

COMMISSION FOR AGRICULTURAL COSTS AND PRICES

PRICE POLICY FOR RABI CROPS OF 2009-10

SUMMARY OF RECOMMENDATIONS

In this report, the Commission for Agricultural Costs and Prices presents its views on the Price Policy for Rabi Crops of 2009-10 season. The Commission recommends that:

The minimum support prices for the fair average quality (FAQ) of various rabi crops of 2009-10 season be fixed at the following levels:

<u>Commodity</u>	<u>Rs/Quintal</u>	
Wheat	1100/-	
Barley	750/-	
Gram	1760/-	
Masur (Lentil)	1870/-	
Rapeseed/Mustard	1830/-	
Safflower	1680	(Para 4.14)

Commission further recommends that:

- i. **greater thrust should be laid on bridging the substantial yield gaps that still prevail between the potential and attainment among various crops, through appropriate technology dissemination.**
(para 1.21)

- ii. **prioritised action plans should be brought in to target the rainfed areas through increased public/private investment supported by attractive policy packages alongwith required institutional reforms and involvement of farmers, to exploit the potential for value addition and to improve the agriculture sector.**
(para 1.22)

iii. farming should be made an attractive occupation by advocacy of farming system approach. Integrated farming system approach needs to be followed comprising agricultural production, animal husbandry, horticulture, fisheries, agro-forestry, bee-keeping, etc., to supplement the income of farmers.

(para 1.23)

iv. keeping in view the national priority for promotion of oilseeds and pulses, the Government should have a re-look at the present policies/programmes pertaining to their promotional thrust and impact, and suitable amendments/improvements brought in to boost up the crop prospects.

(para 1.24)

v. alongwith the thrust on expanding the quantum of credit, emphasis should be laid on the credit reach among the small and marginal farmers.

(para 1.29)

vi. the nodal procurement agencies should further widen the network of procurement operations and decide, in consultation with the concerned State Governments, the location and number of purchase centres to be set up much in advance of the marketing season, and this information should be given wide publicity through media, radio, television, leaflets, etc.

(para 1.31)

vii. the implementation of FAQ norms should be made reliable and transparent with the provision of necessary equipment support in the market, and such norms fixed by the Government should be given wide publicity through different means of media.

(para 1.32)

viii. keeping in view the problems faced by the nodal agencies for procurement and distribution of foodgrains across the country, a suitable action plan supported by adequate funds should be arrived at by the Government urgently, with a long-term

perspective, for creation of adequate storage capacity, including public-private partnership.

(para 1.34)

- ix. farmers should be made aware of the opportunities in barley production and through proper extension facilities and education of farmers, productivity and production of barley should be enhanced.**

(para 2.20)

- x. keeping in view the dependence of cultivation of pulses on weather conditions, the weather based crop insurance scheme, when taken up on a regular basis, may cover all the pulses in a comprehensive form in all the states.**

(para 2.30)

I. An Overview

Even though about 40 percent of the total cropped area is irrigated, the performance of Indian agriculture continues to be largely influenced, inter alia, by the vagaries of monsoon. The south-west monsoon appeared over the Andaman Sea around its normal date, on 20th May. However, it set in over Kerala on 23rd May, about a week earlier than the normal date. Subsequently, the monsoon advanced over the North Eastern States, West Bengal, and Sikkim, and later further advanced along the West coast, Karnataka and Andhra Pradesh. But thereafter, the advance of monsoon got subdued, and heat wave conditions and dry weather prevailed over certain parts of the country. By 1st July, monsoon had covered the entire country except some parts of West Rajasthan. The cumulative rainfall received for the country as a whole, during the period 1st June to 29th July, 2009 was 353.2 mm which is 19 percent below the Long Period Average (LPA). (The overall deficiency level has further worsened to 25 percent by 5th August, 2009). In terms of percentage departure from normal, the rainfall received in the four broad divisions of the country during this period was (-) 33 percent in North West India, 1 percent in Central India, (-)15 percent in South Peninsula, and (-)39 percent in North East India. Out of the 36 meteorological sub-divisions in the country, this cumulative rainfall was in excess/normal in 17, deficient in 18 and scanty in one sub-divisions. It may also be observed that the live storage in 81 major reservoirs in different parts of the country monitored by the Central Water Commission, as on 30.07.2009, was 35 percent of Full Reservoir Level (FRL), and 112 percent of the storage position during last year. IMD's long range forecast update for the 2009 south-west monsoon season (June to September) is that the rainfall is likely to be below normal. Quantitatively, monsoon rainfall for the country as a whole is likely to be 93 percent of the LPA with a model error of +/-4 percent.

1.2 The uncertainties on account of the south-west monsoon related to its quantum as well as spatial and temporal distribution are eroding the expectation of any good agricultural performance in 2009-10. As on 07.08.2009, area sown under all kharif crops at all-India level was 764.73 lakh ha. which is 33.6 lakh ha. (4.2 percent) less than the area coverage of last year in the corresponding period. For foodgrains as a whole, this decline would be 7.8 percent. The Ministry of Agriculture has been

constantly monitoring the kharif sowing progress with the States. Contingency crop plans for specific agro-climatic conditions have been prepared. These, inter alia, include replacement of main crop like paddy with alternate crop like millets in case of delayed sowing, planning for early maturing varieties of the main crop and protective irrigation by efficient use of available water, provision of additional seed, and giving flexibility to the States in the utilisation of funds provided under crop development programmes of central schemes to meet the contingencies out of deficient rainfall. In spite of these initiatives, there is an emergent need for greater monitoring of the situation, followed by timely and time-bound corrective measures.

1.3 According to the Fourth Advance Estimates dated 21.7.2009 of the Directorate of Economics and Statistics (DES), Ministry of Agriculture, total foodgrains production during 2008-09 is estimated at 233.88 million tonnes, which is surpassing the previous record production of 230.78 million tonnes registered during 2007-08 (based on Final Estimates). This is also marginally higher than the target of 233.00 million tonnes of foodgrains production set for the year. The increase has been in respect of rabi foodgrains production which is estimated at 116.18 million tonnes, above the former peak production of 109.83 million tonnes achieved in 2007-08. This is also 4.23 percent higher than the 111.46 million tonnes targetted for the year. As against this, the total kharif foodgrains production for 2008-09 is estimated to deliver a lower output of 117.70 million tonnes, vis-à-vis the finally estimated production of 120.95 million tonnes during 2007-08, and also short of the targetted output by 3.84 million tonnes.

1.4 In the case of rice, the estimated output for 2008-09 would be a record 99.15 million tonnes, against the finally estimated output of 96.69 million tonnes for 2007-08, an increase of 2.54 percent. This is also ahead of the target of 97.00 million tonnes set for the year. Both the rabi and kharif segments of rice contributed to the higher production level. For wheat also, the output is heading for a new landmark. Compared to the wheat output of 78.57 million tonnes in 2007-08, the output for 2008-09 would be 80.58 million tonnes, which is also above the target of 78.50 million tonnes. These increases have reflected in the output of cereals as a whole: the production would rise from the previous record of 216.02 million tonnes in 2007-08 to 219.21 million tonnes in 2008-09. Even though there is a decline in the kharif output of cereals from 114.55

million tonnes (2007-08) to 112.92 million tonnes (2008-09), this has been more than made up by the rabi output which increased from 101.47 million tonnes (2007-08) to 106.29 million tonnes (2008-09). Similar trends of kharif and rabi output could be observed in respect of coarse cereals as a whole, but the total output has undergone a decline from 40.76 million tonnes in 2007-08 to 39.48 million tonnes in 2008-09, a reduction of 3.14 percent. This down trend is exhibited by most coarse cereals, including bajra, jowar, and ragi. The exceptions are barley and maize: the production of barley, which is a rabi crop, is expected to increase to 1.54 million tonnes (2008-09) from 1.20 million tonnes (2007-08), a record output in the past decade, while the output of maize is marginally increasing from 18.96 million tonnes (2007-08) to 19.29 million tonnes (2008-09). The dip has been more pronounced in respect of bajra where the production is declining from 9.97 million tonnes (2007-08) to 8.83 million tonnes (2008-09). In all these cases of decline, the kharif output has been taking dips which have been to an extent offset by the rise in rabi production.

1.5 As regards pulses in toto, the production is expected to decline, albeit marginally from 14.76 million tonnes in 2007-08 to 14.66 million tonnes in 2008-09. Here also, the kharif production is giving the setback, and the increase in rabi output has brought down the extent of decline. An increase in output is expected from Gram where the production is estimated to increase from 5.75 million tonnes (2007-08) to 7.05 million tonnes (2008-09). All other major pulses would be featured by decline: tur from 3.08 million tonnes (2007-08) to 2.31 million tonnes (2008-09), urad from 1.46 million tonnes (2007-08) to 1.11 million tonnes (2008-09), and moong from 1.52 million tonnes (2007-08) to 1.01 million tonnes (2008-09). In respect of these items, the decline is anticipated in both the kharif and rabi segments of production. However, among the pulses categorized as 'other pulses', there would be a pick-up in output from 2.95 million tonnes (2007-08) to 3.18 million tonnes (2008-09), which has to an extent subdued the overall decrease in pulses production.

1.6 For oilseeds, the story is again that of decline. The overall production pertaining to the total of nine oilseeds, would register decline from 297.55 lakh tonnes in 2007-08 to 281.57 lakh tonnes in 2008-09, a dip of 5.37 percent. Whereas the kharif output would significantly decline from 207.13 lakh tonnes (2007-08) to 178.82 lakh tonnes

(2008-09), there would be considerable improvement in the rabi output, from 90.42 lakh tonnes (2007-08) to 102.75 lakh tonnes (2008-08), thus reducing the gravity of total decline. However, there is no such evident trend emerging in respect of the individual items; it is different and distinct for individual items. For groundnut, the output is expected to decline from 91.82 lakh tonnes (2007-08) to 73.38 lakh tonnes (2008-09), with both kharif and rabi portions contributing to the decline. The output of sesamum would be sliding from 7.57 lakh tonnes (2007-08) to 7.33 lakh tonnes (2008-09). However, nigerseed is standing out as distinct, exhibiting a marginal increase from 1.10 lakh tonnes (2007-08) to 1.15 lakh tonnes (2008-09). The case of rapeseed and mustard is more distinct, which is estimated to remarkably increase from 58.34 lakh tonnes (2007-08) to 73.68 lakh tonnes (2008-09), an increase of 26.29 percent. The other four oilseeds, viz., linseed, safflower, sunflower and soyabean are taking dips in production.

1.7 Regarding commercial crops, there is going to be an all-round decline. The output of cotton is anticipated to decline from the record production of 258.84 lakh bales in 2007-08 to 231.56 lakh bales in 2008-09, a decline of 10.54 percent. In the case of jute & mesta, the production would go down from 112.11 lakh bales in 2007-08 to 104.07 lakh bales in 2008-09. The decline in production would be most conspicuous in respect of sugarcane, from 3481.88 lakh tonnes (2007-08) to 2712.54 lakh tonnes (2008-09), registering a reduction of 22.10 percent. In all the three cases, the estimated production is trailing behind the laid down targets. On the whole, the production scenario in the agricultural sector does not seem to be encouraging. The only silver lining is the record production expected in respect of foodgrains, mainly rice and wheat, where the output would register an all-time high of 233.88 million tonnes.

1.8 The procurement of wheat during 2009-10 (as on 21-07-2009) was 25.18 million tonnes, as against the target of 15 million tonnes. The quantum of procurement remains a record, and is 11 percent more than the procurement of 22.69 million tonnes achieved during 2008-09. The favourable crop conditions and higher MSP must have enabled the attainment of this remarkable level of procurement. As against the total market arrival of 26.68 million tonnes of wheat (as on 21.07.2009), 25.18

million tonnes have been procured by the Government agencies; an insignificant 5.6 percent of the market arrivals have gone into the private hands. As on the same date, the procurement of rice during the marketing season (October to September, 2008-09) was 31.73 million tonnes, as against 26.57 million tonnes during the corresponding period of the previous year.

1.9 The offtake of foodgrains (rice and wheat) from the Central Pool during 2008-09 has been 39.50 million tonnes. This is 5.53 percent higher than the offtake of 37.43 million tonnes during 2007-08. The higher offtake of wheat of 14.88 million tonnes vis-à-vis 12.20 million tonnes in 2007-08, has contributed to this. This has also offset the lower offtake of rice at 24.62 million tonnes in 2008-09 as against 25.23 million tonnes in 2007-08. The total stock of foodgrains with the Food Corporation of India (FCI) and other Government agencies as on 1st April, 2009, was 35.58 million tonnes, which was higher than the stipulated buffer stock norm of 16.20 million tonnes as on that date. The stock of wheat at 13.43 million tonnes and that of rice at 21.60 million tonnes, as on this date, substantially exceeded their buffer norms of 4.00 million tonnes and 12.20 million tonnes, respectively. By 1st May, 2009, this stock position took a quantum leap to 51.23 million tonnes, comprising rice of 21.41 million tonnes and wheat of 29.83 million tonnes.

1.10 The enhanced procurement of wheat is getting reflected in its improved carry-over stock. The carry-over stock of wheat which was on the decline a few years back, has, of late, registered consistent increases. It rose from 5.42 million tonnes in 2007-08 to 13.61 million tonnes in 2008-09. However, the case of rice is devoid of any consistent trend. After a decline to 13.72 million tonnes in 2006-07, the carry-over stock increased to 16.44 million tonnes in 2007-08, and to 20.48 million tonnes in 2008-09.

1.11 The behaviour of market and the movement of domestic prices during the past year (April, 2008 to March, 2009) for all commodities as well as agricultural commodities, has been for increase during the first half followed by dips during the second half. This more or less coincided with the global recession that set in around October, 2008. The average annual increase in Wholesale Price Index (WPI, base

1993-94=100) that ranged between 11.8 to 12.3 percent during June to September, 2008, declined to 4.9 to 1.2 percent during January to March, 2009. Accordingly, the average increase for the whole year was only 8.4 percent. In respect of agricultural commodities, the trend was similar; however, the extent of rise and fall was not so pronounced. The average annual increase that was in the range of 9.0 to 10.2 percent during June to September, 2008 gave way to a reduced range of 9.8 to 5.1 percent from January to March, 2009.

1.12 However, the price situation pertaining to foodgrains remained as distinct: except for sporadic and marginal declines, the rate of average annual increase has been looking up all along in the year from 6.1 percent in April, 2008 to 13.2 percent in February, 2009, and there was a decline to 11.6 percent only in March, 2009. The average annual increase for the year as a whole has been 8.6 percent which is considerably higher than the increase of 4.7 percent during the previous year. Within foodgrains, the average annual increase of WPI for wheat for the year was 6.2 percent and the monthly increases hovered around this, with the highest increase of 8.2 percent during July, 2008 and the lowest increase of 4.0 percent in November, 2008. Regarding rice, the price situation has exhibited a trend distinct from that of all other items. Barring monthly fluctuations, the average annual increase was subdued till September, 2008 and there was a surge thereafter, reaching 17.1 percent in February, 2009. A decline set in only thereafter. Overall, the average annual increase in respect of rice in 2008-09 was to the extent of 11.1 percent. Similar trend has been observed in respect of bajra and maize. A trend alike to that of all commodities, viz., increase in the first half followed by decline in the second half, has been exhibited within foodgrains only by barley. The distinct price behaviour of foodgrains in general and rice in particular, of rise in the latter part of the year against their adequate arrivals in the market, is a cause for concern.

1.13 For almost all categories of items, viz., all commodities, foodgrains, and agricultural commodities, price level during the first quarter of 2009-10 (April-June) has shown an uptrend, albeit not drastically. For foodgrains as a whole, the index rose from 250.6 (April) to 253.8 (June), and for agricultural commodities, it rose from 245.4 to 248.2 during this period. Overall, all individual items have also registered similar

increases, barring cases where the index dipped and then again rose or went up and then declined later. The only exception has been Gram where the index has been steadily looking down in the quarter. The overall price movements point to the developing inflationary trends in the economy.

1.14 As per FAO's latest forecast (Food Outlook, June, 2009), the world cereal production in 2009/10 would register a modest decline. As against the record global production of 2287.2 million tonnes in 2008/09, the forecasted production during 2009/10 would be 2218.8 million tonnes (including rice on a milled basis). This could be because of dips in productivity alongwith the reduction in overall plantings (mostly wheat) vis-à-vis that of last year's performance. Both feed and industrial utilization of cereals are expected to be hit by the global recession. On the whole, the cereals utilization during 2009/10 would be 2230.4 million tonnes. This would yield an ending stock of 520.9 million tonnes. The FAO Cereal Price Index (base:2002-2004=100) averaged 183 points in May, 2009, up 4 percent from April but down 32 percent from April, 2008 when the index reached the all time peak of 274 points. The downward pressure on cereal prices has emerged from several sources such as the record production in 2008/09 and the resultant recovery in export supplies, and the prospects for another good crop this year.

1.15 The global wheat production during 2009/10 is expected to be 655.8 million tonnes, which is lower by about 4 percent from the peak production of 684.6 million tonnes attained in the previous year. The production is anticipated to look down in the major producing countries such as the European Union, Russian Federation and United States. Against an estimated utilization of 655.0 million tonnes, the ending stock of wheat is forecasted to be 192.4 million tonnes. According to FAO, there could be significant curtailment in the international trade in wheat, since the increased production in several traditional wheat importing countries would bring down their quantum of import. Still, the prospects of a decline in world wheat production in 2009/10 have begun to push up wheat prices. International wheat quotations began rising by the beginning of March, 2009. In May, the price of US wheat (No.2 Hard Red Winter, f.o.b. Gulf) averaged USD 266 per tonne, the highest since September, 2008. Corresponding movements have been observed in the futures markets also. In May,

wheat futures prices for September delivery on the Chicago Board of Trade (CBOT) rose to USD 229 per tonne, an increase of 14 percent during the month.

1.16 Internationally, coarse grains are expected to register a production level of 1098.5 million tonnes in 2009/10. This would be 3.8 percent below the last year's record level of 1142.3 million tonnes. Any enhancement in production is expected only in Africa. Within coarse grains, the output of barely, second most important coarse grain, is anticipated to go down in 2009/10 by about 5 percent to 147 million tonnes, and sorghum output would be about 61 million tonnes, a dip of 6.7 percent from that of last year. The current economic recession is likely to have a considerable impact on the international trade in coarse grains. Accordingly, the total utilization of coarse grains in 2009/10 is forecast at 1118 million tonnes, about 11 million tonnes higher than that estimated for 2008-09. The falling production and higher utilization may depress the world closing stock of coarse grains during 2009/10 to 201 million tonnes, a drop of 7 per cent vis-à-vis the opening level of stock. International prices rose sharply in recent times, prompted by production shortfalls in South America and outside factors, in particular the surge in soyabeans, renewed strength in crude oil prices and a weakening US Dollar. In May, the price of US maize (No.2 Yellow, Gulf) averaged USD 180 per tonne, the highest since October, 2008. The prices in futures market have also recorded similar increases; by the end of May, the December, 2009 contract at the CBOT hovered around USD 177 per tonne, the highest in 6 months.

1.17 With regard to rice, as perceived by FAO, crop prospects for the ensuing season seem to be favourable. The world production in 2009/10 may rise one percent to reach 464.5 million tonnes (milled equivalent), as against 460.3 million tonnes in 2008/09. After a 1.7 percent higher total utilization of 457.6 million tonnes, still the ending stock by the close of the marketing season would be a seven year high of 120.1 million tonnes, by virtue of the buoyant production levels in the current and ensuing year. This enhancement is mainly expected to materialize in the exporting countries such as China, India, Thailand, USA and Vietnam. International rice prices have exhibited contrasting movements since November, 2008. While the widely traded Indica rice varieties registered declines, Japonica rice prices did not record such price falls. Despite the good crops obtained globally, the price drops of rice have

been subdued. The benchmark Thai 100% B Rice price of USD 556 in May, 2009 was 42 percent less than the record USD 963 per tonne of May, 2008, but still nowhere near the 2007 average value of USD 335 per tonne. This is because of the policy decisions still prevailing in the major exporting countries by way of price support or export restrictions that depress rice arrivals in the world market.

1.18 The global output of oilseeds and products has been forecasted at 405.9 million tonnes in 2008/09. This is an improvement over the output of 403.1 million tonnes in 2007/08 but still about 13 million tonnes below the record crop of 2006/07. The output has been mainly pulled down by the curtailed crop output in South America. Since the production shortfalls have eroded the export availabilities, the present firmness in the world prices for oilseeds and products may persist and possibly strengthen further during the remainder of the current season.

1.19 Globally, the sugar production is anticipated to go down by 5 percent in 2008/09 to 158.5 million tonnes from the record level of 167.6 million tonnes attained in 2007/08. This is mainly because of the production shortfalls in India, Australia, the European Union, Pakistan, and USA. The sustained demand in developing countries is making the consumption outstrip production, for the first time since 2005/06. This would downsize the global carry-over stock to 76.3 million tonnes in 2008/09 vis-à-vis 80.9 million tonnes in 2007/08, impacting the world sugar prices which have reached a three year high in May, 2009.

1.20 Agriculture continues to be crucial for the national economic development. However, over the last decade, there has been a sharp deceleration in the country's agricultural sector. The growth in agriculture GDP which was 4.7 percent per annum during the VIII Plan (1992-97), declined to 2.1 percent during the IX Plan (1997-2002) and to 2.5 percent per annum during the X Plan (2002-07). Despite an average growth rate of over 4.9 percent over three years (2005-06 to 2007-08), the growth in the sector again declined to 1.6 percent in 2008-09. During the period 1996-97 to 2007-08, while the average annual growth rate of foodgrains production was only 0.66 percent, the population growth rate has been estimated at about 1.9 percent, and the growth in demand for foodgrains at 2.2 percent (X Plan), and 2 to 2.5 per cent projected during

the XI Plan. Even at the present rate of population growth, the per capita availability of foodgrains will go down further. This is a cause for concern. A reversal of this deceleration in agricultural growth, particularly that of foodgrains, is imperative.

1.21 It is generally held that the fall in the share of agriculture in GDP is the result of economic evolution, whereas in the Indian context, the share has declined also because of its own lacklustre performance rather than the better performance of other sectors. For any appreciable and sustainable long-term growth in the farm sector, increased levels of productivity is highly essential. A technological breakthrough should come in the place of the currently experienced technology fatigue across the agricultural production spectrum. Devoid of enhanced productivity per unit of scarce national resources like land and water, through technological upgradation, the attainment of 4 percent growth in agriculture could remain as elusive. Therefore, the Commission recommends that **greater thrust should be laid on bridging the substantial yield gaps that still prevail between the potential and attainment among various crops, through appropriate technology dissemination.**

1.22 Another aspect awaiting attention in the country's agricultural sector is the ample scope for value addition. Adequate exploitation of this potential could bring about substantial improvements in the farm sector and deliver higher income levels at different points of the rural economy. It is well known that there are enormous untapped opportunities in the rainfed areas for production and processing of traditional as well as high value commodities such as horticulture and resultant value addition that could elevate farm incomes and open up employment opportunities. However, the initiatives and programmes visualized under the National Rainfed Area Authority have not taken off to the expected extent. The Commission recommends that **prioritised action plans should be brought in to target the rainfed areas through increased public/private investment supported by attractive policy packages alongwith required institutional reforms and involvement of farmers, to exploit the potential for value addition and to improve the agriculture sector.** Around 30 percent share of the food processing sector in the total food market indicates the potential involved. It is reported that currently the lack of a cold chain in the country ends in wastage of about 40 percent of the farm produce. While India has

over 10 percent share of the world's production of fruits and vegetables, the country could gather only a little over 1 percent share of its export market internationally.

1.23 Even though farming continues to be the mainstay of majority of population in the country, the interest of people in the vocation is on the wane. This is mainly because the viability of farming has been eroded. As revealed by the NSSO Survey (59th Round of NSSO, 'Situation Assessment Survey'), given an option, 40 percent of the people currently employed in the agriculture sector would prefer to leave the profession. Hence, it is essential that adequate measures are undertaken to make farming an attractive profession. The income generated from the profession should suffice to meet the needs and requirements of the farm family. As already brought out by the Commission in the earlier Reports, dependence on cultivation alone would not meet such requirements. It is recommended that **farming should be made an attractive occupation by advocacy of farming system approach. Integrated farming system approach needs to be followed comprising agricultural production, animal husbandry, horticulture, fisheries, agro-forestry, bee-keeping, etc., to supplement the income of farmers.** Generation of non-farm job opportunities for the rural poor, is the need of the hour, that could in turn lead to requisite reduction in the labour-to-land ratio.

1.24 Doubts have been rightly raised regarding the sustainability of rice-wheat based cropping pattern. There is no second opinion that the substitution of areas under paddy to eco-friendly crops like pulses and oilseeds would promote sustainability of the agricultural production systems. However, the cultivation of oilseeds and pulses continue to confront major constraints in increasing area, production and yield. For both oilseeds and pulses, the area under cultivation is yet to pick up. Barring exceptions, the use of high quality seeds/hybrids and disease-resistant varieties are still eluding oilseed cultivators who are getting low production potential vis-à-vis crops like rice, wheat, and sugarcane. Their farming is prone to high risk emanating from the vagaries of nature and susceptibility to a number of insect-pests and diseases. As regards pulses, any significant productivity improvement is still not in sight. Pulses cultivation remains confined to marginal and sub-marginal lands under rainfed conditions by small and marginal farmers whose

capacity for input use is quite low. As in the case of oilseeds, the use of high yield varieties/hybrids that could give higher productivity in rainfed conditions, still remains a deficit area. It seems the ongoing schemes/programmes for the promotion of oilseeds and pulses have not been able to tackle these problems/issues. Accordingly, the Commission recommends that **keeping in view the national priority for promotion of oilseeds and pulses, the Government should have a re-look at the present policies/programmes pertaining to their promotional thrust and impact, and suitable amendments/improvements brought in to boost up the crop prospects.**

1.25 The prices of foodgrains appear to have been increasing faster than the wholesale price index in general. Such increases are particularly affecting the lower strata of society most as the larger part of their consumption expenditure goes to pay for food articles. This is reflected in the sharp rise in consumer price index (CPI) for both rural labourers and agricultural labourers. Food inflation is an area of concern today. Increased public spending in rural India could be one of the reasons leading to higher food prices, particularly through NREGA. Any unilateral raising of wages of workers under the employment guarantee scheme by the States, may be avoided.

1.26 Keeping in view the indigenous requirements and exigencies, the Government had banned the export of wheat from Central Pool since August, 2003. Export of wheat and wheat products has also been banned vide Notifications dated 09.02.2007 and 08.10.2007, respectively. Perceiving the stock position of wheat in the Central Pool, it was later decided that export of upto 20 lakh tonnes of wheat from the Central Pool on diplomatic basis may be allowed to friendly countries. As regards import of wheat, the decision to allow import at zero duty followed since September, 2006 would continue till further orders subject to periodic review in the light of domestic wholesale prices and landed prices of imports. In respect of rice, while the export of basmati rice subject to Minimum Export Price (MEP) and customs duty was allowed, the export of non-basmati rice was banned w.e.f. 1st April, 2008. After a few revisions, the MEP of basmati rice has been reduced from \$ 1200/tonne to \$1100/tonne or Rs.49500 per tonne w.e.f. 20th January, 2009 and free of export duty. Further, considering the comfortable stocks of rice in the Central Pool, 20 lakh tonnes of non-basmati rice was

allowed for export from private stocks in KMS 2008-09. However, it would be advisable to arrive at a long-term policy related to export/import of foodgrains taking into account the indigenous stock position, trend of procurement, domestic requirements, and other relevant national priorities, rather than resorting to ad hoc decisions.

1.27 The Government is contemplating to provide food guarantee to the citizens of the country through a legislation, the National Food Security Act. The proposed legislation that would work out as a right to food law, intends to guarantee access to food for all people, particularly the most vulnerable sections of society, and entitle every family living below poverty line in rural or urban areas by law to 25 kg of rice or wheat per month at Rs. 3/- per kg. The intent of the legislation seems to be that such a statutory basis would enable the ensuring of food security for the country. Such a legislation could be expected to bring in better accountability by making the system more responsive to the deprived sections of society.

1.28 However, implementation of such a legislation would necessitate the Government to assure a steady and large-scale supply chain of foodgrains as per the existing and emerging demand requirements. There will have to be substantial procurement if the proposal is made universal. In this context, the focus should be on the contents that are required to be incorporated in the proposed Food Security Act. Rice and wheat are certainly the pillars of food security. But a relevant question is whether the 'food' should be restricted to rice and wheat or it could include items such as coarse cereals, pulses, and edible oil. The huge amount of food subsidy involved with the implementation of the proposed legislation should not obstruct or restrict the essential investments in agriculture development. It should also be kept in view the scope for possible leakage on account of differential price between the prevailing market rate and the subsidized rate for BPL families, considering the track record of PDS in several States. There should be a uniform methodology and transparent and fault-free system for identification, regular updation of the BPL families, in the light of the legal implications of the proposed Act. Along with food, security against malnutrition also needs to be ensured, to arrive at a wholesome food security. In the ultimate analysis, long term food security would emerge from enhanced food

production at national level and improving food and nutrition at household level. The implementation of intensive food production programmes becomes basic to the attainment of national food security. Sectoral programmes and effective implementation of food and nutrition schemes can improve food security at household level. Reflections on these issues are to precede finalization of the proposed legislation.

1.29 An important issue in the context of India's agricultural sector is the limited institutional coverage of farm credit. It is true that the flow of credit from formal sources to the sector has considerably improved since 2004-05, after announcement of the comprehensive credit policy dated 18th June, 2004. This policy, inter alia, contained measures for doubling agriculture credit flow in the next three years which was achieved. Ever since, the targets that were laid down were more than fulfilled, even though during the year 2008-09 the momentum had come down, when against the target of Rs.2,80,000 crore, the achievement was Rs.2,87,149 crore. However, it should be kept in view that the majority of Indian farmers comprise the category of small and marginal who are the most needy for financial support. Hence, the focus should be not only on the quantum of credit disbursal, but also and importantly on the provision of credit among these weaker sections of farmers. The number of new accounts opened among them could be an indicator of the effective reach of institutional credit in the farm sector. Accordingly, the Commission recommends that **alongwith the thrust on expanding the quantum of credit, emphasis should be laid on the credit reach among the small and marginal farmers.**

1.30 Since 2004-05, the share of Cooperative Banks in the delivery of farm credit has been declining from 25 percent (2004-05) to 13 percent (2008-09) and that of RRBs stagnant in the range of 8-10 percent. Whereas, the PACS and RRBs should play an important role in expanding such credit outreach. The improvements brought in the cooperative sector in the wake of implementation of the Vaidyanathan Committee recommendations, should be periodically monitored. Any procedural hurdles that impede the smooth flow of agricultural credit are to be eliminated, and hidden cost (ledger fee, inspection fee, etc.) in case of loans provided to small farmers should get reduced. It is good that the present budget (2009-10) has indicated

initiatives for incentivising the repayment culture among farmers. Alongwith catering to their credit requirements, the farmers also need to be motivated for proper utilization of loans availed and their timely repayment.

1.31 The feedback received by the Commission indicate that the procurement operations under the MSP regime are still leaving deficit areas. In several regions of the country such as Eastern UP, and Bihar, there have been complaints regarding the inadequate coverage of procurement operations, constraining the farmers to resort to distress sales fetching prices below MSP. It seems the network for procurement as well as its scale of operations need to be subjected to review to ascertain the adequacy. The benefit of present policy which is being implemented at such a huge cost, seems to be available only to a limited number of farmers in a few states. There is a need for implementing MSP across the country guided by the marketed surplus generated. However, it is reported that regions with poor market infrastructure are usually excluded from MSP operations by Central agencies. The National Policy for Farmers (2007) has rightly indicated that the MSP mechanism would be implemented effectively across the country. In the light of these, the Commission recommends that **the nodal procurement agencies should further widen the network of procurement operations and decide, in consultation with the concerned State Governments, the location and number of purchase centres to be set up much in advance of the marketing season, and this information should be given wide publicity through media, radio, television, leaflets, etc.**

1.32 Another issue of concern is that at present, there is no reliable and transparent system existing at the field level for Fair Average Quality (FAQ) implementation, and the grading is done more or less on discretionary basis. This system of subjective assessment should give way to a system of objective criteria by providing moisture measuring equipment and related accessories which can help in measuring FAQ. Further, owing to farmers' ignorance of FAQ norms, unscrupulous elements enter the market and purchase agricultural commodities at much lower price than the MSPs fixed by the Government. Cases of farmers being turned back on the ground of non-conformity with the FAQ norms are also reported, leading to hardship and resentment among the farmers. Therefore, the Commission recommends that **the**

implementation of FAQ norms should be made reliable and transparent with the provision of necessary equipment support in the market, and such norms fixed by the Government should be given wide publicity through different means of media.

1.33 At present, FCI and State Governments are facing acute shortage of storage capacity due to record high procurement of wheat (in RMS 2008-09 and 2009-10) and rice (in KMS 2008-09). The total storage capacity with FCI (as on 1.5.2009) is 265.33 lakh MTs, that includes the hired capacities from CWC, SWC, State Government and private sector. Owing to the unprecedented procurement of wheat, FCI and State agencies faced shortage of storage space in the major procuring States of Punjab and Haryana and wheat had to be stored in open under Covered and Plinth (CAP) storage. Substantial quantity of wheat has been reportedly kept in unscientific plinths, rice mills, closed sugar factories, etc. Because of storage constraints in consuming States also, FCI is facing difficulty in taking over these stocks from State agencies and moving the same outside Punjab and Haryana.

1.34 The Government has been operating a Plan Scheme for Construction of Godowns by FCI and State Governments of North Eastern States, Sikkim and Jammu and Kashmir. However, the funds available under the Scheme are too short of the requirements. During the XI Plan, against a projected requirement of Rs. 291 crore, only Rs.149 crore has been allocated to this Scheme. In addition to construction of godowns by FCI under the Plan Scheme, storage capacity has also been augmented by FCI through hiring of storage capacity under Seven Year Guarantee Scheme (SYGS). However, considerable time is required for creation of new storage space. The Commission recommends that **keeping in view the problems faced by the nodal agencies for procurement and distribution of foodgrains across the country, a suitable action plan supported by adequate funds should be arrived at by the Government urgently, with a long-term perspective, for creation of adequate storage capacity, including public-private partnership.**

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

The Commission submitted its Report on Price policy for Rabi Crops sown in 2008-09 and being marketed in 2009-10 on 31st July, 2008 recommending that the Minimum Support Prices (MSPs) for fair average quality (FAQ) of various crops be fixed at the following levels:

(Rs. per quintal)

Crop	MSP fixed for 2008-09 Marketing season	MSP recommended for 2009-10 Marketing season	MSP fixed for 2009-10 Marketing season
1	2	3	4
Wheat	1000	1080	1080
Barley	650	680	680
Gram	1600	1730	1730
Lentil (Masur)	1700	1870	1870
Rapeseed/Mustard	1800	1830	1830
Safflower	1650	1650	1650

The Government announced the price policy for cereals, pulses and oilseeds crops grown in Rabi season of 2008-09 and being marketed in 2009-10 on January 28, 2009 fixing MSP at levels recommended by the Commission.

2.2 The uniform specifications of Wheat for procurement for the Central Pool during the Rabi marketing season 2009-10, was notified by the Government on 25th February, 2009. These specifications have fixed the maximum limit for moisture content at 12 percent in case of wheat and barley and different moisture specifications were made in the case of pulses and oilseeds, viz; gram (12 percent), lentil (14 percent), rapeseed/mustard (8 percent) and safflower (6 percent). The uniform specifications of wheat 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/slightly damaged, shriveled & broken grains, other food grains, etc. The limits prescribed vary from crop to crop.

Wheat

2.3 As per the Fourth Advance Estimates of Production of Foodgrains brought out by the Directorate of Economics and Statistics, the production of wheat in 2008-09 is estimated at a record level of 80.58 million tonnes, 2.6 percent increase over the production of 78.57 million tonnes achieved during 2007-08. The area under wheat during 2008-09, as per Second Advance Estimates of DES has been estimated to decline to 27.82 million hectares from 28.04 million hectares achieved during 2007-08. The production level attained in 2008-09 at 80.58 million tonnes makes it the third consecutive bumper production year, a positive development from the point of view of country's food security and the recent food inflation. The immediate challenge would be to continue with this momentum and to consolidate the production gains achieved since 2006-07 in the coming years. It would be worthwhile to study the factors which have gone into this sustained high production since 2006-07 so that the implementing agencies can build upon them and also replicate them in the low production areas.

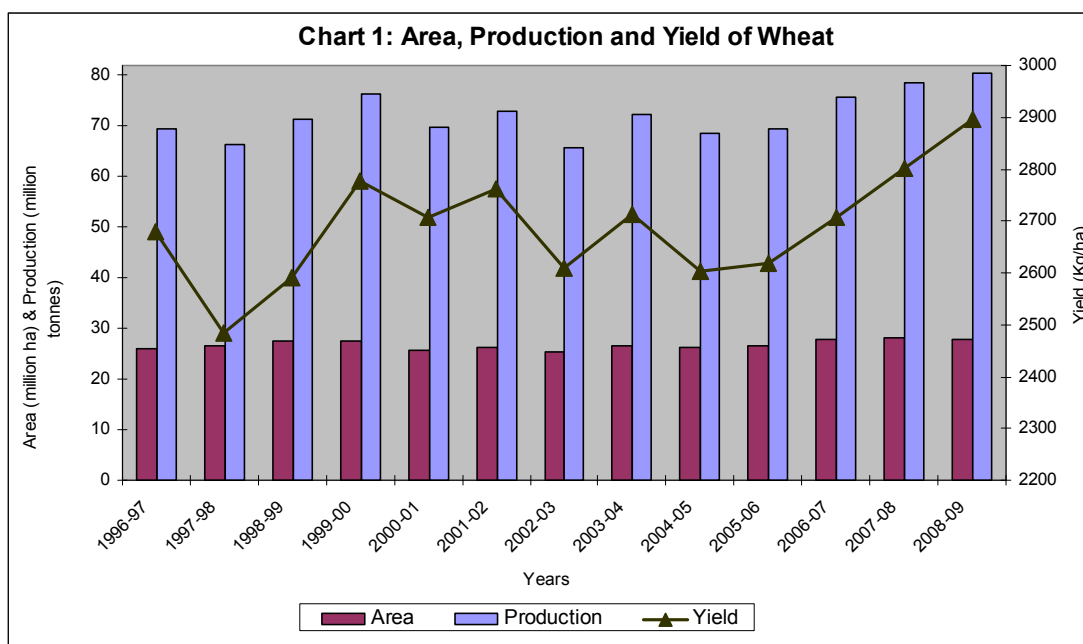
(Table 2.1)

2.4 In spite of the remarkable production performance since 2006-07, the trend growth rate of wheat production during the period 1996-07 to 2007-08 remained lower at 0.65 percent compared to the growth rate of 4.09 percent achieved during 1986-87 to 1996-07. Deceleration in the growth rate of output during the latter period was contributed by all the wheat producing states except Gujarat. Gujarat recorded significant increases in the growth rate of output from 8.08 percent during 1986-87 to 1996-07 to 9.37 percent during 1996-97 to 2007-08. The production of wheat increased from 45.15 million tonnes in TE 1986-87 to 65.74 million tonnes in TE 1996-97 and further to 74.58 million tonnes during TE 2007-08.

2.5 The growth of area under cultivation of wheat was 1.13 percent per annum during 1986-87 to 1996-97, which declined to 0.31 percent per annum during 1996-97 to 2007-08. Major contributors to the decline in the growth rate in the latter period were Bihar, Haryana, Himachal Pradesh, Rajasthan, Madhya Pradesh and Uttar Pradesh. The area under cultivation of wheat, which was 23.23 million hectares during TE 1986-87, increased to 25.53 million hectares during TE 1996-97 and further to 27.51

million hectares during TE 2007-08.

2.6 While the rate of growth of both area and yield showed decline during the period 1996-97 to 2007-08 compared to the previous decade, the decline in the growth rate of yield was much sharper (from 2.93 percent in 1986-87 to 1996-97 to 0.34 percent in 1996-97 to 2007-08) than the decline in area growth rate (from 1.13 percent to 0.31 percent during the same period). It is also important to note that while the decline in the growth rate of yield in the latter decade was witnessed across all states, the deceleration in the growth rate of area was restricted to a few states. States like Gujarat, Haryana, Jammu & Kashmir, Karnataka, Maharashtra, Punjab and West Bengal had accelerated area growth rates during this period. The increase in average wheat yield from TE 1996-97 to TE 2007-08 was only 136 kg. per hectare, whereas the corresponding increase from TE 1986-87 to TE 1996-97 was a significant 630 kg per hectare. The trends in area, production and yield of wheat are shown in the Chart 1.



Productivity enhancement remains one of the major concerns of wheat economy. Though India is the 2nd largest producer of wheat globally after China, the yield level in India is below the world average and also below many of the other producing countries, as indicated in the Table 2.1.

Table: 2.1 Yield of wheat in various countries in 2006

(kg/ha)

Country	Yield
U.K	8039
France	6740
Egypt	6455
China	4455
USA	2825
India	2619
Pakistan	2519
Bangladesh	1605
World	2804

Source: Agricultural Statistics at a Glance 2008, Ministry of Agriculture

2.7 There are considerable inter-state variations in yield also. During 2007-08, Punjab registered the highest yield of 4507kg/ha followed by Haryana 4158 kg/ha, Gujarat 3013 kg/ha, Uttar Pradesh 2817 kg/ha etc. However, states like Madhya Pradesh (1612 kg/ha), Maharashtra (1659 kg/ha), Himachal Pradesh (1376 kg/ha), Jharkhand (1621 kg/ha), and Chhattisgarh (1059 kg/ha) had significantly low levels of productivity. Thus, while there may not be much scope for increasing the yield levels in Punjab and Haryana with the existing technologies, states like Madhya Pradesh, Bihar, Chhattisgarh, Jharkhand, Maharashtra have immense potentialities for enhancing the yield. The Table 2.2 which shows state-wise status of actual yield and the potential yield as demonstrated through Front Line Demonstrations (FLDs) also corroborates this view.

**Table: 2.2 State-wise Yield under FLDs and Actual Yield
under Farmer's Fields –Rabi 2007-08 wheat crop**

State	Average yield under FLDs (q/ha)	Average yield under farmers' fields (q/ha)	Yield gap (in percentage)
UP	46.12	40.80	13.04
Bihar	39.79	31.72	25.44
Jharkhand	38.04	27.01	40.84
Punjab	49.03	47.39	3.46
Haryana	48.77	47.54	2.59
Gujarat	46.01	43.65	5.41

MP	39.04	25.31	54.25
Chhattisgarh	30.13	20.92	44.02
Maharashtra	36.42	31.10	17.11
Rajasthan	42.25	38.30	10.31

Source: ICAR

2.8 Considering that the technologies demonstrated through FLDs are common and basic like application of improved wheat varieties, resource conservation technologies like zero tillage, irrigation management, fertiliser dose and method of application, weed control, seed treatment etc, non-achievement of the FLD yield levels shows limitations mainly in extension services. The National Food Security Mission should strive to address this issue which can go a long way in improving the productivity levels of wheat.

2.9 However, even with the concerns regarding low yields, the crop year 2008-09 witnessed record year of production and supply vis-à-vis domestic consumption requirements. This is illustrated by the balance sheet of wheat in the Table 2.3.

Table – 2.3 Domestic Wheat Situation

(Million tonnes)

Crop Year (July-June)	2007-08	2008-09
Fiscal Year (April-March)	2008-09	2009-10
1. Gross Production	78.57	80.58
2. Net Production	68.75	70.51
(87.5 per cent of Gross Production)		
3. Procurement	22.69	25.18+
4. Offtake	14.88	15.00
(a) Open Sale	1.23	1.20
(b) Exports	0.00	0.00
5. Imports	0.00	0.00
6. Addition to Stock (3-4+5)	7.81	10.18
7. Supply (Gross)	60.94	60.33
[2-3+4-4(b)+5]		
8. Consumption Demand #	57.90	58.70
9. WPI (1993-94= 100)	239.80	248.50*

Sources: (i) Directorate of Economics & Statistics

- (ii) Food Bulletin April, 2009
- (iii) DGCI&S, Kolkata.
- (iv) # based on 63rd NSS Round of Household Consumption Expenditure
- (v) * Average for the months of April to June 2009
- (vi) + procurement up to 21-07- 2009.

2.10 Three years of bumper harvest of wheat should not put the farmers as well as the implementing agencies in a state of complacency, since the demand for wheat and wheat products is bound to increase in the coming years. The results of the 63rd Round (July 2006-June 2007) of NSSO on household consumer expenditure put the per capita monthly consumption of wheat at a significantly low level of 4.43 kg. in urban areas and 3.97 kg in rural areas. This may not be considered as the beginning of a trend towards reduced consumption of wheat. One should not forget that the spiraling of the food prices started in 2006-07, which witnessed a 13 percent increase in the index number of wholesale wheat prices over 2005--06. Reduction in the consumption of wheat in 2006-07, inter-alia, might have been a reaction to the sudden increase in prices. The demand for wheat and wheat products is expected to rise in the coming years in view of increase in the overall economic growth of the country and the resultant increases in income and purchasing power of the people and increases in the demand for wheat for food processing industry. Dietary changes in favour of high value animal products is also expected to increase the demand for wheat for animal feed.

Table – 2.4: Per Capita Consumption of Wheat in Rural and Urban Areas in 30 days

Consumption / Rounds	(in Kg)					
	58 th Round (July-Dec) 2002-03	59 th Round (Jan-Dec) 2003-04	60 th Round (Jan-June) 2004-05	61 st Round (July-June) 2004-05	62 nd Round (July-June) 2005-06	63 rd Round (July-June) 2006-07
Rural	4.34	4.22	4.25	4.29	4.35	3.97
Urban	4.59	4.59	4.67	4.65	4.53	4.43

Source : NSSO Report : Household Consumer Expenditure and Employment - Unemployment Situation in India

2.11 Government announced the MSP for wheat for the Rabi Marketing Season (RMS), 2009-10 at Rs.1080, as per recommendations of the Commission. Since the commencement of the 2009-10 marketing season in April 2009, the total procurement of wheat by FCI and other state agencies stood at 25.18 million tonnes (as on 21.07

2009), already surpassing the procurement of 22.69 million tonnes achieved in RMS, 2008-09. About 70 percent of the total procurement was accounted for by Punjab (43 percent) and Haryana (27 percent). The quantity procured in the state of UP was 3.88 million tonnes (15 percent); MP 1.92 million tonnes (8 percent) and Rajasthan 1.15 million tonnes (5 percent). There have been negligible to nil procurement in other states like Gujarat (0.08 million tonnes); Bihar (0.37 million tonnes) and Maharashtra (nil). The Commission had access to price quotations of very limited centres which showed mixed pictures regarding the ruling wholesale prices during the current wheat marketing season. For example, in Bihar at Patna centre, the wholesale prices of FAQ grade of wheat during the reference period were in the range of Rs. 1300/quintal to Rs.1350/quintal. In Gujarat, at Mehsana /Patan centre hybrid variety was quoting prices in the range of Rs.1177 to 1260 per quintal. In Maharashtra, at Jalgaon centre, the prices of WS-147 variety were in the range of Rs.1300/quintal to Rs. 1351/quintal. Though prices were ruling higher than MSP in the reported centres of Bihar, Maharashtra, Gujarat etc, one centre in a state cannot represent the situation in other centres, especially the remote centres. Compared to the years 2005-06, 2006-07 etc when Punjab and Haryana accounted for more than 90 percent of the wheat procurement, situation has improved. However, since many wheat producing areas still continue to be outside the ambit of MSP operations, Commission again emphasizes the need for expanding the geographical spread of procurement operations of the Government to all the wheat growing areas/centres so that the maximum number of farmers benefits from the minimum support prices announced by the Government.

2.12 Department of Food and Public Distribution and FCI in their communication to the Commission had indicated the persistence of storage problem for the wheat procured, especially in the non-traditional wheat procuring states. Since it is the proclaimed policy of the Government to procure and stock wheat to meet the demands of national food security, equal emphasis needs to be given to storage of the wheat procured in scientific conditions.

2.13 On the price front, 2008-09 witnessed 6.2 percent increase in the index of wholesale prices of wheat over 2007-08. The index number of wholesale prices

averaged at 239.6 (base: 1993-94=100) during 2008-09 compared to 225.7 of 2007-08. The indices for April to June, 2009 point towards continuation of high prices during 2009-10 also.

Table 2.5: Procurement, Stocks and Offtake of wheat (Central Pool)

(Lakh tonnes)

S. No	Fiscal Year	2007-08	2008-09	2009-10
1	Opening stock	47.03	58.03	134.29
2	Procurement	111.28	226.89	251.82@
3	Import	17.93	0.00	0.00
4	Offtake -	122.05	148.81	150.00*
(i)	BPL	47.24	56.24	56.00*
(ii)	APL	30.61	38.35	39.00*
(iii)	Antyodaya	31.81	31.99	32.00*
(iv)	Other welfare schemes	12.31	9.94	10.00*
(v)	Open sale	0.09	12.30	12.00*
(vi)	Export	0.00	0.01	0.00
5	Carry over stock (1+2+3)-4	54.19	136.11	236.11

@ Procurement as on 21-07-2009, * projected on the basis of last year's trend

Source: (i) Foodgrains bulletin, April, 2009

(ii) DGCI&S, Kolkata for export import data

2.14 As per FAO projection, global wheat production during 2009 is estimated at 655.8 million tonnes (Food Outlook, June 2009), about 4 percent reduction from 2008 achievement, however above the average of the past five years. Projections of decline in world production in 2009 and somewhat tight supply situation in the new season have raised the price sentiments since March 2009. The price of United States' wheat averaged USD 266 per tonne in May 2009, highest since September 2008, though lower by about 43 percent from March 2008 level. As of 4th week of May, 2009, wheat futures prices for September, 2009 delivery on the Chicago Board of Trade (CBOT) moved around USD 229 per tonne, Wheat trade in 2009-10 marketing season (July-June) is forecast at 114 million tonnes as against 124 million tonnes in 2008-09.

Table- 2.6: World wheat market at a glance

(Million tonnes)

World Balance	2007-08	2008-09 Estimated	2009-10 Forecast	% age Change in 2009-10 over 2008-09
Production	610.3	684.6	655.8	-4.2
Trade	112.6	123.8	114.0	-7.9
Total Utilisation	618.2	644.7	655.0	1.6
Food	447.0	451.8	456.4	1.0
Feed	102.1	120.3	126.5	5.1
Other Uses	69.1	72.7	72.1	-0.8
Ending Stocks	151.6	191.3	192.4	0.5

Source: FAO Food Outlook, June, 2009

Barley

2.15 Production of barley in 2008-09 is estimated at 1.54 million tonnes (Fourth Advance Estimates of Directorate of Economics & Statistics), compared to 1.20 million tonnes in 2007-08. The cultivation of the crop has been marked by significant year to year fluctuations. The long term trend has been one of declining production. The production of barley declined at the rate of 1.04 percent during the period 1986-87 to 1996-97 and at the rate of 2.47 percent during the period 1996-97 to 2007-08. In recent years, after a relatively satisfactory production achieved in 1997-98 (1.68 million tonnes), the production steadily declined to reach a level of 1.21 million tonnes in 2004-05. During 2005-06, production marginally increased to 1.22 million tonnes and the increasing trend continued during 2006-07 also (1.33 million tonnes). However, the year 2007-08 saw a reversal with a production of 1.20 million tonnes. Rajasthan accounts for about 45 percent of the total production followed by UP (27 percent). Major constraints responsible for stagnation in barley production reportedly are negligible coverage under improved varieties, limited use of inputs like fertilizers and plant protection measures, inadequate seed replacements, second preference to barley sowing compared to wheat, etc.

(Table 2.1)

2.16 Area under barley cultivation during 2007-08 was 6.03 lakh hectares and the area coverage is projected to increase to 6.81 lakh hectares during 2008-09 (Second Advance Estimates of DES). Area coverage under barley steeply declined at about 4.26 percent per annum in the period 1986-87 to 1996-97. This decline had, however, slowed down to 2.73 per cent during the period from 1996-97 to 2007-08. In contrast to the behaviour of area, there was an impressive growth in yields of barley at 3.36 percent per annum during the decade 1986-87 to 1996-97. During the period 1996-97 to 2007-08, the yield growth was only 0.27 percent per annum.

(Table 2.2)

2.17 The prices of barley have shown steady increases in the recent years. After a decline in the average annual index number of wholesale price (WPI base 1993-94=100) in 2003-04 by 7.4 percent over 2002-03, the wholesale prices rose by 5.1 percent, 8.9 percent, 7.5 percent, 3.6 percent and 6.5 percent in 2004-05, 2005-06, 2006-07, 2007-08 and 2008-09 respectively. As per present indication, the price increases are expected to continue during 2009-10 also. The WPI for June 2009 stood at 242.9 compared to 241.0 of June 2008 and 219.3 of June 2007. While the price increases may be partly accounted for by the general increase in the price of cereals as a whole, a major reason for the price increases specific to barley is the increasing demand from malting industry due to entry of multinationals in the domestic brewery industry.

2.18 Government announced an MSP of Rs.680 per quintal for barley for the 2009-10 marketing season. However, due to existing high market prices no procurement took place. During April - June, 2009 the prices of barley ranged between Rs. 780 to 860 per quintal at Jaipur (Rajasthan), Rs. 735 to 765 at Hissar (Haryana), Rs 840 to 855 at Hathras (Uttar Pradesh) and at Rs. 1170 to 1175 at Delhi.

(Table 2.15)

2.19 Global output of barley during 2008-09 is forecast to decrease by about 5 percent to about 147 million tonnes. Trade transactions in barley globally are also expected to decline by 13 percent to 18 million tonnes. Indian presence in the global barley market has been grossly negligible. Exports of barley which was 5000 tonnes

during 2004-05 reduced to zero during 2005-06 and 2006-07. In 2007-08 exports increased to 3.48 lakh tonnes and in 2008-09 (upto December 2008), exports amounted to 1.65 lakh tonnes.

2.20 Production of barley accounts for only 1.54 million tonnes, out of the total cereal production of about 219.21 million tonnes. Though traditionally grown as an animal feed, the crop has tremendous potential as an input for malting industry. Barley demand from the domestic malting industry is expected to increase in the coming years due to entry of multinationals in the beer industry and competitive domestic prices. Industry is also planning solutions like contract farming to streamline supply chain. The Commission recommends that **farmers should be made aware of the opportunities in barley production and through proper extension facilities and education of farmers, productivity and production of barley should be enhanced.**

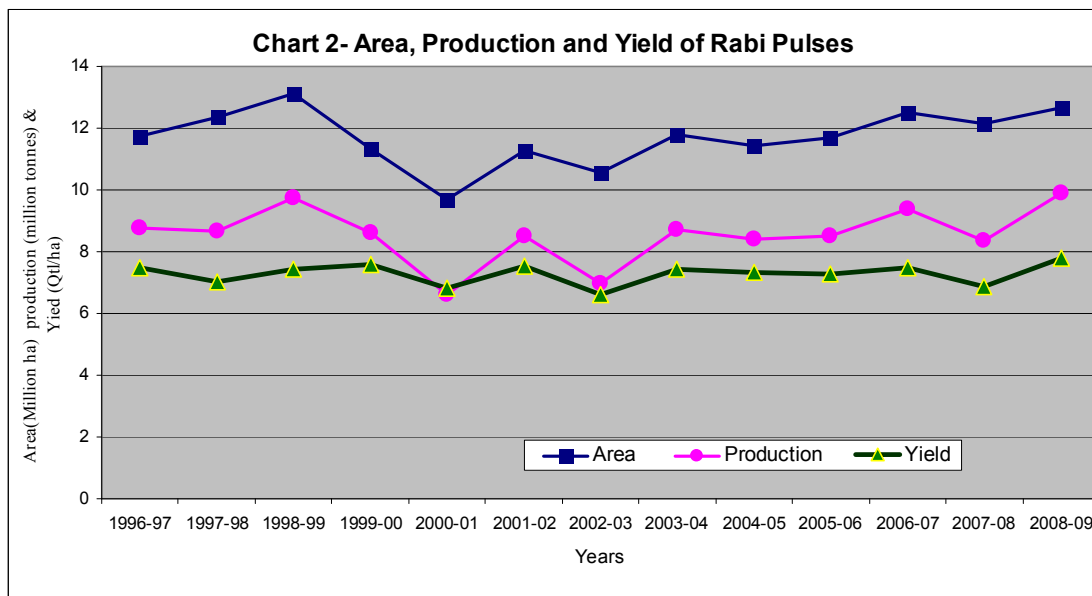
Pulses

2.21 India is the largest producer and consumer of pulses in the world, with a total estimated production at 14.66 million tonnes and consumption demand at about 16.77 million tonnes during 2008-09. The state of Maharashtra is the largest pulses producer in the country, accounting for about 20.48 percent of total production in the year 2007-08, followed by Madhya Pradesh (20.26 percent), Andhra Pradesh (11.50 percent), Uttar Pradesh (11.02 percent), Rajasthan (10.52 percent), Karnataka (8.57 percent) and Gujarat (5.03 percent).

2.22 Pulses are grown in both kharif and rabi seasons, with rabi pulses accounting for more than half of the total pulses production in the country. Rabi pulses in terms of total production of pulses, accounted for 63.58 percent in 2005-06, which increased to 66.22 percent in 2006-07. The share of rabi pulses, however, decreased substantially to 56.62 percent due to unfavourable weather conditions during 2007-08. As per the Fourth Advance Estimates of production for 2008-09 released by the Directorate of Economics and Statistics on 21st July, 2009, rabi pulses are projected to account for 67.39 percent of the total pulses production. The total production of

pulses during 2008-09 at 14.66 million tonnes is 0.68 percent lower than the 2007-08 production and 5.42 percent lower than the target. The decline is due to setback of 1.62 million tonnes in Kharif output alone, which could not be fully neutralized by the increase in the rabi production, which increased by 18.18 percent over 2007-08 rabi output. Production of rabi pulses has exhibited wide inter-year variations. The production, after increasing from 8.52 million tonnes during 2005-06 to 9.40 million tonnes during 2006-07, declined to 8.36 million tonnes during 2007-08 and further increased to 9.88 million tonnes in 2008-09. The decline during 2007-08 was as much as 7.19 lakh tonnes in Madhya Pradesh, 3.31 lakh tonnes in Rajasthan and 2.90 lakh tonnes in Uttar Pradesh. The output has also declined marginally in Haryana, Gujarat and West Bengal, whereas there was an increase of 1.89 lakh tonnes in Maharashtra, 1.21 lakh tonnes in Andhra Pradesh, 0.62 lakh tonnes in Bihar, 0.59 lakh tonnes in Karnataka and about 0.12 lakh tonnes in Orissa. The setback to the production in major producing states was attributed to the lower yield and reduction in area.

2.23 The total area under rabi pulses declined from 126.82 lakh hectares during TE 1986-87 to 121.08 lakh hectares during TE 1996-97 and further it remained almost at the same level of 121.14 lakh ha. during TE 2007-08. The trend in rate of growth of area under pulses, which was -0.15 per annum during 1986-87 to 1996-97 was 0.08 per cent per annum during 1996-97 to 2007-08. Among the states, there has been of late an increase in area under rabi pulses in Andhra Pradesh, Bihar, Maharashtra and Orissa. There was, however, a deceleration in the rate of growth of productivity of rabi pulses from 1.75 per cent during 1986-87 to 1996-97 to (-) 0.17 per cent in 1996-97 to 2007-08. The trends in area, production and yield in respect of rabi pulses are shown in the Chart 2.



Gram

2.24 As per the Fourth Advance Estimates of Production of Foodgrains, production of gram for 2008-09 is estimated at 7.05 million tonnes as against a target of 6.20 million tonnes and production of 5.75 million tonnes in 2007-08. The production has been marked with significant inter-year variations, ranging from 3.85 million tonnes in 2000-01 to 6.33 million tonnes of 2006-07. Considering the long term trends, there was growth of about 2.88 percent in the production of gram during 1986-87 to 1996-97 which decreased to 0.18 percent per annum during 1996-97 to 2007-08. The production of gram increased from 4.96 million tonnes during TE 1986-87 to 5.66 million tonnes during TE 1996-97 and further to 5.89 million tonnes during TE 2007-08. Most of this increase in output during the TE 1996-97 and TE 2007-08 in particular was accounted by Maharashtra (4.67 lakh tonnes), Karnataka (1.15 lakh tonnes) and Madhya Pradesh (1.00 lakh tonnes). On the other hand, during the same TE period, there was setback to production of gram to the extent of 5.35 lakh tonnes in Rajasthan, 3.19 lakh tonnes in Uttar Pradesh and 2.9 lakh tonnes in Haryana.

2.25 As regards the area under cultivation of gram it was 72.31 lakh hectares during TE 1986-87. However, the area under gram declined to 71.68 lakh hectares during TE 1996-97 and further increased to 73.11 lakh hectares during TE 2007-08. During

this period, Maharashtra registered an increase in gram area of 4.84 lakh hectares and Karnataka 1.97 lakh hectares. By TE 2007-08 the total area under gram was 73.11 lakh hectares, i.e. an increase of 1.43 lakh hectares over TE 1996-97. On the other hand during the same period there was a significant decline in the area under this crop, estimated at 4.67 lakh hectares in Rajasthan, 3.45 lakh hectares in Uttar Pradesh, 2.60 lakh hectares in Haryana. The growth rate under area was 0.79 percent per annum during 1986-87 to 1996-97 and 0.29 percent per annum during 1996-97 to 2007-08.

2.26 The average productivity of gram which was 686 kg per hectare during TE 1986-87 improved to 790 kg per hectare during TE 1996-97 and to 805 kg per hectare during TE 2007-08. While the trend in productivity indicated a steady increase in case of Karnataka and Maharashtra, a declining and fluctuating trend could be noticed in the states of Haryana and Rajasthan. The growth rate of yield was 2.07 percent per annum during 1986-87 to 1996-97 and declined in 1996-97 to 2007-08 at the level of (-) 0.11 per cent per annum.

Lentil

2.27 The production of lentil which was 10.38 lakh tonnes during 2003-04 declined to 9.13 lakh tonnes in 2006-07, and further declined to 8.12 lakh tonnes during 2007-08. During 2007-08, the production declined mainly in Uttar Pradesh and Madhya Pradesh at the level of 0.63 lakh tonnes and 0.53 lakh tonnes respectively compared to 2006-07. Whereas the production marginally increased in the states of Maharashtra, and West Bengal. Considering the long term trends, there was growth of about 2.24 percent in the production of lentil during 1986-87 to 1996-97, which decreased at the rate of 0.28 percent per annum during 1996-97 to 2007-08. The production of lentil increased from 6.23 lakh tonnes during TE 1986-87 to 8.20 lakh tonnes during TE 1996-97 and further to 8.90 lakh tonnes during TE 2007-08. Most of this increase in output was accounted for by Uttar Pradesh, Rajasthan and Madhya Pradesh. The increase in output was 1.17 lakh tonnes in Uttar Pradesh, 0.07 lakh tonnes in Rajasthan and 0.61 lakh tonnes in Madhya Pradesh. On the other hand there were setback to the production of lentil to the extent of 0.11 lakh tonnes in Bihar and 0.04 lakh tonnes in Haryana.

2.28 The growth rate of area was 2.08 percent per annum during 1986-87 to 1996-97 and 0.36 percent per annum during 1996-97 to 2007-08. As regards the area under cultivation of lentil it was 10.53 lakh hectares during TE 1986-87, 12.62 lakh hectares during TE 1996-97 and further increased to 14.27 lakh hectares during TE 2007-08. During this period Bihar registered an increase in lentil area of 0.07 lakh hectares, Madhya Pradesh 1.03 lakh hectares, Uttar Pradesh 1.49 lakh hectares and West Bengal 0.17 lakh hectares. By TE 2007-08 the total area under lentil was 14.27 lakh hectares, i.e. an increase of 2.83 lakh hectares over TE 1996-97. There was a marginal decline in the area under this crop, estimated at 0.06 lakh hectares in Haryana and 0.04 lakh hectares in Maharashtra during this period.

2.29 The average productivity of lentil which was 591 kg per hectare during TE 1986-87 improved to 650 kg per hectare during TE 1996-97 and to 624 kg per hectare during TE 2007-08. The growth of yield was 0.16 percent per annum during 1986-87 to 1996-97 and declined in 1996-97 to 2007-08 at the level of 0.64 per cent per annum.

2.30 Pulses are generally grown in rainfed and relatively dry land areas by small and marginal farmers. Standing crop of pulses is mostly affected/damaged at field level due to pest attack and insects as well as adverse weather conditions which decrease productivity and increase substantially the cost of production. Commission recommends that **keeping in view the dependence of cultivation of pulses on weather conditions, the weather based crop insurance scheme, when taken up on a regular basis, may cover all the pulses in a comprehensive form in all the states.**

2.31 Government intervention at enhancing the production and productivity of pulses resulted in the setting up of the Technology Mission on Oilseeds and Pulses in 1986 and coverage of the crop under national programmes like ISOPOM. However, the crop continued to suffer from low productivity and production. Government's recent initiative is the launching of the National Food Security Mission-Pulses from Rabi, 2007-08 with the objective of increasing the production of pulses by 2 million tonnes by the end of the 11th Plan. The activities

include assistance for purchase of breeder seeds, incentive for distribution of micro-nutrients, distribution of zero till seed drills etc. The mission also aims to increase area by intercropping and coverage of rice fallow in the implementing districts. Considering the critical state of the pulses economy in the country, the implementation of the mission should be constantly monitored for outcomes and revisions, if found necessary.

2.32 The National Agricultural Cooperative Marketing Federation of India Ltd. (NAFED) is the designated nodal agency for price support operations for pulses. During 2007-08 and 2008-09, there was no procurement of gram and lentil under price support scheme, since their prices were ruling higher than MSP. During the current rabi marketing season, there was no procurement of gram under the price support operation, as its market prices were ruling above the MSP of Rs.1730 per quintal. Considering the reluctance of farmers to take up cultivation of the crop and the increasing supply gap, NAFED should extend their market intelligence network to cover all the growing areas and should intervene, whenever the market prices fall below the MSP, irrespective of the remoteness of the area or the isolated nature of the case.

2.33 Due to increasing population and stagnant pulse production, the per capita pulse availability in India has come down from 70.3 grams per day in 1956 to 35.5 grams per day in 2007. Long term static production of pulses, combined with increasing consumption has 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. crore)	Unit Value (Rs./ Kg)
2004-05	1312.17	1741.72	13.27
2005-06	1696.52	2477.29	14.60
2006-07	2270.98	3891.91	17.14
2007-08	2830.53	5367.90	18.96
2008-09 (Apr-Dec 08)	1760.88	4536.20	25.76

Source: DGCI&S, Kolkata

2.34 Import prices of pulses during 2008-09 also showed significant increases over 2007-08 prices, by about 41 percent. India's position as net importer of pulses is expected to continue in the coming years also considering the constraints, like cultivation of the crop in rainfed areas, competition from more remunerative crops, lack of technology breakthrough etc.

2.35 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)	2005-06	2006-07	2007-08	2008-09
Fiscal Year (April-March)	2006-07	2007-08	2008-09	2009-10
Gross Production				
Tur	2.74	2.31	3.08	2.31
Other Kharif Pulses	2.13	2.49	3.32	2.47
Gram	5.60	6.33	5.75	7.05
Other Rabi Pulses	2.92	3.07	2.61	2.83
All Pulses	13.39	14.20	14.76	14.66
Net Production (87.5% of Gross Production)	11.72	12.43	12.92	12.83
Procurement of Pulses (NAFED)	Nil	Nil	Nil	Nil
Export (FY) All Pulses	0.25	0.16	0.09**	0.09#
Import (FY) All Pulses	2.27	2.83	1.76**	1.76#
Supply (FY)	13.74	15.10	14.59	14.50
Consumption Demand	17.38 @	17.71 @	16.77*	17.51*

@ Projection made in the 10th Plan * Projection made in the 11th Plan # 2008-09 status repeated.

** The figures of exports and imports for the year 2008-09 are upto Dec- 08.

Source:- (i) Production data from Directorate of Economics & Statistics

(ii) Export Import data from DGCI & S, Kolkata.

2.36 Since the production of pulses during 2008-09 is projected to decline by about 0.68 percent over 2007-08 production, the gap between supply and demand of pulses is also expected to widen to about 3 million tonnes. Hence, in the short term, Government may have to increase the imports to stabilize the domestic prices and to ensure adequate quantity for consumption. However, the issues with respect to import of pulses are two-fold. The unit value of imports of pulses during the last 4 years has increased by more than 100 percent from Rs. 13.27/kg in 2004-05 to Rs.25.76/kg during 2008-09. Further, as pulses are not an important crop for human consumption in the developed and other major developing countries and is mostly used for animal feed purposes, supply in overseas markets is also limited. Considering the above factors, there seems to be no short cut but to improve the productivity and production

of pulses.

2.37 The wholesale prices of pulses have been fluctuating widely in recent years. The Wholesale Price Index (WPI) of pulses (base 1993-94=100) which was 176.6 in 2003-04 dropped to 174.4 (-1.2 per cent) in 2004-05. The price index then 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 increased to 259.8 in 2008-09, registering an increase of 6.8 per cent and then it increased to 284.9 in June 2009 indicating an increase of 16.8 percent compared to the corresponding month of the last year.

Oilseeds

2.38 Total production of nine major oilseeds (Groundnut, soyabean, Rapeseed/mustard, sunflower, safflower, sesamum, castorseed, linseed and nigerseed) in 2008-09 is projected at 28.16 million tonnes (Fourth Advance Estimates of DES, 21st July, 2009), which is about 11.3 percent lower than the targeted production for 2008-09 and 5.37 percent lower than the production of 2007-08 at 29.76 million tonnes. The production of kharif oilseeds is expected to decline by 13.67 percent over the previous year's production, while the production of rabi oilseeds is projected to increase by 13.64 percent over the 2007-08 production. The edible oil sector continues to exhibit demand-supply gaps which are addressed through liberal imports. (Table 2.1)

2.39 The production of oilseeds has been marked by inter-year fluctuations, mainly due to absence of assured irrigation. After 1998-99, the production of oil seeds registered a declining growth except for the year 2001-02 and reached the lowest level of production of 14.8 million tonnes in 2002-03 because of drought. Next year in 2003-04, it increased significantly (70 per cent) to 25.2 million tonnes due to good weather but again declined marginally to 24.35 million tonnes in 2004-05. The year 2005-06 witnessed record production of 27.86 million tonnes, but production decreased to 2004-05 level in 2006-07 and again reached historically highest level at 29.76 million tonnes in 2007-08. Barring 2002-03 which was a drought year and 2000-01 another slack year, from 1996-97 to 2008-09, rabi production of oilseeds fluctuated in the range of 7.2 million tonnes (1997-98) to 11.2 million tonnes (2005-06) but no increase was noticed during this period as the average production remained static at about 10 million tonnes at the level of 1996-97.

Table 2.9: Production of Nine Major Oilseeds

(Lakh tonnes)

Crops	Season	2005-06	2006-07	2007-08(Final Estimates)	2008-09 (Fourth Advance Estimates)
1	2	3	4	5	6
Groundnut	Kharif	62.98	32.94	73.62	56.37
	Rabi	16.95	15.69	18.20	17.01
	Total	79.93	48.64	91.82	73.38
Castorseed	Kharif	9.91	7.62	10.53	11.15
Sesamum	Kharif	6.41	6.18	7.57	7.33
Nigerseed	Kharif	1.08	1.21	1.10	1.15
Rapeseed & Mustard	Rabi	81.31	74.38	58.34	73.68
Linseed	Rabi	1.73	1.68	1.63	1.55
Safflower	Rabi	2.29	2.40	2.25	1.80
Sunflower	Kharif	4.56	3.66	4.63	3.81
	Rabi	9.83	8.62	10.00	8.71
	Total	14.39	12.28	14.63	12.52
Soyabean	Kharif	82.74	88.51	109.68	99.01
Total Nine Oilseeds	Kharif	167.68	140.12	207.13	178.82
	Rabi	112.11	102.77	90.42	102.75
	Total	279.79	242.89	297.55	281.57

Source: Directorate of Economics & Statistics, Department of Agriculture & Cooperation

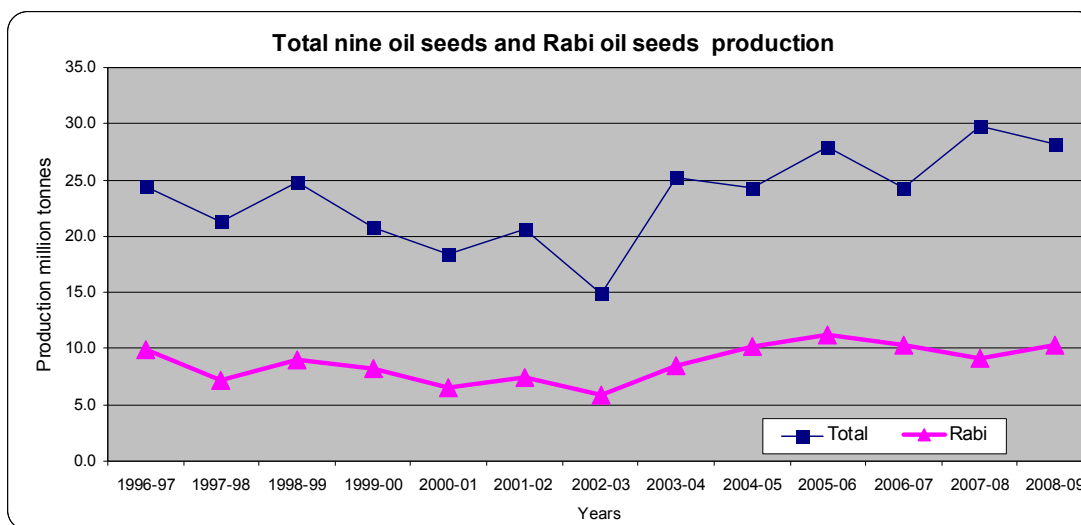
2.40 The long term trend of growth in production shows better performance during the period 1986-87 to 1996-97 compared to the present period 1996-97 to 2007-08. During 1986-87 to 1996-97 the average annual growth rate was 6.72 per cent per annum compared to 1.99 per cent per annum achieved during 1996-97 to 2007-08.

Similarly, average annual growth rate of rabi oilseeds was 5.68 per cent during 1986-87 to 1996-97 as compared to 1.92 per cent achieved during the later period (1996-97 to 2007-08). It appears that the Technology Mission on Oilseeds, set up in 1986, could not sustain the efforts at increasing the production.

(Tables 2.1& 2.2)

2.41 The trend in production of nine major oilseeds and rabi oilseeds is shown in the Chart 3.

Chart 3: Production Trends in Total Nine Oilseeds and Rabi Oilseeds



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

2.42 Area sown under nine major oilseeds recorded a marginal increase of about 1.8 lakh ha (0.7 per cent) to 266.93 lakh ha in 2007-08 from 265.13 lakh ha in 2006-07 but down by 4.2 per cent from the area of 278.63 lakh ha in 2005-06. The area under kharif oilseeds increased by 11.8 lakh ha (about 7 per cent) but the area under rabi oilseeds declined by 10 lakh ha, about 9 per cent to last year's level and about 17 per cent less than the area under rabi oilseeds in 2005-06. However, the 2008-09 preliminary estimates of area show an increase of 2.85 per cent at 274.5 lakh ha from the 266.93 lakh ha in 2007-08. In the absence of major breakthrough in oilseed yields in the long run, the production levels were determined mainly by area coverage under the crops in a season. However, in 2007-08, the production levels were determined mainly by oilseeds yield as area increase was marginal (0.7 per cent) while increase in production was substantial (22.5 per cent) due to favourable monsoon and conducive

weather except in the case of rapeseed/mustard where both area and yield decreased due to non-conduciveness of weather. Like production, the growth rate in area coverage under nine oilseeds and rabi oilseeds was 3.29 per cent and 3.16 per cent respectively during 1986-87 to 1996-97 as compared to 0.49 per cent and (-) 0.46 per cent during 1996-97 to 2007-08. Thus area reduction took place mainly in rabi oilseed crops especially in rapeseed and mustard which can be attributed to substitution in favour of wheat in States like Rajasthan, Punjab and Haryana, due to higher price realization in respect of wheat and sensitivity of the crop to weather, as shown in the table 2.10.

Table 2.10 : Area Sown under Nine Major Oilseeds

(In Lakh ha)

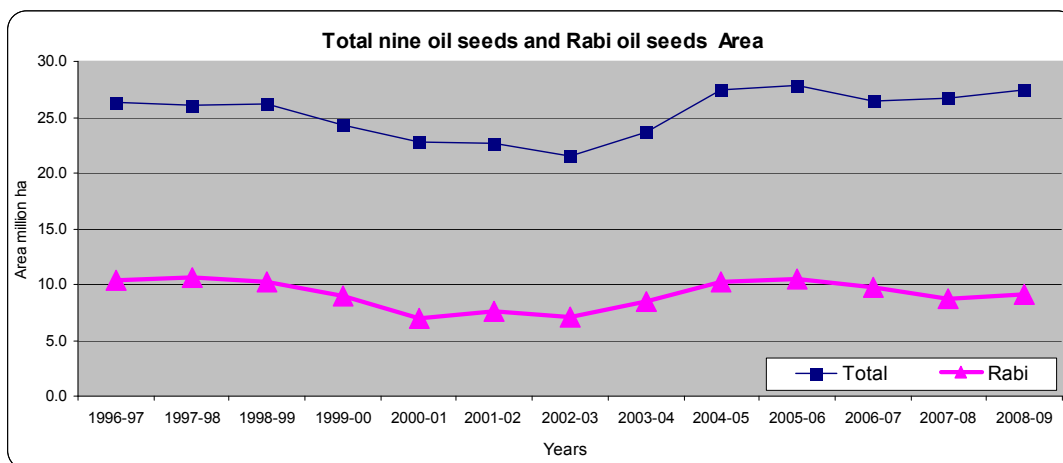
	2005-06	2006-07	2007-08	2008-09*
Total Oilseeds	278.63	265.13	266.93	274.50
Total Kharif	173.68	167.70	179.49	183.17
Total Rabi	104.94	97.43	87.43	91.33
Rapeseed/Mustard(Rabi)	72.77	67.90	58.26	63.69
Sunflower	23.40	21.65	19.12	18.09
Kharif	9.19	8.60	7.62	6.78
Rabi	14.21	13.04	11.50	11.31
Safflower (Rabi)	3.65	3.77	3.20	2.85
Linseed (Rabi)	4.37	4.37	4.68	3.85
Groundnut	67.36	56.15	62.92	61.74
Kharif	57.40	47.80	53.12	52.11
Rabi	9.96	8.35	9.80	9.63
Sesamum (Kharif)	17.23	17.03	17.99	16.35
Soyabean (Kharif)	77.08	83.29	88.82	95.71
Nigerseed (Kharif)	4.14	4.69	4.08	3.74
Castor seed (Kharif)	8.64	6.28	7.87	8.48

* Preliminary as per Second Advance Estimates of DES,

Source: DE&S, Ministry of Agriculture.

2.43 The trend in area under nine major oilseeds and rabi oilseeds from 1996-97 to 2008-09 is depicted in the Chart 4:

Chart 4 : Area Coverage under Total Nine Oilseeds and Rabi Oilseeds



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

2.44 Improvements in productivity of oilseeds during the current period (1996-97 to 2007-08), have also remained lower as compared to earlier period (1986-87 to 1996-97). The annual growth rate of yield in respect of nine major oilseeds and rabi oilseeds during 1996-97 to 2007-08 was 1.49 per cent and 2.39 per cent per annum as compared to 3.32 per cent and 2.45 per cent respectively in earlier period. As regard to performance of rabi oilseeds (Rapeseed/Mustard, Safflower, Sunflower and Groundnut), the growth in yield has been sustainable in the present decade despite negative growth rate (0.46 per cent) in area. However, in recent years from 2003-04, average annual growth rate has declined to 1.41 per cent due to negative yields in Madhya Pradesh, Bihar, Haryana and Rajasthan. The decline in yield in these states could be attributed to scanty/no rains, non-conducive weather and insufficient irrigation due to drying up of tube wells. Moreover, the productivity levels as compared to other producing countries and world average are too low which can be seen from the Table 2.11. In case of Rapeseed/Mustard, it stands about two third of the world average and China and about one fourth of the yield levels of Germany and France. As regard to productivity of Safflower, it was one half of the world average and about one sixth of the yield of China and Mexico.

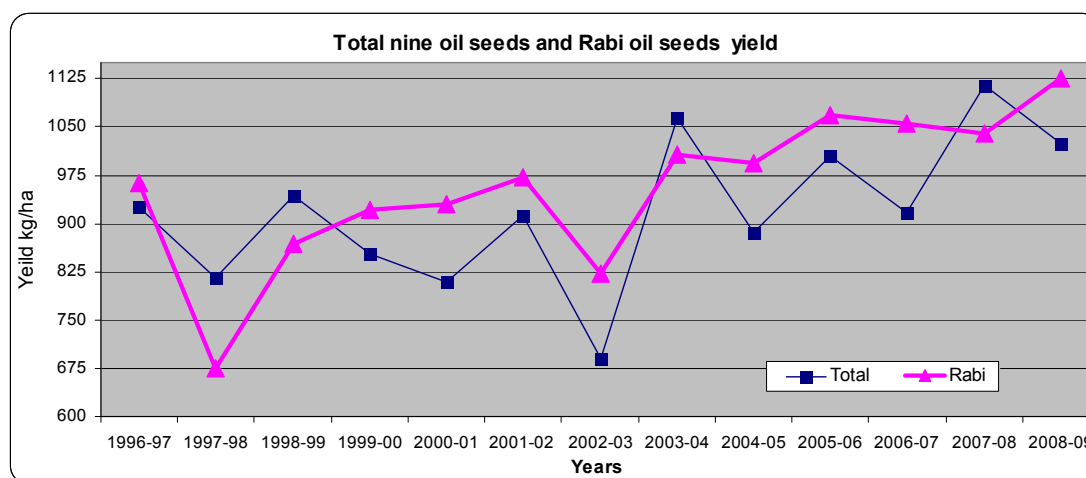
Table 2.11: International Comparison of Productivity of Rabi Oilseeds
(Yield in kg/ha)

Country	Rapeseed/ Mustard (2004-05)	Safflower (2004-05)
China	1779	2500
India	1007	369
Germany	4113	-
France	3542	-
Mexico	-	2503
World	1750	788

Source: Directorate of Oilseeds Development, Hyderabad- network

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

Chart 5: Yield levels of Oilseeds



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

2.46 The yield levels of oilseed crops have been significantly lower from the yields of other major producing countries and from the world average broadly due to factors like outdated farm practices, cultivation in rain-fed conditions and the consequent dependence on rainfall, deceleration of under ground water, lack of technology transfer/up-gradation at farm level, non-availability of quality seeds/hybrid seeds, lack of disease and pest management practices, degradation of soil health and poor infrastructure and inadequate extension services. Therefore, increased irrigation facilities by way of assured irrigation, adoption of research on various aspects of harvest and post-harvest operations, proper demonstration and quality extension services would go a long way in improving the yields of the oilseed crops in India.

2.47 The wholesale prices of oilseeds as a whole have increased continuously for

the last three financial years. The average increase in wholesale price index (WPI) in 2006-07 was 5.2 per cent which further increased by 24.1 per cent in 2007-08 and 12.7 per cent in 2008-09. The index for April-June 2009 showed an increase of 0.5 per cent from the average index of 2008-09. The WPI of oilseeds consistently increased from 213.3 in November 2007 to reach a high of 259.8 in July, 2008, registering an increase of 21.8 per cent. The prices, since July, 2008 have softened to decline by 13.3 percent in March, 2009. While all the crops in the oilseeds category showed increases in prices during 2008-09, the price increases were higher in respect of rapeseed/mustard and sesamum due to low production of these two crops in 2007-08 and the resultant supply constraints in 2008-09. In respect of all other crops, the price increases softened as compared to 2007-08.

(Table 2.25)

2.48 NAFED has been assigned the role of the Nodal central procurement agency in case of oilseeds under price support scheme. NAFED during the 2008-09 rabi season has not procured oilseeds under price support scheme as the market prices of all rabi oilseeds were ruling above the MSP. However, NAFED made commercial purchases of 1100 tonnes of the Mustard seed from Rajasthan, Gujarat and Madhya Pradesh, valued at Rs.26.6 million.

2.49 The edible oil sector of the country continues to show mismatch between domestic availability and demand, necessitating large scale imports. The demand and supply situation of edible oils is given in the Table 2.12.

Table 2.12: Demand and Supply of Edible Oils

(In lakh Tonnes)

Oil year (Nov-Oct)	Production of Oilseeds	Net domestic availability of edible oils*	Import of edible oils	Total availability/ consumption of edible oils (domestic+ Import)	Total estimated requirement/ Demand for Edible Oils**
1	2	3	4	5	6
2001-02	206.63	61.46	43.22	104.68	98.20
2002-03	148.39	46.64	43.65	90.29	102.90
2003-04	251.86	71.40	52.90	124.30	107.80
2004-05	243.54	72.47	47.51	117.89	113.00
2005-06	279.79	83.16	42.88	126.04	118.50
2006-07	242.89	73.70	47.15	120.85	124.10
2007-08	297.55	86.54	56.08	142.62	127.57
2008-09	281.57	85.61	65.66@	151.27	132.80

* Include availability from primary + secondary sources less export & industrial use

@ Estimated for the whole year ** Demand is based on Behaviouristic Approach with an assumption of per capita disposable income growth of 4.8 percent and average oil content of 28 percent

Source: Directorate of Vanaspati, Vegetable Oils & Fat;

2.50 As can be seen from the Table 2.12, domestic production has been showing wide inter-year variations mainly because of the rain-fed conditions in which the crop is being cultivated and lack of technology suitable for rain-fed conditions. Demand for edible oil has been consistently increasing mainly due to increased income and better standards of living. Government, justifiably, has been resorting to imports to meet the demand requirements and to stabilize the edible oil prices domestically. Imported edible oil accounted for about 46 percent of the total availability during 2007-08.

2.51 The import duty structure has been reviewed from time to time, depending on the domestic demand and supply positions. In order to control the rising prices of edible oils in 2007-08, the import duties were drastically reduced to 7.5 percent in the case of refined edible oils and zero duty in case of crude edible oils from April, 2008. While Government measures to stabilise edible oil prices in the country through imports are justifiable, the impact of the imports on domestic prices and on the farmers income needs to be constantly monitored to see that imports do not act as a disincentive for domestic farmers to take up oilseeds cultivation. During interactions with the Commission, farmers especially coconut farmers had expressed concern at the policy of zero import duty on crude palm oil and its distribution at a subsidized price through PDS in some states, which have placed the domestic oil sector at a disadvantage particularly coconut oil in Kerala and mustard oil in some other states.

Presently, there is a softening of oil prices in the country. Government needs to review the situation and if need be, consider imposition of duties on all crude edible oils and increasing the duties on refined oils so that the farmers and oil industry do not suffer from the cheaper imported oils.

2.52 The higher dependence on imports has its own disadvantages, especially in the current scenario of instability in global prices, which witnessed abnormal increase up to July 2008 and sharp decline thereafter due to economic meltdown and related factors. The prices of oilseed products globally again started to surge from April 2009 and expected to remain firm and strengthen further but also volatile depending on future course of weather developments and the on-going financial and economic slowdown. Hence, there does not appear to be an alternative but to enhance the domestic availability of edible oils through increase in productivity of oilseed crops.

2.53 Global scenario of production, trade and prices influence domestic oilseed and oils economy in view of India's prominent status as one of the largest importers of edible oils in the world. Global oilseed production in 2008-09 is forecast to 405.9 million tonnes, a marginal increase of 0.7 per cent from the low level in 2007-08 and down by 10 per cent from the record production at 418.7 million tonnes in 2006-07, mainly on account of adverse weather conditions in South America, Argentina, Paraguay and Brazil in case of soyabean.

2.54 The unprecedented increase in the global prices of oilseed and oilseed products, which started in 2006 continued in 2007-08 up to June 2008. The prices started declining since July 2008. FAO price indices for oilseeds and oils/fats in 2007-08 increased to 217 and 243 points, registering an increase of 68 per cent and 64 per cent respectively from 2006-07 levels. Expanding demand which resulted in sharp reduction in inventories was one of the reasons for this 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 estimated earlier in November 2008 for 2008-09 season. As per the FAO's Price Index, the prices of oilseeds and oils/fats

sharply declined by 30 per cent and 43 per cent respectively in 2008-09 up to May 2009, though the prices started to increase from April 2009 due to revised lower forecast of production and tightening of supply position because of low opening stocks. According to FAO's revised supply and demand forecast for 2008-09 (October-September) prices of oilseeds complex will remain firm and may strengthen further in 2009-10 season.

2.55 Global consumption demand for oil/fat during 2008-09 is expected to increase by about 3 per cent, half of which would be accounted for by food uses and the other half by non-food uses including industrial uses primarily for bio-fuel. The decline in international prices since July 2008 was expected to trigger demand but growth in consumption lowered by one per cent than the earlier estimated 4 per cent, due to global economic recession. Among the countries, the growth of consumption in developing countries is expected to almost double that in developed countries and developing Asia alone account for half of the global oil/fat consumption with heavy increases in consumption in China and India besides in the European Union.

2.56 The world supply and demand position in respect of oilseeds and products is shown in the Table: 2.13.

Table 2.13: World Oilseeds and Products Market

(In Million Tonnes)

Product	2006-07	2007-08 (estimated)	2008-09 (forecast)	%age change in 2008-09 over 2007-08
Total Oilseeds				
Production	418.7	403.1	405.9	0.7
Oils and Fats				
Production	152.7	155.5	160.4	3.2

Supply@	173.8	177.9	181.7	2.1
Utilisation	151.5	156.7	161.6	3.1
Trade@@	76.6	80.5	83.6	3.8
Stock-to-utilisation ratio (%)	14.7	13.6	13.2	
FAO Price Indices (Oct-Sep)				
(2002-2004=100)				
Oilseeds	129	217	149	-30
Oils/fats	148	243	140	-43

@: Production + opening stocks

@@: Trade data refer to exports based on a common October/ September marketing season

Source: FAO, Food Outlook, Global Market Analysis, June, 2009

2.57 The Commission recommends MSP for two oilseed crops viz. Rapeseed/Mustard and Safflower during the Rabi season. The status of these crops in respect of area, production, yield and prices is indicated below:

Rapeseed & Mustard

2.58 Rapeseed & Mustard contributes about 74 percent towards production of rabi oilseeds in the country and also accounted for about 13 percent of the world production in 2008-09. Around 50 percent of the output is being contributed by the state of Rajasthan. Other major producing states include Uttar Pradesh, Haryana, Gujarat, M.P. and West Bengal. In 2008-09, the production is estimated at 73.68 lakh tonnes, an increase of 15.34 lakh tonnes (26.3 per cent) over the production of 58.34 lakh tonnes in 2007-08. During 2008-09, highest yield was recorded in Gujarat (1600 kg/ha), followed by Haryana (1560 kg/ha) as against All India average yield of 1157 kg/ha. Area, production and yield under rapeseed-mustard crop showed frequent fluctuations depending upon the situation of monsoon rains, winter showers and appropriateness of the weather since the crop is sensitive to weather conduciveness. During the period 1986-87 to 1996-97, the area, yield and production under rapeseed-mustard had expanded at an annual average growth rate of 5.07 percent. 2.49 per cent and 7.69 per cent respectively while in the latter period (1996-97 to 2007-08) yield has been maintained at 2.44 per cent but the growth rates declined heavily as area increase was nominal at 0.21 per cent and production increased at 2.66 per cent. The growth achieved in earlier period was perhaps due to launching of Technology Mission on Oilseeds in 1986 which could not be sustained in the later period. The Integrated Scheme on Oilseeds, Pulses and Maize (ISOPOM) launched

since April, 2004 could not help in increasing the productivity of rapeseed/mustard as the annual growth rate during 2003-04 to 2008-09 has been negative at 0.39 per cent. The Wholesale Price Index (WPI) of rapeseed/mustard in 2008-09, increased by 23.2 per cent from average index of 2007-08 as the supply was less due to low level of production. WPI declined since February, 2009 and average index of April and June 2009 registered a decrease of 5.82 per cent over the average of 2008-09 because of expectations of a good crop. Similarly for mustard oil, the WPI decrease was more at 9.5 per cent as against the decrease of 5.4 percent in edible oils during April-June of 2009-10. (Tables 2.1, 2.2 & 2.25)

Safflower

2.59 Safflower has been losing its ground, in terms of area and production. The area under safflower cultivation has been continuously declining from its highest coverage of 10.52 lakh/ha in 1987-88 to 4.38 lakh/ha in 1999-2000 and estimated to decline further to 2.85 lakh/ha in 2008-09. Similarly, the production of safflower decreased from 4.65 lakh tonnes in 1987-88 to 2.6 lakh tonnes in 1999-2000 and further declined to 1.80 lakh tonnes in 2008-09, a decline of 20 percent over the 2007-08 production. However, the reduction in production has been proportionally lower than the reduction in area as productivity has shown an increasing trend. The crop is being cultivated mainly in the states of Maharashtra and Karnataka. During the period of 2003-04 to 2008-09, the average annual growth rate of area in case of safflower has been negative at 4.51 percent at All India level, while it was negative at 7.93 percent and 4.71 percent in Karnataka and Maharashtra respectively. However, yield increased at 11.72 percent during the same period and as a result of increase in yield, production also increased at the rate of 6.68 percent. The prices of safflower, as measured in terms of WPI increased during 2007-08 and 2008-09 in line with other oilseed crops.

(Tables 2.1 & 2.25)

III. Movement of Input Prices, Cost of Production and Terms of Trade.

3.1 The Commission for Agricultural Costs and Prices (CACP) submitted its last Price Policy Report for Rabi crops on 31st July, 2008. As part of formulating price policy for Rabi crops, CACP reviews comprehensively the cost of production of various Rabi crops grown in different regions of the country. With a view to assess the extent to which the cost of production of various Rabi crops has recorded change in terms of either increase or decrease and to have an adequate understanding of movement of input prices that impact cost of production, the Commission held meetings with the State Governments, Farmer's Associations, Agricultural Universities and other stakeholders on 29th June, 2009. Most of the farmers representing different states of the country expressed the view that the methodology of fixing MSP had to be further refined for the long-term interests of farmers. In this regard, it is clarified that the determination of minimum support prices for mandated crops depends upon the multiplicity of factors that have already been framed in the terms of reference for this Commission. There was also demand from farmers that there should be MSP for white jowar, which is mostly grown in the southern parts and remains the major foodstuff for the people of the southern region. Also, there was a demand for MSPs for different kinds of fruits and vegetables grown by small and marginal farmers in different parts of the country. Most of the farmers argued that present Crop Insurance Policy in the states did not serve the real interests. This is because the loss of yield specific to any particular farm holding was not compensated for in the existing policy framework of the Crop Insurance Scheme unless it was loss of yield for tehsil as a whole.

3.2 Excepting where procurement centres are effectively functioning in the states of Punjab, Haryana, Western UP, and in some southern states, the remaining parts of the country do not have adequate infrastructural facilities of procurement and storage for farmers' produce. Therefore it was requested by the farmers that the procurement centres be set up at least 15 days before the harvesting of crops has started. In addition to this, there was the recurrent problem of farmers not receiving essential inputs like fertilizers and seeds on time and this caused innumerable hardships to them in their timely farming operations.

3.3 Despite criticism of cost of production data generated under the Comprehensive Scheme (CS) of Department of Agriculture and Cooperation, that it does not reflect accurately costs of various agricultural inputs, the Commission clarifies that the CS data on cost of cultivation and production remains the only data set regularly generated from adequate number of sample farm holdings spread throughout the country and distributed according to agro-climatic zones.

3.4 The Commission based on the latest available estimates of 2007-08 has undertaken exercises to assess the change in the input prices both at the specific input level and at the aggregate level. In order to grapple with the changes in the prices of various inputs going into crop production, the Commission set about analyzing the broad spectrum of data on wholesale input price indices, wage rates, levels of fertilizer consumption and prices, and seed rates etc. from the Office of the Economic Adviser, Ministry of Commerce and Industry, Labour Bureau, Ministry of Labour and Employment, Fertilizer Association of India, and feedbacks from State Governments etc.

3.5 The replies so far received from the State Governments show that the statutory minimum wage rates have recorded upward revision in the states of Bihar, Haryana and Orissa. On the question of wage rate of agricultural labour, it is evident that the per day agricultural wage levels as separately given both in the CS estimates and in the state replies do broadly correspond. The average daily wage rates for agricultural labour have gone up by 41.86 percent for Orissa, followed by 27.67 percent for Andhra Pradesh, 21.31 percent for Haryana, 18.20 percent for Punjab, 17.78 percent for Tamilnadu, 17.34 percent for Kerala, 16.22 percent for Karnataka, and 16.09 percent for Bihar during the period June 2008 to May 2009. The extent of increase in average daily wage rates in these states is 16 to 42 percent. No state is reported to have recorded a fall in the average daily wage rate during this period. The states of Gujarat, West Bengal, Assam, Maharashtra, Madhya Pradesh, Rajasthan have their average daily wage rates increased 3 to 14 percent. Kerala has the highest wage rate at Rs.255.19 per manday during May, 2009, followed by Haryana at Rs.140.79 per manday, Punjab at Rs.127.49 per manday, Rajasthan at Rs.124.47 per manday,

Tamilnadu at Rs.115.91 per manday, Andhra Pradesh at Rs.113.75 per manday. The state of Madhya Pradesh has the lowest wage rate at Rs.64.73 per manday among the major states. As far as the cost of living index of agricultural labourers is concerned, the index measured in terms of Consumer Price Index of Agricultural Labour has registered increase of the order of 8 to 13 percent in the majority of states.

3.6 The Wholesale Price Indices (WPI) with base 1993-94 = 100 for farm inputs during the period July 2008 to June 2009 reveal that the WPI has dropped by (-) 7.50 percent for electricity (for irrigation purposes), by (-) 0.36 percent for lubricants, by (-)11.59 percent for High Speed Diesel Oil (HSDO), by (-)19.93 percent for Light Diesel Oil (LDO). The change in WPI for High Speed Diesel Oil in the negative terrain during the period July 2008 to June 2009 is due to the fact that the increase in WPI for HSDO from 451.1 in February, 2009 to 452.2 in June, 2009 has not touched on an average the level of WPI in the year 2008. In regard to LDO the order of increase in WPI observed during the months of February to June 2009 has not exceeded the level for the year 2008. There has been increase in WPI by 0.55 percent for fertilizers, by 22.36 percent for pesticides, by 3.72 percent for tractors, by 6.78 percent for fodders and by 6.75 percent for cattle feed.

ESTIMATES OF COST OF CULTIVATION AND PROJECTIONS FOR 2009-10 CROP SEASON.

Wheat

3.7 The Commission has received actual estimates of cost of cultivation/production of wheat for 2007-08 for the states of Bihar, Chhattisgarh, Gujarat, Haryana, Himachal Pradesh, Jharkhand, Madhya Pradesh, Punjab, Rajasthan, Uttar Pradesh, Uttarakhand from the Directorate of Economics and Statistics, Ministry of Agriculture. The details of latest cost estimates of wheat and those for the preceding year of 2006-07 are given in table 3(A). As is evident from table 3 (A), C2 cost of cultivation per hectare has increased in all the states for the year 2007-08 in comparison to that

for the year 2006-07 excepting the state of Chhattisgarh, due to increase in input cost per hectare including that on account of family labour. The states of Jharkhand, West Bengal, Rajasthan, Madhya Pradesh, Himachal Pradesh present a situation where the increase in cost of cultivation per hectare is due largely to the major share of increase in paid out cost. In regard to cost of production per quintal there has been a substantial increase in the states of Rajasthan (14.37 percent), Chhattisgarh (9.50 percent), Jharkhand (16.27 percent). These states have their yield levels dropped. In the case of Haryana, the increase in cost by 14.40 percent per quintal is accompanied by increase in yield of 5.61 percent between 2006-07 and 2007-08. The state of Haryana is an example of relatively higher increase in cost relative to unit increase in yield. The implicit prices for 2007-08 for wheat derived from cost estimates under CS for different wheat growing states range between Rs.927 per quintal to Rs.1146 per quintal.

3.8 In order to arrive at the likely cost of production of wheat in different wheat growing states for the ensuing season 2009-10, the Commission has as usual adopted the base level cost data generated under comprehensive scheme for the latest 3 years ending 2007-08. The per hectare variable input costs are projected using the methodology of projecting input prices for the ensuing season based on the current series of data on wage rates, fertilizer prices, seed prices, irrigation charges etc. The grasp of plausible movement of input prices being crucial to estimating cost of production per quintal for the year 2009-10, the Commission as far as possible takes account of the updated data on prices of different inputs, wage rates etc. and computes for each state and crop weighted composite input price index, weights being the share of each input in the total operational cost net of interest. The weighted composite input price index estimated for the year 2009-10 provides on an average a clue to how much input price in general is expected to go up for the year under consideration, compared to each of the latest 3 years' actual input prices. The all India paid out cost including family labour (A2+FI) per quintal and overall (C2) cost per quintal are arrived at by taking weighted average of respective state specific estimated costs, weights being shares of production of each state in absolute quantity in total production.

Table 3 (A): Cost Estimates for Wheat

(In Rupees)									
States	Years	A ₂ +FL /hec	C ₂ /hec	A ₂ +FL /qtl	C ₂ /qtl	C ₃ /qtl	Yield qtl/hec.	Implicit Price (per qtl)	MSP (qtl)
Bihar	2007-08	11457	16738	417.45	609.28	681.92	23.90	936.27	1000
	2006-07	11097	15694	473.50	668.98	755.17	20.50	909.11	850
Chattisgarh	2007-08	9180	14964	589.18	962.61	1077.97	13.03	1080.68	1000
	2006-07	9687	15057	565.98	879.11	968.07	14.38	1034.70	850
Gujarat	2007-08	14731	21608	396.80	581.12	639.23	35.79	1010.48	1000
	2006-07	14127	19900	428.26	602.91	663.20	31.65	894.46	850
Haryana	2007-08	17873	32380	371.69	673.46	754.68	41.99	999.81	1000
	2006-07	16534	28424	342.47	588.68	657.69	39.76	856.15	850
Himachal Pradesh	2007-08	13976	23926	504.90	866.86	953.55	18.93	971.21	1000
	2006-07	11868	20965	440.74	778.94	885.19	19.56	900.97	850
Jharkhand	2007-08	14102	16099	1135.95	1292.45	1421.70	10.73	955.89	1000
	2006-07	12849	14999	954.30	1111.55	1222.71	11.93	921.53	850
Madhya Pradesh	2007-08	12158	21450	442.73	779.37	860.19	23.86	1146.06	1000
	2006-07	11151	19373	420.88	730.32	803.89	22.91	1012.34	850
Punjab	2007-08	17122	32827	337.94	647.95	723.93	46.47	1000.58	1000
	2006-07	16254	29947	335.38	617.11	687.52	42.10	850.36	850
Rajasthan	2007-08	16732	25729	424.08	649.77	714.75	33.39	1035.02	1000
	2006-07	15867	24660	365.23	568.12	626.00	36.46	930.87	850
Uttar Pradesh	2007-08	17329	25529	441.94	651.14	725.75	33.29	999.64	1000
	2006-07	16581	24689	425.48	635.89	711.62	31.92	868.01	850
Uttarakhand	2007-08	15413	25152	496.24	806.28	886.91	25.78	1016.50	1000
	2006-07	15669	24552	487.30	756.86	847.66	25.20	804.02	850
West Bengal	2007-08	18856	25981	708.37	975.17	1085.35	24.92	926.59	1000
	2006-07	16973	23242	727.06	996.32	1100.45	21.40	890.90	850

3.9 According to the above mentioned projection methodology, and on the basis of the actual input price movements observed so far, the per quintal average paid out cost including imputed cost of family labour (i.e. A₂+FL) for wheat for 2009-10 is projected to Rs.524.18, Rs.679.59, Rs.451.75, Rs.402.49, Rs.570.09, Rs.1073.42, Rs.490.07, Rs.361.55, Rs.433.57, Rs.522.90 and Rs.584.79 per quintal for Bihar, Chhattisgarh, Gujarat, Haryana, Himachal Pradesh, Jharkhand, Madhya Pradesh, Punjab, Rajasthan, Uttar Pradesh and Uttarakhand respectively. The average projected unit costs of production (cost C₂) of wheat in these states worked out to Rs. 721.82, Rs.1006.12, Rs.626.08, Rs.660.69, Rs.871.21, Rs.1231.87, Rs.783.27,

Rs.643.37, Rs.613.99, Rs.747.70 and Rs.806.81 respectively. The weighted average projected cost of production of wheat for 2009-10 for all these states worked out to Rs.460 on A₂ + FL basis and Rs.701 on C₂ cost basis. [(Tables 3.3 and 3.4 and 3 (H))]

BARLEY

3.10 The cost estimates of barley for 2007-08 became available for the states of Rajasthan and Uttar Pradesh. As is observed from table 3 (B) the comparative costs of cultivation/production for the states of Rajasthan and Uttar Pradesh are given with their corresponding yields for the years 2006-07 and 2007-08.

Table 3 (B): Cost Estimates for Barley

(In Rupees)

States	Years	A ₂ +FL/ hec	C ₂ /hec	A ₂ +FL /qtl	C ₂ /qtl	C ₃ /qtl	Yield qtl/hec.	Implicit Price (per qtl)	MSP (qtl)
Rajasthan	2007-08	14546	22806	405.27	632.04	695.24	29.81	1064.18	650
	2006-07	13886	21410	298.95	465.16	522.14	35.36	693.88	565
Uttar Pradesh	2007-08	16043	24399	431.59	659.01	761.71	30.22	861.49	650
	2006-07	15534	22592	461.63	677.24	769.32	27.11	733.45	565

3.11 The average A₂ +FL cost of barley for 2009-10 is projected at Rs.386.19 per quintal for Rajasthan and Rs.475.72 per quintal for Uttar Pradesh following the same methodology as used in the case of wheat. The average C₂ cost of production of barley for these states is projected at Rs.550.22 and Rs.691.26 per quintal respectively. The all-India weighted average cost of production of barley for 2009-10 works out to Rs.423 on A₂ +FL basis and Rs.608 per quintal on C₂ cost basis.

[(Tables 3.6, 3.7 &3(H))]

Gram

3.12 The cost estimates of gram for 2007-08 have been made available for the states of Bihar, Chhattisgarh, Haryana, Jharkhand, Madhya Pradesh, Maharashtra, Rajasthan and Uttar Pradesh. Table 3 (C) gives the details of costs of cultivation/production of the above states for gram for two consecutive years of 2006-07 and 2007-08. The table 3 (C) provides the striking information of yields varying between as low as 2.19 quintals per hectare and as high as 13.20 quintals per hectare. The lowest yield rate of 2.19 quintals per hectare is reported by Haryana for the year 2007-08 and the highest yield rate of 13.20 by Andhra Pradesh for the same

year. The loss of yield for gram during the period 2006-07 to 2007-08 is highest for Haryana at (-)64.33 percent followed by Rajasthan at (-)32.38 percent, Madhya Pradesh at (-)3.50 percent. The cost per quintal in these states has gone up by 130.83 percent, 46.04 percent, 4.03 percent respectively during the same period.

Table 3 (C): Cost Estimates for Gram

(in Rupees)

States	Years	A ₂ +FL /hec	C ₂ /hec	A ₂ +FL /qtl	C ₂ /qtl	C ₃ /qtl	Yield qtl/hec	Implicit Price (per qtl)	MSP (qtl)
Andhra Pradesh	2007-08	9859	18119	746.01	1370.76	1507.84	13.20	2091.66	1600
	2006-07	9532	17887	756.50	1420.03	1588.69	12.59	2127.31	1445
Bihar	2007-08	6402	11078	750.92	1299.76	1435.94	8.22	2817.01	1600
	2006-07	7630	12375	933.04	1513.49	1688.69	7.75	2659.39	1445
Chhattisgarh	2007-08	6672	13936	508.09	1061.68	1188.89	12.75	2076.13	1600
	2006-07	6579	11964	625.10	1136.17	1269.13	9.79	1952.86	1445
Haryana	2007-08	5510	8544	2257.05	3479.70	4055.45	2.19	3817.09	1600
	2006-07	5300	10539	800.92	1597.15	1756.87	6.14	2131.69	1445
Jharkhand	2007-08	5599	7384	978.28	1290.27	1419.30	5.45	2974.55	1600
	2006-07	5479	7267	1107.84	1470.73	1617.80	4.72	2488.98	1445
Karnataka	2007-08	7625	11281	1048.62	1545.75	1708.05	7.10	2264.08	1600
	2006-07	7202	10712	1066.95	1583.46	1805.00	6.62	2213.52	1445
Madhya Pradesh	2007-08	8758	15508	911.72	1613.49	1774.84	9.09	2362.07	1600
	2006-07	8633	15323	874.16	1551.00	1706.10	9.42	2233.98	1445
Maharashtra	2007-08	10657	15678	1097.53	1614.12	1775.53	9.54	2311.43	1600
	2006-07	11348	15444	1391.16	1894.80	2084.28	8.03	2135.49	1445
Rajasthan	2007-08	8693	13954	1133.74	1817.84	2013.46	7.10	2569.39	1600
	2006-07	7976	14371	691.06	1247.65	1378.73	10.50	2217.25	1445
Uttar Pradesh	2007-08	11317	18256	1128.94	1820.35	2002.39	9.60	2555.98	1600
	2006-07	9785	15724	1092.42	1751.12	1926.23	8.56	2325.36	1445

3.13 The average A₂+FL costs of gram are projected for 2009-10 at Rs.915.09, Rs.620.96, Rs.1060.29, Rs.1100.97, Rs.941.55, Rs.1406.59, Rs.1132.21 and Rs.880.78 for Bihar, Chhattisgarh, Haryana, Jharkhand, Madhya Pradesh, Maharashtra, Rajasthan and Uttar Pradesh respectively. The corresponding C₂ costs are projected at Rs.1457.45, Rs.1142.49, Rs.1693.02, Rs.1433.44, Rs.1603.98, Rs.1896.00, Rs.1746.08 and Rs.1420.76 per quintal respectively. The weighted average cost of production of gram works out to Rs.1044 per quintal on A₂ + FL basis and Rs.1641 per quintal on C₂ cost basis for the year 2009-10.

[(Tables 3.9, 3.10 & 3 (H))]

Lentil (Masoor)

3.14 The estimates of cost of cultivation of lentil became available for 2007-08 in respect of Bihar, Jharkhand, Madhya Pradesh and Uttar Pradesh. From Table 3(D) it is observed that the cost of production per quintal has shown increase for the year 2007-08 compared to the preceding year of 2006-07 by 8.65 percent for Bihar, 13.99 percent for Madhya Pradesh and 4.75 percent for Uttar Pradesh, with Jharkhand showing drop in cost of production per quintal by (-)4.02 percent. The state of Jharkhand shows an increase of yield by 7.98 percent that has given rise to decline in cost of production in the same period. The state of Bihar has recorded a decline of yield by (-)10.54 percent whereas Madhya Pradesh has shown both marginal increase of yield by 2.28 percent together with increase in cost of production per quintal by 13.99 percent.

Table 3(D) : Cost Estimates for Lentil(Masoor)

(in Rupees)

States	Years	A ₂ +FL/ hec	C ₂ /hec	A ₂ +FL /qtl	C ₂ /qtl	C ₃ /qtl	Yield qtl/hec.	Implicit Price (per qtl)	MSP (qtl)
Bihar	2007-08	5453	10676	616.02	1206.57	1338.46	8.40	2444.10	1700
	2006-07	5738	11064	576.48	1110.52	1262.80	9.39	1984.85	1545
Jharkhand	2007-08	4573	6670	766.54	1118.89	1230.78	5.68	2447.91	1700
	2006-07	4397	6415	801.18	1165.73	1282.30	5.26	2281.87	1545
Madhya Pradesh	2007-08	7139	13819	844.80	1634.73	1802.32	8.08	2775.83	1700
	2006-07	6427	11863	776.98	1434.10	1577.51	7.90	2184.95	1545
Uttar Pradesh	2007-08	9072	14941	1103.26	1817.44	1999.18	7.96	2943.56	1700
	2006-07	8527	14105	1047.02	1735.04	1922.14	7.70	2179.25	1545

3.15 The A₂ +FL cost per quintal of lentil is projected for 2009-10 at Rs.703.62, Rs.870.86, Rs.814.37, and Rs.1262.05 for Bihar, Jharkhand, Madhya Pradesh and Uttar Pradesh, respectively. The C₂ costs for these states have been projected at Rs.1245.21, Rs.1262.66, Rs.1343.39 and Rs.1902.60 respectively. The weighted average cost of production of lentil works out to Rs.1038 per quintal on A₂+ FL basis and Rs.1626 per quintal on C₂ cost basis for the year 2009-10.

[(Tables 3.12, 3.13 & 3(H))]

Rapeseed/Mustard and Safflower

3.16 The estimates of Rapeseed/Mustard have become available for the states of Assam, Gujarat, Haryana, Madhya Pradesh, Rajasthan, Uttar Pradesh and West Bengal for the year 2007-08. Table 3(E) gives comparative cost estimates of Rapeseed/Mustard for above states for the period 2006-07 to 2007-08. From this table it is observed that Rajasthan has recorded decline in yield by (-)16.02 percent in

2007-08 followed by (-)4.44 percent for Uttar Pradesh, (-)0.98 percent for Assam, (-)0.18 percent for Madhya Pradesh. These states have their cost of production per quintal increased by 32.92 percent, 22.11 percent, 5.98 percent, 26.43 percent respectively during the same period. The highest yield recorded for the year 2007-08 is for the state of Gujarat and it stands at 17.68 quintals per hectare, followed by Haryana at 15.83 quintals per hectare.

Table 3 (E) : Cost Estimates for Rapeseed/Mustard
(in Rupees)

States	Years	A ₂ +FL/ hec	C ₂ /hec	A ₂ +FL /qtl	C ₂ /qtl	C ₃ /qtl	Yield qtl/hec.	Implicit Price (per qtl)	MSP (qtl)
Assam	2007-08	9693	12175	1591.15	1998.81	2198.69	6.09	1727.39	1800
	2006-07	9239	11606	1502.40	1885.97	2074.57	6.15	1321.63	1715
Gujarat	2007-08	9997	18133	560.26	1016.22	1117.84	17.68	2521.69	1800
	2006-07	10111	14938	677.30	1000.91	1101.00	14.70	1662.30	1715
Haryana	2007-08	12924	23889	754.15	1396.05	1535.66	15.83	2228.04	1800
	2006-07	13722	21349	915.47	1423.89	1566.28	13.86	1768.10	1715
Madhya Pradesh	2007-08	8511	17528	745.51	1534.32	1687.75	11.10	2694.52	1800
	2006-07	7969	14244	678.92	1213.53	1334.88	11.12	1764.16	1715
Rajasthan	2007-08	9614	16892	758.61	1332.63	1465.89	12.21	2549.14	1800
	2006-07	8893	15059	591.87	1002.61	1102.87	14.54	1720.06	1715
Uttar Pradesh	2007-08	11592	20371	830.70	1461.21	1610.63	13.33	2418.69	1800
	2006-07	9735	17681	655.07	1196.67	1316.34	13.95	1759.19	1715
West Bengal	2007-08	14654	21698	1283.56	1900.48	2095.80	11.12	2114.27	1800
	2006-07	13396	18551	1351.65	1873.23	2060.55	9.44	1676.89	1715

3.17 The estimated costs of production of Rapeseed/Mustard for states for which latest estimates are available have been projected for 2009-10. As gleaned from the table 3(G), the estimated A₂ + FL cost varies within a wide range between Rs.688.27 per quintal for Gujarat and Rs.1653.57 per quintal for Assam. The projected C₂ cost varies between Rs.1044.72 per quintal for Gujarat and Rs.2042.80 per quintal for Assam. Next to Assam having the highest cost of production is West Bengal which has Rs.1935.00 as per its projected C₂ cost of production. These two being the high cost states, MSP could not cover their costs of production for the year 2007-08.

3.18 The estimated cost of production for rapeseed and mustard has been projected for the year 2009-10 to Rs.1653.57 per quintal for Assam, Rs.688.27 per quintal for Gujarat, Rs.898.54 per quintal for Haryana, Rs.790.25 per quintal for Madhya Pradesh, Rs.716.24 per quintal for Rajasthan, Rs.923.41 per quintal for Uttar Pradesh and Rs.1389.03 per quintal for West Bengal on A₂+FL basis. The projected C₂ costs per quintal for the year 2009-10 in these states stand at Rs.2042.80, Rs.1044.72,

Rs.1453.35, Rs.1398.98, Rs.1111.55, Rs.1446.98, Rs.1935.00 respectively. The all India weighted average cost is projected at Rs.820 per quintal on A₂+FL basis and Rs.1276 on C₂ basis.

[(Tables 3.15, 3.16 & 3(H)]

3.19 The latest cost estimate for Safflower pertaining to 2007-08 is available for Maharashtra and Karnataka. The Table 3 (F) provides the actual cost estimates of cultivation/production for safflower in respect of Maharashtra for the years 2006-07 and 2007-08, and in respect of Karnataka for the year 2007-08. From the table it is observed that the yield rate for the year 2007-08 has dropped by (-) 25.43 percent that has resulted in increase in cost of production per quintal by 67.12 percent. It is observed that minimum support price of Rs.1650 per quintal fixed for the year 2007-08 in respect of safflower could not cover the C₂ cost of production which stands at Rs.2169.62 per quintal for Maharashtra, but covers its A₂+FL cost of Rs.1600.96.

Table 3 (F): Cost Estimates for Safflower

(in Rupees)									
States	Years	A ₂ + FL/hec	C ₂ /hec	A ₂ +FL /qtl	C ₂ /qtl	C ₃ /qtl	Yield qtl/h ec.	Implicit Price (per qtl)	MSP (qtl)
Karnataka	2007-08	5221	7895.97	840.03	1269.53	1430.78	6.13	1605.52	1650
Maharashtra	2007-08	8965	12160	1600.96	2169.62	2386.58	5.60	2608.38	1650
	2006-07	7246	9754	964.90	1298.23	1428.05	7.51	1508.61	1565

3.20 The estimated cost of production for Safflower has been projected for 2009-10 to an average of Rs.1439 and Rs.1884 per quintal on A₂ + FL and C₂ cost basis respectively.

[(Tables 3.18, 3.19 & 3 (H)]

Comparison of Cost Estimates generated under Comprehensive Scheme (CS) and those provided by the State Governments.

3.21 In addition to the data obtained from CS, the Commission received data on cost of cultivation and input usage from various state governments based on their own surveys. These two sets of data are not strictly comparable to the corresponding CS estimates due to some conceptual and methodological differences. Nevertheless, the cost estimates provided by the different state governments have proved very useful as

many of them pertain to the more recent years and some times the data for the states not covered under CS are also made available. These have been tabulated and presented in Table 3 (I) for comparison.

3.22 The states of Bihar, Chhattisgarh, Gujarat, Madhya Pradesh, Maharashtra have provided cost of production/cost of cultivation estimates for wheat for the years 2007-08 and 2008-09, whereas the states of West Bengal, Uttarakhand, Uttar Pradesh have provided estimates only for the year 2007-08 and Assam for 2008-09.

These estimates made available from these states have been compared with the cost estimates of the corresponding states reported under CS. For the year 2007-08 Bihar has reported cost of production per quintal at Rs.895 as against Rs.609 given in the CS estimates. The lower side of cost estimate under CS is due to State Government of Bihar reporting per hectare cost of cultivation a little more than twice as much as that given in the CS estimates. Similar is the case for the states of Chhattisgarh reporting cost of production per quintal at Rs.1155 vis-a-vis Rs.963 under CS (the difference in cost higher on the side of the state reply is due to a lower yield of 12.40 quintals per hectare in the state reply and 13.03 quintals per hectare given in the CS estimates), Gujarat reporting C2 cost of Rs.986 per quintal as against Rs.581 per quintal given in the CS estimates, Madhya Pradesh reporting C2 cost of Rs.1106 per quintal compared to Rs.779 per quintal in the CS estimates (the difference in cost higher on the side of state reply is due to lower yield of 18.83 quintals per hectare given in the state reply and higher yield of 23.86 quintals per hectare given in the CS estimates), Haryana reporting C2 cost of Rs.807 per quintal compared to Rs. 673 per quintal in the CS estimates.

3.23 Haryana and Uttar Pradesh have provided cost estimates for barley with their per quintal costs of production being Rs.696 and Rs.758 respectively. There is information on cost of production for gram received from states of Bihar, Chhattisgarh, Gujarat, Haryana, Madhya Pradesh and Maharashtra for the years 2007-08 and 2008-09. Chhattisgarh has given per quintal cost of production at Rs.1437 as against Rs.1062 in the CS estimates. The difference in the overall cost of production per quintal for the year 2007-08 in respect of Chhattisgarh is due to yield reported lower by the state than given in the CS estimates. In respect of Haryana CS estimates of

cost of production are higher at Rs.3480 per quintal than estimates given in the state reply at Rs.1610 per quintal. Maharashtra gives cost of production of Rs.1632 per quintal that is closely comparable to Rs.1614 per quintal given in the CS estimates.

3.24 For Lentil, Bihar and Madhya Pradesh have provided cost of production figures for the years 2007-08 and 2008-09 whereas Uttar Pradesh and Uttarakhand have provided cost figures for 2007-08 only. In regard to rapeseed and mustard the states of Bihar, Chhattisgarh, Gujarat, Haryana, Madhya Pradesh have provided cost figures for the years 2007-08 and 2008-09. In respect of Gujarat, the CS estimate of cost of production at Rs.1016 per quintal is lower than Rs.1730 per quintal given in the state reply due to relatively higher yield of 17.68 quintals per hectare in the CS estimates as against the lower yield of 13.69 quintals per hectare in the state reply. Madhya Pradesh provides higher cost estimate of Rs.1977 per quintal for 2007-08, compared to Rs.1534 per quintal in the CS estimates. This is due to relatively lower yield reported for rapeseed/mustard in the state reply. For safflower, as against the cost of production higher on the side of CS estimates relative to what is given in the state reply for the year 2007-08, the per hectare cost of cultivation both in the state reply and in the CS estimates broadly agree and it ranges between Rs.12160 per hectare in the CS estimates and Rs.12000 per hectare in the state reply of Maharashtra. The difference in the cost of production between state reply and CS estimates in respect of Maharashtra is largely a result of higher yield reported by the State Government at 7.25 quintals per hectare and lower yield of 5.60 quintals per hectare given in the CS estimates for the year 2007-08.

Comparison of Projections made by CACP and those made available by the State Governments.

3.25 The Commission has received the cost projections for Rabi crops from Andhra Pradesh, Bihar, Haryana, Punjab and Maharashtra for the year 2009-10. In order to make a meaningful comparison between the projections made by CACP and those provided by the states, certain additional items of cost considered by the states such as managerial cost, transportation cost, weather, marketing charges and other incidental cost have been excluded as these are taken up at all India level to arrive at

the overall C2 cost of production. Therefore, the cost projections received from the states were adjusted accordingly to make them comparable with the projections carried out by the Commission. This is given in the Table 3 (J). The projected cost for 2009-10 in respect of wheat for Bihar is reported in the state reply at Rs.1473 per quintal as against Rs.722 projected based on CS estimates. This difference is due to higher cost of cultivation per hectare reported in the state reply compared to that in the CS estimates. So also state Governments of Punjab and Haryana projected their costs of production of wheat at Rs.982 per quintal and Rs.1031 per quintal, compared to which CACP projections stand at Rs.643 per quintal and Rs.661 per quintal. For gram Andhra Pradesh, Bihar, Haryana, Maharashtra and Orissa have provided their respective cost projections for 2009-10. For the states of Bihar and Haryana, the state level projections for gram are higher than those made by CACP. This can be explained by the fact that in regard to gram Bihar and Haryana have reported higher cost of cultivation per hectare in their respective state replies. For the state of Maharashtra, the state level projection given in the state reply for gram stands at Rs.1831 per quintal, compared to which CACP projection is Rs.1896 per quintal. The projected cost of production per quintal for gram as done by CACP is higher than that given in the state reply of Maharashtra due to comparatively lower cost per hectare given in the state reply. In regard to rapeseed and mustard, comparable projections are available for the state of Haryana, in which the state reply furnished projected cost for 2009-10 at Rs.2065 per quintal as against Rs.1453 per quintal projected by CACP. For lentil, the comparable projections for the year 2009-10 are available for Bihar and it is seen that the projections in cost of cultivation per hectare vary between state reply and the CACP projection to the extent of more than 100 percent.

Terms of Trade

3.26 The Commission in its earlier reports made a reference to the deteriorating terms of trade between agriculture and non-agriculture sectors in recent years. The Index of Terms of Trade (ITT) with base triennium ending 1990-1991 = 100 stood at 105.6 in the year 1991-92 and deteriorated further until the year 1994-95 when it rose to 106.6. Since then it has dipped to around 101-103 excepting the years 1997-98 and 1998-99 – the years in which ITT recovered considerably well showing on an

average 105. According to the figure released by the Directorate of Economics & Statistics, the index of terms of trade is provisionally fixed at 102.0 for the year 2006-07, up from 101.9 for the year 2005-06. This is corroborated by decline in input-output price parity index to 99.9 in 2006-07 from 102.7 in 2005-06. The drop of 2.8 basis points in input output price parity index during the period 2005-06 to 2006-07 shows that the input use efficiency has performed well relative to the price level of output.

(Appendix I & II)

Restructuring the cost of production

3.27 In spite of Government having given approval for including crop insurance premium paid by the farmers, marketing and transportation cost incurred by them, as part of input cost of production to arrive at the overall cost of production, a proper methodological approach to collecting data at farm holding level has not yet been formulated. However, the Directorate of Economics and Statistics has already initiated the ground work for redesigning the schedules of enquiry to capture such information and for changing the old FARMAP software to a more user friendly inclusive software. Until such time as would enable the Directorate to scientifically collect and disseminate the information on aforesaid inputs, the Commission would continue to rely on ad-hoc information being supplied by the state Governments in their replies. Based on available information received, an all India projected cost of production for Rabi Crops for 2009-10 has been derived and given in the Table 3(G).

Table 3 (G): Estimated Cost of Production for Rabi Crops for 2009-10, inclusive of Marketing, Transportation and Crop Insurance premium. (All India).

(Rs./quintal)

Crop	Projected C2 Cost of Production	Estimated Cost of Marketing	Estimated Cost of Transportation	Estimated Cost of Crop Insurance Premium	Modified Cost *
Wheat	700.63	3	11.48	25.65	740.75
Rapeseed/ Mustard	1276.05	3	11.48	24.40	1314.93
Gram	1640.85	3	11.48	21.83	1677.15
Lentil	1625.93	3	11.48	23.12	1663.53
Safflower	1884.25	3	11.48	7.28	1906.01
Barley	608.02	3	11.48	5.56	628.05

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

The modified cost that includes the additional charges on account of marketing, transportation and crop insurance premium shows that the C2 cost of production for wheat stands at Rs.741 per quintal, Rs.1315 per quintal for rapeseed/mustard, Rs.1677 per quintal for gram, Rs.1664 per quintal for lentil, Rs.1906 per quintal for safflower and Rs.628 per quintal for barley.

Cost of Production and Minimum Support Prices

3.28 Since one of the major considerations in arriving at Minimum Support Prices (MSP) is the cost of production, the Commission is concerned about the views sometimes expressed that the MSPs for various crops, whether recommended by the Commission or fixed by the Government, do not adequately cover the cost of production of the crops in many states and therefore farmers are forced to incur losses. It must be stated at the outset that the cost of production is, inter alia, an important consideration in setting the MSP. While using the cost of production data for setting the MSP, generally three considerations are kept in mind. First, the MSP should not normally be below the paid out costs (Cost A_2 + cost of family labour). Second, farmers should normally have a price realization that gives them a reasonable margin over their full cost of production including the imputed rental value of owned land and capital (i.e. cost C_2). To ensure this, the MSP is usually set to offer a reasonable margin above the C_2 cost of production in states, which are efficient in terms of their cost of production. Third, in doing so it is kept in mind that MSP should normally be at a level above the paid-out costs (A_2 + cost of family labour) in every state and thus

provides a floor, which protects farmers against actual loss. The exercise of cost projections for rabi crops for the crop season 2009-10, brings out the fact that an increase in overall per quintal cost of production has been estimated for 2009-10 over 2008-09. At all India level, estimated increase in the cost of production is 8.02 percent for wheat, 7.64 percent for barley, 9.76 percent for gram, 11.22 percent for lentil, 7.78 percent for rapeseed/mustard and 29.42 percent for safflower during the year 2009-10.

Table – 3(H): Projected Cost of Production of Rabi Crops (Rs./Qtl)

Crops/ States	Base Year	Composite Variable Input Price Indices			Projections for 2009-10 (Revised Method – Using three year averages)		
		2007-08	2008-09	2009-10	Yield (qtl/hec)	A2+FL	C ₂
1	2	3	4	5	6	7	8
WHEAT							
Bihar	01-02	151.11	153.66	160.16	19.96	524.18	721.82
Chhattisgarh	02-03	132.61	136.43	143.32	12.73	679.59	1006.12
Gujarat	01-02	130.50	133.88	138.76	33.60	451.75	626.08
Haryana	01-02	135.92	136.77	142.34	40.13	402.49	660.69
Himachal Pradesh	01-02	131.78	141.89	146.66	18.10	570.09	871.21
Jharkhand	02-03	154.30	156.87	165.26	11.76	1073.42	1231.87
Madhya Pradesh	01-02	157.73	163.05	170.48	22.67	490.07	783.27
Punjab	01-02	135.29	139.06	144.38	43.54	361.55	643.37
Rajasthan	01-02	135.13	139.37	145.91	34.54	433.57	613.99
Uttar Pradesh	01-02	149.28	152.79	156.22	29.93	522.90	747.70
Uttarakhand	02-03	165.77	174.27	186.70	24.90	584.79	806.81
Weighted Average						460.36	700.63
BARLEY							
Rajasthan	01-02	143.81	148.18	154.22	32.03	386.19	550.22
Uttar Pradesh	01-02	145.13	146.93	150.98	27.17	475.72	691.26
Weighted Average						422.88	608.02
GRAM							
Bihar	01-02	140.00	144.21	149.70	8.24	915.09	1457.45
Chhattisgarh	02-03	149.42	156.49	165.45	12.27	620.96	1142.49
Haryana	01-02	138.12	140.69	152.78	6.46	1060.29	1693.02
Jharkhand	02-03	134.42	138.17	142.21	5.25	1100.97	1433.44
Madhya Pradesh	01-02	162.26	163.28	165.82	9.34	941.55	1603.98
Maharashtra	02-03	159.63	164.70	173.84	8.50	1406.59	1896.00
Rajasthan	01-02	138.36	142.64	162.94	8.26	1132.21	1746.08

Uttar Pradesh	01-02	135.63	136.79	139.46	10.77	880.78	1420.76
Weighted Average						1044.32	1640.85
LENTIL (MASOOR)							
Bihar	01-02	142.24	146.72	152.97	8.92	703.62	1245.21
Jharkhand	02-03	137.78	141.49	145.50	5.47	870.86	1262.66
Madhya Pradesh	01-02	144.49	145.69	148.16	8.44	814.37	1343.39
Uttar Pradesh	01-02	147.15	151.41	153.29	8.05	1262.05	1902.60
Weighted Average						1038.00	1625.93
RAPESEED & MUSTARD							
Assam	01-02	142.67	147.84	152.50	6.20	1653.57	2042.80
Gujarat	01-02	159.93	162.31	164.86	16.39	688.27	1044.72
Haryana	01-02	138.17	139.02	141.66	14.86	898.54	1453.35
Madhya Pradesh	01-02	134.05	136.70	148.25	10.99	790.25	1398.98
Rajasthan	01-02	130.97	133.98	139.38	13.23	716.24	1111.55
Uttar Pradesh	01-02	128.51	140.98	143.79	11.58	923.41	1446.98
West Bengal	01-02	137.77	139.20	141.46	10.24	1389.03	1935.00
Weighted Average						819.86	1276.05
SAFFLOWER							
Maharashtra	01-02	174.29	178.96	185.95	4.79	1438.60	1884.25
Weighted Average						1438.60	1884.25

Table – 3(I): Comparative Statement of Cost estimates of Rabi crops provided under Comprehensive Scheme (C.S.) and those by State Government

Crop/State	Year	Cost of Cultivation (Rs./Hect)		Yield (Qtl/Hect.)		Cost of production (Rs/Qtl)	
		C.S. Survey	State Reply	C.S. Survey	State Reply	CS Survey	State Reply
1	2	3	4	5	6	7	8
Wheat							
Assam	2008-09	NA	14960	NA	13.00	NA	1151
Bihar	2007-08	16738	31325	23.90	35.00	609	895
	2008-09	NA	32144	NA	28.00	NA	1148
Chhattisgarh	2007-08	14964	14327	13.03	12.40	963	1155
	2008-09	NA	28394	NA	16.70	NA	1701
Gujarat	2007-08	21608	25596	35.79	25.95	581	986
	2008-09	NA	30190	NA	32.29	NA	935
Haryana	2007-08	32380	NA	41.99	NA	673	807
	2008-09	NA	NA	NA	NA	NA	1153
Madhya Pradesh	2007-08	21450	20834	23.86	18.83	779	1106
	2008-09	NA	29993	NA	22.58	NA	1328
Maharashtra	2007-08	NA	21187	NA	17.66	NA	1167
	2008-09	NA	19355	NA	16.86	NA	1110
Uttar Pradesh	2007-08	25529	27422	33.29	27.22	651	871
Uttarakhand (Plains)	2007-08	25152	24387	25.78	40.64	806	463
West Bengal	2007-08	25981	28144	24.92	25.55	975	1101
Barley							
Haryana	2007-08	NA	18242	NA	28.17	NA	696
	2008-09	NA	NA	NA	NA	NA	842
Uttar Pradesh	2007-08	24399	20646	30.22	22.69	659	758
Gram							
Bihar	2007-2008	11078	28980	8.22	18.00	1300	1610
	2008-2009	NA	NA	NA	NA	NA	2201
Chhattisgarh	2007-2008	13936	11997	12.75	8.35	1062	1437
	2008-2009	NA	28689	NA	12.00	NA	2390
Gujarat	2007-2008	NA	17214	NA	9.49	NA	1731
	2008-2009	NA	17443	NA	9.64	NA	1723
Haryana	2007-2008	8544	NA	2.19	NA	3480	1610
	2008-2009	NA	18623	NA	7.15	NA	2201
Madhya Pradesh	2007-2008	15508	18950	9.09	6.99	1613	2711
	2008-2009	NA	22016	NA	10.69	NA	2060
Maharashtra	2007-2008	15678	10432	9.54	6.22	1614	1632
	2008-2009	NA	10905	NA	6.24	NA	1675
Uttar Pradesh	2007-2008	18256	15993	9.60	10.36	1820	1494
Lentil							
Bihar	2007-2008	10676	21915	8.40	15.00	1207	1461
	2008-2009	NA	23551	NA	11.00	NA	2141

Madhya Pradesh	2007-2008	13819	10704	8.08	4.40	1635	2433
	2008-2009	NA	12947	NA	6.36	NA	2037
Uttar Pradesh	2007-2008	14941	14238	7.96	8.39	1817	1622
Uttarakhand (Plains)	2007-2008	NA	14516	NA	7.74	NA	1875
Rapeseed & Mustard							
Bihar	2007-2008	NA	25170	NA	15.00	NA	1678
	2008-2009	NA	26460	NA	10.00	NA	2646
Chhattisgarh	2007-2008	NA	7825	NA	7.25	NA	1079
	2008-2009	NA	34808	NA	10.00	NA	3480
Gujarat	2007-2008	18133	24091	17.68	13.69	1016	1730
	2008-2009	NA	25008	NA	16.20	NA	1511
Haryana	2007-2008	23889	NA	15.83	NA	1396	1650
	2008-2009	NA	NA	NA	NA	NA	2392
Madhya Pradesh	2007-2008	17528	18331	11.10	9.27	1534	1977
	2008-2009	NA	21739	NA	10.19	NA	2134
Uttar Pradesh	2007-2008	20371	19009	13.33	10.10	1461	1792
Uttarakhand (Plains)	2007-2008	NA	17570	NA	13.13	NA	731
West Bengal	2007-2008	21698	23406	11.12	9.18	1900	2551
Safflower							
Maharashtra	2007-2008	12160	12000	5.60	7.25	2170	1653
	2008-2009	NA	11976	NA	8.19	NA	1460

Source : 1. Directorate of Economics and Statistics
2. State Replies for 2010-11 Season

Table – 3(J): Comparison of Projections

(In

Rupees)

Crop/State	Year	State Yield	State Projections (determined by state)	* Comparable Estimates (using state data)	Yield (C.S)	Projections for 2009-10 (as done by CACP)
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		Qtl/hect	Cost/hec.	Cost/qtl	Cost/hect	Cost/qtl	Qtl/hect	Cost/hect	Cost/qtl
1	2	3	4	5	6	7	8	9	10
Wheat									
Andhra Pradesh	2009-10	11.00	20646	1855	18769	1706	NP	NP	NP
Bihar	2009-10	28.00	32993	1473	29994	1071	19.96	17047	722
Haryana	2009-10	42.17	49818	1211	49818	1031	40.13	31640	661
Punjab	2009-10	42.95	45665	1540	45665	982	43.54	31571	643
Maharashtra	2009-10	20.52	25578	1715	25335	1198	NP	NP	NP
Gram									
Andhra Pradesh	2009-10	13.00	28287	2161	25715	1978	NP	NP	NP
Bihar	2009-10	14.00	32633	2914	29667	2119	8.24	12632	1457
Haryana	2009-10	7.15	18623	2848	18623	2455	6.46	11764	1693
Maharashtra	2009-10	7.50	14382	2608	14012	1831	8.50	16432	1896
Orissa	2009-10	7.00	12883	1840	12883	1840	NP	NP	NP
Barley									
Haryana	2009-10	29.49	27343	955	27343	825	NP	NP	NP
Rapeseed & Mustard									
Andhra Pradesh	2009-10	8.00	3557	445	3234	404	NP	NP	NP
Bihar	2009-10	10.00	27775	3471	25250	2525	NP	NP	NP
Haryana	2009-10	13.67	28232	2400	28232	2065	14.86	23663	1453
Orissa	2009-10	4.50	8859	1968	8859	1968	NP	NP	NP
Lentil									
Bihar	2009-10	11.00	24301	2761	22092	2008	8.92	11779	1245
Safflower									
Andhra Pradesh	2009-10	10.00	24321	2432	22110	2211	NP	NP	NP
Maharashtra	2009-10	7.67	13217	2402	12878	1672	4.79	11048	1884

Note : * Comparable estimates are made by taking into account common inputs both in CS estimates and state replies

NP - Not Projected due to non-coverage of crops for the States under Comprehensive Scheme

IV. PRICE POLICY FOR 2009-10 SEASON

This report made a detailed examination of the recent trends in agricultural production and prices in general and rabi crops in particular. In arriving at the Price Policy for Rabi crops of 2009-10 Season, the Commission has considered various relevant factors such as cost of cultivation, domestic and international demand-supply situation of commodities, market price trends, inter-crop price parity, food security situation and inter-sectoral terms of trade. The Commission has as usual undertaken a study of the cost of production of rabi crops and made projections regarding their likely levels during 2009-10.

4.2 The year 2008-09 witnessed a record foodgrains production. According to the Fourth Advance Estimates of the Directorate of Economics and Statistics, Ministry of Agriculture, the total foodgrains production for the year 2008-09 is estimated at 233.88 million tonnes and stands out as record production ever achieved in India. This would be 3.1 million tonnes more than the final estimate of the production for the year 2007-08. It may be noted that already there was a significant increase of 13.4 million tonnes in 2007-08 as compared to that of 2006-07. Rabi foodgrains production increased from 109.83 million tonnes in 2007-08 to 116.18 million tonnes in 2008-09 – an increase of 6.35 million tonnes. On the other hand, there was a decline of 3.25 million tonnes in kharif foodgrains production during the same period. There is a concern regarding the production of foodgrains and other crops in the year 2009-10 because of delayed and deficit rainfall during south-west monsoon season. Some regions like north-west, east and north-east would be affected more than other regions. It is likely that production would be lower in 2009-10 as compared to that of 2008-09. Nevertheless, it is too early to predict the exact amount of decline in production. Fortunately, the country has enough buffer stocks of rice and wheat which would last for more than 13 months. However, there is a concern regarding the production of other crops.

4.3 The situation of wheat is relatively better as the production in the last three years was much higher than the first five years of this decade. The production of wheat rose from 69.35 million tonnes in 2005-06 to 75.81 million tonnes in 2006-07 and to 78.40 million tonnes in 2007-08. It again rose to 80.58 million tonnes in 2008-09. In the case of other rabi crops such as barley, gram, rapeseed & mustard, production

increased in 2008-09 as compared to 2007-08. The production of rapeseed & mustard declined from 74.4 million tonnes in 2006-07 to 58.0 million tonnes in 2007-08. But, it rose significantly to 73.68 million tonnes in 2008-09 although it is lower than the production levels during 2004-05 to 2006-07.

4.4 The global wheat production was lower in the years 2006-07 and 2007-08 but increased significantly in 2008-09. The FAO forecast indicates that global wheat production in 2009-10 is expected to be 655.8 million tonnes. This number is lower by about 4 per cent from the peak production of 684.6 million tonnes attained in the previous year. The ending stock of wheat is forecasted to be 192.4 million tonnes in 2009/10. The global wheat prices which showed a decline since the mid-2008, began rising by the beginning of March 2009. The price of US wheat (No.2 Hard Red Winter, f.o.b. Gulf) averaged US\$ 266 per tonne in May 2009. There was also an increase of wheat prices in futures market in the same month.

4.5 The wholesale price index (WPI) shows that the annual average price of wheat for the year in 2006-07 was higher by 13 per cent as compared to that of 2005-06. On the other hand, the price of wheat increased by only 4.3 per cent in 2007-08. But, it increased to 6.2 per cent in the year 2008-09. The wheat price rise was 6 to 8 per cent during April to September 2008. It was 4 to 6 per cent during October 2008 to March 2009. The WPI of wheat in June, 2009 was higher by 6.9 per cent over that of June, 2008. The price of barley also increased from 3.6 per cent in 2007-08 to 6.5 per cent in 2008-09. In the case of gram, the prices declined to -4.2 per cent in 2007-08 but rose to 4.7 per cent in 2008-09. On the other hand, the price of masur (lentil) increased sharply to 25.7 per cent in 2007-08. This sharp rise in masur (lentil) prices continued and recorded 23.7 per cent in 2008-09. Similarly, there was a sharp increase in the prices of rapeseed & mustard and safflower in 2007-08 and 2008-09. For example, the annual average price increase for rapeseed & mustard in 2007-08 was 18.8 per cent but increased to 23 per cent in 2008-09. However, the rapeseed & mustard prices started declining since January, 2009.

4.6 The procurement of wheat was only 9.2 million tonnes and 11.1 million tonnes respectively in the years 2006-07 and 2007-08. The government had to import wheat

for buffer stock purposes. However, the procurement of wheat rose sharply to 22.53 million tonnes and 25 million tonnes respectively in marketing years 2008-09 and 2009-10. The stock of wheat at 13.43 million tonnes as on 1st April, 2009, substantially exceeded the buffer norm of 4.00 million tonnes. By 1st May, the stock position of wheat took a quantum leap to 29.83 million tonnes. India is in a comfortable position in terms of buffer stock for the next one year. It may be noted that the higher MSP along with other factors played important role in attaining the substantially higher level of procurement for wheat in the marketing years 2008-09 and 2009-10.

4.7 The Presidential address to Parliament and the budget 2009 indicate that the Government would enact a National Food Security Law that will provide a statutory basis for a framework which assures food security for all. According to this proposed law, every family below the poverty line in rural as well as urban areas will be entitled by law, to 25 kilograms of rice or wheat per month at Rs. 3 per kilogram. It is felt that the statutory guarantee to food with fixed entitlements to the poor would be an important step in the direction of ensuring food and nutritional security of the country. Although the ongoing 'targeted public distribution system' (TPDS) is supposed to provide subsidized foodgrains to the BPL population, the legislative measure may lead to better accountability by making the PDS system more responsive in reaching out to the targeted population. However, a number of policy level and operational issues have to be addressed while extending food guarantee to the citizens through a statutory mandate. One of the main issues relates to coverage of BPL population. What proportion of households should get Below Poverty Line (BPL) cards and how should these households be identified? At present, the Central Government restricts BPL population to the Planning Commission's estimate of 6.52 crore households. The final figure of BPL has to be arrived by having consultations with state governments and civil society. It may be noted that right to food is a wider concept than giving only foodgrains at Rs.3 per kg. It should cover nutritional security also particularly for the children. In other words, it should create other entitlements that guarantee good nutrition. It requires, along with cheaper grain, nutritious food including protein, fats and essential micronutrients. Apart from nutritious food, attention is also needed on clean water, hygiene and basic health care in order to reduce malnutrition in the country.

4.8 Turning to agricultural prices, cost of production is generally considered as the most important factor in the determination of minimum support prices. However, in the last two years, the reports on price policy for rabi crops indicated that there would be deviation in the case of wheat, especially because of greater weightage being assigned to food security. The all India weighted C₂ cost of production of wheat for 2007-08 was Rs.625 per quintal. But, the Commission recommended Rs. 1000 per quintal as MSP for wheat in the 2007-08 season and the government accepted this recommendation. It may be noted that the MSP was 60 per cent higher than C₂ cost of production for the 2007-08 season. There has been a substantial increase in MSP for the last few years. It increased from Rs700 per quintal in 2005-06 to Rs.850 per quintal in 2006-07 to Rs.1000 per quintal in 2007-08 and to Rs1080 per quintal in 2008-09. In other words, there has been 54 per cent increase in MSP for wheat since 2005-06. The rationale for this increase was due to greater weightage given to food security and price stability than cost of production per se. Inter-crop price parity was changed in favour of wheat in order to help food security mission to achieve its objective of attaining higher production of wheat. Thus, there has been a significant deviation from the cost of production approach. The present MSP of Rs.1080 per quintal for wheat is already substantially higher than the projected C₂ cost for 2009-10.

4.9 The all India weighted C₂ cost of production of wheat per quintal for 2008-09 season is estimated at Rs.700 and the modified C₂ cost at Rs.741. **Even if we maintain last year's MSP of Rs.1080, this would be 54 per cent higher than the projected cost of production and 46 per cent higher over the modified C₂ cost for 2009-10.** Therefore, if we go by cost considerations, there is no justification for increasing the MSP of wheat. Moreover, the country is comfortable in terms of production and, procurement. The price rise based on wholesale price index was also not high in the year 2008-09. The global situation of production and prices of wheat are relatively comfortable. However, increase in projected cost of production for the year 2009-10 is higher than the increase in last year particularly if we consider the modified C₂ cost. Keeping in view of the increase in cost of production and the deficient rainfall situation, there may be a case for marginal increase in the MSP of wheat for the year 2009-10. It may be noted that this increase would be over the

already high base of Rs.1080 per quintal fixed last year.

4.10 In the case of other rabi crops such as barley, gram, lentil and rapeseed & mustard, the existing minimum support prices are higher than the projected C₂ cost of production for 2008-09 season. The MSP of Rs.1730 per quintal for gram in 2008-09 season is higher than that of the projected C₂ cost of Rs.1641 and modified C₂ cost of Rs.1677 per quintal for the 2009-10 season. Similarly, the existing MSP of Rs. 1830 for rapeseed & mustard is much higher than the projected cost of Rs.1276 and modified C₂ cost of Rs.1314 per quintal in 2009-10. Thus, the margin is more than Rs.700 over cost for this crop. Therefore, on the basis of cost considerations, there is no justification for increase in MSP of barley, gram, lentil and, rapeseed & mustard. However, some increase may be needed in the case of pulses to encourage the production of these crops. The existing MSP of Rs. 1650 for safflower is much higher than the A₂+FL cost of Rs.1439 per quintal in 2009-10. In the case of barley which comes under coarse cereals, the existing MSP of Rs.680 is much lower than the MSP of Rs.840 per quintal for jowar, maize etc. In order to maintain some parity among coarse cereal group, there is a need to increase the MSP of barley.

4.11 The Commission made comparisons between the projections of costs made by CACP and those provided by the states. Only few states provided cost projections for the year 2009-10. The comparable estimates show that the projected C₂ costs of production of wheat per quintal given by the states are higher than those of the Commission in respect of Bihar, Haryana and Punjab. In the case of gram, the Maharashtra's cost projection of the State is lower while those of Bihar and Haryana higher than the corresponding projection of the Commission. Similarly, the projections of the costs by states are higher than those of the Commission for lentil and rapeseed & mustard. However, in the case of safflower, the cost of cultivation for Maharashtra - the only cost estimate available, is marginally lower than that of CACP.

Table 4.1: Long run farm prices and their coefficient variation

Crops	Farm Harvest Prices(Rs./Qtl) ¹				Implicit Price from Comprehensive Scheme (Rs./Qtl) ²		
	MSP (Rs./qtl.) (2008-09)	5 years* average	Coefficient Variation	1.5 Standard Deviation below 5 years average	5 years* average	Coefficient Variation	1.5 Standard Deviation below 5 years average
		X	Y	Z	X	Y	Z
Wheat	1080.00	882.00	18.27	640.29	901.38	20.86	619.34
Barley	680.00	756.83	22.72	498.90	774.13	30.70	417.64
Lentil	1870.00	-	-		1921.74	14.02	1517.60
Rapeseed/ Mustard	1830.00	1954.37	15.65	1495.58	1945.89	17.32	1440.35
Gram	1730	1822.49	1.35	1785.58	2160.87	21.44	1465.93
Safflower	1650	-	-		1963.08	31.70	1029.53

Source:

- 1: Farm Harvest Prices of Principal Crops in India, Directorate of Economics & Statistics, Govt. of India;
- 2: Derived from Cost of Cultivation of Principal Crops, Directorate of Economics & Statistics, Govt. of India.

Explanations:

- (X) 5 years average (ending 2007-08) real price multiplied by assumed WPI (All Commodities) for 2009-10, where real price is farm price divided by WPI for All commodities.
- (Y) Coefficient of variation (CV) of real prices for 5 years data.
- (Z) $Z = X * (1 - 0.015 * Y)$

4.12 In table 4.1, certain summary parameters are presented for MSP, long run farm harvest prices and implicit prices for each crop. It shows for each crop what the actual national average farm price would be if the real farm price (the farm price divided by the WPI of all commodities) was maintained at its average for the past five years with overall inflation upto 2009-10 marketing season being used. The data for farm harvest prices have been obtained from official sources while the data on implicit prices have been obtained from the Comprehensive Scheme. In using these data, it should be kept in view that MSP should normally be less than the average farm price as estimated in table 4.1. Table shows that the MSP is higher than farm harvest prices for wheat whereas it is lower for other crops. The table also gives the coefficient of variation of these real farm harvest prices and an indicative price which is less than the weighted average farm price by 1.5 standard deviation. There is a significant probability that MSP operations will be required if the MSP is higher than the indicative

price. The table shows that the indicative price is above the current MSP of gram but significantly lower for wheat, barley and rapeseed/mustard. The five year average of implicit prices are lower than current MSP for wheat but higher for barley, lentil, rapeseed/mustard, gram and safflower.

Table: 4.2 International Price Parameters

Crop	US dollar terms (Per tonne)				Rupee terms** (Per qtl.)				
	5 years* Average	3 years* Average	Latest quarter	CV	5 years* Average	3 years* Average	Latest quarter	CV	1.5 SD below 5 years Average
Wheat	144.49	193.06	245.60	56.73	636.50	848.29	1200.90	57.86	94.91
Barley	152.16	177.12	154.20	25.18	595.97	711.80	650.67	29.32	370.89
Lentil	576.64	581.35	0.00	6.07	2549.18	2573.97	0.00	3.72	2317.24
Rapeseed /_Mustard	326.10	396.57	394.95	36.43	1431.89	1733.99	1931.84	35.19	649.53

Source: Directorate of Economics & Statistics, Govt. of India

Note: (i) * 5 year average refers to the period 2004-05 to 2008-09, 3 year average refers to the period 2006-07 to 2008-09.

(ii) ** Rupee conversion quoted from various issues of Economic Survey, Govt. of India for different years.

(iii) CV: Coefficient of Variation.

(iv) SD: Standard Deviation.

4.13 In the present globalized context, the Commission also considers the world price situation and this needs to be done in a long run context taking into account the weighted average global price over a few years as also their coefficient of variation. Table 4.2 accordingly presents both the 5 year and 3 year dollar price averages ending 2008-09, as well as the actual for the latest available quarter. The coefficients of variation of these dollar prices are also presented. Figures are also given for the rupee equivalent of these, as given in the Economic Survey. It may be noted that the comparisons should be made with caution since any valid comparison would require taking into account costs such as insurance, freight, trade and transport margin as well as tariffs. Table 4.2 shows that the variations in global prices are much larger than the domestic prices for wheat and rapeseed/mustard given in table 4.1. In the case of barley, variation in international price is closer to that of domestic price. Also, the latest international price was considerably higher than its five or three year average for wheat. For wheat, the international price in the last quarter was higher than the MSP of wheat but less than the FCI's current economic cost. However, 5 year and three

year averages of international prices for wheat were lower than MSP of wheat. In the case of barley, the last quarter international price is closer to that of current MSP. For lentil, the 5 year and three year average of international prices are much higher than the current MSP. In the case of rapeseed, the international price is lower than current MSP for five year and three year averages but higher for the last quarter.

4.14 In determination of MSP, the Commission also considers the issue of price parity across crops. Comparison for rabi crops shows that rise of MSP for wheat has shifted price parity in favour of wheat. As against increase of 86 per cent in the MSP for wheat between 2001-02 to 2008-09, the corresponding increases for other crops ranged between 65 per cent for gram to 47 per cent for safflower. The MSP for pulses and oilseeds have increased 50 to 65 per cent over this period and are higher enough to improve productivity. However, it may be noted that non-price factors like irrigation and technology are equally or more important than price factors for raising productivity of pulses and oilseed crops.

4.15 Considering all the relevant factors, as indicated above, and after consultations with all the stakeholders, the Commission recommends that the minimum support prices of various rabi crops for 2009-10 be fixed as under:

<u>Commodity</u>	<u>Rs./Quintal</u>
Wheat	1100/-
Barley	750/-
Gram	1760/-
Masur (Lentil)	1870/-
Rapeseed/Mustard	1830/-
Safflower	1680/-

Commission further recommends that:

- I. greater thrust should be laid on bridging the substantial yield gaps that still prevail between the potential and attainment among various crops, through appropriate technology dissemination.**

(para 1.21)

II. prioritised action plans should be brought in to target the rainfed areas through increased public/private investment supported by attractive policy packages alongwith required institutional reforms and involvement of farmers, to exploit the potential for value addition and to improve the agriculture sector.

(para 1.22)

III. farming should be made an attractive occupation by advocacy of farming system approach. Integrated farming system approach needs to be followed comprising agricultural production, animal husbandry, horticulture, fisheries, agro-forestry, bee-keeping, etc., to supplement the income of farmers.

(para 1.23)

IV. keeping in view the national priority for promotion of oilseeds and pulses, the Government should have a re-look at the present policies/programmes pertaining to their promotional thrust and impact, and suitable amendments/improvements brought in to boost up the crop prospects.

(para 1.24)

V. alongwith the thrust on expanding the quantum of credit, emphasis should be laid on the credit reach among the small and marginal farmers.

(para 1.29)

VI. the nodal procurement agencies should further widen the network of procurement operations and decide, in consultation with the concerned State Governments, the location and number of purchase centres to be set up much in advance of the marketing season, and this information should be given wide publicity through media, radio, television, leaflets, etc.

(para 1.31)

VII. the implementation of FAQ norms should be made reliable and transparent with the provision of necessary equipment support in the market, and such norms fixed by the Government should be given wide publicity through different means of media.

(para 1.32)

VIII. keeping in view the problems faced by the nodal agencies for procurement and distribution of foodgrains across the country, a suitable action plan supported by adequate funds should be arrived at by the Government urgently, with a long-term perspective, for creation of adequate storage capacity, including public-private partnership.

(para 1.34)

IX. farmers should be made aware of the opportunities in barley production and through proper extension facilities and education of farmers, productivity and production of barley should be enhanced.

(para 2.20)

X. keeping in view the dependence of cultivation of pulses on weather conditions, the weather based crop insurance scheme, when taken up on a regular basis, may cover all the pulses in a comprehensive form in all the states.

(para 2.30)

-Sd-

(S. MAHENDRA DEV)

CHAIRMAN

-Sd-

(R. VISWANATHAN)

MEMBER

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(RAJ VIR SINGH)

MEMBER

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(K. G. RADHAKRISHNAN)

MEMBER SECRETARY

10th AUGUST, 2009