COMMISSION FOR AGRICULTURAL COSTS AND PRICES

REPORT ON PRICE POLICY FOR KHARIF CROPS OF 2009-2010 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 2009-2010 Season. The Commission recommends that :

i) minimum support prices fixed for the year 2008-09 be the same for the year 2009-10 also in the case of jowar (hybrid and maldandi), bajra, maize, ragi, urad, groundnut-in-shell, soyabean (black and yellow), sunflowerseed, nigerseed and cotton (kapas) Staple Length (2.5% span) of 24.5 mm - 25.5 mm and Micronaire Value of 4.3 - 5.1 consisting of F414/H777/J34-Raj. variety, cotton (kapas) Staple Length (2.5% span) of 29.5 mm - 30.5 mm and Micronaire Value of 3.5 - 4.3 consisting of Bunny/Brahma variety;

(ii) for the other kharif crops, namely, Paddy, Tur (Arhar), Moong, Sesamum, there is a case for increasing the MSP of 2009-10 Kharif season. Accordingly, for various kharif crops, the CACP recommends the following MSPs.

Commodity	Variety	Quality	Minimum Support Price (Rs per quintal)
Paddy	Common	FAQ	950
	Grade-A	"	980
Jowar	Hybrid	"	840
	Maldandi	"	860
Bajra	-	"	840
Maize	-	"	840
Ragi	-	"	915
Tur (Arhar)	-	"	2300
Moong	-	"	2760
Urad	-	"	2520
Groundnut-in-shell	-	"	2100
Soyabean	Black	"	1350
	Yellow	"	1390
Sunflowerseed	-	"	2215

Sesamum	-	"	2850
Nigerseed	-	"	2405

Cotton (Kapas):

(i) Staple length (mm) of 24.5 -25.5 and Micronaire value of 4.3 - 5.1 F414/H777/J34-Raj. variety,		"	2500
(ii) Staple length (mm) of 29.5 -30.5 and Micronaire value of 3.5 – 4.3 Bunny/Brahma variety;		"	3000

VFC Tobacco

Black soil	F_2 grade	"	4350
Light soil	L_2 grade	"	4550

(para 4.14)

The Commission further recommends that:

i.) **the FCI should be authorised to maintain an appropriate level of buffer stock and then undertake open market operations with flexible clauses in needy areas, considering the price movements and market requirements.**

(para 1.6)

ii.) **alongwith the thrust on increased availability of farm credit, there should be emphasis on the greater inclusion of new farmers, especially small and marginal, under institutional coverage, and the progress in this regard needs to be monitored regularly.**

(para 1.15)

iii.) **there should be adequate emphasis on the provision of small farm implements and tools that would cater to the requirements of the majority of Indian farm holdings, and which would facilitate enhanced farm production and productivity.**

(para 1.16)

iv.) **the Government should on priority carry out a review of the adequacy of procurement centres opened, availability as well as requirement of storage and other related infrastructural facilities across the country, and make efforts to make up the deficit. Associating various appropriate agencies available in the States,**

other than the traditional organizations, (e.g., cooperative organizations) for procurement operations, need to engage the attention of Government.

(para 1.17)

v.) **the country should bring into operation well-balanced and appropriate measures for the use as well as conservation of irrigation resources, so that the needs of agriculture are fulfilled as well as the environmental compulsions are not violated. The slogan 'crop from every drop of water' should be infused with real content. Promoting water use efficiency should be a national priority.**

(para 1.21)

vi.) **the seed policy should be subjected to periodic review, to incentivise and promote the production and supply of good quality and genetically sound seeds and in the process elevate the seed replacement rate to the desired level, as this will be one of the key drivers for augmenting agricultural yields and production.**

(para 1.22)

vii.) **there should be further thrust on the promotion of agricultural research followed up with effective and knowledgeable extension services with emphasis not only on the number of ATMAs established, but also on their requisite linkages with the concerned knowledge centres.**

(para 1.23)

viii.) **it should be the endeavour of Government to declare MSPs well in advance of the sowing season for the concerned crops.**

(para 1.24)

ix.) **the National Rainfed Area Authority (NRAA), constituted in 2007, urgently initiate action for developing appropriate technology package to break the low yield barriers in the rainfed rice producing areas.**

(para 2.12)

x.) **the adoption of hybrid rice technology needs to be further accelerated, by strengthening the research systems of both public and private sectors and by providing adequate policy support.**

(para 2.13)

xi.) the entire gamut of procurement operations by FCI and the State agencies (through the scheme of decentralized procurement) should be reviewed to examine the road blocks in extending the procurement operations to non-conventional regions and to recommend ways to rationalize and collaborate the operations of both the agencies so that the spread of procurement operations can be extended to the maximum possible beneficiaries.

(para 2.16)

xii.) an integrated strategy is required to boost the production and use of coarse cereals as a major food crop. Steps may be taken to include nutritious coarse cereals such as bajra, jowar, ragi in the food security basket through the network of Public Distribution System (PDS) which would help in improving nutritional security and would also lead to enhancement of dryland farming in the country.

(para 2.32)

xiii.) there is a need for diversification of the coarse cereals products through cost effective and innovative methods. Focused plan of action on agro processing, value addition and market support may be spelt out to maintain future sustainability of the coarse cereals.

(para 2.38)

xiv.) in order to ensure food security, coarse cereals should be included as a component of ongoing National Food Security Mission.

(para 2.56)

xv.) in view of the urgent need to augment domestic availability of edible oils, the oilseed crops of secondary sources should be given special attention.

(para 2.82)

xvi.) Ministry of Textiles needs to look into the grievance of the Cotton Industry regarding low priority being given to by-products of cotton, value addition which suffer from faulty processing, traditional crushing techniques, lack of extension education etc. and to take appropriate remedial measures, either through a new scheme or through the existing Technology Mission on Cotton.

(para 2.110)

xvii.) taking into account the views of Tobacco Board, DES needs to sort out the discrepancy in the data collected by Directorate of Tobacco Development and Central Tobacco Research Institute and consider extension of coverage for collection of cost of cultivation data to Karnataka also.

(para 2.127)

I. AN OVERVIEW

The weather factors, particularly rainfall situation, continue to influence the prospects of Indian agriculture. During 2008, the south-west monsoon appeared over Kerala on May 31, one day ahead of the normal date. Its further advance was quite rapid and by June 16, the south-west monsoon had covered most of the country except for some parts of Rajasthan. The whole nation came under the sweep of monsoon by July 10, against the normal date of July 15. The cumulative rainfall during this monsoon season (1st June to 30th September) for the country as a whole was near normal, 98 per cent of its long period average (LPA). However, the temporal distribution of rainfall was featured by considerable unevenness that led to flood situation in some States with resultant adverse impact on crop prospects. Out of 36 meteorological sub-divisions in the country, 32 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, 2008) was 31 per cent below normal as compared to 32 per cent below normal during the corresponding period of the previous year. As on 26th March, 2009, the live storage of 81 important/major reservoirs monitored by the Central Water Commission, as percentage of Full Reservoir Level (FRL), remained as 26 per cent which is 79 per cent of the corresponding period of the previous year.

1.2 According to the Second Advance Estimates of Crop Production released by the Directorate of Economics and Statistics (DES), Department of Agriculture and Cooperation (DAC), the total foodgrain production during the year 2008-09 would be 227.88 million tonnes, registering a decline of 1.26 per cent relative to the record production of 230.78 million tonnes (Final Estimates) in the previous year. The estimated foodgrain production for 2008-09 falls short of the target of 233.00 million tonnes set for the year, by 2.25 per cent. However, the rice production in 2008-09 is expected to be 98.89 million tonnes, i.e., higher by 2.20 million tonnes, over that of the previous year. The increase is emanating from the

kharif output, as the rabi output is anticipated to decline, albeit not significantly. Whereas, the production of wheat is estimated to register a marginal decline from the record output of 78.57 million tonnes (2007-08) to 77.78 million tones (2008-09), as against the consistent increase over the years since 2004-05. Also, this would be below the targetted output of 78.50 million tonnes set for the current year. As regards coarse cereals, it is going to be a tale of decline, except for barley, during 2008-09 as compared to 2007--08; jowar from 7.93 to 7.24 million tonnes, bajra from 9.97 to 8.85 million tonnes, maize from 18.96 to 17.04 million tonnes, ragi from 2.15 to 1.94 million tonnes. Barley is exhibiting better prospects of increase from 1.20 to 1.45 million tonnes. While the rabi output of coarse cereals is still on the rise, it is the kharif output that has pulled down the output, and in the process registering an overall decline from 40.76 million tonnes (2007-08) to 36.96 million tonnes (2008-09). In respect of cereals as a whole, the dip has been experienced mainly by the kharif output. The total cereals production is looking down from 216.02 million tonnes (2007-08) to 213.63 million tonnes (2008-09).

1.3 As regards pulses, except for gram, other pulses have recorded declines. The decline has been most pronounced in respect of moong, from 1.52 million tonnes (2007-08) to 0.54 million tonnes (2008-09). The decline for total pulses does not appear substantial, since the considerable drop during the kharif season has been offset by the rise during rabi season. The decline has been more sharp in respect of oilseeds. For nine oilseeds, the production is anticipated to go down from 297.55 lakh tonnes (2007-08) to 259.60 lakh tonnes (2008-09). While the kharif output of oilseeds has considerably declined, the increase in rabi output was able to reduce the extent of reduction. The decline has been most striking in respect of groundnut, from 91.83 lakh tonnes (2007-08) to 66.17 lakh tonnes (2008-09), with both kharif and rabi outputs sharing the downslide. Enhanced output is expected only in respect of castorseed as well as rapeseed & mustard. The silver lining in the scenario of oilseeds production happens to be rapeseed/mustard whose production is likely to look up from 58.33 lakh tonnes

(2007-08) to 69.76 lakh tonnes (2008-09). Amongst the commercial crops also, there is a trend of decline. A drastic decline is anticipated in the output of cotton to 221.67 lakh bales of 170 kgs each (2008-09), from the peak level of 258.84 lakh bales attained in the year 2007-08. Jute and mesta is also likely to go down from 112.11 lakh bales of 180 kgs each to 110.38 lakh bales. A matter of concern is the considerable drop in the output of sugarcane from 3481.88 lakh tonnes (2007-08) to 2904.49 lakh tonnes (2008-09) which could dent the quantum of indigenous sugar output.

1.4 Overall, the agricultural crop production in the current year is anticipated to be less encouraging than that of the past year. The prospects have been more depressed by the kharif output relative to that of the rabi output. The increase in sown area under several rabi crops corroborates this. As reported by the DES, on 27.03.2009, this was 3.01 per cent higher than the area sown during the corresponding period of the previous year. However, it needs to be kept in view that the 2008-09 data are not yet firm and final, as there are always large variations between the advance estimates and the final estimates. On the whole, the ideal state of increasing foodgrains production in a stable manner is still eluding us, and calls for concerted action and enhanced efforts.

1.5 The rice procurement for Central Pool during the Marketing Year (MY) 2008-09 (October-September) has been a record 24.83 million tonnes, as on 16-03-2009. This is as against the procurement of 20.92 million tonnes during the corresponding period of the previous year. The substantial portion of rice procurement continues to be through levy route. The procurement of wheat has been remarkably more buoyant. While during the rabi marketing year 2007-08 (April-March), as on 31-12-2007, the wheat procurement was 11.13 million tonnes, during the corresponding period of 2008-09, it has more than doubled to 22.68 million tonnes. The prominent factor that played up the level of procurement has been the considerable increase in the Minimum Support Price (MSP), alongwith the favourable crops.

1.6 Following the remarkable procurement made during the recent times, especially of wheat, total foodgrain stock as on 1st January, 2009, was 35.79 million tonnes, as against the buffer stock norm of 20.0 million tonnes and the stock of 19.19 million tonnes at the onset of 2008. While the wheat stock was substantially higher at 18.21 million tonnes vis-à-vis the buffer stock norm of 8.2 million tones, the rice stock was also significantly higher at 17.58 million tonnes as compared to the buffer stock norm of 11.8 million tonnes. The Government has, of late, decided to have a strategic reserve of 5 million tonnes of foodgrains, consisting of 3 million tonnes of wheat and 2 million tonnes of rice, so as to ensure food security in the country, check prices and maintain adequate supplies of foodgrains for Targetted Public Distribution System (TPDS), other welfare schemes, etc. Keeping in view the stock position and the prospects for foodgrains production in the current year, it appears that the country has improved the comfort level in respect of food security. In fact, since the stock of foodgrains available in the FCI godowns is far in excess of the prescribed buffer stock requirements, the problem facing the country today is not shortage of foodgrains, but finding ways and means to manage the accumulated surplus. This excess level of foodgrains lying with the Government calls for timely action. The Commission is of the view that **the FCI should be authorised to maintain an appropriate level of buffer stock and then undertake open market operations with flexible clauses in needy areas, considering the price movements and market requirements.** It is understood that the Government have decided, subject to certain restrictions, to lift the ban on wheat exports after May, 2009. The export of not only wheat but also rice needs to be re-opened without delay. In fact, what the country is devoid of, but really requires is a long-term policy in the grains sector. Another issue of importance is that most storage godowns with FCI are small-scale, low-quality structures; sometimes, grains are also stored in the open leading to heavy storage losses. This calls for urgent remedial measures. Hiring of godown facilities made available under various existing schemes, by the FCI, needs to be explored to make up the deficit.

1.7 During 2008-09, the market prices of almost all agricultural commodities including foodgrains remained buoyant in the country. The index of average wholesale prices (WPI) of agricultural commodities (base 1993-94=100) which was 204.5 in 2006-07 increased to 219.6 in 2007-08 and further to 239.2 in 2008-09 (upto February, 2009), and that of foodgrains from 206.0 to 215.6 and 232.5 during the same period. This is in tandem with the movement of WPI for all commodities. The increase during the current year as against that of the previous year in respect of both agricultural commodities (8.9 per cent) and foodgrains (7.8 per cent), has been high. The WPI of rice went up from 179.6 (2006-07) to 191.8 (2007-08) and 210.7 (2008-09). In the case of wheat, the WPI increased from 216.5 (2006-07) to 225.7 (2007-08) and 239.1 (2008-09). In fact, the WPI of all cereals increased over the said period. For cereals as a whole, the increase was 7.3 per cent in 2006-07, 6.2 per cent in 2007-08 and 8.1 per cent in 2008-09. For jowar, the WPI increased considerably by 11.2 percent and 13.8 percent during 2006-07 and 2007-08, respectively, and relatively moderate by 7.1 percent during 2008-09. While for maize the increase was by 9.8 percent (2006-07), 5.0 percent (2007-08) and by 7.8 percent (2008-09). The wholesale prices of pulses as a whole increased quite substantially during the year 2006-07 (254.2), declined during 2007-08 (243.2), but again increased in 2008-09 (258.9). The average WPI of tur increased by 6.57 (2006-07), 13.94 percent (2007-08) and 8.80 percent (2008-09). Whereas, for moong, the WPI greatly increased by 38.22 percent (2006-07), drastically declined by -11.80 percent (2007-08), and again increased by 6.44 percent (2008-09). For urad, the WPI registered a sharp increase of 49.33 percent (2006-07), and thereafter recorded declines by -16.55 percent (2007-08) and -0.27 percent (2008-09). In the case of gram, the WPI increased remarkably by 32.92 percent (2006-07), then slided by -4.18 percent (2007-08) and again looked up by 5.53 percent (2008-09). Regarding masur, the WPI has been indicating increases all along, by 4.59 percent (2006-07), and then heavily by 25.71 percent and 23.15 percent during the years 2007-08 and 2008-

09, respectively. Thus, the individual pulses give a mixed trend, while the overall trend has been for increase, decline and then again increase.

1.8 In respect of oilseeds, the overall trend has been for increase during the relevant period, albeit the quantum of increase has varied among the individual items. For oilseeds as a whole, the average WPI increased from 175.7 (2006-07) to 218.1 (2007-08) and to 247.0 (2008-09), indicating increases of 5.18, 24.09 and 13.30 percent, respectively. In the case of rapeseed/mustard, the increase in WPI was considerable, by 4.45 percent (2006-07), 18.81 percent (2007-08) and then considerably by 24.68 percent (2008-09). The WPI of safflower seed increased by 4.77 percent (2006-07), 28.26 percent (2007-08) and then marginally by 0.36 percent (2008-09). For groundnut also, the WPI has been looking up, by 10.51 percent (2006-07), 25.99 percent (2007-08) and 5.01 percent (2008-09). The WPI for soyabean declined by -8.01 percent (2006-07), and then substantially increased by 29.56 and 20.99 percent during 2007-08 and 2008-09, respectively. As regards sunflowerseed, the WPI increased by 4.77 percent (2006-07), followed by a sharp increase of 28.26 percent (2007-08) and thereafter a nominal increase of 0.36 percent (2008-09). The increase was rapid in respect of nigerseed: by 19.24 percent (2006-07), 80.60 percent (2007-08), and 23.65 percent (2008-09). The average WPI of raw cotton increased from 163.8 in 2006-07 to 204.1 in 2007-08 and to 222.5 in 2008-09 (till December, 2008).

1.9 As brought out in the FAO Food Outlook, November, 2008, world cereal production is expected to hit a new record in 2008/09, enabled by the exceptionally high prices and resultant enlarged plantings, and generally good weather conditions. As against the production of 2010.6 million tonnes in 2006/07, the estimated production in 2007/08 is 2128.2 million tonnes and the forecast for 2008/09 is a record production of 2241.5 million tonnes. The world cereal production would be not only sufficient to fulfill the anticipated utilization, but also deliver a significant recovery in global stocks. This enhanced production

is expected to raise the cereal stock-to-use ratio to 22.0 per cent from 19.7 per cent in 2007/08. As a result, international prices of most cereals are looking down from their peak levels of 2008, further accelerated, inter alia, by the global economic slow-down and fall in crude oil prices. The uptrend in prices during 2007/08 was brought about by the eroded supplies in several exporting countries alongwith the restricted exports by others for fear of shortages.

1.10 Among the major cereals, the best production is forecasted for wheat. As against a wheat production of 596.6 million tonnes in 2006/07, the estimated production in 2007/08 is 610.5 million tonnes and it is forecasted to be a record 677.0 million tonnes in 2008/09, facilitated by the larger crops in Europe, North America and Oceania. In respect of rice, as per the FAO's Rice Market Monitor (February, 2009), the estimated world paddy production in 2008 is 683 million tonnes (milled rice equivalent of 456 million tonnes) which would be 3.5 percent more than the production in 2007. With this increased output, the world rice stocks carried over 2009 has been forecasted to be 118 million tonnes, a record level since 2002. No wonder, international rice prices are on the slide since May, 2008. Any loosening of the export restrictions in force in some of the countries including India, may impart further momentum to the price decline.

1.11 The world production of coarse grains has increased from 985.3 million tonnes in 2006/07 to an estimated 1078.2 million tonnes in 2007/08 and is forecasted to be an all-time high of 1114.2 million tonnes in 2008/09 (source: FAO Food Outlook, November, 2008). This record rise in crop prospects is certain to lead to recovery in inventories. The output of maize, the major coarse grain, is estimated to reach 798 million tonnes, up by almost 2 per cent from 2007-08. The increase is attributed mostly to the better crop levels in all regions except North America and particularly the strong recovery in Europe after their drought condition in 2007-08. In the case of barley, the second most important coarse grain, there would be 12 per cent increase in the global production in 2008-09, mainly because of the said buoyant recovery in Europe. The forecast of world sorghum output in 2008-09 remains virtually unchanged at about 64 million

tonnes. International prices of all coarse grains have declined sharply in recent months to well below their peaks in June.

1.12 Market fundamentals in the case of oilseeds are anticipated to remain relatively tight during the 2008/09 season. The global oilcrop production is anticipated to rise from a declined level of 403.8 million tonnes in 2007/08 (as against 417.8 million tonnes in 2006/07), to a new record of 430.5 million tonnes in 2008/09. However, the supply growth will be moderated by the very low opening stocks. Recoveries are expected for all major oilcrops except cottonseed. For soyabeans, the production is expected to look up from 220.6 million tonnes (2007/08) to 238.0 million tonnes (2008/09). However, cottonseed is anticipated to further decline from 44.1 million tonnes (2007/08) to 42.4 million tonnes (2008/09). In respect of rapeseed, there would be a further increase from 48.9 million tonnes (2007/08) to 55.0 million tonnes (2008/09). The production of groundnuts (unshelled) is also expected to increase further, albeit marginally, from 35.4 million tonnes (2007/08) to 35.9 million tonnes (2008/09). For sunflower seed, there would be pick-up from 28.5 million tonnes (2007/08) to 31.8 million tonnes (2008-09).

1.13 Prices for most agricultural commodities have registered swift and significant drops in recent months. The international US wheat price (No.2 Hard Red Winter, f.o.b. Gulf) which was USD 381 in January, 2008, declined to USD 256 in January, 2009—a decline of 33 per cent and 50 per cent below its peak level in February, 2008. The US maize (No.2 Yellow, Gulf) whose price remained at USD 206 in January, 2008, dropped to USD 172 in January, 2009, a decline of 17 per cent and 50 per cent below its peak in February, 2008. As regards sorghum (No.2 Yellow, Gulf), the price registered a decrease from USD 225 in January, 2008 to USD 148 in January, 2009. In respect of rice, for rice broken (A1 Super, f.o.b. Bangkok), the price that ruled at USD 364.50 in January, 2008, went upto USD 772.00 in May, 2008, steadily declined thereafter to USD 310.25 in December, 2008, but again climbed to USD 332.00 in January, 2009.

1.14 According to the IMF World Economic Outlook dated January, 2009, the world economy is expected to experience a major decline with the world economic growth in 2009 projected to fall to 0.5 percent when measured in terms of purchasing power parity and to turn negative when measured in terms of market exchange rates. This is ensuing from what the Fund describes as the most dangerous financial shock since the 1930s. The financial crisis will have implications for international agricultural markets and the agricultural sectors of developing countries. Agricultural commodity prices have been sliding, alongwith oil prices. The current financial crisis would affect the agricultural sector and food security of developing countries. The impact could be from both the demand and supply sides. The economic slow-down would echo in the international markets for agricultural commodities as well as their derived products. Alongwith this, the concomitant uncertainties and negative market expectations would further dampen the demand and depress the price scenario for agricultural items. As regards the supply side, the reduction of agricultural commodity prices may lead to cutback in production. There could also be decreased availability of credit. The combined effect of all these may dent the agricultural production, with telling implications for global food security.

1.15 The credit initiatives taken by the Government since 2004-05 have been appreciable. The target of doubling the flow of agricultural credit in three years as part of the comprehensive credit policy announced by the Government on 18th June, 2004, was achieved ahead of schedule. Since 2004-05, the achievement has been consistently higher than the target, albeit while adjusting for inflation over the years, this would take some dip. While slashing down the rate of interest to 7 per cent for crop loans up to a principal amount of Rs.3.00 lakh can be considered as a step in the right direction, the scheme of debt waiver and debt relief for farmers announced by the Government in the Union Budget 2008-09, has assisted only farmers who have availed loan from institutional sources. It needs to be observed that as against the agricultural credit flow target of Rs.

2,80,000 crore for 2008-09, the achievement till December, 2008 has been only Rs. 1,69,837/- crore. This calls for accelerated efforts, so that the record of past 4 years of fulfilling the target, is kept up. The economic slow-down and decline in credit flow should not impinge on the farm sector. Further, an examination of the number of new farmers financed since 2004-05 reveals that the progress on this front has been tardy. As against 78.84 lakh new farmers provided with credit from various institutional sources, the corresponding number during the subsequent years were 78.73 lakhs (2005-06), 83.5 lakhs (2006-07), 85.19 lakhs (2007-08) and 55.65 lakhs till 31.12.2008. Further, only 27 per cent of the total farm households in the country are coming under the coverage of institutional sources. It needs to be kept in view that the financial exclusion in the Indian context is large with wide variations across regions, social groups and asset holdings. As observed by the Vyas Committee (ref. 'Report of the Committee on Financial Inclusion', January, 2008), the poorer the group, the greater is the exclusion. It is the category of small and marginal farmers who mainly fall prey to exploitation by informal sources. The thrust on financial inclusion in the farm sector continues to remain as only a target. Therefore, the Commission recommends that **alongwith the thrust on increased availability of farm credit, there should be emphasis on the greater inclusion of new farmers, especially small and marginal, under institutional coverage, and the progress in this regard needs to be monitored regularly.**

1.16 From the information/feedback received by the Commission from the various stakeholders, it emerges that the impact of implementation of NREGA is becoming visible. This has influenced the availability of agricultural labour and also its cost in several states. In the recent years, wages of agricultural workers have considerably looked up. However, their adequate availability is a constraint hampering the smooth conduct of agricultural operations. It is important that agricultural workers should get higher wages. But keeping in view its cost implications and the constrained availability of farm labourers, there is a need to substitute agricultural operations traditionally done manually, by farm implements

and machinery alongwith the requisite training. It is true that various promotional schemes/programmes are under implementation for promoting farm mechanization. At present, the estimated population of tractors and power tillers in the country is over 40 lakhs and 2.5 lakhs, respectively. However, it has to be appreciated that the predominant portion (82 percent) of agricultural holdings in the country are small and marginal (less than 2 hectares). Hence, the thrust on major items like tractors alone may not meet the real needs of the majority of farmers, especially keeping in view the changing scenario for agricultural workers. Accordingly, the Commission recommends that **there should be adequate emphasis on the provision of small farm implements and tools that would cater to the requirements of the majority of Indian farm holdings, and which would facilitate enhanced farm production and productivity.**

1.17 The 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, as rightly brought out in the 'Agricultural Price Policy—A Long Term Perspective', November, 1986, Government of India, still hold good. The National Policy on Farmers, 2007, has also highlighted 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. Ensuring price stability to a great extent depends on infrastructural development. For this, requisite number of procurement centres needs to be set up supported with adequate storage facility for the grains that are procured by the Government or Government-approved agencies. Without this, the MSP operations cannot progress or deliver the intended effect and benefit. The preparedness of the country for procurement should be assessed keeping in view the expected crop prospects. Necessarily, the implementers of MSP have to be equipped with the infrastructural facilities, so that the essential procurement operations may not get handicapped. Earlier also, the Commission in its Reports had highlighted this

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, as well as during the Commission's State visits and interactions with stakeholders. Distress sales to the middlemen take place, MSP operations suffer and the farmers are denied the benefits of MSP. No wonder, reaching the unreached areas still eludes attainment. This is particularly so when the crop prospects are better and disposable stock with farmers increases. In States like Bihar, the MSP operations are devoid of adequate reach because of this limitation. New initiatives have been taken in India through the decentralized procurement of foodgrains. Some state governments have, for instance, initiated their own food procurement operations. However, more of such initiatives integrated with effective implementation, should be brought into operation. Quite often fund constraints are reportedly handicapping the effective operation of food procurement agencies for which sometimes the creation of a corpus fund was thought of which needs to be given serious consideration. The Commission recommends that **the Government should on priority carry out a review of the adequacy of procurement centres opened, availability as well as requirement of storage and other related infrastructural facilities across the country, and make efforts to make up the deficit. Associating various appropriate agencies available in the States, other than the traditional organizations, (e.g., cooperative organizations) for procurement operations, need to engage the attention of Government.**

1.18 An important challenge before the country is the revitalization of agricultural sector. The deceleration in agricultural growth after the mid-1990s has to be reversed without loss of time. It is true that during the last two years of the Tenth Plan and the first year of the Eleventh Plan (2005-06, 2006-07 and 2007-08), the growth rate in the agricultural sector has been 6.0, 3.8 and 4.5 percent, respectively, as against 2.1 and 2.5 percent during the IX and X Plan

periods as a whole. However, keeping in view the anticipated foodgrain requirement in the coming years, there is an imperative need to enhance farm production. For this, the feasibility of bringing additional land under cultivation is limited. In fact, the land area available for agriculture in India is getting depleted, because of urbanization, industrialization, construction of Special Economic Zones (SEZs), development of real estate business, and the successive fragmentation of land holdings over the years. In the circumstances, the tenable option would be to expand production from the available field of operation. It is the outward shifts in productivity that can elevate farm incomes and resolve the crisis situation confronting Indian agriculture, on a sustainable basis.

1.19 India's average paddy yield of 3.1 tonnes per hectare (2006), does not compare with that of many other countries, viz., China's average paddy yield of 6.3 tonnes per hectare and even Bangladesh's 3.9 tonnes per hectare as well as the world average of 4.1 tonnes per hectare. Agricultural productivity has to be boosted up on the size and scale that have been achieved in industry and services. Such a substantial enhancement of agricultural productivity is possible only through the introduction of large-scale irrigation, increased and judicious use of high-yielding seeds, multiple cropping, and significant and widespread improvements in agricultural practices. Only a technology-led growth could increase agricultural production in the 'high-potential and low-performing' regions of the country.

1.20 It is well known that the progress and spread of Green Revolution was mainly in the irrigated lands. Protective irrigation in time could reportedly increase yields by about 40 percent. Inadequate irrigation continues to be one of the critical constraints for Indian agriculture. For several years, the expanse of agricultural land under irrigation cover has stagnated around 40 percent. Any possibility of a quantum leap in this regard in the foreseeable future, seems unlikely. Therefore, the need of the times is not only to endeavour for enhanced irrigation coverage but also for increased efficiency in irrigation to realize better

output from the same quantity of water and in the process causing least environmental problems. The traditional concepts and methods of irrigation should give way to more efficient methods like micro-irrigation techniques that are in tune with the requirements of the majority of Indian farmers. This could also check the problems of drainage, undesirable leaching of nutrients and associated problems of water logging and salinity build-up. When the requisite nutrients are placed at the root zone of the crop alongwith irrigation water, the efficiencies of both nutrient and water use would scale heights.

1.21 Any programmes or measures aimed at increasing irrigation in India should keep in view that the underground water potential has been over-exploited in several places, mainly instanced by Punjab where the water table has gone down to a depth of about 200 metres. The provision of free power or its provision at highly subsidized rates by the State Governments have also played a role in the excessive exploitation of ground water. About 60 percent of irrigation is currently from groundwater drawn from wells and tube-wells, using an estimated 6.5 million diesel pumps and 11 million electric pumps. A good number of blocks in the country are now groundwater deficient. Indeed, the neglect of appropriate irrigation infrastructure has costed the nation too dear. Here, it has to be appreciated that the investment in agricultural sector predominantly pertains to augmentation of irrigation resources. It is only through better water management that the country could make these investments most productive. In the context of agriculture, water is the new 'oil' and its wastage must be prevented at all costs. There should be emphasis on water literacy so that awareness is generated in the country for the conservation of this precious national resource as well as for its wise and judicious utilization. Accordingly, the Commission recommends that **the country should bring into operation well-balanced and appropriate measures for the use as well as conservation of irrigation resources, so that the needs of agriculture are fulfilled as well as the environmental compulsions are not violated. The slogan 'crop from**

every drop of water' should be infused with real content. Promoting water use efficiency should be a national priority.

1.22 Increase in agricultural production is inalienably linked to improved agronomic practices and the availability of high quality seeds. In fact, seed is the primary and fundamental input for elevating productivity in the farm sector. For any significant advance that India has achieved on the agricultural front in the past few decades, the role of high-yielding variety of seeds has been substantial. Unfortunately, in the Indian agricultural sector, the lack of adequate availability of good quality seeds at affordable prices, remains as a perennial problem for the farmers. Seed replacement rate is still in the range of 2-10 percent for some crops, which is much below the desired level of 25 percent for most crops. The use of hybrid seeds is mostly confined to cotton and a few other items. It is this inadequacy of high quality and good seeds that, inter alia, lowers the average productivity of major crops in the country much below the world average. Rejuvenating the seeds sector is an imperative. The machinery for provision of quality seeds needs to be strengthened on an urgent basis. Where there are no seeds corporations at present, it may be considered to develop suitable entrepreneurs to deliver the goods. Therefore, the Commission recommends that **the seed policy should be subjected to periodic review, to incentivise and promote the production and supply of good quality and genetically sound seeds and in the process elevate the seed replacement rate to the desired level, as this will be one of the key drivers for augmenting agricultural yields and production.** Failing this, the country may not be able to achieve the level of productivity on par with the best available internationally. The fact that with the adoption of better seed varieties, India has doubled its cotton production in the time span of five years and overtook the US in 2006 to become the world's second largest cotton producer and is expected to overtake China shortly as the number one producer of the item, should enthuse the country.

1.23 From the experience of Green Revolution, it is evident that research and extension services are critical for the progress of agricultural system in the country. After the near total collapse of extension services in most states, the Government of India made a schematic intervention during 2005-06 to boost up extension services through the launch of the Agricultural Technology Management Agency (ATMA) at district level to operationalise the extension reforms. This Scheme aims at making extension system farmer-driven as well as farmer-accountable. About 580 ATMAs are in position by March, 2009, virtually covering the whole country. However, based on the feedback received by the Commission, it seems that the linking of farmers with agricultural universities and best cultivation practices are still short of the requirements. The effective interaction of Krishi Vigyan Kendras with ATMAs is not to the requisite extent. Keeping in view that technological progress is crucial for the long-run growth of farm sector, it is highly essential to further strengthen the agricultural research. The technological fatigue that had gripped the Indian agriculture, should not be made to persist. Development of new high-yielding varieties of seeds comparable to the era of Green Revolution, is still a desideratum. Since the promotion of best cultivation practices and the conscientisation of farmers in this regard, have not taken strides, farming practices in the country, by and large, remain sub-optimal. The yield growth of total cereals, for instance, that decelerated from 3.24 percent (1980-81 to 1990-91) to 1.91 percent (1990-91 to 2000-01) and further to 1.78 percent (2000-01 to 2007-08), is indicating the absence of technological progress. With the result, the poor farmers play into the hands of private or unauthorized extension agents, mainly the local input traders, who exploit the opportunity for promoting sub-standard inputs such as seeds, fertilizers and pesticides. In the circumstances, achieving any sort of agricultural dynamism continues to be elusive. The knowledge deficit of farmers needs to be made up so that empowerment of farmers would become a reality. Keeping these in view, the Commission recommends that **there should be further thrust on the promotion of agricultural research followed up with effective and knowledgeable extension services with emphasis not only on the number**

of ATMAs established, but also on their requisite linkages with the concerned knowledge centres.

1.24 Of late, there has been considerable delay in the announcement of Minimum Support Prices (MSPs) by the Government. Needless to say that MSPs function as a price signal to the farmers. The decision regarding support prices is to be made known to them well before the sowing season. Accordingly, they are to take decisions regarding the allocation of land and other inputs as well as resources to the cultivation of specific crops. Any delay in this regard would handicap the cultivators from taking crucial decisions related to cultivation, and also would adversely affect the national interests. Further, this would be inimical to the purpose of fixing MSP. Therefore, the Commission recommends that **it should be the endeavour of Government to declare MSPs well in advance of the sowing season for the concerned crops.**

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

Minimum Support Price

Submitting its Report on Price Policy for Kharif Crops of 2008-09 on February 5, 2008, 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)

Crop	Variety	MSP fixed by Government for 2007-08 Season	MSP recommended by CACP for 2008-09 Season	MSP fixed by Government for 2008-09 Season
1	2	3	4	5
Paddy	Common	645 ©	1000	850&
Paddy	Grade-A	675 ©	1050	880&
Jowar	(Hybrid)	600	840	840
Jowar	(Maldandi)	620	860	860
Bajra		600	840	840
Maize		620	840	840
Ragi		600	915	915
Tur(Arhar)		1550(#)	2000	2000
Moong		1700(#)	2520	2520
Urad		1700(#)	2520	2520
Groundnut-in-shell		1550	2100	2100
Soyabean(Black)		910	1350	1350
Soyabean(Yellow)		1050	1390	1390
Sunflower-seed		1510	2215	2215
Sesamum		1580	2750	2750
Nigerseed		1240	2405	2405
Cotton(F-414/H-777/J34-Raj.) (Medium Staple length)		1800	2500	2500*
Cotton (H-4) (Long Staple Length)		2030	3000	3000**
VFC Tobacco Black soil	F2 Grade	3200	4350	-
VFC Tobacco Light soil	L2 Grade	3400	4550	-

© : An additional incentive bonus of Rs. 100 per quintal for paddy for 2007-08 entire kharif marketing season (Rs.50 vide Notification dated 9.10.2007 and Rs.50 vide Notification dated 15.11.2007).

: An additional incentive bonus of Rs. 40 per quintal be given over and above the MSP for 2007-08 season.

& : Bonus of Rs. 50/- per quintal is payable over the MSP.

*: Staple length (mm) of 24.5 - 25.5 and micronaire value of 4.3 - 5.1.

**: Staple length (mm) of 29.5 - 30.5 and micronaire value of 3.5 - 4.3.

2.2 The Government announced the kharif price policy for cereals, pulses, oilseeds and raw cotton on August 21, 2008, fixing MSP at levels recommended by the Commission except paddy for which price fixed was Rs. 850/- for common grade and Rs. 880 for Grade-A. An additional incentive bonus of Rs. 50/- per quintal for paddy for 2008-09 for both the grades was announced by the Government. The Textile Commissioner fixed the MSPs for different varieties of raw cotton on 24.09.2008, keeping in view the normal market price differentials and other relevant factors, namely, staple length and micronaire value. The Government has not announced the MSP for tobacco for 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 2008-2009, were notified by the Government on 1st September, 2008. These specifications have fixed the maximum limit for moisture content at 17 percent for paddy, 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.

Rice

2.5 Rice plays a critical role in the global food security with more than half the world's population depending on this crop as the staple food. From the point of view of India, rice enjoys the double distinction of being the single largest sown crop in the country and also the staple food of about 65 per cent of the country's population.

2.6 The total rice production during 2007-08 is estimated at 96.69 million tonnes (Final Estimates of Directorate of Economics and Statistics), an increase of 3.5 per cent over the production of 2006-07. The production target for 2008-09 is 97 million tonnes. As per the 2nd Advance Estimates, the total rice production during 2008-09 is estimated at 98.89 million tonnes, which, if attained will be a record production. The kharif rice production during 2007-08 was 82.66 million tonnes. For 2008-09 kharif rice production, Ministry of Agriculture has indicated a target of 83.00 million tonnes. The kharif production is presently estimated at 85.45 million tonnes, an increase of 3.3 per cent over the kharif production levels achieved during 2007-08. The significant increase in the production expected in the 2008-09 season, also coincides with the second year of implementation of the National Food Security Mission (NFSM). The area under rice registered a marginal increase to 43.91 million hectares in 2007-08 from 43.81 million hectares in 2006-07.

(Table 2.1)

2.7 Rice production exhibited an average growth of 1.45 per cent during 1996-97 to 2007-08, marked by yearly fluctuations. The year 1999-2000 closed with high production of 89.68 million tonnes, however the production dipped to a low level of 84.98 million tonnes in 2000-01. The year 2001-02 witnessed record production at 93.34 million tonnes followed by a sharp decline in production in 2002-03 to 71.82 million tonnes, the lowest level of production recorded since 1988-89. The year 2004-05 was another low production year with a production of 83.13 million tonnes from 88.53 million tonnes achieved in the previous year. Since 2004-05, there have been steady increases in production levels which

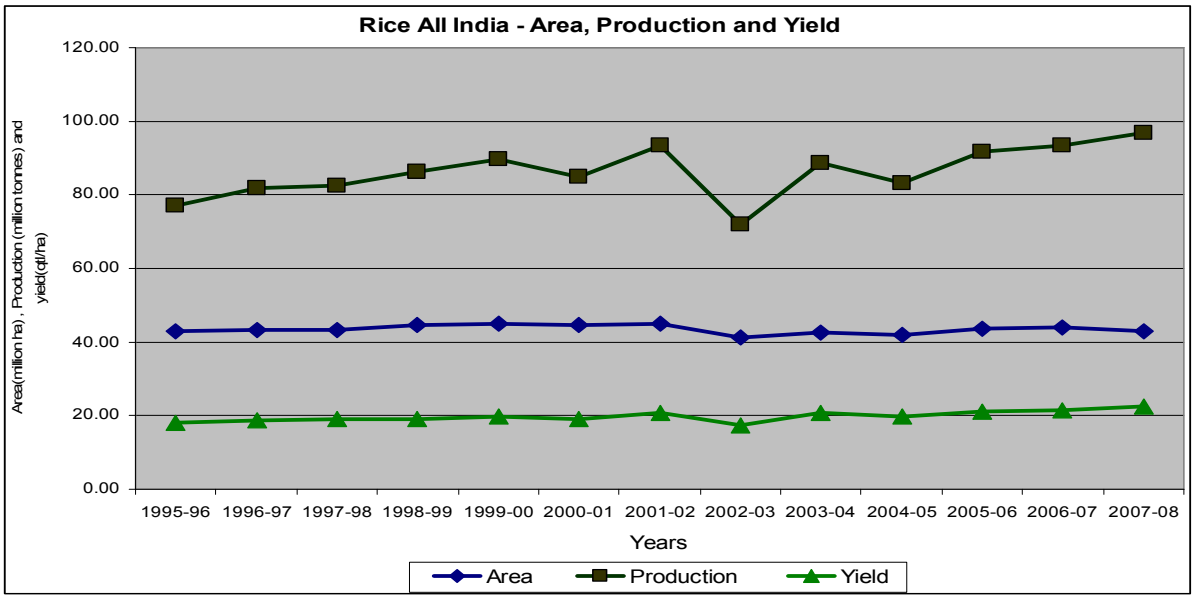
arrived at the level of 93.35 million tonnes in 2006-07 and further to 96.69 million tonnes (estimated) in 2007-08 and 98.89 million tonnes (projected) in 2008-09. An analysis of the decadal performance of rice production reveals that the growth rate of rice production during the decade (1996-97 to 2007-08) was lower at 1.45 per cent per annum compared to 2.79 per cent of 1986-87 to 1996-97.One reason is the relatively lower growth in area which registered a growth rate of 0.16 per cent during 1996-97 to 2007-08 compared to 0.45 per cent in the previous decade. (Tables 2.1 & 2.2)

2.8 The area under rice has been stagnating with minor year to year fluctuations. During the year 1997-98, the area coverage was 43.44 million hectares and the estimated area coverage under the crop during 2007-08 is 43.91 million hectares. The country could not as yet surpass the area coverage of 45.16 million hectares achieved during 1999-2000. Area expansion under rice is possible in the still unexploited Eastern and North-Eastern region and Government measures for rice development should concentrate on these regions. (Table 2.2)

2.9 The average growth rate of yield under rice during 1996-97 to 2007-08 was 1.29 per cent compared to 2.33 per cent of the previous decade. The lowest yield in the recent years was witnessed in 2002-03 at 1744 kgs/ha. However, after the year 2004-05, there was steady recovery and the yield reached the record level of 2202 kgs/ha during the year 2007-08. (Tables 2.1& 2.2)

The performance in respect of all the three indicators, viz., 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 Considering the limitations in area expansion, the crucial challenge for increasing production of rice is productivity enhancement. The yield rate of paddy in India is still much lower than the world average and that of major producing countries, as shown in the Table 2.1.

Table 2.1 : Yield rates of Paddy in various countries in 2006

Country	Yield (kg/ha)
China	6265
Indonesia	4772
Japan	6336
India	3124
Bangladesh	3904
Brazil	3868
USA	7694

Thailand	2906
Pakistan	3164
Philippines	3684
Vietnam	4891
World	4112

Source: Agricultural Statistics at a Glance, 2008

2.11 The low productivity in rice production needs to be tackled through a multi-pronged approach covering research, timely dissemination of technologies, extension facilities, availability of quality inputs and inducement to farmers to take up improved farm practices through making available necessary infrastructure and assured returns.

2.12 Rice is cultivated throughout the country other than the arid tracts of Rajasthan, since the crop is widely adaptable to diverse eco-systems. The major producing states, in terms of area and production are West Bengal, Andhra Pradesh, Uttar Pradesh, Punjab, Orissa, Chhattisgarh and Tamil Nadu. In terms of productivity, Punjab leads with a yield level of 4019 kg/ha (2007-08) followed by Haryana (3361 kg/ha), Andhra Pradesh (3344 kg/ha) and Tamil Nadu (2817 kg/ha). West Bengal which leads the states in rice production (2007-08), has a yield level of 2573 kg/ha. Orissa, which is another major producing state has a yield level of 1694 kg/ha. The yield levels are lower than the All India average of 2145 kg/ha in states like Madhya Pradesh (1297 kg/ha), Chhattisgarh (1297 kg/ha), Assam (1428 kg/ha), Gujarat (1942 kg/ha) and Maharashtra (1903 kg/ha). Rice is a highly water-intensive crop; however about 44 per cent of the rice cultivation is still carried out in un-irrigated conditions. A look at the statistics shows that the states having high productivity rates in the country have also maximum area under assured irrigation. Andhra Pradesh has 96.6 per cent (2005-06) under irrigation; Punjab (99.3 per cent); Tamil Nadu (93.0 per cent); Haryana (99.9 per cent) and Uttar Pradesh (73 per cent). West Bengal and Orissa, though leading in terms of area and production have lower yield rates

and also comparatively lower area under irrigation at 49.8 per cent and 42.6 per cent respectively. States with very low yield rates have low irrigation like Madhya Pradesh (13.6 per cent); Maharashtra (28.7 per cent); Assam (4.6 per cent); Chattisgarh (30.3 per cent); Jharkhand (5.6 per cent). Bihar, though has half the rice cultivation under assured irrigation has low rice yields of 1486 kg/ha (2006-07). The above shows that the rainfed areas are at a disadvantage compared to irrigated tracts. Hence, there is an urgent need to harness and conserve rainfall in these areas through rain harvesting, community watershed programmes, development of minor irrigation systems like ponds and tanks and efficient water utilization through use of devices like sprinkler and drip irrigation. Commission strongly recommends that **the National Rainfed Area Authority (NRAA), constituted in 2007, urgently initiate action for developing appropriate technology package to break the low yield barriers in the rainfed rice producing areas.** This will also help states like Punjab and Haryana, which are over-stressed by the rice-wheat rotation.

2.13 Hybrid rice has emerged as a proven technology. Its proper adoption can go a long way in obviating the current yield stagnation and low profitability and making visible the achievement of higher production targets. The recent progress in hybrid rice programmes in countries like Vietnam, Philippines and China is evidence to this. Average yields of hybrid are greater relative to that of high yielding varieties. Further, hybrids are of short duration with better resistance to major pests and diseases as well as unfavourable soil conditions. Effective and systematic efforts to develop and use this technology in India materialized after the 1980s, and the area coverage under hybrid rice has been about 2.5 per cent of the total rice area. The Commission is of the view that **the adoption of hybrid rice technology needs to be further accelerated, by strengthening the research systems of both public and private sectors and by providing adequate policy support**. The present constraints arising from the inadequate flow of quality hybrid seeds at affordable prices, lack of area-specific approaches for rationalize on of hybrid rice, etc., are to be overcome on priority. The

system of rice intensification (SRI) also needs to be further popularized among farmers for getting better productivity.

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

2.14 The year 2007-08 witnessed increases in market price of rice. The average index of wholesale price of rice for 2007-08 was 191.8 (base: 1993-94=100), showing an increase of 6.8 per cent over 2006-07. The average wholesale price index of rice for the eleven months (April 2008 – February 2009) of 2008-09 showed further increase to 210.7, 9.9 per cent increase over the previous year. However, there have been variations in the movement of prices as among states. (Table 2.14)

For eg. In the Kurnool market of Andhra Pradesh, the wholesale prices of paddy (Sona) during the current marketing year up to December 2008 were ruling significantly high, as high as Rs.1800/quintal in December 2008. Prices were also ruling high in Gujarat (Rs. 1360/quintal for Basmati in Bavla market during January 2009), Kerala (Rs.1100/quintal for Ponni variety in Palakkad in January 2009) and Punjab (Rs.1000 in Dec.2008, however reduced to Rs.900 in January 2009 for PR-106 variety in Patiala).

2.15 On the other end of the spectrum is states like West Bengal, where all the reporting centres have shown consistently lower market prices than MSP ((including bonus) during October- December of the current marketing year. All the reporting centres except Kanpur in Uttar Pradesh, Mysore centre in Karnataka, Gondia centre in Maharashtra also reported prices below MSP. The persistence of low prices during the post harvest period in the above states can be attributed to low procurement activities.

Procurement

2.16 The procurement of rice during 2008-09 marketing season reached a level of 24.83 million tonnes as on 16.3.2009 as against the procurement of 20.92 million tonnes, materalised during the corresponding period of 2007-08, amounting to about 18 per cent step-up. Participation from the private trade has been reported to be poor, attributed to the existing ban on exports of non-basmati rice and restrictions on the export of basmati rice from India. The Government had imposed this ban in March 2008 as part of its inflation control measures. The state-wise procurement follows the usual trend of six states viz. Punjab (8.4 million tonnes), Haryana (1.4 million tonnes), Andhra Pradesh (4.4 million tonnes), Uttar Pradesh (3.5 million tonnes), Chhattisgarh (2.5 million tonnes), and Orissa(1.6 million tonnes), dominating the operations. States like Bihar, West Bengal, Assam, and Jharkhand are still lagging behind as far as procurement operations are concerned. To ensure that maximum number of farmers in the country benefit from MSP operations, it is necessary that FCI extends its operations to the non-conventional regions and state governments supplement the FCI operations through decentralized procurement. . The Commission is of the view that **the entire gamut of procurement operations by FCI and the State agencies (through the scheme of decentralized procurement) should be reviewed to examine the road blocks in extending the procurement operations to non-conventional regions and to recommend ways to rationalize and collaborate the operations of both the agencies so that the spread of procurement operations can be extended to the maximum possible beneficiaries.**

(Table 2.8)

2.17 The procurement operations of the Government are governed by two considerations, viz., to provide minimum support prices to the farmers in case the market prices fall below the MSP and to ensure enough stocks in the central pool to meet the requirements of various welfare schemes. The Government has also

decided to create a strategic reserve of 5 million tonnes of food grains comprising of 3 million tonnes of wheat and 2 million tonnes of rice, in addition to the buffer stocks held by FCI every year, intended as insurance for food security. The strategic reserve will be built up over a period of time starting from 2008-09.

Stock

2.18 Rice stock held by the FCI and the state agencies as on 01.02.2009 was 20.19 million tonnes. After taking into consideration the likely procurement and offtake during 2009-10, the estimated stock of rice as on April 1, 2010 is 26.45 million tonnes, 13.25 million tonnes more than the stipulated buffer norm of 13.20 million tonnes. The position is illustrated in the Table 2.2.

Table.2.2: Projected Stocks in the Central Pool

(Million Tonnes)

	Rice
Official Stock as on 01.02.2009	20.19
Procurement during Feb-March 2009	6.26
Likely Offtake during Feb-March 2009	4.00
Likely Stock as on 01.04.09	22.45
Likely Procurement during 2009-10	29.00
Likely Imports during 2009-10	0.00
Likely Offtake during 2009-10	25.00
Likely Stock as on 01.04.10	26.45
Buffer Norm requirement for 1st April	13.20

Source: Projected by CACP

Offtake

2.19 Offtake of foodgrains from the central pool is undertaken to meet the requirements of Targeted Public Distribution System (TPDS) and various welfare schemes. Total offtake of foodgrains from central pool during 2007-08 was 37.43 million tonnes comprising of 25.2 million tonnes of rice and 12.2 million tonnes of wheat. The offtake under TPDS accounted for 33.5 million tonnes and other welfare schemes accounted for 3.90 million tonnes. Projected offtake of rice during 2008-09 is 25. 00 million tonnes. Considering the comfortable stock position of rice, increasing the availability of rice through public distribution system can be considered.
(Table 2.11)

Demand and Supply

2.20 For projecting the consumption demand for rice for 2009-10, the Commission made use of the 63rd round of NSS (July, 2006-June, 2007) and the Population Census (2001) data. Projection is arrived at by extrapolating growth of population with annual growth rate 1.6 per cent for 2008-09 and 2009-10. Since NSS consumption data do not account for non-household consumptions, the household consumption demand for rice for 2009-10 is projected at 86.88 million tonnes, as indicated in the Table 2.3.

Table 2.3: Annual (365 days) Consumption of rice

(Million Tonnes)

	Per Person Per Month Consumption (Kg.)*		2008-09##	2009-10###
	Rural	Urban		
Population (Million)	72%	28%	1161	1177
Rice	6.56	4.80	85.46	86.88

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

Consumption figures for 2008-09 are on the basis of 62nd round of NSSO.

Consumption figures for 2009-10 are on the basis of 63rd Round of NSSO.

2.21 Based on the above projections and data on gross production, the situation that emerges in respect of overall supply of rice during the marketing year 2008-09 is presented in the table 2.4.

Table 2.4 : Domestic Rice situation

(Million ttonnes)

Crop Year (July-June)	2007-08	2008-09
Fiscal Year (April–March)	2008-09	2009-10
1. Gross Production	96.69	98.89
2. Net Production	89.34	91.37
(92.4% of Gross Production)		
3. Procurement**	28.49	29.00
4. Offtake, of which (April-March)	25.00	25.00
(a) Export Sale	3.65	3.65
(b) Open Sale	0.01	0.01
5. Addition to Stock (3-4)	3.49	4.00
6. Supply [2-3+4-4(a)]or[2-5-4(a)]	82.20	83.72
7. Consumption Demand #	85.70	86.88
8. WPI, Fiscal year (1993-94=100)	210.7*	

Source: Food Bulletin and DGCI &S

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

***: Till February 2009;**

#: Based on 63rd Round (July 2006-June 2007) of NSSO;

**** Marketing year (October- September)**

2.22 On the basis of above, the supply of rice is likely to increase in 2008-09 to 83.72 million tonnes from 82.20 million tonnes of 2007-08, however falls short of demand by 3.16 million tonnes.

Global outlook

2.23 As per FAO Rice Market Monitor- February 2009, global production of paddy in 2008-09 is projected to be about 683 million tonnes (equivalent to 456 million tonnes of milled rice), an increase of 3.8 per cent or 16.5 million tonnes over the performance of 2007-08. This is attributed to expectations of increase in area under paddy by 2.2 per cent to 159 million hectares and yields by 1.3 per cent to 4.3 tonnes per hectare. The bulk of the increase in production would be accounted for by rise in area coverage, estimated to grow by 2.2 per cent to 159 million hectares. The expansion in area is stated to be a positive reaction of the farmers to high prices and government support. Average paddy yield during 2008-09 is also expected to increase to 4.3 tonnes/hectare, due to prevalence of generally favourable growing conditions. Almost all the major producing countries of Asia namely Bangladesh, China, India, Indonesia, Pakistan, Philippines and Vietnam are expected to register bumper harvests. Favourable growing conditions coupled with improved economic incentives have reported to encourage farmers to expand plantings.

2.24 In contrast to the tight price situation witnessed during the first half of 2008, the world rice prices started easing in June 2008 and by December 2008, the prices lost 106 basic points, from 372 in May 2008 to 266 in December 2008(as measured by FAO rice price index (2002-04=100). In January 2009, however, the rice prices rebounded, lifting the index by five points to 271, partly triggered by announcement of 1.5 million tonnes sale of broken rice from Vietnam to Philippines. Although falling, the world rice prices continue to exceed their level of one year ago mainly because of various programmes implemented in China, Thailand, Pakistan and Vietnam, aimed at sustaining export prices. The

continuation of export restrictions in India and Egypt has also averted drastic drop in prices. Under current rice supply and demand prospects, world rice prices during 2009 are expected to balance at lower levels. This is especially so if the slowdown of the economies, reduces effective demand.

2.25 During 2008-09, world rice utilization is projected to increase by about 2.4 per cent to reach a level of 438 million tonnes (in milled rice equivalent), of which about 379 million tonnes would be used as food. Among the regions, per capita rice consumption is expected to increase in Asia in view of targeted distribution programmes and ceilings in retail prices. In Africa and in Latin American countries, per capita consumption is expected to decline due to projected reduction in imports and in developed countries, it is expected to remain at the same level as the previous year.

2.26 World trade in rice, which reduced to a level of 30.80 million tonnes during 2007-08 is expected to increase to 31.00 million tonnes in 2008-09, facilitated by increased availability in major exporting countries. Export restrictions imposed by some of the exporting countries are also expected by the FAO to be removed or further reduced in the coming months.

Table 2.5 (i) : World rice market at a glance

	2006-07	2007-08 estimated	2008-09 forecast	% Change: 2008-09 over 2007-08
WORLD BALANCE (milled basis) million tonnes				
Production	428.7	439.5	456.0#	3.8
Trade	32.3	30.8	31.0	0.6
Total utilization	427.1	436.5	438.0#	0.3
Food	372.2	377.4	379.0#	0.4
Ending stocks	104.6	109.3	115.0	5.2
SUPPLY AND DEMAND INDICATORS				
Per caput food consumption:				
World (kg/year)	56.9	56.7	57.0	0.5

LIFDC** (kg/year)	69.6	69.6	70.0	0.6
World stock-to-use ratio (%)	24.0	24.6	24.4	0.8
Major exporters' stock-to-disappearance ratio (%)	15.4	17.1	18.6	8.8
	2006	2007	2008	% Change Jan-Oct 2008 over Jan-Oct 2007
FAO Price Index (1998-2000=100)	117.0	137.0	258.0*	94.0

Source: FAO, Food Outlook, November, 2008.

***: Jan-Oct 2008, ** : Low Income Food -Deficit Countries,**

 # FAO's Rice market monitor (Feb, 09)

2.27 India exports premium basmati rice to Saudi Arabia and Middle East countries, Europe and the USA and non-basmati, white/parboiled rice to Bangladesh, Indonesia, Philippines, Nigeria, South Africa, Ivory Coast and other African countries. During 2007-08, India exported 6.47 million tonnes of rice valuing Rs. 1175.4 crores. The exports during 2008-09 (April-July) amounted to 6.12 lakh tonnes. The exports during 2008-09 is expected to end at a lower level than the previous year due to the ban imposed on the export of non-basmati rice and restrictions on export of basmati rice, with a view to contain the inflation and to ensure domestic food security. Import of rice by India has been insignificant over the years. India competes with countries like Thailand, Vietnam, USA and Pakistan in the export of rice. India is already second largest exporter of rice in the world. While short term measures to ban/restrict export of rice is inevitable at times, the long term goal should be to expand our presence in the global market by making Indian rice internationally competitive in terms of price and quality.

Coarse Cereals

2.28 Coarse Cereals are the staple diet of millions of rural poor in India. The major producers of these crops are the States of Karnataka, Maharashtra, Tamil Nadu, Madhya Pradesh, Rajasthan and Gujarat. Coarse Cereals play an important role in stabilizing food production in the country. The crops also offer a good promise in the food processing industry as well as for export.

2.29 Coarse cereals contributed about 17.66 per cent of the total foodgrains production of the country during 2007-08. Their production has, by and large, shown a fluctuating trend during the last four decades. The contribution of coarse cereals production to the total foodgrains production during 1965-66 was 29.61 per cent which has gone down to 17.66 per cent during 2007-08. The reasons for the downward trend in production are mainly, land degradation, frequent occurrence of natural calamities, limited irrigation, changing lifestyle etc.

2.30 The second advance estimates released by DES, for 2008-09 has projected a decline in production of Kharif coarse cereals compared to that in 2007-08. The production of Kharif coarse cereals which was 31.89 million tonnes for 2007-08 is expected to be 27.69 million tonnes during 2008-09 (Second Advance Estimates). This makes a decrease of 4.20 million tonnes over the production of previous year and 4.91 million tonnes lower than the target of 32.60 million tonnes set for 2008-09. As regards the individual items, during 2008-09, the production of kharif maize is estimated to be 13.40 million tonnes, followed by bajra 8.85 million tonnes, kharif jowar 3.06 million tonnes and ragi 1.94 million tonnes as against the target of 15.50 million tonnes, 10.00 million tonnes, 4.10 million tonnes and 2.50 million tonnes respectively. Owing to the low availability of irrigation, the coarse cereals continue to be dependent on the vagaries of weather. (Table 2.1)

2.31 The area under coarse cereals has been declining by 1.54 per cent during the period 1986-87 to 2007-08. This decline has been more pronounced during the period 1986-87 to 1996-97 (2.39 per cent) than during the period 1996-97 to 2007-08 (0.70 per cent). However, the trend in yield was better during the period 1986-87 to 1996-97 (3.66 per cent) as compared to the period 1996-97 to 2007-08 (2.25 per cent), giving an overall growth rate of 2.46 per cent during the entire period 1986-87 to 2007-08. The trends exhibited by kharif coarse cereals in respect of area coverage and yield have been similar to that of total coarse

cereals.

(Table 2.2)

2.32 The total area under coarse cereals in India is estimated to be 28.36 per cent of the total area under cereals in 2007-08. The state with the highest production and area under coarse cereals is Rajasthan, with bajra accounting for the largest share, while productivity is highest in Andhra Pradesh at 3.34 tonnes per hectare. The production of coarse cereals is estimated as 18.86 per cent of total cereal production in the country as against rice which forms 44.76 per cent and wheat 36.37 per cent of total cereals production, during the year 2007-08. The Commission recommends that **an integrated strategy is required to boost the production and use of coarse cereals as a major food crop. Steps may be taken to include nutritious coarse cereals such as bajra, jowar, ragi in the food security basket through the network of Public Distribution System (PDS) which would help in improving nutritional security and would also lead to enhancement of dryland farming in the country.**

2.33 The export of coarse cereals during 2007-08 registered 67.62 per cent decline over the year 2006-07. The export of jowar, bajra, maize and ragi in the year 2007-08 went down to 232.60 thousand tonnes from 718.41 thousand tonnes in 2006-07. Out of this, maize export constituted the largest chunk of (58 per cent) 134.00 thousand tonnes, followed by bajra (30 per cent) 69.37 thousand tonnes, jowar (11 per cent) 25.10 thousand tonnes and ragi (2 per cent) 4.14 thousand tonnes. The highest export earnings of Rs. 133.23 crore was realised from maize, followed by bajra of Rs. 65.29 crore, jowar of Rs. 22.65 crore and ragi of Rs. 2.81 crore. The import of maize in 2007-08 was 4.27 thousand tonnes as against 2.00 thousand tonnes in 2006-07.

(Tables 2.25 & 2.26)

2.34 International prices of all coarse grains declined sharply from the fourth quarter of 2008 onwards, to well below their peaks in June 2008, due to

favourable global crop prospects and ample supplies of feed wheat in world markets. The downturn was further aggravated by the market expectation that a global economic slowdown could lower demand for coarse grains and that the steep drop in crude oil prices could also depress demand (for maize in particular) from the ethanol sector. In October, 2008, the benchmark United States maize (No. 2 Yellow, Gulf) price averaged USD 184 per tonnes, 35 per cent below the high of June 2008. The continuing strength of the United States Dollar also contributed to the decline in international quotations. By late October, 2008, the March maize futures at the Chicago Board of Trade (CBOT) hovered around USD 165 per tonne, down by over 18 per cent from the previous month. Having halved from their record levels of late June, Maize futures have fallen to their lowest levels since late 2007.

Table 2.5(ii): World coarse grain market at a glance

	2006-07	2007-08 *estimated*	2008-09 *forecast*	% Change: 2008-09 over 2007-08
WORLD BALANCE (*million tonnes)*				
Production	985.3	1 078.2	1 114.2	3.3
Trade	111.4	129.9	114.5	-11.8
Total utilization	1 015.6	1 073.7	1 109.2	3.3
Food	179.2	186.2	188.2	1.0
Feed	615.1	638.1	633.6	-0.7
Other uses	221.4	249.3	287.5	15.3
Ending stocks	161.8	168.8	172.0	1.9

Source : FAO, Food Outlook, November 2008.

2.35 FAO's latest forecast for world production of coarse grains in 2008-09 now stands at an all-time high of 1114 million tonnes, 3.3 per cent above the record of last year. Output of maize, the major coarse grain, is now set to reach 798 million tonnes, up almost 2 per cent from 2007-08. The increase is attributed mostly to a strong recovery in Europe's production after drought in 2007, although larger crops are also estimated in all other regions with the exception of North America. The forecast of world sorghum output in 2008-09 stands at about 64 million tonnes, about 3 per cent up from last year.

2.36 World trade (exports) in coarse grains in 2008-09 (July-June) is forecast to contract sharply to 114.5 million tonnes from roughly 130 million tonnes in 2007-08, driven by smaller trade in maize and sorghum. International maize trade in 2008-09 is forecast at 87 million tonnes, down almost 14 million tonnes from the record in 2007-08. World trade in sorghum is also forecast to drop sharply to 5.5 million tonnes, down by over 4 million tonnes from last season's record level

World utilization of coarse grains in 2008-09 is forecast to reach 1109 million tonnes, up 3.3 per cent, or 36 million tonnes, from the previous season. While this growth is above the ten-year average, it remains well below the almost 6 per cent rate of expansion experienced in 2007-08. Feed utilization, which is forecast at 634 million tonnes, 4.5 million tonnes, or nearly 1 per cent, less than the estimated level in 2007-08. Total food consumption of coarse grains is forecast to reach 188 million tonnes, up 1 per cent from the previous season. Unlike food and feed utilization, industrial use, especially for production of biofuels, is expected to demonstrate a sharp expansion in 2008-09. Most of the increase is expected to be again driven by larger maize use for the ethanol sector in the United States, which in 2008-09 is forecast to reach roughly 101 million tonnes, up by as much as 25 million tonnes, or 33 per cent, from the already high level in 2007-08.

2.37 World stocks of coarse grains for seasons ending in 2009 are currently forecast at 172 million tonnes, up 3 million tonnes from their opening level. As a result, the world stocks-to-use ratio for coarse grains is expected to approach 16 per cent, which would be around one percentage point above the estimated ratio in 2007-08, but still below the ten-year average of more than 18 per cent.

2.38 There is rise in demand for coarse cereals because of its variety of uses. The demand pattern is also influenced by the changing life style and demand for processed food. Strong economic growth in developing countries is a major driver of a changing world food demand towards high-value agricultural products and processed foods. The Commission recommends that **there is a need for**

diversification of the coarse cereals products through cost effective and innovative methods. Focused plan of action on agro processing, value addition and market support may be spelt out to maintain future sustainability of the coarse cereals.

The position regarding individual coarse cereals in India are given below:-

Maize

2.39 In India maize is emerging as the third most important crop after rice and wheat. Maize has its significance because of its wide variety of uses such as human food, animal feed and as a source of large number of industrial products. Diversified uses of maize for maize corn, starch, corn oil production, baby corns, popcorns etc and potential for exports have added to the demand of maize all over the world. To enhance the production and productivity of maize, it has been included in the Technology Mission on Oilseeds and Pulses since 1995. The Accelerated Maize Development Programme has been merged into the centrally sponsored Integrated Scheme of Oilseeds, Pulses, Oil palm and Maize (ISOPOM) for the overall development of these crops. The major producers of this crop are the states of Karnataka, Andhra Pradesh, Bihar, Punjab, Uttar Pradesh, Madhya Pradesh, Gujarat, & Himachal Pradesh.

2.40 There has been increase in the area coverage under maize cultivation. It increased from 5.8 million hectares in 1986-87 (TE) to 6.1 million hectares in 1996-97 (TE) and further to 7.86 million hectares in 2007-08(TE). The production target of maize for 2008-09 is 19.50 million tonnes. Out of the total production of maize, about 79 per cent is generated in the kharif season. As per the Second Advance Estimates, the production of kharif maize during 2008-09 is likely to be 13.40 million tonnes, lower than the 15.11 million tonnes estimated in 2007-08.

(Tables 2.1 & 2.2)

2.41 During the period 1996-97 to 2007-08 the production of maize recorded an annual growth of 4.54 per cent. The annual growth rate of production was as high as 21.53 per cent in Tamil Nadu, 13.62 per cent in Maharashtra and 10.40 per cent in Andhra Pradesh. During the above period, at the all India level, the yield of maize recorded a growth rate of 1.90 per cent per annum and acreage has expanded by 2.59 per cent per annum. There has been significant increase in area in the states of Andhra Pradesh, Maharashtra and Karnataka. The yield of maize is higher than that of rice in some of the states like Andhra Pradesh, Himachal Pradesh and Maharashtra. During 2008-09 the seed replacement rate of maize (Hybrid) is 100 per cent in Andhra Pradesh, 80 per cent in Tamil Nadu, 60 per cent in Maharashtra, 50 per cent in Tripura, 34.20 per cent in Assam, 34.15 per cent in Madhya Pradesh, 21.44 per cent in Uttar Pradesh and as low as 10 per cent in Uttarakhand.

(Table 2.2)

2.42 During 2008-09, cereal prices in general have been rising compared to 2007-08. The index of wholesale prices of maize, which stood at 248.9 in April, 2007, slightly slipped to 246.1 in April, 2008 but rose to 268.0 in February, 2009. Though the price of maize at Hyderabad (Andhra Pradesh) and Karnal (Haryana) was ruling above MSP, but price of maize in other states like Madhya Pradesh, Rajasthan, Bihar and Karnataka, dipped below MSP, to Rs.700-830 during October 2008 to February, 2009. The total procurement of maize, bajra and jowar during 2008-09 (as on 16.03.2009) was 551718 tonnes, 318179 tonnes and 48132 tonnes respectively.

(Tables 2.14 & 2.9(b))

2.43 The demand for maize is being driven by the poultry industry. Poultry meat consumption in the country is expanding at brisk pace as population is growing and eating habits are changing with increasing household income. Moreover, demand from cattle feed sector is increasing with rise in offtake of dairy and meat products, while consumption of products such as baby corn,

sweet corn, popcorn, corn oil and corn syrup by the urban population is also increasing. The other sector where maize is witnessing demand is the starch sector, while ethanol use is leading to demand for exports.

2.44 The growth in the maize sector is also raising a number of key policy issues that need to be addressed if maize is to continue to play a role in India's economic growth. These issues include providing a policy environment that facilitates increasing role of the private sector in seed production. Contract farming may be encouraged since such an arrangement provides an assured market and hence a reasonably reliable income. However, as the domestic demand is increasing at a rapid pace with rising demand from poultry and starch industry, the country needs to boost its yield to assure continued self sufficiency. Also, looking at the increased global demand, particularly in Asia, India has a huge potential to increase its market share of global trade and to make its presence felt in the global maize market.

Jowar

2.45 Jowar is used for food, fodder, the production of alcoholic beverages as well as bio-fuel. Jowar is grown in arid and semi-arid regions, as it is drought resistant. In India, it is mainly grown in the arid tracts of Gujarat, Uttar Pradesh, Karnataka, Maharashtra and Andhra Pradesh.

2.46 Production of jowar in kharif 2008-09 is estimated at 3.06 million tonnes (Second Advance Estimates, DES) as compared to 4.11 million tonnes in 2007-08. Jowar production (kharif and rabi) during 2008-09 is estimated at 7.24 million tonnes as against 7.93 million tonnes in 2007-08. During the period between 1996-97 and 2007-08, the production of jowar declined sharply by 2.09 per cent per annum as compared to a slower decline of 0.66 per cent per annum observed during the period 1986-87 to 1996-97. The decline in production was attributed to significant acreage shifts away from jowar in the states of Gujarat,

Madhya Pradesh, Karnataka and Andhra Pradesh.

(Tables 2.1 & 2.2)

2.47 Though there has been stagnancy in the yield of jowar for the past more than a decade, remarkable increase has been observed in 2007-08. In respect of yield, Andhra Pradesh is on top (1.42 tonnes per hectare), followed by Karnataka (1.32 tonnes per hectare), Gujarat (1.23 tonnes per hectare), Madhya Pradesh including Chhattisgarh (1.12 tonnes per hectare), Maharashtra (0.97 tonne per hectare), Uttar Pradesh (0.82 tonne per hectare) and Rajasthan (0.63 tonne per hectare). However, there has been a remarkable increase in the yield level of jowar in Karnataka, Gujarat, Andhra Pradesh and Rajasthan as against that of last year, while Tamil Nadu, Uttar Pradesh, Bihar and Jharkhand indicated a declining trend. Following the stagnation in production, the average WPI of jowar (base 1993-94=100) rose from 316.2 in February, 2008 to 349.1 in February, 2009, registering an increase of 10.4 per cent (Table 2.14). The prices of Jowar were ruling above MSP, in general except in the state of Madhya Pradesh. The seed replacement rate for jowar in Maharashtra and Andhra Pradesh is 100 per cent (for hybrid) and for other varieties it is 50 per cent in Andhra Pradesh, 26.29 per cent in Uttar Pradesh, 17.00 per cent in Maharashtra, 16.40 per cent in Rajasthan, 7.3 per cent in Madhya Pradesh and as low as 6.00 per cent in Tamil Nadu.

Bajra

2.48 Bajra is well adapted to production systems characterized by low rainfall, low soil fertility and high temperature. Owing to its tolerance to difficult growing conditions, the crop can be grown in areas where other cereal crops such as wheat or maize would not survive. The production of bajra is estimated at 8.85 million tonnes in 2008-09 (Second Advance Estimates) which is 1.12 million tonnes lower than the production in 2007-08. During the period between 1996-97 and 2007-08 production of bajra registered a growth rate of 2.46 per cent per

annum only as compared to a higher growth rate of 3.85 per cent observed during 1986-87 to 1996-97. The important states producing bajra are Rajasthan, Uttar Pradesh, Maharashtra, and Haryana. The state with highest production is Rajasthan with 4.22 million tonnes, followed by Uttar Pradesh (1.34 million tonnes), Haryana (1.16 million tonnes), and Maharashtra (1.13 million tonnes). (Tables 2.1 & 2.2)

2.49 The total acreage under bajra declined by 0.69 per cent per annum during the period 1986-87 to 2007-08. The state with highest yield is Haryana with 1.84 tonnes per hectare followed by 1.52 tonnes per hectare in Uttar Pradesh, 1.43 tonnes per hectare in Tamil Nadu, and 1.40 tonnes per hectare in Madhya Pradesh (including Chhattisgarh). The seed replacement rate of bajra in Maharashtra, Gujarat, Karnataka and Andhra Pradesh is 100 per cent for hybrid and for all other varieties it is 78 per cent in Uttar Pradesh, 74 per cent in Maharashtra, 61 per cent in Haryana, 53.2 in Rajasthan, 51.43 per cent in Madhya Pradesh and 27 per cent in Karnataka.

2.50 Bajra is characterized by its localized demand as well as short shelf life. The lack of adequate storage facility is creating difficulties for its cultivation. Therefore, the Government should take immediate steps to provide proper storage facilities.

2.51 The index number of wholesale prices of bajra (base 1993-94=100) which was 237.1 in February, 2008 increased to 270.2 in February, 2009, registering an increase of 14.0 per cent. But the month-end wholesale prices of bajra quoted during February 2008 - February 2009 ranged between Rs.675-950 per quintal in Rajkot (Gujarat), and Rs.650-825 per quintal in Jaipur (Rajasthan), Rs. 575-850 per quintal in Agra (U.P) and Rs. 560 to Rs 800 per quintal in Hathras as against the MSP of Rs.840 per quintal.
(Table 2.14)

Ragi

2.52 Ragi is a very hardy crop as well as a grain of great nutritive value. Ragi is grown in most of the states under dry land conditions, mainly by small and marginal farmers. Once harvested, the seeds keep extremely well and are seldom attacked by insects/pest. The long storage capacity makes ragi an important crop in risk avoidance strategies for poorer farming communities. This crop has the potential to improve nutrition, boost food security and foster rural development.

2.53 Ragi production in 2008-09, according to the Second Advance Estimates, would be 1.94 million tonnes as against the production of 2.15 million tonnes in 2007-08. The major ragi producing states are Karnataka, Tamil Nadu, Uttarakhand and Maharashtra. The production of ragi has fallen by 2.17 per cent per annum during 1996-97 to 2007-08.
(Table 2.1)

2.54 The area under ragi cultivation has been on the decline over the years. During the period 1986-87 to 2007-08, this decline was by 2.64 per cent per annum. This happened mainly in the states of Orissa, Bihar, Jharkhand, Andhra Pradesh, Gujarat and Maharashtra. The average yield of ragi is 1.55 tonnes per hectare in 2007-08. The yield of ragi is highest in Tamil Nadu at 1.88 tonnes per hectare followed by 1.80 tonnes in Karnataka and 1.40 tonnes in Uttarakhand. The seed replacement rate of ragi in Tamil Nadu is 58 per cent and 29 per cent in Karnataka. To increase productivity, the seed replacement rate needs to be improved in the major ragi growing states.

(Table 2.2)

2.55 The annual average index number of wholesale prices (Base 1993-94=100) of ragi increased by 6.0 per cent in 2008-09 (up to February, 2009) over the preceding year. The monthly index on a point to point basis rose from 5.4 per cent in January, 2008 to 15.6 per cent in February, 2009. The index stood at

260.3 in February, 2009.

(Table 2.14)

2.56 Achieving food security has been the overriding goal of agricultural policy in India. The Commission recommends that **in order to ensure food security, coarse cereals should be included as a component of ongoing National Food Security Mission.** There is a need for strengthening efforts to increase its production by increasing productivity through public investment in irrigation, infrastructure development, research, and efficient use of water and plant nutrients. Seed is the most cost efficient input in increasing the agricultural production. A strong seed sector and technology dissemination mechanism needs to be developed for widespread use of improved technologies and hybrid seeds.

Pulses

2.57 India is the world's largest producer, consumer and importer of pulses. It accounted for about. 24.1 per cent of the world production of 61.34 million tonnes during 2007-08. The sector continues to face problems of stagnant acreage and low yield levels thereby preventing production to reach higher levels. The crop faces stiff competition for acreage from wheat and rice. The productivity of pulses in India at 622 kg/ha is lower than the productivity of Asia and World at 802 kg/ha and 836 kg/ha respectively. Even the establishment of Technology Mission for Pulses (together with oilseeds) in 1986 could not make significant headway in improving the health of the sector. In 2007-08, Government of India initiated a new Scheme titled, National Food Security Mission (NFSM), which has the mandate, among others, to increase production of pulses through area expansion and productivity enhancement in a sustainable manner in the identified 168 pulse growing districts in 14 states of the country. The Programme envisages increasing the production of pulses by 2 million tonnes by the end of the Eleventh Plan.

2.58 The total pulse production during 2007-08 crop season is estimated to reach a level of 14.76 million tonnes (Final Estimates of DES), an increase of 3.94 per cent over the production of 14.20 million tonnes achieved in 2006-07. The target for 2008-09 is 15.50 million tonnes and as per the 2nd Advance Estimates for 2008-09, the production is estimated at 14.25 million tonnes, a reduction by 1.25 million tonnes from the target fixed and 0.51 million tonne less than the production of 2007-08. The production has been showing significant year to year fluctuations. The year 1998-99 recorded bumper crop of 14.91 million tonnes which reduced to 13.41 million tonnes during 1999-2000 and further to 11.08 million tonnes during 2000-01. During 2001-02, the production increased to 13.37 million tonnes, which showed a dip in 2002-03 to 11.13 million tonnes. The year 2003-04 was again a record production year of 14.91 million tonnes, which dropped to 13.13 million tonnes during 2004-05. The production has been increasing consistently since then to reach the level of 14.76 million tonnes during 2007-08. However, as per present indications the production during 2008-09 will be less than that of the 2007-08 levels. Kharif pulses accounted for a record production at 6.40 million tonnes contributing to 43.36 per cent to the total pulses output in 2007-08 and an increase of 33.3 per cent over the kharif production of 4.80 million tonnes in 2006-07. As per the 2nd Advance Estimates, the production of pulses during Kharif 2008-09 has been reported at 4.82 million tonnes against the target of 5.94 million tonnes. The Rabi pulses during 2007-08 however, showed a decline of about 8.89 per cent at 8.36 million tonnes from 9.40 million tonnes in 2006-07. Production of Tur (Arhar – Pigeon pea), the major crop in kharif pulses recorded highest production (since 1989-90) at 2.74 million tonnes in 2005-06; declined to 2.31 million tonnes, about 16 per cent, in 2006-07 but is estimated to increase sharply by about 34 per cent in 2007-08 to reach a level of 3.08 million tonnes, a new record in production of Tur. However, during 2008-09, the production is estimated to decline to 2.47 million tonnes (decline by 19.8 per cent). The production of Urad/Blackgram (Black Mapte), another major kharif pulse crop moved in a narrow range between 1.25 million tonnes to 1.50 million tonnes since 1998-99 to 2007-08. The highest

production at 1.50 million tonnes recorded in 2001-02 could not as yet be surpassed with the production during 2007-08 also estimated at a lower level of 1.46 million tonnes. As per present indications, the production during 2008-09 is expected to reduce further to reach a level of 1.02 million tonnes, lowest in the present decade. Similarly, in case of Moong (Green Gram), highest production was recorded in 2003-04 at 1.70 million tonnes, while it fluctuated in the range of 0.87 million tonnes to 1 million tonnes in the other years. The anticipated production during 2007-08 and 2008-09 are 1.52 million tonnes and 0.54 million tonnes respectively. The steep decline in production of pulses projected for 2008-09 is also an indication that the impact of NFSM is yet to be felt at the ground level.

(Table 2.1)

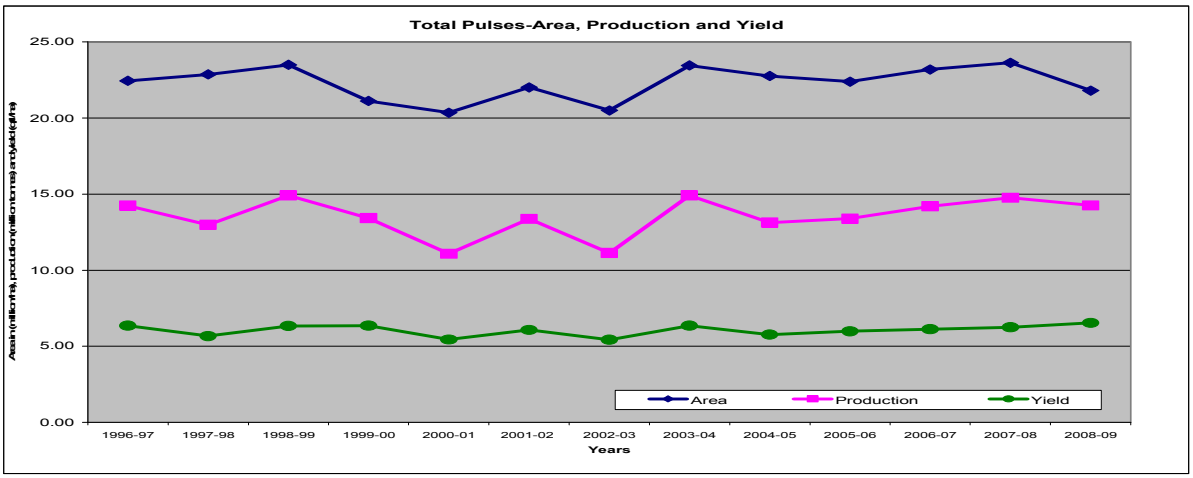
2.59 For more than fifty years from 1953-54 to 2007-08, the total area under pulses cultivation in India remained virtually stagnant (fluctuating between 20 - 24 million hectares). The peak level of 24.83 million hectares achieved in 1959-60 could not as yet be reached. However, the area coverage estimated for 2007-08 at 23.63 million hectares is the highest coverage achieved since 1990-91. Contrary to area, the yield levels under pulses increased, though with ups and downs, from 473 kg/ha in 1980-81 to 578 kg/ha in 1990-91, and attained the peak 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 consistently increased thereafter and the yield estimate for 2007-08 is 625 kg/ha.

(Table 2.1)

2.60 Stagnancy in area and persistent low levels of yield have been of great concern in respect of pulses cultivation. However, one redeeming factor, which the decadal comparison brings out, is the better performance of pulses in the current decade, in all the three parameters of area, production and yield. During the years 2000-01 to 2007-08, the annual growth rate in area was 1.91 per cent compared to (-) 0.60 per cent achieved in 1990-91 to 1999-2000 and (-) 0.09 per cent of 1980-81 to 1989-90. Growth rate in production was 3.42 per cent during

the current decade so far compared to 0.59 per cent of 1990-91 to 1999-00 and 1.52 per cent of 1980-81 to 1989-90. The yield rates also depict similar pattern, ie., 1.65 per cent during 2000-01 to 2007-08; 0.93 per cent during 1990-91 to 1999-00 and 1.61 per cent during 1980-81 to 1989-90. The trends in area, production and yield in respect of pulses are shown in the Chart 2:

Chart 2: Area, Production and Yield of Pulses



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

2.61 Pulses are grown in both kharif and rabi seasons. Kharif pulses in terms of total production of pulses, accounted for 36 per cent in 2005-06, decreased to 34 per cent in 2006-07 and further increased substantially to 43 per cent due to conducive weather conditions during 2007-08 (Final estimates). However, as per present indications, the share of the kharif pulses would reduce to about 34 per cent during 2008-09. The rate of growth of kharif production which was 0.88 per cent during 1986-87 to 1996-97, increased to 1.06 per cent during 1996-97 to 2007-08, mainly due to increase in area, which grew at 0.72 per cent during the period. Productivity increases (0.34 per cent) also contributed to the above.

2.62 The major pulses growing states include Madhya Pradesh, Maharashtra, Andhra Pradesh, Uttar Pradesh and Rajasthan, contributing about 70 per cent to the production and 68.6 per cent to the area under pulses in the country (2007-08). Maharashtra leads in production of total pulses (2007-08), accounting for 20

per cent of the production in the country followed by Madhya Pradesh (16.6 per cent), Andhra Pradesh (11.5 per cent), Uttar Pradesh (10.7per cent), and Rajasthan (10.5 per cent).

2.63 One reason for the stagnancy in area, production and productivity in pulses cultivation is the conditions in which the crop is generally grown, which is rain-fed and in vast domains of arid and semi-arid regions of Central, Western and Peninsular India. The levels of production, productivity and area under pulses are generally determined by the weather/climatic conditions, primarily the coverage of monsoon. A look at the statistics from 1990-91 up to 2007-08 reveals that the trend in area under pulses shows wide variation in rabi crops and not much deviation in kharif crops. The impact of weather is more pronounced on production of rabi pulses, causing high variations in the total production of pulses. The erratic and irregular situations of monsoon affect timely sowing of crops and its productivity. The irrigation coverage under the crop is low across the major producing states, with Madhya Pradesh having the highest irrigated area of 33.5 per cent, with all-India position at 15.1 per cent. The state-wise position as on 2005-06 is indicated in the Table 2.6:

Table 2.6: Irrigation coverage under Pulse Cultivation

State	Coverage under irrigation (in %age)-2005-06
Madhya Pradesh	33.5
Maharashtra	23.4
Uttar Pradesh	11.3
Rajasthan	1.1
AP	5.4
Karnataka	12.0
Gujarat	10.2

Haryana	31.9
Bihar	4.7
All-India	15.1

Source: Agricultural Statistics at a Glance, 2008

2.64 While the requirement of water for pulses is much lower than that of most of other crops, the importance of irrigation arises from the need to have timely application of water, which a rainfed area may not be able to provide. The Technology Mission on Oilseeds and Pulses set up in 1986 and other specialized research institutions like the Institute of Pulses Development have not succeeded in breaking the impact of weather on the production of pulses. Hence expansion of irrigation facilities and development of technologies suitable for semi arid/ arid zones are two important areas, which require the attention of National Food Security Mission, which has a mandate to increase the pulses production to 2 million tonnes by the end of 11th Plan.

(Table 2.1)

2.65 The per capita per year net availability of pulses in the country, during the period from 1951 to 2007, was reduced to half from 22.1 kg to 10.7 kg. During the 1950's and up to 1963, it was fluctuating in the range of 22-27 kg, during the 1966 to 1976 it further declined and remained in the range of 17.6-18.7 kg and thereafter it was continuously fluctuating in a low range of 10.7-13.8 kg up to 2007. Evidently, the production of pulses has failed to keep pace with the increase in population of the country. Ups and downs and long term static production of pulses combined with increasing consumption have necessitated continued large scale imports. The status with regard to import of pulses in the recent years is shown in the Table 2.7:

Table: 2.7 Import of Pulses

Year	Quantity (000 tonnes)	Value (Rs. in crore)

2004-05	1312.17	1741.72
2005-06	1696.52	2477.29
2006-07	2270.98	3891.91
2007-08	2830.53	5367.89
2008-09 (Apr-July 08)	648.24	1598.47

Source: DGCI&S,Kolkata; P-Provisional

The status with regard to demand and supply of pulses in the country is provided in the Table 2.8.

Table: 2.8 Demand and Supply Situation of Pulses

(Million Tonnes)

Crop Year (July-June)	2003-04	2004-05	2005-06	2006-07	2007-08	2008-09
Fiscal Year (April-March)	2004-05	2005-06	2006-07	2007-08	2008-09	2009-10
Gross Production						
Tur	2.36	2.35	2.74	2.31	3.08	2.47
Other Kharif Pulses	3.81	2.37	2.13	2.49	3.32	2.35
Gram	5.72	5.47	5.60	6.33	5.75	6.54
Other Rabi Pulses	3.02	2.94	2.92	3.07	2.61	2.89
All Pulses	**14.91**	**13.13**	**13.39**	**14.20**	**14.76**	**14.25**
Net Production (87.5% of Gross Production)	**13.05**	**11.49**	**11.72**	**12.43**	**12.92**	**12.46**
Procurement All Pulses (NAFED)	Negligible	Negligible	Nil	Nil	Nil	Negligible$
Export(FY) All Pulses	**0.28**	**0.45**	**0.25**	**0.25**	**0.17**	**0.17#**
Import(FY) All Pulses	**1.31**	**1.70**	**2.27**	**2.83**	**2.83**	**2.83#**
Supply(FY)	14.08	12.74	13.74	14.45	15.58	15.12
Consumption Demand			17.38@	17.71@	16.77*	17.51*

Source:- Production data from Directorate of Economics & Statistics and Export Import data from DGCI & S, Kolkata.
@ Projection made in the 10th Plan * Projection made in the 11th Plan .
$(as per present indications); # 2007-08 status repeated.

2.66 The unit value of imports of pulses during the last 4 years has increased to 64 per cent at Rs.22.17/kg in 2007-08 from Rs.13.51/kg in 2003-04. The increase in the import prices can be attributed to speculative activities in the international

market considering the position of India as a larger importer of pulses. India's position as net importer of pulses is expected to continue in the coming years also considering land constraints, competition from more remunerative crops, lack of technology breakthrough etc. In such a situation, there is a need to explore long term supply arrangements with suppliers in the world trade so that the required quantity of imports would be assured on sustainable basis

2.67 The wholesale prices of pulses have been fluctuating widely in recent years. The Wholesale Price Index (WPI) of pulses (base 1993-94=100) increased from 179.6 in 2000-01 to 189.2 in 2001-02 (5.3 per cent), but dropped to 180.6 (-4.6 per cent) in 2002-03, 176.6 (-2.2 per cent) in 2003-04 and 174.4(-1.3 per cent) in 2004-05. The prices increased to 194.9 (11.8 per cent) in 2005-06 and 254.2 (30.4 per cent) in 2006-07 but declined to 243.2 (-4.3 per cent) in 2007-08 and further increased to 272.3 in February, 2009, an increase of 16.9 per cent compared to the corresponding month of the last year. The prices during 2008-09 are expected to remain steady due to reports of lower production in kharif 2008.

(Table 2.15)

2.68 Procurement operations of pulses are undertaken by NAFED. Except 2096 tonnes of urad procured in 2004-05, no procurement of pulses has been made by NAFED under the price support scheme (PSS) up to 2007-08 as the prices of pulses continuously remained above the levels of MSP. As reported by NAFED during the current kharif 2008, in-spite of 40 per cent increase in MSP over the previous year, the market prices were ruling well above the MSP levels in case of Moong, Urad and Tur, except in case of Urad in West Bengal, NAFED reported purchase of 302 tonnes of urad.

Oilseeds

2.69 The estimated production of nine cultivated oilseeds in India during the year 2007-08 is 29.76 million tonnes, an increase of 22.52 per cent from 24.29 million tonnes achieved during the previous year. The target for 2008-09 is 31.75 million tonnes, however as per 2nd Advance Estimates of DES, production of oilseeds is projected to decline to 25.96 million tonnes, decline of 18.24 per cent from the target envisaged and 12.75 per cent from the production achieved in 2007-08. As per the 2nd Advance Estimates for 2008-09, the kharif production will be 16.32 million tonnes, showing a deficit of 4.39 million tonnes over the 2007-08 kharif production India accounts for about 6-7 per cent of the world's oilseeds production and is the fourth largest producer of oilseeds in the world after USA, China and Brazil. However, due to its low productivity and high consumption, India has become the largest importer of edible oils in the world. (Table 2.1)

2.70 India produces all the major oilseeds, viz., groundnut, soyabean, sunflower, nigerseed, sesamum, linseed, castorseed, rapeseed/mustard and safflower. The major oilseeds producing states are Madhya Pradesh, Gujarat, Maharashtra, Rajasthan, Karnataka, Andhra Pradesh and Uttar Pradesh. Soyabean, groundnut and mustard together account for about 88 per cent of the total oilseeds production.

2.71 The production of oilseeds has been moving in the range of 24-30 million tonnes during the last five years starting from 2003-04, with year to year fluctuations. The year 2003-04 was significant since it witnessed 69.7 per cent increase in production of oilseeds over the 14.84 million tonnes achieved in 2002-03, one of the worst years in oilseeds production since 1997-98. Oilseeds production which was generally stagnating at around 7-9 million tonnes during

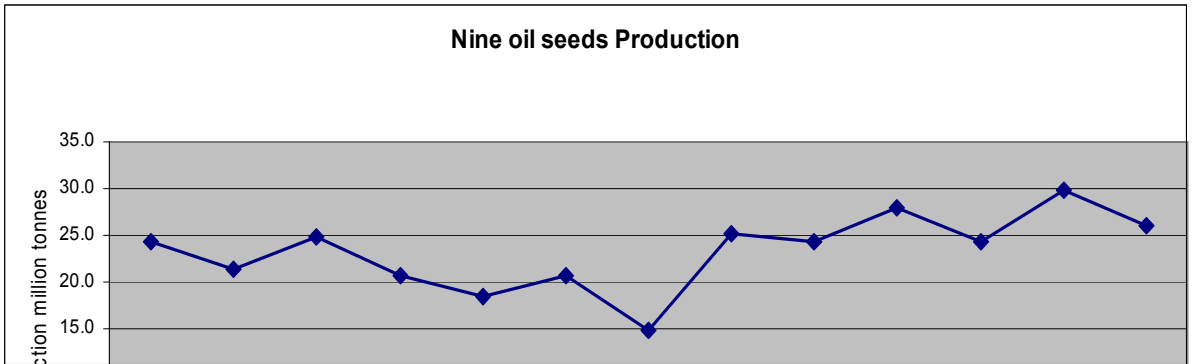
1950-51 to 1980-81, moved in the range of 10-12 million tonnes from 1980-81 to 1987-88. From 1987-88, one could perceive a sudden improvement in the production scenario, which can be attributed to the initial success achieved by the Technology Mission on Oilseeds, Pulses and Maize (TMOP&M), set up in 1986 to achieve self- sufficiency in the production of oilseeds together with pulses and maize. However, the production of 24.38 million tonnes achieved in 1996-97 could not be improved upon further in a consistent way. Production as latest as 2006-07 at 24.29 million tonnes fell short of the achievement of 1996-97. This can be due to lack of technology to evolve high yielding seeds suitable under rain-fed conditions and limited spread of irrigation in the oilseeds grown areas. The yearly ups and downs in production is a pointer to the fact that monsoon still decides the fate of the oilseeds production. The sharp decline of oilseeds production to 14.84 million tonnes in 2002-03 was mainly attributed to failure of monsoon and the recovery in production in 2003-04 to 25.19 million tonnes and in 2005-06 to 27.98 million tonnes again were primarily due to good, timely and evenly distributed monsoon.

2.72 The production of oilseeds showed a reduction in 2006-07 to a level of 24.29 million tonnes due to uneven distribution of monsoon rains but increased in 2007-08 (Final estimates) reaching the highest at 29.76 million tonnes, again attributed to good rainfall. The performance of the current decade so far has been significantly better than the earlier decades. The present decade (2000-01 to 2007-08) so far has an annual growth rate of 7.23 per cent compared to 1.42 per cent per annum achieved in 1990-91 to 1999-2000 and 5.36 per cent of 1980-81 to 1989-90.

(Table 2.1)

The trend in production of oilseeds is shown in the Chart 3.

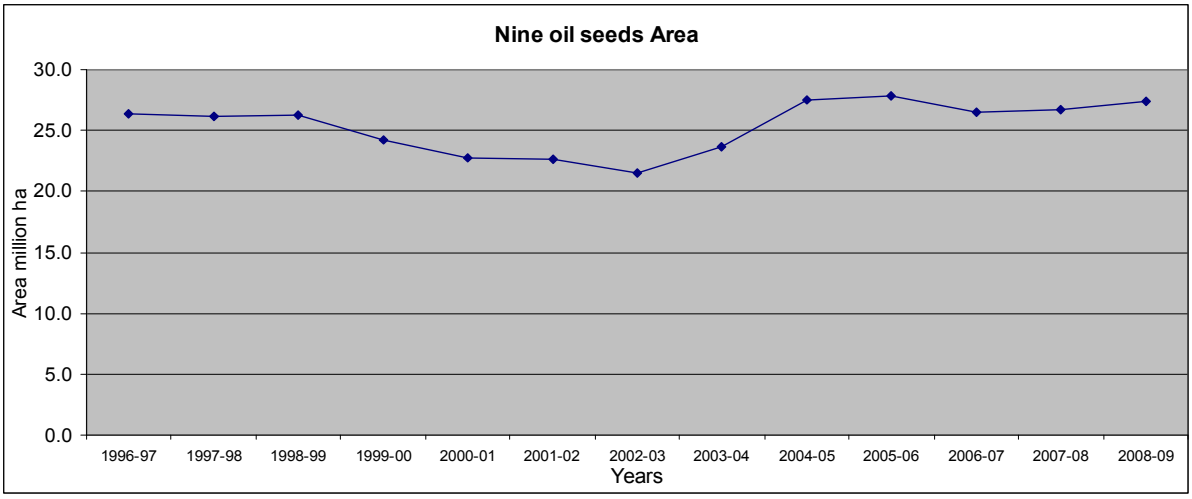
Chart 3 : Production Trends in Oilseeds



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

2.73 Area coverage under oilseeds shows year to year fluctuations. The years 2004-05 and 2005-06 witnessed the highest coverage under the crop at 27.22 million hectares and 27.86 million hectares respectively. However, this could not be sustained with the area coverage falling to 26.51 million hectares during 2006-07. The year 2007-08 showed marginal increase to 26.69 million hectares. The average growth in area during 1994-95 to 2007-08 was only 0.09 per cent. Negative growth rates in respect of groundnut (-) 1.56 and sesamum (-) 1.17 were responsible for this low growth, though some of the oilseeds like soyabean showed significant increase in the area coverage at 5.38 per cent. Decade-wise comparison shows better performance during the current decade so far at 3.38 per cent per annum compared to 0.17 per cent increase per annum of 1990-91 to 1999-2000 and 2.47 per cent per annum achieved during 1980-81 to 1989-90. The trend in area coverage under oilseeds is indicated in the Chart 4.

Chart 4 : Area Sown under Oilseeds



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

2.74 In tandem with the improvements in area and production of oilseeds during the current decade, productivity has also increased. The annual growth of yield during 2000-01 to 2007-08 was 3.70 per cent per annum. This compares well with the achievements of 1990-91 to 1999-2000 and 1980-81 to 1989-90 at 1.42 and 2.49 per cent respectively. However, the productivity levels are still lower than other producing countries and world average, which can be seen from Table 2.9 below. In case of Soyabean, it stands about one third of the world average and 40-50 per cent of the yield in China and Indtonnesia, while about one fourth of the yield levels of USA. As regard to productivity of Groundnut, it was about 36, 38 and 74 per cent of the yield in USA, China and world average respectively.

Table 2.9 : International Comparison of Productivity of Major Kharif Oilseeds

(Yield in kg/ha)

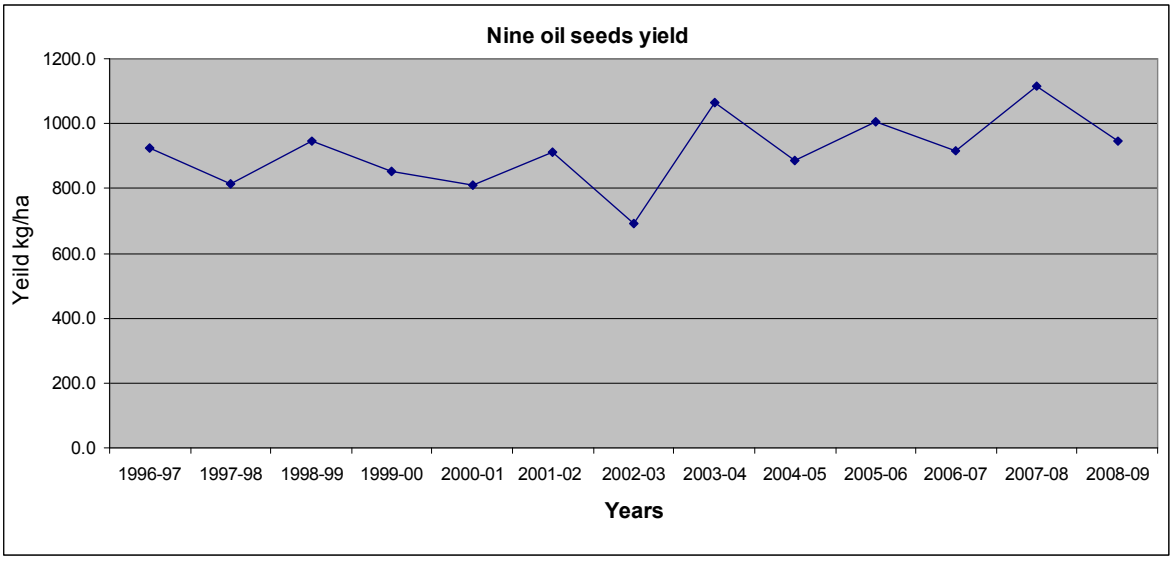
Country	Soyabean (2004-05)	Groundnut (2005-06)	Sunflower (2004-05)
Argentina	2200	-	1701
Brazil	2291	-	-
China	1796	3074	1594
India	764	1179	604
Indtonnesia	1298	1994	-
U.S.A	2856	3317	1342

World	2234	1602	1218

Source: Directorate of Oilseeds Development, Hyderabad- network

The movement in the yield levels of oilseeds during the last ten years is shown in the Chart 5.

Chart 5: Yield levels of Oilseeds



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

2.75 The reasons for low yields are broadly the same as in case of other crops, viz., outdated 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 degradation of soil health. Hence, increasing the irrigation facility for oilseeds production which is presently at a low level of 25 per cent and adoption of research on various aspects of harvest and post-harvest operations, carried out by the ICAR institutes by the farmers through demonstration and extension facilities can go a long way in improving the yields of the oilseed crops in India.

2.76 The financial year 2008-09 started with a wholesale price index of 240.7 which consistently increased to reach a high of 259.8 in July, 2008, registering an

increase of 7.94 per cent. The prices, since July, 2008 have softened to reach an index of 237.8 in February, 2009. The average price index for the current year, up to February, 2009 showed an increase of 14.56 per cent compared to the corresponding period of the last year. While all the crops continued the upward movement of prices, the increases were higher than the previous year in respect of rapeseed/mustard and sesamum seed. In respect of all other crops, the price increases softened during the current year compared to 2007-08, as shown in the Table 2.10.

Table 2.10: Percentage Change in Index of Wholesale Prices of Oilseeds

Commodity	Year	April index	February Index	Average index (Apr-Feb)	% change in index from previous year
Oilseeds	2006-07			173.5	
	2007-08	203.8	235.4	215.6	24.26
	2008-09	240.7	237.8	247.0	14.56
Rapeseed/ Mustard	2006-07			171.1	
	2007-08	191.2	219.8	201.1	17.53
	2008-09	226.9	240.8	254.9	26.75
Safflowerseed	2006-07			143.1	
	2007-08	159.6	169.3	165.6	15.68
	2008-09	169.3	193.8	191.1	15.43
Groundnut	2006-07			186.8	
	2007-08	225.9	246.3	238.8	27.83
	2008-09	250.5	242.2	251.3	5.24
Soyabean	2006-07			143.5	
	2007-08	173.1	217.6	184.0	28.19
	2008-09	223.5	220.5	227.1	23.47
Sunflowerseed	2006-07			194.7	
	2007-08	227.9	286.7	250.2	28.53
	2008-09	264.8	241.1	254.5	1.69
Sesamum seed	2006-07			185.4	
	2007-08	195.0	250.2	199.9	7.81
	2008-09	277.2	280.4	265.2	32.67
Nigerseed	2006-07			207.9	
	2007-08	350.5	474.4	380.3	82.94
	2008-09	551.0	432.7	490.3	28.94

Source: Compiled from data from O/o of Economic Adviser, M/o of Commerce & Industry

2.77 In view of the prevailing high prices of oilseeds, NAFED, the central procurement agency for oilseeds has not procured oilseeds during the season as the market prices of all kharif oilseeds were ruling well above the MSP, except

sunflower seeds (4392 tonnes) and groundnut (40 tonnes) reported as purchased by the NAFED under price support scheme. The reasons for the price increases of oilseeds during the last two years can be attributed to factors, both domestic and global. Domestically, there exists a gap between domestic demand and availability of vegetable oils, as indicated in the Table 2.11.

Table 2.11: Demand and Supply of Edible Oils

(In lakh Tonnes)

Oil year (Nov-Oct)	Production of Oilseeds	Net availability of edible oils from all domestic sources	Consumption of edible oils (domestic+ import sources)	Gap between domestic demand and supply
1	2	3	4	5
2001-02	206.63	61.46	104.68	43.22
2002-03	148.39	46.64	90.29	43.65
2003-04	251.86	71.40	124.30	52.90
2004-05	243.54	72.47	117.89	45.42
2005-06	279.79	83.16	126.04	42.88
2006-07	242.89	73.70	115.87	42.17
2007-08	297.55	87.74.*	133.95	46.21

Source: Directorate of Vanaspati, Vegetable Oils & Fat; Column 5 –estimated.
*** estimated proportionately to increased production estimates for 2007-08 (as per the final estimates of DES)**

2.78 During 2007-08, though domestic production of oilseeds and net availability of oils were higher, the demand-supply gap was expected to increase due to increase in domestic consumption. Internationally, the FAO global price index for oilseeds and oils/fats reached highs of 295 and 292 points in June, 2008 implying percentage increases of up to 150 from the 2006 levels. The prices however started declining in July 2008 and the declining trend continued through October, 2008. The factors which triggered the decline in the prices of oilseeds and oil include poor demand for oilseeds and products and excellent production prospects for 2008-09; recent downturn in energy prices reducing the demand for oil in the feed and bio-diesel requirements. FAO's first supply and demand forecast for 2008-09 (October-September) indicates prices of oilseed complex to strengthen slightly. The volatility seen in the prices during 2007-08

could remain in 2008-09 also mainly due to uncertainties in the market (notably the course which the economic slowdown would take in the coming months).

2.79 Imports of edible oils have been regularly resorted to bridge the gap between demand and availability. The trend in the imports of vegetable oils during the last nine years is shown in the Table 2.12.

Table 2.12 : Imports of Edible Oils

Year (April-March)	Quantity (in lakh tonnes)	Value(Rs. in 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
2008-09 (Apr- July)	17.19	3620.38	21.06

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

2.80 The import duty structure has been reviewed from time to time, depending on the domestic demand and supply positions. Keeping in view the rising prices of edible oils in 2007-08, the import duties were drastically reduced to 7.5% in the case of refined and nil duty for import of crude edible oil. Zero import duty on crude palm oil and its distribution at a subsidized price through PDS in some states have placed the domestic oil sector at a disadvantage. Government has recently cut the twenty per cent import duty on crude soyabean oil to 'nil' with a view to keep the domestic prices stable. However, Government needs to constantly review the impact of the above liberal import duty structure on the domestic oil seeds sector so that the farmers do not suffer from cheaper imported oils.

2.81 The higher dependence on imports has its own disadvantages, especially in the current scenario of abrupt increases/decreases in global prices, which witnessed abnormal increase up to July 2008 and sharp decline thereafter due to economic meltdown. Due to reduction in the crude oil prices and the on-going economic slowdown, the global prices may remain moderate. However, the above contributory factors which are moderating edible oil prices presently may not remain long and in the medium term, the international prices may shoot up. Hence, there does not appear to be an alternative but to enhance the domestic availability of edible oils.

2.82 Production of oils from secondary sources is one option to augment net availability of edible oils in the country. As indicated in the Table 2.13, while increases in production were witnessed in case of rice bran oil and cotton seed oil during the last two years, production of tree born oilseeds and coconut oil has been remaining at the same level of 1.20 lakh tonnes and 4.50 lakh tonnes respectively. The commission recommends that i**n view of the urgent need to augment domestic availability of edible oils, the oilseed crops of secondary sources should be given special attention.**

Table 2.13 : Production of Vegetable Oils from secondary sources.

(In Lakh Tonnes)

Secondary sources	2003-04	2004-05	2005-06	2006-07	2007-08
Coconut	5.50	5.50	4.20	4.50	4.50
Cottonseed	4.30	4.30	5.70	6.30	8.00
Ricebran	6.00	6.20	6.80	7.00	7.20
Solvent extracted Oils	3.30	3.50	4.30	3.50	4.00
Tree & forest origin	0.80	0.80	1.30	1.20	1.20
Total	19.90	20.30	22.30	22.50	24.90

Source: Directorate of Vanaspati, Vegetable oils and Fats.

2.83 Oil Palm is considered to be the highest oil yielding perennial crop as reported by TMOP, capable of yield rates which are 10-15 times higher than obtainable from traditional oilseeds. Since the palm oil is capable of yielding much more than the yield of edible oils obtained from traditional oilseeds, more

emphasis need to be given for availability of adequate infrastructure under the Oil Palm Development Programme. Some of the suggestions for improvement of the crop prospects, which came up during interactions with the stakeholders include; (i) declare cultivation of oil palm as plantation crop; (ii) enactment of oil palm Act by defaulting states to ensure buy-back of oil palm fresh fruit bunches (FFBs); (iii) establishment and maintenance of seed gardens for production and availability of seeds within the country; (Iv) research for reducing the gestation period of the crop, for developing dwarf and water resistant varieties and hybrids for direct transplantation into fields and development of tissue culture; and (v) water harvesting /water conservation and irrigation systems to be taken up on a priority basis.

2.84 Global trends in production and prices influence domestic oilseed economy in view of India's position as one of the largest importer of edible oil in the world. Global oilseed production in 2008-09 is forecast to increase by 7 per cent from 2007-08 level, mainly on account of huge increases estimated in the production of soyabean and rapeseed/mustard at 8 per cent and 12 per cent respectively. Among the countries, total output is anticipated to rise in the two main oil/fat consuming nations of China and India. Favourable weather conditions in several regions, increased application of fertilizers by farmers, continued prospects in growth of demand and farmer's response to above average oilseed prices have contributed to the anticipated increase. The Table 2.14 indicates the position.

Table 2.14: World production of major oilseeds

(million tonnes)

Crops	2006-07	2007-08 estimate	2008-09 forecast
Soyabeans	235.9	220.6	238.0
Cottonseed	44.6	44.1	42.4
Rapeseed	47.6	48.9	55.0
Groundnut (unshelled)	34.0	35.4	35.9
Sunflower	30.2	28.5	31.8
Palm kernels	10.1	11.1	11.8
Copra	5.0	5.2	5.4

Total	407.4	393.8	420.3

Source: Food outlook, FAO- November 2008

2.85 The unprecedented increases in the global oilseed and oilseed product prices which started in 2006, continued through 2007 till June 2008 when the FAO price indices for oilseeds, oils/fats and meals/cakes reached historic highs of 295, 292 and 279 points respectively, increases of up to 150 per cent from 2006 levels. Expanding demand which resulted in sharp reduction in inventories was one of the reasons for the price rise. However, from July 2008 prices started declining and by October 2008, FAO Price Indices tumbled back to 2006-07 level mainly because of poor demand caused by economic slowdown and better production prospects for 2008-09 season. Besides this, the recent downturn in energy prices also contributed to the fall in prices. As per the FAO's estimates of global demand and supply, the international prices for oilseeds and oilseed products during 2008-09 are expected to stabilize and possibly strengthen slightly. Though, the production is expected to rise, market fundamentals are expected to remain relatively tight due to low opening stock and other contributing factors that farmers world wide confronted like substantial increase in cost of production, and continued competition among arable crops for land.

2.86 Global consumption demand for oil/fat during 2008-09 is expected to increase by 4 per cent, half of which would be accounted for by food uses and the other half by non-food uses notably biofuel. The recent decline in international prices may trigger the demand but global economic recession could dampen growth in consumption. Overall, growth in world consumption of oil/fat would depend on the extent of effect of economic recession despite the lower prices at present. Among countries, consumption is expected to increase by 4 per cent in China, India and United States, while the prices will increase at a lower rate in the European Union.

The world supply and demand position in respect of oilseeds and products is shown in the Table: 2.15.

Table 2.15 : World Oilseeds and Products Market

(In Million Tonnes)

Product	2006-07	2007-08 (estimated)	2008-09 (forecast)
Total Oilseeds			
Production	417.8	403.8	430.5
Oils and Fats			
Production	152.6	155.4	163.0
Supply	173.7	177.5	183.4
Utilisation	151.6	155.9	161.5
Trade	76.2	80.7	83.3
Stock-to-utilisation ratio (%)	14.5	13.1	13.5
Meals & Cakes			
Production	106.1	102.0	108.8
Supply	121.6	120.3	122.6
Utilisation	102.0	104.9	107.8
Trade	58.6	62.6	62.8
Stock-to-utilisation ratio	17.6	13.4	13.8

Source: FAO, Food Outlook, November 2008.

2.87 The Commission recommends MSP for five oilseeds crops viz. Groundnut, Sunflower seed, Soyabean, Sesamum and Nigerseed during Kharif season. The status of these crops in respect of area, production, demand and prices etc. is indicated below:

Soyabean

2.88 Soyabean is the single largest oilseed crop cultivated in India in terms of area (33 per cent of the total area under oilseed crops) and production (37 per cent of the total oilseed production and more than 50 per cent of kharif oilseeds). The magnitude of expansion of the crop can be seen from the growth rates of area and production during 1994-95 to 2007-08 at 5.38 per cent, and 7.82 per cent respectively. However the yield rates grew at a much lower rate of 2.18 per cent, which is lower than the growth in yield levels achieved by other kharif oilseed crops. One reason may be the predominance of the crop under rain-fed conditions (98.3 per cent) and the dependence on weather conditions. Rajasthan

has the maximum area under irrigation (11.4 per cent) among the major producing states, followed by Karnataka (10.9 per cent); Andhra Pradesh (2.6 per cent); and Madhya Pradesh and Maharashtra at 0.5 per cent. Considering the growing importance of the crop domestically and globally as a protein food for nutritional health and in feed, energy and bio-fuel sectors, steps should be taken to enhance the yield levels through assured irrigation and scientific farm practices including improved seeds. The Final Estimates for 2007-08 has put the production at 109.68 lakh tonnes, an increase of about 21.17 lakh tonnes over the last year's production. However, the production during 2008-09 is estimated at 90.45 lakh tonnes, decline by 6.30 per cent over the target of 96.54 lakh tonnes and reduction by 17.5 per cent over the 2007-08 production levels. The wholesale price index of the crop, which was at 223.5 points in April 2008, decreased to 220.5 in February 2009, a decline by 1.3 per cent. However, for the whole of current year up to February 2009, the price index showed an increase of 23.47 per cent over the corresponding period of the previos year. Globally, the production of soyabean is expected to increase by 8 per cent in 2008-09 from the 2007-08 level of 220.6 million tonnes to 238.0 million tonnes. The movement of the prices of soyabean in the international markets is projected to be in tandem with other oilseeds, as indicated earlier. (Table 2.1)

Groundnut

2.89 Groundnut has traditionally been a leading oilseed crop, accounting for about 21 per cent of the area under oilseeds and 32.5 per cent of the oilseeds production (2007-08). The production at 91.83 lakh tonnes during 2007-08 constitutes about 26 per cent of the world production. The area coverage under the crop has shown negative growth during the current decade, 2000-01 to 2007-08, so far at (-) 0.23 per cent per annum, though better than the performance during 1990-91 to 1999-200 (-2.31 per cent per annum). However, the encouraging factors are the 3.17 per cent per annum growth achieved in

production and 3.41 per cent per annum growth in yield rates during the current decade. This shows that the increases in production during the recent years have been mainly due to increases in productivity. During 2007-08, area, production and yield increased to 62.92 lakh ha, 91.83 lakh tonnes and 1459 kg/ha as compared to 56.15 lakh hectares, 48.64 lakh tonnes and 866 kg/ha in 2006-07 respectively. As per the Second Advance Estimates for 2008-09, the production is expected to decrease to 66.17 lakh tonnes, decrease of about 25.66 lakh tonnes over the last year's production. The crop is grown mainly in the states of Gujarat, Andhra Pradesh, Karnataka, Tamil Nadu, Maharashtra, Madhya Pradesh, Orissa and Punjab, with Gujarat, Andhra Pradesh and Tamil Nadu accounting for about 76 per cent of the total production and 66 per cent of the total area. The yield rates in the states of Gujarat (1777 kg/ha.), Tamil Nadu(1957 kg/ha.) and Rajasthan (1728 kg/ha.) are significantly higher than the All India Average 1459 kg/ha. (as per 2007-08 states), while Karnataka (807 kg/ha.), Madhya Pradesh (979 kg/ha.), Uttar Pradesh (602 kg/ha.) and Punjab (871 kg/ha.) are at the lower end of the spectrum. The average WPI increased to 190.0 and 239.3 points in 2006-07 and 2007-08 respectively from 171.9 in 2005-06 registering an increase of 10.5 and 25.9 per cent over the period. The average price index during the current year from April to February 2009 was 251.3 points, an increase of 5.24 per cent over the corresponding period of the previous year, a modest increase compared to other oilseed crops, except sunflower.

(Tables 2.1 & 2.16)

Nigerseed

2.90 Though nigerseed is an oilseed crop, globally, it is known for its use as a high value bird feed in many countries especially USA. The major producing

countries are Ethiopia and India. In India, the crop is grown mainly in the marginal lands of the tribal areas of Madhya Pradesh, Chhattisgarh, Orissa, Maharashtra and Karnataka. India exports, on an average, about 24000 tonnes yearly. The crop presently occupies about 2 per cent of the area under oilseeds and less than 1 per cent of the production of oilseeds in the country. The area, production and yield have been consistently decreasing over the years. As per the 2007-08 estimates, area, production and yield are estimated at 4.07 lakh hectares, 1.10 lakh tonnes and 268 kg/ha respectively, an indication of declining trend in all three parameters. As per the 2nd Advance production Estimates for 2008-09, the production of the crop will be 1.04 lakh tonnes, a decline of 0.06 lakh tonnes from the previous year and by 0.67 lakh tonnes from the target fixed. The trend in production shows significant year to year fluctuations which can be attributed to prevailing weather situations, since the crop is cultivated in mainly rain-fed areas. The price increase during 2008-09 (up to February, 2009), at 28.94 per cent over the corresponding period of the last year was modest compared to 2007-08 price increases, which witnessed an increase of 82.94 per cent over 2006-07 prices. Though the importance of the crop in terms of volume of production may be low, considering the export potential of the crop, efforts should be taken to enhance the productivity and production of the crop under ISOPOM.

The volume of nigerseed exported during 2000-01 to 2007-08 is given in the table 2.16.

Table 2.16: Exports of Nigerseed

Year	Quantity (In 000'tonnes)	Value (In Rs. Crore)	Unit value (In 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(Apr-July)	7.53	33.37	44.34

Source: DGCI&S, Kolkata

Sesamum

2.91 Sesamum accounts for about 6.7 per cent of the area and 2.7 per cent of the production (2007-08) of oilseeds in the country. India ranks first both in production and area under the crop in the world. The crop is mainly grown in Rajasthan, Gujarat, M.P. and U.P and in limited areas in Andhra Pradesh, Maharashtra, Orissa, Tamil Nadu and Chhattisgarh. During the last ten years, the area has been in the range of 1.40 million hectares to 1.80 million hectares with year to year fluctuations. The coverage of 1.80 million hectares achieved in 2007-08 was higher than the area coverage in 2006-07 by 0.10 million hectares. Production also has been showing year to year fluctuations. It reached a peak level of 0.78 million tonnes in 2003-04, however consistently declined in the next three years to reach a level of 0.62 million tonnes in 2006-07. The production increased to 0.76 million tonnes in 2007-08, however as per the 2nd Advance Estimates of production for 2008-09, the production is expected to register a decline of about 12 per cent to reach a level of 0.67 million tonnes. The crop

yield varied widely in different states, from 901 kg/ha in West Bengal to 177 kg/ha in Uttar Pradesh (TE 2007-08). (Table 2.1)

2.92 The importance of the crop arises from its export potential which has been steadily increasing from 1.83 lakh tonnes in 2000-01 to 3.17 lakh tonnes in 2007-08. Prices realized through exports have also shown steady increases and have witnessed about 83 per cent increase in 2007-08 over 2000-01 prices. The position is given in the table 2.17.

Table 2.17 : Exports of Sesamumseed

Year	Quantity (In 000'Tonnes)	Value (In Rs. Crore)	Unit Value (In 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(Apr-July)	85.45	706.69	82.70

Source: DGCI&S, Kolkata

Sunflower

2.93 The importance of sunflower as an edible oil has been increasing in the recent years. In terms of area and production the crop occupies fourth position after groundnut, Rapeseed and Mustard and Soyabean. Major producers of the crop include Karnataka, Andhra Pradesh and Maharashtra and the crop is also grown in small quantities in Tamil Nadu, Bihar, Chhattisgarh and Orissa. The area coverage under the crop had shown steady increase from 2001-02 at 11.77 lakh hectares to 23.40 lakh hectares during 2005-06. However, the area declined in 2006-07 and 2007-08 to 21.65 lakh hectares and to 19.11 lakh hectares in 2007-08. Production also showed consistent increases during the period from 2001-02 to 2005-06, from 6.8 lakh tonnes to 14.39 lakh tonnes.

However, production declined to 12.28 lakh tonnes during 2006-07 but again increased to 14.63 lakh tonnes in 2007-08. The second advance estimates of the Ministry of Agriculture for 2008-09 has put the production of this crop at 11.12 lakh tonnes, which is lower by 3.51 lakh tonnes achieved during 2007-08 kharif season. (Table 2.1)

2.94 The yield has been showing significant year to year fluctuations with yield rates falling from 600 kg/ha in 2000-01 to 577 kg/ha in 2001-02, further to 532 kg/ha in 2002-03 and to 465 kg/ha in 2003-04. However, the yield rates improved in 2004-05 and 2005-06 to 551 kg/ha and 615 kg/ha. The year 2006-07 witnessed decline in yield to 567 kg/ha, which was reversed in 2007-08, when the yield increased to 764 kg/ha. The yield rates of rabi sunflower have been consistently much higher than the kharif crop, which makes erratic weather the main reason for the yield fluctuations. The yield levels of the crop are one of the highest among the oilseeds crop and considering that the crop is comparatively new and upcoming, attention should be given to make it remunerative to the farmers through proper marketing and processing arrangements. The crop can even be considered as an alternative to wheat and paddy in Punjab and Haryana since both these states have high productivity levels in sunflower. (Table 2.1)

2.95 The Average WPI for sunflower for the current year up to February 2009 was 254.5, compared to 250.2 of the corresponding period of 2007-08, showing an increase of 1.69 per cent over 2007-08 price.
(Table 2.16)

Cotton

2.96 Cotton is one of the major cash crops of India considered from the point of view that it is a principal raw material to textile industry, which contributes about 4 per cent of the GDP, and also is a major foreign exchange earner through

exports of cotton yarn. Internationally, India is the second largest producer of cotton after China and world's second largest exporter of cotton. Indian textile industry contributes about 12 per cent of world textile production. Considering its position in the global cotton and textile industry, it may not be possible to de-couple Indian cotton and textile industry from the global industry and the on-going global slow down/recession is expected to impact domestic cotton and textile sectors.

2.97 Cotton is grown in three major agro-climatic zones in India, viz., the Northern zone comprising of Punjab, Haryana and north Rajasthan; the Central zone covering Gujarat, Maharashtra and Madhya Pradesh; and the Southern zone comprising of Andhra Pradesh, Karnataka and Tamil Nadu, with Central zone contributing about 66 per cent of the total area and 59 per cent of the total production (as per 2008-09 trade data).

2.98 Area coverage under cotton has shown year to year fluctuations during the current decade. While area under cotton which was 8.54 million hectares in 2000-01 was increased to 9.13 million hectares in 2001-02, it showed decline in the subsequent two years to 7.67 million hectares in 2002-03 and to 7.60 million hectares in 2003-04. The year 2004-05 showed an increase of 1.19 million hectares over the previous year, while 2005-06 witnessed marginal decline by 0.11 million hectare. Area coverage increased to a level of 9.14 million hectares in 2006-07, 5.30 per cent increase over 2005-06 level, and further to 9.41 million hectares in 2007-08, mainly due to promotional efforts for BT cotton. As per estimates of Cotton Advisory Board, the area under cotton is showing a marginal decline to 9.37 million hectares during 2008-09. (Table 2.1)

2.99 The decline projected in area during 2008-09 has a surprising element in that for the first time during the current decade, central zone is estimated to show a decline in area, though marginal, as can be seen from the Table 2.18

Table 2.18: Zone-wise area under Cotton

(in lakh ha)

Season	Northern Zone	Central Zone	Southern Zone	Total* (All India)
2002-03	13.54	49.79	12.81	76.67
2003-04	13.22	50.04	12.53	76.30
2004-05	15.68	53.22	18.28	87.86
2005-06	16.11	54.01	15.86	86.77
2006-07	14.87	60.99	14.69	91.42
2007-08$	14.26	62.46	16.59	94.39
2008-09$	12.15	62.05	18.55	93.73

*** including "others"; $: CAB estimates as on 13.2.2009**

2.100 The decline in area projected during 2008-09 is maximum in respect of northern zone, a reduction of 2.11 lakh hectares over the last year's coverage. Major producing states like Gujarat, Maharashtra, Punjab and Haryana have projected decline in the area during 2008-09. The decline in area is attributed to uneven monsoon during 2008. While the onset of monsoon was in time in many cotton growing states, the long dry spell in the crucial month of July affected cotton sowing in many states. Northern zone got further affected due to non-availability of water in time in Gangasagar belt. This prompted many farmers in the Northern and Central zone to shift to alternate crops.

2.101 Area under Bt cotton cultivation continued to accelerate during 2008-09 season, with its coverage increased from 63.34 lakh hectares in 2007-08 to 68.81 lakh hectares in 2008-09 which is about 74 per cent of the total area under cotton, up from the 67 per cent achieved in 2007-08. Bt cotton coverage area, of the total cotton area, was 80 per cent in South zone; 73 per cent in Central zone and 81 per cent in North zone. Andhra Pradesh has the largest area under Bt

cotton (86 per cent), followed by Punjab (85 per cent), Haryana (83 per cent), Maharashtra (82 per cent), and Madhya Pradesh (80 per cent). States like Tamil Nadu (60 per cent), Karnataka (40 per cent) , Gujarat (60 per cent) and Rajasthan (68 per cent) are still slow in shifting to Bt cultivation , though the area coverage under Bt cotton in these states has been consistently increasing. The status of the use of Bt cotton is shown in the Table 2.19

Table 2.19: Area under cotton and Coverage under BT* Cotton during 2006- 07 to 2008-09

(in lakh hectares)

State	2006-07			2007-08			2008-09		
	Total area	Bt area	%	Total area	Bt area	%	Total area	Bt area	%
Punjab	5.88	2.81	48	6.41	5.57	85	5.60	4.76	85
Haryana	5.33	0.42	8	4.83	2.79	53	4.18	3.46	83
Rajasthan	3.50	0.05	1	3.68	0.38	10	2.17	1.48	68
Gujarat	23.90	4.07	17	25.16	13.00	52	24.17	14.50	60
Maharashtra	31.24	16.55	53	31.91	25.62	81	31.33	25.72	82
M.P.	6.30	3.02	48	6.62	4.71	71	6.43	5.14	80
A.P.	9.62	6.57	68	10.96	10.00	91	13.91	11.43	86
Karnataka	3.70	0.80	22	3.88	1.46	10	3.98	1.60	40
Tamilnadu	1.33	0.32	24	1.30	0.60	64	1.20	0.72	60
Total**	91.58	34.61	38	95.55	63.34	67	92.60	68.81	74

Source: Directorate of Cotton Development, Mumbai;
Office of the Textile Commissioner, Mumbai
Note: * BT Area coverage as per official estimates **Total includes "others" also.

2.102 In respect of productivity, cotton has witnessed two positive developments during the current decade: (i) Productivity has been consistently increasing; (ii) The gap in productivity between Indian and world cotton, though still continues, has narrowed down.

Table 2.20: Yield of Indian and world cotton (kg/ha)

Year	India	World	Gap
2000-01	278	616	338
2001-02	308	647	339

2002-03	302	649	347
2003-04	399	647	648
2004-05	470	751	281
2005-06	472	734	262
2006-07	521	754	233
2007-08	563	765	212

Source: Directorate of Cotton Development, Mumbai.

2.103 However, there are wide inter-state variations. According to 2008-09 trade estimates, Tamil Nadu, Andhra Pradesh and Gujarat top the list of high productivity rates with average yield levels of 708 kg/hectare, 670 kg/hectare and 633 kg/hectare respectively. On the other end, there are States like Maharashtra with an average yield of 336 kg/hectare and Karnataka with 392 kg/hectare. The average yield of Punjab during 2008-09 was 554 kg/hectare; Haryana 523 kg/hectare and Madhya Pradesh 467 kg/hectare. The performance of the states of Gujarat and Andhra Pradesh are commendable since their average yield levels have become close to the world average and they have achieved this inspite of the fact that only about 40 per cent of cotton area in these states is irrigated. This also shows that just one input for eg., Bt cotton in this case, cannot bring about success in cultivation since Gujarat presently has much lower area under Bt cotton compared to Punjab, Haryana, Maharashtra and MP. The success of Gujarat can be attributed to high standard of cultivation existing in the state. Maharashtra which accounts for about 34 per cent of the area under cotton in India and has 82 per cent of the cotton area under Bt cotton has recorded the lowest average yield of 336 kg/hectare. The one major reason for the less than average performance of Maharashtra in the cotton cultivation is water deficiency and lack of irrigation coverage. Among the southern states, the performance of Karnataka has been much below that of Tamil Nadu and Andhra Pradesh, mainly due to unfavourable weather conditions. The state-wise average yields in 2007-08 and 2008-09 are indicated in the Table 2.21.

Table 2.21: State-wise Average Yield.

(Kg/ha)

State	Average yield 2007-08	Average yield 2008-09
Punjab	619	554
Haryana	563	523
Rajasthan	451	572
Gujarat	786	633
Maharashtra	330	336
MP	567	467
AP	687	670
Karnataka	338	392
Tamil Nadu	714	708

Source: Office of the Textile Commissioner, Mumbai

2.104 As per the CAB estimates (as on 13.2.2009), the production of cotton during 2008-09 is projected at 290 lakh bales as against the production of 315 lakh bales achieved in 2007-08, a reduction by (-) 7.94 per cent. Thus the trend of consistent annual increases in the domestic production of cotton since 2003-04 gets reversed in 2008-09. The production of cotton which stood at 179 lakh bales in 2003-04 increased to 241 lakh bales in 2005-06. Production reached a level of 280 lakh bales in 2006-07 and further to 315 lakh bales in 2007-08. The decrease in production during 2008-09, despite extensive spread of hybrid and Bt cotton is attributed to erratic rains and pest problems. The State-wise production details are given in the Table 2.22.

Table 2.22: State-wise Production of Cotton

(in lakh bales of 170 kgs)

State	2006-07	2007-08	2008-09(P)
Punjab	24.00	22.00	17.50
Haryana	15.00	16.00	14.00

Rajasthan	9.00	9.00	7.50
Northern Zone	48.00	47.00	39.00
Gujarat	103.00	112.00	90.00
Maharashtra	50.00	62.00	62.00
Madhya Pradesh	19.00	21.00	18.00
Central Zone	172.00	195.00	170.00
Andhra Pradesh	36.00	46.00	53.00
Karnataka	6.00	8.00	9.00
Tamil Nadu	5.00	5.00	5.00
Southern Zone	47.00	59.00	67.00
Other States	1.00	2.00	2.00
Loose cotton	12.00	12.00	12.00
Total (All India)	280.00	315.00	290.00

Source: Office of the Textile Commissioner, Mumbai

(P) Estimated by CAB as on 13.2.2009

2.105 The decline in production is a cause of concern, especially the consistent decreases in production in last two years witnessed in the progressive state of Punjab. One problem in cotton production, which recurrently came up during Commission's discussions with the stakeholders is the persistent attack of pests on cotton crop. 'Military bollworm', which attacks in the night and destroys the crop by morning was said to have caused havoc in Gujarat cotton fields. The above problem should not be allowed to dampen the otherwise vibrant cotton sector. The farmers should be made knowledgeable about the correct use of pesticides through extension services and in the medium term, ICAR institutes should bring out hybrid varieties which have resistance to pests.

2.106 The production estimates brought out by the Department of Agriculture and Cooperation and the Cotton Advisory Board continued to show large variations as can be seen from the Table 2.23:

Table 2.23 : Zone-wise estimation of Cotton Production by DES and CAB during 2007-08

(in lakh bales)

Zone	Production estimates by DES	Production estimates by CAB (provisional)
North Zone	51.02	47.00
Central Zone	161.55	195.00
South Zone	44.69	59.00
Other states	1.58	2.00
Loose production	-	12.00
Total	258.84	315.00

Source: DES, Ministry of Agriculture and Office of the Textile Commissioner.

2.107 Reconciliation of the production data of DES and CAB has been pending for long. Commission has been emphasizing the need for reconciliation of discrepancy, however the variation still continues. Considering the importance of the crop domestically and the position of India in the global cotton market, production data is widely used and existence of two sets of data can create confusion among researchers and policy makers. Hence, Commission reiterates the urgent need for both the organizations to settle the above discrepancy through mutual consultations.

2.108 The decline in the area under cotton witnessed during 2008-09, inspite of significant growth in productivity and in use of Bt cotton and hybrid varieties during the last few years shows that the crop is still vulnerable to weather conditions and competition from other competing alternate crops. The challenge is to sustain the recent gains in area, production and productivity. Sustaining Bt technology with proper farm management methods, development of zone-wise best suited Bt hybrids, introduction of farm mechanization and spread of micro-irrigation facilities in unirrigated cotton areas are some major areas which require Government's continued attention in the coming years.

2.109 Concerns regarding varietal imbalances remain. The production of short staple varieties is still lower than the demand from the textile industry, while production of the long staple varieties is reportedly in excess of the demand. The Cotton Technology Mission should consider this aspect and accordingly provide incentives to the farmers to produce varieties which are short in supply. The present position with respect to the supply of various varieties of cotton and the demand projected for 2010 is shown in the Table 2.24, which clearly indicates the need for increasing the production of short and extra long staples.

Table 2.24: Cotton Requirement 2010, Staple-wise.

Staple group	Demand in percentage terms	Quantity required (lakh bales)	Present position
Short	10	45.00	Likely short
Medium	35	157.50	Marginally lower
Medium long	18	81.00	Sufficient
Long	30	135.00	Excess production
ELS	7	31.00	Acute shortage
Total	100	450.00	

Source: Directorate of Cotton Development, Mumbai

2.110 During discussions with stakeholders, a section of representatives of the trade indicated the low priority being given by the Government towards promoting value addition in cotton. Cottonseed is a valuable by-product with variable uses like production of cottonseed oil; production of propellants used for gun ammunition, manufacture of paper, tissue papers etc from cotton linters and production of cattle feed from cotton hulls. The by-product industry reportedly suffers from faulty processing, traditional crushing techniques, lack of extension education etc. The Commission recommends that **Ministry of Textiles needs to look into the grievance of the Cotton Industry regarding low priority being**

given to by-products of cotton, value addition which suffer from faulty processing, traditional crushing techniques, lack of extension education etc. and to take appropriate remedial measures, either through a new scheme or through the existing Technology Mission on Cotton.

2.111 As per present indications, domestic demand as well as exports during 2008-09 are projected to decline. Thus, the consistent yearly increase in cotton demand witnessed during recent years, is expected to reverse during 2008-09. This is to be expected considering the global recession and the slowdown of the Indian textile industry. The domestic cotton consumption is presently projected at 230.00 lakh bales, as compared to 241.00 lakh bales realized during 2007-08. Exports are expected to decline from the 2007-08 level of 85 lakh bales to 50 lakh bales during 2008-09 due to lesser demands from importing countries like China (Main land), Pakistan, Bangladesh and other Far Eastern countries. Cotton balance sheet for 2008-09, given below projects the carry forward stock during 2009-10 to be 60 lakh bales, which is equivalent to more than two and a half month mill consumption.

Table 2.25: Cotton Balance Sheet in lakh bales of 170 kg

	2005-06	2006-07	2007-08	2008-09
Supply				
Opening Stock	72.00	52.00	47.50	43.00
Crop	241.00	280.00	315.00	290.00
Imports	5.00	5.50	6.50	7.00
Total Supply	318.00	337.50	369.00	340.00
Demand				
Mill Consumption	180.00	200.00	203.00	195.00
SSI consumption	19.00	20.00	23.00	20.00
Non-mill Consumption	20.00	15.00	15.00	15.00
Exports	47.00	55.00	85.00	50.00
Total Demand	266.00	290.00	326.00	280.00
Closing Stock	52.00	47.50	43.00	60.00

Source: CAB, Ministry of Textiles, Mumbai. (as on 13.2.09)

2.112 The cotton season 2007-08 (October-September) witnessed steady increases in prices of cotton, in spite of a record production and adequate carry-over stocks. For eg. the lint price of J-34, a medium staple cotton increased from Rs. 17100 per candy on 1.10.2007 to Rs.26300 per candy on 15.9 2008, registering 54 per cent increase. The same trend could be seen in all other varieties. While one reason quoted for this behaviour of prices during 2007-08 was the consistent demand especially from exporters, another major reason was the intervention of speculative funds in the market. As per an International Cotton Advisory Committee (ICAC) communique, increased investment in cotton futures by people not involved in physical cotton trade, soaring prices of competing commodities and weakening of US dollar also contributed to the steep rise. The high world cotton prices influenced the domestic cotton prices in India as well. However, the opening month of the new season 2008-09 witnessed steep fall in cotton prices. Various reasons, both domestic as well as international, have been cited for the price falls. Domestically, the prospect of another bumper season (which as per indications, will not be achieved) and the mounting arrivals in the market put pressure. The collapse of several leading financial institutions in USA and in several developed economies have created a situation of unprecedented cash crunch forcing speculative element to exit the market, which is also reportedly cited as one of the reasons for the steep fall in the cotton prices. Due to comfortable supply position and lesser demands for domestic consumption and exports, the cotton prices, which are already under pressure is expected to remain subdued for such time till the global recession/slow down reverses. The movement of prices during 2007-08 and 2008-09 cotton season is indicated in the Table 2.26.

Table 2.26 : Market Prices of lint during 2007-08 and 2008-09

(in Rs per candy)

Date/ month	J-34		H-4		S-6		DCH-32	
	2008-09	2007-08	2008-09	2007-08	2008-09	2007-08	2008-09	2007-08

1.10	23500	17100	26000	19800	26000	20400	32000	30000
31.10	21600	17800	22000	19200	22300	20000	31500	28500
28.11	19700	18200	21500	19000	21600	19500	30000	28500
31.12	20500	18800	21000	19300	21500	20100	28000	28500
31.01	21000	19400	20900	20100	21300	21000	28000	29400
27.02	20000	20200	19900	21000	20400	20000	26500	31000
16.03	20700	-	20000	-	20800	-	27000	-
31.3	-	20200	-	21300	-	22100	-	31000
30.4	-	20600	-	22000	-	22600	-	31000
31.5	-	24400	-	22500	-	24500	-	32000
30.6	-	26600	-	26700	-	27500	-	33000
31.7	-	27400	-	28000	-	28300	-	33300
30.8	-	26300	-	28100	-	28500	-	32500
15.9	-	26300	-	28000	-	28800	-	32500

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

2.113 In view of the subdued price situation, Cotton Corporation of India (CCI) entered the markets from the beginning of the season and has undertaken MSP operations. The Corporation as on March 17, 2009 has purchased around 87.15 lakh bales against estimated arrivals of around 247.45 lakh bales. NAFED has also taken up MSP operations in Maharashtra through Maharashtra Federation and so far purchased 10.54 lakh bales.

Table 2.27: Procurement by CCI (as on 17.03.09)

(in lakh bales)

States	Total estimated arrivals upto 18.3.09	Purchases by CCI
Punjab	16.16	10.41
Haryana	13.07	2.55
Rajasthan	7.17	1.55
Gujarat	66.00	12.13
Madhya Pradesh	16.10	7.28
Maharashtra	62.77	19.50
Andhra Pradesh	46.11	31.50
Karnataka	5.86	1.53
Tamil Nadu	2.26	-
Others	1.65	0.70
Loose cotton	10.30	-
Total	247.45	87.15

Source: Cotton Corporation of India

2.114 The world cotton prices during 2007-08 averaged 73 US cents per lb, which is about 24 per cent higher than the average price of 58.59 US cents per lb registered during 2006-07(as measured by Cotlook A index). The year 2007-08 also witnessed periods of heightened volatility. During March 2008 Cotlook A index fluctuated by more than 17 US Cents per lb in the same month. The year 2008-09 opened with the kapas prices at a high of 78.04 US Cents per lb which was declined to 54.96 US Cents per lb as on November 2008, registering a decline of 30 per cent. The movement of the world cotton prices in the coming months will depend largely on how the major economies of the world will perform in general and specifically on the consumption pattern of cotton and other fibres by the major consuming countries. As per the projections by International Cotton Advisory Committee (ICAC) released on March 2, 2009, Cotlook A index is expected to average at 60 US Cents per lb during 2008-09.

Table 2.28: International Reference Price of Cotton (in cents per pound)

Month	Cotlook-A @			Cotlook-B(#)		
	2006-07	2007-08	2008-09	2006-07	2007-08	2008-09
August	59.88	66.62	78.04	NQ	NQ	NQ
September	58.82	68.12	73.59	NQ	68.90	NQ
October	57.03	68.93	62.30	NQ	68.30	NQ
November	57.39	69.68	54.96	54.55	69.35	NQ
December	59.43	69.52	55.47	56.95	NQ	
January	59.06	73.21	57.71	57.45	NQ	
February	57.86	75.05	55.82	56.80	NQ	
March	58.42	80.18		57.30	NQ	
April	57.13	75.44		57.45	NQ	
May	55.57	74.12		55.80	NQ	
June	60.61	77.04		NQ	NQ	
July	61.84	77.29		NQ	NQ	
Average	58.59	72.93	62.56	56.61	68.85	

Source: Cotton Corporation of India, Mumbai (average upto 23.2.09).

@ : Index based upon the average of the five lowest quotes of 27.78 mm.

 # : Index based upon the average of the cheapest three quotes of 26.98 mm.

NQ: Not Quoted.

2.115 As per ICAC press release dated March 2, 2009, world cotton production during 2008-09 is expected to decline by 9.61 per cent, to 23.70 million tonnes, compared to the last year's production of 26.22 million tonnes. USA, Turkey and Brazil would account for substantial decreases to the extent of 29 per cent, 26 per cent and 18 per cent respectively. One major reason for the reduction in production is the decline in cotton area. The world cotton area is expected to reduce from 33.3 million hectares in 2007-08 to 31.30 million hectares in 2008-09. The decline in world area under cotton is expected to continue in 2009-10 also. Decreasing cotton returns and more attractive prices for competing crops are reportedly encouraging farmers to switch to alternative crops.

2.116 Due to financial crisis in USA and slow down in major consuming countries, cotton consumption is projected to decline by 9. 47 per cent in 2008-09 to 23.80 million tonnes. The mill use is likely to be lower during 2008-09 in all the major consuming countries, including China. Due to decline in mill use, the world cotton exports are projected to decline to 6.30 million tonnes from the level of 8.35 million tonnes achieved in 2007-08. The world cotton balance sheet as drawn by ICAC as on March 2, 2009 is given in the table 2.29.

Table 2.29 : World Demand & Supply of Cotton

(Quantity in million tonnes)

Year Beginning August	2007-08	2008-09	2009-10
World Cotton Production	26.22	23.70	23.50
World Cotton Consumption	26.29	23.80	23.90
World Cotton Exports	8.35	6.30	7.50
World Ending Stocks	12.47	12.30	11.90

(As per ICAC release dated March 2, 2009)

2.117 Cotton is a traded commodity in the futures market. The futures prices are also broad indicators of the expected movement of prices in the near future. The spot and the futures prices of Kapas at NCDEX is shown in the table 2.30.

Table 2.30: Spot and Futures Prices of Kapas

(Rs. /20 kg)

Date	Spot	27 Feb 09	31 March 09	30 April 09
30 Aug 08	614.70	540.00	545.50	551.90
15 Sept 08	614.70	517.00	516.50	517.70
15 Oct 08	614.70	478.00	489.00	492.90
31 Oct 08	614.70	472.00	480.20	488.10
15 Nov 08	614.70	479.50	481.00	472.00
29 Nov 08	614.70	485.00	476.50	480.80
15 Dec 08	614.70	448.00	464.00	475.90

Source: Forward Market Commission, Mumbai.

2.118 The futures prices of cotton up to April 2009 show prices moving towards more subdued levels compared to the spot prices prevailing in the later months of 2008.

2.119 To sum up, the immediate outlook for cotton sector is one of declining prices (which may extend the procurement operations domestically to a longer period). Reversal in the downturn in demand, both domestic as well as international and stabilization of cotton prices would depend on the economic revival in USA and other major economies which are the consumers of cotton and textile products, further shift in area under cotton to other competing crops in countries like USA, Brazil, Turkey, Pakistan etc during 2009-10 season and the prevailing prices of competitive fibres.

Tobacco (Virginia Flue Cured)

2.120 As an agricultural cash crop, tobacco has a prominent place in the Indian agricultural sector since it provides livelihood to about 26 million people and also a foreign exchange earner for the country with India occupying fifth position in the global export of tobacco. Various steps which Government have been taking to discourage consumption of tobacco need to consider the above aspect also, though adverse health implication of consumption of tobacco and tobacco products is a serious issue and cannot be overlooked. The Commission reiterates that any attempts at reducing the cultivation of tobacco should be simultaneously backed by policy measures to provide viable alternate cropping solutions to the farmers, if need be with initial handholding so that the livelihood of farmers is not affected.

2.121 Major producers of tobacco in the world are China, Brazil, India, USA and Turkey, with two- thirds of the world production accounted for by these five countries. India is the third largest producer of tobacco and also occupies twelfth position in the production of cigarettes. The crop is produced in India in the states of Andhra Pradesh, Karnataka, Maharashtra, Orissa, Bihar, Uttar Pradesh, West Bengal, Tamil Nadu and Gujarat. The Flue Cured Virginia (VFC) tobacco is the most prominent among the different kinds of tobacco cultivated in the country. The trends in area, production and yield of VFC tobacco are indicated in the table 2.31.

Table 2.31 : Area, production and yield of VFC tobacco

Year	Area in ha.	Marketed Produce (Million Kg)	Average Yield per ha.	Unauthorised production (Million Kg)
2004-05	183034	243.30	1329	67.54

2005-06	191222	228.30	1194	29.01
2006-07	205050	268.90	1311	36.61
2007-08	212455	252.98	1191	22.59
2008-09	224847	275. 00	1223	-

Source: Tobacco Board

2.122 The trends in area coverage under tobacco show that despite attempts by the Government to discourage production and consumption of tobacco, area under tobacco cultivation has been consistently increasing. This can be attributed to certain special characteristics of tobacco cultivation like short duration, drought tolerance, less incidence of pests and diseases and high profitability. The above factors need to be kept in mind while looking at viable alternate crops for tobacco growers. Production has shown yearly fluctuations, mainly due to varying weather conditions. However, production has been in excess of the crop size fixed by the Tobacco Board in all the years, as can be seen from the figures of unauthorized production in the Table 2.31.

The supply and demand position has been comfortable over the years with supply outstripping demand as shown in the Table 2.32.

Table 2.32: VFC Tobacco – Balance Sheet

(Quantity in Million Kgs.)

	2005-06	2006-07	2007-08	2008-09(E)
Opening Stock	84.60	82.65	95.55	78.77
Production	228.27	269.00	255.00	275.00
Total Supply (A)	312.87	351.65	350.55	353.77
Domestic Consumption	75.00	82.00	83.00	80.00
Net exports	109.57	120.30	137.78	150.00
Farm Wastage	45.65	53.80	51.00	55.00
Total Demand (B)	230.22	256.10	257.00	285.00
Closing Stock (A-B)	82.65	95.55	78.77	68.77

Source: Tobacco Board; E- estimated

2.123 The Table also indicates a comfortable demand -supply position during 2008-09. Domestic consumption and exports during 2008-09 are expected to be

at higher levels compared to 2007-08, an indication of a vibrant sector. This is inspite of a decline in cigarette production by 2 per cent projected during 2007-08. The year is expected to close with a surplus stock of 68.77 million kgs,

2.124 World cigarette production during 2007 increased by about 2.1 per cent, mostly propelled by the growth in cigarette production in China (5.9 per cent growth rate). Excluding China, world production increased by only 0.2 per cent. The compound annual growth rate in world cigarette production excluding China during 2002-07 was around 0.3 per cent. Going by the above trend, international consumption of FCV tobacco is either stagnant or declining by a small percentage.

2.125 The Commission recommends MSP for two varieties of VFC tobacco viz. Black soil (F2 grade) and Light soil (L2 grade). The MSP of these varieties and the actual average price realization are indicated in the Table 2.33.

Table2.33: MSP and Price Realization

(Rs per kg)

Year	MSP announced for Black soil (F2) grade	F2 grade Average price realization	MSP announced for Light soil (L2) grade	L2 grade Average price realization* (NLS)
2003-04	31.00	35.12	33.00	43.03
2004-05	32.00	34.38	34.00	42.72
2005-06	32.00	34.88	34.00	56.84
2006-07	32.00	44.92	34.00	54.13
2007-08	32.00	80.90	34.00	74.46

Source: Tobacco Board; *As a representative of L2 grade, North Light Soils (NLS) variety has been taken.

2.126 The MSPs for F2 and L2 grades of Tobacco have been retained at the level of Rs. 32 and 34 per kg respectively during 2004-05 to 2007-08 though the

prices have increased manifold, which would also mean that there was no need for any Government intervention during these years. Regarding MSP for 2008-09, though CACP had submitted its recommendation in February 2008, Government has not yet announced the MSPs. While Government's policy to discourage production and consumption of tobacco is appreciated, considered from the health point of view, till the farmers presently involved in the cultivation of tobacco are re-settled in remunerative alternate crop cultivations, Government should announce the MSP every season, since it gives a psychological comfort to the cultivators, though the market has been quite vibrant during the last few years with market prices averaging much above the MSP announced.

2.127 The Commission recommends MSP for Tobacco, on the basis, among others, of cost of cultivation data received from Directorate of Economics and Statistics, Ministry of Agriculture. During discussions with the Tobacco Board and farmer representatives, it was understood that there are wide discrepancies in the cost of cultivation data collected by the Directorate of Tobacco Development (which provides data to DES) and by the Central Tobacco Research Institute (CTRI) (which is made use of by the Tobacco Board). Also Directorate of Tobacco Development data covers only Andhra Pradesh, while Karnataka is also a major tobacco growing state. The Commission recommends that **taking into account the views of Tobacco Board, DES needs to sort out the discrepancy in the data collected by Directorate of Tobacco Development and Central Tobacco Research Institute and consider extension of coverage for collection of cost of cultivation data to Karnataka also.**

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

3.1 The cost of production is one among the factors that determine the formulation of minimum support price policy. Therefore the Commission visited the states of Maharashtra, Gujarat, Bihar and Tamil Nadu to have an assessment of the cost of production of different kharif crops for both the current and ensuing season of 2009-10 and to have an objective view of price movement and procurement scenario and held meetings with the State Government officials, farmer's representatives and procurement agencies functioning in the respective states and other stakeholders to ascertain their views on price policy for kharif season 2009-10. As was clear from the discussion with the concerned State Governments, they have been experiencing inadequate infrastructural facilities of procurement as a result of which the farmers are facing the problem of delivering their produce, especially paddy, in the current season of 2008-09.

3.2 It was pointed out by a number of farmers that contrary to the usual official statistics of wage rates of farm labourers, it has gone up many times over in the recent years so much so that the farmers found it extremely difficult to hire labour at different stages of farming operations without having to pay increased rates of wage.

3.3 In the meeting held in Delhi with the State Government officers, farmer's representatives and other stakeholders on 4th March, 2009, most of the farmer's representatives from across the different states voiced that the per hectare land rent had gone up more than what was accounted for in the Comprehensive Scheme (CS) cost estimates. Moreover, concern was expressed for the operational inefficiency in the implementation of the Comprehensive Scheme across the states, in the system of data management related to cost of production of different crops. They wanted the existing FARMAP software to be

replaced with a new user friendly software for estimating cost of production. In this connection, it is clarified that the Government while giving approval for recommendations of the Expert Committee set up under the Chairmanship of Prof. Y.K. Alagh to examine methodological issues in fixing MSP, has decided that the rental value of land would continue to be computed according to the practice being presently followed. The Government has also given approval for replacing the existing software. Many states including Punjab brought to the notice the fact that the State Government could not ensure uninterrupted supply of power despite electricity being available free of cost for agriculture. The farmer's representatives also wanted that the State Governments should at least ensure certain hours of uninterrupted supply of electricity so that farmers could make informed decisions on the timing of their agricultural operations, which are crucial from the point of view of both production and productivity in the agriculture sector. The farmers were of the view that the fixation of minimum support prices be made according to Agro Climatic Zones in the country in view of the fact that the cost of production varies across the regions and states. However, such a decision, if conceded, would distort the pricing mechanism of the national market and result in increased minimum support prices for high cost states/regions and inefficiency in production.

3.4 The Commission has used estimates of cost of cultivation/cost of production generated under the Comprehensive Scheme state-wise for each crop so as to prepare the cost projections for the kharif season 2009-10. The cost estimates based on which projections are made for the year 2009-10 pertain to the year 2006-07. In addition to this, the Commission in recognition of the feedback it has garnered from its various meetings, studied the movement of input cost as well as the overall escalation in C2 cost, based on detailed information from State Governments, updated price indices in respect of agricultural inputs upto February, 2009 from the Office of the Economic Advisor, Ministry of Commerce and Industry; month-wise daily wage rates for agricultural labour from Labour Bureau, Shimla. The detailed information as available from

State Governments contained among many other things, data on prices of agricultural inputs and their respective costs of cultivation/production.

3.5 The Commission submitted its report on Price Policy for kharif crops for 2008-09 season on 5th February, 2008. During the period March, 2008 to February, 2009, the prices of all agricultural inputs as measured by Wholesale Price Index (WPI) have registered an increase excepting high speed diesel oil and low speed diesel oil, which have shown a decline of (-) 3.16 per cent and (-)0.18 respectively. The prices of fertilizers in terms of WPI have recorded substantial increase of 5.70 per cent compared to about 1.85 per cent in the corresponding period of the previous year. Other items of input that have registered an increase are pesticides (3.71 per cent), non-electrical machinery (4.33 per cent), tractors (5.74 per cent), lubricants (19.09 per cent), cattle feed (3.36 per cent). Of all the inputs that have gone into production of crops, lubricants have recorded the highest increase followed by tractors and fertilizers. It is pertinent to mention that prices of majority of inputs have increased in the range of about 5 per cent and above excepting cattle feed, fodder, non-electrical machinery, pesticides. Therefore, it is clear that the cost burden on the farmers has gone up on account of input costs.

3.6 The Statutory Minimum Wages for agricultural labourers have been revised upwards in the states of Haryana, Karnataka, Punjab, Bihar, Kerala, Uttar Pradesh, Jharkhand. As per the data obtained from the Labour Bureau, the actual monthly agricultural wage rates between December, 2007 and December, 2008 are observed to have increased by 2.21 per cent in the state of only Assam. It is paradoxical that the state of Madhya Pradesh has registered a decrease in wage rate by (-) 13.93 per cent. The states with increase in daily wage rate for agricultural labour by about 9 to 10 per cent are Gujarat (9.50 per cent), West Bengal (9.27 per cent) and Kerala (8.69 per cent). The states which have recorded phenomenal increase in wage rates of the order of 11 to 36 per cent are Uttar Pradesh (15.08 per cent), Rajasthan (10.95 per cent), Punjab (36.32

per cent), Orissa (17.90 per cent), Maharashtra (11.57 per cent), Karnataka (12.07 per cent), Haryana (19.49 per cent), Andhra Pradesh (27.42 per cent), Bihar (13.28 per cent) and Tamil Nadu (13.32 per cent). The state of Kerala falls in-between high-increase-wage rate states and low- increase-wage rate states and has recorded the increase of wage rate by 8.69 per cent. The wage rate in absolute terms is the highest in Kerala at Rs.220.27 per manday for December 2008 against the lowest at Rs.61.33 per manday for Madhya Pradesh for the corresponding period. The states whose wage rates have crossed the level of Rs.100 per day for agricultural labourers are Haryana, Kerala, Punjab, Rajasthan and Tamil Nadu.

Paddy

3.7 The Directorate of Economics & Statistics has provided estimates of cost of cultivation/production of paddy for the year 2006-07 in respect of Andhra Pradesh, Assam, Bihar, Chhattisgarh, Haryana, Jharkhand, Karnataka, Kerala, Madhya Pradesh, 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 2005-06 are presented in table 3(A). There has been upward movement in the C2 cost of production per quintal in majority of the paddy growing states in the year 2006-07 compared to that in the preceding year. The states that have recorded increase in cost of production per quintal for the year 2006-07 compared to the preceding year are Andhra Pradesh (2.89 per cent), Assam (52.30 per cent), Bihar (4.23 per cent), Chattisgarh (3.12 per cent), Himachal Pradesh (2.93 per cent), Kerala (6.80 per cent), Maharashtra (32.22 per cent), Orissa (7.84 per cent), Uttar Pradesh (10.05 per cent), West Bengal (7.58 per cent) and Karnataka (0.34 per cent). These states are characterized by either fall in respect of yield rates or somewhat marginal increase in their yield. There has been decline in the cost of production per quintal in the state of Jharkhand for the year 2006-07 compared to the previous year by (-) 13.05 per cent and this was due to increase in yield by 43 per cent. Haryana has also recorded decrease in cost of

production by (-) 1.52 per cent, influenced by increase of 5.64 per cent in yield. Then Uttarakhand, Tamil Nadu and Punjab have experienced decrease in their respective costs of production per quintal at (-) 8.61 per cent, (-) 8.20 per cent and (-) 2.02 per cent respectively, with their respective yield rates showing an increase by 8.84 per cent, 18.34 per cent and 3.16 per cent respectively. The elaborate details of cost of cultivation/production of paddy for the year 2006-07 and for the preceding year are given in the tables 3.3 and 3.4.

(Tables 3.3 & 3.4)

3.8 The Commission has arrived at the likely levels of cost of production of paddy in different states for the ensuing season 2009-10, on the basis of the cost of production/cultivation of data available for the year 2006-07. 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, states 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 (2009-10). Lastly, the all India weighted average cost is computed with weights being the shares of production of each state in the total production of the crop growing states.

(Table 3.5)

3.9 In accordance with the aforesaid methodology, the projected per quintal paid out cost of production of paddy plus imputed cost of family labour (A2+FL) for 2009-10 works out to an average of Rs. 418.43 for Andhra Pradesh, Rs. 725.17 for Assam, Rs. 428.07 for Bihar, Rs. 381.57 for Chhattisgarh, Rs.460.77 for Haryana, Rs. 599.76 for Jharkhand, Rs. 452.17 for Karnataka, Rs.589.72 for Kerala, Rs.592.77 for Madhya Pradesh, Rs.410.44 for Orissa, Rs.319.01 for Punjab, Rs.540.54 for Tamil Nadu, Rs.482.98 for Uttar Pradesh, Rs.431.47 for Uttarakhand and Rs.500.36 for West Bengal. As against this, the projected C2

cost of production stands at Rs. 608.66 for Andhra Pradesh, Rs. 935.63 for Assam, Rs. 582.05 for Bihar, Rs. 564.71 for Chhattisgarh, Rs. 693.14 for Haryana, Rs. 767.82 for Jharkhand, Rs.601.68 for Karnataka, Rs. 874.93 for Kerala, Rs. 802.54 for Madhya Pradesh, Rs 644.55 for Orissa, Rs. 509.15 for Punjab, Rs. 722.04 for Tamil Nadu, Rs. 664.27 for Uttar Pradesh, Rs. 649.21 for Uttrakhand and Rs. 664.13 for West Bengal. The weighted average cost of production of paddy for all these states works out to Rs. 458 on A_2+FL basis and Rs. 645 on C_2 basis.

(Table 3(G))

3.10 It is observed from the above that the average C_2 cost of production of paddy is lowest (Rs. 509.15) in Punjab followed by Chhattisgarh (Rs.564.71). On yield performance, Madhya Pradesh suffers on account of low yield at 15.05 quintals per hectare in contrast to Punjab recording the highest yield of 64.92 quintals per hectare on an average, followed by Andhra Pradesh (51.65 quintals per hectare), Haryana (48.30 quintals per hectare) etc. In terms of cost, following Assam, Kerala's high cost of production per quintal at Rs.874.93 is mainly the resultant of higher cost on account of human labour. The neighbouring states of Punjab and Haryana have more or less the same level of per hectare cost of cultivation for the year 2006-07 with sharply differential rates of productivity, with Haryana reporting yield of 51.47 quintals per hectare and Punjab, 63.08 quintals per hectare in the same year. The difference in productivity of about 12 quintals per hectare between these two states has led difference in per quintal cost of production. Punjab reports per quintal cost of production at Rs.477.42 and Haryana at Rs.609.03.

3.11 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.

3.12 From Table 3(H) it is observed that the costs of production of paddy as furnished in state replies for Andhra Pradesh, Bihar, Haryana, Madhya Pradesh, Maharashtra, Uttar Pradesh and Uttarakhand stand at Rs.660, Rs.774, Rs.756, Rs.781, Rs.739, Rs.689 and Rs.495 per quintal respectively for 2006-07. Almost all the states report higher per quintal costs of production compared to CS estimates excepting Uttarakhand, Maharashtra, for the year 2006-07. In the case of Maharashtra, the cost per quintal reported being lower than CS estimates proves that the yield rate reported by the state of Maharashtra is higher than that given under CS estimates. Similarly, for Uttarakhand, the yield of 44.38 quintals per hectare as reported in the state reply for the year 2006-07 is higher than 38.04 quintals per hectare given in the CS estimates. In regard to the state of Andhra Pradesh, the cost of production as reported in the state reply is on the higher side compared to that given in the CS cost estimates and this is largely due to the comparatively lower yield rate furnished by this state. (Table 3(H))

3.13 The projected costs of production of paddy for the year 2009-10 have been received from the states of Andhra Pradesh, Bihar, Haryana, Punjab, Uttarakhand, Maharashtra and West Bengal. The projected unit cost of production for Andhra Pradesh for the year 2009-10 arrives at Rs.1038 per quintal, which is higher than the Commission's usual projection of Rs.608.66 per quintal. This may be due to difference both in yield levels and other input costs used for two sets of projections. Bihar has furnished the projected cost of production at Rs.1088 per quintal compared to Rs.582.05 per quintal projected by the Commission for the year 2009-10. The increase in the projected cost of production in regard to Bihar on the side of the state reply is mainly due to the proportionately increased amounts spent on variable inputs, particularly the expenditure on account of human labour. In the case of Punjab, special mention may be made of the higher amount of rental value of land reported in the state reply than given in the CS estimates. And therefore, Punjab reports the projected per quintal cost of production at Rs.1057, which is disproportionately

higher than the projected cost of Rs.509.15 per quintal projected by the Commission. It is worth pointing out here that Punjab has the highest yield among the paddy growing states. In a sharp contrast, the Commission's projection of per quintal cost of production at Rs.649.21 for the year 2009-10 has gone down to Rs.605 reported in the state reply for Uttarakhand. The state of West Bengal presents a scenario of comparable cost projections done separately by the state and the Commission. West Bengal has given the projection of per quintal cost of production at Rs.700 compared to Rs.664 projected by the Commission. This minimal difference in cost projection is largely a result of difference in yield.

(Table 3 (I))

Coarse Cereals

3.14 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 2006-07 in respect of Andhra Pradesh, Karnataka, Madhya Pradesh, Maharashtra, Rajasthan and Tamil Nadu. It may be observed from Table 3(C) that between 2005-06 and 2006-07, the actual C_2 cost of cultivation per hectare for jowar is estimated to have increased in all the above jowar growing states excepting Rajasthan, where it has declined by about (-)14 per cent. The decline in per hectare cost in Rajasthan is reflected in the decline in per quintal cost accompanied by an increase in yield by 11.11 per cent. The cost estimates for bajra have been received from the states of Gujarat, Haryana, Maharashtra, Karnataka, Rajasthan and Uttar Pradesh. For bajra, the C_2 cost of production is estimated to have increased in all the states excepting Haryana, Karnataka, Rajasthan and Uttar Pradesh where it has declined by (-)12.64 per cent, (-)1.34 per cent, (-)3.97 per cent, (-)10.75 per cent respectively. The decline in the C2 cost of cultivation in these states is accompanied by increase in per hectare cost of cultivation together with increase in yield in the states of Haryana, Karnataka, Rajasthan and Uttar Pradesh by 44.58 per cent, 17.77 per

cent, 35.30 per cent and 37.16 per cent respectively. Even though the yield rates in all the major bajra growing states have not shown any decline, it is noted that Gujarat has recorded a meagre increase in yield rate by 0.80 per cent followed by Maharashtra (12.52 per cent). The increase in the yield rate of Maharashtra by 12.52 per cent is accompanied by increase in C2 cost of production by 9.54 per cent. This can be explained by the fact that there has been considerable increase in per hectare cost of cultivation not followed by proportionate increase in yield rate in the state of Maharashtra, compared to other states where the increase in per hectare cost of cultivation is associated with bigger jumps in the yield rates. Maharashtra's case may be one of inefficiency of input use. In the case of maize, cost estimates have become available for Andhra Pradesh, Bihar, Chhattisgarh, Gujarat, Himachal Pradesh, Jharkhand, Karnataka, Madhya Pradesh, Rajasthan, Tamil Nadu, Uttar Pradesh and Uttarakhand for the year 2006-07. The per hectare C_2 cost of cultivation has gone up in most of the above mentioned states except Gujarat, Karnataka and Madhya Pradesh. Despite the decline in per hectare cost of cultivation in the states of Gujarat, Karnataka and Madhya Pradesh, the per quintal cost of production has gone up by 95.17 per cent, 22.80 per cent and 57.35 per cent respectively due to decline in the levels of yield by (-)61.78 per cent, (-) 21.69 per cent and (-)48.86 per cent respectively. Given the cost of production per quintal of these major maize growing states, one particular feature that strikes us is that the cost of production has recorded a decline in the states of Andhra Pradesh, Chhattisgarh, Himachal Pradesh, Jharkhand and Uttarakhand mainly due to the substantial increase in their respective levels of yield. Jharkhand has recorded the highest increase in the level of yield at 49.53 per cent followed by Himachal Pradesh (37.21 per cent), and Chhattisgarh (18.92 per cent). The cost estimates for ragi are available for the year 2006-07 for Karnataka, Maharashtra and Tamil Nadu. It is observed that C_2 cost of production per quintal is reported to have increased in all the states. In the state of Maharashtra, for ragi the yield rate has gone down by (-) 13.61 per cent together with increase in cost of production by 2.10 per cent. In the states of Karnataka and Tamil Nadu the contrasting picture is that of both

increase in yield rates and increase in cost of production. This can be explained by the fact that whereas in Maharashtra cost of cultivation per hectare has gone down by (-) 13.75 per cent, the same has recorded jumps in the states of Karnataka and Tamil Nadu by 12.88 per cent and 5.15 per cent respectively. Tamil Nadu is reported to have recorded the yield of about 20 quintals per hectare compared to about 9 quintals per hectare in Maharashtra.

3.15 The cost estimates for jowar have been made available from the states of Andhra Pradesh, Maharashtra and Uttar Pradesh for the years 2006-07 and 2007-08. The comparable estimates as given in the state replies and under Comprehensive Scheme are for the year 2006-07 for the states of Andhra Pradesh, Madhya Pradesh and Maharashtra. The per quintal cost of production in the state reply of Andhra Pradesh at Rs.758 per quintal is lower than Rs.898 per quintal given in the CS estimates despite the lower yield rate of 11 quintals per hectare in the state reply as against 13 quintals per hectare in the CS estimates for the year 2006-07. The lower cost of production for jowar reported by Andhra Pradesh despite its lower yield rate than that of CS estimates is due to the difference in per hectare cost of cultivation being lower in the state reply of Andhra Pradesh. In regard to Madhya Pradesh the state reply has quoted the comparatively lower cost of production at Rs.680 per quintal, as against Rs.724 per quintal in the CS estimates. The comparison is not possible due to the non reporting of yield rate of jowar in the reply of Madhya Pradesh. As far as Maharashtra is concerned, the costs of production figures are comparable, as given in state reply and in the CS estimates for the year 2006-07.

3.16 The Commission has received state replies as regards cost estimates for bajra from the states of Andhra Pradesh, Haryana, Maharashtra and Uttar Pradesh. Andhra Pradesh is not comparable because the comparable CS estimate is not available for the year 2006-07. The CS estimates for Haryana give per quintal cost of production at Rs.683 as against Rs.616 in the state reply. However, the costs of production estimates as given separately in the CS estimates and in the state reply of Maharashtra are broadly comparable despite the differences in yield, with yield rate in the state reply being on the lower side (13 quintals per hectare) as against about 17 quintals per hectare in the CS estimates. The cost of production in the CS estimates for bajra for the year 2006-07 stands at Rs.747 per quintal as compared to Rs.744 per quintal in the state reply of Maharashtra. The state reply of Uttar Pradesh has furnished the cost of production of Rs.655 per quintal compared to Rs.529 per quintal in the CS estimates for the year 2006-07 and the relatively higher cost of cultivation in the state reply is mainly due to the reporting of low yield of 13.42 quintals per hectare by the state of Uttar Pradesh relative to that of 20.41 quintals per hectare in the CS estimates. For maize, the replies of cost of production have been received from the states of Andhra Pradesh, Bihar, Haryana, Madhya Pradesh, Maharashtra and Uttar Pradesh. The per quintal cost of production figures are on the higher side in the state replies of Andhra Pradesh, Bihar and Madhya Pradesh. Uttar Pradesh state reply has given the cost of production figure for the year 2006-07 at Rs.668 as against Rs.748 in the CS estimates. The difference in the cost of production figures results from lower yield of 14.90 quintals per hectare reported in the state reply of Uttar Pradesh compared to higher yield of 16.20 quintals per hectare in the CS estimates.

(Tables 3(H) & 3(I))

3.17 The projected cost of production (A_2+FL) for jowar for 2009-10 in respect of Andhra Pradesh, Karnataka, Madhya Pradesh, Maharashtra, Rajasthan and

Tamil Nadu are Rs.645.80, Rs.722.82, Rs. 576.78, Rs.573.27, Rs. 555.21 and Rs.707.82 per quintal respectively while the projected cost of production per quintal on C_2 basis for these states are Rs.901.43, Rs.936.23, Rs.779.96, Rs. 737.05, Rs. 765.30 and Rs. 899.20 respectively. The weighted average A_2+FL and C_2 cost of production for jowar works out to Rs.616 and Rs. 804 per quintal respectively. The projected cost of production for bajra for the year 2009-10 for the states of Gujarat, Haryana, Maharashtra, Rajasthan and Uttar Pradesh on A_2+FL basis works out to Rs. 536.03, Rs.565.40, Rs.629.47, Rs.420.29 and Rs.379.72 per quintal respectively, while the C_2 cost of production per quintal for these states are Rs. 657.53, Rs. 788.90, Rs.789.13, Rs.593.21 and Rs.626.89 respectively. The weighted average A_2+FL and C_2 costs of production of bajra for the year 2009-10 works out to Rs.476 and Rs.658 per quintal respectively. The A_2+FL projected cost of production of maize for the states of Andhra Pradesh, Bihar, Chhattisgarh, Himachal Pradesh, Jharkhand, Madhya Pradesh, Rajasthan, Uttar Pradesh and Uttarakhand are Rs. 443.48, Rs. 306.93, Rs. 506.21, Rs. 481.63, Rs. 589.98, Rs.795.93, Rs. 773.94, Rs. 567.67 and Rs. 677.97 per quintal respectively, while the projected C_2 cost of production for these states works out to Rs. 648.56, Rs. 427.68, Rs. 675.85, Rs. 669.85, Rs. 823.15, Rs.1007.25, Rs. 958.12, Rs.843.43 and Rs. 917.40 per quintal respectively. The weighted average A_2+FL and C_2 costs of production of maize on the basis of these costs work out to Rs. 539 and Rs.738 per quintal respectively. For ragi, projection has been carried out for Karnataka and Tamil Nadu for 2009-10. The projected A_2+FL cost of production for ragi for Karnataka works out to Rs.704.86 per quintal as against Rs. 594.20 per quintal for Tamil Nadu. The projected C_2 costs of production for 2009-10 for these states are at Rs. 863 and Rs. 837 per quintal respectively. The weighted average cost of production of ragi works out to Rs.694 on A_2+FL basis and Rs. 861 on C_2 basis respectively. (Table 3(G))

Pulses

3.18 The latest available estimates of cost of cultivation/production for 2006-07 for major kharif pulses of tur (arhar), moong and urad are presented in Table 3 (D). It may be observed that the cost of production per quintal for tur is observed to have increased to a great extent in 2006-07 in Andhra Pradesh, Bihar, Karnataka, Madhya Pradesh and Uttar Pradesh and it is declining in the states of Gujarat and Orissa. Gujarat presents the case of decline in per hectare cost of cultivation, per quintal cost of production and yield rate. This can be explained by both crop and production loss from causes beyond the control of farmers. The decline in cost of production for tur in the state of Orissa by (-) 0.24 per cent in the year 2006-07 can be attributed to the increase in yield by 4.75 per cent. Cost estimates are available for moong for the year 2006-07 for the states of Andhra Pradesh, Karnataka, Maharashtra, Orissa and Rajasthan. The C2 cost of production has registered an increase in all the states excepting Rajasthan where it has declined by (-) 11.16 per cent due to substantial increase in the level of yield by 80.71 per cent. In contrast to Rajasthan, Andhra Pradesh has its C2 cost of production increased by 20.48 per cent because of decline in yield by (-) 13.25 per cent. Orissa has also recorded substantial increase in cost of production like Andhra Pradesh, by 12.10 per cent due to decline in yield by (-)12.39 per cent. The Commission has also received cost estimates for 2006-07 for the states of Andhra Pradesh, Chhattisgarh, Madhya Pradesh, Maharashtra, Orissa, Rajasthan, Tamil Nadu and Uttar Pradesh. The cost of production for urad for Chhattisgarh has considerably increased by 59.57 per cent in contrast to the large decline in the state of Rajasthan by (-) 45.70 per cent. These two states furnish two contrasting scenarios in the sense that Chhattisgarh is characterized by the decline in yield by (-) 24.60 per cent whereas Rajasthan shows the increase in yield by 274.55 per cent. The decline in yield rates are observed for the states of Maharashtra apart from Chhattisgarh.

3.19 For all the kharif pulses, the estimates of costs have been provided by the states of Andhra Pradesh, Madhya Pradesh, Maharashtra and Uttar Pradesh. The state replies for Andhra Pradesh, Madhya Pradesh have reported higher

figures of cost of production of tur than those given in the CS estimates in the respective states. Maharashtra in its state reply has put out the cost of production for tur at Rs.1676 per quintal as against Rs.1957 in the CS estimates. Similarly, Uttar Pradesh has provided in its state reply the cost of production at Rs.1412 per quintal lower than Rs.1702 per quintal in the CS estimates and this higher difference on the side of CS estimates results from higher yield rate of 10.04 quintals per hectare reported in the state reply and lower yield rate of 8.79 quintals per hectare in the CS estimates. As regards moong, the cost estimates as given in the state replies of Andhra Pradesh and Maharashtra are lower than those in the CS estimates. In the case of kharif urad, Andhra Pradesh in its state reply has reported the cost of production of Rs.2019 per quintal for the year 2006-07, compared to which CS estimates are put at Rs.1426 per quintal. This is due to higher yield rate given in the CS estimates at 11.81 quintals per hectare as against 4.8 quintals per hectare in the state reply.

(Tables 3(H) & (I))

3.20 The projected per quintal cost of production (A_2+FL) of tur for the year 2009-10 averaged at Rs.1111.57 for Andhra Pradesh, Rs.1129.76 for Gujarat, Rs. 1328.18 for Karnataka, Rs.941.62 for Madhya Pradesh, Rs.1582.84 for Orissa and Rs.892.30 for Uttar Pradesh and 1315.61 for Maharashtra. The corresponding projected C_2 cost figures are put at Rs.1734.71, Rs.1497.62, Rs.1798.16, Rs.1509.54, Rs.2611.64, Rs.1658.59 and Rs.1709.49 per quintal respectively. The weighted average cost for tur for 2009-10 is projected at Rs.1181 and Rs. 2197 per quintal on A_2+FL and C_2 basis respectively. As regards moong cost A_2+FL is projected at Rs.1685.62, Rs.2601.10, Rs. 1587.88 and Rs.1620.99 per quintal for the states of Andhra Pradesh, Maharashtra, Orissa and Rajasthan respectively and the corresponding C_2 cost at Rs.2556.64, Rs.3203.86, Rs.2455.01 and Rs.2340.08 per quintal respectively. The weighted average cost for moong for the year 2009-10 works out to Rs.1991 and Rs.2704 per quintal on A_2+FL and C_2 basis respectively. The A_2+FL cost for urad for the states of Andhra Pradesh, Chhattisgarh, Madhya Pradesh, Maharashtra, Orissa,

Rajasthan, Tamil Nadu and Uttar Pradesh have been projected at Rs. 795.54, Rs.1540.52, Rs.1777.79, Rs.2529.25, Rs.1158.47, Rs.1476.75, Rs.1646.87 and Rs.1239.07 per quintal respectively. The corresponding C_2 costs of production for these states work out to Rs.1504.72, Rs.2174.21, Rs.2451.92, Rs.3340.84, Rs.2148.10, Rs.2310.56, Rs.2491.88 and Rs.1986.14 per quintal respectively, with all-India weighted average A_2+FL and C_2 cost for urad for the year 2009-10 being placed at Rs.1503 and Rs.2257 per quintal respectively.

(Table 3(G))

Oilseeds

3.21 The latest estimates of cost of cultivation/production for groundnut for the year 2006-07 have become available in respect of Andhra Pradesh, Gujarat, Karnataka, Maharashtra and Tamil Nadu. (Table-3(E)). The C_2 cost of production per quintal for groundnut for 2006-07 is reported to have gone up over the previous year in all the states. The highest increase in cost of production of groundnut for the year 2006-07 is reported to have been observed for the state of Karnataka and the increase is of the order 40.75 per cent followed by Gujarat (31.33 per cent), Tamil Nadu (19.47 per cent), Maharashtra (18.47 per cent). It is interesting to observe here that none of the states has shown any improvement in the performance of their yield levels, i.e., all the states have shown decline in yield. Given the levels of paid out costs including family labour and overall C2 costs of these states growing groundnut, it is evident that the paid out costs including family labour have increased proportionately higher than the fixed cost. The CS estimates for soyabean have been received from the states of Chhattisgarh, Madhya Pradesh, Maharashtra and Rajasthan for the year 2006-07, with their respective costs of production remaining stable or declining. The maximum decline in C2 cost of production is noticed for the state of Rajasthan alongwith the increase in yield by 28.76 per cent. Maharashstra has its C2 cost of production declined by a meagre (-) 1.11 per cent in the year 2006-07 in line with increase in yield by 19.32 per cent. Madhya Pradesh has its cost of production

increased by 1.81 per cent and its yield by 1.86 per cent. In regard to sunflower, there has taken place increase in cost of production in the states of Maharashtra (31.90 per cent), Karnataka (7.86 per cent), Andhra Pradesh (0.63 per cent), for which CS estimates are available. And the increase in per quintal cost of production for sunflower in these states is also result of decline in the levels of yield of these states.

3.22 The CS estimates for sesamum for the year 2006-07 have been received from the states of Gujarat, Madhya Pradesh, Orissa, Rajasthan, Tamil Nadu and West Bengal. Excepting for Madhya Pradesh, Rajasthan and Tamil Nadu where C2 cost has recorded a decline followed by increase in the yield rates in these states, the remaining states of Gujarat, Orissa and West Bengal have recorded increase in the overall cost of production together with either considerable decrease in yield rate or marginal increase in yield, as in the case of Orissa. CS estimates for nigerseed have been provided for the states of Madhya Pradesh and Orissa for the year 2006-07, with cost of production increasing by 21.63 per cent and 10.99 per cent respectively. The increase in cost of production of these states is due to the decline in the yield levels in the respective states.

3.23 The estimated costs of kharif oilseeds for the latest three years ending 2006-07 have been projected for the ensuing crop season of 2009-10 and their weighted averages taken. Accordingly, the projected A_2+FL cost of production for groundnut averages at Rs.1513.13 per quintal for Andhra Pradesh, Rs.1334.41 for Gujarat, Rs.1856.26 for Karnataka, Rs.1807.42 for Maharashtra and Rs. 1224.97 per quintal for Tamil Nadu. The C_2 cost of production for these states work out to Rs.2092.19, Rs.1698.55, Rs.2355.38, Rs. 2267.26 and Rs 1599.20 per quintal respectively. The weighted average cost for groundnut works out to Rs.1441 per quintal on A_2+FL basis and Rs.1879 on C2 basis. For soyabean, the projected A_2+FL cost works out to Rs.779.01, Rs.1086.81, Rs.695.64 and Rs.871.68 per quintal respectively for the states of Madhya Pradesh, Maharashtra, Rajasthan and Chhattisgarh while the C_2 cost works out to

Rs.1123.47, Rs. 1370.87, Rs.908.29 and Rs.1177.13 per quintal respectively. The weighted average cost for soyabean works out to Rs.883 and Rs.1200 per quintal respectively on cost A_2+FL and C_2 basis. The costs for sunflower for 2009-10 for the states of Andhra Pradesh, Karnataka and Maharashtra are projected at Rs.1262.86, Rs.1535.93 and Rs.1423.70 per quintal on A_2+FL basis and Rs. 1819.38, Rs.1999.18 and Rs.1818.97 per quintal on C_2 basis. The weighted average unit cost of production for sunflower on C2 basis is put at Rs.1915 per quintal for 2009-10 season. For sesamum, the average projected A_2+FL costs are Rs.2866.81, Rs.2042.65, Rs.2128.11, Rs.1821.29 and Rs.2128.97 per quintal and the corresponding C_2 costs work out to Rs.3484.22, Rs. 3045.80, Rs.2928.35, Rs.2681.44 and Rs.2700.87 per quintal for the states of Gujarat, Madhya Pradesh, Orissa, Rajasthan and Tamil Nadu respectively with the weighted average A_2+FL and C_2 cost at Rs.2270 and Rs. 3035 per quintal respectively. The C_2 cost of production of nigerseed in respect of Orissa has been projected to an average of Rs.2368 per quintal.
(Table 3(G))

Cotton (Kapas)

3.24 For cotton, which is the only fibre crop grown in kharif, the estimates of cost of cultivation/production for 2006-07 have been made available for the states of Andhra Pradesh, Gujarat, Haryana, Madhya Pradesh, Maharashtra, Punjab, Rajasthan, Tamil Nadu and Karnataka. The data presented in Table 3(B) shows that the C_2 cost of cultivation per hectare is estimated to have decreased over the preceding year in the states of Andhra Pradesh, Haryana, Maharashtra, Rajasthan and Tamil Nadu. The yield rate has declined in Gujarat by (-) 19.61 per cent with increase in C2 cost by 7.17 per cent and in Madhya Pradesh yield rate declined by (-) 27.08 per cent with increase in C2 cost by 17.48 per cent. Excepting these two states of Gujarat and Madhya Pradesh, all states have reported increase in yield rate from as low as 5.30 per cent in Punjab to as high as 75.56 per cent in Andhra Pradesh in 2006-07 vis-à-vis 2005-06. (Tables 3.6 & 3.7)

3.25 Following the same methodology, the cost A_2+FL of cotton per quintal is projected for 2009-10 to an average of Rs.1408.37 for Andhra Pradesh, Rs. 1368.32 for Gujarat, Rs.1374.55 for Haryana, Rs.1881.57 for Madhya Pradesh, Rs. 2046.24 for Maharashtra, Rs.1515.60 for Punjab, Rs.971.93 for Rajasthan, Rs.2100.99 for Tamil Nadu and Rs.1731.18 for Karnataka. The corresponding C_2 costs per quintal are projected at Rs.2314.67, Rs 1802.78, Rs.2002.81, Rs.2638.26, Rs. 2528.80, Rs.2108.69, Rs.1399.57 Rs.2718.85 and Rs.2510.29 per quintal respectively in these states. The weighted average cost of production

of cotton for 2009-10 works out to Rs.1511 per quintal and Rs.2111 per quintal on cost A_2+FL and C_2 basis respectively.

(Table 3(G))

3.26 In addition, the estimates of cost of production of cotton for the year 2006-07 and 2007-08 have been provided by the states of Andhdra Pradesh, Haryana, Madhya Pradesh and Maharashtra. As regards Haryana, the C2 cost of production for cotton is put at Rs.1829 per quintal in the state reply, which is lower than Rs.1924 per quintal in the CS estimates for the year 2006-07. Madhya Pradesh has more or less comparable costs of production as given separately in state reply and CS estimates. The state reply of Madhya Pradesh puts the figure at Rs.2350 per quintal closely related to Rs.2302 per quintal in the CS estimates.

3.27 Andhra Pradesh, Haryana, Maharashtra and Punjab have provided projected C2 costs of cotton for 2009-10 at Rs.2689, Rs.2776, Rs.2721, Rs.2680 per quintal respectively compared to which the Commission's projections are Rs.2315, Rs.2003, Rs.2529, Rs.2109 for the corresponding states.

(Tables 3(H) & 3(I))

VFC Tobacco

3.28 The latest estimates of cost of cultivation/production for VFC tobacco have been made available by the DES which pertains to Andhra Pradesh for the year 2006-07. 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 2005-06 and 2006-07 has increased. The cost of production of tobacco in respect of Andhra Pradesh has been projected to an average of Rs.4171 and Rs. 5104 per quintal on cost A_2+FL and C_2 basis, respectively.

(Table 3(G))

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 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 price level of output.

(Appendix I & II)

Restructuring the cost of production

3.30 The Government has given approval for including the insurance premium paid by the farmers, marketing and transportation costs incurred by them, as part of cost to arrive at the overall cost of production. This decision was taken by the Government in the light of recommendations of the Expert Committee constituted under the Chairmanship of Prof. Y.K. Alagh on 7th May, 2003 to examine the methodological issues in the fixation of MSPs for mandated crops. It is noted here that the expenditures borne on account of marketing, transportation and insurance premium have so far not been compiled in the usual estimates of cost of production furnished by the Directorate of Economics and Statistics, Ministry of Agriculture, to the Commission. As far as what is gathered in discussion with the Directorate in the meeting held on 13th March, 2009, it was clarified by them that there are provisions in the schedules of enquiry by which the detailed cost data are captured at the operational holding level through cost accounting method. It was proposed that a Group would be constituted involving the officers of both the Directorate and CACP to examine the feasibility of using the existing schedules and if necessary to improve upon the existing system to capture the cost on

account of the aforesaid items at the farm level and aggregating them through suitable averaging method to arrive at the cost estimates for each crop and each state.

3.31 Since such implementation would take some time, it was considered appropriate by the Commission to have a broadly comprehensive view on the matter by formulating a supplementary questionnaire related to these costs and sending them to all the states and other concerned agencies for seeking information in this regard. The information profiles related to these items of cost so far received from states have anomalies and pose difficulty in arriving at reliably valid estimates of these costs by crops even at the state level. As an illustration, it is pointed out that the operation of Crop Insurance Scheme for farmers, as is claimed by many of the farmers, is not farmer friendly and moreover a certain percentage of loan amount is deducted as premium for loanee farmers. For non-loanee farmers, it is not evident whether their crops are insured under any insurance coverage for loss on account of production or income. It has been the unanimous opinion of the farmers that for any claim of indemnity on account of loss of crop either due to pest attacks or natural calamities from any single farmer is not entertained unless the entire Tehsil or Block in the district is affected in any particular state. Therefore, unless the Commission actually gets the cost on account of premium paid by the farmers at the disaggregated level of the operational holding crop-wise, it would be difficult to arrive at crop-wise cost on account of premium.

3.32 In so far as transportation and marketing costs are involved, it has been reported by as many as seven states so far. On close scrutiny of the information it is found that it is not uniformly given by the states and that some states provide marketing charges as per centage of produce sold. This percentage for most of the crops varies between 1 and 2 per cent of the amount sold. The state like Uttar Pradesh has given Rs.1.50 per quintal towards marketing charges. The transportation charges across seven states, namely, Delhi, Uttar Pradesh,

Madhya Pradesh, Rajasthan, Haryana, Jharkhand, Kerala vary between as low as Rs.1.75 to Rs.2 per quintal in Jharkhand and as high as Rs.25 per quintal in Kerala. For the state of Uttar Pradesh the average transportation charges come to Rs.10 to 30 per quintal. All these transportation charges reported by the states relate to paddy only. And since other crops like coarse cereals, oilseeds, pulses may be in the range of transportation charges given for paddy by the states, the Commission at the moment without any other information available, considers for these crops other than paddy the same transportation charges.

3.33 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 throw up 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 below gives an account of estimated cost of production for kharif crops for 2009-10 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 C2 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 other inputs and aggregated upwards to arrive at the state and national estimates.

3.34 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.

Estimated cost of production for Kharif Crops for 2009-10, inclusive of marketing/transportation and insurance premium (All India).

(In Rupees) per quintal

Crop	Projected C2 cost of Production (2009-10)	Estimated cost of Marketing	Estimated Cost of Transportation	Estimated Cost of Crop Premium	Modified Cost*
Paddy	645	2.00	9.73	13.08	670
Cotton	2111	2.00	9.73	11.60	2135
Jowar	804	2.00	9.73	8.74	824
Bajra	658	2.00	9.73	25.00	695
Maize	738	2.00	9.73	17.50	767
Ragi	861	2.00	9.73	4.37	877
Tur (Arhar)	2197	2.00	9.73	22.55	2231
Moong	2705	2.00	9.73	43.10	2759
Urad	2257	2.00	9.73	25.20	2294
Groundnut	1879	2.00	9.73	28.38	1919

Soyabean	1200	2.00	9.73	21.90	1233
Sunflower	1915	2.00	9.73	7.20	1934
Sesamum	3035	2.00	9.73	60.60	3107
Nigerseed	2368	2.00	9.73	8.73	2389
Tobacco	5104	2.00	9.73	NA	5116

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

Inter-Crop Price Parity:

3.35 Minimum Support Price is one of the instruments to maintain inter-crop price parities in the sense that it helps in judicious allocation of area among different crops by farmers for the balanced development of agriculture in the country. Therefore, CACP takes care in its price policy formulation recommendations to preserve inter-crop price parities. Towards this end, effort is made to see that the differences in MSPs across different crops have the same differences in their respective costs/returns. During the past one decade the prices of various agricultural commodities have registered movement at different rhythms. The Wholesale Price Index (WPI) with base year 1993-94 for rice increased by 15.1 per cent during the month of February, 2008-09 to 226.5 from 196.8 during the month of February, 2007-08. The WPI of cereals increased by 11.4 per cent from 217.2 during the month of February, 2007-08 the previous year to 242.0 during February of 2008-09. The WPI of coarse cereals like bajra, maize and ragi increased during the same period by 14.0 per cent, 13.0 per cent and 15.6 per cent respectively. However the considerable increase in WPI for bajra, maize and ragi is a resultant of the statistical phenomenon of the negative or low base year growth with which the price index of 2008-09 is being compared. With regard to barley, it can be said that the annual change in percentage terms in WPI since 2005-06 has been oscillating between as low as (-) 1.3 per cent and as high as 4.2 per cent. The WPI for jowar has shown a decline in growth from 11.9 per cent in February of 2007-08 to 10.4 per cent of the corresponding month of 2008-09. Maize and ragi have recovered during

February, 2008-09 from negative and zero growth base of the corresponding previous period. Jowar and bajra have recorded increase in WPI by 10.9 per cent and 14.0 per cent respectively during the same period. This may be due to substantial increase in MSP for bajra from Rs.600 per quintal in 2007-08 to Rs.915 in 2008-09 and for maize from Rs.620 in 2007-08 per quintal to Rs.840 per quintal in 2008-09 and for ragi from Rs.600 per quintal in 2007-08 to Rs.915 in 2008-09. The WPI of pulses recorded increase by 16.93 per cent in the month of February, 2008-09 from 232.9 in February of 2007-08 to 272.3 in the same month of 2008-09. Going by the cross comparison of increase in WPI in percentage terms for the month of February, 2008-09 over the corresponding month of the previous year the increase for both paddy and pulses is around 15-17 per cent. It is 16.93 per cent for pulses and 15.1 per cent for rice. It is noteworthy to mention that the WPI of oilseeds has increased by 1.02 per cent from 237.8 during the month of February, 2009 to 235.4 during the corresponding month of the previous year. There has been a noticeable increase in WPI in percentage terms during February, 2009 of sesamum seed by 12.07 per cent compared to the corresponding month of the previous year. Other kharif oilseeds like nigerseed, soyabean, groundnut etc. have recorded negative increase or insignificant increase of 1 per cent during February, 2009 vis-à-vis the corresponding month of the previous year.

3.36 As regards the level of minimum support prices there was considerable increase in the case of paddy, bajra, groundnut , urad, tur, maize in relation to their all India average cost of production for the year 2008-09. The percentage increase of their respective MSPs over their C2 cost ranges between about 24 to 45 percent. Relative to cost of production, the increase in MSP for jowar, moong, nigerseed, ragi, sesamum, and sunflower was between 7 and 10 percent.

IV PRICE POLICY FOR 2009-10 SEASON

In arriving at the price policy for Kharif crops of 2009-10 season, the Commission has considered various relevant factors such as cost of production, market price trends, domestic and international demand situation, inter-sectoral terms of trade, input-output price parity, inter-crop price parity and, food security situation. In order to ascertain the views of the stakeholders on kharif crops, the Commission had wide consultations with farmers, millers, exporters, agricultural research organizations, officials of Central and State Governments. This report made a detailed examination of the recent trends and structure of agriculture production in general and of kharif crops in particular. The Commission has as usual carried out a study on the cost of production of kharif crops and made projections regarding their likely levels during 2009-10.

4.2. The Second Advance Estimates of crop production released by the DES indicate that the total foodgrain production during the year 2008-09 would be 227.88 million tonnes. This would be 1.26 per cent lower than the record foodgrains production of 230.78 million tonnes in the year 2007-08. Kharif foodgrains production is likely to decline from 120.96 million tonnes in 2007-08 to 117.96 million tonnes in 2008-09 – a decline of 3 million tonnes. On the other hand, rabi foodgrains production would more or less maintain at the same level in 2008-09 as compared to that of 2007-08. The projected demand for foodgrains production for the year 2011-12 is around 234 million tonnes. The country is, therefore, in a relatively comfortable position as India has already achieved 231 million tonnes in 2007-08 and likely to achieve 230.0 million tonnes in 2008-09, as per the Third Advance Estimates. However, the long term fitted trend growth rate of foodgrains production was only around 0.93 per cent per annum during the period 1996-97 to 2007-08. This growth rate was less than that of population growth.

4.3. The situation of rice is much better as the production in the last few years was much higher than the first five years of this decade. The production of rice rose from 91.8 million tonnes in 2005-06 to 93.4 million tonnes in 2006-07 to 96.7 million tonnes in 2007-08 and likely to be 99.4 million tonnes in 2008-09. However, in the case of other kharif crops such as coarse cereals, pulses, oilseeds and cotton, there would be decline in production in 2008-09 as compared to 2007-08 – the biggest decline being in groundnut. The production of groundnut is likely to decline from 9.2 million tonnes (kharif and rabi) in 2007-08 to 7.3 million tonnes in 2008-09.

4.4. The global food prices increased significantly in 2007 and first half of 2008. In contrast to the tight situation during this period, prices started easing since July 2008. The price of rice broken (A1 super, f.o.b Bangkok) which was US$ 364.5 in January, 2008 registered a sharp increase to US$ 772.0 in May, 2008 but steadily declined thereafter to US$ 310.3 in December, 2008. The global rice prices are expected to be at lower levels in 2009 given, *inter alia*, the global financial crisis and comfortable global production situation. The world rice production is expected to increase from 439.5 million tonnes in 2007-08 (estimated) to 456 million tonnes in 2008-09 (projected) – an increase of 3.8 per cent. The ending stock of rice is likely to increase from 109.3 million tonnes to 115.0 million tonnes – an increase of 5.2 per cent during the same period.

4.5. The wholesale price index (WPI) shows that the price of rice increased significantly during 2008-09. It increased by 15.1 per cent in February 2009 as compared to the index in February, 2008. The annual average WPI of rice for the year 2007-08 was higher by 6.8 per cent as compared to that of 2006-07. The price of rice increased by 9.9 per cent in 2008-09 compared to the index in 2007-08. Thus, there seems to be an upward pressure on rice prices in 2008-09 fiscal year. For cereals as a whole, the increase was 6.2 per cent in 2007-08 and 8.1 per cent in 2008-09. The wholesale prices for total pulses declined by (-) 4.3 per cent in 2007-08 but showed an increase of 6.5 per cent in 2008-09. For total

oilseeds, the average wholesale price increased by 24.1 per cent in 2007-08 and 13.3 per cent in 2008-09. The higher inflation for oilseeds in 2007-08 could be due to higher global prices during that year. On the whole, the inflation was higher for the groups of agricultural commodities, food articles and foodgrains in 2008-09 as compared to 2007-08. It is known that higher food prices hurt the consumers particularly the poor. It is a challenge for the policy maker to provide food at affordable prices for the consumer while simultaneously giving incentive prices for the farmers.

4.6. Procurement of both rice and wheat has been at record levels in 2008-09. The rice procurement during the marketing year (2008-09) has been a record 24.83 million tonnes till the middle of March, 2009. This is much higher than the procurement of 20.92 million tonnes of rice during the corresponding period in 2007-08. The procurement of wheat was at a record level of 22.53 million tonnes in 2008-09 as compared to 11.1 million tonnes in 2007-08. As a result of remarkable procurement in 2008-09, total foodgrain stock as on 1st January 2009, was 35.79 million tonnes as against the buffer stock norm of 20.0 million tonnes. In other words, there is an excess stock of around 15.8 million tonnes of foodgrains (10 million tonnes of wheat and 5.8 million tonnes of rice) with the government as on 1st January, 2009. The Government has decided to have a strategic reserve of 5 million tonnes of foodgrains. The procurement levels of both wheat and rice is likely to be at high levels even in 2009-10. Thus, the problem facing the country today is not shortage of foodgrains but finding ways and means to manage the accumulated foodgrain surpluses.

4.7. As per the available indications, the procurement of rice is expected to reach a level of 30 million tonnes and that of wheat about 24 million tonnes. There is a clear evidence that the price offered to the farmers through MSP is quite attractive and it has incentivised the farmers to produce more.

4.8. There has been an unprecedented increase of minimum support prices (MSP) for Kharif crops by the Government in 2008-09 as compared to those of 2007-08. The Commission recommended these high prices to improve incentives to farmers. Several factors such as farmers' distress over time, high global food prices, food security etc. were responsible for this unprecedented increase in 2008-09. As shown in Table 4.1, MSP increase ranges from 21 per cent for paddy to 94 per cent for nigerseed in 2008-09 as compared to those of 2007-08. Apart from increase in rice, pulses and oilseeds, there has been remarkable increase of 39 to 48 per cent increase in MSP for cotton.

Table 4.1. Minimum Support Prices (MSP) in 2007-08 and 2008-09: Kharif Crops

Crops	2007-08 (Rs.)	2008-09 (Rs.)	Per cent change in 2008-09 over 2007-08
Paddy	745	900	20.8
Jowar	600	840	40.0
Bajra	600	840	40.0
Maize	620	840	35.5
Ragi	600	915	52.5
Tur (arhar)	1540	2000	29.9
Moong	1740	2520	44.8
Urad	1740	2520	44.8
Groundnut	1550	2100	35.5
Soyabean	910	1350	48.4
Sunflower	1510	2215	46.7
Sesamum	1580	2750	74.1
Nigerseed	1240	2405	94.0
Cotton F 414/J34*	1800	2500	38.9
Cotton H4**	2030	3000	47.9

Note: MSP includes bonus also

*** : 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 consisting of bunny/brahma variety.**

4.9 Cost of production is generally considered the most important factor in the determination of minimum support prices. However, last year's report on the

price policy for kharif crops indicated that there would be deviation in the case of almost all kharif crops due to various factors which include the above-mentioned reasons also. The government accepted the recommendation of the unprecedented increase in all kharif crops except for paddy in the year 2008-09. The Commission recommended Rs.1000 for common variety and Rs.1050 for Grade-A variety of paddy in 2008-09. Against this recommendation, the Government fixed Rs.900 for common variety and Rs.930 for Grade-A variety (including bonus) in the same year.

4.10 The all India weighted average C2 cost of production of paddy for 2008-09 was Rs.619 per quintal. It may be noted that the MSP of Rs.900 (including bonus) for common variety of paddy fixed by the government was 45 per cent higher than C2 cost in 2008-09 (Table 4.2). In view of the increase in the cost of production of paddy and to improve the income levels of paddy farmers as in the case of wheat, the Commission feels that there is ground for increasing the support price to Rs.950 for common variety and Rs.980 for Grade-A variety. The projected all India weighted average C2 cost of production of paddy in 2009-10 is Rs.645 and the **modified C2 cost** including insurance premium, marketing and transportation charges is Rs.670. The recommended MSP of Rs.950 for paddy would be higher by 47.3 per cent over C2 cost and 41 per cent over **modified C2 cost**. The percentage change in MSP over C2 cost for various kharif crops is given below:

Table 4.2. Percentage Change of MSP over C2 cost for Kharif Crops: 2008-09

Crops	MSP (Rs.)	C2 cost (Rs.)	MSP over C2 (percent)
Paddy	900*	619	45
Jowar	840	765	10
Bajra	840	643	31
Maize	840	680	24
Ragi	915	832	10

Tur (arhar)	2000	1609	24
Moong	2520	2293	10
Urad	2520	1994	26
Groundnut	2100	1659	27
Soyabean	1350	1181	14
Sunflower	2215	2011	10
Sesamum	2750	2498	10
Nigerseed	2405	2188	10
Cotton	2500	2088	20

* includes bonus of Rs. 50 per quintal.

4.11 In the case of other kharif crops, the MSP fixed was much higher than C2 cost of production in 2008-09 (Table 4.2). In fact, even if we consider C2 cost or **modified** C2 cost for 2009-10, the minimum support prices of these crops in 2008-09 would be higher. The MSP of Rs. 840 for maize in 2008-09 is higher than the **modified** projected C2 cost of Rs. 767 in 2009-10. Similarly, the MSP of Rs.2500 for cotton in 2008-09 is much higher than the modified C2 cost of Rs.2133 in 2009-10. Therefore, on the basis of cost considerations, there is no justification for increase in MSP for many of the kharif crops. However, in the case of three crops viz., tur (arhar), moong and sesamum, the projected cost of production in 2009-10 is much higher than that of 2008-09. Therefore, there is a case for increase in the MSP for tur, moong and sesamum.

4.12 The Commission made comparisons between the projections of costs made by CACP and those provided by the states. The comparable estimates show that the projected C2 costs of production per quintal for paddy given by the states are higher than those of CS estimates in respect of Andhra Pradesh, Punjab and Bihar and lower for Uttarakhand. In the case of jowar, the C2 cost per quintal provided by states is lower than those of CS estimates for Andhra Pradesh and Madhya Pradesh. Similarly, the C2 cost per quintal for tur provided by states is higher than CS estimates for Andhra Pradesh and Madhya Pradesh and lower for Maharashtra and Uttar Pradesh. In the case of cotton, the projected C2 costs provided by states are higher than CS estimates for Andhra Pradesh, Haryana, Maharashtra and Punjab and lower for Haryana.

4.13 The Commission has also considered the issue of price parity across crops in terms of increase in MSP over time. The MSP for paddy increased 77 per cent between 2000-01 and 2008-09. The corresponding increase for other crops ranged between 54 per cent for cotton to 136 per cent increase for nigerseed. Only in the case of cotton and tur, the rate of increase is lower than paddy. The MSP for coarse cereals, oilseeds and pulses other than tur have increased faster than paddy. This should give incentives to grow these crops. It is, however, known that non-price factors like technology, irrigation are equally important as price alone can not improve productivity in some of these crops.

4.14 Considering all the relevant factors as indicated above, and after consultations with all the stakeholders, the Commission recommends that :

i) minimum support prices fixed for the year 2008-09 be the same for the year 2009-10 also in the case of jowar (hybrid and maldandi), bajra, maize, ragi, urad, groundnut-in-shell, soyabean (black and yellow), sunflowerseed, nigerseed and cotton (kapas) Staple Length (2.5% span) of 24.5 mm - 25.5 mm and Micronaire Value of 4.3 - 5.1 consisting of F414/H777/J34-Raj. variety, cotton (kapas) Staple Length (2.5% span) of 29.5 mm - 30.5 mm and Micronaire Value of 3.5 - 4.3 consisting of Bunny/Brahma variety;

(ii) for the other kharif crops, namely, Paddy, Tur (Arhar), Moong, Sesamum, there is a case for increasing the MSP of 2009-10 Kharif season. Accordingly, for various kharif crops, the CACP recommends the following MSPs.

Commodity	**Variety**	**Quality**	**Minimum Support Price**
			(Rs per quintal)
Paddy	Common	FAQ	950
	Grade-A	"	980
Jowar	Hybrid	"	840
	Maldandi	"	860
Bajra	-	"	840
Maize	-	"	840

Ragi	-	"	915
Tur (Arhar)	-	"	2300
Moong	-	"	2760
Urad	-	"	2520
Groundnut-in-shell	-	"	2100
Soyabean	Black	"	1350
	Yellow	"	1390
Sunflowerseed	-	"	2215
Sesamum	-	"	2850
Nigerseed	-	"	2405
Cotton (Kapas):			
(iii) Staple length (mm) of 24.5 -25.5 and Micronaire value of 4.3 - 5.1 F414/H777/J34-Raj. variety,		"	2500
(iv) Staple length (mm) of 29.5 -30.5 and Micronaire value of 3.5 – 4.3 Bunny/Brahma variety;		"	3000
VFC Tobacco			
Black soil	F_2 grade	"	4350
Light soil	L_2 grade	"	4550

The Commission further recommends that:

xviii.) the FCI should be authorised to maintain an appropriate level of buffer stock and then undertake open market operations with flexible clauses in needy areas, considering the price movements and market requirements.

(para 1.6)

xix.) alongwith the thrust on increased availability of farm credit, there should be emphasis on the greater inclusion of new farmers, especially small and marginal, under institutional coverage, and the progress in this regard needs to be monitored regularly.

(para 1.15)

xx.) there should be adequate emphasis on the provision of small farm implements and tools that would cater to the requirements of the majority of Indian farm holdings, and which would facilitate enhanced farm production and productivity.

(para 1.16)

xxi.) the Government should on priority carry out a review of the adequacy of procurement centres opened, availability as well as requirement of storage and other related infrastructural facilities across the country, and make efforts to make up the deficit. Associating various appropriate agencies available in the States, other than the traditional organizations, (e.g., cooperative organizations) for procurement operations, need to engage the attention of Government.

(para 1.17)

xxii.) the country should bring into operation well-balanced and appropriate measures for the use as well as conservation of irrigation resources, so that the needs of agriculture are fulfilled as well as the environmental compulsions are not violated. The slogan 'crop from every drop of water' should be infused with real content. Promoting water use efficiency should be a national priority.

(para 1.21)

xxiii.) the seed policy should be subjected to periodic review, to incentivise and promote the production and supply of good quality and genetically sound seeds and in the process elevate the seed replacement rate to the desired level, as this will be one of the key drivers for augmenting agricultural yields and production.

(para 1.22)

xxiv.) **there should be further thrust on the promotion of agricultural research followed up with effective and knowledgeable extension services with emphasis not only on the number of ATMAs established, but also on their requisite linkages with the concerned knowledge centres. (para 1.23)**

xxv.) **it should be the endeavour of Government to declare MSPs well in advance of the sowing season for the concerned crops. (para 1.24)**

xxvi.) **the National Rainfed Area Authority (NRAA), constituted in 2007, urgently initiate action for developing appropriate technology package to break the low yield barriers in the rainfed rice producing areas. (para 2.12)**

xxvii.) **the adoption of hybrid rice technology needs to be further accelerated, by strengthening the research systems of both public and private sectors and by providing adequate policy support. (para 2.13)**

xxviii.) **the entire gamut of procurement operations by FCI and the State agencies (through the scheme of decentralized procurement) should be reviewed to examine the road blocks in extending the procurement operations to non-conventional regions and to recommend ways to rationalize and collaborate the operations of both the agencies so that the spread of procurement operations can be extended to the maximum possible beneficiaries. (para 2.16)**

xxix.) **an integrated strategy is required to boost the production and use of coarse cereals as a major food crop. Steps may be taken to include nutritious coarse cereals such as bajra, jowar, ragi in the food security basket through the network of Public Distribution System (PDS) which would help in improving nutritional security and would also lead to enhancement of dryland farming in the country. (para 2.32)**

xxx.) **there is a need for diversification of the coarse cereals products through cost effective and innovative methods. Focused plan of action on agro processing, value addition and market support may be spelt out to maintain future sustainability of the coarse cereals. (para 2.38)**

xxxi.) **in order to ensure food security, coarse cereals should be included as a component of ongoing National Food Security Mission. (para 2.56)**

xxxii.) **in view of the urgent need to augment domestic availability of edible oils, the oilseed crops of secondary sources should be given special attention.**

(para 2.82)

xxxiii.) **Ministry of Textiles needs to look into the grievance of the Cotton Industry regarding low priority being given to by-products of cotton, value addition which suffer from faulty processing, traditional crushing techniques, lack of extension education etc. and to take appropriate remedial measures, either through a new scheme or through the existing Technology Mission on Cotton. (para 2.110)**

xxxiv.) taking into account the views of Tobacco Board, DES needs to sort out the discrepancy in the data collected by Directorate of Tobacco Development and Central Tobacco Research Institute and consider extension of coverage for collection of cost of cultivation data to Karnataka also.

(para 2.127)

-Sd-

(S. MAHENDRA DEV)

CHAIRMAN

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MEMBER

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(K. G. RADHAKRISHNAN)

MEMBER SECRETARY

May 29, 2009