5	169.2	166.5	161.2
	2010-11	165.2	165.0	166.3	167.4	168.7	169.3	169.0	171.7	172.6	171.6	172.4		169.0
Source : Office of the Economic Adviser,														
Ministry of Commerce and Industry														

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Table - 2.15														
Pulses : Index Numbers of Wholesale Prices														
(Base :2004-05=100)														
Commodity	Year	Apr	May	Jun	Jul	Aug	Sept	Oct	Nov	Dec	Jan	Feb	Mar	Average
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Pulses														
	2005-06	98.9	100.0	103.1	108.3	110.1	111.7	113.4	119.0	122.5	123.7	123.4	126.0	113.3
	2006-07	131.0	134.2	139.0	139.1	141.1	151.6	166.1	165.2	163.5	156.6	156.3	146.5	149.2
	2007-08	148.3	145.7	144.0	147.6	147.9	146.4	146.7	145.2	142.7	137.3	139.6	147.8	144.9
	2008-09	147.3	144.5	147.3	152.3	159.4	158.3	160.7	161.1	160.6	158.7	160.8	159.1	155.8
	2009-10	163.2	165.6	168.1	179.9	187.2	189.2	193.7	208.0	212.1	219.1	204.1	198.9	190.8
	2010-11	202.5	206.2	206.8	205.8	201.7	196.5	194.1	187.2	187.2	191.1	193.7		197.5
Tur (Arhar)														
	2005-06	90.9	93.4	95.0	101.0	101.9	102.0	102.3	102.8	98.5	98.6	93.7	96.5	98.1
	2006-07	101.1	101.4	103.2	100.7	102.8	111.0	113.2	110.3	110.6	112.0	118.0	115.4	108.3
	2007-08	118.0	117.9	117.9	121.7	126.3	126.2	127.4	131.2	131.4	130.2	128.6	136.2	126.1
	2008-09	133.5	129.7	131.8	138.3	146.3	147.1	148.9	148.4	148.4	148.7	153.8	156.4	144.3
	2009-10	164.9	170.1	181.1	206.8	220.3	221.3	224.7	237.2	236.2	262.7	231.0	220.1	214.7
	2010-11	224.3	228.6	225.6	222.8	199.4	203.2	196.9	185.6	181.7	188.5	202.2		205.3
Moong														
	2005-06	108.1	109.7	111.5	115.6	116.2	116.3	117.3	124.5	125.3	131.4	139.9	144.1	121.7
	2006-07	154.0	158.2	159.8	155.5	152.8	159.1	168.1	165.1	164.9	160.8	163.8	161.5	160.3
	2007-08	162.6	157.8	147.3	149.2	145.6	142.3	138.1	133.9	130.3	125.4	129.6	132.1	141.2
	2008-09	132.4	130.7	133.4	141.4	154.9	159.3	160.5	161.1	157.2	157.7	158.7	157.7	150.4
	2009-10	161.5	167.6	177.2	189.8	198.1	222.7	237.0	267.2	292.5	301.9	290.6	299.5	233.8
	2010-11	316.0	322.9	327.2	309.5	305.0	270.7	257.4	243.5	248.7	269.8	255.1		284.2
Urad														
	2005-06	105.1	110.4	114.3	117.1	119.6	122.3	129.1	149.7	154.5	148.0	150.6	152.3	131.1
	2006-07	171.8	179.2	186.1	184.9	187.9	200.0	217.3	209.3	201.7	187.5	190.5	179.8	191.3
	2007-08	179.2	173.8	170.6	171.8	170.5	166.0	165.1	151.4	146.4	137.9	137.6	146.9	159.8
	2008-09	148.5	145.4	147.3	154.3	161.3	163.4	164.0	163.7	164.7	165.8	168.6	170.4	159.8
	2009-10	178.7	180.0	183.2	196.4	211.9	215.4	233.7	263.5	273.9	283.1	266.1	255.3	228.4
	2010-11	261.6	275.7	287.2	294.2	294.9	292.6	285.5	260.2	255.5	254.4	250.3		273.8
Gram														
	2005-06	98.4	98.5	102.1	108.1	110.5	112.9	114.0	117.4	125.6	126.5	125.2	128.1	113.9
	2006-07	127.6	130.8	138.0	141.1	144.5	158.2	180.7	183.4	182.0	171.5	166.5	149.5	156.2
	2007-08	150.3	147.0	146.2	150.4	150.1	149.4	150.7	151.2	148.1	142.3	146.7	155.4	149.0
	2008-09	153.3	150.1	152.5	154.6	159.6	155.2	157.4	157.3	155.4	150.3	151.1	148.7	153.8
	2009-10	150.6	151.0	147.9	154.2	155.9	152.6	152.3	159.2	156.4	155.1	146.4	144.3	152.2
	2010-11	143.9	144.1	143.2	145.2	149.2	146.6	149.5	151.8	154.9	154.9	159.9		149.4
Masur (Lentil)														
	2005-06	95.7	92.8	96.3	100.1	101.3	102.0	102.3	104.0	101.3	112.7	111.5	110.1	102.5
	2006-07	115.9	117.1	116.2	113.3	112.8	113.4	113.7	111.8	111.6	115.5	116.4	121.9	115.0
	2007-08	132.9	137.5	141.7	148.3	149.9	149.1	149.8	148.7	149.9	142.2	142.1	156.1	145.7
	2008-09	164.8	165.7	174.3	183.6	192.7	193.0	203.1	208.2	217.3	219.9	223.4	207.9	196.2
	2009-10	207.6	211.5	214.1	221.3	230.9	229.5	226.3	236.6	250.7	252.0	239.0	218.4	228.2
	2010-11	219.9	219.3	213.1	208.4	195.0	190.8	191.4	184.5	177.3	180.6	179.2		196.3
Source : Office of the Economic Adviser, Ministry of Commerce and Industry														

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Table - 2.16														
Oilseeds : Index Numbers of Wholesale Prices														
(Base : 2004-05=100)														
Commodity	Year	Apr	May	Jun	Jul	Aug	Sept	Oct	Nov	Dec	Jan	Feb	Mar	Ave
Oilseeds														
	2005-06	92.8	92.3	92.5	93.6	92.2	92.4	92.0	91.8	85.4	86.3	86.9	86.1	90.4
	2006-07	86.8	88.5	89.6	89.7	90.3	91.8	91.7	95.2	100.7	101.3	103.8	104.5	94.5
	2007-08	107.2	107.9	109.2	111.9	111.4	111.2	110.1	110.5	112.6	117.4	119.3	129.9	113.2
	2008-09	127.5	129.9	136.2	137.9	135.8	133.0	130.8	131.1	128.6	129.3	126.2	127.7	131.2
	2009-10	130.1	134.6	134.9	134.1	135.0	133.4	130.3	134.4	137.4	140.0	139.2	136.2	135.0
	2010-11	138.6	137.7	137.7	137.1	138.4	139.7	140.1	138.6	141.9	142.2	149.8		140.2
Rapeseed/Mustard														
	2005-06	95.1	94.7	94.7	96.2	96.4	96.1	95.3	94.8	93.7	92.5	92.5	91.9	94.5
	2006-07	91.9	93.1	93.8	94.4	95.3	95.4	95.4	98.2	101.8	102.2	100.5	100.8	96.9
	2007-08	103.1	103.4	104.6	106.1	107.0	107.1	107.5	110.4	111.2	124.3	126.7	138.7	112.5
	2008-09	130.5	133.5	147.9	151.7	151.2	150.1	151.3	151.2	151.5	148.1	134.0	131.7	144.4
	2009-10	133.4	137.4	137.8	139.0	140.3	138.1	139.2	139.9	144.3	144.3	140.2	136.7	139.2
	2010-11	136.5	136.2	136.7	133.6	133.3	133.1	134.3	134.2	134.6	136.3	136.9		135.1
Safflower seed														
	2005-06	88.8	90.8	91.2	86.9	89.2	87.3	89.6	86.0	84.2	92.9	93.4	88.0	89.0
	2006-07	87.6	87.4	87.5	87.1	87.3	87.3	85.5	85.1	88.2	89.6	87.9	91.9	87.7
	2007-08	98.0	98.0	98.0	98.0	100.0	105.8	105.8	105.3	105.6	105.1	104.9	111.8	103.0
	2008-09	104.9	118.7	122.2	122.2	122.2	122.2	122.2	122.2	122.2	122.2	122.2	122.2	120.5
	2009-10	122.2	122.2	122.2	122.2	122.2	122.2	122.2	122.2	122.2	122.2	122.2	122.2	122.2
	2010-11	122.2	122.2	122.2	122.2	137.3	136.5	138.3	137.1	140.1	140.1	146.0		133.1
Groundnut														
	2005-06	96.0	96.3	97.1	102.1	98.7	99.9	101.8	103.3	91.5	89.8	91.6	93.5	96.8
	2006-07	95.4	98.8	100.4	101.7	101.4	103.0	104.0	110.3	116.4	122.5	128.2	132.2	109.5
	2007-08	133.9	136.6	141.9	146.5	145.5	145.1	140.1	134.1	136.1	136.7	140.9	146.5	140.3
	2008-09	146.4	150.6	155.1	149.2	150.4	139.5	139.9	137.8	141.7	142.1	137.8	141.3	144.3
	2009-10	146.4	146.0	145.1	140.2	141.4	144.6	141.5	152.0	156.0	153.7	156.0	152.9	148.0
	2010-11	162.0	163.4	163.4	166.3	173.5	178.4	172.1	158.6	157.6	156.6	157.5		164.5
Soyabean														
	2005-06	90.0	87.5	90.0	88.9	87.0	87.7	84.0	82.0	66.8	72.8	74.7	73.0	82.0
	2006-07	73.1	75.5	76.2	76.6	74.7	74.0	73.8	78.7	91.3	84.0	87.3	88.4	79.5
	2007-08	94.8	95.1	95.2	95.7	93.6	94.4	94.8	98.1	100.5	111.8	104.6	129.2	100.7
	2008-09	127.2	127.8	131.7	135.5	129.6	130.1	125.0	133.3	119.0	128.0	132.6	137.2	129.8
	2009-10	138.7	153.0	152.4	143.2	140.3	135.2	129.1	137.8	137.8	143.5	144.0	139.9	141.2
	2010-11	139.9	137.0	132.7	126.6	117.8	117.1	117.1	118.2	125.9	125.9	140.0		127.1
Sunflowerseed														
	2005-06	101.2	101.6	101.6	104.9	104.6	103.9	91.8	89.4	89.6	88.5	87.0	87.6	96.0
	2006-07	91.9	91.5	94.5	98.1	96.0	94.6	85.5	88.2	106.7	124.3	128.2	120.2	101.6
	2007-08	117.6	115.3	118.5	131.2	126.8	129.1	132.5	132.8	131.2	142.7	152.0	154.2	132.0
	2008-09	138.4	137.7	141.1	141.9	134.4	135.7	130.2	126.1	121.6	119.6	121.3	122.2	130.9
	2009-10	124.5	129.1	127.0	124.2	124.4	122.5	119.0	115.3	125.3	132.3	125.2	127.8	124.7
	2010-11	120.1	121.2	121.0	120.6	129.9	122.2	139.6	147.7	162.6	157.7	175.9		138.0
Gingelly seed/Sesamum seed														
	2005-06	101.4	103.5	101.8	102.5	97.0	98.6	101.7	109.6	107.2	108.2	109.2	111.9	104.4
	2006-07	113.4	114.9	116.8	115.4	114.1	122.8	128.4	134.0	127.5	124.4	129.3	138.1	123.3
	2007-08	131.5	121.5	123.1	126.3	129.2	132.5	127.1	128.8	137.8	137.6	157.5	164.9	134.8
	2008-09	169.1	177.6	176.4	173.5	162.7	159.6	159.8	162.8	168.2	163.5	160.3	160.2	166.1
	2009-10	174.5	194.4	201.6	242.0	249.2	247.4	247.4	251.2	254.4	252.5	246.2	241.5	233.5
	2010-11	253.2	246.9	252.0	254.4	249.7	240.9	242.7	245.6	249.7	247.4	247.4		248.2
Nigerseed														
	2005-06	86.9	87.5	89.1	90.5	89.3	89.3	81.7	83.6	83.3	82.0	82.6	81.2	85.6
	2006-07	79.5	78.7	81.0	87.5	92.6	98.7	97.6	99.9	102.4	110.1	135.1	162.0	102.1
	2007-08	163.0	179.4	166.9	177.7	211.9	197.7	183.8	144.9	146.0	153.1	220.6	267.7	184.4
	2008-09	256.2	257.5	283.7	274.3	243.6	232.8	201.6	200.4	182.4	180.4	206.6	217.6	228.1
	2009-10	206.5	207.2	181.4	167.7	163.4	161.7	151.6	149.4	152.6	172.8	168.3	146.6	169.1
	2010-11	140.8	139.5	136.8	134.1	134.1	137.5	141.7	161.0	161.0	152.4	140.8		143.6

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Table - 2.17														
Edible Oils : Index Numbers of Wholesale Prices														
(Base : 2004-05=100)														
Commodity	Year	Apr	May	Jun	Jul	Aug	Sept	Oct	Nov	Dec	Jan	Feb	Mar	Average
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Edible Oil														
	2005-06	94.8	94.3	93.9	95.3	95.4	95.2	94.7	94.2	93.1	92.4	92.7	93.0	94.1
	2006-07	96.7	98.2	98.8	99.9	102.0	102.5	102.4	103.3	105.4	106.5	106.9	106.8	102.5
	2007-08	111.0	111.2	112.1	114.6	114.7	114.4	114.4	115.0	116.2	119.6	121.8	127.2	116.0
	2008-09	124.0	123.2	126.7	127.8	125.6	123.9	122.0	119.7	119.8	117.1	115.3	113.5	121.6
	2009-10	114.2	115.9	114.6	113.9	114.2	113.3	112.3	113.7	115.9	116.0	114.5	114.0	114.4
	2010-11	114.3	114.4	115.2	116.5	118.2	119.7	119.9	121.0	122.4	124.3	127.6		119.4
Mustard Oil														
	2005-06	95.1	94.7	94.7	96.2	96.4	96.1	95.3	94.8	93.7	92.5	92.5	91.9	94.5
	2006-07	91.9	93.1	93.8	94.4	95.3	95.4	95.4	98.2	101.8	102.2	100.5	100.8	96.9
	2007-08	103.1	103.4	104.6	106.1	107.0	107.1	107.5	110.4	111.2	114.0	115.8	121.3	109.3
	2008-09	117.5	117.8	124.6	126.8	124.0	123.0	122.0	121.3	122.7	129.6	122.0	117.0	122.4
	2009-10	114.5	115.6	114.2	115.3	114.9	112.7	112.9	115.8	118.8	119.3	115.1	114.1	115.3
	2010-11	111.4	111.8	112.3	113.6	116.0	116.2	116.1	116.3	116.9	118.7	121.7		115.5
Groundnut Oil														
	2005-06	95.7	94.5	94.7	99.3	100.9	101.8	101.8	99.5	96.0	94.8	92.9	92.5	97.0
	2006-07	94.5	96.4	96.9	101.8	106.2	110.1	110.3	112.0	115.3	119.9	125.7	124.3	109.5
	2007-08	128.3	127.9	131.8	139.7	139.8	138.6	133.6	128.0	130.1	131.7	134.9	138.7	133.6
	2008-09	135.8	135.4	138.4	137.9	134.4	133.0	130.9	129.9	130.8	126.3	121.4	120.6	131.2
	2009-10	125.1	123.4	123.1	125.1	125.2	125.2	125.3	129.9	133.0	134.7	132.3	131.5	127.8
	2010-11	133.2	135.4	140.4	146.5	150.9	154.1	151.0	147.9	148.2	148.8	145.0		145.6
Soyabean Oil														
	2005-06	93.3	92.0	91.6	91.6	91.3	90.7	90.4	89.8	89.3	88.1	88.7	90.9	90.6
	2006-07	95.9	97.8	98.8	100.6	103.5	104.3	104.1	104.2	106.3	107.4	106.5	107.3	103.1
	2007-08	113.0	113.9	114.2	115.3	115.6	115.2	116.6	118.2	120.5	124.3	126.2	130.8	118.7
	2008-09	129.5	127.9	129.6	130.4	130.6	130.1	127.1	123.6	124.1	121.3	120.2	119.7	126.2
	2009-10	119.3	119.4	119.5	117.4	117.1	114.7	114.5	116.6	119.5	118.2	117.4	117.5	117.6
	2010-11	119.0	118.8	119.0	119.5	120.6	120.8	121.7	125.2	126.5	130.2	140.7		123.8
Sunflower Oil														
	2005-06	93.7	93.8	94.1	95.4	96.3	94.8	94.9	95.6	94.7	93.5	92.7	93.5	94.4
	2006-07	97.0	98.1	98.2	98.7	101.3	102.3	102.0	105.7	115.4	112.6	113.2	111.5	104.7
	2007-08	119.4	121.2	121.7	125.1	122.1	121.0	122.8	127.3	129.4	128.5	131.3	131.7	125.1
	2008-09	127.8	127.9	129.6	129.7	128.0	126.9	128.2	128.6	126.2	112.1	111.3	112.8	124.1
	2009-10	113.4	115.8	114.3	111.6	112.9	112.1	111.8	112.6	115.8	113.8	111.3	112.5	113.2
	2010-11	113.8	112.7	113.8	114.2	115.2	117.3	120.5	126.4	128.4	128.6	128.3		119.9
Gingelly Oil/Sesamum Oil														
	2005-06	91.3	90.2	89.1	90.6	89.8	89.3	88.3	88.9	88.2	87.8	87.3	87.8	89.1
	2006-07	90.1	92.1	91.8	91.3	96.0	97.0	99.3	99.2	100.8	101.8	102.3	104.1	97.2
	2007-08	105.2	105.2	107.2	106.5	105.6	106.0	106.1	109.0	113.0	121.5	131.3	143.7	113.4
	2008-09	138.4	135.4	136.0	141.0	137.4	130.3	125.3	121.9	121.4	123.2	121.3	122.1	129.5
	2009-10	128.8	130.4	128.1	126.8	125.5	126.2	126.4	125.3	126.5	130.9	128.0	132.3	127.9
	2010-11	131.1	130.1	130.8	131.9	134.4	133.6	132.6	130.3	133.6	134.6	140.4		133.0
Source : Office of the Economic Adviser, Ministry of Commerce and Industry														

P-26
Table - 2.18

Raw Cotton : Index Number of Wholesale Prices

(Base : 2004-05=100)

Year	April	May	June	July	Aug	Sept	Oct	Nov	Dec	Jan	Feb	March	Ave
1	2	3	4	5	6	7	8	9	10	11	12	13	14
Raw Cotton													
2005-06	84.3	87.0	88.2	88.8	88.6	86.8	88.3	91.4	97.0	97.6	93.6	90.6	90.2
2006-07	92.7	91.3	91.8	96.0	102.5	103.8	99.9	97.9	96.2	95.0	93.2	99.2	96.6
2007-08	109.7	105.2	106.7	113.1	113.5	112.5	107.9	108.6	111.3	115.1	116.3	121.7	111.8
2008-09	125.2	131.8	144.8	154.7	158.3	160.9	147.0	140.9	139.2	137.4	129.9	124.2	141.2
2009-10	129.8	132.7	132.7	135.3	135.4	133.2	131.9	139.4	148.8	148.2	146.2	149.0	138.6
2010-11	150.8	152.0	155.7	153.1	153.1	180.2	189.6	204.3	219.5	220.2	263.4		185.6

Source : Office of the Economic Adviser,
Ministry of Commerce and Industry

Annual Percentage Change Over Previous Year : Index Numbers Of Wholesale Prices

(Base : 2004-05=100)

Year	April	May	June	July	August	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	March	Avg
1	2	3	4	5	6	7	8	9	10	11	12	13	14
Raw Cotton													
2005-06													
2006-07	10.0	4.9	4.1	8.1	15.7	19.6	13.1	7.1	-0.8	-2.7	-0.4	9.5	7.1
2007-08	18.3	15.2	16.2	17.8	10.7	8.4	8.0	10.9	15.7	21.2	24.8	22.7	15.7
2008-09	14.1	25.3	35.7	36.8	39.5	43.0	36.2	29.7	25.1	19.4	11.7	2.1	26.3
2009-10	3.7	0.7	-8.4	-12.5	-14.5	-17.2	-10.3	-1.1	6.9	7.9	12.5	20.0	-1.9
2010-11	16.2	14.5	17.3	13.2	13.1	35.3	43.7	46.6	47.5	48.6	80.2		34.0

Table-2.19

Indices of International Commodity Prices

(2005=100; in terms of U.S. Dollars)

Commodity	Weights	2005	2006	2007	2008	2009	2010	Quarterly Averages 2009				Quarterly Averages 2010				Monthly Avg		Percentage Change	
								1st	2nd	3rd	4th	1st	2nd	3rd	4th	Jan 11	Feb 11	Feb-10 to Feb,11	Jan,-11 to Feb,11
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
Non-fuel Commodities*	36.9	100.0	123.2	140.6	151	127.4	161	109.8	120.1	127.2	133.8	150.4	155.4	158.6	179.4	196.9	204.1	38.1	3.7
Food	16.7	100.0	110.5	127.3	157	134	149.4	126.1	139	134.6	136.3	138.7	140.1	150.5	168.2	183.2	189.4	37.1	3.4
Cereals	3.6	100.0	121.3	158.7	222.6	162.4	166.5	166.6	170.9	153.8	158.3	153.3	140.8	168.1	203.7	224.2	239.6	56.7	6.8
Wheat	1.7	100.0	125.8	167.4	213.8	146.6	146.7	152	162.6	137	134.7	128.4	116.4	156.1	186.1	214.2	228.4	79.0	6.6
Maize	1.0	100.0	123.6	165.9	226.9	168.2	189	169.7	178.8	153.9	170.5	165.3	160.7	184.7	245.4	269.6	298.2	81.5	10.6
Rice	0.6	100.0	105.5	115.5	243.3	204.8	180.9	217.1	193	207.6	201.3	199.5	166	171.1	166.8	183.6	186.0	-8.5	1.3
Barley	0.3	100.0	122.7	181.3	210.9	135	166.6	122.4	136.4	128.2	153.1	151.1	154.5	170.2	190.5	205.2	206.5	43.0	0.6
Vegetable oils and																			
Protein meals	4.4	100.0	103.4	143.4	192.5	154	170.4	138.4	164.5	156.3	156.7	157.2	158	167.7	198.5	223.2	224.2	44.4	0.4
Soyabeans	1.2	100.0	97.5	142.2	203.2	169.7	172.5	155.3	185.5	172.7	165.1	157.2	157.6	170.4	204.8	229.1	229.5	48.6	0.2
Soyabean meal	0.8	100.0	94.3	128.1	178.8	174.6	161	157.9	194.3	182.3	163.9	149.4	150.4	163.3	181	200.3	199.3	35.1	-0.5
Soyabean oil	0.4	100.0	111.2	161.3	228.7	158.8	186.6	144.6	165.7	155.3	169.4	131.3	169.6	179	226.4	253.6	255.8	50.9	0.9
Palm oil	0.7	100.0	113.4	195.6	234.7	175.2	233.9	145.8	195.5	174.5	184.8	207.6	212	228.9	287	336.9	339.6	65.5	0.8
Sunflower oil	0.2	100.0	62.3	58.8	148	91	130.6	89.7	89.9	90.9	93.4	96.4	96.9	99.9	121.3	135.6	139.1	45.8	4.1
Groundnuts	0.2	100.0	107.8	153.1	203.8	129.3	161.1	131.7	120.2	127.3	138.1	157.4	157	158.8	171.4	203.9	208	31.4	2.0
Cotton	0.7	100.0	105.2	114.7	129.4	113.7	187.7	99.3	108.8	116.7	130.1	147	163	168.7	272	324.3	386.4	166.3	19.1
* : Weights are based on 2002-2004 average world export earnings.																			
Source : International Monetary Fund.																			

Export of Rice and Wheat

Quantity (in '000 tonnes)

Value (in Rs. Crore)

Unit Value (in Rs./Kg.)

Item	2005-2006			2006-2007			2007-2008			2008-09			2009-10			2010-11 (April-July 10)		
	Quantity	Value	Unit Value	Quantity	Value	Unit Value	Quantity	Value	Unit Value	Quantity	Value	Unit Value	Quantity	Value	Unit Value	Quantity	Value	Unit Value
RICE																		
Basmati Rice	1166.56	3043.09	26.09	1045.71	2792.00	26.70	1183.34	4344.58	36.71	1556.41	9477.03	60.89	2016.87	10889.60	53.99	659.68	3178.48	48.18
Parboiled Rice	1951.83	2204.47	11.29	2853.26	3292.60	11.54	3847.95	5126.51	13.32	750.27	1291.39	17.21	42.98	103.33	24.04	19.62	39.05	19.90
Broken Rice	189.87	178.81	9.42	271.08	243.47	8.98	260.45	250.38	9.61	2.31	1.84	7.97	0.85	1.39	16.42	0.02	0.06	37.94
Other Rice	779.80	794.90	10.19	577.86	706.58	12.23	1177.52	2032.90	17.26	179.31	394.15	21.98	95.71	260.58	27.22	24.83	50.52	20.34
Total Rice	4088.06	6221.27	15.22	4747.91	7034.65	14.82	6469.25	11754.38	18.17	2488.29	11164.40	44.87	2156.41	11254.90	52.19	704.15	3268.11	46.41
WHEAT																		
Durum Wheat	39.45	28.97	7.34	11.36	10.53	9.27	0.030	0.026	8.72	0.241	0.241	9.98	0.01	0.01	11.65	0.015	0.041	27.95
Wheat Seed	35.91	27.51	7.66	0.70	0.66	9.43	0.08	0.076	10.08	0.36	0.378	10.39						
Other Wheat	669.92	506.58	7.56	34.49	24.09	6.98	0.11	0.097	9.24	0.88	1.216	13.84						
Total Wheat	745.28	563.06	7.56	46.55	35.28	7.58	0.21	0.20	9.46	1.48	1.84	12.36				0.01	0.04	27.95
Wheat or Meslin Flour	36.76	44.17	12.02	37.68	54.70	14.52	0.03	0.04	15.04	0.03	0.04	15.04	0.02	0.04	24.28			
TOTAL	782.04	607.23	7.76	84.23	89.98	10.68	0.24	0.24	10.09	1.51	1.88	12.41	0.02	0.04	24.28	0.01	0.04	27.95
Source: DGCI&S, Kolkata, Ministry of Commerce and Industry																		

Import of Rice and Wheat

Quantity (in '000 tonnes)
Value (in Rs. Crore)
Unit Value (in Rs./Kg.)

	2005-2006			2006-2007			2007-2008			2008-2009			2009-10			2010-11 (April - July 10)		
Items	Quantity	Value	Unit Value	Quantity	Value	Unit Value	Quantity	Value	Unit Value	Quantity	Value	Unit Value	Quantity	Value	Unit Value	Quantity	Value	Unit Value
RICE																		
Basmati Rice																		
Parboiled Rice	0.23	0.32	13.91	0.013	0.03	23.85	0.10	0.17	17.05				0.02	0.07	34.00	0.02	0.06	26.25
Broken Rice																		
Other Rice	0.03	0.02	6.52	0.15	0.38	25.33	0.04	0.25	56.30	0.09	0.54	63.15	0.04	0.30	67.91	0.02	0.16	64.52
Total Rice	0.26	0.34	13.03	0.16	0.41	25.21	0.15	0.42	29.04	0.09	0.54	63.15	0.07	0.37	56.79	0.05	0.21	46.83
WHEAT																		
Durum Wheat				301.76	308.05	10.21	38.82	40.70	10.48				60.24	85.87	14.26	16.84	21.15	12.56
Other Wheat	0.49	0.30	6.12	5778.35	5543.60	9.59				0.02	0.01	7.49						
Total Wheat	0.49	0.30	6.12	5778.35	5543.60	9.59	38.82	40.70	10.48	0.02	0.01	7.49	60.24	85.87	14.26	16.84	21.15	12.56
Wheat or Meslin flour	0.98	0.60	6.12	5.72	8.50	14.86	1754.38	2616.81	14.92				104.15	146.03	14.02	84.39	108.37	12.84
TOTAL	1.47	0.90	6.12	5784.07	5552.10	9.60	1793.21	2657.51	14.82	0.02	0.01	7.49	164.38	231.90	14.11	101.23	129.52	12.79

Export and Import of Foodgrains

Quantity (in '000 Tonnes)

	Exports				Imports			
Year	Rice	Total Cereals	Pulses	Total Foodgrains	Rice	Total Cereals	Pulses	Total Foodgrains
1	2	3	4	5	6	7	8	9
1990-91	504.99	651.49	15.11	666.60	66.04	128.86	1273.43	1402.29
1991-92	678.24	1350.67	25.78	1376.45	12.12	12.12	312.61	324.73
1992-93	580.40	634.21	34.31	668.52	#####	1466.08	382.62	1848.70
1993-94	767.67	892.81	43.60	936.41	75.52	317.22	627.96	945.18
1994-95	890.57	1061.46	50.71	1112.17	6.99	7.53	554.08	561.61
1995-96	4914.01	5574.93	61.36	5636.29	0.08	8.33	485.65	493.98
1996-97	2511.98	3728.57	55.15	3783.72	-	612.84	654.79	1267.63
1997-98	2389.86	2403.20	170.76	2573.96	0.05	1486.27	1008.15	2494.42
1998-99	4963.59	4974.82	103.90	5078.72	6.63	1812.35	563.53	2375.88
1999-00	1896.12	1906.24	192.17	2098.41	34.99	1605.78	252.82	1858.60
2000-01	1534.48	2393.10	244.26	2637.36	13.20	46.61	350.57	397.18
2001-02	2210.98	4994.91	161.64	5156.55	0.06	5.87	2232.29	2238.16
2002-03	505743	8828.13	151.36	8979.49	0.87	1.26	1995.33	1996.59
2003-04	3412.05	8069.40	153.88	8223.28	0.05	2.04	1723.33	1725.37
2004-05	4796.66	7908.35	271.18	8179.53	-	2.88	1339.45	1342.33
2005-06	4088.06	5372.79	447.44	5820.23	0.26	23.19	1696.52	1719.71
2006-07	4747.91	5515.57	252.00	5767.57	0.16	5781.19	2270.97	8052.16
2007-08	6469.25	7055.35	164.42	7219.77	0.15	1798.56	2830.53	4629.09
2008-09	2488.29	6158.181	136.27	6294.45	0.09	12.04	2481.1	2493.14
2009-10	2156.41	4948.74	99.95	5048.69	0.07	186.40	3509.58	3695.98
2010-11	704.15	1428.92	101.98	1530.90	0.05	103.27	675.962	779.23
(April-July 10)				232				

Source: DGCI&S, Kolkata, Ministry of Commerce and Industry

					P - 32										
					Table - 2.24										
				Export of Foodgrains											
													Quantity (in '000 tonnes)		
													Value (in Rs. Crore)		
													Unit Value (in Rs./Kg.)		
	2006-2007			2007-2008			2008-2009			2009-10			2010-11		
Item			Unit			Unit			Unit			Unit			Unit
	Quantity	Value	Value	Quantity	Value	Value	Quantity	Value	Value	Quantity	Value	Value	Quantity	Value	Value
Rice	4747.91	7034.65	14.82	6469.25	11754.38	18.17	#####	#####	44.87	2156.41	11254.90	52.19	704.15	3268.11	46.41
Wheat	46.55	35.28	7.58	2.170	2.870	13.22	1.51	1.88	12.41	0.02	0.04	24.28	0.01	0.04	27.95
Barley	0.8300	1.0600	12.77	347.84	411.37	11.83	15.93	18.82	11.81	51.22	56.86	11.10	0.86	1.44	16.68
Jowar	51.03	51.41	10.07	25.10	22.65	9.02	89.99	97.46	10.83	72.58	97.66	13.46	6.04	6.40	10.58
Bajra	27.44	27.66	10.08	69.37	65.29	9.41	15.93	18.82	11.81	40.69	50.45	12.40	20.58	30.33	14.73
Maize	637.41	498.85	7.83	133.99	133.23	9.94	3537.30	3374.99	9.54	2600.82	2553.87	9.82	694.54	676.52	9.74
Ragi	2.53	1.48	5.85	4.14	2.81	6.80	4.77	4.40	9.22	6.31	6.47	10.26	1.94	1.49	7.65
Other Cereals	1.87	3.00	16.04	3.49	4.44	12.71	4.45	7.33	16.47	20.69	66.00	31.89	0.78	2.07	26.42
Total Cereals	5515.57	7653.39	13.88	7055.35	12397.05	17.57	6158.18	14688.10	23.85	4948.74	14086.24	28.46	1428.92	3986.39	27.90
Pulses	250.71	773.34	30.85	164.20	526.41	32.06	136.27	540.22	39.64	99.95	407.50	40.77	101.98	367.11	36.00
Total															
Foodgrains	5766.28	8426.73	14.61	7219.55	12923.46	17.90	6294.45	15228.32	24.19	5048.69	14493.74	28.71	1530.90	4353.50	28.44

		P-33			
		Table - 2.25			
	Export of Coarse Cereals				
				Quantity (in '000 Tonnes)	
Year	Jowar	Bajra	Maize	Ragi	Total
1	2	3	4	5	6
1991-92	7.48	5.83	-	0.47	13.78
1992-93	5.34	8.54	0.43	2.67	16.98
1993-94	71.93	25.41	26.67	0.52	124.53
1994-95	57.92	6.38	18.90	0.60	83.80
1995-96	3.16	5.30	18.75	0.77	27.98
1996-97	7.26	5.11	55.36	1.23	68.96
1997-98	4.80	5.59	1.61	1.22	13.22
1998-99	1.26	4.01	2.07	0.93	8.27
1999-00	1.38	2.72	1.27	4.36	9.73
2000-01	3.98	6.76	32.46	1.29	44.49
2001-02	10.40	7.68	113.65	1.03	132.76
2002-03	8.93	9.55	78.18	1.09	97.75
2003-04	14.14	23.34	543.27	1.67	582.42
2004-05	23.06	25.34	1068.67	2.49	1119.56
2005-06	67.64	46.82	419.95	2.52	536.93
2006-07	51.03	27.44	637.41	2.53	718.41
2007-08	25.10	69.37	133.99	4.14	232.60
2008-09	89.99	15.93	3537.30	4.77	3647.99
2009-10	72.58	40.69	2600.82	6.31	2720.40
2010-11	6.04	20.58	694.54	1.94	723.10
(Apr-July 09)					
Source: DGCI&S, Kolkata, Ministry of Commerce and Industry					

Table - 2.26

Import of Foodgrains

Quantity (in '000 tonnes)

Value (in Rs. Crore)

Unit Value (in Rs./Kg.)

Item	2006-07			2007-08			2008-09			2009-10			2010-11 (April-July 10)		
	Quantity	Value	Unit	Quantity	Value	Unit	Quantity	Value	Unit	Quantity	Value	Unit	Quantity	Value	Unit
			Value			Value			Value			Value			Value
Rice	0.16	0.41	25.63	0.15	0.42	29.04	0.09	0.54	63.15	0.07	0.37	56.79	0.05	0.21	46.83
Wheat	5778.35	5543.60	9.59	1793.21	2657.51	14.82	0.02	0.01	7.49	164.38	231.90	14.11	101.23	129.52	12.79
Barley	0.00	0.00	27.50	0.30	0.45	15.27	2.42	4.17	17.23	0.39	0.63	16.26	1.01	1.36	13.49
Maize	2.00	3.66	18.30	4.27	8.38	19.61	7.28	23.50	32.28	19.14	57.81	30.21	0.58	1.40	24.14
Other Cereals	0.68	0.90	13.24	0.63	0.82	12.94	2.24	2.58	11.51	2.43	3.30	13.58	0.41	0.72	17.57
Total Cereals	5781.19	5548.57	9.60	1798.56	2667.59	14.83	12.04	30.80	25.58	186.40	294.00	15.77	103.27	133.21	12.90
Pulses	2270.97	3891.91	17.14	2830.53	5367.89	18.96	2481.10	6246.40	25.18	3509.58	9813.37	27.96	675.96	2328.13	34.44
Total Foodgrains	8052.16	9440.48	11.72	4629.09	8035.48	17.36	2493.14	6277.20	25.18	3695.98	10107.37	27.35	779.23	2461.33	31.59

					P - 35										
					Table-2.27										
					Export of Pulses									Quantity (in tonnes)	
														Value (in Rs. thousand)	
														Unit value (in Rs./Kg.)	
Item	2006-07			2007-08			2008-09			2009-10			2010-11 (April-July 10)		
	Quantity	Value	Unit Value	Quantity	Value	Unit Value	Quantity	Value	Unit Value	Quantity	Value	Unit Value	Quantity	Value	Unit Value
Peas	2200.0	35754.1	16.3	1870.5	55648.1	29.8	152.9	4295.9	28.1	641.8	23926.7	37.3	341.6	15016.4	44.0
Chickpeas	61303.9	2173050.7	35.4	161772.5	5189692.9	32.1	127101.4	5027619.3	39.6	95264.2	3910719.1	41.1	100420.4	3613174.0	36.0
Beans of the Sp Vigna Mungo	364.5	14415.1	39.5	43.2	928.8	21.5	33.5	1512.5	45.2	14.6	273.6	18.7	1.7	89.6	52.7
Small Red Bean	160.5	5209.1	32.5	0.4	12.2	30.4	-	-	-	48.2	2595.3	53.8			
Kidney Beans	51.1	1324.6	25.9	19.8	736.1	37.1	1.0	23.2	23.2	8.6	306.6	35.7	1.0	46.6	46.6
Guarseed	1286.2	56251.2	43.7	8.4	281.9	33.5									
Other Beans	3090.9	110256.9	35.7	6409.2	225706.9	35.2									
Lentils	121009.9	3218694.3	26.6	50.6	2650.2	52.4	109.6	5989.9	54.6	601.7	28656.6	47.6	74.5	2489.0	33.4
Broad Beans	85.8	2077.7	24.2	9.7	183.6	18.9	-	-	-	2.5	47.1	18.5			
Tur	22662.5	866430.4	38.2	238.3	6010.2	25.2	132.7	9030.3	68.0	274.4	8241.8	30.0	11.7	249.1	21.2
Others	42869.0	1416476.4	33.0	406.6	18087.4	44.5	8740.0	353751.5	40.5	3090.9	100213.6	32.4	1126.3	40056.8	35.6
TOTAL	255084.5	7899940.3	31.0	170829.3	5499938.2	32.2	136271.1	5402222.8	39.6	99947.0	4074980.5	40.8	101977.2	3671121.4	36.0
TOTAL	251993.5	7789683.5	30.9	164420.0	5274231.3	32.1	136271.1	5402222.8	39.6	99947.0	4074980.5	40.8	101977.2	3671121.4	36.0
(Excluding other beans)															
Source: DGCI&S, Kolkata, Ministry of Commerce and Industry															

Table - 2.28

Import of Pulses

Quantity (in '000 tonnes)

Value (in Rs. Crore)

Unit Value (in Rs./Kg.)

Item	2006-2007			2007-2008			2008-2009			2009-10			2010-11 (April-July 10)		
	Quantity	Value	Unit Value	Quantity	Value	Unit Value	Quantity	Value	Unit Value	Quantity	Value	Unit Value	Quantity	Value	Unit Value
Peas and Beans	1388.6	1625.2	11.7	1738.3	2774.4	16.0	1216.0	2738.4	22.5	1655.6	2593.1	15.7	299.5	447.8	15.0
Chickpeas	127.3	356.3	28.0	145.6	337.4	23.2	198.2	467.7	23.6	338.4	849.4	25.1	14.9	36.9	24.8
Beans of the Spp Vigna Mungo	332.4	1055.6	31.8	326.6	856.5	26.2	440.3	1261.3	28.6	706.2	3163.6	44.8	197.4	1137.2	57.6
Small Red Beans	11.8	26.4	22.3	0.7	1.5	21.0	0.1	0.3	27.4	1.9	6.5	33.3	0.1	0.2	30.4
Kidney Beans	56.6	165.0	29.1	42.1	125.8	29.9	51.5	175.9	34.1	82.7	280.3	33.9	31.1	108.1	34.8
Guarseed			-	-	-										
Other Beans	219.7	668.9	30.5	116.8	274.6	23.5									
Lentils	58.9	106.1	18.0	230.6	503.7	21.8	33.2	142.1	42.8	288.1	1082.2	37.6	79.5	327.2	41.2
Tur	246.5	416.3	16.9	312.8	684.0	21.9	502.8	1356.0	27.0	389.3	1656.6	42.6	35.5	178.6	50.4
Others	48.8	141.2	29.0	34.0	84.6	24.9	39.3	104.7	26.6	47.3	181.6	38.4	18.1	92.1	50.8
TOTAL	2490.6	4560.8	18.3	2947.3	5642.5	19.1	2481.4	6246.4	25.2	3509.6	9813.4	28.0	676.0	2328.1	34.4
TOTAL (Excluding Other Beans)	2271.0	3891.9	17.1	2830.5	5367.9	19.0	2481.4	6246.4	25.2	3509.6	9813.4	28.0	676.0	2328.1	34.4

P-37						
Table - 2.29				Quantity (in '000 tonnes)		
				Value (in Rs. Crore)		
Export and Import of Pulses				Unit Value (in Rs./Kg.)		
Year	Exports			Imports		
	Qty.	Value	Unit Value	Qty.	Value	Unit Value
1	2	3	4	5	6	7
1980-81	1.09	0.35	3.21	172.96	29.76	1.72
1981-82	0.95	0.34	3.58	128.07	44.34	3.46
1982-83	1.71	0.87	5.09	102.36	36.68	3.58
1983-84	6.37	0.66	1.04	227.90	82.85	3.64
1984-85	3.79	2.56	6.75	235.39	100.70	4.28
1985-86	0.57	0.46	8.07	431.44	189.06	4.38
1986-87	5.37	4.77	8.88	624.79	233.66	3.74
1987-88	9.18	6.41	6.98	612.40	272.02	4.44
1988-89	10.10	11.50	11.39	755.56	1190.01	15.75
1989-90	13.14	15.98	12.16	469.90	228.35	4.86
1990-91	15.11	17.93	11.87	1273.43	481.17	3.78
1991-92	25.78	39.04	15.14	312.61	254.77	8.15
1992-93	34.31	53.44	15.58	382.62	334.38	8.74
1993-94	43.60	73.59	16.88	627.96	566.85	9.03
1994-95	50.71	90.41	17.83	554.08	593.37	10.71
1995-96	61.36	131.81	21.48	485.65	685.55	14.12
1996-97	55.15	131.58	23.86	654.79	890.34	13.60
1997-98	170.76	360.80	21.13	1008.15	1194.67	11.85
1998-99	103.90	223.03	21.47	563.53	708.81	12.58
1999-00	192.17	419.65	21.84	252.82	358.25	14.17
2000-01	244.26	537.58	22.01	350.57	500.06	14.26
2001-02	161.62	369.20	22.84	2232.29	3163.72	14.17
2002-03	151.38	351.37	23.21	1995.33	2741.05	13.74
2003-04	153.88	328.60	21.35	1723.33	2284.87	13.26
2004-05	271.18	602.57	22.22	1339.45	1777.58	13.27
2005-06	447.80	1116.07	24.92	1696.52	2477.29	14.60
2006-07	251.99	778.97	30.91	2270.89	3891.91	17.14
2007-08	164.42	527.42	32.08	2830.53	5367.89	18.96
2008-09	136.27	540.22	39.64	2481.10	6246.40	25.18
2009-10	99.95	407.498	40.77	3509.58	9813.37	27.96
2010-11	101.98	367.112	36.00	675.96	2328.13	34.44
(April-July, 10)						
Source: DGCI&S, Kolkata, Ministry of Commerce and Industry						

	P - 38		
	Table - 2.30		
	Import of Edible Oils		
	Quantity (in '000 tonnes)		
	Value (in Rs. Crore)		
	Unit Value (in Rs./Kg.)		
YEAR	Edible oils		
	Quantity	Value	Unit Value
1	2	3	4
1990-91	525.80	325.79	6.20
1991-92	226.05	247.79	10.96
1992-93	102.77	166.88	16.24
1993-94	114.36	166.63	14.57
1994-95	346.75	624.24	18.00
1995-96	1061.99	2261.93	21.30
1996-97	1416.79	2929.19	20.67
1997-98	1265.75	2764.67	21.84
1998-99	2621.85	7588.93	28.94
1999-00	4195.64	8046.05	19.18
2000-01	4177.17	5976.53	14.31
2001-02	4321.83	6464.97	14.96
2002-03	4365.03	8779.64	20.11
2003-04	5290.30	11683.24	22.08
2004-05	4751.19	11076.89	23.31
2005-06	4288.11	8960.99	20.90
2006-07	4269.38	9539.90	22.34
2007-08	4903.39	10301.08	21.01
2008-09	6719.35	15837.47	23.57
2009-10	8034.00	26483.22	32.96
2010-11	2308.55	8816.52	38.19
(April-July 10)			
	Source : DGCI&S, Kolkata,		
	Ministry of Commerce and Industry		

Farm Inputs: Index Numbers of Wholesale Prices (Base 2004-05=100)

Month/ Year	Ferti- lisers	Electri- city (irriga- tion)	Pesti- cides	Non-elec trical Machi- nery	Tractors	Lubri- cants	Diesel Oil (HSDO)	Diesel Oil (LDO)	Fodder	Cattle Feed
1	2	3	4	5	6	7	8	9	10	11
Annual Average (July - June)										
2005-06	102.63	110.81	103.76	105.93	104.06	106.62	124.27	131.18	111.08	103.58
2006-07	105.05	116.29	107.83	107.68	108.01	138.23	129.62	145.09	117.40	115.99
2007-08	106.61	115.97	107.51	110.03	111.07	148.12	127.73	178.48	123.03	128.17
2009										
January	107.90	117.50	112.70	110.80	122.00	174.50	132.40	100.00	108.70	148.20
February	107.20	117.50	112.70	110.70	122.00	174.50	125.40	116.80	109.80	149.70
March	107.70	108.70	112.60	110.30	122.10	174.50	125.70	119.60	112.20	150.00
April	107.60	108.70	111.60	112.70	122.60	174.50	125.70	131.30	114.30	152.40
May	107.50	108.70	110.40	112.60	122.70	174.50	125.70	140.60	114.00	157.20
June	107.60	108.70	110.10	112.80	122.70	174.50	125.70	145.60	116.00	158.20
July	107.50	108.70	110.20	112.80	122.70	174.50	133.90	165.80	119.50	159.90
August	107.20	117.40	110.60	112.80	122.70	174.50	133.90	159.80	123.30	165.30
September	107.10	117.40	110.40	112.80	122.60	174.50	133.90	162.00	139.80	166.30
October	108.10	117.40	110.50	114.70	123.20	174.50	133.90	157.40	136.40	166.50
November	108.50	117.40	110.70	118.00	123.20	174.50	133.90	160.20	144.60	166.90
December,	109.00	117.40	110.60	117.80	123.20	174.50	133.90	165.20	143.00	168.80
2010										
January	108.90	117.40	110.20	117.70	123.50	174.50	133.90	184.30	182.30	173.10
February	109.00	117.40	110.20	118.00	123.50	174.50	136.60	185.30	176.50	175.60
March	109.80	117.40	111.80	118.60	123.70	174.50	144.60	180.10	199.10	175.80
April	114.60	117.40	114.60	118.80	123.50	174.50	145.60	187.10	182.20	177.00
May	115.20	126.20	113.60	117.60	123.90	194.20	145.60	187.30	165.20	177.00
June	115.30	126.20	113.60	117.80	124.00	194.20	147.40	174.90	171.30	177.00
July	115.30	126.20	113.40	117.90	124.00	194.20	153.50	174.70	173.40	177.60
August	116.50	126.20	113.30	117.90	124.00	194.20	153.50	170.60	180.70	177.80
September	116.50	126.20	113.40	118.00	124.20	194.20	153.50	174.30	186.50	178.00
October	116.30	126.20	113.70	118.00	125.00	194.20	153.50	182.30	192.70	178.20
November	116.60	126.20	114.00	118.20	125.60	194.20	153.60	190.90	190.70	178.60
December,	116.30	126.20	113.90	118.10	125.60	194.20	153.60	203.00	190.10	178.90
2011										
January	116.60	128.10	113.80	117.80	125.90	194.20	153.60	217.10	192.80	178.60
February	118.80	128.10	113.30	118.30	125.90	194.20	153.60	218.40	195.30	179.90

Source : Office of the Economic Adviser, Ministry of Commerce and Industry

Table - 3.2

Month-wise average daily wage rates for Agricultural Labour (Man)

(Rupees)

	Andhra Pradesh	Assam	Bihar	Gujarat	Haryana	Himachal Pradesh	Karna-taka	Kerala	Madhya Pradesh	Maha-rashtra	Orissa	Punjab	Rajasthan	Tamil-Nadu	Uttar Pradesh	West Bengal
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
Labour Bureau(Daily Wage Rates)																
January, 2008	85.35	77.70	64.35	73.62	111.63	170.00	67.15	202.66	54.04	73.34	76.05	95.58	102.64	100.30	71.76	80.16
February	77.48	77.82	65.28	73.43	115.52	170.00	67.92	203.76	55.02	73.55	74.52	95.17	98.67	100.91	72.44	79.92
March	78.16	78.12	65.45	73.43	114.51	178.33	69.05	218.94	64.57	73.59	61.39	96.56	93.85	98.63	74.15	80.57
April	86.94	78.23	65.60	74.23	115.83	155.67	69.80	218.94	56.67	76.07	62.65	102.86	97.27	99.24	74.29	80.64
May	92.67	79.12	65.30	73.99	115.50	151.18	69.67	218.73	56.49	73.65	61.20	106.92	92.57	99.73	75.29	80.43
June	89.10	79.99	65.16	73.51	116.06	147.07	70.91	217.49	56.73	77.21	63.78	107.86	120.65	98.41	78.16	81.43
July	91.48	80.34	68.91	76.26	121.28	151.57	71.46	219.70	60.92	76.66	67.33	112.98	121.44	102.05	83.41	85.53
August	88.90	84.33	69.76	78.47	121.96	160.46	72.86	219.70	61.88	76.83	66.35	112.13	111.00	103.65	79.70	86.29
September	90.88	83.30	69.83	77.34	128.05	162.22	72.48	197.70	61.41	79.89	67.29	114.08	102.20	104.60	79.13	85.86
October	97.57	83.03	70.14	78.67	130.30	161.54	72.54	224.49	62.97	79.40	67.36	120.80	103.89	106.01	81.39	85.91
November	99.03	82.97	71.30	78.67	132.54	163.95	73.29	224.49	62.40	81.39	67.85	119.71	106.44	110.86	81.82	83.55
December, 2008	98.31	81.19	71.42	78.72	132.64	164.72	72.90	220.27	61.33	82.61	68.05	130.63	109.84	113.28	81.14	87.40
January, 2009	106.13	82.51	68.30	80.07	133.79	171.83	73.90	221.38	61.80	83.83	68.97	126.46	109.79	113.75	81.32	86.10
February	100.08	82.32	68.30	80.07	133.79	171.83	73.90	221.38	61.80	83.83	68.97	126.46	109.79	113.75	81.32	86.10
March	109.21	82.79	73.32	78.76	134.25	171.83	76.78	226.71	63.52	84.47	78.12	133.00	138.29	117.07	82.46	87.74
April	112.55	84.61	75.70	78.56	140.89	171.83	77.16	238.53	65.11	84.67	86.14	144.80	113.61	117.73	85.19	88.85
May	113.75	86.09	75.64	78.72	140.79	169.04	82.41	255.19	64.73	84.98	90.19	127.49	124.47	115.91	86.35	88.86
June	111.55	88.33	75.40	78.98	142.75	167.44	83.34	304.16	66.07	87.83	92.22	137.02	137.68	121.12	86.92	89.68
July	115.21	87.32	83.46	80.72	160.23	161.99	83.55	308.91	71.13	90.19	89.16	143.30	126.25	124.81	90.58	92.73
August	117.03	90.86	86.71	81.21	162.87	166.40	84.76	309.95	70.51	90.52	87.56	138.19	117.76	125.36	92.47	94.14
September	118.40	92.77	88.57	82.57	165.94	170.17	85.98	249.21	69.26	94.03	86.83	138.19	116.55	127.62	92.21	95.28
October	116.48	96.08	85.47	82.76	163.95	167.60	86.37	252.04	68.17	94.74	85.03	140.54	130.16	136.50	92.63	96.57
November	125.38	96.27	86.40	82.76	168.01	165.20	86.40	252.04	71.32	95.52	84.37	134.00	132.33	138.37	94.30	98.74
December	137.95	96.40	86.55	82.76	168.22	180.42	87.54	250.79	69.79	95.10	86.70	133.49	113.65	137.98	94.89	99.94
January, 2010	136.03	96.74	88.76	83.98	171.21	178.17	88.12	258.96	69.49	96.37	86.55	143.26	129.15	136.00	96.42	101.16
February	140.28	94.92	89.72	84.06	176.23	178.83	89.58	257.71	70.92	97.29	92.38	141.35	129.05	148.01	97.54	105.12
March	131.78	98.19	89.99	85.22	177.27	178.56	90.15	297.77	72.65	97.58	92.79	141.35	119.58	145.03	98.33	105.41
April	143.43	97.36	90.30	85.77	177.62	180.78	92.76	297.77	74.25	97.38	95.32	146.99	127.59	145.38	104.03	106.50
May	135.41	99.77	92.17	85.96	179.09	177.54	92.68	297.77	74.94	99.09	95.33	147.44	145.71	145.38	101.82	106.44
June	125.90	102.23	92.10	85.96	176.35	178.87	92.80	299.16	76.40	106.26	115.39	163.59	126.25	148.01	103.21	106.12
July	141.17	104.73	96.71	88.07	181.29	185.78	95.17	307.27	79.33	109.78	105.29	182.24	136.37	158.33	109.05	109.56
August	137.66	111.56	97.90	88.37	187.85	189.67	99.21	307.27	80.45	109.18	105.74	176.86	132.17	153.03	110.93	110.64
September	136.33	112.60	98.06	87.05	185.35	193.33	103.11	317.77	80.32	110.00	109.21	172.42	192.37	163.06	112.23	114.89
October	139.76	112.39	98.69	89.14	187.65	185.71	105.67	329.87	81.27	114.63	117.52	178.37	144.36	166.73	114.63	114.81
November	153.21	112.89	99.26	90.23	188.07	184.83	108.99	329.87	83.62	116.61	120.96	176.86	144.79	178.20	115.26	115.28
December	176.29	114.10	101.85	91.36	195.02	195.22	111.76	319.13	84.43	119.36	123.96	176.21	145.69	174.08	116.53	118.47
Note: Daily Wage rate - average of five operations i.e. ploughing, , Sowing, Weeding, Transplanting and harvesting has been considered.																
Source: Labour Bureau, Ministry of Labour, Govt. Of India																

Table - 3.2

	Andhra Pradesh	Assam	Bihar	Gujarat	Haryana	Himachal Pradesh	Karnataka	Kerala	Madhya Pradesh	Maharashtra	Orissa	Punjab	Rajasthan	Tamil-Nadu	Uttar Pradesh	West Bengal
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
CPIAL(Base 1986-87=100)																
January 2008	426	410	409	419	441	369	404	404	406	431	392	436	437	401	423	390
February	430	412	413	422	448	370	405	405	409	431	397	445	440	406	431	394
March	435	417	416	425	459	370	409	411	418	437	401	454	447	412	441	402
April	441	423	422	426	461	377	418	420	426	442	408	465	450	418	447	410
May	445	424	419	427	460	375	421	425	427	443	413	465	453	423	446	409
June	450	430	421	431	467	381	425	427	430	449	419	472	457	425	449	411
July	458	437	433	438	475	390	429	432	440	457	429	480	468	431	458	415
August	468	442	440	447	483	397	437	436	446	467	433	491	473	437	464	415
September	478	444	443	450	489	407	446	442	450	469	435	497	477	446	467	423
October	486	449	446	454	492	410	454	450	451	476	439	497	483	449	465	432
November	486	450	444	457	495	411	461	456	451	474	435	500	483	454	465	433
December	484	449	440	454	494	404	460	459	452	471	433	496	482	458	459	431
January 2009	486	450	442	458	495	408	465	463	455	474	431	496	488	461	463	429
February	486	448	447	460	501	405	463	460	459	474	430	499	492	462	464	430
March	486	450	447	464	503	406	463	457	462	474	438	502	497	460	469	431
April	489	454	454	468	508	407	464	460	466	479	444	507	502	459	477	437
May	497	462	458	476	518	412	476	463	480	485	452	523	515	465	483	445
June	509	480	462	486	525	419	478	469	491	499	462	529	523	474	490	449
July	520	492	478	501	537	421	501	473	505	526	485	541	534	483	506	459
August	532	505	482	517	552	437	514	476	509	540	485	558	553	492	515	468
September	534	512	490	525	563	447	523	477	512	551	486	569	558	497	524	481
October	543	522	493	529	574	458	534	481	513	557	494	579	565	500	539	486
November	551	527	501	543	590	463	544	489	531	565	490	595	582	515	548	500
December	562	527	507	552	593	464	546	497	532	572	495	593	585	526	546	510
January 2010	562	527	511	554	613	464	548	506	533	573	497	609	591	530	551	519
February	557	520	510	545	615	461	539	505	531	571	495	606	590	521	546	522
March	554	520	510	541	608	457	535	506	532	566	496	601	586	517	540	521
April	561	523	511	545	604	460	541	509	531	567	502	592	577	521	534	525
May	569	533	504	550	601	464	543	513	534	574	508	593	577	528	534	522
June	580	540	507	558	610	464	547	521	541	584	511	595	580	534	542	530
July	578	550	515	573	617	475	554	530	548	586	515	603	588	542	548	545
August	578	561	513	575	627	484	564	539	550	593	521	608	589	543	550	543
September	582	570	517	575	636	486	568	544	559	591	529	618	591	544	560	558
October	584	577	526	574	641	492	575	549	562	593	540	619	593	542	559	567
November	589	583	534	574	638	486	579	550	565	604	547	622	593	546	563	562
December	604	586	538	596	642	486	595	564	569	624	556	624	604	566	565	567
January 2011	619	585	541	600	654	492	609	576	582	633	553	634	616	579	573	569
CPIAL: Consumer Prices Index for Agricultural Labour																
Source: Labour Bureau, Ministry of Labour, Govt. of India																

Table - 3.3

Paddy : Estimates of Cost of Cultivation/Production and related data

	Andhra Pradesh		Assam		Bihar		Chhattisgarh		Gujarat		Haryana		Himachal Pradesh		Jharkhand		Karnataka	
	2008-09	2007-08	2008-09	2007-08	2008-09	2007-08	2008-09	2007-08	2008-09	2007-08	2008-09	2007-08	2008-09	2007-08	2008-09	2007-08	2008-09	2007-08
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19
Cost of Cultivation per hectare(Rs)																		
A1	24164.84	19866.40	8626.68	6892.57	10000.34	8501.60	9984.62	8136.96	17281.96	12394.02	19744.11	16203.43	4635.99	4791.82	9654.16	8928.24	19132.33	18560.40
A2	25351.05	19907.68	8890.14	7388.27	10000.34	8501.60	9984.62	8136.96	17421.35	12465.06	19992.91	16315.29	4645.09	4791.82	9654.16	8928.24	19132.33	18560.40
A2+FL	29664.84	23285.29	14726.69	12482.56	12632.02	10192.18	12764.95	10822.91	20024.65	13801.15	23950.82	20502.56	9905.26	12327.22	12399.18	11509.77	24148.05	21159.04
B1	25203.44	20677.63	10196.69	7980.34	10831.73	9294.89	11106.66	9074.44	18076.09	13014.28	22443.06	18195.86	6069.50	6317.31	11221.90	10039.94	20230.13	19677.11
B2	42136.41	34066.00	14875.45	11610.20	15578.13	13508.71	16601.88	14952.58	25043.76	18121.76	39664.86	31818.52	10244.46	10069.19	15041.72	13129.45	30842.95	28987.71
C1	29517.22	24055.24	16034.24	13074.63	13463.41	10985.47	13886.99	11760.39	20679.39	14350.37	26400.98	22383.13	11329.67	13852.71	13966.92	12621.47	25245.84	22275.76
C2	46450.20	37443.61	20713.00	16704.49	18209.81	15199.29	19382.21	17638.53	27647.06	19457.84	43622.77	36005.79	15504.62	17604.60	17786.75	15710.98	35858.66	31586.35
C2*	46736.47	37578.87	20713.00	17071.45	18329.91	15998.08	19639.12	18001.89	27700.76	19501.27	43622.77	36005.79	16652.44	17604.60	17786.75	15710.98	35858.66	31586.35
Yield per hectare (Quintals)	56.00	55.11	26.75	25.38	26.65	29.00	24.22	29.12	38.15	35.00	42.01	52.19	17.60	14.63	17.36	18.48	45.38	50.53
Value of the main-product per hectare (Rs)	53772.32	41994.88	19406.77	16429.65	19344.04	18317.81	20910.21	21458.86	36131.61	25037.62	59752.73	66220.14	15091.21	12114.40	13763.71	12968.13	47559.80	41878.09
Value of the by-product per hectare (Rs)	2647.81	2637.05	1130.99	1011.91	3261.06	3690.56	1070.67	2053.71	5810.04	5644.15	944.53	1212.97	5757.02	3655.51	2545.29	2370.83	2705.35	2792.13
Implicit price (Rs./qtl)	960.22	762.02	725.49	647.35	725.86	631.65	863.34	736.91	947.09	715.36	1422.35	1268.83	857.46	828.05	792.84	701.74	1048.03	828.78
Cost of production per quintal (Rs)																		
A1	410.65	338.95	304.26	256.14	329.59	245.63	393.03	254.92	388.51	292.31	461.45	304.25	190.39	260.80	466.21	410.22	393.17	343.64
A2	431.37	339.67	313.62	273.87	329.59	245.63	393.03	254.92	391.98	294.03	467.63	306.39	190.72	260.80	466.21	410.22	393.17	343.64
A2+FL	504.87	397.56	520.25	463.29	405.62	292.52	501.37	339.20	452.18	321.78	561.25	385.78	407.39	647.28	602.77	526.56	503.49	392.57
B1	428.14	352.49	359.90	297.43	350.02	269.65	437.40	284.31	405.33	306.07	525.22	341.89	249.84	345.15	547.28	462.49	417.42	364.20
B2	717.30	581.24	524.80	430.71	500.97	387.14	651.94	468.53	561.41	425.38	930.11	598.27	419.21	539.77	728.44	600.60	627.07	530.64
C1	500.74	409.81	566.52	486.54	433.87	317.99	547.20	368.51	468.29	337.45	617.00	420.47	464.71	727.83	684.10	580.01	527.79	415.21
C2	789.90	638.56	731.41	619.81	584.82	435.48	761.74	552.74	624.37	456.76	1021.90	676.86	634.08	922.45	865.26	718.11	737.44	581.66
C2*	794.73	640.89	731.41	633.36	588.59	458.42	771.68	564.17	625.51	457.72	1021.90	676.86	680.97	922.45	865.26	718.11	737.44	581.66
C3	874.20	704.98	804.55	696.69	647.45	504.26	848.85	620.59	688.06	503.49	1124.09	744.55	749.06	1014.7	951.79	789.92	811.18	639.83
Material and labour inputs per hectare																		
ITEM	UNIT																	
Seeds	(kgs.)	80.39	76.30	63.22	64.14	52.34	51.95	93.05	102.17	1.58	12.81	0.00	0.00	102.22	103.41	56.69	56.03	79.55
Fertilisers	(kgs. of Nutrients)	222.34	231.05	8.95	10.75	80.59	87.92	78.51	80.11	189.39	140.96	203.61	203.45	34.77	30.50	43.14	43.34	227.81
Manure	(Quintals)	17.81	18.59	3.55	5.71	1.96	1.09	6.67	8.16	16.68	10.45	0.01	0.00	6.21	22.68	2.64	2.34	6.67
Human Labour (Man Hours)		818.24	864.37	714.83	705.69	796.51	770.62	485.90	605.91	999.87	832.82	568.89	602.63	416.00	559.39	755.97	788.75	1070.01
Animal Labour (Pair Hours)		15.52	24.07	218.67	250.81	34.52	25.73	64.37	91.92	11.32	21.63	0.36	2.25	43.96	92.44	70.20	99.24	83.81

Table - 3.3 (Concluded)

Paddy : Estimates of Cost of Cultivation/Production and related data

		Kerala		Madhya Pradesh		Maharashtra		Orissa		Punjab		Tamil Nadu		Uttar Pradesh		Uttarakhand		West Bengal	
		2008-09	2007-08	2008-09	2007-08	2008-09	2007-08	2008-09	2007-08	2008-09	2007-08	2008-09	2007-08	2008-09	2007-08	2008-09	2007-08	2008-09	2007-08
1		20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37
Cost of Cultivation per hectare(Rs)																			
A1		24299.31	21545.03	9612.03	7054.30	24178.45	20071.27	13064.15	10501.44	18594.43	14219.24	24135.99	22865.85	12834.99	11323.86	11772.49	7145.27	16813.85	13957.19
A2		24352.08	21545.03	9612.03	7054.30	24178.45	20205.42	13171.04	10572.90	22510.13	16957.13	24792.04	23372.53	12880.17	11344.16	11772.49	7145.27	17838.23	14117.41
A2+FL		26673.74	24332.27	12482.71	9881.56	28399.87	24462.29	17478.05	14487.47	25154.75	18951.70	28880.74	27148.18	17022.00	15464.87	15369.32	12640.82	24731.06	20043.64
B1		24644.38	21815.76	10721.66	7787.14	26805.58	21582.42	14415.94	11678.76	21847.38	16368.22	26913.83	24736.61	15349.15	12607.60	13608.48	8270.29	17885.97	15024.14
B2		34445.97	29212.12	19083.81	10823.25	30984.62	26139.69	21602.04	17798.80	42646.63	32786.63	36153.68	33407.31	24002.67	18180.46	23509.28	14315.96	26153.29	22215.65
C1		26966.04	24603.00	13592.34	10614.40	31027.00	25839.29	18722.94	15593.33	24492.00	18362.80	31002.53	28512.26	19490.98	16728.30	17205.32	13765.84	24778.80	20950.37
C2		36767.64	31999.36	21954.50	13650.51	35206.03	30396.56	25909.05	21713.38	45291.24	34781.20	40242.38	37182.96	28144.50	22301.17	27106.11	19811.51	33046.12	28141.88
C2*		36767.64	31999.36	21954.50	13650.51	35206.03	30396.56	26191.84	22972.62	45291.24	34781.20	40242.38	37182.96	30004.20	22301.17	27466.99	19811.51	33046.12	28197.73
Yield per hectare (Quintals)		42.67	37.14	26.64	15.36	21.74	30.60	32.42	32.03	67.41	68.01	42.00	49.36	36.61	35.00	36.95	33.32	39.04	36.70
Value of the main-product per hectare (Rs)		45076.81	32257.31	30654.68	10756.21	22082.94	24133.36	25569.09	21599.55	66794.48	56037.40	42689.38	37320.40	33728.05	26109.68	34500.77	23688.25	28157.59	24977.59
Value of the by-product per hectare (Rs)		3888.32	4724.51	2793.92	1388.23	2986.23	2713.80	3021.98	2819.73	196.62	616.01	2987.29	2951.50	1656.55	1576.49	3082.55	2940.26	4463.52	3677.07
Implicit price (Rs./qtl)		1056.41	868.53	1150.70	700.27	1015.77	788.67	788.68	674.35	990.87	823.96	1016.41	756.09	921.28	745.99	933.72	710.93	721.25	680.59
Cost of production per quintal (Rs)																			
A1		524.13	506.72	339.27	404.45	966.71	597.74	360.35	288.20	279.35	206.85	536.46	432.44	332.50	304.25	307.72	206.88	371.96	329.29
A2		525.19	506.72	339.27	404.45	966.71	600.89	363.58	290.22	328.76	246.61	545.78	442.25	334.36	304.88	307.72	206.88	395.19	332.94
A2+FL		575.48	571.45	429.43	569.79	1150.73	718.61	482.13	400.08	372.07	275.63	642.66	509.69	443.19	416.69	381.83	337.49	546.80	476.06
B1		531.84	513.28	377.41	445.39	1074.35	644.17	397.52	321.06	326.26	238.08	602.52	466.78	402.31	338.98	370.93	237.06	395.48	355.39
B2		743.02	687.45	645.21	621.18	1233.22	774.57	595.61	489.66	622.47	476.91	803.67	625.62	623.48	488.75	609.70	408.85	579.03	526.19
C1		581.43	573.57	477.42	607.53	1254.72	763.61	516.95	431.09	373.65	267.09	693.85	537.95	511.45	450.96	435.28	355.87	547.71	497.54
C2		792.61	747.73	745.22	783.31	1413.59	894.01	715.04	599.68	669.86	505.92	894.99	696.79	732.62	600.73	674.05	527.66	731.25	668.34
C2*		792.61	747.73	746.75	783.31	1413.59	894.01	722.88	634.43	669.86	505.92	894.99	696.79	781.04	600.73	683.07	527.66	731.25	669.70
C3		871.87	822.50	821.43	861.64	1554.95	983.41	795.16	697.87	736.85	556.51	984.49	766.47	859.14	660.80	751.38	580.43	804.38	736.67
Material and labour inputs per hectare																			
ITEM	UNIT																		
Seeds	(kgs.)	0.00	0.00	67.62	85.17	65.14	75.36	87.95	92.32	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	65.20	69.59
Fertilisers	(kgs. of Nutrients)	148.56	130.33	78.68	53.65	137.56	139.30	100.05	85.46	212.89	189.40	230.80	238.80	158.56	129.94	116.98	55.34	143.57	112.56
Manure	(Quintals)	11.28	18.33	9.12	10.93	24.65	37.11	23.20	26.09	45.31	24.69	31.97	29.68	4.18	12.11	8.65	5.66	20.13	19.63
Human Labour (Man Hours)		614.79	773.11	574.19	548.92	1220.51	1188.93	1059.53	1046.27	417.19	402.54	788.68	841.48	757.10	827.31	570.35	632.20	1227.99	1226.56
Animal Labour (Pair Hours)		0.47	2.66	67.32	77.60	120.34	147.31	182.76	188.87	2.81	1.54	13.72	18.72	7.73	28.22	30.16	43.52	81.09	111.56
Note : The estimates are provisional unless specified.																			
Cost A1 = All actual expenses in cash and kind incurred in production by owner.																			
Cost A2 = Cost A1 + rent paid for leased-in land.																			
Cost A2+FL = Cost A2 + imputed value of Family Labour.																			
Cost B1 = Cost A1 + interest on value of owned capital assets (excluding land).																			
Cost B2 = Cost B1 + rental value of owned land (net of land revenue) and rent paid for leased-in land																			
Cost C1 = Cost B1 + imputed value of Family Labour.																			
Cost C2 = Cost B2 + imputed value of Family Labour.																			
Cost C2* = Cost C2 estimated by taking into account statutory minimum or actual wage whichever is higher.																			
Cost C3 = Cost C2* + 10% of Cost C2* on account of managerial functions performed by farmer.																			
Source : Directorate of Economics & Statistics, Ministry of Agriculture.																			

Table - 3.4

Paddy : Break-up of Cost of Cultivation per Hectare (In Rs.)

Cost Items	Andhra Pradesh		Assam		Bihar		Chhattisgarh		Gujarat		Haryana		Himachal Pradesh		Jharkhand		Karnataka	
	2008-09	2007-08	2008-09	2007-08	2008-09	2007-08	2008-09	2007-08	2008-09	2007-08	2008-09	2007-08	2008-09	2007-08	2008-09	2007-08	2008-09	2007-08
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19
Operational Cost	28284.94	23032.04	13825.73	11451.90	12350.08	9937.72	12188.91	10152.42	19697.69	13642.31	23545.32	20263.80	9531.08	11949.18	11693.58	11069.81	23939.55	20961.53
Human Labour																		
Casual	11100.67	8812.75	2425.10	1310.07	4780.09	3850.36	2211.51	1986.48	6651.61	4119.22	5879.15	4199.79	359.33	190.98	3552.22	3352.47	7653.98	6002.33
Attached	385.87	285.54	390.16	412.60	11.08	17.89	37.84	16.50	110.17	124.04	866.20	970.66	13.48	13.01	0.00	189.83	34.23	66.25
Family	4313.79	3377.61	5837.55	5094.29	2631.68	1690.58	2780.33	2685.95	2603.30	1336.09	3957.91	4187.27	5260.17	7535.40	2745.02	2581.53	5015.72	2598.64
Total	15800.33	12475.90	8652.81	6816.96	7422.85	5558.83	5029.68	4688.93	9365.08	5579.35	10703.26	9357.72	5632.98	7739.39	6297.24	6123.83	12703.93	8667.22
Bullock Labour																		
Hired	202.60	221.49	22.11	13.66	115.24	134.13	513.66	401.95	40.88	97.38	2.16	0.00	343.76	719.92	75.65	159.12	812.24	603.55
Owned	361.26	553.13	3021.15	3055.37	646.14	310.22	690.66	1207.52	306.20	583.45	25.31	109.34	178.07	396.97	2513.19	2559.47	1523.41	1054.91
Total	563.86	774.62	3043.26	3069.03	761.38	444.35	1204.32	1609.47	347.08	680.83	27.47	109.34	521.83	1116.89	2588.84	2718.59	2335.65	1658.46
Machine Labour																		
Hired	4456.08	3024.81	649.07	139.20	1330.82	1468.72	2454.92	1057.85	2365.63	1547.48	2494.16	1512.44	1210.84	551.86	965.28	488.20	2857.42	2615.37
Owned	58.61	11.43	90.54	52.71	3.32	29.56	16.27	4.38	114.33	105.36	1344.88	1499.67	16.08	61.16	0.36	0.27	173.10	472.52
Total	4514.69	3036.24	739.61	191.91	1334.14	1498.28	2471.19	1062.23	2479.96	1652.84	3839.04	3012.11	1226.92	613.02	965.64	488.47	3030.52	3087.89
Seed	1128.92	962.51	672.59	607.58	1192.33	803.91	1036.91	828.16	2147.42	2187.34	906.57	752.95	1149.06	976.85	898.28	809.70	925.47	773.40
Fertilisers and Manure																		
Fertilisers	2920.08	2977.11	184.67	190.09	1202.74	1229.40	1091.11	1085.70	2786.17	1981.39	2697.62	2505.52	361.75	329.80	594.09	593.94	3224.26	3994.70
Manure	491.26	531.38	198.91	288.17	88.43	27.19	416.18	459.90	430.36	275.09	0.70	0.00	289.84	799.73	78.32	78.06	419.86	723.86
Total	3411.34	3508.49	383.58	478.26	1291.17	1256.59	1507.29	1545.60	3216.53	2256.48	2698.32	2505.52	651.59	1129.53	672.41	672.00	3644.12	4718.56
Insecticides	1546.23	1054.81	3.78	0.49	45.46	21.93	255.07	103.56	300.24	131.82	1612.74	1264.98	146.04	188.12	0.00	0.00	170.69	624.17
Irrigation charges	545.94	564.92	88.03	95.02	8.25	103.92	396.49	83.45	1323.37	780.73	3164.36	2758.18	73.24	51.62	0.00	0.00	552.57	873.80
Interest on working capital	726.40	595.59	242.07	192.65	294.50	249.91	285.11	226.26	518.01	372.92	593.56	487.17	129.42	133.76	271.17	257.22	573.45	556.45
Miscellaneous	47.23	58.96	0.00	0.00	0.00	0.00	2.85	4.76	0.00	0.00	0.00	15.83	0.00	0.00	0.00	0.00	3.15	1.58
Fixed Cost	18165.26	14411.57	6887.27	5252.59	5859.73	5261.57	7193.30	7486.11	7949.37	5815.53	20077.45	15741.99	5973.54	5655.42	6093.17	4641.17	11919.11	10624.82
Rental value of owned land	15746.76	13347.08	4415.30	3134.16	4746.40	4213.82	5495.22	5878.14	6828.28	5036.43	16973.00	13510.79	4165.85	3751.88	3819.83	3089.51	10612.82	9310.59
Rent paid for leased-in land	1186.21	41.29	263.47	495.70	0.00	0.00	0.00	0.00	139.39	71.04	248.80	111.87	9.10	0.00	0.00	0.00	0.00	0.00
Land revenue, cesses & taxes	0.54	2.37	45.82	42.26	29.93	25.46	3.15	2.72	11.98	17.64	0.00	0.00	11.74	10.18	42.03	33.36	12.42	22.15
Depreciation on implements & Farm buildings	193.15	209.59	592.68	492.70	252.02	229.00	572.89	667.77	175.58	70.15	156.70	126.90	353.34	367.87	663.58	406.60	196.07	175.37
Interest on fixed capital	1038.60	811.24	1570.00	1087.77	831.38	793.29	1122.04	937.48	794.14	620.27	2698.95	1992.43	1433.51	1525.49	1567.73	1111.70	1097.80	1116.71
Total Cost	46450.20	37443.61	20713.00	16704.49	18209.81	15199.29	19382.21	17638.53	27647.06	19457.84	43622.77	36005.79	15504.62	17604.60	17786.75	15710.98	35858.66	31586.35
Operational Cost (based on new methodology)	28571.21	23167.30	13825.73	11818.36	12470.18	10736.51	12445.82	10515.78	19751.39	13685.74	23545.32	20263.80	10678.90	11949.18	11693.58	11069.81	23939.55	20961.53
Human Labour (based on new methodology)	16086.60	12611.16	8652.81	7183.92	7542.95	6357.62	5286.59	5052.29	9818.78	5622.78	10703.26	9357.72	6780.80	7739.39	6297.24	6123.83	12703.93	8667.22
Total Cost (based on new methodology)	46736.47	37578.87	20713.00	17071.45	18329.91	15998.08	19639.12	18001.89	27700.76	19501.27	43622.77	36005.79	16652.44	17604.60	17786.75	15710.98	35858.66	31586.35
(Contd.....)																		

Table - 3.4 (Concluded)																		
Paddy : Break-up of Cost of Cultivation per Hectare (In Rs.)																		
Cost Items	Kerala		Madhya Pradesh		Maharashtra		Orissa		Punjab		Tamil Nadu		Uttar Pradesh		Uttarakhand		West Bengal	
	2008-09	2007-08	2008-09	2007-08	2008-09	2007-08	2008-09	2007-08	2008-09	2007-08	2008-09	2007-08	2008-09	2007-08	2008-09	2007-08	2008-09	2007-08
1	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37
Operational Cost	26372.94	24101.52	11836.31	9491.40	27669.86	23824.91	16842.25	13983.04	20970.94	16013.57	27744.49	25965.13	16460.18	15086.71	15211.77	12391.32	23139.58	19459.64
Human Labour																		
Casual	13524.02	13831.96	2608.21	1463.67	7770.54	4943.95	5560.27	3667.10	4255.53	2598.62	8081.46	7967.22	3388.52	2760.72	3336.63	927.34	7133.55	5667.65
Attached	0.00	0.00	83.55	7.07	272.22	191.23	159.16	313.95	1469.76	878.96	423.06	272.00	76.70	7.95	188.65	58.30	8.26	58.22
Family	2321.66	2787.24	2870.68	2827.26	4221.42	4256.87	4307.01	3914.57	2644.62	1994.57	4088.70	3775.65	4141.83	4120.71	3596.83	5495.55	6892.83	5926.23
Total	15845.68	16619.20	5562.44	4298.00	12264.18	9392.05	10026.44	7895.62	8369.91	5472.15	12593.22	12014.87	7607.05	6889.38	7122.11	6481.19	14034.64	11652.10
Bullock Labour																		
Hired	52.80	90.63	506.18	309.83	2116.12	1647.98	264.85	191.28	0.27	0.95	263.43	282.76	4.64	155.67	422.65	0.00	354.96	450.19
Owned	0.49	1.06	1240.42	1325.42	3464.82	4279.09	2211.53	2151.12	161.92	89.48	117.09	214.81	731.18	1303.41	1315.19	1403.33	1281.19	1689.68
Total	53.29	91.69	1746.60	1635.25	5580.94	5927.07	2476.38	2342.40	162.19	90.43	380.52	497.57	735.82	1459.08	1737.84	1403.33	1636.15	2139.87
Machine Labour																		
Hired	5366.30	2710.15	1001.65	798.44	3239.19	2346.46	724.30	475.92	2428.39	1876.71	4891.01	4715.77	2163.58	1294.82	1377.69	1233.59	1294.51	798.58
Owned	4.65	35.83	57.62	6.31	6.62	66.28	32.46	105.54	2081.98	1754.10	115.11	85.06	335.60	172.25	693.40	435.38	17.78	1.58
Total	5370.95	2745.98	1059.27	804.75	3245.81	2412.74	756.76	581.46	4510.37	3630.81	5006.12	4800.83	2499.18	1467.07	2071.09	1668.97	1312.29	800.16
Seed	1138.58	1040.95	1160.33	910.82	1752.32	1042.95	764.56	670.51	901.84	725.97	3109.36	2515.74	1603.80	1496.44	791.94	1319.52	889.44	750.56
Fertilisers and Manure																		
Fertilisers	1845.20	1778.10	1000.10	685.23	1786.61	2111.79	1440.4	1194.00	2721.65	2337.69	3279.20	3082.52	2144.80	1693.23	1463.38	724.91	2192.90	1667.48
Manure	691.30	944.97	568.68	586.02	1947.45	2223.78	757.02	762.62	342.03	180.31	961.54	758.55	96.80	306.21	387.68	113.20	605.41	628.71
Total	2536.50	2723.07	1568.78	1271.25	3734.06	4335.57	2197.42	1956.62	3063.68	2518.00	4240.74	3841.07	2241.60	1999.44	1851.06	838.11	2798.31	2296.19
Insecticides	671.41	202.84	272.28	98.12	55.95	59.13	124.26	132.19	1977.14	1486.25	717.95	437.54	244.04	84.96	367.00	105.95	323.98	301.79
Irrigation charges	27.70	31.90	187.62	271.27	326.04	62.43	116.57	99.13	1406.3	1636.38	964.26	1181.96	1153.87	1356.56	918.76	365.29	1617.01	1067.95
Interest on working capital	728.83	645.89	271.69	201.94	710.56	592.97	379.86	305.11	555.34	424.82	716.84	672.41	373.28	332.30	351.97	208.96	492.33	410.10
Miscellaneous	0.00	0.00	7.30		0.00		0.00	0.00	24.17	28.76	15.48	3.14	1.54	1.48	0.00		35.43	40.92
Fixed Cost	10394.70	7897.84	10118.19	4159.11	7536.17	6571.65	9066.80	7730.34	24320.30	18767.63	12497.89	11217.83	11684.32	7214.46	11894.34	7420.19	9906.54	8682.24
Rental value of owned land	9748.83	7396.37	8362.15	3036.11	4179.03	4423.13	7079.21	6048.59	16883.54	13680.51	8583.79	8164.02	8608.33	5552.57	9900.79	6045.67	7242.94	7031.29
Rent paid for leased-in land	52.77	0.00	0.00	0.00	0.00	134.15	106.89	71.46	3915.7	2737.90	656.05	506.68	45.18	20.30	0.00	0.00	1024.38	160.22
Land revenue, cesses & taxes	49.62	50.00	2.97	3.92	44.49	20.53	18.94	18.65	0	0.00	118.12	120.74	6.29	4.61	4.84	2.34	39.50	33.51
Depreciation on implements & Farm buildings	198.41	180.74	643.44	386.24	685.52	482.70	509.97	414.33	268.11	200.23	362.09	555.62	510.34	353.25	152.72	247.16	527.60	390.27
Interest on fixed capital	345.07	270.73	1109.63	732.84	2627.13	1511.14	1351.79	1177.31	3252.95	2148.99	2777.84	1870.77	2514.18	1283.73	1835.99	1125.02	1072.12	1066.95
Total Cost	36767.64	31999.36	21954.50	13650.51	35206.03	30396.56	25909.05	21713.38	45291.24	34781.20	40242.38	37182.96	28144.50	22301.17	27106.11	19811.51	33046.12	28141.88
Operational Cost (based on new methodology)	26372.94	24101.52	11836.31	9491.40	27669.86	23824.91	17125.04	15242.28	20970.94	16013.57	27744.49	25963.13	18319.88	15086.71	15572.65	12391.32	23139.58	19515.49
Human Labour (based on new methodology)	15845.68	16619.20	5562.44	4298.00	12264.18	9392.05	10026.44	9154.86	8369.91	5472.15	12593.22	12014.87	9466.75	6889.38	7482.99	6481.19	14034.64	11707.95
Total Cost (based on new methodology)	36767.64	31999.36	21954.50	13650.51	35206.03	30396.56	26191.84	22972.62	45291.24	34781.20	40242.38	37182.96	30004.20	22301.17	27466.99	19811.51	33046.12	28197.73

Paddy : Variable Input Price Index					
ANDHRA PRADESH					
(Base 2004-05=100)					
	Weights		Indices		
ITEMS					
	2008-09	2008-09	2010-11*	2011-12*	
Human Labour	0.5733	222.79	281.96	312.97	
Bullock Labour	0.0205	150.92	174.40	184.86	
Machine Labour	0.1638	121.45	130.93	132.24	
Seeds	0.0410	135.13	147.56	151.99	
Fertilizer	0.1060	100.99	100.99	102.00	
Manure	0.0178	127.27	133.71	135.05	
Insecticide	0.0561	110.45	113.73	114.87	
Irrigation Charges	0.0215	114.99	119.30	119.60	
ASSAM					
(Base 2004-05=100)					
	Weights		Indices		
ITEMS					
	2008-09	2008-09	2010-11*	2011-12*	
Human Labour	0.6370	139.86	164.79	176.32	
Bullock Labour	0.2240	133.17	141.28	145.51	
Machine Labour	0.0544	121.45	130.93	132.24	
Seeds	0.0495	130.55	138.50	142.66	
Fertilizer	0.0136	105.92	116.34	117.50	
Manure	0.0146	133.33	136.01	137.37	
Insecticide	0.0003	110.45	113.73	114.87	
Irrigation Charges	0.0065	112.42	111.29	111.57	
BIHAR					
(Base 2004-05=100)					
	Weights		Indices		
ITEMS					
	2008-09	2008-09	2010-11*	2011-12*	
Human Labour	0.6157	150.18	205.18	229.80	
Bullock Labour	0.0632	131.10	138.41	141.18	
Machine Labour	0.1107	121.45	130.93	132.24	
Seeds	0.0989	170.51	204.44	220.80	
Fertilizer	0.0998	100.93	109.70	110.80	
Manure	0.0073	225.00	229.52	231.82	
Insecticide	0.0038	110.45	113.73	114.87	
Irrigation Charges	0.0007	117.36	128.59	128.91	
(contd..)					

Paddy : Variable Input Price Index					
CHHATTISGARH					
(Base 2004-05=100)					
		Weights		Indices	
ITEMS					
		2008-09	2008-09	2010-11*	2011-12*
Human Labour		0.4225	167.60	202.79	223.07
Bullock Labour		0.1012	149.19	170.81	182.77
Machine Labour		0.2076	121.45	130.93	132.24
Seeds		0.0871	152.39	163.25	168.96
Fertilizer		0.0917	100.72	103.23	104.26
Manure		0.0350	114.81	117.12	118.29
Insecticide		0.0214	110.45	113.73	114.87
Irrigation Charges		0.0335	102.35	246.94	247.55
GUJARAT					
(Base 2005-06=100)					
		Weights		Indices	
ITEMS					
		2008-09	2008-09	2010-11*	2011-12*
Human Labour		0.4883	141.94	173.06	185.87
Bullock Labour		0.0181	117.10	121.83	124.27
Machine Labour		0.1293	118.89	128.17	129.45
Seeds		0.1120	115.76	127.63	134.01
Fertilizer		0.1453	97.67	111.00	112.11
Manure		0.0224	136.84	146.59	149.52
Insecticide		0.0157	108.04	111.25	112.36
Irrigation Charges		0.0690	107.35	118.89	119.19
HARYANA					
(Base 2004-05=100)					
		Weights		Indices	
ITEMS					
		2008-09	2008-09	2010-11*	2011-12*
Human Labour		0.4663	146.94	222.85	260.74
Bullock Labour		0.0012	269.50	404.25	464.88
Machine Labour		0.1673	121.45	130.93	137.47
Seeds		0.0395	110.38	121.69	127.77
Fertilizer		0.1175	100.12	100.12	105.13
Manure		0.0000	777.78	857.50	900.38
Insecticide		0.0703	100.80	101.04	102.05
Irrigation Charges		0.1379	101.36	101.02	101.27
(contd..)					

Paddy : Variable Input Price Index					
HIMACHAL PRADESH					
(Base 2005-06=100)					
ITEMS	Weights		Indices		
	2008-09	2008-09	2010-11*	2011-12*	
Human Labour	0.5991	129.92	162.98	182.53	
Bullock Labour	0.0555	143.44	150.70	152.21	
Machine Labour	0.1305	118.89	128.17	129.45	
Seeds	0.1222	132.86	139.58	140.98	
Fertilizer	0.0385	98.14	102.48	103.51	
Manure	0.0308	109.27	109.93	110.26	
Insecticide	0.0155	108.04	111.25	112.36	
Irrigation Charges	0.0078	106.91	338.54	339.38	
JHARKHAND					
(Base 2004-05=100)					
ITEMS	Weights		Indices		
	2008-09	2008-09	2010-11*	2011-12*	
Human Labour	0.5513	121.49	133.31	138.64	
Bullock Labour	0.2266	192.35	212.06	222.66	
Machine Labour	0.0845	121.45	130.93	132.24	
Seeds	0.0786	126.60	135.61	138.32	
Fertilizer	0.0520	101.02	101.02	101.27	
Manure	0.0069	142.86	168.17	179.94	
Insecticide	0.0000	110.45	113.73	114.87	
Irrigation Charges	0.0000	117.36	128.59	128.91	
KARNATAKA					
(Base 2004-05=100)					
ITEMS	Weights		Indices		
	2008-09	2008-09	2010-11*	2011-12*	
Human Labour	0.5437	157.51	185.34	203.87	
Bullock Labour	0.1000	135.71	149.62	157.11	
Machine Labour	0.1297	121.45	130.93	132.24	
Seeds	0.0396	105.73	107.85	108.93	
Fertilizer	0.1380	100.09	107.18	108.25	
Manure	0.0180	128.57	139.06	144.63	
Insecticide	0.0073	110.45	113.73	114.87	
Irrigation Charges	0.0238	110.77	116.22	116.51	
(contd..)					

Paddy : Variable Input Price Index					
KERALA					
(Base 2004-05=100)					
ITEMS	Weights		Indices		
	2008-09	2008-09	2010-11*	2011-12*	
Human Labour	0.6179	142.54	220.62	242.68	
Bullock Labour	0.0021	406.33	409.18	410.62	
Machine Labour	0.2094	121.45	130.93	132.24	
Seeds	0.0444	109.55	113.98	116.26	
Fertilizer	0.0720	100.02	105.12	110.37	
Manure	0.0270	112.96	115.23	116.39	
Insecticide	0.0262	113.55	133.88	135.22	
Irrigation Charges	0.0011	118.53	116.94	117.24	
MADHYA PRADESH					
(Base 2004-05=100)					
ITEMS	Weights		Indices		
	2008-09	2008-09	2010-11*	2011-12*	
Human Labour	0.4810	153.59	167.32	178.20	
Bullock Labour	0.1510	146.87	161.93	170.02	
Machine Labour	0.0916	121.45	130.93	132.24	
Seeds	0.1003	218.60	262.10	283.07	
Fertilizer	0.0865	102.69	106.44	107.51	
Manure	0.0492	124.00	129.01	131.59	
Insecticide	0.0235	110.45	113.73	114.87	
Irrigation Charges	0.0169	107.50	141.11	141.47	
MAHARASHTRA					
(Base 2005-06=100)					
ITEMS	Weights		Indices		
	2008-09	2008-09	2010-11*	2011-12*	
Human Labour	0.4549	135.00	195.82	209.53	
Bullock Labour	0.2070	122.92	126.64	127.27	
Machine Labour	0.1204	118.89	128.17	129.45	
Seeds	0.0650	162.34	177.28	182.60	
Fertilizer	0.0663	100.14	115.73	116.89	
Manure	0.0722	158.00	159.58	160.38	
Insecticide	0.0021	108.04	111.25	112.36	
Irrigation Charges	0.0121	140.77	132.50	132.83	
(contd..)					

Paddy : Variable Input Price Index					
ORISSA					
(Base 2004-05=100)					
ITEMS	Weights		Indices		
	2008-09	2008-09	2010-11*	2011-12*	
Human Labour	0.6091	145.19	237.74	261.52	
Bullock Labour	0.1504	109.44	109.66	109.77	
Machine Labour	0.0460	121.45	130.93	132.24	
Seeds	0.0464	132.67	139.38	140.78	
Fertilizer	0.0875	100.04	100.11	101.11	
Manure	0.0460	137.50	140.26	141.67	
Insecticide	0.0075	110.45	113.73	114.87	
Irrigation Charges	0.0071	118.82	123.05	123.36	
PUNJAB					
(Base 2004-05=100)					
ITEMS	Weights		Indices		
	2008-09	2008-09	2010-11*	2011-12*	
Human Labour	0.4100	188.82	234.75	258.22	
Bullock Labour	0.0079	136.23	153.07	162.26	
Machine Labour	0.2209	121.45	130.93	132.24	
Seeds	0.0442	117.15	124.28	128.01	
Fertilizer	0.1333	99.95	108.82	109.91	
Manure	0.0168	160.00	197.14	218.82	
Insecticide	0.0968	110.45	113.73	114.87	
Irrigation Charges	0.0701	111.94	354.50	355.38	
TAMIL NADU					
(Base 2004-05=100)					
ITEMS	Weights		Indices		
	2008-09	2008-09	2010-11*	2011-12*	
Human Labour	0.4659	147.05	200.39	220.43	
Bullock Labour	0.0141	135.48	144.43	148.04	
Machine Labour	0.1852	121.45	130.93	132.24	
Seeds	0.1150	116.18	126.87	132.58	
Fertilizer	0.1213	98.62	98.67	98.87	
Manure	0.0356	115.60	120.27	122.68	
Insecticide	0.0266	110.45	113.73	114.87	
Irrigation Charges	0.0362	113.43	343.25	350.11	
(contd..)					

Paddy : Variable Input Price Index					
UTTARAKHAND					
(Base 2004-05=100)					
ITEMS	Weights		Indices		
	2008-09	2008-09	2010-11*	2011-12*	
Human Labour	0.4793	135.77	158.37	170.25	
Bullock Labour	0.1169	180.35	214.27	233.56	
Machine Labour	0.1394	121.45	130.93	132.24	
Seeds	0.0533	116.04	127.94	131.78	
Fertilizer	0.0985	100.78	100.75	101.76	
Manure	0.0261	115.85	126.51	127.78	
Insecticide	0.0247	110.45	113.73	114.87	
Irrigation Charges	0.0618	239.01	205.14	205.55	
UTTAR PRADESH					
(Base 2004-05=100)					
ITEMS	Weights		Indices		
	2008-09	2008-09	2010-11*	2011-12*	
Human Labour	0.4729	145.20	210.49	229.44	
Bullock Labour	0.0457	338.98	345.79	349.25	
Machine Labour	0.1554	121.45	130.93	132.24	
Seeds	0.0997	133.24	146.89	148.36	
Fertilizer	0.1333	101.83	102.28	103.30	
Manure	0.0060	127.78	130.35	131.65	
Insecticide	0.0152	110.45	113.73	114.87	
Irrigation Charges	0.0718	131.66	184.87	185.34	
WEST BENGAL					
(Base 2004-05=100)					
ITEMS	Weights		Indices		
	2008-09	2008-09	2010-11*	2011-12*	
Human Labour	0.6197	146.73	190.13	207.24	
Bullock Labour	0.0722	114.74	126.50	132.82	
Machine Labour	0.0579	121.45	130.93	132.24	
Seeds	0.0393	135.18	149.04	156.49	
Fertilizer	0.0968	100.00	102.58	103.60	
Manure	0.0267	113.66	120.58	124.19	
Insecticide	0.0143	110.45	113.73	114.87	
Irrigation Charges	0.0730	115.89	119.88	120.18	
* : Input Index is projected on the basis of observed changes in the prices of different inputs.					

Table - 3.6

Cotton : Estimates of Cost of Cultivation/Production and related data

	Andhra Pradesh		Gujarat		Haryana		Karnataka		Madhya Pradesh		Maharashtra		Orissa	Punjab		Rajasthan		Tamil Nadu	
	2008-09	2007-08	2008-09	2007-08	2008-09	2007-08	2008-09	2007-08	2008-09	2007-08	2008-09	2007-08	2008-09	2008-09	2007-08	2008-09	2007-08	2008-09	2007-08
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
Cost per hectare(Rs)																			
A1	23479.42	22456.17	23346.87	16859.56	18622.18	14281.44	13964.90	9858.67	13864.90	14178.74	20863.51	16179.64	12930.26	23674.99	18350.04	9604.91	9222.89	21156.14	14587.34
A2	24246.98	24784.80	23361.21	16995.23	18622.18	14386.18	13964.90	9858.67	13864.90	14178.74	20934.26	16179.64	13109.76	24650.71	19503.74	9604.91	9222.89	21156.14	14587.34
A2+FL	29140.77	26856.97	29616.09	20708.96	29918.97	22592.11	15942.69	11344.22	17027.27	18219.31	23711.44	18677.86	17818.75	29047.10	23934.84	16649.91	16295.65	34128.96	20738.71
B1	25481.63	23320.88	26470.58	18192.01	20751.53	15766.59	14798.58	10419.67	15572.59	16066.48	24359.42	17490.21	13820.81	25703.04	20553.49	11730.05	10678.34	23021.57	15535.68
B2	39862.93	37947.68	35815.55	25394.02	32721.39	26671.15	20261.67	16002.60	25586.92	24153.13	30339.65	21900.69	21049.87	46432.44	36059.73	18330.15	16999.71	29175.39	20730.11
C1	30375.41	25393.05	32725.46	21905.74	32048.32	23972.52	16776.36	11905.22	18734.96	20107.05	27136.60	19988.43	18529.80	30099.43	24984.59	18775.06	17751.10	35994.39	21687.05
C2	44756.72	40019.86	42070.44	29107.74	44018.18	34877.09	22239.46	17488.16	28749.29	28193.69	33116.82	24398.91	25758.86	50828.83	40490.82	25375.16	24072.48	42145.21	26881.47
C2*	44756.72	40307.67	42106.84	29107.74	44018.18	34877.09	22239.46	18624.08	29570.49	28321.56	33116.82	24398.91	27313.84	50828.83	40490.82	25375.16	24481.97	42145.21	26881.47
Cost per quintal (Rs)																			
A1	17.83	23.55	19.05	16.68	19.90	18.09	9.61	10.77	16.06	13.44	12.69	11.82	10.23	24.39	21.08	12.79	16.51	20.62	11.89
A2	48429.60	51902.59	55496.62	42763.87	59533.60	40987.85	24608.82	24909.26	38255.00	31182.03	34649.45	25751.37	28890.54	67526.08	46978.75	38273.90	38050.32	47136.21	29429.35
A2+FL	2.34	86.10	709.41	682.07	2349.78	1138.01	822.41	785.30	1802.32	1164.53	957.96	706.23	989.61	2706.79	2421.00	1318.77	870.38	653.33	396.48
B1	2716.19	2203.93	2913.21	2563.78	2991.64	2265.77	2560.75	2312.84	2382.00	2320.09	2730.45	2178.63	2824.10	2768.60	2228.59	2992.49	2304.68	2285.95	2475.13
B2																			
C1																			
C2																			
C2*																			
Cost per quintal (Rs)																			
A1	1313.74	955.50	1235.90	1006.74	898.06	780.07	1423.84	894.19	823.90	1009.05	1603.52	1335.76	1244.58	931.59	830.10	754.01	547.40	994.38	1228.38
A2	1361.13	1058.79	1236.65	1013.81	898.06	785.94	1423.84	894.19	823.90	1009.05	1609.22	1335.76	1255.12	969.86	882.46	754.01	547.40	994.38	1228.38
A2+FL	1634.29	1138.53	1535.03	1222.05	1446.38	1215.14	1605.32	1021.12	1012.53	1306.80	1818.24	1538.01	1684.13	1145.04	1079.78	1258.43	964.94	1632.51	1721.03
B1	1429.80	990.89	1369.26	1083.63	1000.81	856.25	1509.15	943.12	927.22	1152.64	1872.92	1443.44	1332.78	1011.45	929.27	961.89	634.41	1082.62	1299.06
B2	2235.07	1614.34	1840.85	1502.04	1579.91	1444.36	2040.22	1442.06	1519.51	1720.22	2328.57	1806.42	1999.87	1827.28	1627.11	1420.55	1006.34	1364.58	1726.19
C1	1704.73	1073.64	1707.66	1298.25	1548.25	1287.69	1702.19	1076.18	1116.02	1458.51	2083.82	1647.52	1766.56	1187.93	1128.64	1457.08	1052.88	1733.41	1804.05
C2	2509.99	1697.09	2179.26	1716.67	2127.35	1875.80	2233.26	1575.12	1708.32	2026.09	2539.47	2010.50	2433.65	2003.76	1826.48	1915.73	1424.81	2015.38	2231.17
C2*	2509.99	1708.99	2181.51	1716.67	2127.35	1875.80	2233.26	1676.92	1757.63	2035.18	2539.47	2010.50	2581.40	2003.76	1826.48	1915.73	1448.93	2015.38	2231.17
C3	2760.99	1879.89	2399.66	1888.34	2340.09	2063.38	2456.59	1844.61	1933.39	2238.70	2793.42	2211.55	2839.54	2204.14	2009.13	2107.30	1593.83	2216.92	2454.29
labour inputs per hectare																			
UNIT																			
(kgs.)	1.66	1.76	1.56	3.02	2.62	3.91	3.37	3.00	1.24	1.38	1.47	2.66	1.30	2.81	2.51	14.73	13.91	1.70	8.70
kgs. of Nutrients)	240.28	191.06	177.44	149.48	127.47	108.23	130.94	97.93	102.09	157.48	135.19	123.43	193.96	185.07	152.66	141.76	91.06	308.46	154.30
(Quintals)	16.18	34.76	41.42	36.75	0.21	0.00	19.00	10.48	8.72	9.98	19.88	9.65	16.79	8.76	0.70	4.58	6.19	45.99	18.94
ur (Man Hours)	841.98	656.17	1267.37	991.45	791.66	801.91	676.02	715.12	563.40	680.12	833.60	869.10	1327.32	717.78	803.30	559.86	682.39	1195.39	967.25
ur (Pair Hours)	58.33	62.63	43.46	42.54	20.74	38.41	71.57	67.97	76.38	83.61	113.25	124.57	145.46	2.69	4.20	0.29	15.42	0.13	7.97
Note :	The estimates are provisional unless specified.																		
Cost A1 =	All actual expenses in cash and kind incurred in production by owner.																		
Cost A2 =	Cost A1 + rent paid for leased-in land.																		
Cost A2+FL =	Cost A2 + imputed value of Family Labour.																		
Cost B1 =	Cost A1 + interest on value of owned capital assets (excluding land).																		
Cost B2 =	Cost B1 + rental value of owned land (net of land revenue)																		
	and rent paid for leased-in land																		
Cost C1 =	Cost B1 + imputed value of Family Labour.																		
Cost C2 =	Cost B2 + imputed value of Family Labour.																		
Cost C2*=	Cost C2 estimated by taking into account statutory minimum or actual wage whichever is higher.																		
Cost C3 =	Cost C2* + 10% of Cost C2* on account of managerial functions performed by farmer.																		
Source :	Directorate of Economics & Statistics, Ministry of Agriculture.																		

Table - 3.7

Cotton : Break-up of Cost of Cultivation per Hectare (In Rs.)

Cost Items	Andhra Pradesh		Gujarat		Haryana		Karnataka		Madhya Pradesh		Maharashtra		Orissa	Punjab		Rajasthan		Tamil Nadu	
	2008-09	2007-08	2008-09	2007-08	2008-09	2007-08	2008-09	2007-08	2008-09	2007-08	2008-09	2007-08	2008-09	2008-09	2007-08	2008-09	2007-08	2008-09	2007-08
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
Operational Cost	27903.33	24264.82	29184.04	20351.68	29632.02	22228.06	15576.32	11113.17	16486.30	17135.84	22877.35	18185.29	17233.61	27785.16	22369.46	16390.26	15852.87	33719.78	20424.28
Human Labour																			
Casual	8589.07	8289.60	6991.60	4736.13	4785.02	2983.44	4367.65	3012.25	3958.20	2688.17	4279.89	3960.44	5279.49	7431.08	5165.63	836.14	1274.39	5219.55	6043.05
Attached	1189.14	52.55	100.55	165.49	728.94	721.69	40.19	1.43	7.80	128.22	368.85	115.44	70.59	1470.03	1449.31	970.06	830.94	9.99	227.83
Family	4893.79	2072.17	6254.88	3713.73	11296.79	8205.93	1977.79	1485.55	3162.37	4040.57	2777.18	2498.22	4708.99	4396.39	4431.10	7045.00	7072.76	12972.82	6151.37
Total	14672.00	10414.32	13347.03	8615.35	16810.75	11911.06	6385.63	4499.23	7128.37	6856.96	7425.92	6574.10	10059.07	13297.50	11046.04	8851.20	9178.09	18202.36	12422.25
Bullock Labour																			
Hired	365.77	1875.39	618.30	469.50	218.36	117.80	594.52	569.24	267.79	111.98	559.73	988.74	114.12	0.00	0.00	6.56	34.12	5.35	21.73
Owned	1781.29	498.53	1510.09	977.29	778.42	1170.05	1132.53	850.31	2250.23	2356.79	5843.22	4410.47	1650.80	139.47	210.68	1.41	452.01	0.00	269.65
Total	2147.06	2373.92	2128.39	1446.79	996.78	1287.85	1727.05	1419.55	2518.02	2468.77	6402.95	5399.21	1764.92	139.47	210.68	7.97	486.13	5.35	291.38
Machine Labour																			
Hired	2178.63	1720.09	1556.85	1751.82	1295.25	698.87	848.77	639.85	745.62	477.86	870.02	649.84	52.65	1278.52	1140.78	1607.50	1226.30	3255.92	1677.88
Owned	18.73	15.54	294.41	213.20	1029.80	1202.94	35.72	120.81	49.52	5.82	136.70	30.21	9.99	3182.53	1821.84	204.64	29.03	1.38	325.64
Total	2197.36	1735.63	1851.26	1965.02	2325.05	1901.81	884.49	760.66	795.14	483.68	1006.72	680.05	62.64	4461.05	2962.62	1812.14	1255.33	3257.30	2003.52
Seed	2878.84	2314.32	2231.87	1883.27	3334.74	1934.85	2441.62	1756.54	2054.58	2201.07	2214.73	1985.16	1333.62	3656.61	3067.89	1125.78	877.15	2452.65	1365.66
Fertilisers and Manure																			
Fertilisers	3168.50	2657.97	2410.54	2024.60	1612.77	1364.95	1936.83	1476.46	1402.00	2084.71	2026.37	1752.09	2734.89	2349.20	1879.47	2030.94	1186.84	4383.20	2035.47
Manure	617.43	1785.24	1344.34	1038.44	10.59	0.00	812.94	388.93	689.40	808.82	1238.00	613.10	652.21	69.34	4.03	316.70	247.83	2387.32	532.80
Total	3785.93	4443.21	3754.88	3063.04	1623.36	1364.95	2749.77	1865.39	2091.40	2893.53	3264.37	2365.19	3387.10	2418.54	1883.50	2347.64	1434.67	6770.52	2568.27
Insecticides	1402.91	2294.45	2468.12	1505.26	2324.75	1444.90	931.87	392.23	1154.19	1092.45	955.55	587.64	246.74	2861.34	2003.56	1509.94	1736.26	1382.76	672.97
Irrigation charges	120.48	14.82	2707.66	1368.78	1660.98	1957.73	43.81	127.82	301.77	736.66	966.05	82.81	0.00	235.91	638.07	452.40	619.18	1020.14	667.72
Interest on working capital	697.26	672.50	694.83	504.17	555.61	424.91	412.08	291.75	403.76	396.83	609.10	475.37	379.52	708.75	543.59	283.19	266.06	628.70	432.51
Miscellaneous	1.49	1.65	0.00	0.00	0.00	0.00	0.00	0.00	39.07	5.89	31.96	35.76	0.00	5.99	13.51	0.00	0.00	0.00	0.00
Fixed Cost	16853.39	15755.04	12886.40	8756.06	14386.16	12649.03	6663.14	6374.99	12262.99	11057.85	10239.47	6213.62	8525.25	23043.67	18121.36	8984.90	8219.61	8425.43	6457.19
Rental value of owned land	13613.74	12298.17	9330.63	7066.34	11969.86	10799.82	5463.10	5582.94	10014.33	8086.64	5909.47	4410.48	7049.57	19753.69	14352.53	6600.10	6321.38	6150.82	5194.43
Rent paid for leased-in land	767.57	2328.63	14.35	135.67	0.00	104.74	0.00	0.00	0.00	0.00	70.75	0.00	179.50	975.72	1153.70	0.00	0.00	0.00	0.00
Land revenue, cesses & taxes	2.26	6.33	14.87	19.01	0.00	0.00	18.80	14.57	4.92	7.37	36.93	28.08	7.30	0.00	0.00	5.48	6.21	23.34	74.92
Depreciation on implements & Farm buildings	467.61	257.20	402.85	202.60	286.95	259.32	347.56	216.48	536.05	1076.10	726.41	464.50	398.33	286.22	411.68	254.17	436.58	385.84	239.51
Interest on fixed capital	2002.21	864.71	3123.70	1332.44	2129.35	1485.15	833.68	561.00	1707.69	1887.74	3495.91	1310.56	890.55	2028.04	2203.45	2125.15	1455.44	1865.43	948.33
Total Cost	44756.72	40019.86	42070.44	29107.74	44018.18	34877.09	22239.46	17488.16	28749.29	28193.69	33116.82	24398.91	25758.86	50828.83	40490.82	25375.16	24072.48	42145.21	26881.47
Operational Cost (based on new methodology)	27903.33	24552.63	29220.44	20351.68	29632.02	22228.06	15576.32	12249.09	17307.50	2930.03	22877.35	18185.29	18788.55	27785.16	22369.46	16390.26	16262.36	33719.78	20424.28
Human Labour (based on new methodology)	14672.00	10702.13	13383.43	8615.35	16810.75	11911.06	6385.63	5635.15	7949.57	1815.24	7425.92	6574.10	11614.05	13297.50	11046.04	8851.20	9587.58	18202.36	12422.25
Total Cost (based on new methodology)	44756.72	40307.67	42106.84	29107.74	44018.18	34877.09	22239.46	18624.08	29570.49	28321.56	33116.82	24398.91	27313.84	50828.83	40490.82	25375.16	24481.97	42145.21	26881.47

Cotton : Variable Input Price Index					
ANDHRA PRADESH					
(Base 2004-05=100)					
ITEMS	Weights		Indices		
	2008-09	2008-09	2010-11*	2011-12*	
Human Labour	0.5393	208.15	275.28	316.57	
Bullock Labour	0.0789	125.34	134.27	138.97	
Machine Labour	0.0808	121.45	130.93	132.24	
Seeds	0.1058	342.74	356.58	363.71	
Fertilizer	0.1165	100.99	100.99	102.00	
Manure	0.0227	128.12	135.92	140.00	
Insecticide	0.0516	110.45	113.73	114.87	
Irrigation Charges	0.0045	114.99	119.30	119.60	
GUJARAT					
(Base 2004-05=100)					
ITEMS	Weights		Indices		
	2008-09	2008-09	2010-11*	2011-12*	
Human Labour	0.4685	151.23	163.99	173.83	
Bullock Labour	0.0747	189.86	199.46	201.46	
Machine Labour	0.0650	121.45	130.93	132.24	
Seeds	0.0783	148.09	179.19	197.10	
Fertilizer	0.0846	97.63	110.96	112.07	
Manure	0.0472	160.00	163.22	164.85	
Insecticide	0.0866	110.45	113.73	114.87	
Irrigation Charges	0.0950	113.20	125.37	125.68	
HARYANA					
(Base 2004-05=100)					
ITEMS	Weights		Indices		
	2008-09	2008-09	2010-11*	2011-12*	
Human Labour	0.5782	188.71	216.64	238.30	
Bullock Labour	0.0343	201.25	241.30	260.60	
Machine Labour	0.0800	121.45	130.93	132.24	
Seeds	0.1147	675.77	689.35	696.25	
Fertilizer	0.0555	100.12	100.12	101.12	
Manure	0.0004	107.18	111.51	113.74	
Insecticide	0.0800	110.45	113.73	116.00	
Irrigation Charges	0.0571	100.80	101.04	101.29	
KARNATAKA					
(Base 2004-05=100)					
ITEMS	Weights		Indices		
	2008-09	2008-09	2010-11*	2011-12*	
Human Labour	0.4211	197.47	284.79	293.34	
Bullock Labour	0.1139	153.30	156.38	157.94	
Machine Labour	0.0583	121.45	130.93	132.24	
Seeds	0.1610	555.49	666.03	679.35	
Fertilizer	0.1277	100.09	107.18	108.25	
Manure	0.0536	112.55	119.41	122.99	
Insecticide	0.0615	110.45	113.73	114.87	
Irrigation Charges	0.0029	110.77	116.22	116.51	
(contd..)					

Cotton : Variable Input Price Index				
MADHYA PRADESH				
(Base 2004-05=100)				
ITEMS	Weights		Indices	
	2008-09	2008-09	2010-11*	2011-12*
Human Labour	0.4432	167.31	209.87	235.05
Bullock Labour	0.1566	140.59	155.00	162.75
Machine Labour	0.0494	121.45	130.93	132.24
Seeds	0.1278	136.03	149.97	157.47
Fertilizer	0.0872	102.69	106.44	107.51
Manure	0.0429	192.68	196.56	198.52
Insecticide	0.0718	110.45	113.73	114.87
Irrigation Charges	0.0212	107.50	141.11	141.47
MAHARASHTRA				
(Base 2004-05=100)				
ITEMS	Weights		Indices	
	2008-09	2008-09	2010-11*	2011-12*
Human Labour	0.3335	159.44	231.90	250.45
Bullock Labour	0.2875	133.37	136.05	137.41
Machine Labour	0.0452	121.45	130.93	132.24
Seeds	0.0995	274.37	302.50	317.62
Fertilizer	0.0910	100.14	115.73	116.89
Manure	0.0556	134.78	137.49	138.87
Insecticide	0.0429	110.45	113.73	114.87
Irrigation Charges	0.0448	148.87	140.11	140.46
PUNJAB				
(Base 2004-05=100)				
ITEMS	Weights		Indices	
	2008-09	2008-09	2010-11*	2011-12*
Human Labour	0.4911	176.27	209.57	230.53
Bullock Labour	0.0052	135.69	149.59	157.07
Machine Labour	0.1648	121.45	130.93	132.24
Seeds	0.1350	422.12	533.99	560.69
Fertilizer	0.0868	99.95	108.82	109.91
Manure	0.0026	200.00	212.18	218.55
Insecticide	0.1057	110.45	113.73	116.00
Irrigation Charges	0.0089	111.94	354.50	355.38
RAJASTHAN				
(Base 2004-05=100)				
ITEMS	Weights		Indices	
	2008-09	2008-09	2010-11*	2011-12*
Human Labour	0.5495	164.99	188.87	205.87
Bullock Labour	0.0005	113.49	115.77	116.93
Machine Labour	0.1125	121.45	130.93	132.24
Seeds	0.0699	218.50	299.10	349.95
Fertilizer	0.1261	102.99	114.54	115.69
Manure	0.0197	313.64	462.99	555.59
Insecticide	0.0937	110.45	113.73	114.87
Irrigation Charges	0.0281	131.02	145.79	146.15
Cotton : Variable Input Price Index				

Cotton : Variable Input Price Index					
TAMIL NADU					
(Base 2004-05=100)					
		Weights		Indices	
ITEMS					
		2008-09	2008-09	2010-11*	2011-12*
Human Labour		0.5501	173.85	248.44	277.01
Bullock Labour		0.0002	131.63	139.65	143.83
Machine Labour		0.0984	121.45	130.93	132.24
Seeds		0.0741	172.55	195.70	205.49
Fertilizer		0.1325	98.62	98.67	99.66
Manure		0.0721	126.83	129.38	130.67
Insecticide		0.0418	110.45	113.73	114.87
Irrigation Charges		0.0308	113.43	343.25	344.11
* : Input Index is projected on the basis of observed changes in the prices of different inputs.					

Table - 3.9

Jowar : Estimates of Cost of Cultivation/Production and related data

	Andhra Pradesh		Karnataka		Madhya Pradesh		Maharashtra		Rajasthan		Tamil Nadu	
	2008-09	2007-08	2008-09	2007-08	2008-09	2007-08	2008-09	2007-08	2008-09	2007-08	2008-09	2007-08
1	2	3	4	5	6	7	8	9	10	11	12	13
Cost of Cultivation per hectare(Rs)												
A1	11367.51	8674.65	6373.49	5298.67	6403.50	6219.52	12019.38	11354.25	3107.19	2971.34	6577.76	6270.49
A2	11367.51	8674.65	6373.49	5298.67	6403.50	6219.52	12041.26	11359.80	3107.19	2971.34	6581.69	6270.49
A2+FL	14921.48	10727.16	7925.12	6551.69	8730.12	8625.57	14355.32	13527.46	6813.93	5353.75	8593.40	7962.03
B1	12363.71	9690.46	6909.57	5653.02	7296.08	6805.79	14962.06	12612.44	3890.20	3794.11	6770.29	6677.13
B2	20646.46	12755.90	9110.51	8115.40	9423.86	10116.15	18293.71	16100.63	5576.71	4896.99	8783.86	8914.29
C1	15917.68	11742.97	8461.20	6906.05	9622.70	9211.83	17276.12	14780.10	7596.94	6176.52	8782.00	8368.68
C2	24200.43	14808.41	10662.15	9368.42	11750.48	12522.19	20607.77	18268.29	9293.45	7279.40	10795.57	10605.84
C2*	24200.43	14808.41	10662.15	9563.68	11750.48	12522.19	20607.77	18268.29	9283.45	7297.47	10795.57	10605.84
Yield per hectare (Quintals)												
Value of the main-product per hectare (Rs)	25126.80	8500.16	8163.86	10095.36	6769.06	9947.26	13056.96	14836.67	4566.22	3236.81	7213.74	9100.41
Value of the by-product per hectare (Rs)	2482.36	1717.96	1555.73	1572.66	1742.08	3294.18	6863.63	6085.48	5550.83	3379.16	5253.21	5335.35
Implicit price (Rs./qtl)	1251.96	805.70	917.29	1196.13	812.61	713.58	898.00	856.62	818.32	879.57	840.76	867.53
Cost of production per quintal (Rs)												
A1	531.99	677.29	612.22	543.66	563.56	332.17	537.25	469.22	255.53	360.46	428.70	355.24
A2	531.99	677.29	612.22	543.66	563.56	332.17	538.24	469.48	255.53	360.46	428.70	355.24
A2+FL	676.63	845.84	917.29	671.64	833.52	464.83	647.13	553.86	551.19	711.76	579.53	478.49
B1	578.02	757.71	660.88	579.05	669.40	367.98	673.41	520.70	321.59	466.43	441.30	382.40
B2	949.91	998.88	865.00	825.94	862.60	539.02	820.94	662.38	457.14	589.68	571.55	495.73
C1	730.49	925.23	803.40	709.51	930.03	501.94	779.99	607.22	621.17	727.55	564.61	469.60
C2	1102.37	1166.40	1007.52	956.40	1123.22	672.98	927.53	748.90	756.72	850.81	694.87	582.93
C2*	1102.37	1166.40	1007.52	976.52	1123.22	672.98	927.53	748.90	756.72	853.55	694.87	582.93
C3	1212.61	1283.04	1108.27	1074.17	1235.54	740.28	1020.28	823.79	822.39	938.91	764.36	641.22
Material and labour inputs per hectare												
ITEM	UNIT											
Seeds (kgs.)	10.42	10.16	7.62	7.86	10.95	11.44	10.34	10.23	33.47	30.81	25.34	24.98
Fertilisers (kgs. of Nutrients)	92.36	90.48	58.98	39.31	41.58	47.80	69.85	71.90	17.11	15.57	30.28	8.61
Manure (Quintals)	6.07	0.65	3.24	1.03	6.43	9.52	6.39	4.82	5.50	1.31	0.09	0.40
Human Labour (Man Hours)	436.04	460.56	408.37	404.64	342.18	408.21	533.65	576.09	351.62	269.43	402.96	404.93
Animal Labour (Pair Hours)	64.92	60.98	65.15	74.18	85.83	86.54	77.22	86.36	2.70	3.88	2.15	3.74
Note : The estimates are provisional unless specified.												
Cost A1 = All actual expenses in cash and kind incurred in production by owner.						Cost C1 = Cost B1 + imputed value of Family Labour.						
Cost A2 = Cost A1 + rent paid for leased-in land.						Cost C2 = Cost B2 + imputed value of Family Labour.						
Cost A2+FL = Cost A2 + imputed value of Family Labour.						Cost C2* = Cost C2 estimated by taking into account statutory minimum or actual wage whichever is higher.						
Cost B1 = Cost A1 + interest on value of owned capital assets (excluding land).						Cost C3 = Cost C2* + 10% of Cost C2* on account of managerial functions performed by farmer.						
Cost B2 = Cost B1 + rental value of owned land (net of land revenue) and rent paid for leased-in land						Source : Directorate of Economics & Statistics, Ministry of Agriculture.						

Table - 3.10

Jowar : Break-up of Cost of Cultivation per Hectare (In Rs.)

Cost Items	Andhra Pradesh		Karnataka		Madhya Pradesh		Maharashtra		Rajasthan		Tamil Nadu	
	2008-09	2007-08	2008-09	2007-08	2008-09	2007-08	2008-09	2007-08	2008-09	2007-08	2008-09	2007-08
1	2	3	4	5	6	7	8	9	10	11	12	13
Operational Cost	14464.09	10390.29	7734.80	6381.57	8359.71	8233.61	13736.90	13129.37	6465.40	5092.15	8283.49	7638.89
Human Labour												
Casual	4676.89	3522.35	2241.20	1918.39	1386.62	995.83	2766.12	2705.96	473.53	614.44	3370.92	3538.65
Attached	63.46	75.22	58.44	12.92	203.27	57.66	172.36	105.85	0.77	0.00	0.00	0.00
Family	3553.97	2052.51	1551.63	1253.02	2326.62	2406.05	2314.06	2167.66	3706.74	2382.41	2011.71	1691.54
Total	8294.32	5650.08	3851.27	3184.33	3916.51	3459.54	5252.54	4979.47	4181.04	2996.85	5382.63	5230.19
Bullock Labour												
Hired	690.72	169.94	900.88	839.14	140.76	62.25	784.85	1027.28	25.42	5.21	53.71	85.14
Owned	1965.72	1653.19	681.70	789.50	1838.53	2433.46	3451.53	3558.57	57.41	87.23	0.00	5.21
Total	2656.44	1823.13	1582.58	1628.64	1979.29	2495.71	4236.38	4585.85	82.83	92.44	53.71	90.35
Machine Labour												
Hired	1005.15	453.96	739.33	537.85	654.57	417.77	1472.72	1080.11	1241.12	831.07	1457.82	1632.83
Owned	12.97	63.85	76.81	1.97	129.11	18.04	4.07	30.10	85.93	284.72	0.20	0.00
Total	1018.12	517.81	816.14	539.82	783.68	435.81	1476.79	1110.21	1327.05	1115.79	1458.02	1632.83
Seed	418.39	365.17	233.35	177.67	288.30	309.74	406.29	449.11	380.89	464.88	508.42	240.91
Fertilisers and Manure												
Fertilisers	1283.48	1491.40	912.78	623.67	589.93	641.76	1058.53	995.51	233.64	243.77	675.12	130.28
Manure	294.41	19.59	122.04	46.96	499.82	708.63	425.95	353.33	168.50	39.42	4.41	20.52
Total	1577.89	1510.99	1034.82	670.63	1089.75	1350.39	1484.48	1348.84	402.14	283.19	679.53	150.80
Insecticides	60.77	194.54	0.51	0	115.52	5.83	7.96	3.24	7.85	56.89	2.65	0.00
Irrigation charges	106.83	54.62	28.76	25.07	0.00	0.00	526.31	320.47	0.00	0.00	8.48	113.59
Interest on working capital	330.61	252.66	187.37	155.41	182.82	176.59	346.15	332.18	83.60	82.11	190.05	180.22
Miscellaneous	0.72	21.29	0.00	0.0	3.84	0.00	0.00		0.00	0	0.00	
Fixed Cost	9736.34	4418.12	2927.35	2986.85	3390.77	4288.58	6870.87	5138.92	2818.05	2187.25	2512.08	2966.95
Rental value of owned land	8282.75	3065.44	2200.95	2462.37	2127.79	3310.36	3309.76	3482.65	1686.51	1102.88	2009.65	2237.16
Rent paid for leased-in land	0.00	0.00	0.00	0.00	0.00	0.00	21.88	5.55	0.00	0.00	3.93	0.00
Land revenue, cesses & taxes	3.55	3.82	7.90	5.43	3.13	5.30	29.17	28.94	3.36	4.92	15.97	51.42
Depreciation on implements & Farm buildings	453.84	333.04	182.43	164.70	367.27	386.66	567.38	363.60	345.18	256.68	290.00	271.73
Interest on fixed capital	996.20	1015.82	536.07	354.35	892.58	586.26	2942.68	1258.18	783.00	822.77	192.53	406.64
Total Cost	24200.43	14808.41	10662.15	9368.42	11750.48	12522.19	20607.77	18268.29	9283.45	7279.40	10795.57	10605.84
Operational Cost (based on new methodology)	14464.09	10390.29	7734.80	6576.83	8359.71	8233.61	13136.90	13129.37	6465.40	5110.22	8283.49	7638.89
Human Labour (based on new methodology)	8294.32	5650.08	3851.27	3379.59	3916.51	3459.54	5252.54	4979.47	4181.45	3014.92	5382.63	5230.19
Total Cost (based on new methodology)	24200.43	14808.41	10662.15	9563.68	11750.48	12522.19	20607.77	18268.29	9283.45	7297.47	10795.57	10605.84

Bajra : Estimates of Cost of Cultivation/Production and related data

Page 1: Estimates of Cost of Cultivation, Production and related data													
		Gujarat		Haryana		Karnataka		Maharashtra		Rajasthan		Uttar Pradesh	
		2008-09	2007-08	2008-09	2007-08	2008-09	2007-08	2008-09	2007-08	2008-09	2007-08	2008-09	2007-08
1		2	3	4	5	6	7	8	9	10	11	12	13
Cost of Cultivation per hectare(Rs)													
A1		11806.06	9321.75	6940.95	5010.09	4498.35	3863.04	13883.62	10331.96	3410.77	2664.90	6506.26	5740.83
A2		11806.06	9819.86	6940.95	5010.09	4498.35	3863.04	13883.62	10331.96	3414.09	2694.99	6946.40	6201.48
A2+FL		15183.54	12571.66	11575.62	10509.24	5760.57	4683.29	17523.85	12745.22	7558.55	5675.72	11892.17	10328.55
B1		12752.45	9657.16	8436.19	6210.71	4887.27	4329.35	15537.39	11875.92	4444.16	3731.20	8367.32	7277.68
B2		17458.69	12841.57	14081.66	10304.07	5985.27	5450.24	18640.40	14623.48	6187.24	5377.79	12875.29	11519.05
C1		16129.94	12408.96	13070.86	11709.87	6149.49	5149.60	19177.62	14289.18	8588.61	6711.93	13313.10	11404.75
C2		20836.18	15593.37	18716.33	15803.22	7247.49	6270.49	22280.63	17036.74	10331.69	8358.52	17821.07	15646.13
C2*		20836.18	15593.37	18716.33	15803.22	7247.49	6927.85	22280.63	17036.74	10407.16	8527.89	17821.07	15646.13
Yield per hectare (Quintals)		25.07	19.47	21.43	18.98	6.39	8.06	16.67	19.14	9.24	9.25	19.53	22.36
Value of the main-product per hectare (Rs)		21053.47	15164.03	17320.56	11435.88	4700.13	4410.36	14846.62	13735.69	6254.63	5915.55	11709.29	13203.97
Value of the by-product per hectare (Rs)		7178.31	4417.73	2322.42	2566.69	749.58	828.01	3767.72	2746.39	4188.53	3871.62	2871.17	3974.58
Implicit price (Rs./qtl)		839.79	778.84	808.24	602.52	735.54	547.19	890.62	717.64	676.91	639.52	599.55	590.52
Cost of production per quintal (Rs)													
A1		349.95	366.94	283.85	215.03	627.51	404.66	662.63	451.97	226.25	174.05	267.99	206.51
A2		349.95	381.86	283.85	215.03	627.51	404.66	662.63	451.97	226.44	175.91	286.57	219.85
A2+FL		451.65	500.02	476.30	452.21	777.50	489.21	838.44	554.94	489.93	370.87	489.01	355.05
B1		376.93	379.43	348.01	266.36	685.43	454.28	744.68	519.83	290.54	249.37	342.52	259.93
B2		516.60	503.11	579.98	442.20	816.76	572.09	888.89	638.66	404.09	353.07	528.62	401.40
C1		475.38	487.41	537.62	503.14	843.70	539.26	919.44	624.05	554.68	445.68	545.12	396.36
C2		615.04	611.09	769.59	678.98	975.04	657.07	1063.65	742.88	668.23	549.38	731.21	537.84
C2*		615.04	611.09	769.59	678.98	975.04	725.79	1063.65	742.88	673.05	560.58	731.21	537.84
C3		676.54	672.20	846.59	746.88	1072.54	798.36	1170.02	817.17	740.36	616.64	804.33	591.62
Material and labour inputs per hectare													
ITEM	UNIT												
Seeds	(kgs.)	6.74	6.87	4.06	4.13	3.45	4.09	4.32	4.34	5.32	6.22	5.62	5.78
Fertilisers	(kgs. of Nutrients)	104.44	94.49	80.40	46.85	26.25	10.87	55.44	73.38	18.89	7.45	61.71	58.67
Manure	(Quintals)	23.07	17.54	0.00	2.61	0.00	0.54	21.20	4.17	7.24	3.15	0.00	0.00
Human Labour (Man Hours)		655.87	655.10	273.70	312.61	302.72	365.27	529.33	485.24	315.28	312.12	457.99	488.27
Animal Labour (Pair Hours)		11.59	21.49	9.93	2.09	42.75	51.25	80.27	43.88	5.46	1.71	11.69	12.95
Note : The estimates are provisional unless specified.													
Cost A1 = All actual expenses in cash and kind incurred in production by owner.													
Cost A2 = Cost A1 + rent paid for leased-in land.													
Cost A2+FL = Cost A2 + imputed value of Family Labour.													
Cost B1 = Cost A1 + interest on value of owned capital assets (excluding land).													
Cost B2 = Cost B1 + rental value of owned land (net of land revenue)													
and rent paid for leased-in land													

Table - 3.12

Bajra : Break-up of Cost of Cultivation per Hectare (In Rs.)

Cost Items	Gujarat		Haryana		Karnataka		Maharashtra		Rajasthan		Uttar Pradesh	
	2008-09	2007-08	2008-09	2007-08	2008-09	2007-08	2008-09	2007-08	2008-09	2007-08	2008-09	2007-08
	1	2	3	4	5	6	7	8	9	10	11	12
Operational Cost	14952.92	12000.80	11385.79	10315.68	5579.29	4458.53	17103.64	12389.61	7285.59	5385.14	10990.87	9224.48
Human Labour												
Casual	2797.25	2442.82	1753.29	541.20	1439.29	1397.64	2417.92	2090.47	599.87	465.36	1046.44	854.52
Attached	78.14	29.56	17.35	20.04	0.00	3.08	26.13	126.46	10.29	5.13	5.32	0.00
Family	3377.48	2751.80	4634.67	5499.15	1262.22	820.25	3640.23	2413.26	4144.46	2980.73	4945.77	4127.07
Total	6252.87	5224.18	6405.31	6060.39	2701.51	2220.97	6084.28	4630.19	4754.62	3451.22	5997.53	4981.59
Bullock Labour												
Hired	316.92	404.94	59.07	44.35	1079.02	898.75	850.30	862.74	11.82	7.79	1.08	5.01
Owned	220.92	241.74	519.01	543.32	58.31	378.57	3712.72	2014.38	98.25	44.98	1237.89	393.24
Total	537.84	646.68	578.08	587.67	1137.33	1277.32	4563.02	2877.12	110.07	52.77	1238.97	398.25
Machine Labour												
Hired	2951.82	2409.19	2065.51	1723.77	797.88	262.46	2308.54	2167.54	1313.06	1170.62	2288.45	2194.05
Owned	262.38	23.09	509.30	369.37	0.00	0.00	295.66	171.18	109.04	72.44	19.03	11.95
Total	3214.20	2432.28	2574.81	2093.14	797.88	262.46	2604.20	2338.72	1422.10	1243.06	2307.48	2206.00
Seed	833.25	714.97	507.47	462.23	403.49	379.30	650.37	661.70	339.56	278.94	515.73	572.04
Fertilisers and Manure												
Fertilisers	1354.22	1239.47	931.37	523.15	408.26	179.14	700.99	907.41	234.58	90.83	708.07	668.01
Manure	736.34	502.19	0.00	26.23	0.00	27.19	1926.48	286.12	271.19	93.14	0.00	0.00
Total	2090.56	1741.66	931.37	549.38	408.26	206.33	2627.47	1193.53	505.77	183.97	708.07	668.01
Insecticides	49.13	11.33	2.86	5.87	0.00	0.00	0.52	0.00	5.62	9.67	0.72	0.05
Irrigation charges	1624.30	949.43	181.31	411.04	0.00	1.90	165.80	386.03	52.66	92.65	39.19	244.07
Interest on working capital	350.77	280.27	204.58	145.96	130.82	110.25	407.98	302.32	95.19	72.86	183.18	154.47
Miscellaneous	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Fixed Cost	5883.26	3592.57	7330.54	5487.54	1668.20	1811.96	5176.99	4647.13	3046.10	2973.38	6830.20	6421.65
Rental value of owned land	4706.24	2686.30	5645.47	4093.35	1098.00	1120.88	3103.01	2747.56	1739.76	1616.50	4067.83	3780.73
Rent paid for leased-in land	0.00	498.11	0.00	0.00	0.00	0.00	0.00	0.00	3.32	30.09	440.14	460.64
Land revenue, cesses & taxes	7.83	8.10	0.00	0.00	4.33	4.29	13.18	12.11	4.23	3.47	6.85	3.15
Depreciation on implements & Farm buildings	222.79	64.65	189.83	193.56	176.94	220.47	407.03	343.49	265.40	257.02	454.32	640.28
Interest on fixed capital	946.40	335.41	1495.24	1200.63	388.93	466.32	1653.77	1543.97	1033.39	1066.30	1861.06	1536.85
Total Cost	20836.18	15593.37	18716.33	15803.22	7247.49	6270.49	22280.63	17036.74	10331.69	8358.52	17821.07	15646.13
Operational Cost (based on new methodology)	14952.92	12000.80	11385.79	10315.68	5579.29	5115.89	17103.64	12389.61	7361.06	5554.51	10990.87	9224.48
Human Labour (based on new methodology)	6252.87	5224.18	6405.31	6060.39	2701.51	2878.33	6084.28	4630.19	4830.09	3620.59	5997.53	4981.59
Total Cost (based on new methodology)	20836.18	15593.37	18716.33	15803.22	7247.49	6927.85	22280.63	17036.74	10407.16	8527.89	17821.07	15646.13

Table - 3.13

Maize : Estimates of Cost of Cultivation/Production and related data

Andhra Pradesh		Bihar		Chhattisgarh		Gujarat		Himachal Pradesh	
2008-09	2007-08	2008-09	2007-08	2008-09	2007-08	2008-09	2007-08	2008-09	2007-08
2	3	4	5	6	7	8	9	10	11
21792.59	14563.06	11755.26	10901.22	1586.56	1666.59	9472.28	12560.84	4607.77	6169.75
21805.78	14566.74	11755.26	10901.22	1586.56	1666.59	9472.28	12560.84	4611.27	6196.10
25687.09	17771.81	13513.92	12879.71	4079.63	4571.53	12679.77	15072.9	9519.75	11478.64
23306.28	15282.64	12541.34	11764.21	2193.19	1835.70	10258.38	13012.38	6389.13	7639.78
33920.54	23523.15	18099.04	16608.41	4237.55	3664.03	14447.93	17527.32	9363.14	11852.73
27187.59	18487.71	14300.01	13742.70	4686.27	4740.64	13465.87	15524.44	11297.61	12922.32
37801.85	26728.22	19857.70	18586.90	6730.63	6568.97	17655.42	20039.38	14271.62	17135.27
38085.75	26845.00	19901.98	19724.75	7370.80	7362.82	17655.42	20039.38	14621.48	17135.27
42.68	41.50	42.95	37.92	9.31	10.11	23.68	28.69	12.64	17.85
33645.93	26095.55	35564.86	22225.03	7370.97	5559.66	20020.30	19798.97	9148.71	14010.04
1725.18	1371.25	6162.41	3208.06	806.45	1753.67	5111.95	7285.21	3830.22	6209.52
788.33	628.81	828.05	586.10	791.73	549.92	845.45	690.10	723.79	784.88
489.07	336.89	226.48	256.37	153.53	125.34	318.95	318.89	252.03	216.48
489.34	336.89	226.48	256.37	153.53	125.34	318.95	318.89	252.22	217.15
572.5	406.86	268.18	296.81	394.98	343.75	426.55	384.05	530.88	445.57
520.81	352.70	240.80	277.70	212.24	138.05	344.79	330.67	349.85	270.44
758.59	543.10	363.61	384.69	410.07	275.55	485.86	445.07	516.22	417.56
602.79	420.70	281.62	322.08	453.50	356.52	452.41	397.69	630.19	522.84
840.58	611.10	404.43	429.07	651.33	494.02	593.48	512.09	796.56	669.95
846.87	613.79	405.33	455.35	713.63	553.64	593.48	512.09	816.17	669.95
931.56	675.17	445.86	500.88	784.99	609.00	652.83	563.3	897.79	736.95
21.26	23.26	22.60	20.54	22.18	23.28	20.84	16.36	33.91	29.46
223.66	191.51	156.33	132.35	9.09	15.07	107.55	80.94	54.14	89.90
18.77	22.49	2.69	10.26	0.00	0.00	13.36	80.42	31.75	34.43
651.31	637.91	578.24	686.32	370.97	443.50	616.08	776.17	366.39	428.21
40.66	73.32	7.77	20.81	72.98	103.39	32.75	109.49	40.77	43.89
									(Contd..)

Table - 3.13(Concluded)									
Maize : Estimates of Cost of Cultivation/Production and related data									
Karnataka		Madhya Pradesh		Rajasthan		Tamil Nadu		Uttar Pradesh	
2008-09	2007-08	2008-09	2007-08	2008-09	2007-08	2008-09	2007-08	2008-09	2007-08
12	13	14	15	16	17	18	19	20	21
11355.52	8939.76	6693.68	6870.90	9046.72	7481.13	18685.72	13842.16	9812.72	7659.30
11355.52	8939.76	6696.68	6870.90	9425.00	7530.96	18688.73	13842.93	9812.72	7659.30
13792.85	10364.96	9899.63	10162.94	14421.46	13338.48	22846.06	16167.61	15635.43	11496.58
12215.46	9478.96	7513.59	7425.82	10660.91	8973.98	20958.45	15391.42	11655.49	8695.53
18234.22	14143.65	9849.55	10111.06	14813.82	11921.59	27678.01	20418.22	15222.40	12871.75
14652.79	10904.16	10719.53	10717.86	15657.38	14781.51	25115.78	17716.10	17478.20	12532.81
20671.54	15568.85	13055.50	13403.09	19810.29	17729.11	31835.34	22742.90	21045.11	16709.03
20671.54	15818.08	13055.50	13403.09	19810.29	17768.30	31835.34	22832.16	21812.28	16709.03
31.10	29.95	10.81	12.61	23.56	21.07	45.05	36.38	13.70	17.01
24959.73	20359.97	7538.96	8951.45	18259.51	14396.48	35457.35	26947.00	10136.27	12382.61
3496.93	2343.90	1804.92	1789.49	5140.33	3138.50	2061.64	1592.74	1037.35	2274.74
802.56	679.80	697.41	709.87	775.02	683.27	787.07	740.71	739.87	727.96
321.61	270.20	482.25	479.97	292.52	295.12	393.39	374.64	670.90	384.03
321.61	270.20	482.25	479.97	310.25	297.14	393.45	374.66	670.90	384.03
389.00	310.35	738.89	671.67	477.65	519.75	479.26	419.61	1035.32	570.98
345.08	290.19	544.30	513.65	348.20	353.17	440.56	414.51	796.84	438.58
512.25	418.48	704.99	677.08	481.23	468.40	581.08	535.50	1015.41	632.20
414.52	336.77	815.00	721.94	525.74	575.57	527.80	470.16	1168.79	649.13
581.69	465.07	975.69	885.37	658.77	690.80	668.32	591.15	1387.36	842.75
581.69	472.51	975.69	885.37	658.77	692.22	668.32	593.52	1437.51	842.75
639.86	519.76	1073.26	973.91	724.65	761.44	735.15	652.88	1581.27	927.03
16.52	16.15	20.08	19.29	29.38	30.86	18.95	21.04	23.42	23.13
128.98	100.11	36.63	60.97	101.56	66.67	258.54	171.19	97.34	71.10
7.88	7.15	4.14	11.59	4.17	25.74	19.47	18.65	0.02	1.41
599.46	548.93	436.92	470.89	624.91	675.21	672.29	492.51	654.83	694.77
82.41	82.35	75.91	80.91	62.65	76.48	6.85	10.27	37.59	20.95
s specified.				Cost C1 = Cost B1 + imputed value of Family Labour.					
kind incurred in production by owner.				Cost C2 = Cost B2 + imputed value of Family Labour.					
land.				Cost C2*= Cost C2 estimated by taking into account statutory					
amily Labour.				minimum or actual wage whichever is higher.					
ned capital assets (excluding land).				Cost C3 = Cost C2* + 10% of Cost C2* on account of managerial functions performed by farmer.					
and (net of land revenue) and rent paid for leased-in land				Source : Directorate of Economics & Statistics, Ministry of Agriculture.					

	Maize : Break-up of Cost of Cultivation per Hectare (In Rs.)									
	Andhra Pradesh		Bihar		Chhattisgarh		Gujarat		Himachal Pradesh	
Cost Items	2008-09	2007-08	2008-09	2007-08	2008-09	2007-08	2008-09	2007-08	2008-09	2007-08
1	2	3	4	5	6	7	10	9	10	11
Operational Cost	25306.57	17508.37	13294.20	12485.78	3901.07	4480.61	12520.74	14989.03	9212.65	11105.43
Human Labour										
Casual	7903.39	4913.06	2965.74	2540.39	64.52	0.00	2245.01	2202.72	140.01	192.07
Attached	827.34	57.92	1.80	5.41	0.00	0.00	62.32	233.83	2.24	6.30
Family	3881.31	3205.07	1758.66	1978.49	2493.07	2904.94	3207.49	2512.06	4908.48	5282.54
Total	12612.04	8176.05	4726.20	4524.29	2557.59	2904.94	5514.82	4948.61	5050.73	5480.91
Bullock Labour										
Hired	568.81	612.40	98.21	42.24	0.00	0.00	342.20	298.9	195.67	211.94
Owned	986.92	1365.25	49.01	393.05	976.21	1176.28	1083.14	3391.39	193.88	209.16
Total	1555.73	1977.65	147.22	435.29	976.21	1176.28	1425.34	3690.29	389.55	421.10
Machine Labour										
Hired	2121.07	1745.54	1639.44	1544.96	0.00	0.00	1773.76	1494.03	1120.63	1285.24
Owned	18.61	0.24	1.24	36.80	0.00	0.00	33.35	12.06	21.32	107.43
Total	2139.68	1745.78	1640.68	1581.76	0.00	0.00	1807.11	1506.09	1141.95	1392.67
Seed	2094.57	1677.44	1399.15	1317.90	206.05	186.21	1057.11	831.74	602.46	973.11
Fertilisers and Manure										
Fertilisers	2893.84	2379.31	2193.08	1916.21	118.55	165.43	1362.93	1033.54	608.71	1010.20
Manure	702.02	837.94	97.58	232.78	0.00	0.00	281.12	1386.57	1063.08	1090.55
Total	3595.86	3217.25	2290.66	2148.99	118.55	165.43	1644.05	2420.11	1671.79	2100.75
Insecticides	698.88	138.43	5.86	0.00	0.00	0.00	90.07	8.83	87.78	204.64
Irrigation charges	1957.82	136.59	2734.87	2159.15	0.00	0.00	700.02	1205.27	137.96	355.80
Interest on working capital	649.25	433.43	349.56	318.40	42.67	47.75	282.22	378.09	130.43	176.45
Miscellaneous	2.74	5.75	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Fixed Cost	12495.28	9219.85	6563.50	6101.12	2829.56	2088.36	5134.68	5050.35	5058.97	6029.84
Rental value of owned land	10601.07	8236.83	5557.70	4844.20	2044.35	1828.33	4189.55	4514.93	2970.52	4186.60
Rent paid for leased-in land	13.18	3.68	0.00	0.00	0.00	0.00	0.00	0.00	3.49	26.35
Land revenue, cesses & taxes	3.57	3.22	34.41	29.70	3.81	7.65	11.01	14.18	10.94	8.04
Depreciation on implements & Farm buildings	363.78	256.54	185.31	364.24	174.77	83.27	148.02	69.69	292.67	338.82
Interest on fixed capital	1513.68	719.58	786.08	862.98	606.63	169.11	786.10	451.55	1781.35	1470.03
Total Cost	37801.85	26728.22	19857.70	18586.90	6730.63	6568.97	17655.42	20039.38	14271.62	17135.27
Operational Cost (based on new methodology)	25590.47	17625.15	13338.48	13623.63	4541.24	5274.46	12520.74	14989.03	9562.51	11105.43
Human Labour (based on new methodology)	12895.94	8292.83	4770.48	5662.14	3197.76	3698.79	5514.82	4948.61	5400.59	5480.91
Total Cost (based on new methodology)	38085.75	26845.00	19901.98	19724.75	7370.80	7362.82	17655.42	20039.38	14621.48	17135.27
									(Contd..)	

Table - 3.14 (Concluded)

Maize : Break-up of Cost of Cultivation per Hectare (In Rs.)

Cost Items	Karnataka		Madhya Pradesh		Rajasthan		Tamil Nadu		Uttar Pradesh	
	2008-09	2007-08	2008-09	2007-08	2008-09	2007-08	2008-09	2007-08	2008-09	2007-08
1	12	13	14	15	16	17	18	19	20	21
Operational Cost	13604.59	10120.42	9520.57	9661.34	13576.81	12965.97	22546.66	15993.29	15114.37	11249.97
Human Labour										
Casual	3490.63	2651.14	1991.97	1152.64	1110.84	578.45	6564.02	4736.28	1555.56	2481.19
Attached	83.72	-	31.84	158.43	262.90	23.10	566.94	42.26	39.94	67.54
Family	2437.33	1425.20	3205.95	3292.04	4996.46	5807.52	4157.33	2324.68	5822.71	3837.28
Total	6011.68	4076.34	5229.76	4603.11	6370.20	6409.07	11288.29	7103.22	7418.21	6386.01
Bullock Labour										
Hired	1196.76	864.24	39.40	10.85	363.82	343.35	112.89	194.45	16.87	32.81
Owned	977.92	1012.41	1737.09	1941.40	1389.02	1565.05	55.19	35.53	3935.61	939.26
Total	2174.68	1876.65	1776.49	1952.25	1752.84	1908.40	168.08	229.98	3952.48	972.07
Machine Labour										
Hired	1303.33	1105.62	610.10	585.97	1908.63	1250.41	2210.06	2075.04	1315.38	1332.07
Owned	22.43	14.05	25.78	7.55	93.51	25.19	52.90	22.23	404.35	143.15
Total	1325.76	1119.67	635.88	593.52	2002.14	1275.60	2262.96	2097.27	1719.73	1475.22
Seed	1144.04	920.60	695.26	565.29	1554.74	716.60	2711.19	2415.74	348.28	345.95
Fertilisers and Manure										
Fertilisers	1821.93	1409.25	531.52	797.11	1328.54	897.36	3406.69	2300.89	1302.63	897.92
Manure	490.08	322.12	331.45	905.20	270.43	1243.08	819.46	582.73	0.85	45.36
Total	2312.01	1731.37	862.97	1702.31	1598.97	2140.44	4226.15	2883.62	1303.48	943.28
Insecticides	9.55	44.56	77.97	51.85	2.27	1.51	286.25	236.54	0.00	9.69
Irrigation charges	288.47	87.74	50.89	0.00	35.64	297.43	1046.49	612.72	90.62	893.12
Interest on working capital	338.40	263.49	191.35	193.01	260.01	216.92	557.25	414.20	281.57	224.63
Miscellaneous	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Fixed Cost	7066.95	5448.43	3534.93	3741.75	6233.48	4763.14	9288.68	6749.61	5930.74	5459.06
Rental value of owned land	6018.75	4664.69	2335.97	2685.24	3774.64	2897.77	6716.54	5026.03	3566.91	4176.22
Rent paid for leased-in land	0.00	0.00	0.00	0.00	378.28	49.84	3.02	0.77	0.00	0.00
Land revenue, cesses & taxes	11.08	6.27	8.55	3.80	9.09	7.50	54.68	32.12	10.37	5.49
Depreciation on implements & Farm buildings	177.17	238.27	370.50	497.79	457.28	315.18	241.70	141.43	510.69	241.12
Interest on fixed capital	859.95	539.20	819.91	554.92	1614.19	1492.85	2272.74	1549.26	1842.77	1036.23
Total Cost	20671.54	15568.85	13055.50	13403.09	19810.29	17729.11	31835.34	22742.90	21045.11	16709.03
Operational Cost (based on new methodology)	13604.59	10369.65	9520.57	9661.34	13576.81	13005.16	22546.66	16082.55	15881.54	11249.97
Human Labour (based on new methodology)	6011.68	4325.57	5229.76	4603.11	6370.20	6448.26	11288.29	7192.48	8185.38	6386.01
Total Cost (based on new methodology)	20671.54	15818.08	13055.50	13403.09	19810.29	17768.30	31835.34	22832.16	21812.28	16709.03

Table - 3.15

Ragi : Estimates of Cost of Cultivation/Production and related data

		Karnataka		Maharashtra		Tamil Nadu	
		2008-09	2007-08	2008-09	2007-08	2008-09	2007-08
1	2	3	4	5	6	7	
Cost of Cultivation per hectare(Rs)							
A 1		11891.53	11671.86	18178.75	13485.35	9514.59	8600.95
A 2		11891.53	11671.86	18178.75	13485.35	9514.59	8600.95
A 2+FL		15383.52	14391.66	23606.40	16963.53	15379.12	15310.86
B 1		14609.39	12271.43	20776.19	13966.58	10182.25	9581.77
B 2		19103.15	15152.56	24053.41	15993.38	13208.11	15320.97
C 1		18101.38	14991.23	26203.84	17444.76	16046.79	16291.68
C 2		22595.14	17872.36	29481.05	19471.56	19072.64	22030.88
C 2*		22595.14	18237.14	30365.64	19471.56	19072.64	22030.88
Yield per hectare (Quintals)		17.65	14.70	13.63	7.40	19.83	35.07
Value of the main-product per hectare (Rs)		15652.26	10295.85	17922.49	10855.79	20443.51	28326.68
Value of the by-product per hectare (Rs)		4653.84	1816.22	1736.85	1302.56	3599.10	2975.28
Implicit price(Rs./qtl)		886.81	700.40	1314.93	1467.00	1030.94	807.72
Cost of production per quintal (Rs)							
A 1		560.94	695.15	1234.70	1614.04	407.64	224.38
A 2		560.94	695.15	1234.70	1614.04	407.64	224.38
A 2+FL		671.83	832.22	1578.93	2046.78	659.45	395.08
B 1		658.40	718.98	1451.11	1715.08	451.12	249.34
B 2		843.86	870.40	1627.15	1880.87	575.39	391.84
C 1		819.56	879.96	1787.46	2197.90	697.72	426.35
C 2		1005.02	1031.39	1963.49	2363.69	822.00	568.86
C 2*		1005.02	1052.73	2022.24	2363.69	822.00	568.86
C 3		1105.52	1158.00	2224.46	2600.06	904.20	625.75
Material and labour inputs per hectare							
ITEM	UNIT						
Seed (Qtl.)		15.51	19.70	40.96	3.38	22.45	18.46
Fertiliser (kgs. of Nutrients)		94.31	90.69	33.95	119.89	51.70	118.33
Manure (Quintals)		22.62	36.39	45.65	22.77	17.57	5.19
Human Labour (Man Hours)		759.33	729.56	1051.29	1040.89	709.22	861.22
Animal Labour (Pair Hours)		90.21	116.40	117.42	66.20	39.89	23.30

Note : The estimates are provisional unless specified.
 Cost A 1 = All actual expenses in cash and kind incurred in production by owner.
 Cost A 2 = Cost A 1 + rent paid for leased-in land.
 Cost A 2+FL = Cost A 2 + imputed value of Family Labour.
 Cost B 1 = Cost A 1 + interest on value of owned capital assets (excluding land).
 Cost B 2 = Cost B 1 + rental value of owned land (net of land revenue)
 and rent paid for leased-in land
 Cost C 1 = Cost B 1 + imputed value of Family Labour.
 Cost C 2 = Cost B 2 + imputed value of Family Labour.
 Cost C 2*= Cost C 2 estimated by taking into account statutory
 minimum or actual wage whichever is higher.
 Cost C 3 = Cost C 2* + 10% of Cost C 2* on account of managerial
 functions performed by farmer.

Source : Directorate of Economics & Statistics,
 Ministry of Agriculture.

Table - 3.16

Ragi : Break-up of Cost of Cultivation per Hectare (In Rs.)

		Karnataka		Maharashtra		Tamil Nadu	
Cost Items		2008-09	2007-08	2008-09	2007-08	2008-09	2007-08
1		2	3	4	5	6	7
Operational Cost		15091.61	14127.30	22962.63	16754.31	14847.16	15030.27
Human Labour							
Casual		4990.82	4321.42	6441.98	4046.03	4791.97	3980.78
Attached		0.00	0.00	281.78	410.07	50.14	0.00
Family		3491.99	2719.80	5427.65	3478.18	5864.53	6709.91
Total		8482.81	7041.22	12151.41	7934.28	10706.64	10690.69
Bullock Labour							
Hired		496.98	1436.86	2164.49	1887.70	702.88	504.62
Owned		1643.66	742.83	3660.81	526.08	148.76	123.54
Total		2140.64	2179.69	5825.30	2413.78	851.64	628.16
Machine Labour							
Hired		260.72	1095.82	0.00	1773.24	1249.73	1012.28
Owned		1142.57	0.00	0.00	23.95	0.00	0.00
Total		1403.29	1095.82	0.00	1797.19	1249.73	1012.28
Seed		170.67	163.52	488.90	34.30	442.20	190.10
Fertilisers and Manure							
Fertilisers		1360.42	1395.47	504.46	2005.42	579.81	1273.11
Manure		960.85	1725.11	3461.21	2167.03	615.02	283.69
Total		2321.27	3120.58	3965.67	4172.45	1194.83	1556.80
Insecticides		0.00	0.00	0.00	0.00	0.00	0.00
Irrigation charges		221.43	180.79	0.00	0.00	129.92	700.11
Interest on working capital		351.50	345.68	531.35	402.31	272.20	252.13
Miscellaneous		0.00	0.00	0.00	0.00	0.00	0.00
Fixed Cost		7503.53	3745.06	6518.42	2717.25	4225.48	7000.61
Rental value of owned land		4493.76	2881.13	3277.21	2026.80	3025.86	5739.20
Rent paid for leased-in land		0.00	0.00	0.00	0.00	0.00	0.00
Land revenue, cesses & taxes		19.46	16.69	23.03	16.49	32.95	44.82
Depreciation on implements & Farm buildings		272.46	247.67	620.74	192.73	499.01	235.77
Interest on fixed capital		2717.85	599.57	2597.44	481.23	667.66	980.82
Total Cost		22595.14	17872.36	29481.05	19471.56	19072.64	22030.88
Operational Cost (based on new methodology)		15091.61	14492.08	23847.22	16754.31	14847.16	15030.27
Human Labour (based on new methodology)		8482.81	7406.00	13036.00	7934.28	10706.64	10690.69
Total Cost (based on new methodology)		22595.14	18237.14	30365.64	19471.56	19072.64	22030.88

Table - 3.17

Tur (Arhar) : Estimates of Cost of Cultivation/Production and related data

	Andhra Pradesh		Bihar		Gujarat		Karnataka		Madhya Pradesh		Maharashtra		Orissa		Tamil Nadu		Uttar Pradesh		
	2008-09	2007-08	2008-09	2007-08	2008-09	2007-08	2008-09	2007-08	2008-09	2007-08	2008-09	2007-08	2008-09	2007-08	2008-09	2007-08	2008-09	2007-08	
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19
Cost of Cultivation per hectare(Rs)																			
A1	12587.15	8889.48	5278.82	6797.21	11063.06	7619.53	8288.66	7577.11	5864.30	4642.71	14387.12	13359.05	4317.56	4108.96	8518.82	8499.03	5936.05	5470.99	
A2	12587.15	8889.48	5278.82	6797.21	11193.54	7643.07	8288.66	7577.11	5864.30	4642.71	14439.09	13361.29	4317.56	4108.96	8518.82	8499.03	5943.01	5470.99	
A2+FL	17051.66	11243.12	7670.26	7985.40	13468.82	9439.86	10593.15	8915.96	8184.71	7433.23	17130.55	16419.82	6539.60	7106.48	12517.40	11486.57	9794.05	8566.43	
B1	14385.01	10182.42	6448.54	8001.53	12164.74	8303.63	9048.76	8146.22	6682.23	5676.33	17901.50	14988.12	5279.13	5936.28	9783.33	8711.36	10189.28	8288.39	
B2	19707.14	15689.01	12270.79	15423.65	17276.63	13518.44	14224.19	11668.13	11884.51	10282.90	22578.80	19043.96	8476.24	8250.20	12206.89	11578.53	19225.70	15071.38	
C1	18849.51	12536.06	8839.98	9189.72	14440.02	10100.42	11353.25	9485.08	9002.64	8466.85	20592.95	18046.66	7501.17	8933.80	13781.91	11698.90	14040.32	11383.83	
C2	24171.65	18042.65	14662.23	16611.83	19551.90	15315.23	16528.68	13006.98	14204.92	13073.42	25270.26	22102.50	10698.29	11247.73	16205.47	14566.07	23076.74	18166.82	
C2*	24171.65	18042.65	14813.30	16808.25	19561.88	15822.46	16528.68	13139.52	14204.92	13073.42	25426.13	22173.74	10914.54	11549.16	16205.47	14566.07	24021.20	18166.82	
Yield per hectare (Quintals)	6.42	8.05	9.48	9.20	9.59	12.61	7.47	7.26	7.16	7.71	8.72	10.76	4.76	4.31	3.71	10.11	9.83	8.95	
Value of the main-product per hectare (Rs)	17276.63	18042.36	24087.04	24538.61	28377.77	29162.04	22695.41	15760.93	19641.13	17120.02	26879.44	23377.75	12181.73	8961.09	10895.87	18204.71	28840.76	23339.64	
Value of the by-product per hectare (Rs)	463.83	312.93	2335.35	1105.61	2111.81	2064.99	406.57	891.08	1167.98	1306.29	1143.77	956.79	606.73	294.58	580.10	1738.83	6271.76	2531.28	
Implicit price (Rs./qtl)	2691.06	2241.29	2540.83	2667.24	2959.10	2312.61	3038.21	2170.93	2743.17	2220.50	3082.50	2172.65	2559.19	2079.14	2936.89	1800.66	2933.95	2607.78	
Cost of production per quintal (Rs)																			
A1	1955.65	1125.56	544.27	706.50	1070.27	571.50	1077.18	1005.08	833.54	574.78	1579.81	1190.00	903.26	923.75	2331.50	767.08	512.53	535.04	
A2	1955.64	1125.56	544.27	706.50	1076.01	573.04	1077.18	1005.08	833.54	574.78	1584.98	1190.17	903.26	923.75	2331.50	767.08	513.11	535.04	
A2+FL	2586.58	1372.85	737.59	830.56	1307.19	699.10	1393.14	1162.38	1078.95	895.75	1884.33	1466.01	1308.68	1596.36	3203.41	1037.10	818.38	863.49	
B1	2221.32	1283.33	649.75	831.22	1169.38	624.11	1188.18	1073.82	943.33	691.31	1966.39	1334.62	1101.63	1238.83	2599.68	786.24	851.23	816.52	
B2	3031.06	1893.88	1190.38	1605.01	1644.46	1001.68	1821.44	1513.04	1590.31	1231.25	2468.62	1693.97	1727.23	1753.35	3195.66	1045.02	1606.01	1513.20	
C1	2860.79	1582.43	868.11	949.84	1423.22	758.79	1539.20	1242.95	1226.85	1029.47	2273.56	1614.33	1522.07	2012.87	3558.24	1055.88	1186.76	1126.54	
C2	3670.54	2192.98	1408.75	1723.63	1898.30	1136.36	2172.46	1682.16	1873.83	1569.41	2775.80	1973.68	2147.67	2527.40	4154.22	1314.66	1941.55	1823.22	
C2*	3670.54	2192.98	1423.44	1743.55	1898.58	1173.91	2172.46	1700.42	1873.83	1569.41	2793.26	1980.45	2189.07	2594.60	4154.22	1314.66	2021.60	1823.22	
C3	4037.59	2412.28	1565.78	1917.90	2088.44	1291.30	2389.71	1870.46	2061.21	1726.35	3072.59	2178.49	2407.98	2854.07	4569.64	1446.13	2223.76	2005.54	
Material and labour inputs per hectare																			
ITEM (UNIT)																			
Seeds (kgs.)	14.97	14.49	17.70	20.59	11.81	11.34	9.27	11.83	19.01	20.84	16.89	16.26	23.92	20.50	30.87	23.96	16.48	16.60	
Fertilisers (kgs. of Nutrients)	101.26	68.15	0.00	64.82	76.63	65.22	59.81	50.86	20.94	20.78	75.20	89.74	0.08	0.05	12.80	13.34	2.71	2.36	
Manure (Quintals)	7.01	5.19	0.00	0.00	17.41	11.03	6.82	12.02	5.71	3.53	6.78	7.04	0.00	0.00	33.92	0.00	0.00	0.31	
Human Labour (Man Hours)	461.58	499.48	451.59	399.81	592.97	717.01	397.93	442.19	395.37	417.95	742.54	962.65	443.74	514.88	441.81	609.29	546.38	580.57	
Animal Labour (Pair Hours)	64.40	61.22	83.96	0.00	50.56	71.96	68.65	65.83	44.92	56.07	108.13	123.90	134.47	119.17	53.85	26.20	12.52	27.84	

Note : The estimates are provisional unless specified.

Cost A1 = All actual expenses in cash and kind incurred in production by owner.

Cost A2 = Cost A1 + rent paid for leased-in land.

Cost A2+FL = Cost A2 + imputed value of Family Labour.

Cost B1 = Cost A1 + interest on value of owned capital assets (excluding land).

Cost B2 = Cost B1 + rental value of owned land (net of land revenue)

and rent paid for leased-in land

Cost C1 = Cost B1 + imputed value of Family Labour.

Cost C2 = Cost B2 + imputed value of Family Labour.

Cost C2* = Cost C2 estimated by taking into account statutory

minimum or actual wage whichever is higher.

Cost C3 = Cost C2* + 10% of Cost C2* on account of managerial

functions performed by farmer.

Source : Directorate of Economics & Statistics, Ministry of Agriculture

Table - 3.18

Tur (Arhar) : Break- up of Cost of Cultivation per Hectare (In Rs.)

Cost Items	Andhra Pradesh		Bihar		Gujarat		Karnataka		Madhya Pradesh		Maharashtra	
	2008-09	2007-08	2008-09	2007-08	2008-09	2007-08	2008-09	2007-08	2008-09	2007-08	2008-09	2007-08
1	2	3	4	5	6	7	8	9	10	11	12	13
Operational Cost	16617.24	10783.13	7265.57	7470.37	13014.51	9192.56	10375.86	8612.10	7706.32	6847.50	16189.07	15755.60
Human Labour												
Casual	4527.41	3089.48	1291.49	2460.6	2758.03	1862.59	2188.08	1919.00	1409.09	760.66	3283.33	3733.88
Attached	34.83	567.80	0.00	4.96	352.74	314.70	39.08	94.07	245.01	105.23	270.03	182.95
Family	4464.51	2353.64	2391.44	1188.19	2275.28	1796.79	2304.49	1338.85	2320.41	2790.52	2691.46	3058.53
Total	9026.75	6010.92	3682.93	3653.75	5386.05	3974.08	4531.65	3351.92	3974.51	3656.41	6244.82	6975.36
Bullock Labour												
Hired	317.51	370.32	66.78	0.00	849.71	464.91	723.46	669.95	30.79	13.20	766.57	1012.32
Owned	1944.29	1435.08	2338.16	0.00	1408.76	1760.10	1220.39	898.49	967.87	1293.14	4591.70	3609.47
Total	2261.80	1805.40	2404.94	0.00	2258.47	2225.01	1943.85	1568.44	998.66	1306.34	5358.27	4621.79
Machine Labour												
Hired	1502.41	796.00	264.49	1931.63	1675.35	850.30	742.87	536.47	1057.20	350.71	1160.77	897.49
Owned	1.29	0.68	0.00	26.69	126.48	18.43	56.26	125.49	29.11	35.76	43.01	21.62
Total	1503.70	796.68	264.49	1958.32	1801.83	868.73	799.13	661.96	1086.31	386.47	1203.78	919.11
Seed	486.81	379.98	765.51	695.99	399.19	351.33	307.60	315.58	638.06	559.72	772.28	600.15
Fertilisers and Manure												
Fertilisers	1345.27	948.72	0.00	971.94	1017.91	917.59	970.63	780.67	305.20	306.66	1124.58	1276.56
Manure	351.84	208.82	0.00	0.00	357.73	251.49	400.52	523.55	300.11	222.58	405.33	453.94
Total	1697.11	1157.54	0.00	971.94	1375.64	1169.08	1371.15	1304.22	605.31	529.24	1529.91	1730.50
Insecticides	1177.11	328.98	0.00	0.00	643.12	269.68	1168.21	1189.58	169.51	224.54	467.61	475.55
Irrigation charges	4.55	0.00	0.00	0.00	824.78	110.53	9.68	0.00	70.65	61.84	203.38	48.37
Interest on working capital	368.26	255.44	147.70	190.37	325.43	224.12	244.59	220.40	163.31	122.94	409.02	384.77
Miscellaneous	91.15	48.19	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Fixed Cost	7554.41	7259.52	7396.66	9141.46	6537.39	6122.67	6152.82	4394.88	6495.12	6225.92	9081.19	6346.90
Rental value of owned land	5322.14	5506.59	5822.24	7422.12	4981.40	5191.27	5175.43	3521.91	5202.28	4606.58	4625.34	4053.61
Rent paid for leased-in land	0.00	0.00	0.00	0.00	130.48	23.54	0.00	0.00	0.00	0.00	51.98	2.24
Land revenue, cesses & taxes	5.46	7.49	23.16	24.75	38.16	37.77	7.57	9.17	7.59	9.80	59.45	37.63
Depreciation on implements & Farm buildings	428.95	452.50	381.54	490.27	285.66	185.99	209.72	294.68	467.32	575.92	830.05	624.35
Interest on fixed capital	1797.86	1292.94	1169.72	1204.32	1101.69	684.10	760.10	569.12	817.93	1033.62	3514.37	1629.07
Total Cost	24171.65	18042.65	14662.23	16611.83	19551.90	15315.23	16528.68	13006.98	14201.44	13073.42	25270.26	22102.50
Operational Cost (based on new methodology)	16617.24	10783.13	7416.64	7666.79	13024.49	9699.79	10375.86	8744.64	7709.80	6847.50	16344.94	15826.84
Human Labour (based on new methodology)	9026.75	6010.92	3834.00	3850.17	5396.03	4481.31	4531.65	3484.46	3974.51	3656.41	6400.69	7046.60
Total Cost (based on new methodology)	24171.65	18042.65	14813.30	16808.25	19561.88	15822.46	16528.68	13139.52	14204.92	13073.42	25426.13	22173.74

Table - 3.19

Moong : Estimates of Cost of Cultivation/Production and related data

		Andhra Pradesh		Karnataka		Maharashtra		Orissa		Rajasthan
		2008-09	2007-08	2008-09	2007-08	2008-09	2007-08	2008-09	2007-08	2008-09
1		2	3	4	5	6	7	8	9	10
Cost of Cultivation per hectare(Rs)										
A1		4815.93	5650.95	5442.91	4223.69	9631.90	9474.12	3281.82	3228.20	3095.39
A2		4815.93	5650.95	5442.91	4223.69	9647.55	9495.14	3318.27	3242.62	3319.37
A2+FL		6684.18	6534.22	6440.64	5053.14	10780.76	11140.39	5483.54	5243.39	6204.23
B1		6385.84	5843.99	5848.79	4392.03	10777.39	10046.31	3832.12	3809.71	4051.79
B2		11341.07	11684.16	6870.90	5522.58	14238.24	12000.10	6101.71	5823.65	6280.72
C1		8254.08	6727.26	6846.53	5221.48	11910.60	11691.56	5997.39	5810.48	6936.65
C2		13209.32	12567.43	7868.64	6352.03	15371.45	13645.36	8266.98	7824.42	9165.59
C2*		13209.32	12567.43	7868.64	6603.56	15430.04	13645.36	8400.33	8226.15	9308.51
Yield per hectare (Quintals)		5.90	7.69	1.32	2.35	6.70	5.51	3.01	3.18	4.05
Value of the main-product per hectare (Rs)		16434.42	19018.22	4495.33	5092.55	20390.01	11400.67	8573.93	7640.30	11707.20
Value of the by-product per hectare (Rs)		83.03	449.02	116.91	203.63	303.57	238.13	431.81	388.47	1004.46
Implicit price (Rs./qtl)		2785.49	2473.11	3405.55	2167.04	3043.29	2069.09	2848.48	2402.61	2890.67
Cost of production per quintal (Rs)										
A1		817.63	749.71	4162.31	1755.24	1416.20	1668.14	1037.57	954.55	673.83
A2		817.63	749.71	4162.31	1755.24	1418.77	1671.56	1049.06	959.38	724.62
A2+FL		1127.22	830.12	4755.59	2067.60	1585.46	1980.48	1734.42	1569.08	1410.86
B1		1073.02	773.76	4445.00	1818.60	1588.80	1769.85	1210.85	1136.86	891.33
B2		1906.14	1458.53	5108.42	2256.33	2088.40	2115.37	1930.19	1741.97	1371.85
C1		1395.85	919.76	5114.06	2153.15	1761.65	2079.08	1894.81	1731.76	1588.15
C2		2228.97	1604.53	5777.48	2590.88	2261.24	2424.60	2614.14	2336.87	2068.67
C2*		2228.97	1604.53	5777.48	2693.44	2268.58	2424.60	2657.56	2459.85	2102.96
C3		2451.87	1764.98	6355.23	2962.78	2495.44	2667.06	2923.32	2705.83	2313.26
Material and labour inputs per hectare										
ITEM (Unit)										
Seeds (kgs.)		17.29	21.89	12.59	14.00	15.21	16.74	29.92	29.08	13.52
Fertilisers (kgs. of Nutrients)		30.35	52.09	59.27	33.61	51.89	44.49	0.69	0.91	9.55
Manure (Quintals)		0.00	0.00	11.09	2.55	2.16	6.19	0.20	0.12	1.46
Human Labour (Man Hours)		230.52	269.94	290.13	324.20	414.07	559.48	336.44	362.48	255.87
Animal Labour (Pair Hours)		31.90	26.02	44.62	43.97	56.01	85.91	102.46	97.24	3.45
Note : The estimates are provisional unless specified.						Cost C1 = Cost B1 + imputed value of Family Labour.				
Cost A1 = All actual expenses in cash and kind incurred in production by owner.						Cost C2 = Cost B2 + imputed value of Family Labour.				
Cost A2 = Cost A1 + rent paid for leased-in land.						Cost C2*= Cost C2 estimated by taking into account statutory				
Cost A2+FL = Cost A2 + imputed value of Family Labour.						minimum or actual wage whichever is higher				
Cost B1 = Cost A1 + interest on value of owned capital assets (excluding land).						Cost C3= CostC2* + 10% of C2* on account of managerial functions				
Cost B2 = Cost B1 + rental value of owned land (net of land revenue)						performed by farmer				
and rent paid for leased-in land						Source : Directorate of Economics & Statistics, Ministry of Agriculture				

Table - 3.20

Moong : Break-up of Cost of Cultivation per Hectare (In Rs.)

Cost Items	Andhra Pradesh		Karnataka		Maharashtra		Orissa	
	2008-09	2007-08	2008-09	2007-08	2008-09	2007-08	2008-09	2007-08
	1	2	3	4	5	6	7	8
Operational Cost	6571.25	6399.28	6340.07	4974.13	10450.88	10838.72	5221.50	5037.42
Human Labour								
Casual	1833.99	1870.96	1701.62	1427.25	2970.67	2729.44	707.09	586.77
Attached	152.55	13.01	0.00	46.47	172.84	125.86	55.89	182.43
Family	1868.25	883.27	997.73	829.45	1133.21	1645.25	2165.27	2000.77
Total	3854.79	2767.24	2699.35	2303.17	4276.72	4500.55	2928.25	2769.97
Bullock Labour								
Hired	77.89	133.95	139.50	508.27	509.39	588.03	21.72	80.08
Owned	1075.97	663.24	1039.47	463.04	2170.64	2214.62	1094.55	977.96
Total	1153.86	797.19	1178.97	971.31	2680.03	2802.65	1116.27	1058.04
Machine Labour								
Hired	197.23	644.89	337.17	281.02	1169.01	1075.41	107.87	253.60
Owned	210.76	0.00	0.00	58.98	123.21	33.10	11.76	7.41
Total	407.99	644.89	337.17	340.00	1292.22	1108.51	119.63	261.01
Seed	492.22	869.33	440.39	473.23	769.62	791.77	947.59	812.27
Fertilisers and Manure								
Fertilisers	404.12	689.81	1015.70	535.91	818.25	667.46	11.28	23.70
Manure	0.00	0.00	401.59	104.38	191.53	528.20	4.37	3.71
Total	404.12	689.81	1417.29	640.29	1009.78	1195.66	15.65	27.41
Insecticides	112.69	463.67	89.32	110.48	127.13	121.64	0.00	12.50
Irrigation charges	0.00	0.00	15.69	10.05	13.03	39.35	1.50	4.20
Interest on working capital	142.52	167.15	161.89	125.60	282.35	278.59	92.61	92.02
Miscellaneous	3.06	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Fixed Cost	6638.07	6168.15	1528.57	1377.90	4920.57	2806.64	3045.48	2787.00
Rental value of owned land	4955.24	5840.17	1022.11	1130.56	3445.21	1932.78	2233.14	1999.52
Rent paid for leased-in land	0.00	0.00	0.00	0.00	15.65	21.02	36.46	14.42
Land revenue, cesses & taxes	0.00	0.11	3.90	3.70	25.10	16.77	9.50	12.22
Depreciation on implements & Farm buildings	112.93	134.83	96.68	75.31	289.12	263.89	216.08	179.33
Interest on fixed capital	1569.90	193.04	405.88	168.33	1145.49	572.18	550.30	581.51
Total Cost	13209.32	12567.43	7868.64	6352.03	15371.45	13645.36	8266.98	7824.42
Operational Cost (based on new methodology)	6571.25	6399.28	6340.07	5225.66	10509.47	10838.72	5354.85	5439.15
Human Labour (based on new methodology)	3854.79	2767.24	2699.35	2554.70	4335.31	4500.55	3061.60	3171.70
Total Cost (based on	13209.32	12567.43	7868.64	6603.56	15430.04	13645.36	8400.33	8226.15

Table - 3.21

Urad : Estimates of Cost of Cultivation/Production and related data

Andhra Pradesh		Chhattisgarh		Madhya Pradesh		Maharashtra		Orissa		Rajasthan		Tamil Nadu		Uttar Pradesh	
2008-09	2007-08	2008-09	2007-08	2008-09	2007-08	2008-09	2007-08	2008-09	2007-08	2008-09	2007-08	2008-09	2007-08	2008-09	2007-08
2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
6208.15	5449.24	5824.55	3821.13	5969.68	5378.80	9997.35	9315.90	3651.71	3260.83	3991.36	3782.28	5997.87	5841.86	3940.16	3488.70
6687.41	5449.24	5824.55	3861.13	5969.68	5378.80	9997.35	9315.90	3651.71	3269.87	3691.36	3786.89	6033.85	5884.34	3940.28	3607.96
7818.27	5885.73	7105.40	5233.40	8803.60	7218.45	11248.31	10533.64	5658.33	5241.10	8068.50	7607.30	7664.02	7024.13	6768.52	5410.88
6704.94	5628.69	6183.00	4143.27	6355.64	5898.54	11425.01	9930.71	4358.81	3977.84	4833.50	4694.07	6549.11	6432.75	5001.74	4244.34
13337.83	12683.59	9084.40	6585.18	10039.18	8501.92	13509.12	12527.93	7060.12	6293.26	6346.27	6855.60	9467.09	9087.39	8010.66	6982.44
7835.81	6065.18	7463.85	5515.53	9189.56	7738.18	12675.97	11148.46	6365.43	5949.07	9210.64	8514.48	8179.28	7572.54	7829.97	6047.26
14468.70	13120.08	10365.26	7957.45	12873.10	10341.56	14760.08	13745.67	9066.74	8264.49	10723.41	10676.01	11097.26	10227.18	10838.89	8785.36
14613.13	13145.79	10526.98	8059.19	12873.10	10341.56	14774.37	13745.67	9157.21	8719.87	11025.03	10676.01	11097.26	10227.18	11086.24	8785.36
7.48	8.99	4.40	5.22	6.69	5.05	4.33	7.62	4.05	3.75	2.66	4.50	4.11	4.06	4.07	3.71
22536.17	23478.62	11311.59	9405.35	14061.39	9871.63	12292.91	15301.15	10176.53	8597.77	8136.92	11736.71	13210.87	11164.66	11741.27	10119.10
218.98	37.70	294.04	362.31	672.79	541.88	209.25	279.05	628.70	740.05	937.88	1219.92	364.72	143.77	399.54	278.61
3012.86	2611.64	2570.82	1801.79	2101.85	1954.78	2839.01	2008.02	2512.72	2292.74	3058.99	2608.16	3214.32	2749.92	2884.83	2727.52
818.82	636.67	1291.00	729.26	835.36	988.39	2249.58	1172.11	842.68	783.53	1234.25	767.67	1420.54	1391.50	986.99	1002.11
874.89	636.67	1291.00	729.26	835.36	988.39	2249.58	1172.11	842.68	786.34	1234.25	768.94	1428.96	1399.90	987.02	1052.94
1035.16	653.65	1573.95	965.38	1255.85	1355.02	2554.28	1357.61	1315.83	1286.86	2719.78	1531.34	1814.63	1708.09	1608.30	1419.38
890.95	662.30	1370.45	785.04	887.95	1091.39	2618.92	1254.56	1007.83	985.26	1706.39	964.37	1546.77	1559.12	1235.50	1219.06
1739.09	1348.89	2013.54	1213.46	1403.50	1563.31	3034.74	1568.98	1630.61	1533.83	2170.17	1375.11	2239.36	2232.62	1896.37	1891.18
1066.76	767.96	1654.35	1039.86	1318.10	1467.99	2926.46	1459.39	1489.10	1489.12	3115.73	1722.61	1932.70	1810.47	1904.11	1632.05
1914.90	1454.55	2297.44	1468.28	1833.65	1939.92	3342.29	1773.81	2111.87	2037.70	3579.51	2133.35	2625.29	2483.97	2564.97	2304.17
1933.08	1457.43	2331.88	1485.75	1833.65	1939.92	3348.86	1773.81	2132.63	2147.39	3673.31	2133.35	2625.29	2483.97	2625.55	2304.17
2126.39	1603.18	2565.07	1634.33	2017.02	2133.91	3683.75	1951.19	2345.89	2362.13	4040.64	2346.69	2778.92	2732.37	2888.10	2534.59
33.86	35.94	27.75	25.10	23.75	25.19	14.80	14.74	34.00	31.05	24.00	23.05	25.46	19.91	18.25	15.56
9.71	4.69	41.39	23.39	18.73	19.05	43.37	47.43	4.65	2.69	1.99	12.26	13.03	32.43	1.55	0.14
0.00	0.00	0.00	0.65	8.74	11.02	6.94	2.13	0.92	3.20	1.59	0.00	0.01	1.14	0.00	0.00
164.34	94.20	340.75	263.13	372.70	316.54	384.12	454.10	358.79	392.79	399.44	428.51	283.50	293.09	308.67	299.20
11.22	4.48	34.55	38.58	53.99	32.34	56.93	72.88	73.74	82.75	22.88	48.95	2.58	4.33	10.47	14.80

sional unless specified.

1 cash and kind incurred in production by owner.

2 or leased-in land.

3 d value of Family Labour.

4 value of owned capital assets (excluding land).

5 value of owned land (net of land revenue)

6 sed-in land

Cost C1 = Cost B1 + imputed value of Family Labour.

Cost C2 = Cost B2 + imputed value of Family Labour.

Cost C2* = Cost C2 estimated by taking into account statutory

minimum or actual wage whichever is higher.

Cost C3 = Cost C2* + 10% of Cost C2* on account of managerial

functions performed by farmer.

Source : Directorate of Economics & Statistics, Ministry of Agriculture.

Table - 3.22

Urad : Break- up of Cost of Cultivation per Hectare (In Rs.)

Cost Items	Andhra Pradesh		Chhattisgarh		Madhya Pradesh		Maharashtra		Orissa		Rajasthan		Tamil Nadu	
	2008-09	2007-08	2008-09	2007-08	2008-09	2007-08	2008-09	2007-08	2008-09	2007-08	2008-09	2007-08	2008-09	2007-08
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Operational Cost	7091.75	5738.12	6942.78	4945.42	8653.26	6907.74	10837.80	10285.80	5356.62	5007.30	7892.48	7217.69	7385.51	6598.28
Human Labour														
Casual	1990.46	740.95	1900.19	720.49	950.14	733.15	2106.91	2220.30	1039.87	618.93	794.36	345.71	2573.65	2301.41
Attached	53.92	8.26	0.00	0.00	18.59	82.74	238.57	154.87	113.68	391.37	7.17	6.83	4.48	31.12
Family	1130.86	436.49	1280.85	1372.27	2833.92	1839.65	1250.96	1217.74	2006.62	1971.23	4377.14	3820.41	1630.17	1139.79
Total	3175.24	1185.70	3181.04	2092.76	3802.65	2655.54	3596.44	3592.91	3160.17	2981.53	5178.67	4172.95	4208.30	3472.32
Bullock Labour														
Hired	10.31	30.17	215.57	284.83	417.75	55.88	269.01	661.04	44.17	12.78	77.10	240.97	23.38	108.91
Owned	457.13	62.76	268.05	213.49	890.31	552.05	2983.14	2268.18	827.83	819.28	498.09	985.81	50.20	19.87
Total	467.44	92.93	483.62	498.32	1308.06	607.93	3252.15	2929.22	872.00	832.06	575.19	1226.78	73.58	128.78
Machine Labour														
Hired	1525.61	2614.74	1498.21	1236.55	1448.00	1510.62	1293.48	1358.10	48.20	65.58	994.56	609.01	1016.75	993.31
Owned	5.71	0.00	0.00	0.00	88.42	18.15	45.14	35.23	6.94	18.11	19.85	35.39	9.52	19.66
Total	1531.32	2614.74	1498.21	1236.55	1536.42	1528.77	1338.62	1393.33	55.14	83.69	1014.41	644.40	1026.27	1012.97
Seed	1005.29	939.47	939.71	626.59	759.19	866.30	840.31	1031.97	955.59	828.16	830.84	865.15	1278.29	823.96
Fertilisers and Manure														
Fertilisers	105.19	72.39	668.63	356.79	287.27	293.82	708.77	722.78	74.20	56.01	31.02	187.86	195.75	497.29
Manure	0.00	0.00	0.00	26.13	722.13	728.09	624.15	190.25	33.37	130.89	79.72	0.00	0.37	34.19
Total	105.19	72.39	668.63	382.92	1009.40	1021.91	1332.92	913.03	107.57	186.90	110.74	187.86	196.12	531.48
Insecticides	617.42	672.23	0.00	0.00	52.61	60.22	186.85	150.55	103.11	2.83	76.10	15.45	324.87	348.38
Irrigation charges	3.84	0.00	0.00	0.00	0.00	12.65	0.00	0.00	1.53	0.13	0.00	2.15	103.68	114.98
Interest on working capital	180.63	160.66	171.57	108.28	176.34	153.58	290.51	274.79	101.51	92.00	106.53	102.95	174.40	165.41
Miscellaneous	5.38	0.00	0.00	0.00	8.59	0.84	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Fixed Cost	7376.95	7381.96	3422.48	3012.03	4219.84	3433.82	3922.28	3459.87	3710.12	3257.19	2830.93	3458.32	3711.75	3628.90
Rental value of owned land	6153.64	7054.90	2901.41	2441.92	3683.54	2603.38	2084.11	2597.22	2701.31	2306.38	1512.77	2156.92	2882.00	2612.16
Rent paid for leased-in land	479.25	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	9.04	0.00	4.61	35.98	42.48
Land revenue, cesses & taxes	0.00	0.02	1.19	2.70	2.74	3.29	23.92	20.75	12.76	12.86	4.55	7.20	76.49	84.83
Depreciation on implements & Farm buildings	247.27	147.59	161.43	285.27	147.60	307.41	386.59	227.09	288.95	211.90	171.47	377.79	166.04	298.54
Interest on fixed capital	496.79	179.45	358.45	282.14	385.96	519.74	1427.66	614.81	707.10	717.01	1142.14	911.80	551.24	590.89
Total Cost	14468.70	13120.08	10365.26	7957.45	12873.10	10341.56	14760.08	13745.67	9066.74	8264.49	10723.41	10676.01	11097.26	10227.18
Operational Cost (based on new methodology)	7236.18	5763.83	7104.50	5047.16	8653.26	6907.74	10852.09	10285.80	5447.09	5462.68	8194.50	7217.69	7385.51	6598.28
Human Labour (based on new methodology)	3319.67	1211.41	3342.76	2194.50	3802.65	2655.54	3610.73	3592.91	3250.64	3436.91	548.32	4172.95	4208.30	3472.32
Total Cost (based on new methodology)	14613.13	13145.79	10526.98	8059.19	12873.10	10341.56	14774.37	13745.67	9157.21	8719.87	11025.06	10676.01	11097.26	10227.18

Table - 3.23

Groundnut : Estimates of Cost of Cultivation/Production and related data

		Andhra Pradesh		Gujarat		Karnataka		Maharashtra		Orissa	
		2008-09	2007-08	2008-09	2007-08	2008-09	2007-08	2008-09	2007-08	2008-09	
1		2	3	4	5	6	7	8	9	10	
Cost of Cultivation per hectare(Rs)											
A1		17131.96	14800.29	19403.85	14494.62	11317.87	8480.79	21711.24	16411.54	11333.74	
A2		17204.84	14888.37	19422.78	14542.35	11317.87	8480.79	21725.01	16411.54	11333.74	
A2+FL		21229.01	18269.75	22951.28	17029.59	13647.10	10193.95	26078.66	19837.51	17119.11	
B1		18864.98	16150.40	20550.40	14968.83	12150.66	8985.28	24387.82	17563.88	12169.17	
B2		26410.43	25145.68	26585.94	21076.77	14984.96	12964.17	28329.81	22088.93	19479.79	
C1		22889.15	19531.78	24078.91	17456.08	14479.89	10698.44	28741.47	20989.85	17954.54	
C2		30434.61	28527.06	30114.45	23564.01	17314.20	14677.33	32683.46	25514.90	25265.16	
C2*		30669.67	28682.68	30139.57	23587.52	17404.22	15520.84	32683.46	25514.90	25265.16	
Yield per hectare (Quintals)		11.07	13.12	13.45	13.05	4.71	8.35	9.33	13.14	12.42	
Value of the main-product per hectare (Rs)		23498.69	28644.44	31348.33	32020.34	12243.62	18496.40	21311.75	25024.39	28344.16	
Value of the by-product per hectare (Rs)		1736.69	1503.72	5149.54	4921.63	732.16	849.56	2259.56	2120.48	898.32	
Implicit price (Rs./qtl)		2122.74	2183.27	2330.73	2453.67	2599.49	2215.14	2284.22	1904.44	2282.14	
Cost of production per quintal (Rs)											
A1		1422.14	1079.31	1245.85	966.32	2191.81	961.96	2179.79	1183.03	891.95	
A2		1427.50	1086.00	1246.62	968.22	2191.81	961.96	2181.04	1183.03	891.95	
A2+FL		1785.73	1323.06	1465.65	1131.10	2733.98	1167.22	2527.20	1391.77	1336.01	
B1		1565.34	1175.77	1316.99	996.01	2356.66	1022.27	2386.98	1255.16	958.61	
B2		2215.58	1809.27	1693.10	1394.11	2848.76	1473.00	2776.39	1550.23	1517.80	
C1		1904.67	1429.87	1542.81	1168.26	2991.91	1222.50	2817.94	1506.92	1414.28	
C2		2554.91	2063.36	1918.92	1566.36	3484.01	1673.23	3207.35	1801.98	1973.47	
C2*		2575.19	2075.38	1920.86	1567.36	3502.18	1769.87	3207.35	1801.98	1973.47	
C3		2832.71	2282.92	2112.94	1724.10	3852.39	1946.85	3528.09	1982.18	2170.82	
Material and labour inputs per hectare											
ITEM UNIT											
Seeds (kgs.)		109.43	103.04	118.96	114.62	89.38	85.19	86.71	92.35	131.37	
Fertilisers (kgs. of Nutrients)		74.91	63.13	108.83	73.60	66.48	48.78	116.91	70.28	80.32	
Manure (Quintals)		13.07	21.37	34.40	26.02	4.97	3.75	54.46	21.22	8.01	
Human Labour (Man Hours)		676.45	689.15	595.62	503.72	502.37	565.27	924.75	817.74	957.56	
Animal Labour (Pair Hours)		32.97	57.81	59.71	58.07	67.46	61.87	91.11	77.58	139.71	
Note : The estimates are provisional unless specified.						Cost C1 = Cost B1 + imputed value of Family Labour.					
Cost A1 = All actual expenses in cash and kind incurred in production by owner.						Cost C2 = Cost B2 + imputed value of Family Labour.					
Cost A2 = Cost A1 + rent paid for leased-in land.						Cost C2* = Cost C2 estimated by taking into account statutory					
Cost A2+FL = Cost A2 + imputed value of Family Labour.						minimum or actual wage whichever is higher.					
Cost B1 = Cost A1 + interest on value of owned capital assets (excluding land).						Cost C3 = Cost C2* + 10% of Cost C2* on account of managerial					
Cost B2 = Cost B1 + rental value of owned land (net of land revenue)						functions performed by farmer.					
and rent paid for leased-in land						Source : Directorate of Economics & Statistics,					
						Ministry of Agriculture.					
						2 / 4					

				Table - 3.24								
				Groundnut : Break-up of Cost of Cultivation per Hectare (In Rs.)								
Cost Items	Andhra Pradesh		Gujarat		Karnataka		Maharashtra		Orissa	Tamil Nadu		
	2008-09	2007-08	2008-09	2007-08	2008-09	2007-08	2008-09	2007-08	2008-09	2008-09	2007-08	
1	2	3	4	5	6	7	8	9	10	11	12	
Operational Cost	20774.50	17763.60	22754.92	16873.04	13419.08	10028.34	25308.12	19458.57	16779.72	21717.22	18184.99	
Human Labour												
Casual	6448.97	5225.93	3516.63	2375.17	3147.88	1897.66	4041.02	2875.39	2851.33	5932.81	5448.20	
Attached	0.00	3.06	59.32	37.62	74.49	0.00	42.70	370.77	71.06	128.76	92.14	
Family	4024.17	3381.38	3528.50	2487.24	2329.23	1713.16	4353.65	3425.97	5785.37	4724.97	3832.85	
Total	10473.14	8610.37	7104.45	4900.03	5551.60	3610.82	8437.37	6672.13	8707.76	10786.54	9373.19	
Bullock Labour												
Hired	518.05	693.54	960.25	604.73	689.12	569.63	1020.81	780.53	173.66	357.81	349.09	
Owned	535.75	869.48	1941.98	1749.39	1290.76	802.65	3325.24	3465.52	1532.63	542.78	177.78	
Total	1053.80	1563.02	2902.23	2354.12	1979.88	1372.28	4346.05	4246.05	1706.29	900.59	526.87	
Machine Labour												
Hired	1327.40	898.05	2032.85	1764.01	387.91	528.09	2125.60	379.19	521.60	1166.71	1201.77	
Owned	0.12	28.24	235.43	99.98	122.25	18.22	74.96	571.57	1.70	3.67	30.72	
Total	1327.52	926.29	2268.28	1863.99	510.16	546.31	2200.56	950.76	523.30	1170.38	1232.49	
Seed	4540.33	4045.16	5848.64	4925.67	3623.45	3026.68	3742.07	3848.21	3531.04	5330.21	4051.50	
Fertilisers and Manure												
Fertilisers	1224.70	970.53	1527.55	1074.17	1018.16	764.09	1579.17	1103.56	1261.60	1204.89	1020.46	
Manure	648.88	575.28	1045.11	641.83	280.09	170.09	4248.51	1622.94	256.83	929.66	815.53	
Total	1873.58	1545.81	2572.66	1716.00	1298.25	934.18	5827.68	2726.50	1518.43	2134.55	1835.99	
Insecticides	348.65	286.25	791.61	480.35	38.01	48.36	2.51	29.00	49.90	280.39	161.13	
Irrigation charges	649.52	350.88	684.43	196.94	81.67	237.73	116.90	500.09	409.84	597.72	568.91	
Interest on working capital	507.59	435.82	582.62	435.94	336.06	251.98	634.98	485.83	333.16	514.92	434.91	
Miscellaneous	0.37	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.92	0.00	
Fixed Cost	9660.11	10763.46	7359.53	6690.97	3895.12	4648.99	7375.34	6056.33	8485.44	8676.44	7705.22	
Rental value of owned land	7472.58	8907.20	6016.61	6060.20	2834.30	3978.89	3928.22	4525.05	7310.62	5787.91	5204.49	
Rent paid for leased-in land	72.88	88.08	18.93	47.73	0.00	0.00	13.78	0.00	0.00	327.98	209.15	
Land revenue, cesses & taxes	1.01	2.70	7.08	10.90	8.72	7.05	30.83	16.30	12.59	47.65	55.28	
Depreciation on implements & Farm buildings	380.62	415.38	170.36	97.92	219.31	158.56	725.93	362.64	326.80	415.01	751.90	
Interest on fixed capital	1733.02	1350.10	1146.55	474.22	832.79	504.49	2676.58	1152.34	835.43	2097.89	1484.40	
Total Cost	30434.61	28527.06	30114.45	23564.01	17314.20	14677.33	32683.46	25514.90	25265.16	30393.66	25890.21	
Operational Cost (based on new methodology)	21009.56	17919.22	22780.04	16896.55	13509.10	10871.85	25308.12	19458.57	16779.72	21717.22	18184.99	
Human Labour (based on new methodology)	10708.20	8765.99	7129.57	4923.54	5641.62	4454.33	8437.37	6672.13	8707.76	10786.54	9373.19	
Total Cost (based on new methodology)	30669.67	28682.68	30139.57	23587.52	17404.22	15520.84	32683.46	25514.90	25265.16	30393.66	25890.21	

Table - 3.25

Soyabean : Estimates of Cost of Cultivation/Production and related data

		Madhya Pradesh		Maharashtra		Rajasthan	
		2008-09	2007-08	2008-09	2007-08	2008-09	2007-08
1		2	3	4	5	6	7
Cost of Cultivation per hectare (Rs)							
A 1		9176.60	7983.68	15244.95	12758.33	8871.47	7373.59
A 2		9176.60	7983.68	15298.88	12766.11	8871.47	7635.58
A 2 + FL		11372.00	9653.92	16768.58	13968.58	11309.44	10208.64
B 1		10076.95	8606.73	17282.93	13713.91	9645.41	8019.72
B 2		15134.34	13471.67	20724.29	18316.93	12761.78	11523.74
C 1		12272.35	10276.96	18752.63	14916.38	12083.37	10592.78
C 2		17329.75	15141.91	22193.98	19519.40	15199.75	14096.80
C 2 *		17338.67	15141.91	22212.37	19519.40	15761.59	14200.63
Yield per hectare (Quintals)		12.12	12.36	12.25	16.64	8.85	12.92
Value of the main-product per hectare (Rs)		19025.40	18434.52	20057.00	26911.25	17503.32	19224.72
Value of the by-product per hectare (Rs)		1204.18	1025.25	554.04	696.61	1191.18	929.55
Implicit price (Rs./qtl)		1569.75	1491.47	1637.31	1617.26	1977.78	1487.98
Cost of production per quintal (Rs)							
A 1		713.09	612.49	1209.12	710.10	1010.82	545.14
A 2		713.09	612.49	1214.06	710.54	1010.82	567.35
A 2 + FL		882.43	739.91	1332.07	818.28	1196.48	753.70
B 1		782.02	657.72	1370.80	769.94	1082.66	589.76
B 2		1172.67	1031.60	1642.76	1006.30	1368.63	853.20
C 1		953.27	785.91	1491.47	904.38	1323.33	777.30
C 2		1343.92	1159.79	1763.43	1140.73	1609.30	1040.75
C 2 *		1344.73	1159.79	1764.53	1140.73	1668.71	1048.02
C 3		1479.20	1275.71	1940.99	1254.80	1835.59	1152.82
Material and labour inputs per hectare							
ITEM	UNIT						
Seeds	(kgs.)	86.73	88.91	76.35	78.09	88.80	100.54
Fertilisers	(kgs. of Nutrients)	37.01	42.43	82.62	72.72	8.90	1.76
Manure	(Quintals)	7.35	6.50	6.67	6.20	0.00	9.17
Human Labour	(Man Hours)	326.42	334.03	475.02	509.49	427.70	403.78
Animal Labour	(Pair Hours)	38.00	43.89	83.63	81.53	9.90	22.60

Note : The estimates are provisional unless specified.

Cost A 1 = All actual expenses in cash and kind incurred in production by owner.

Cost A 2 = Cost A 1 + rent paid for leased-in land.

Cost A 2 + FL = Cost A 2 + imputed value of Family Labour.

Cost B 1 = Cost A 1 + interest on value of owned capital assets (excluding land).

Cost B 2 = Cost B 1 + rental value of owned land (net of land revenue)

and rent paid for leased-in land

Cost C 1 = Cost B 1 + imputed value of Family Labour.

Cost C 2 = Cost B 2 + imputed value of Family Labour.

Cost C 2* = Cost C 2 estimated by taking into account statutory

minimum or actual wage whichever is higher.

Cost C 3 = Cost C 2* + 10% of Cost C 2* on account of managerial

functions performed by farmer.

Source : Directorate of Economics & Statistics,

Ministry of Agriculture.

Table - 3.26

Soyabean : Break-up of Cost of Cultivation per Hectare (In Rs.)

Cost Items	Madhya Pradesh		Maharashtra		Rajasthan	
	2008-09	2007-08	2008-09	2007-08	2008-09	2007-08
1	2	3	4	5	6	7
Operational Cost	11003.34	9270.60	16192.52	13591.66	11044.12	9609.95
Human Labour						
Casual	1534.56	1409.89	2852.74	2571.25	2882.20	1232.00
Attached	37.80	72.23	200.36	204.96	58.74	120.83
Family	2195.40	1670.24	1469.70	1202.47	2437.97	2573.06
Total	3767.76	3152.36	4522.80	3978.68	5378.91	3925.89
Bullock Labour						
Hired	179.99	205.70	798.90	531.63	42.87	71.01
Owne d	911.48	953.69	3472.78	3386.08	192.31	555.76
Total	1091.47	1159.39	4271.68	3917.71	235.18	626.77
Machine Labour						
Hired	1956.06	1543.31	2071.04	1809.65	2159.02	1991.84
Owne d	132.35	88.05	106.34	73.25	104.79	232.12
Total	2088.41	1631.36	2177.38	1882.90	2263.81	2223.96
Seed	2150.90	1517.69	2491.22	1641.48	2544.05	1876.07
Fertilisers and Manure						
Fertilisers	564.67	653.30	1319.29	1073.34	110.26	27.45
Manure	599.69	427.80	495.85	470.00	0.00	367.55
Total	1164.36	1081.10	1815.14	1543.34	110.26	395.00
Insecticides	460.04	453.15	386.26	210.60	247.77	304.39
Irrigation charges	2.30	33.87	74.40	41.52	3.35	44.63
Interest on working capital	266.91	230.31	446.15	375.43	260.79	213.24
Miscellaneous	11.19	11.37	7.49	0.00	0.00	0.00
Fixed Cost	6326.41	5871.31	6001.46	5927.74	4155.63	4486.85
Rental value of owned land	5057.40	4864.94	3387.43	4595.25	3116.38	3242.03
Rent paid for leased-in land	0.00	0.00	53.93	7.78	0.00	261.99
Land revenue, cesses & taxes	4.11	5.22	25.10	19.61	6.02	9.79
Depreciation on implements & Farm buildings	364.55	378.11	497.03	349.52	259.29	326.91
Interest on fixed capital	900.35	623.04	2037.97	955.58	773.94	646.13
Total Cost	17329.75	15141.91	22193.98	19519.40	15199.75	14096.80
Operational Cost (based on new methodology)	11012.26	9270.60	16210.91	13591.66	11605.96	9713.78
Human Labour (based on new methodology)	3776.68	3152.36	4541.19	3978.68	5940.75	4029.72
Total Cost (based on new methodology)	17338.67	15141.91	22212.37	19519.40	15761.59	14200.63

Table - 3.27

Sunflower : Estimates of Cost of Cultivation/Production and related data

		Andhra Pradesh		Karnataka		Maharashtra	
		2008-09	2007-08	2008-09	2007-08	2008-09	2007-08
1		2	3	4	5	6	7
Cost of Cultivation per hectare (Rs)							
A 1		10877.25	7874.56	7780.84	5904.72	10611.40	8622.56
A 2		13276.43	7874.56	7780.84	5904.72	10845.15	8950.30
A 2+FL		14734.04	9358.73	9196.66	6949.46	12984.09	10249.00
B 1		11861.12	8288.14	8505.33	6220.89	12440.46	9189.76
B 2		16650.64	12143.38	10617.54	9384.71	15766.97	12017.83
C 1		13318.73	9772.31	9921.15	7265.63	14579.41	10488.46
C 2		18108.26	13627.55	12033.36	10429.45	17905.92	13316.53
C 2*		18150.55	13665.22	12033.36	10859.61	17905.92	13316.53
Yield per hectare (Quintals)		7.03	5.75	4.12	6.44	8.58	6.49
Value of the main-product per hectare (Rs)		13946.05	12809.91	8924.30	14729.96	19251.61	15826.05
Value of the by-product per hectare (Rs)		9.04	40.89	301.76	197.39	250.00	152.50
Implicit price (Rs./qtl)		1983.79	2227.81	2166.09	2287.26	2243.78	2438.53
Cost of production per quintal (Rs)							
A 1		1542.30	1366.98	1845.87	910.38	1206.81	1321.39
A 2		1871.81	1366.98	1845.87	910.38	1231.34	1375.46
A 2+FL		2094.52	1622.43	2159.19	1064.84	1493.90	1564.13
B 1		1680.86	1440.77	2016.14	959.16	1423.59	1409.01
B 2		2361.90	2105.79	2504.84	1438.40	1799.95	1837.89
C 1		1891.80	1699.28	2336.82	1118.69	1682.75	1604.33
C 2		2572.84	2364.30	2825.24	1597.93	2059.11	2033.20
C 2*		2580.26	2369.29	2825.24	1663.17	2059.11	2033.20
C 3		2838.28	2606.22	3107.76	1829.50	2265.02	2236.52
Material and labour inputs per hectare							
ITEM (Unit)							
Seeds (kgs.)		6.16	6.80	5.69	5.05	8.01	8.48
Fertilisers (kgs. of Nutrients)		110.41	69.74	57.67	56.44	55.81	60.03
Manure (Quintals)		3.70	7.87	8.91	2.67	0.58	0.47
Human Labour (Man Hours)		291.19	346.68	353.10	370.56	434.13	465.60
Animal Labour (Pair Hours)		39.46	60.00	70.83	64.09	83.68	66.62

Note : The estimates are provisional unless specified.

Cost A1 = All actual expenses in cash and kind incurred in production by owner.

Cost A2 = Cost A1 + rent paid for leased-in land.

Cost A2+FL = Cost A2 + imputed value of Family Labour.

Cost B1 = Cost A1 + interest on value of owned capital assets (excluding land).

Cost B2 = Cost B1 + rental value of owned land (net of land revenue)

and rent paid for leased-in land

Cost C1 = Cost B1 + imputed value of Family Labour.

Cost C2 = Cost B2 + imputed value of Family Labour.

Cost C2* = Cost C2 estimated by taking into account statutory

minimum or actual wage whichever is higher.

Cost C3 = Cost C2* + 10% of Cost C2* on account of managerial

functions performed by farmer.

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Source : Directorate of Economics & Statistics,
Ministry of Agriculture.

Table - 3.28

Sunflower : Break-up of Cost of Cultivation per Hectare (In Rs.)

Cost Items	Andhra Pradesh		Karnataka		Maharashtra	
	2008-09	2007-08	2008-09	2007-08	2008-09	2007-08
1	2	3	4	5	6	7
Operational Cost	12023.13	9144.47	8988.49	6826.47	12331.95	9702.24
Human Labour						
Casual	3483.21	2103.59	1936.18	1433.66	1970.54	2587.37
Attached	92.33	4.31	1.53	11.45	103.08	83.98
Family	1457.61	1484.17	1415.82	1044.74	2138.94	1298.70
Total	5033.15	3592.07	3353.53	2489.85	4212.56	3970.05
Bullock Labour						
Hired	602.33	474.71	882.66	583.55	407.35	547.44
Owned	765.98	1138.91	1040.07	811.50	3401.37	1639.35
Total	1368.31	1613.62	1922.73	1395.05	3808.72	2186.79
Machine Labour						
Hired	1397.45	517.39	751.81	645.36	1072.04	668.73
Owned	0.00	1.93	48.71	42.32	45.89	43.43
Total	1397.45	519.32	800.52	687.68	1117.93	712.16
Seed	1473.92	1444.48	1347.32	912.84	1540.88	1115.90
Fertilisers and Manure						
Fertilisers	1673.59	1047.93	921.66	876.60	869.11	859.43
Manure	132.16	229.33	305.18	116.98	58.07	56.21
Total	1805.75	1277.26	1226.84	993.58	927.18	915.64
Insecticides	517.18	391.00	56.03	6.71	45.16	1.98
Irrigation charges	106.80	74.59	52.05	165.56	370.64	545.07
Interest on working capital	320.17	232.13	229.47	175.20	308.88	254.65
Miscellaneous	0.40	0.00	0.00	0.00	0.00	0.00
Fixed Cost	6085.13	4483.08	3044.87	3602.98	5573.97	3614.29
Rental value of owned land	2390.35	3855.24	2112.21	3163.82	3092.76	2500.33
Rent paid for leased-in land	2399.17	0.00	0.00	0.00	233.75	327.74
Land revenue, cesses & taxes	0.57	1.45	7.22	4.65	27.75	15.15
Depreciation on implements & Farm buildings	311.17	212.81	200.95	118.34	390.65	203.87
Interest on fixed capital	983.87	413.58	724.49	316.17	1829.06	567.20
Total Cost	18108.26	13627.55	12033.36	10429.45	17905.92	13316.53
Operational Cost (based on new methodology)	12065.42	9182.14	8988.49	7256.63	12331.95	9702.24
Human Labour (based on new methodology)	5075.44	3629.74	3553.53	2920.01	4212.56	3970.05
Total Cost (based on	18150.55	13665.99	12033.36	10250.91	17025.99	13212.59

Sesamum : Estimates of Cost of Cultivation/Production and related data

Source : Directorate of Economics & Statistics, Ministry of Agriculture.

Table - 3.30								
Sesamum : Break-up of Cost of Cultivation per Hectare (In Rs.)								
Cost Items	Gujarat		Orissa		Rajasthan		Tamil Nadu	
	2008-09	2007-08	2008-09	2007-08	2008-09	2007-08	2008-09	2007-08
1	2	3	4	5	6	7	8	9
Operational Cost	13275.25	8382.73	6565.76	6513.23	4875.70	5087.53	9949.52	8561.68
Human Labour								
Casual	2989.05	1450.12	871.73	242.22	474.93	603.07	4513.15	3150.13
Attached	85.25	3.84	562.41	108.89	246.80	3.91	169.54	101.52
Family	3042.57	2713.90	2901.79	3894.93	2422.65	2945.85	1684.27	1861.21
Total	6116.87	4167.86	4335.93	4246.04	3144.38	3552.83	6366.96	5112.86
Bullock Labour								
Hired	320.99	188.36	9.12	0.00	16.63	42.25	49.52	35.82
Owned	1270.91	415.70	1522.49	1852.72	64.94	250.58	43.11	98.52
Total	1591.90	604.06	1531.61	1852.72	81.57	292.83	92.63	134.34
Machine Labour								
Hired	1637.85	1710.48	196.10	55.53	893.13	766.41	1027.10	928.71
Owned	136.38	9.32	5.82	0.00	173.05	16.01	265.18	150.95
Total	1774.23	1719.80	201.92	55.53	1066.18	782.42	1292.28	1079.66
Seed	326.12	278.35	299.67	279.61	386.61	233.12	539.81	247.71
Fertilisers and Manure								
Fertilisers	1312.25	1000.92	85.59	0.00	63.48	137.78	628.90	752.89
Manure	653.47	148.20	0.00	0.00	47.42	3.66	87.52	342.61
Total	1965.72	1149.12	85.59	0.00	110.90	141.44	716.42	1095.50
Insecticides	447.06	219.24	0.00	0.00	3.89	0.60	290.11	101.10
Irrigation charges	743.27	72.52	0.00	0.00	7.84	19.39	400.85	587.47
Interest on working capital	310.08	171.78	111.04	79.33	74.33	64.90	250.46	203.04
Miscellaneous	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Fixed Cost	5541.91	2945.24	3920.85	2855.14	4508.68	3355.17	6638.66	4879.03
Rental value of owned land	4261.74	2603.36	2517.28	1985.74	2684.42	2294.53	4551.67	3409.81
Rent paid for leased-in land	0.00	29.62	0.00	0.00	238.93	126.24	0.00	37.04
Land revenue, cesses & taxes	6.19	7.68	15.21	19.21	6.67	7.04	58.45	44.42
Depreciation on implements & Farm buildings	289.87	73.75	394.48	294.49	255.40	212.86	140.16	268.90
Interest on fixed capital	984.11	230.83	993.88	555.70	1323.26	714.50	1888.38	1118.86
Total Cost	18817.16	11327.97	10486.61	9368.37	9384.38	8442.70	16588.18	13440.71
Operational Cost (based on new methodology)	13436.03	8382.73	6743.75	3225.91	4875.70	5454.74	9949.52	8561.68
Human Labour (based on new methodology)	6277.65	4167.86	4513.92	2111.12	3144.38	3920.04	6366.96	5112.86
Total Cost (based on new methodology)	18977.94	11327.97	10664.60	9792.12	9384.38	8809.91	16588.18	13440.71

Table - 3.31

Nigerseed : Estimates of Cost of Cultivation/Production and related d

		Orissa	
		2008-09	2007-08
1		2	3
Cost of Cultivation per hectare(Rs)			
A 1		4183.58	3705.30
A 2		4183.58	4465.73
A 2+FL		5464.63	5313.31
B 1		4759.62	3871.28
B 2		6910.02	5086.98
C 1		6040.67	4718.85
C 2		8191.07	5934.56
C 2*		8191.07	6113.36
Yield per hectare (Quintals)		2.90	2.72
Value of the main-product per hectare (Rs)		8549.57	5227.24
Value of the by-product per hectare (Rs)		52.04	27.95
Implicit price (Rs./qtl)		2948.13	1921.78
Cost of production per quintal (Rs)			
A 1		1431.62	1354.17
A 2		1431.62	1632.08
A 2+FL		1872.95	1943.03
B 1		1628.74	1414.83
B 2		2364.61	1859.30
C 1		2067.12	1724.59
C 2		2802.99	2168.89
C 2*		2802.99	2235.61
C 3		3083.29	2459.17
Material and labour inputs per hectare			
ITEM	UNIT		
Seeds	(kgs.)	10.28	10.76
Fertilisers	(kgs. of Nutrients)	0.00	0.00
Manure	(Quintals)	0.00	0.00
Human Labour (Man Hours)		295.25	289.21
Animal Labour (Pair Hours)		111.67	117.59

Note : The estimates are provisional unless specified.

Cost A1 = All actual expenses in cash and kind incurred in production by owner.

Cost A2 = Cost A1 + rent paid for leased-in land.

Cost A2+FL = Cost A2 + imputed value of Family Labour.

Cost B1 = Cost A1 + interest on value of owned capital assets (excluding land).

Cost B2 = Cost B1 + rental value of owned land (net of land revenue) and rent paid for leased-in land

Cost C1 = Cost B1 + imputed value of Family Labour.

Cost C2 = Cost B2 + imputed value of Family Labour.

Cost C2*= Cost C2 estimated by taking into account statutory minimum or actual wage whichever is higher.

Cost C3 = Cost C2* + 10% of Cost C2* on account of managerial functions performed by farmer.

Source : Directorate of Economics & Statistics,
Ministry of Agriculture.

Table - 3.32

Nigerseed : Break-up of Cost of Cultivation per Hectare (In Rs.)

Cost Items	Orissa	
	2008-09	2007-08
	2	3
Operational Cost	5197.22	4479.98
Human Labour		
Casual	1530.84	1504.21
Attached	0.00	0.00
Family	1281.05	847.58
Total	2811.89	2351.79
Bullock Labour		
Hired	285.91	44.19
Owned	1631.24	1704.92
Total	1917.15	1749.11
Machine Labour		
Hired	0.00	0.00
Owned	0.00	0.00
Total	0.00	0.00
Seed	349.51	269.01
Fertilisers and Manure		
Fertilisers	0.00	0.00
Manure	0.00	0.00
Total	0.00	0.00
Insecticides	0.00	0.00
Irrigation charges	0.00	0.00
Interest on working capital	118.67	110.07
Miscellaneous	0.00	
Fixed Cost	2993.85	1454.58
Rental value of owned land	2150.40	455.28
Rent paid for leased-in land	0.00	760.43
Land revenue, cesses & taxes	6.05	1.30
Depreciation on implements & Farm buildings	261.36	71.60
Interest on fixed capital	576.04	165.97
Total Cost	8191.07	5934.56
Operational Cost (based on new methodology)	5197.22	2980.96
Human Labour (based on new methodology)	2811.89	1866.17
Total Cost (based on new methodology)	8191.07	6113.36

Table - 3.33

VFC Tobacco : Estimates of Cost of Cultivation/Production and related data

			(As a whole)*	
			Andhra Pradesh	
			2008-09	2007-08
1	2	3		
Cost of Cultivation per hectare(Rs)				
A1	79133.60	52671.30		
A2	81968.43	54711.29		
A2+FL	82761.02	55324.78		
B1	83387.50	56337.71		
B2	102151.01	68415.41		
C1	84180.09	56951.20		
C2	102943.60	69028.90		
C2*	103381.30	69278.74		
Yield per hectare (Quintals)			13.83	13.21
Value of the main-product per hectare (Rs)			141478.70	116325.20
Value of the by-product per hectare (Rs)			0.00	17.93
Implicit price(Rs./qtl)			10229.84	8805.84
Cost of production per quintal (Rs)				
A1	5721.88	3986.61		
A2	5926.86	4141.02		
A2+FL	5984.17	4187.45		
B1	6029.46	4264.12		
B2	7386.19	5178.26		
C1	6086.77	4310.55		
C2	7443.50	5224.70		
C2*	7475.15	5243.37		
C3	8222.66	5767.70		
Material and labour inputs per hectare				
ITEM	UNIT			
Seed	(Qtl.)	295.90	282.14	
Fertiliser	(kgs. of Nutrients)	227.92	199.24	
Manure	(Quintals)	1.86	1.21	
Human Labour	(Man Hours)	1773.56	1616.92	
Animal Labour	(Pair Hours)	57.26	67.59	
Note : The estimates are provisional unless specified.				
Cost A1 = All actual expenses in cash and kind incurred in production by owner.				
Cost A2 = Cost A1 + rent paid for leased-in land.				
Cost A2+FL = Cost A2 + imputed value of Family Labour.				
Cost B1 = Cost A1 + interest on value of owned capital assets (excluding land).				
Cost B2 = Cost B1 + rental value of owned land (net of land revenue)				
rent paid for leased-in land.				
Cost C1 = Cost B1 + imputed value of Family Labour.				
Cost C2 = Cost B2 + imputed value of Family Labour.				
Cost C2*= Cost C2 estimated by taking into account statutory				
minimum or actual wage whichever is higher.				
Cost C3 = Cost C2* + 10% of Cost C2* on account of managerial				
functions performed by farmers.				
*: Cost of cultivation includes all soil types.				
Source : Directorate of Economics & Statistics,				
Ministry of Agriculture.				

Table - 3.34			
V F C Tobacco : Break - up of Cost of Cultivation per hectare (In Rs.)			
Andhra Pradesh			
Cost Items		2008-09	2007-08
1		2	3
Total Operational Cost		78716.81	52318.14
Cost on field			
Human labour			
Casual		15661.83	9579.58
Attached		475.53	202.12
Family		646.89	454.33
Total		16784.25	10236.03
Bullock labour			
Hired		2604.22	1750.49
Owned		498.81	657.97
Total		3103.03	2408.46
Machine Labour			
Hired		5718.51	4701.09
Owned		139.85	287.48
Total		5858.36	4988.57
Seed		9035.60	3572.02
Fertilizer & Manure			
Fertilizer		7365.77	5697.65
Manure		82.53	37.13
Total		7448.30	5734.78
Insecticides		999.67	836.81
Irrigation charges		1014.69	320.33
Cost on curing		32020.09	22593.63
Human labour			
Casual		16644.12	10499.26
Attached		58.32	37.34
Family		145.70	159.16
Total		16848.14	10695.76
Fuel		13914.81	10923.91
Bamboo		500.67	256.52
Twine		326.82	294.21
Bags		429.56	421.95
Others		0.09	1.28
Interest on W.C.		2452.82	1627.51
Fixed Cost		24226.79	16710.76
Rent.Value of Owned Land		15928.68	10037.71
Rent paid for leased in land		2834.83	2039.99
Land revenue, cesses & taxes		7.35	9.30
Depreciation on implements & Farm buildings		1202.03	957.35
Interest on fixed Capital		4253.90	3666.41
Total Cost		102943.60	69028.90
Operational Cost (based on new methodology)		79154.51	53567.98
Human Labour (based on new methodology)		17221.95	10485.87
Total Cost (based on new methodology)		103381.30	69278.74

INDEX OF TERMS OF TRADE BETWEEN AGRICULTURAL AND NON AGRICULTURAL SECTORS

(T.E 1990-91=100)						
YEAR	INDEX OF PRICES PAID FOR			COMBINED INDEX OF PRICES PAID	INDEX OF PRICES RECEIVED	INDEX OF TERMS OF TRADE
	FINAL CONSUMPTION	INTER- MEDIATE CONSUMPTION	CAPITAL FORMATION			
1	2	3	4	5	6	7
Weights	73.54	21.63	4.83	100		
1981-82	54.4	88.5	56.9	61.9	54.9	88.7
1982-83	58.8	91.1	62.6	66.0	60.3	91.4
1983-84	64.2	91.0	67.4	70.1	64.2	91.6
1984-85	66.6	92.3	72.5	72.4	68.0	93.9
1985-86	69.5	94.3	76.4	75.2	70.4	93.6
1986-87	74.8	98.7	78.8	80.2	76.7	95.7
1987-88	84.6	102.3	82.5	88.3	86.0	97.4
1988-89	90.4	96.9	90.9	91.8	90.3	98.3
1989-90	97.6	99.2	100.6	98.1	97.5	99.4
1990-91	112.1	104.0	108.5	110.2	112.3	101.9
1991-92	124.9	119.4	127.2	123.8	130.8	105.6
1992-93	131.5	139.5	137.5	133.5	138.7	103.9
1993-94	143.9	152.9	147.3	146.1	151.4	103.6
1994-95	159.0	166.1	158.4	160.5	171.1	106.6
1995-96	173.4	174.2	176.1	173.7	182.9	105.3
1996-97	185.6	181.5	188.8	184.8	190.6	103.1
1997-98	195.7	192.0	196.7	194.9	205.9	105.6
1998-99	213.8	197.1	206.8	209.9	220.8	105.2
1999-00	217.1	203.9	212.6	214.0	219.8	102.7
2000-01	220.5	230.4	227.0	223.0	225.0	100.9
2001-02	226.4	235.2	240.4	229.0	235.3	102.8
2002-03	234.9	252.7	245.2	239.3	247.9	103.6
2003-04	245.2	259.1	255.7	248.7	251.2	101.0
2004-05	252.3	264.5	305.6	257.5	258.2	100.3
2005-06	266.0	277.1	310.5	270.6	275.8	101.9
2006-07*	283.4	282.7	327.8	285.4	291.1	102.0
* : Provisional. T.E : Triennium Ending						
Source:- Directorate of Economics & Statistics, M/o Agriculture.						

	P - 86			Appendix-II	
	INDEX OF INPUT-OUTPUT PRICE PARITY BASED ON INDEX OF TERMS OF TRADE				
				(T.E 1990-91=100)	
YEAR	INDEX OF PRICES PAID FOR			PRICES	INDEX OF
	INTER-	CAPITAL	PRICES	RECEIVED	INPUT-OUTPUT
	MEDIATE	FORMATION	PAID	FOR OUTPUT	PRICE PARITY
	CONSUMPTION		FOR INPUT		
1	2	3	4	5	6
<u>WEIGHTS</u>	21.63	4.83	26.46		
1981-82	88.5	56.9	82.8	54.9	150.7
1982-83	91.1	62.6	85.9	60.3	142.5
1983-84	91.0	67.4	86.7	64.2	134.9
1984-85	92.3	72.5	88.7	68.0	130.4
1985-86	94.3	76.4	91.0	70.4	129.3
1986-87	98.7	78.8	95.0	76.7	124.0
1987-88	102.3	82.5	98.6	86.0	114.7
1988-89	96.9	90.9	95.8	90.3	106.1
1989-90	99.2	100.6	99.4	97.5	102.0
1990-91	104.0	108.5	104.8	112.3	93.4
1991-92	119.4	127.2	120.8	130.8	92.4
1992-93	139.5	137.5	139.1	138.7	100.3
1993-94	152.9	147.3	151.8	151.4	100.3
1994-95	166.1	158.4	164.7	171.1	96.2
1995-96	174.2	176.1	174.5	182.9	95.5
1996-97	181.5	188.8	182.8	190.6	95.9
1997-98	192.0	196.7	192.9	205.9	93.7
1998-99	197.1	206.8	198.9	220.8	90.1
1999-00	203.9	212.6	205.5	219.8	93.5
2000-01	230.4	227.0	229.8	225.0	102.1
2001-02	235.2	240.4	236.1	235.3	100.4
2002-03	252.7	245.2	251.3	247.9	101.4
2003-04	259.1	255.7	258.5	251.2	102.9
2004-05	264.5	305.6	272.0	258.2	105.3
2005-06	277.1	310.5	283.2	275.8	102.7
2006-07*	282.7	327.8	290.9	291.1	99.9
	* Provisional	T.E : Triennium Ending			
Source:- Directorate of Economics & Statistics, M/o Agriculture.					

			P-87			Annexure - I
(a) : States/Centres where prices of kharif crops dipped below MSP during 2010-2011 marketing season						
					(Rs per quintal)	
State	Centre	MSP	Oct	Nov	Dec	Jan
1	2	3	4	5	6	7
PADDY		1000				
Karnataka	Mysore		850	890	990	895
Maharashtra	Gondia		982	968	973	973
Orissa	Sambalpur		900	900	900	
Uttar Pradesh	Shahjahanpur		865	880	890	975
	Attara		975	980		
West Bengal	Sainthiya				955	
	Indas					980
JOWAR		880				
Madhya Pradesh	Chhindwara		850			
Uttar Pradesh	Kanpur				820	860
BAJRA		880				
Haryana	Hissar		771	775	770	785
Rajasthan	Jaipur		800	800		820
Uttar Pradesh	Agra		850		810	870
	Bagalkote					
Punjab	Patiala					
RAGI		965				
Andhra Pradesh	Vizianagram			950	900	
Source : Directorate of Economics & Statistics, Ministry of Agriculture						

		P-88		Annexure - I	
(b) : States/Centres where prices of kharif crops dipped below MSP during 2010-2011 marketing season					
				(Rs per quintal)	
State	Centre	MSP	Oct	Nov	Dec
1	2	3	4	5	6
PADDY		1000			
Assam	Nagaon			900	
	Golpara			950	
	Nalbari			800	
Chhattisgarh	Raipur		990		
	Kavardha		950		
Gujarat	Bavla		992	921	
	Salal			965	
	Sanand		785	853	
Karnataka	Dayanagere		780	800	860
	Tumkur		900	900	
Madhya Pd.	Balaghat		925		
	Varasivani		850		
	Dabra		850		
JOWAR		880			
Karnataka	Belgaun			800	800
	Mysore		750	800	850
	Basavakalyan		600	700	700
Madhya Pd.	Burhanpur		500		
	Khargaon		644		
	Shyopur		601		
	Pachor		750		
Rajasthan	Kota			851	
BAJRA		880			
Gujarat	Jamnagar		860		
Karnataka	Gulbarga		725	705	790
	Lingsugur			720	
	Bijapur		735	725	801
	Bagalkote		650	732	705
Rajasthan	Jaipur		800	793	
	Jodhpur		850	870	
Uttar Pradesh	Kanpur		822	780	
MAIZE		880			
Karnataka	Devanagere		720	720	725
	Shikaripura		800	700	700
	Ranibennur		810	800	820
	Nargund		850	850	860
Madhya Pd.	Badnawar		830		
	Chindwara		700		
	Chorai		750		
	Neemach		620		
	Burhanpur		400		
Uttar Pradesh	Varanasi			779	
RAGI		965			
Karnataka	Tumkur		900	750	700
	Huliyar		730	700	800
	Nagamangla		800	700	750
	Arsikere		720	680	780
Source : Replies of the State Governments					

						P-89							Annexure - II
Wholesale Price Index of Different Commodities													
						(April-March)							
											(Base : 1993-94=100)		
Year	All Commodities	Agricultural Commodities	Cereals	Rice	Wheat	Pulses	Oilseeds	Raw Cotton	Jowar	Bajra	Maize	Ragi	Barley
1993-94	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1994-95	112.6	116.3	113.7	111.3	108.9	120.9	118.5	153.6	132.7	132.8	142.3	112.0	135.5
1995-96	121.6	126.2	120.8	117.4	112.1	135.0	128.6	159.0	175.1	147.8	147.6	141.4	113.9
1996-97	127.2	136.7	135.7	128.5	137.3	151.3	130.6	133.2	175.6	147.2	161.1	146.0	145.1
1997-98	132.8	140.6	138.4	134.3	138.1	145.9	128.3	155.4	172.3	143.4	148.5	138.5	166.3
1998-99	140.7	157.5	150.9	146.1	151.8	160.1	148.5	166.9	190.4	156.6	154.4	152.4	151.7
1999-00	145.3	159.4	177.8	171.3	174.7	166.1	133.4	147.3	240.6	201.2	193.6	178.7	199.2
2000-01	155.7	164.0	173.0	167.5	176.6	179.6	129.3	157.3	199.7	184.0	178.9	182.1	174.3
2001-02	161.3	169.8	170.1	167.0	175.3	189.2	137.6	148.7	182.4	151.3	171.5	158.0	160.2
2002-03	166.8	175.6	173.5	166.0	175.7	180.6	160.2	142.1	218.7	190.3	189.5	174.3	193.8
2003-04	175.9	183.2	176.3	168.8	181.4	176.6	177.8	180.6	218.8	178.6	181.2	197.0	179.5
2004-05	187.3	187.0	177.9	168.2	184.1	174.4	180.8	165.6	233.4	183.1	187.9	184.5	188.6
2005-06	195.6	191.0	185.9	174.5	191.5	194.9	167.1	144.3	244.5	210.9	205.0	186.8	205.3
2006-07	206.2	204.5	199.4	179.6	216.5	254.2	175.7	151.7	272.0	227.6	224.9	205.6	220.8
2007-08	215.8	219.6	211.8	191.8	225.7	243.2	218.5	178.1	309.4	235.7	236.1	227.0	228.8
2008-09	234.6	239.1	230.5	213.0	239.6	259.9	245.9	220.2	331.6	251.8	245.9	247.7	243.7
2009-10	240.8	264.2	258.5	241.7	258.6	327.2	252.6	215.0	377.6	322.0	292.0	325.4	239.4
(Upto Jan. 2010)													
Source : Office of the Economic Adviser, Ministry of Commerce & Industry													
Real Prices of Agricultural Commodities (Deflated by All Commodities WPI)													
	Year	Agricultural Commodities	Cereals	Rice	Wheat	Pulses	Oilseeds	Raw Cotton	Jowar	Bajra	Maize	Ragi	Barley
	1993-94	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
	1994-95	103.3	100.9	98.9	96.7	107.4	105.2	136.5	117.9	117.9	126.4	99.5	120.4
	1995-96	103.8	99.4	96.6	92.2	111.1	105.8	130.8	144.1	121.6	121.4	116.3	93.7
	1996-97	107.5	106.7	101.0	108.0	119.0	102.7	104.7	138.0	115.7	126.7	114.8	114.1
	1997-98	105.9	104.2	101.1	104.0	109.9	96.7	117.1	129.8	108.0	111.8	104.3	125.3
	1998-99	112.0	107.3	103.9	107.9	113.8	105.6	118.7	135.4	111.3	109.8	108.3	107.8
	1999-00	109.7	122.3	117.9	120.2	114.3	91.8	101.3	165.6	138.4	133.2	123.0	137.0
	2000-01	105.3	111.1	107.6	113.4	115.4	83.0	101.0	128.3	118.2	114.9	117.0	111.9
	2001-02	105.3	105.4	103.5	108.7	117.3	85.3	92.2	113.1	93.8	106.3	97.9	99.3
	2002-03	105.3	104.0	99.5	105.4	108.3	96.0	85.2	131.1	114.1	113.6	104.5	116.2
	2003-04	104.1	100.2	96.0	103.1	100.4	101.1	102.7	124.4	101.5	103.0	112.0	102.0
	2004-05	99.8	95.0	89.8	98.3	93.1	96.6	88.4	124.6	97.7	100.3	98.5	100.7
	2005-06	97.7	95.0	89.3	97.9	99.7	85.4	73.8	125.0	107.8	104.8	95.5	105.0
	2006-07	99.2	96.7	87.1	105.0	123.3	85.2	73.6	131.9	110.4	109.1	99.7	107.1
	2007-08	101.8	98.1	88.9	104.6	112.7	101.3	82.5	143.4	109.2	109.4	105.2	106.0
	2008-09	101.9	98.3	90.8	102.2	110.8	104.8	93.9	141.4	107.4	104.8	105.6	103.9
	2009-10	109.7	97.8	93.5	107.0	126.5	77.2	85.1	175.6	85.3	90.7	111.4	73.6
	(Upto Jan. 2010)												
													(Contd..)

Wholesale Price Index of Different Commodities

(April-March)

(Base: 1993-94=100)

Year	Tur	Moong	Urad	Gram	Groundnut	Soyabean	Sunflower	Sesamum	Niger-seed	Rapeseed/ Mustard	Safflower
1993-94	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1994-95	109.8	120.3	169.6	108.3	122.6	115.4	123.5	126.6	122.6	116.1	98.5
1995-96	161.1	143.0	216.2	74.8	135.1	126.8	123.8	150.6	136.1	123.6	108.7
1996-97	170.7	160.8	211.9	96.7	135.0	144.8	127.7	130.2	128.9	119.4	109.7
1997-98	136.2	164.7	175.3	124.6	133.9	138.8	128.2	115.4	124.3	116.9	108.0
1998-99	186.1	181.2	197.3	110.9	150.8	124.3	144.5	157.2	145.0	163.6	142.8
1999-00	176.3	180.6	234.0	115.5	139.6	107.5	117.4	154.4	177.6	138.7	129.7
2000-01	150.3	186.9	295.7	139.2	139.4	121.3	118.1	132.9	183.0	118.0	112.6
2001-02	142.6	205.6	273.9	170.3	143.4	130.1	164.6	134.5	156.8	126.7	128.9
2002-03	157.5	208.0	239.8	149.7	169.3	153.4	192.5	157.8	189.6	143.4	150.5
2003-04	172.8	195.9	217.4	142.5	180.7	158.6	194.3	169.5	223.4	184.3	188.8
2004-05	179.3	187.4	216.3	137.1	182.0	187.8	197.8	177.3	214.1	172.3	171.4
2005-06	170.8	219.2	270.4	157.0	171.9	157.5	188.7	169.3	184.1	164.8	146.6
2006-07	182.0	303.0	403.8	208.7	190.0	144.9	197.7	187.2	219.6	172.1	143.8
2007-08	207.4	267.3	336.9	200.0	239.3	187.7	253.6	205.5	396.6	204.4	166.7
2008-09	228.5	286.6	338.4	209.6	249.1	230.0	252.9	266.4	489.7	251.8	191.4
2009-10	344.4	388.5	448.5	207.3	259.6	254.5	238.4	322.4	365.8	242.5	193.8
(Upto Jan 2010)											

Source: Office of the Economic Adviser, Ministry of Commerce & Industry

Real Prices of Agricultural Commodities

(Deflated by All Commodities WPI)

Year	Tur	Moong	Urad	Gram	Groundnut	Soyabean	Sunflower	Sesamum	Niger-seed	Rapeseed/ Mustard	Safflower
1993-94	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1994-95	97.5	106.8	150.7	96.2	108.9	102.5	109.7	112.5	108.9	103.1	87.5
1995-96	132.5	117.7	177.9	61.5	111.1	104.3	101.8	123.9	111.9	101.7	89.4
1996-97	134.2	126.4	166.6	76.0	106.2	113.9	100.4	102.3	101.3	93.9	86.3
1997-98	102.5	124.1	132.1	93.8	100.9	104.5	96.6	86.9	93.6	88.0	81.3
1998-99	132.3	128.8	140.3	78.9	107.2	88.3	102.8	111.8	103.1	116.3	101.5
1999-00	121.3	124.3	161.0	79.4	96.1	74.0	80.8	106.2	122.2	95.5	89.3
2000-01	96.5	120.1	189.9	89.4	89.5	77.9	75.9	85.3	117.6	75.8	72.3
2001-02	88.4	127.5	169.8	105.5	88.9	80.6	102.0	83.4	97.2	78.6	79.9
2002-03	94.4	124.7	143.8	89.8	101.5	92.0	115.4	94.6	113.7	86.0	90.2
2003-04	98.2	111.4	123.6	81.0	102.7	90.2	110.4	96.3	127.0	104.8	107.3
2004-05	95.7	100.1	115.5	73.2	97.2	100.3	105.6	94.7	114.3	92.0	91.5
2005-06	87.3	112.1	138.3	80.3	87.9	80.6	96.5	86.6	94.2	84.2	75.0
2006-07	88.3	147.0	195.8	101.2	92.1	70.3	95.9	90.8	106.5	83.5	69.7
2007-08	96.1	123.8	155.1	92.7	110.9	87.0	117.5	95.2	183.8	94.7	77.3
2008-09	97.4	122.2	144.3	89.4	106.2	98.1	107.8	113.6	208.8	107.4	81.6
2009-10	143.0	165.5	186.3	86.1	107.8	105.7	99.0	133.9	151.9	100.7	80.5
(Upto Jan 2010)											

				P-91						
									Annexure - III	
Changes in Minimum Support Prices of Different Commodities and Gross Returns Obtained										
(Marketing Season)										
Commodity	Nature of Price	MSP		%	TE YIELD (Kg/Hec)		%	Return/Hec	Return/Hec	%
		1990-91	2010-11	Change	1990-91	2009-10	Change	1990-91	2009-10	Change
1	2	3	4	5	6	7	8	9	10	11
Paddy	M S P	205 *	1000	387.8	2587	2169	-16.2	5303	21690	309.0
Paddy(F)	M S P	215 *	1030	379.1	2587	2169	-16.2	5562	22341	301.7
Wheat	M S P	215 *	1100	411.6	2216	2849	28.6	4764	31339	557.8
Jowar-Hybrid	M S P	180 *	880	388.9	793	947	19.4	1428	8334	483.6
Jowar-Maldandi		180 *	900	400.0	793	947	19.4	1428	8523	496.8
Bajra	M S P	180 *	880	388.9	638	932	46.1	1148	8202	614.2
Ragi	M S P	180 *	965	436.1	1100	1506	37.0	1979	14533	634.2
Maize	M S P	180 *	880	388.9	1515	2257	49.0	2727	19862	628.3
Barley	M S P	180	750	316.7	1595	2194	37.6	2871	16455	473.1
Gram	M S P	421	1760	318.1	706	856	21.3	2971	15066	407.1
Arhar(Tur)	M S P	480	3000	525.0	738	739	0.1	3544	22170	525.6
Moong	M S P	480	3170	560.4	412	336	-18.4	1978	10651	438.6
Urad	M S P	480	2900	504.2	476	435	-8.6	2285	12615	452.1
Rapeseed/Mustard	M S P	575	1830	218.3	880	1109	26.0	5062	20295	300.9
Safflowerseed	M S P	550	1680	205.5	504	635	25.9	2774	10668	284.6
Groundnut	M S P	580	2300	296.6	989	1214	22.8	5734	27922	386.9
Sunflowerseed	M S P	600	2350	291.7	477	519	8.8	2862	12197	326.2
Soyabean										
Black	M S P	350	1400	300.0	903	1096	21.4	3161	15344	385.5
Yellow	M S P	400	1440	260.0	903	1096	21.4	3612	15782	336.9
Cotton\$										
F414/H777 #	M S P	620	2500	303.2	681	521	-23.5	4221	13025	208.5
H4 ##	M S P	750	3000	300.0	681	521	-23.5	5107	15630	206.1
Jute(TD-5)	M S P	320	1575	392.2	1820	2324	27.7	5824	36603	528.5
Sugarcane	S M P/FRP	23	139.12	504.9	64216	67816	5.6	14770	94346	538.8
\$: Yield of Kapas has been taken for cotton.									* : Procurement Price in 1990-91	
F : Fine									M S P : Minimum Support Price	
FRP: Fair & Remunerative Price for 2009-10.									S M P : Statutory Minimum Price	
# : for 2008-09 with technical parameters of Basic Staple Length (2.5% span) of 24.5 mm-25.5 mm										
and Micronaire Value of 4.3-5.1;										
## : for 2008-09 with technical parameters of Basic Staple Length (2.5% span) of 29.5 mm-30.5 mm										
and Micronaire Value of 3.5-4.3;										

Minimum Support Prices Fixed by Government (Marketing Season)																			Annexure - IV	
(WPI : Base 1993-94 = 100) (MSP : Rs per quintal)																				
Commodity	Nature of Price	1990-91	1994-95	1995-96	1996-97	1997-98	1998-99	1999-00	2000-01	2001-02	2002-03	2003-04	2004-05	2005-06	2006-07	2007-08	2008-09	2009-10	2010-11*	
ALL COMMODITIES	(WPI)**	78.6	118.0	124.1	130.0	136.7	142.7	149.9	159.7	163.4	171.2	181.7	191.6	201.5	213.2	229.1	236.2	256.1	270.8	
Paddy Common	M S P	205	340	360	380	415	440	490	510	530	530	550	560	570	620	745	900	1000	1000	
Paddy (F)	M S P	215	360	375	395	445	470	520	540	560	560	580	590	600	650	775	930	1030	1030	
Paddy(SF)	M S P	225	380	395	415															
Wheat	M S P	215	350	360	380	475	510	550	580	610	620	620	630	640	700	850	1000	1080	1100	
Coarse Cereal	M S P	180	280	300	310	360	390	415	445	485	485	505	515	525						
Jowar-Hybrid															540	600	840	840	880	
Jowar-Maldandi															555	620	860	860	900	
Bajra															540	600	840	840	880	
Maize	M S P	180	290	310	320	360	390	415	445	485	485	505	525	540	540	620	840	840	880	
Ragi															540	600	915	915	965	
Barley	M S P	180	275	285	295	305	350	385	430	500	500	500	525	540	550	565	650	680	750	
Gram	M S P	421	640	670	700	740	815	895	1015	1100	1200	1220	1400	1425	1435	1445	1600	1730	1760	
Tur (Arhar)	M S P	480	760	800	840	900	960	1105	1200	1320	1320	1360	1390	1400	1410	1590	2000	2300	3000	
Moong	M S P	480	760	800	840	900	960	1105	1200	1320	1330	1370	1410	1520	1520	1740	2520	2760	3170	
Urad	M S P	480	760	800	840	900	960	1105	1200	1320	1330	1370	1410	1520	1520	1740	2520	2520	2900	
Lentil (Masur)										1200	1300	1320	1500	1525	1535	1545	1700	1870	1870	
Rapeseed/ Mustard	M S P	575	810	830	860	890	940	1000	1100	1200	1300	1330	1600	1700	1715	1715	1800	1830	1830	
Safflower	M S P	550	760	780	800	830	910	990	1100	1200	1300	1300	1500	1550	1565	1565	1650	1650	1680	
Toria	M S P	545	780	800	825	855	905	965	1065	1165	1265	1295	1565	1665	1680	1680				
Groundnut	M S P	580	860	900	920	980	1040	1155	1220	1340	1355	1400	1500	1520	1520	1550	2100	2100	2300	
Sunflower seed	M S P	600	900	950	960	1000	1060	1155	1170	1185	1195	1250	1340	1500	1500	1510	2215	2215	2350	
Soyabean																				
Black	M S P	350	570	600	620	670	705	755	775	795	795	840	900	900	900	910	1350	1350	1400	
Yellow	M S P	400	650	680	700	750	795	845	865	885	885	930	1000	1010	1020	1050	1390	1390	1440	
Sesamum	M S P			850	870	950	1060	1205	1300	1400	1450	1485	1500	1550	1560	1580	2750	2850	2900	
Nigerseed	M S P			700	720	800	850	915	1025	1100	1120	1155	1180	1200	1220	1240	2405	2405	2450	
Cotton	M S P																			
F414/H777#	M S P	620	1000	1150	1180	1330	1440	1575	1625	1675	1675	1725	1760	1760	1770	1800	2500	2500	2500	
H4##	M S P	750	1200	1350	1380	1530	1650	1775	1825	1875	1875	1925	1960	1980	1990	2030	3000	3000	3000	
Jute (TD5)	M S P	320	470	490	510	570	650	750	785	810	850	860	890	910	1000	1055	1250	1375	1575	
Sugarcane	S M P/FRP	23.00	39.10	42.50	45.90	48.45	52.70	56.10	59.50	62.05	74.50	73.00	74.50	79.50	80.25	81.18	81.18	129.84@@	139.12	
Copra@	M S P																			
Milling		1600	2350	2500	2500	2700	2900	3100	3250	3300	3300	3320	3500	3570	3590	3620	3660	4450	4450	
Ball			2575	2725	2725	2925	3125	3325	3500	3550	3550	3570	3750	3820	3840	3870	3910	4700	4700	
VFC - Tobacco																				
F2	M S P	1325	1850	1900	1900	2050	2250	2500	2600	2700	2800	3100	3200	3200	3200	3200				
L2	M S P	1425	2100	2150	2200	2350	2550	2700	2800	2900	3000	3300	3400	3400	3400	3400				
\$: Average WPI (October, 2010 to February, 2011).																			(Contd..)	
* : Procurement Price in 1990-91																			** : Marketing year October-September.	
# : refer to Staple Length (mm) of 24.5-25.5 and Micronaire value of 4.3-5.1																			@ : Figures in 1990-91 relate to the year 1990 & so on.	
##: refer to Staple Length (mm) of 29.5-30.5 and Micronaire value of 3.5-4.3																			M S P : Minimum Support Price	
Note : from 2008-09 onwards with technical parameters of Basic Staple Length (2.5% span) of 24.5 mm-25.5 mm																			S M P : Statutory Minimum Price	
and Micronaire Value of 4.3-5.1; and with technical parameters of Basic Staple Length (2.5% span) of 29.5 mm-30.5 mm																			@@: Fair & Remunerative Price (FRP) from 2009-10 onwards.	
and Micronaire Value of 3.5-4.3;																				

									REAL MINIMUM SUPPORT PRICES																	Annexure -IV	(Concluded)	
Commodity	Nature of Price	1990-91	1991-92	1992-93	1993-94	1994-95	1995-96	1996-97	1997-98	1998-99	1999-00	2000-01	2001-02	2002-03	2003-04	2004-05	2005-06	2006-07	2007-08	2008-09	2009-10	2010-11	% change in 1999-2000 over 1990-1991	% change in 2009-10 over 1999-2000	% change in 2009-10 over 1990-1991			
Paddy Common	Pr Price	261	259	282	310	288	290	292	304	308	327	319	324	310	303	292	285	294	346	384	406	369	25.33	24.26	55.73			
Paddy (F)		274	271	293	330	305	302	304	326	329	347	338	343	327	319	308	300	308	360	397	418	380	26.82	20.60	52.94			
Paddy(SF)		286	282	303	350	322	318	319																				
Wheat	Pr Price	274	254	287	330	297	290	292	347	357	367	363	373	362	341	329	320	332	394	427	439	406	34.14	19.56	60.37			
Coarse Cereal	Pr Price	229	231	251	260	237	242	238	263	273	277	279	297	283	278	269	262						20.89					
Jowar-Hybrid																		256	278	359	341	325						
Jowar-Maldandi																		263	288	367	349	332						
Bajra																		256	278	359	341	325						
Maize	Pr Price	229	237	256	265	246	250	246	263	273	277	279	297	283	278	274	270	256	288	359	341	325	20.89	23.24	48.98			
Ragi																		256	278	391	372	356						
Barley	M S P	229	225	219	260	233	230	227	223	245	257	269	306	292	275	274	270	261	262	278	276	277	12.15	7.54	20.61			
Gram	M S P	536	507	522	600	542	540	538	541	571	597	636	673	701	671	731	711	680	670	683	703	650	11.47	17.69	31.19			
Tur (Arhar)	M S P	611	614	669	700	644	645	646	658	673	737	751	808	771	748	725	699	668	738	854	934	1108	20.71	26.73	52.98			
Moong	M S P	611	614	669	700	644	645	646	658	673	737	751	808	777	754	736	759	720	807	1076	1121	1171	20.71	52.08	83.57			
Urad	M S P	611	614	669	700	644	645	646	658	673	737	751	808	777	754	736	759	720	807	1076	1024	1071	20.71	38.85	67.61			
Lentil (Masur)													734	759	726	783	761	727	717	726	760	691						
Rapeseed/ Mustard	M S P	732	676	700	760	686	669	662	651	659	667	689	734	759	732	835	849	813	796	769	743	676	-8.81	11.42	1.61			
Safflower	M S P	700	648	669	720	644	629	615	607	638	660	689	734	759	715	783	774	742	726	704	670	620	-5.62	1.48	-4.22			
Toria	M S P	693	643	674	725	661	645	635	625	634	644	667	713	739	713	817	831	796	779	0			-7.16					
Groundnut	M S P	738	727	784	800	729	725	708	717	729	771	764	820	791	771	783	759	720	719	897	853	849	4.42	10.70	15.59			
Sunflower-seed	M S P	763	755	836	850	763	766	738	732	743	771	733	725	698	688	699	749	711	701	946	900	868	0.94	16.76	17.86			
Soyabean																					548	517						
Black	M S P	445	445	496	525	483	483	477	490	494	504	485	487	464	462	470	449	427	422	576	548	532	13.11	8.87	23.14			
Yellow	M S P	509	502	549	580	551	548	538	549	557	564	542	542	517	512	522	504	483	487	593	565	1071	10.77	0.15	10.94			
Sesamum	M S P						685	669	695	743	804	814	857	847	817	783	774	739	733	1174	1158	905		44.00				
Nigerseed	M S P						564	554	585	596	610	642	673	654	636	616	599	578	575	1027	977	923		60.03				
Cotton	M S P																											
F414/H777 #	M S P	789	784	836	900	847	927	908	973	1009	1051	1018	1025	978	949	919	879	839	835	1067	1015	1108	33.20	-3.36	28.73			
H4 ##	M S P	954	947	993	1050	1017	1088	1062	1119	1156	1184	1143	1147	1095	1059	1023	989	943	942	1281	1219	582	24.10	2.91	27.70			
Jute (TD5)	M S P	407	423	418	450	398	395	392	417	456	500	492	496	496	473	465	454	474	489	534	558	51	22.89	11.62	37.18			
Sugarcane	S M P/F R P	29	29	32	35	33	34	35	35	37	37	37	38	44	40	39	40	38	38	35	53	48	27.90	40.92	80.23			
Copra@	M S P																											
Milling		2036	1917		2150	1992	2015	1923	1975	2032	2068	2035	2020	1928	1827	1827	1782	1701	1680	1563	1807	1643	1.59	-12.60	-11.21			
Ball			2086		2350	2182	2196	2096	2140	2190	2218	2192	2173	2074	1965	1957	1907	1820	1796	1669	1909	1736		-13.94	#DIV/0!			
VFC - Tobacco																												
F2	M S P	1686	1663	1672	1800	1568	1531	1462	1500	1577	1668	1628	1652	1636	1706	1670	1598	1517	1485				-1.07					
L2	M S P	1813	1804	1829	2000	1780	1732	1692	1719	1787	1801	1753	1775	1752	1816	1775	1697	1611	1578				-0.65					
		# : for 2008-09 with technical parameters of Basic Staple Length (2.5% span) of 24.5 mm-25.5 mm and Micronaire Value of 4.3-5.1;													M S P : Minimum Support Price													
															S M P : Statutory Minimum Price													
		## : for 2008-09 with technical parameters of Basic Staple Length (2.5% span) of 29.5 mm-30.5 mm and Micronaire Value of 3.5-4.3;													FRP: Fair & Remunerative Price for 2009-10.													

MSP Recommended by State Govts. for the Kharif Crops of 2011-2012

Annexure - V

(Rs./Qtl.)

State	Paddy (Common)	Paddy (Fine)	Paddy (Super Fine)	Paddy (Grade A)	Paddy (Basmati)	Jowar	Bajra	Maize	Ragi	Moong	Urad	Tur	Groundnut- in-shell	Sesamum	Soyabean	Soyabean (Yellow)	Soyabean (Black)	Sunflower- seed	Nigerseed	Cotton	Cotton (extra Long Staple)	Cotton (Long Staple)	Cotton (Medium Staple)	Cotton (American)	Cotton (Short Staple)
Andhra Pradesh	1900			2030		1718	1880	1670	1765	5220	5240	5500	4985	5600			2875	5160				5742	5535		
Assam	1200			1250																					
Andaman & Nicobar	1250																								
Bihar	1531							1468																	
Chhattisgarh	1980			2000				1175		5520	5040	5750	4700	5700		3000	2950	4430	4810						
Delhi	1000			1030		900	880	880	965	3170	2900	3000													
Gujarat	1300					1480	1200	1200		3600	3100	3600	2800	4100								3200	2700		
Haryana	1350	1450	1550				1075	1425																3150	
Himachal Pradesh	1000			1030		880	880	880	965	3170	2900	3000	2300	1440		1440	1400	2350	2900			3000	2500		
Jammu & Kashmir	1100			2000				1600		6500	6500			10000											
Jharkhand	1100- 1200			1200- 1300		850 900	850- 900	1100- 1200	600- 700	2900- 3000	2850- 2900	3100- 3200	2400- 2600	2500- 2700		1700- 1800	1700- 1800	2500- 2700	2600- 2800						
Karnataka	1500			1650		1500	1350	1250	1350	6500	7000	4500	4500	7500		3200		4000	5000		5500	4500	3500		
Kerala	1600			1650																					
Madhya Pradesh	1300			1500		1000	1000	1050		3200	3200	3200	2475	3170		1900	1800	2400	2750			3450	3100		
Maharashtra	1780					1471	1697	1203		4675	4174	3672	4004	5980	2763			3091				4285	4149		4046
Orissa	1350			1500				1200		3500	3260	3200	2550	3500					3000						
Punjab	1400			1500				1450		4000	3700	3500	3000							3780		8000*	4500**		4000#
Rajasthan						880	880	880		3170	2900		2300	2900		1440									
Tamil Nadu	1500			1600		1100	1100	1100	1100	3500	3500	4500	3000	3500		1850	1800	2850		2500- 3000		3700	3500		3000
Uttar Pradesh	1350			1585	2535	1220	1220	1220		3590	3575	3570	3565		2535										
West Bengal	1330																								

Source : State Replies

