

COMMISSION FOR AGRICULTURAL COSTS AND PRICES
PRICE POLICY FOR RABI CROPS OF 2010-11
SUMMARY OF RECOMMENDATIONS

In this report, the Commission for Agricultural Costs and Prices presents its views on the Price Policy for Rabi Crops of 2010-11 season. The Commission recommends that:

The minimum support prices for the fair average quality (FAQ) of various rabi crops of 2010-11 season be fixed at the following levels:

<u>Commodity</u>	<u>Rs/Quintal</u>
Wheat	1120/-
Barley	780/-
Gram	2100/-
Masur (Lentil)	2250/-
Rapessed/Mustard	1850/-
Safflower	1800/-

(Para 4.15)

Commission further recommends that:

- i) an arrangement for associating spot exchanges in procurement operations in those places where currently the procurement system is inadequate, seems advisable, and the Government may give due consideration to this after framing the requisite safeguards.**

(Para 1.11)
- ii) any payment of MSP including bonus payment to farmers, should be made only by way of crossed A/C payee cheque, to eliminate any chances of other operators in the market cutting into the due entitlement of farmers.**

(Para 1.12)
- iii) all taxes on items under MSP coverage need to be removed or at least reduced to a reasonable and uniform level across the country, so as to encourage participation by all players in the market, and there**

emerges a unified and integrated national market in the country.

(Para 1.13)

- iv) the Government should urgently put in efforts to enhance the present storage capacity available with the foodgrain procurement agencies, with equal emphasis on ensuring the setting up of modern and scientific storage system and practices that would assure quality preservation and loss prevention. In this regard, associating the private sector through PPP mode or on its own should be given serious consideration. (Para 1.23)**
- v) attempts at the Second Green Revolution need to ensure that its coverage is across the country focussed on all important agricultural crops, effectively supported by research and extension, with particular thrust on the East and North East parts of the country, and it takes place in an environment-friendly manner. (Para 1.25)**
- vi) the emphasis on efficient growth in the sector through the optimal use of resources such as water and fertilisers should become integral to the efforts for attaining the target for agricultural growth, so that higher growth is attained from utilization of the same quantum of resources. (Para 1.27)**
- vii) Government should maintain constant vigil and monitoring of possible pest and fungus attacks, particularly the coming of Ug99, evolve sturdy varieties of wheat crop that could fight the menace, and guard against its spread. (Para 1.28)**
- viii) not only the rate of interest on farm credit but also other associated/related costs such as processing and inspection charges for availing credit should be brought down to nominal and affordable levels, so that the effective cost of farm finance gets lowered to the intended extent. (Para 1.29)**
- ix) the implementation of MNREGS should promote the cause of farming, through the fullest possible convergence of its operational guidelines**

with that of the schemes/programmes of the Ministry of Agriculture, and by effective inclusion of activities that would foster the development of agri-facilitating infrastructure. (Para 1.30)

- x) the promotion of non-farm activities in the rural areas such as food processing that would lead to a substantial reduction in the labour-to-land ratio, needs to be laid emphasis, so that the agricultural sector in the country turns out to be viable and attractive.

(Para 1.32)

- xi) The issues in the provision and distribution of fertilisers, arising in the changeover of fertiliser subsidy regime, require to be looked into by the Government for possible corrective measures. (Para1.33)

- xii) for fertiliser applications to bring in the intended benefits, there has to be in position a programme for comprehensive analysis of soil profiling and their physical and chemical properties, leading to the provision of soil health cards giving regular updates to farmers in the country, supported with stress on soil health awareness.

(Para1.34)

- xiii) requisite efforts should be brought in to promote 'group action' among farmers, including women farmers, so that they could be empowered to overcome the present constraints and limitations confronting them, and in the process promote the interests of farming in a more effective manner. (Para1.35)

- xiv) concerted efforts have to be made through effective extension services for immediately propagating the pulses varieties and technologies developed in the research organizations to the farmers field. (Para 2.41)

- xv) in order to increase the area, production and productivity of oilseeds as a whole on a sustainable basis enabling increased availability of

domestic edible oils, setting up of a Technology Mission for Oilseeds incorporating proper monitoring and assured accountability in implementation of the Mission should be given top priority by replacing the existing Integrated Scheme of Oilseeds, Pulses, Oil palm and Maize (ISOPOM). (Para 2.62)

- xvi) Government needs to review on priority, the present import duty structure on edible oils in order to facilitate a level-playing field for the benefit of farmers and domestic oil sector. (Para 2.71)**

I. An Overview

The influence of monsoon over the prospects of Indian agriculture is perennial. As per the Indian Meteorological Department's long range forecast for the 2010 south-west season (June to September), rainfall over the country as a whole is likely to be normal. Quantitatively, the season's rainfall is likely to be 102 percent of the long period average (LPA) with a model error of ± 4 percent. This year, the arrival of south-west monsoon was before the normal date. It set in over the Andaman Sea around 17th May, 3 days before its normal date, and appeared over the Kerala coast on 31st May, one day prior to the normal date. By early July, the monsoon had covered almost the whole country. However, the cumulative seasonal rainfall for the country as a whole upto 15th July has been 14 percent below the LPA. Out of 36 meteorological sub-divisions in the country, rainfall has been excess over 6, normal over 16 and deficient in 14 sub-divisions. Water storage of 81 major reservoirs, as on 15th July, 2010, was 17 percent of FRL, against 14 percent of last year level and 25 percent of last 10 years' average level.

1.2 The timely monsoon should turn out to be good news for kharif sowing operations. The area coverage under kharif, 2010, as on 2-7-2010, has increased by 16.5 percent compared to that of last year. The increase has mainly taken place in respect of oilseeds and the commercial crops of cotton as well as jute & mesta. The category of oilseeds has been led by groundnut and soyabean. Even though for foodgrains as a whole, there is a decline in area under crops, there has been an increase in the case of rice, jowar and urad.

1.3 As per the Third Advance Estimates released on 12th May, 2010, by the Directorate of Economics and Statistics (DES), Ministry of Agriculture, the total foodgrains production for the year 2009-10 is estimated as 218.19 million tonnes, considerably trailing behind the target of 239.10 million tonnes. This amounts to a substantial dip of 16.28 million tonnes, as against the finally estimated record production of 234.47 million tonnes attained in the year 2008-09. The anticipated output also indicates a reversal of the uptrend in production witnessed after 2004-05. The decline in production has been pronounced in the kharif foodgrains production

(102.34 million tonnes), which is the lowest level in kharif output since 2002-03. The drought conditions that prevailed over the country during the season have been mainly responsible for this drop in production. Whereas, the rabi foodgrains output (115.85 million tonnes), albeit lower than the record performance in 2008-09, has brought down the extent of decline. This is better than that of several other years in the recent past as well as above the laid down target of 113.95 million tonnes. The decline and differential production performance of kharif and rabi outputs are reflected in the case of cereals as well as coarse cereals. For total cereals, the estimated output in 2009-10 would be 203.42 million tonnes vis-à-vis 219.90 million tonnes recorded during the previous year. In respect of coarse cereals, the output would be only 33.13 million tonnes in 2009-10, as against 40.03 million tonnes in 2008-09, the lowest level of production after 2002-03.

1.4 In respect of individual crops, the major decline has been experienced by rice. Giving a sharp contrast to the finally estimated output of 99.18 million tonnes during 2008-09, the estimated output in 2009-10 would be 89.31 million tonnes, a decrease of 9.87 million tonnes. This is far below the target of 100.50 million tonnes. The movement of output related to kharif and rabi portions is in tandem with that of the overall trend. The kharif output has drastically come down to 74.78 million tonnes (2009-10) from 84.91 million tonnes (2008-09), way below the laid down target of 86.00 million tonnes, while the rabi portion has improved to set a new record of 14.53 million tonnes (2009-10), from 14.27 million tonnes (2008-09), and marginally above the target of 14.50 million tonnes. As regards wheat, the country is heading for a new record in production at 80.98 million tonnes (2009-10), against 80.68 million tonnes in 2008-09. The individual coarse cereals, viz., jowar, bajra, maize, ragi, and barley have all registered decline in output.

1.5 Regarding pulses as a whole, the output for 2009-10 is indicating improvement, even though marginally, as 14.77 million tonnes, compared to 14.57 million tonnes in 2008-09. The decline in kharif output has been more than made up by the rise in rabi production. Increase in production has happened in respect of tur, gram, and urad, while the output of moong is moving southward due to the reduced level of kharif production. However, it may be observed that this is despite the area increase under pulses cultivation. The area increase was more during kharif than

rabi season, but because of the decline in yield during kharif cultivation, the overall output could not increase more.

1.6 It is a tale of decline in the case of oilseeds. For the nine oilseeds, the total output would be 254.07 lakh tonnes (2009-10), recording a reduction of 23.12 lakh tonnes from the previous year's output of 277.19 lakh tonnes. Interestingly, both the kharif and rabi counterparts have contributed to depress production. Almost all oilseeds are exhibiting decline. The decrease has been most sharp in respect of groundnut, from 71.68 lakh tonnes (2009-09) to 53.83 lakh tonnes (2009-10). The only silver lining is the instance of soyabean where the output is expected to go up from 99.05 lakh tonnes (2008-09) to 105.40 lakh tonnes (2009-10).

1.7 Pertaining to commercial crops, the position is relatively better. On the whole, the production is expected to look up. For cotton, the output would go up from 222.76 lakh bales (2008-09) to 228.34 lakh bales (2009-10). In the case of jute and mesta, there would be substantial improvement: from 103.65 lakh bales (2008-09) to 111.04 lakh bales (2009-10). This is despite the anticipated decline in respect of mesta. However, for sugarcane, from the depressed production of 2850.29 lakh tonnes (2008-09), the output would further dip to 2746.58 lakh tonnes (2009-10).

1.8 Overall, the state of agricultural production during 2009-10 is not encouraging; in fact, there is room for concern. The total output of foodgrains has taken a sharp hit. The decline in rice production is telling. Regarding pulses, the production seems to be trapped in a perennially low level, without any signs of breakthrough. With the result, the mismatch between demand and supply appears to be a chronic feature. Related to oilseeds also, production would be at a lower level, indicating the inadequacy for meeting domestic requirements. The drought conditions that prevailed in several parts of the country have impacted the crop situation. The deficiency in the receipt of rainfall alongwith the unevenness in its distribution during the south-west monsoon of 2009, had depressed the kharif production. This is particularly so in respect of foodgrains production. It is true that the Government had taken several measures to address the problem. However, greater efforts are warranted to further strengthen the preparedness for facing droughts and other natural calamities. Especially, the ushering in of improved varieties of crops that

would be resilient to climatic aberrations, has become imperative, to eliminate any repeat of this state of affairs.

1.9 The procurement of wheat during 2010-11 (as on July 2, 2010) was 22.50 million tonnes. The quantum of procurement falls short of the record procurement of 25.38 million tonnes achieved during 2009-10. Out of the total market arrivals of 25.71 million tonnes, 22.50 million tonnes have been procured by the Governmental agencies; only about 12.5 percent has been taken over by the private players. So, the predominance of Government in the procurement operations continues. As regards the procurement of rice/paddy, in terms of rice, the total procurement during 2009-10 (as on 2nd July, 2010) has been 29.56 million tonnes, as against 30.97 million tonnes in the corresponding period of 2008-09. There has been a dip in the quantum of rice procured by official agencies, but seen against the decreased market arrival in the year, the portion obtained by the Government does not seem to have declined. On the whole, the procurement of these two foodgrains, particularly wheat, has made the stock position comfortable, and there may not be any need for import.

1.10 Needless to say, the effective administration of procurement operations is an imperative for the success of MSP regime. This has been repeatedly highlighted by the Commission in its reports. However, the reach and coverage of procurement still remain restricted in several states such as Bihar and Orissa. Necessarily, there has to be expansion of MSP operations across the country. Keeping in view the constraints on expanding the existing infrastructure of the Food Corporation of India (FCI) and other Government procurement agencies to all parts of the country, an option could be that the Government may enlist the National Spot Exchange Ltd. (NSEL) to carry out e-procurement of commodities in such areas where government infrastructure is weak or non-existent. The Commission had detailed discussions with the NSEL on this, and the organization expressed their interest and willingness in this regard. Under the mechanism proposed by them, farmers may sell their produce to Electronic Spot Exchanges at MSP. After procurement, the National Spot Exchanges may keep the stock in their warehouses and report the quantity and value to the concerned State/Central Government agency. The Government agency then could release funds to the Spot Exchange against receipt of physical/electronic

warehouse receipts, while the goods could remain in the Exchange warehouse only, with responsibility for quantity and quality, thereby reducing the cost of movement of goods. Subsequently, the Government would be free to lift the stock for PDS requirement or ask the Spot Exchange to dispose off the stock electronically and remit funds to the Government agency.

1.11 In this way, the Spot Exchanges would enable the sale of farm produce directly by the farmers through electronic spot platforms as against local APMC markets with their functional inadequacies. On the e-spot market, where transactions would be on a 'trade plus zero' basis, farmers are at liberty to set the best possible price for their produce. The Economic Survey 2009-10 has observed that the national level electronic spot exchanges have created an avenue for direct market linkage among farmers, processors, exporters and end users with a view to reducing the cost of intermediation and enhancing price realization by farmers. Further, the exchanges would enable farmers to trade seamlessly on the platform by providing real-time access to price information and a simplified delivery process, thereby ensuring the best possible price. The efficiency levels attained as a result of seamless spot transactions would benefit both producers and consumers. Still, for abundant caution, when the spot exchanges are functioning for support of procurement operations, it may be insisted that the sale/purchase value of the items under MSP coverage should not go down below the declared support prices for the respective items. Around 11 States including Maharashtra, Karnataka, Gujarat, Rajasthan, Orissa and Madhya Pradesh have already given licences to the spot exchanges to undertake electronic spot trading. In the view of Commission, **an arrangement for associating spot exchanges in procurement operations in those places where currently the procurement system is inadequate, seems advisable, and the Government may give due consideration to this after framing the requisite safeguards.**

1.12 Another issue related to procurement operations, is the actual receipt of price or money values of the produce tendered by farmers. Despite the sale of wheat or paddy at MSP, still the farmers are not reportedly receiving its value at the rate of MSP. It seems the middlemen play in the market and cut down on the due receipt of farmers. There are also complaints that the payment out of bonus announced by the

Government, which often comes late after farmers have parted with their produce, does not reach them. As a solution, it would be appropriate to insist that all payments, including bonus, pertaining to procurement operations, may be made to farmers, only by way of crossed A/C payee cheques. This needs to be invariably enforced, so that even after all government efforts, there is no under-receipt of MSP entitlement by farmers. Accordingly, the Commission recommends that **any payment of MSP including bonus payment to farmers, should be made only by way of crossed A/C payee cheque, to eliminate any chances of other operators in the market cutting into the due entitlement of farmers.** Every state may also bring out mandi-wise daily bulletins regarding market arrivals as well as sales and buys by Government and private interests, in order to bring in greater transparency.

1.13 There are also problems with the proliferation of state and local taxes, cesses and levies at a higher level. This too needs to be addressed. For instance, the high rate of tax in Punjab is distorting trade, by crowding out private trade. All trade-distorting taxes like the purchase tax should be preferably removed or at least brought down to a reasonable level, after resolution of any related legal issues. This is required so that adequate private sector participation in the market could be ensured. It could also scale down the extent of procurement by Governmental agencies to a manageable level. Private players are reportedly not entering the market because of high taxes. There should be uniformity in the State level tax structure in agricultural commodities, so as to promote market efficiencies and remove 'de facto' restriction on movement of goods across the States. The concept of a unified and integrated national market should be translated into real practice. Therefore, the Commission recommends that **all taxes on items under MSP coverage need to be removed or at least reduced to a reasonable and uniform level across the country, so as to encourage participation by all players in the market, and there emerges a unified and integrated national market in the country.**

1.14 The total offtake of foodgrains from the Central Pool during 2009-10 was 49.73 million tonnes as against 39.50 million tonnes in 2008-09. The offtake of wheat increased from 14.88 million tonnes in 2008-09 to 22.35 million tonnes in 2009-10 and that of rice from 24.62 million tonnes in 2008-09 to 27.38 million tonnes in 2009-

10. The offtake under Targetted Public Distribution System (TPDS) remarkably increased for wheat in 2009-10, whereas for rice it was moderate at 1.83 million tonnes. For other schemes, as a whole, the trend of increase has been maintained, but the quantum of increase has been more in respect of rice. The total stock of foodgrains with the FCI and other Government agencies as on 1st April, 2010 was 43.30 million tonnes, which was higher than the buffer stock norm of 21.20* million tonnes stipulated for 1st April (*includes food security reserves of 3 million tonnes for wheat from 1-7-2008 and 2 million tonnes for rice from 1-1-2009). This amounts to a definite improvement as compared to the position that prevailed over the corresponding date of previous year when the public stock of foodgrains was 37.07 million tonnes.

1.15 The Wholesale Price Indices (WPI base 1993-94) for all agricultural commodities and food articles were 291.9 and 294.6 respectively by May, 2010, registering an increase of 17.1 per cent and 16.5 per cent over the previous year, as against the overall inflation of 10.2 per cent. In fact, these indices have been recording considerable increase since 2006-07, and the upward movement has been sharp during the past two years. Barring a marginal decline in the case of barely, all major cereal items have exhibited significant northward movement in their prices. For wheat and rice, there has been steady increase during the past few years. The WPI of wheat moved up from 239.6 (2008-09) to 264.7 (2009-10), yielding an increase of 10.5 per cent, even though marginally declined to 261.1 during May, 2010. While, in respect of rice the increase was more sharp: from 213.0 (2008-09) to 243.7 (2009-10), generating an increase of 14.4 per cent and became 251.3 in May, 2010. Within foodgrains, the price buoyancy has been striking in respect of pulses. As against a decline of 4.3 per cent during 2007-08, the WPI in this category rose by 6.8 per cent in 2008-09, 28.5 per cent in 2009-10, and by 30.4 and 32.4 per cent during April and May, 2010 respectively. This drastic increase calls for action on priority. Regarding individual items, in the year 2009-10, there has been sharp increase in respect of almost all pulse items: tur (arhar) (52.8 per cent); moong (46.6 per cent); urad (35.6 per cent); and masur (lentil) (18.2 per cent). The exception seems to have been Gram, where the price index experienced a marginal decline of 1.7 per cent. But, during 2010-11 (till May), the index has begun to increase. For Masur (Lentil), the price position has moved down during April-May, 2010; this may not be construed as

a downtrend, keeping in view its ups and downs during 2009-10. In general, the WPI of oilseeds also shared the upward movement in prices. For oilseeds as a whole, the WPI increased by 24.09 per cent (2007-08), 12.77 per cent (2008-09), 3.66 per cent (2009-10), and by 7.05 and 3.71 percent during April, May, 2010. In respect of individual items, during the year 2009-10, the increase was indicated by safflower, groundnut and soyabean, while decline was noticed in the case of rapeseed/mustard, sunflower and nigerseed. In 2010-11, the price level of groundnut and sunflower has moved up, safflower and soyabean remained as stable, rapeseed/mustard did not register much increase, and nigerseed continued to decline. The rise in the price of foodgrains has considerably outstripped that of the wholesale price index in general. This high level of food inflation continues to remain as an area of concern.

1.16 As per FAO's latest forecast (June, 2010), the global cereal production in 2010-11 is geared for a good output of 2279.5 million tonnes (including rice on milled basis). Registering an increase of 1.2 percent over the previous year, this would come closer to the record output of 2008-09. The world cereal stocks by the end of 2011 are estimated to increase to 533 million tonnes, the highest level since 2002. The ample export supplies and prospects for large crops in 2010 have brought down the international prices for all major cereals in 2010. Accordingly, the FAO cereal price index averaged 156 points in May, 2010, down by nearly 9 percent from December, 2009.

1.17 The international wheat production in 2010-11 is again expected to decline, by about one percent from the last year's output of 682.4 million tonnes, to 676.5 million tonnes. The reduction is resultant to smaller plantings because of lower price prospects, followed by assumed relatively lower yield levels. The one percent decline in world wheat production in 2010-11 would be more than made up by the larger opening stocks. The high inventories and good crop prospects in 2010-11 have pressured down prices. The benchmark United States wheat, No.2 Hard Red Winter, f.o.b. Gulf, averaged USD 196 per tonne in May, a climb-down by about 8 percent from the beginning of the year. Wheat futures have weakened sharply since May, prompted by good crop prospects, a firm US Dollar, and depressed demand arising from economic slowdown. During May, wheat futures in Chicago for September

delivery were quoted at around USD 180 per tonne, a decline by 15 percent from the start of the year.

1.18 A welcome indication emerging from the FAO's forecast for 2010-11 is the increase in global output of coarse grains. The estimated output for 2010-11 is at 1130.9 million tonnes. Registering a 1.4 percent increase over the output of 2009-10 at 1115.2 million tonnes, this is taking the production closer to the 2008-09 record level of 1140.3 million tonnes. Relatively weak demand and ample supplies continue to put downward pressure on international prices of major coarse grains. The benchmark US maize prices (yellow, No.2, f.o.b.) averaged USD 163 per tonne in May, down by 2 percent from December, 2009. The price fall in futures markets have been faster, under pressure from a dip in energy markets. In May, maize futures on the Chicago Board of Trade for December delivery averaged USD 152 per tonne, a decline of 13 percent from the corresponding period of last year.

1.19 The estimate for world paddy production in 2009-10 is 682 million tonnes (455.5 million tonnes, milled basis). It is encouraging that this would be only about half a percentage short of the record crop of 2008-09. The present forecast of world paddy production in 2010-11 is at a record 707 million tonnes, an increase of 3.6 percent over 2009-10. The world prices are moving down since January, 2010, prompted by low purchase from major importers and generally ample availabilities in exporting countries. Correspondingly, the FAO All Rice Price Index dropped steadily from 251 to 201 points between January and May, 2010. As an instance, the value of benchmark Thai 100 percent B rice, came down by 21 percent from January and traded at USD 475 per tonne in May, 2010.

1.20 As regards oilseeds sector, the prices of oils/fats have strengthened further while prices for meals have risen and may begin to decline in coming months. As per estimates for 2009-10 marketing year, there would be a more relaxed global supply and demand situation for oilseeds and meals and not so for oils/fats. In the market for oils/fats and high oil-yielding oilseeds, global supplies in 2009-10 are expected to be tight relative to demand, generating uptrend in prices. The output of oilseeds, rising about 10 percent over the past year, is expected to climb to a new record of 448 million tonnes in 2009-10. Almost the whole contribution towards this would be

from soyabean, as production of other oilcrops is anticipated to either fall or grow at below average rates.

1.21 Globally, sugar prices have sharply come down, impacted by the enhanced production in Brazil and India. After reaching a 30-year high average of US 26.46 cents per pound (USD 583 per tonne) in January, 2010, international sugar prices went southward to average US 15.10 cents per pound by May. The world sugar production is expected to increase by 3.5 percent in 2009-10 to 156.3 million tonnes, boosted by favourable growing conditions and high returns. The production surplus, albeit not significant, for 2010-11 would provide downward pressure on prices.

1.22 The FCI and State Governments are facing shortage of storage capacity due to substantial procurement of foodgrains. The problem has become more acute in the major procuring States of Punjab and Haryana. Here, wheat had to be stored in open under Covered and Plinth (CAP) storage. Reports indicate that considerable quantity of wheat has been kept in unscientific plinths, rice mills, closed sugar factories, etc. The total storage capacity with FCI (as on 31-3-2010) is 288.36 lakh MTs, out of which 154.77 lakh MTs are owned and 133.59 lakh MTs are hired. It is anticipated that the problem may get aggravated once the proposed Food Security Law is brought into force. Its implementation would require the Government to assure a steady and large scale supply chain of foodgrains, that would in turn necessitate substantial procurement, with resultant strain on storage capacity of the country's biggest foodgrain buyer. The need for considerable increase in storage capacity requires serious consideration.

1.23 Alongwith the above, it is also important to ensure use of modern storage system and practices essentially geared to quality preservation and loss prevention. Unscientific storage such as CAP results in enormous indirect costs including quality deterioration and pilferage. Efficient bulk storage systems have been developed and are available globally. Substantial investments are to be made for modern warehousing, and importantly for upgrading existing warehouses. An advisable avenue to be explored could be Public-Private-Partnership (PPP). The efficiencies of the private sector need to be harnessed. Already, keeping in view the shortage in storage space, top procurement States of Punjab and Haryana were enlisting

storage from the private sector. Also, FCI needs to manage its inventories so that the stocks do not exceed a certain pre-defined level. In fact, it is high time the Government revamped its entire system of food management. The Commission recommends that **the Government should urgently put in efforts to enhance the present storage capacity available with the foodgrain procurement agencies, with equal emphasis on ensuring the setting up of modern and scientific storage system and practices that would assure quality preservation and loss prevention. In this regard, associating the private sector through PPP mode or on its own should be given serious consideration.**

1.24 An issue that has earlier been given focus by the Commission is the problem related to the Public Distribution System (PDS). Effective procurement operations for commodities under MSP followed by an efficient system for their offtake, are the basics to ensure that the laid-down objectives meet with fulfillment, from the interests of cultivators as well as consumers. Unfortunately, the PDS network in the country has invited lot of criticism over the years. It has quite often been pointed out that the distributed foodgrains are not reaching the intended beneficiaries and there is large scale leakages between the main distribution point and the final destination of beneficiaries. Inefficiency and corruption have considerably crept into the delivery system. No wonder, the Comptroller and Auditor General of India (CAG) has decided to carry out an audit of the country's PDS focussed on leakages and inefficiencies that prevent the essential commodities from reaching the actual beneficiaries, and to some extent stoke the food price inflation. It is also contextual to mention that the Hon'ble Prime Minister has recently set up a Committee of Central Ministers and Chief Ministers to overhaul the PDS and check price rise. PDS is an important segment of the whole process of reaching out foodgrains to the needy people. Failing this, an important objective of procurement operations involving heavy Government expenditure, gets defeated. Despite deliberations over finding alternatives to the PDS, for the present and the near future, the system has to remain in place. Further, with the enactment of national food security law, the role of PDS network would acquire added importance. Accordingly, the Commission is of the view that based on detailed review of the PDS, in order to streamline the whole system and to tone up efficiency, serious efforts are needed to make the distribution

mechanism adequate and fool-proof for delivering goods to the intended beneficiaries.

1.25 The need for initiating a Second Green Revolution has acquired emphasis in the recent times. In fact, it was the Green Revolution of the 1960s that changed the status of India from that of a food-deficit to a food self-sufficient nation. As brought out in the Union Budget (2010-11), the proposed strategy intends to extend the green revolution to the eastern region of the country comprising Bihar, Chhattisgarh, Jharkhand, Eastern UP, West Bengal, and Orissa. Further, the gains already attained in the green revolution areas would be sustained through initiatives at conservation. While extending the green revolution, it has to be necessarily kept in view that the gains of the earlier period are further promoted, and the pitfalls/failures if any, are eliminated. It is well known that initially the green revolution was crop as well as region focussed. Its spread was confined to Punjab, Haryana, and parts of UP having assured irrigation facilities. Also, the crops that comprised were primarily paddy and wheat. The second green revolution should have a wider coverage across the country inclusive of all major agricultural crops, with location-specific thrust and interventions. Not only the Eastern India, but also the North East part of the nation whose agricultural potential is yet to be adequately exploited, should receive priority in the process. Cultivation of important crops such as paddy in that region carries considerable scope. It is widely appreciated that research and extension played a major role in the success of the first green revolution. Hence, there has to be renewed thrust on this crucial link while rolling out another green revolution, to generate greater yields and value addition at all stages. Last but not the least, any adverse impact on the environment, such as depletion of soil properties and over-exploitation of groundwater resources, as it happened during the course of first green revolution, should be guarded against. Accordingly, the Commission recommends that **attempts at the Second Green Revolution need to ensure that its coverage is across the country focussed on all important agricultural crops, effectively supported by research and extension, with particular thrust on the East and North East parts of the country, and it takes place in an environment-friendly manner.**

1.26 An encouraging feature of India's agriculture sector is the turnaround in public investment during later years of the X Plan. Overall capital formation in the sector during the period has risen to about 15 per cent of agricultural GDP. But it is disturbing that the Incremental Capital Output Ratio (ICOR) has also risen from about 2.5 in 1980-81 to around 4. Hence, all-out efforts are warranted to restore the efficiency of investment. Devoid of this, the extent of investment would need to be increased heavily, to achieve the targetted 4 per cent growth in agriculture. But, it also needs to be ensured that growth in future times is more efficient, sustainable and inclusive. Certainly, increase in productivity emanating from efficient use of technology has to play an important role. Since technology breakthrough is not forthcoming, concentration should be on areas where one can increase output using existing technology. The country has to target places where yields are low, for improvement, by location-specific interventions. Alongwith this, it has to be appreciated that the available resources such as land and water are fixed and limited. So, greater productivity has to be attained out of every unit of these scarce natural resources.

1.27 Improvement in resource use efficiency at all levels--government as well as farm, should become the motto of the times. Inputs will have to be used in a much more efficient manner. Among farm inputs, irrigation plays a critical role in increasing productivity. About 20 million hectares of additional land can be brought under irrigation by completing the on-going major and medium irrigation projects and by constructing field channels in command areas. Related to the non-availability of timely and adequate water for irrigation becoming a serious constraint in achieving higher productivity and stability of farming in many parts of the country, the *National Policy for Farmers (2007)* has also stressed on the need for bringing in assured irrigation. Ample emphasis should be laid on rainwater harvesting and efficient water management. It has been assessed that even a 10 per cent increase in the present level of water-use efficiency in irrigation projects may help to provide life-saving irrigation to crops in large areas. An advisable avenue for elevating water use efficiency is greater installation of drip, sprinkler and fertigation systems, which have become essential in an environment of dwindling water resources. Wastage of the nation's precious water resources should be brought under zero tolerance. The use of fertilizers and other essential inputs is to be oriented to enhance soil health and

efficiency. Emphasis on input use efficiency is crucial for producing agricultural commodity in a cost-effective manner. Nearly two-thirds of our farmlands are in some way either degraded or sick, indicating the extent of efficiency deficit currently existent. Research priorities are warranted towards areas of balanced and site-specific nutrient supply and efficient water management practices. The Commission is of the view that **the emphasis on efficient growth in the sector through the optimal use of resources such as water and fertilisers should become integral to the efforts for attaining the target for agricultural growth, so that higher growth is attained from utilization of the same quantum of resources.**

1.28 Even though the country is having good wheat crop during the last several years, one should be on the guard against pest attacks. Stem rust affects wheat crop. In warm and humid areas, the disease can survive from year to year on affected crops. In recent times, a race named Ug99 after its discovery in Uganda in 1999, also termed as 'agriculture's polio', has caused serious damage of wheat crop in Africa. It has been confirmed that Ug99 is prevalent in Uganda, Kenya, Ethiopia, Sudan, Yemen and Iran. In November, 2008, FAO and Government of India organized an international conference on *Wheat Stem Rust Ug99--A threat to Food Security* in New Delhi to raise awareness on the status of Ug99 wheat rust threats and promote global knowledge sharing. As the deadly pathogen has already been detected in Iran, there are concerns raised about its possible spread to South Asia, especially Punjab. As per reports, Indian scientists have developed varieties of wheat that can fight this menace. Considering the seriousness of the problem, the Commission recommends that the **Government should maintain constant vigil and monitoring of possible pest and fungus attacks, particularly the coming of Ug99, evolve sturdy varieties of wheat crop that could fight the menace, and guard against its spread.**

1.29 The Commission has repeatedly highlighted in its Reports the importance of adequate availability of credit to the farmers, particularly small and marginal. The coverage of credit has to be inclusive, so that the progress towards inclusive economic growth could be expedited. It is encouraging that over the past few years, the disbursement of farm credit has greatly increased. Almost in all the years since the announcement of the comprehensive credit policy in June, 2004, the actual provision

of agricultural credit has been higher than the targets that were set. For the year 2010-11, the target laid down for provision of farm credit is Rs. 3,75,000 crore as against Rs. 3,25,000 crore in 2009-10. It is also welcome that during the year 2009-10 an additional one percent interest subvention was given to incentivise farmers who repay their short-term crop loans as per schedule. This subvention has been raised to two percent for 2010-11, making the effective rate of interest for such finance as five percent per annum. However, during field visits, it has been brought to the notice of the Commission by farmer representatives that banks charge a good sum of money as processing charges and inspection charges for providing Kisan Credit Cards. Further, the charges get repeated for the subsequent years. The cost also varies considerably from bank to bank. This has to be considered alongwith the possible longish procedural drill to be completed as well as the repeated visits to the bank branch before the credit window gets opened. The cost of all these put together erodes the claim of the Government in providing farm finance at an affordable cost. Accordingly, the Commission recommends that **not only the rate of interest on farm credit but also other associated/related costs such as processing and inspection charges for availing credit should be brought down to nominal and affordable levels, so that the effective cost of farm finance gets lowered to the intended extent.**

1.30 An issue that is repeatedly represented by the farmers before the Commission has been the implementation of Mahatma Gandhi National Rural Employment Guarantee Scheme (MNREGS). This has been discussed in details in the Report of the Commission related to the Price Policy for Kharif Crops of 2010-11 season. Recommendations focussed on the impact of MNREGS on the cost and availability of farm labour, have already been given. The thrust of this national programme being in the rural areas, there has to be an essential link between its operations and the agriculture sector. This is especially so, since the farm sector of the country is critically in need of productivity improvement. The activities taken up under MNREGS should lead to the creation of assets around the farmlands that would facilitate this. Instances for this could be development of mini/micro irrigation, creation of community bunds, village roads, and other required infrastructure that carry the potential for promoting farm productivity. There have been initiatives aimed at the convergence of MNREGS guidelines with schemes of the Ministry of

Agriculture. This has to be taken forward further. Therefore, the Commission recommends that **the implementation of MNREGS should promote the cause of farming, through the fullest possible convergence of its operational guidelines with that of the schemes/programmes of the Ministry of Agriculture, and by effective inclusion of activities that would foster the development of agri-facilitating infrastructure.**

1.31 Given the present state of agricultural sector in India predominated by small and marginal holdings, dependence on farming alone may not suffice to impart adequate income to the farmers and render agriculture as viable. Essentially, there should be adoption and promotion of non-farm agricultural occupations as integral to the activities of farmers. As revealed by the Survey of NSSO (59th Round of NSSO, 'Situation Assessment Survey'), 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. Urgent measures are required to make farming viable as well as attractive. A vital strategy could be ample generation of non-farm job opportunities for the rural poor. This would also go a long way towards poverty reduction. Farmers should look beyond cropping. Development of viable non-farm rural enterprises should receive priority. For instance, it has to be properly appreciated the growth potential and possibilities of employment creation in the food processing sector. In the agriculture sector, provision of forward linkages that cater for food processing, has become the need of the times. The XI Plan has considered food processing as a sunrise sector, and laid stress on policies and programmes to encourage its growth. Already the sector contributes a good portion of the manufacturing employment in the country, and could provide the same number of jobs at a substantially lower quantum of capital investment compared to the manufacturing sector as a whole. Keeping in view the greater involvement of women in this sector, growth of food processing is expected to facilitate women's employment.

1.32 The growth and spread of non-farm activities in the rural sector should lead to requisite reduction in the labour-to-land ratio. Congenial conditions are to be created that would encourage the majority of rural population to migrate out of agriculture into industry and services, particularly food processing, as indicated above. It is only through a large reduction in the labour to land ratio that farmers could look forward to

a standard of living on par with that in industry and services. While slower growth of GDP in agriculture than non-agriculture is to be expected, the main failure has been the inability to curtail the dependence of workforce on agriculture by creating adequate non-farm opportunities to absorb the labour surplus in rural areas supported with development of skills and other requisite re-orientations. Accordingly, the Commission recommends that **the promotion of non-farm activities in the rural areas such as food processing that would lead to a substantial reduction in the labour-to-land ratio, needs to be laid emphasis, so that the agricultural sector in the country turns out to be viable and attractive.**

1.33 It is a welcome measure that the Government has decided to introduce nutrient based subsidy policy for administering the fertilizer subsidy regime. Expectedly, the change-over should incentivise farmers in favour of a balanced fertilizer application which, in turn, would impart help in addressing the issues of productivity in the agricultural sector. The levels of productivity have been stagnating or declining on account of continued deterioration in soil quality due to unbalanced and indiscriminate use of nitrogenous fertilizers. Instances of soil degradation through improper use of agro-chemicals have been reported across the country. Excess use of some nutrients, driven in part by imbalanced subsidies, had led to depletion of other nutrients from the soil leading to deterioration of soil health. But according to feedback from farmer representatives, of late, the cost of fertilisers has gone up and their availability is giving problems for farmers. Prices are fluctuating, and their increase is impacting the cost of cultivation. The distribution network particularly related to the provision of rakes by the Railways, is disappointing farmers. **The issues in the provision and distribution of fertilisers, arising in the changeover of fertiliser subsidy regime, require to be looked into by the Government for possible corrective measures.**

1.34 However, it is important to keep in view that the implementation of nutrient-based subsidy regime would require comprehensive analysis of varied geographies in the country aimed at their distinct soil profiling and physical and chemical properties to arrive at proper nutrient management systems appropriate to the particular soil requirements. At present, the non-availability of requisite facilities for soil testing constraints the farmers from adoption of required nutrients. To overcome

this, all farmers should be in possession of soil health cards that contain regular updates on major and micro nutrients. For attaining this state nationally, substantial efforts are to be brought in to strengthen soil testing labs across the country and to expand their testing capacity to cover micro-nutrients as well. Alongwith this, soil health awareness must also be promoted. The present extension system may not be in a position to provide the related personalized advisory services. Greater involvement of the private sector supported through the application of information and communication technology, will be necessary. The PPP mode may be explored wherever possible to expand the reach of soil testing. Therefore, the Commission recommends that **for fertiliser applications to bring in the intended benefits, there has to be in position a programme for comprehensive analysis of soil profiling and their physical and chemical properties, leading to the provision of soil health cards giving regular updates to farmers in the country, supported with stress on soil health awareness.**

1.35 A prominent feature of the Indian farming sector is that about 80 per cent of the farmers are small and marginal. Women participation is also increasing. There should be special steps to improve their access to inputs, credit, extension services and output markets. The poor are best empowered if they function as a group rather than as individuals. Hence, there is a need to encourage a 'group approach' for farmers including women, to reap economies of scale and become efficient farmers. Group approach could improve their bargaining power, and would impart better access to land, credit, and skills, and in the process promote faster inclusiveness. The group approach could range from low levels of collective functioning such as joint investments in lumpy inputs like tube wells or cooperatives for input purchase and marketing, to high levels of collective functioning such as land pooling and joint farming. Thereby, the disadvantage of fragmented small scale peasant production can be overcome. Cooperatives should come up to collect, process and distribute agro-products using the best technologies and modern practices. Particularly for women farmers, cooperatives and other forms of group efforts should be promoted for the dissemination of agricultural technology and other inputs as well as for marketing of produce. At present, under the auspices of NABARD, there is a scheme to finance Joint Liability Groups (JLG) to facilitate availment of bank loan against mutual guarantee, primarily for the sake of tenant farmers and small farmers. These

JLGs could also serve as conduits for technology transfer, accessing market information, training, etc. But the 'group approach' should cover the whole spectrum of farming and other related activities. Therefore, the Commission recommends that **requisite efforts should be brought in to promote 'group action' among farmers, including women farmers, so that they could be empowered to overcome the present constraints and limitations confronting them, and in the process promote the interests of farming in a more effective manner.**

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 2009-10 and being marketed in 2010-11 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 2009-10 Marketing season	MSP recommended for 2010-11 Marketing season	MSP fixed for 2010-11 Marketing season
1	2	3	4
Wheat	1080	1100	1100
Barley	680	750	750
Gram	1730	1760	1760
Lentil (Masur)	1870	1870	1870
Rapeseed/Mustard	1830	1830	1830
Safflower	1650	1680	1680

The Government announced the price policy for cereals, pulses and oilseeds crops grown in Rabi season of 2009-10 and being marketed in 2010-11 on November 11, 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 2010-11, was notified by the Government on 11th March, 2010. These specifications have fixed the maximum limit for moisture content with full value at 12 percent and discounted value for the moisture in excess of 12 percent and upto 14 percent in case of wheat and barley and different moisture specifications were made in the case of pulses and oilseeds, viz; gram (14 percent), lentil (12 percent), rapeseed/mustard (8 percent) and safflower (6 percent). 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 foodgrains, etc. which vary from crop to crop. Relaxation in specification was granted on the request of Uttar Pradesh Government in the case of wheat relaxing limit from uniform specification of 7 per cent to 15 per cent for shriveled broken grains with value cut of Rs. 17 per quintal upto 10 percent and Rs. 44 per quintal for exceeding 10 and upto 15 percent.

Wheat

2.3 The production of wheat during 2009-10 is estimated at 80.98 million tonnes (Third Advance Estimates), thereby continuing the bumper production of wheat in the country, taking it consecutively to the fourth year. The production estimate of 80.98 million tonnes for 2009-10 constitutes a marginal increase of 0.37 percent over the 2008-09 wheat production of 80.68 million tonnes and 2.5 percent increase over the production target of 79 million tonnes for 2009-10. While deficiency in south-west monsoon during 2009 severely affected kharif crops especially paddy, late rains at the end of kharif season encouraged early sowing of wheat in the rainfed areas. The 2009-10 rabi season also benefited from factors like absence of major pest menace and frost damage, and area increase. Area under wheat during 2009-10 is estimated to increase to 28.34 million hectares from 27.75 million hectares achieved during 2008-09. However, it should also be mentioned that the record production projected for 2009-10 is inspite of sudden significant rise in temperature at wheat harvest time in many wheat growing areas like Uttar Pradesh, Punjab and Haryana which affected proper grain development and potential yield realization. The challenge lies in translating the gains achieved in production in the recent years to distribution and price fronts, through efficient food management.

(Table 2.1)

2.4 Wheat is a major contributor to the food security of the country, contributing about 37 percent of the total foodgrains production. The production of wheat has increased from 45.8 million tonnes in T.E.1987-88 to 65.9 million tonnes in T.E.1997-98 and further to 78.4 million tonnes in T.E.2008-09. While the production increase during T.E.1997-98 over T.E.1987-88 was about 44 percent, the production increase

in T.E.2008-09 over T.E.1997-08 was only 18.8 percent. The same trend could be seen in case of area and yield increase. In terms of growth rates, the average annual increase in wheat production during the period 1997-98 to 2008-09 was 1.01 compared to the growth rate of 3.60 percent achieved during 1987-88 to 1997-98. In respect of area under cultivation of wheat, the rate of growth during 1987-88 to 1997-98 was 1.28 percent, which declined to 0.32 percent during 1997-98 to 2008-09. The corresponding figures in respect of yield were 2.29 percent and 0.68 percent respectively. Deceleration in the growth rate of wheat in all the three parameters, especially in output and yield, during the latter period, is of concern.

2.5 All the major wheat growing states in the country experienced decline in the growth rate of wheat production during the period 1997-98 to 2008-09 compared to the earlier period (1987-88 to 1997-98), except Gujarat and Maharashtra. Gujarat and Maharashtra registered annual growth rates of 10.6 percent and 5.5 percent respectively during this period compared to growth rates of 7.5 percent and 1.5 percent achieved during the earlier period. States like Bihar (including Jharkhand), Madhya Pradesh (including Chhattisgarh) and West Bengal showed negative growth rates of (-) 1.33 percent, (-) 1.01 percent and (-) 0.51 percent respectively during 1997-98 to 2008-09.

2.6 In respect of area growth also, the performance of various wheat producing states differed. While states like Bihar, Gujarat, Jammu and Kashmir, Maharashtra and Punjab had accelerated area growth rates during 1997-98 to 2008-09 compared to the earlier period (1987-88 to 1997-98), states like Haryana, Himachal Pradesh, Madhya Pradesh, Rajasthan and Uttar Pradesh registered deceleration in the area growth rates during the same period.

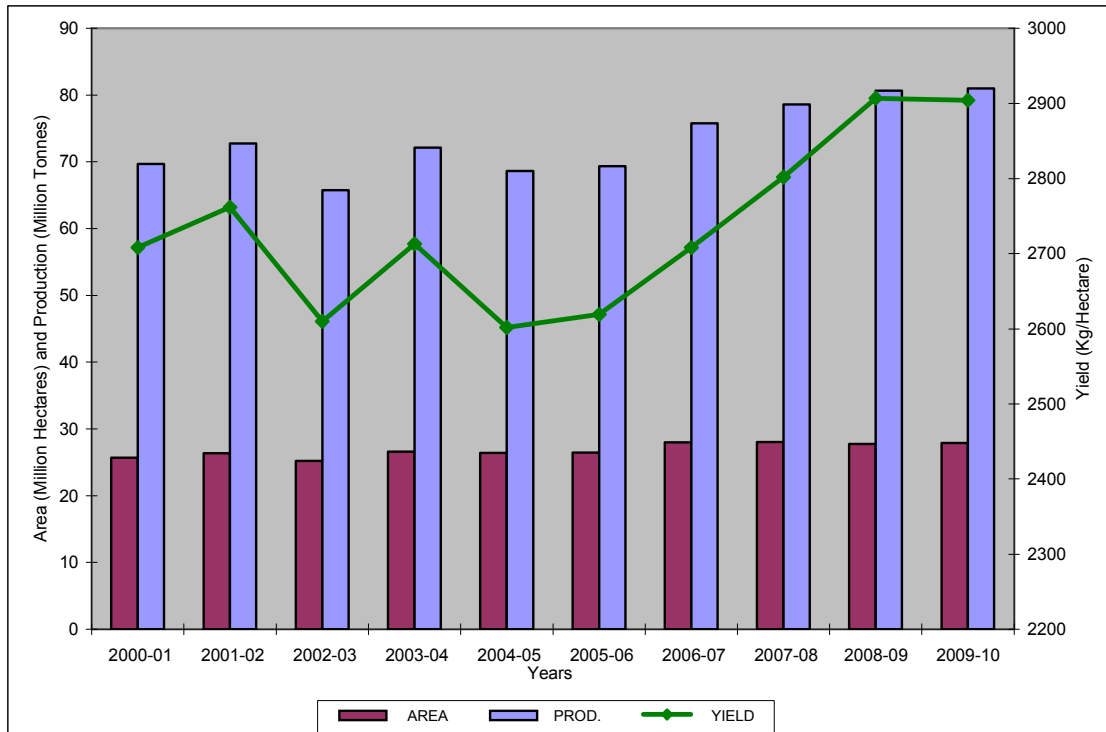
2.7 While both the two determinants of wheat production, viz. area and yield showed declining growth rates during 1997-98 to 2008-09 compared to 1987-88 to 1997-98, the decline in the growth rate of yield was much sharper (from 2.29 percent in 1987-88 to 1997-98 to 0.68 percent in 1997-98 to 2008-09) than the decline in area growth rate (from 1.28 percent to 0.32 percent during the same period). Further, unlike deceleration in the growth rate of area, which was restricted to a few states, decline in yield growth was seen in all major wheat growing states during the latter

period, except Maharashtra. This also indicates that the deceleration in the production growth during 1997-98 to 2008-09 was contributed more by yield variations than by changes in area coverage. The need for continued emphasis on investment in agriculture, both public and private, and more importantly their effective implementation at the ground level gets importance in view of the above scenario.

2.8 Wide variations in yield among major wheat producing states still exist. The average All-India yield for wheat during 2008-09 was 2907 kg/ha. Punjab registered the highest yield of 4462 kg/ha followed by Haryana 4390 kg/ha, Rajasthan 3175 kg/ha, Uttar Pradesh 3002 kg/ha, Gujarat 2377 kg/ha etc. However, states like Bihar (2043 kg/ha), Madhya Pradesh (1723 kg/ha), Jharkhand (1541 kg/ha), Himachal Pradesh (1520 kg/ha), Maharashtra (1483 kg/ha) and Chhattisgarh (1040 kg/ha) had significantly low levels of productivity. Since potential for area increase to enhance wheat production is limited, further increase in production in the coming years has to come from productivity enhancements. States like Madhya Pradesh, Maharashtra, Bihar, Jharkhand, Chhattisgarh, etc are still far behind their full production potential. Attention, hence, may be given to the lagging states in terms of improved farm practices, timely availability of quality inputs, minimum price guarantee through procurement operations etc.

2.9 The trends in area, production and yield of wheat are shown in the Chart1.

Chart 1 : Area, Production and Yield of Wheat



Source : Third Advance Estimates, DES.

2.10 The consistent increase in yield during the last four years ie. 2005-06 to 2008-09 should not make one complacent since the inter-year variations in yield prior to 2005-06 were quite high and the preliminary estimates for 2009-10 also indicate possible decline in the yield compared to 2008-09 level. Further, globally also, irrespective of the fact that India occupies second position in the production of wheat, 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. Hence, concerted efforts are needed to increase productivity through research, improved agricultural practices, and extension activities with attention on states with low productivity.

Table 2.1: Yield of Wheat in Various Countries in 2007

Country	Yield (kg/ha)
U.K	7225
Egypt	6478
France	6256
China	4608
Pakistan	2716
USA	2705
India	2704
Bangladesh	1847
World	2829

Source: Agricultural Statistics at a Glance 2009, Ministry of Agriculture

2.11 As per present indications, the crop year 2009-10 is expected to bring in another bumper crop, which should enable a comfortable supply situation. The domestic wheat situation during 2009-10 crop season is illustrated in the Table 2.2.

Table 2.2: Domestic Wheat Situation

(Million tonnes)

Crop Year (July-June)	2008-09	2009-10
Fiscal Year (April-March)	2009-10	2010-11
1. Gross Production	80.68	80.98
2. Net Production (87.5 per cent of Gross Production)	70.60	70.86
3. Procurement	25.38	22.50 ⁺
4. Offtake (including open sale)	22.35	22.00 ^{\$}
(a) Open Sale/ Tender sale	1.64	1.00
5. Exports	0.00	0.00
6. Imports	0.00	0.00
7. Addition to Stock (3-4+6)	3.03	0.50
8. Supply (Gross) [2-3+4-5+6]	67.57	70.36
9. Consumption Demand	58.70 [#]	62.22 ^{##}
10. WPI (1993-94= 100)	265.3	265.5 [*]

Sources: (i) Directorate of Economics & Statistics

(ii) Food Bulletin, April 2010.

(iii) DGCI&S, Kolkata.

(iv) # based on 63rd NSS Round (July 2006-June 2007) of Household Consumption Expenditure

(v) ## based on 64th NSS Round (July 2007-June 2008) of Household Consumption Expenditure.

(vi) + Procurement as on 02.07.2010,

(vii) \$ Projected

(viii) * Average for the months of April and May 2010

2.12 Wheat has multifarious demand ranging from direct consumption by the people to preparation of various wheat based products like bread, biscuits and other bakery products. The household consumption demand has been showing either stagnancy or even slowing down, as brought out by various Rounds of the NSSO on household consumer expenditure. While the 63rd Round 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, in the 64th Round, per capita consumption had shown increase to 4.20 kg. in rural areas and 4.51 kg in urban areas. In the long run, the per capita consumption by households may remain stagnant due to diversification of consumption pattern and inclusion of other items like fruits, dairy products, meat and processed food in the consumption basket, a natural accompaniment of economic development.

**Table 2.3: Per Capita Consumption of Wheat
in Rural and Urban Areas in 30 days**

(in Kg)

Consumption/ Rounds	59 th Round (July-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	64 th Round (July- June) 2007-08
Rural	4.22	4.25	4.29	4.35	3.97	4.20
Urban	4.59	4.67	4.65	4.53	4.43	4.51

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

2.13 For the Rabi Marketing Season (RMS) 2010-11, Government announced an MSP of Rs. 1100 per quintal for wheat, as per recommendations of the Commission. The wheat marketing season commences in April and during the 2010 season so far (as on 02.07.2010), FCI and other state level procurement agencies have procured 22.50 million tonnes, about 11.35 percent lower than the procurement of 25.38 million tonnes achieved during the corresponding period of RMS 2009-10. The geographical spread of procurement during the current season has been following the usual pattern of Punjab and Haryana getting the maximum benefit of the MSP operations. During RMS 2010-11 so far, Punjab and Haryana accounted for about 74 percent of the total procurement, in the proportion of 45.36 percent and 28.16

percent respectively. The procurement operations in the other major wheat growing states are as follows: Uttar Pradesh 1.66 million tonnes (7.39 percent), Madhya Pradesh 3.54 million tonnes (15.73 percent), Rajasthan 0.48 million tonnes (2.12 percent) and Bihar 0.18 million tonnes (0.78 percent). There have been negligible to nil procurement in other states like Gujarat, Jharkhand and Maharashtra. During discussions with farmers and State Governments, it was brought to the notice of the Commission that in states like Bihar and Jharkhand, procurement operations suffer due to lack of procurement centres and farmers are constrained to sell at the farm gate at prices lower than the MSP. The level of procurement in Madhya Pradesh, which has opted for decentralized procurement (DCP), during the current season has been quite high and occupies third position, after Punjab and Haryana.

2.14 One aspect of procurement in the high procurement states of Punjab and Haryana is that market is completely predominated by Government procurement agencies. For example, during RMS 2010-11, about 99.5 percent of the market arrival in Punjab has been purchased by FCI (as on 02.07.2010), while in respect of Haryana, the proportion is about 99.9 percent. One reason for the complete absence of private traders in the market in these two states may be the high incidence of taxes/levies in these states. The statutory levies/taxes in Punjab amount to Rs. 138.79 per quintal while in Haryana it is Rs. 116.83 per quintal compared to Rs.71.50 per quintal in Uttar Pradesh, Rs.68 per quintal in Madhya Pradesh and Rs.11 per quintal in Gujarat. The Punjab and Haryana situation limits operation of market forces. In the absence of private buyers, the government procurement agencies are forced to enter the market in a major way, which in turn reduces the availability of the grain in the market. Hence, there is a strong case for reducing the statutory levies/taxes for foodgrains especially in the states of Haryana and Punjab, which may attract private traders to enter the market, which in turn may allow market forces to come into play.

2.15 Another issue with regard to the procurement mechanism is the shortage of storage space with FCI. According to information received from FCI, storage gaps exist in states like Chhattisgarh, Jharkhand, West Bengal, Orissa, North-Eastern regions, Himachal Pradesh and J&K. Government has a scheme for establishing new storage capacity through construction of godowns, with participation from

private entrepreneurs. One solution to this problem is involving more players such as National Spot Exchange Ltd in the procurement operations.

2.16 Food price situation, including that of wheat continued to be a cause of concern during 2009-10. While 2008-09 witnessed 6.2 percent increase in the index of wholesale prices of wheat over 2007-08, the average increase in the wholesale price index of wheat during 2009-10 was 10.7 percent over 2008-09. While April 2010 witnessed 9.3 percent increase in WPI index over the same period last year, the May 2010 index indicated 4.5 percent increase over the index of May 2009. The overall high price scenario in the last one year or so has been in spite of various favourable conditions prevailing in the wheat sector like bumper production, high procurement, far in excess of the required buffer stock, by Government agencies, ban on exports etc. Thus, unlike in the case of pulses, supply constraints cannot be considered as a reason for the wheat price increase in the recent times.

2.17 Government also intervened in the market with various administrative measures to contain the price rise. These included, among others, (i) allocation of 2 million tonnes of wheat to states for distribution to retail consumers over and above the normal PDS allocation for the period October 2009 to March 2010; (ii) allocation of one million tonnes of wheat for release by FCI in the open market through Open Market Sale Scheme (OMSS) for the period October 2009 to March 2010; and (iii) allocation of 37,400 metric tonnes of wheat to NAFED and 32,684 metric tonnes of wheat to the National Cooperative Consumers Federation (NCCF) for distribution through their outlets at the same rates at which allocations are made to the State Governments under OMSS.

Table 2.4: Procurement, Stocks and Offtake of Wheat (Central Pool)

(Lakh tonnes)

S. No	Fiscal Year	2008-09	2009-10	2010-11*
1	Opening stock	58.03	134.29	161.25
2	Procurement	226.89	253.82	225.00
3	Import	0.00	0.00	0.00
4	Offtake	148.81	223.49	220.00
(i)	BPL	56.24	61.13	60.50
(ii)	APL	37.10	95.26	94.00
(iii)	Antyodaya	31.99	33.53	33.00
(iv)	Other welfare	11.15	13.44	13.00
(v)	Open sale	12.29	16.36	16.00
(vi)	Spl. Adhoc Allocation		3.76	3.50
(vii)	Export	0.02	0.00	0.00

* Bold figures for the year 2010-11 are projected

Source: (i) Foodgrains bulletin, April 2010 (ii) DGCI&S, Kolkata for export- import data

2.18 Global wheat production during 2010-11 is estimated at 676 million tonnes (FAO Food Outlook, June 2010), about one percent lower than the 2009-10 production. However, a large opening stock is expected to fully offset the small decline in production and the total wheat supply will be adequate to meet the anticipated demand. International wheat prices have remained under downward pressure since December 2009. The benchmark United States wheat, No.2 Hard Red Winter, f.o.b. Gulf averaged US\$ 196 per tonne in May 2010, about 8 percent below its level at the beginning of the year. Global wheat market position is indicated in the Table 2.5.

Table 2.5: World Wheat Market at a Glance

(Million tonnes)

World Balance	2008-09	2009-10 Estimated	2010-11 Forecast	% age Change in 2010-11 over 2009-10
Production	683.8	682.4	676.5	-0.9
Trade	139.2	120.5	122.0	1.2
Total Utilisation	648.6	662.8	675.0	1.8
Food	453.2	461.8	466.7	1.1
Feed	121.7	122.2	128.2	4.9
Other Uses	73.7	78.9	80.1	1.6
Ending Stocks	178.1	196.1	194.1	-1.0
Wheat price index (2002- 2004=100)	2008	2009	2010 (Jan-March)	
	235	154	141	

Source: FAO Food Outlook, June, 2010

Barley

2.19 Barley is a rabi crop cultivated predominantly in the states of Rajasthan, Uttar Pradesh and Madhya Pradesh, which account for about 80 percent of the production in the country. The crop is also grown in Bihar, Haryana, Punjab, West Bengal, Himachal Pradesh and Jammu and Kashmir. The production of barley in 2009-10 is projected at 1.26 million tonnes (Third Advance Estimates), a reduction of 25.4 percent over the 2008-09 production and 18.7 percent over the production target for 2009-10. The decline in the production can be partly attributed to the decrease in area coverage from 7.1 lakh hectares in 2008-09 to 6.3 lakh hectares in 2009-10. (Table 2.1)

2.20 The production of the crop has been declining over time. The production during T.E 1987-88 was 1.74 million tonnes, which was reduced to 1.55 million tonnes during T.E 1997-98 and further to 1.40 million tonnes in T.E 2008-09. The production has been declining at the rate of 0.40 percent during the period 1987-88 to 1997-98, which was further deteriorated during the next ten year period viz. 1997-98 to 2008-09 to (-) 1.45 percent per annum. The production has also been marked by inter-year fluctuations. The year 1997-98 was a better production year with production reaching a level of 1.68 million tonnes. Thereafter, the production continuously declined to reach a level of 1.20 million tonnes in 2004-05. The year 2005-06 saw a marginal increase in the production to 1.22 million tonnes, which further increased to 1.33 million tonnes in 2006-07. However, the production dipped to 1.20 million tonnes in 2007-08. The year 2008-09 was a good production year, with production reaching a level of 1.69 million tonnes. The production during 2009-10 is estimated to reduce to a level of 1.26 million tonnes.

(Tables 2.1 & 2.2)

2.21 The decline in area coverage under barley was steeper than the decline in production. Area under barley cultivation, which was 1.25 million hectares during T.E 1987-88, declined sharply to 0.81 million hectares during T.E 1997-98 and further to 0.65 million hectares during T.E 2008-09. The average annual decline in area was about 3.35 percent during the period 1987-88 to 1997-98. The decline, however, slowed down to 2.33 percent during the period from 1997-98 to 2008-09. The decline in area under barley cultivation is mainly because farmers are shifting to more

remunerative crops like wheat, gram, safflower and rapeseed/mustard. The reason which softened the decline in production even in the face of steep decline in area coverage has been the performance of yield which has been the only parameter showing growth during this period. The productivity growth was 3.06 percent per annum during the decade 1987-88 to 1997-98 and 0.90 percent during the period 1997-98 to 2008-09. (Table 2.2)

2.22 The average annual index number of wholesale prices of barley for 2009-10 had declined by 1.4 percent over 2008-09, after about five years of consistent increase. The average index for 2004-05 showed 5.1 percent increase over the previous year; similarly it was 8.9 percent in 2005-06, 7.5 percent in 2006-07, 3.6 percent in 2007-08 and 6.5 percent in 2008-09. Also barley is the only cereal which experienced a price decline during 2009-10.

2.23 Government announced an MSP of Rs.750 per quintal for barley for the 2010-11 marketing season. However, procurement was negligible due to market prices ruling above the MSP. The wholesale prices quoted during April-June 2010 in some major markets ranged between: Rs. 875 to Rs. 923 per quintal in Hissar (Haryana); Rs. 890 to Rs. 925 per quintal in Jaipur (Rajasthan); Rs. 890 to Rs. 980 per quintal in Hathras (Uttar Pradesh); Rs. 850 to Rs. 900 per quintal in Hapur (Uttar Pradesh) and Rs. 950 to Rs. 1100 per quintal in Delhi. (Table 2.15)

2.24 Domestically, barley accounts for 0.77 percent of the total cereal production and globally, India accounts for about one percent of the world barley production. The predominant use of barley conventionally has been as cattle feed. However, barley has significance in the brewery industry since it is used in the production of malt for manufacture of beer and its demand from this sector is expected to go up. The nutritional benefits of barley, like other coarse cereals, are not yet made aware of or exploited to the full potential. Hence, demand for barley for human consumption is another area where one can expect huge increase in the coming years, which can also take the burden off wheat and rice in ensuring food security. Considering the potential of the crop, the present state of stagnation in area, production and productivity needs to be reversed through Government sponsored research and development and extension programmes and through large scale farmer-industry collaboration.

Pulses

2.25 Pulses are among the most important constituent of the dietary regimen of the vegetarian Indian population for meeting their protein requirements. The importance of pulses in the Indian diet can further be judged as India is the largest consumer in the world. To meet its demand, the country produces pulses particularly in the rainfed areas. But the production had been lagging behind the consumption and to bridge the gap the country has to import the pulses. The National Food Security Mission also realized the importance and included pulses as one of the three components (paddy, wheat, pulses) for ensuring the national food security of the masses through area expansion and productivity enhancement. During the past also the country has made special efforts for increasing the production of pulses by establishment of the different institutions, schemes and programmes like Indian Institute of Pulse Research, Central Research Institute on Dryland Agriculture and Directorate of Pulse Development. The pulses were also included as one of the components of the Technology Mission on Oilseeds.

2.26 Despite all the efforts, the area, production and productivity of pulses could not be increased significantly during the last six decades. The area under pulses cultivation fluctuated in the range of 20-25 million hectares. The area cultivated under pulses in 1959-60 at the level of 24.83 million hectares remained as the peak uptill now. The area coverage was 23.63 million hectares in 2007-08 which declined to 22.09 million hectares in 2008-09 and increased to 23.39 million hectares in 2009-10 (Third Advance Estimates).

2.27 The total area under rabi pulses declined from 123.58 lakh hectares during TE 1987-88 to 120.56 lakh hectares during TE 1997-98 and increased to the level of 123.15 lakh ha. during TE 2008-09. The trend in rate of growth of area under pulses, which was 0.29 per cent per annum during 1987-88 to 1997-98 marginally increased to 0.35 per cent per annum during 1997-98 to 2008-09. Among the states, there has been of late an increase in area under rabi pulses in Andhra Pradesh, Gujarat, Karnataka and Maharashtra. Contrary to this, the states of Bihar, Haryana, Madhya Pradesh, Orissa, Punjab, Rajasthan, Uttar Pradesh and West Bengal witnessed a sharp decline in the rabi pulses area. However, as per the Third Advance Estimates

for 2009-10, the area under rabi pulses has reported an increase to the level of 127.20 lakh hectares, an increase of 4.35 lakh hectares over 2008-09 of 122.85 lakh hectares.

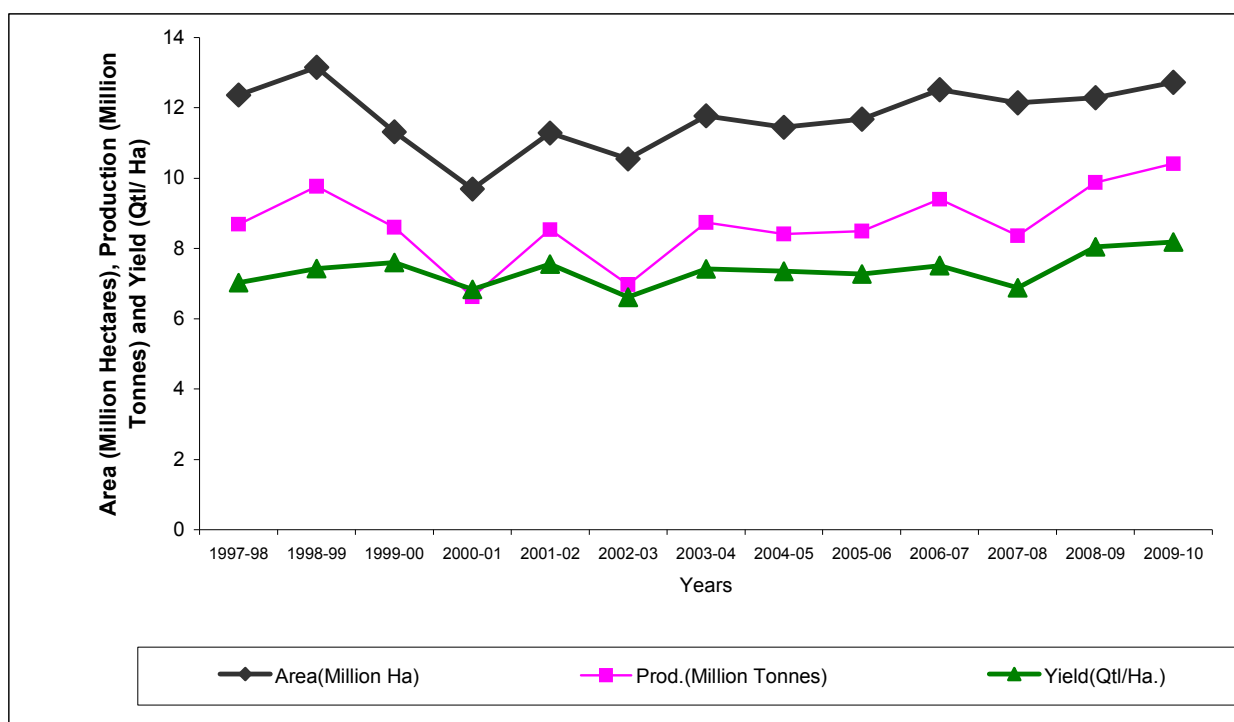
2.28 The total production of pulses during 2008-09 was estimated to reach a level of 14.57 million tonnes, a decrease of 1.29 per cent over the production of 14.76 million tonnes in 2007-08. As per the Third Advance Estimates for 2009-10, the total production of pulses is estimated at 14.77 million tonnes against the target of 16.50 million tonnes (an increase of 0.20 million tonnes over the production of 2008-09). The production has been showing significant year to year fluctuations. The consumption demand of pulses for the period 2010-11 is estimated at 18.29 million tonnes.

2.29 The rabi pulses production during 2007-08 showed a decline of about 11 per cent at 8.36 million tonnes from 9.40 million tonnes in 2006-07. However, during 2008-09, the rabi pulses recorded production of 9.88 million tonnes (an increase of about 18 per cent) over the previous year. However, as per the Third Advance Estimates for 2009-10, the rabi pulses production is estimated at 10.41 million tonnes, an increase of 0.53 million tonnes from the production level of 2008-09.

2.30 The yield level under pulses increased, though with ups and downs, from 473 kg/ha in 1980-81 to 578 kg/ha in 1990-91, and attained the higher yield level at 635 kg/ha in 1996-97, 1999-2000 and 2003-04. While the yield level reduced to 577 kg/ha in 2004-05, it increased thereafter and reached to 659 kg/ha in 2008-09.

2.31 There was, however, a deceleration in the rate of growth of productivity of rabi pulses from 1.48 per cent during 1987-88 to 1997-98 to 0.37 per cent in 1997-98 to 2008-09. During 2009-10 (Third Advance Estimates), the area under rabi pulses shows a marginal increase of 0.43 million hectares over the previous year. The yield during the same period has also exhibited an increase of 0.14 qtl/ha. The trends in area, production and yield in respect of rabi pulses are shown in the Chart 2.

Chart 2: Area, Production and Yield of Rabi Pulses



2.32 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 66.20 percent in 2006-07. The share of rabi pulses decreased substantially to 56.64 percent due to unfavourable weather conditions during 2007-08. However, the share of rabi pulses in terms of total production of pulses increased to 67.81 per cent and 70.48 per cent during 2008-09 and 2009-10 respectively.

2.33 The major pulses growing states are Madhya Pradesh, Maharashtra, Andhra Pradesh, Uttar Pradesh, Gujarat, Karnataka and Rajasthan, contributing about 86 per cent to the production and 84 per cent to the area under pulses in the country during the year 2008-09. The state of Madhya Pradesh is the largest producer of rabi pulses in the country accounting for 30.08 per cent of total production in the year 2009-10 (Third Advance Estimates), followed by Uttar Pradesh (14.22 per cent), Maharashtra (12.52 per cent), Andhra Pradesh (11.49 per cent), Rajasthan (7.37 per cent), Bihar including Jharkhand (5.08 per cent) and Tamil Nadu (1.85 per cent). The State-wise estimates of area, production and yield of pulses in 2009-10 are given in the Table 2.6

Table 2.6 : State-wise Estimates of Area, Production and Yield of Pulses for 2009-10

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

S. No	State	Total Pulses			Rabi Pulses		
		Area	Production	Yield	Area	Production	Yield
1.	Andhra Pradesh	1949	1453	746	1158	1196	1033
2.	Bihar (including Jharkhand)	940	722	768	677	528	780
3.	Gujarat	776	552	711	193	164	850
4	Haryana	155	151	974	113	118	1044
5	Karnataka	2429	1122	462	1083	664	613
6	Madhya Pradesh	4870	3673	754	3837	3132	816
7	Maharashtra	3460	2522	729	1456	1303	895
8	Orissa	725	387	534	175	138	787
9	Punjab	23	20	898	8	8	1000
10	Rajasthan	3403	900	265	946	767	811
11	Tamil Nadu	668	267	401	500	193	386
12	Uttar Pradesh	2495	2000	802	1566	1480	945
13	West Bengal	326	247	757	219	169	773
All India		23388	14771	632	12720	10409	818

Source: Directorate of Economics & Statistics, Ministry of Agriculture, (Third Advance Estimates 2009-10)

2.34 The total production of pulses during 2008-09 at 14.57 million tonnes was lower by 0.19 million tonnes as compared to the production of 2007-08 (a decrease of 1.29 per cent over the production of previous year). The rabi production of 10.41 million tonnes for 2009-10 accounts for 70.48 per cent of the total production of pulses of 14.77 million tonnes for the same period, but it is 5.36 per cent higher than the production of rabi pulses of 2008-09 and also 4.1 per cent higher than the target of 10 million tonnes for 2009-10.

2.35 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.

2.36 While the requirement of water for pulses is much lower than that of most other crops, the importance of irrigation arises from the need to have timely application of water, which a rainfed area may not be able to provide. The expansion

of irrigation facilities and development of technologies suitable for semi arid/arid zones are two important areas, which require the attention of National Food Security Mission.

2.37 The per capita per year net availability of pulses, reduced to half from 22.1 kg in 1951 to 10.7 kg in 2008. It was fluctuating in the range of 22-27 kg during 1950 to 1963 and in the range of 17.6-18.7 kg during 1966 to 1976 and thereafter fluctuating in a low range of 10.7-13.8 kg upto 2007. The production of pulses could not keep pace with the increase in population of the country. This has necessitated large scale import of pulses. 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	1339.45	1777.58	13.27
2005-06	1695.95	2476.25	14.60
2006-07	2270.97	3891.91	17.14
2007-08	2835.06	5374.94	18.96
2008-09	2377.44	5989.76	25.19
2009-10 (Apr-Jan, 2010)(P)	3048.88	8309.76	27.25

Source: DGCI&S, Kolkata, M/o C&I

P: Provisional

2.38 Import prices of pulses during 2009-10 (April-January) also showed significant increase over 2008-09 prices (8.18 percent), which can be attributed to limited availability in the international market. India's position as net importer of pulses, is expected to continue in the coming years also considering land constraints, competition from more remunerative crops, lack of technology breakthrough etc. There is a need to explore long term supply arrangements with suppliers in the world trade in order to ensure the required quantity of imports on sustainable basis. 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 of Pulses

(Million tonnes)						
Crop Year (July-June)	2004-05	2005-06	2006-07	2007-08	2008-09	2009-10
Fiscal Year (April-March)	2005-06	2006-07	2007-08	2008-09	2009-10	2010-11
Gross Production						
Tur	2.35	2.74	2.31	3.08	2.27	2.56
Other kharif pulses	2.37	2.13	2.49	3.32	2.42	1.80
Gram	5.47	5.60	6.33	5.75	7.06	7.38
Other Rabi Pulses	2.94	2.92	3.07	2.61	2.82	3.03
All Pulses	13.13	13.39	14.20	14.76	14.57	14.77
Net Production (87.5% of Gross Production)	11.49	11.72	12.43	12.92	12.75	12.92
Procurement All Pulses (NAFED)	Negligible	Nil	Nil	Nil	Negligible	Nil
Export(FY) All Pulses	0.45	0.25	0.16	0.14	0.03	0.05*
Import (FY) All Pulses	1.70	2.27	2.83	2.38	3.65*	3.65**
Supply (FY)	12.74	13.74	15.10	15.16	16.37	16.52
Consumption Demand		17.38	17.71	16.77	17.51	18.29

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

*: Estimated for the FY 2009-10 based on monthly average of April-January.

** : Projected similar to as in the FY 2009-10.

2.39 The production of pulses during 2009-10 estimated at 14.77 million tonnes shows an increase of 1.37 per cent from 14.57 million tonnes in 2008-09. In order to meet the increasing demand and to stabilize the domestic prices, Government needs to increase the level of imports. The unit value of imports of pulses since 2004-05 has increased by more than 100 percent from Rs. 13.27/kg to Rs.27.25/kg in 2009-10. Considering the above factors, there is an urgent need to improve the productivity and production of pulses by adopting package of practices developed in the research institutions working on pulses.

2.40 The Wholesale Price Index (WPI) of pulses (base 1993-94=100) has been fluctuating widely in recent years. The WPI of pulses decreased from 180.6 in 2002-

03 to 174.4 points in 2004-05. Thereafter, it gained upto 194.9 points (11.8 per cent) in 2005-06 and 254.2 points (30.4 per cent) in the year 2006-07, but dropped to 243.2 points (-4.3 per cent) in 2007-08 and increased to 259.8 points (6.8 per cent) during the year 2008-09 and 333.8 points in 2009-10 (28.5 per cent). There has been a rising trend in Tur, moong, urad and lentil during 2009-10 when compared to 2008-09, except gram which exhibited a declining trend.

2.41 Major portion of the pulses are cultivated in rainfed areas. But the productivity level is low due to its cultivation in marginal soils, aberrant rainfall situations, non-availability of improved quality seed, neglect on input application and poor crop management, inadequate extension and poor credit services. The productivity of pulses in rainfed environment can be enhanced by use of stress tolerant varieties, adoption of site-specific rain water conservation and nutrient management strategies, inclusion of pulses in appropriate rainfed cropping systems and adoption of integrated pest management technologies. To ensure good modulation and nitrogen fixation by pulses in cropping systems, farmers must adhere to (a) use appropriate crop management practices, such as timely planting with suitable farm machinery, application of phosphatic fertilizers or other deficient plant nutrients, (b) participatory seed production programmes on pulses, (c) provision of revolving fund for self-help groups (farm women) involved in the seed production programmes. Pulses production can be increased through area expansion in rainfed rice fallow, intercropping and as summer crop in rice-wheat cropping system. There is a need to provide quality improved seeds of pulses to the farmers by adopting seed village concept with active participation of the farming community. Development of Rural Entrepreneurship by promoting Dal Processing Units in participatory mode through Self-Help-Groups (SHGs) may be encouraged to give better income to the farmers. The Commission reiterates that **concerted efforts have to be made through effective extension services for immediately propagating the pulses varieties and technologies developed in the research organizations to the farmers field.**

2.42 The Commission recommends the MSP for two important rabi pulse crops i.e. Gram and Lentil. The status of these crops in the country is presented below:

Gram

2.43 The production of gram is estimated at 7.38 million tonnes in 2009-10 (Third Advance Estimates), as against the production of 7.06 million tonnes in 2008-09, an increase of 0.32 million tonnes. 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, the growth rate of production was lower at 1.29 per cent per annum during 1997-98 to 2008-09 as compared to 3.71 per cent per annum during 1987-88 to 1997-98. The production of gram increased from 4.96 million tonnes (TE 1987-88) to 5.66 million tonnes (TE 1997-98) and further to 6.38 million tonnes (TE 2008-09). Most of this increase that happened during the TE 1997-98 and TE 2008-09 was mainly in Maharashtra (4.90 lakh tonnes), Karnataka (1.73 lakh tonnes) and Madhya Pradesh (2.51 lakh tonnes). On the other hand, during the same TE period, there was setback in production of gram to the extent of 3.68 lakh tonnes in Rajasthan, 3.53 lakh tonnes in Uttar Pradesh and 2.76 lakh tonnes in Haryana.

2.44 As regards the area under cultivation of gram, it was 68.52 lakh hectares during TE 1987-88. However, the area under gram increased to 71.75 lakh hectares during TE 1997-98 and further increased to 76.43 lakh hectares during TE 2008-09. During this period, Maharashtra registered an increase in gram area of 5.41 lakh hectares and Karnataka 3.35 lakh hectares. By TE 2008-09, the total area under gram was 76.43 lakh hectares, i.e. an increase of 4.68 lakh hectares over TE 1997-98. On the other hand during the same period there was a significant decline in the area under this crop, estimated at 6.17 lakh hectares in Rajasthan, 3.56 lakh hectares in Uttar Pradesh and 2.45 lakh hectares in Haryana. The growth rate of area under gram was 1.65 percent per annum during 1987-88 to 1997-98 and 0.90 percent per annum during 1997-98 to 2008-09, which exhibits a decline in the growth rate in area during the current decade. Apparently there has been a decline in the area of Gram in the northern India (cooler, long season environment) and increase in the area in the central and south India (warmer, short season environment).

2.45 The average productivity of gram which was 684 kg per hectare during TE 1987-88 improved to 789 kg per hectare during TE 1997-98 and to 834 kg per

hectare during TE 2008-09. While the trend in productivity indicated a steady increase in case of Karnataka and Maharashtra, a fluctuating trend could be noticed in the states of Haryana and Rajasthan. For the country as a whole, the growth rate of yield was 2.03 percent per annum during 1987-88 to 1997-98 and declined in 1997-98 to 2008-09 to the level of 0.39 per cent per annum.

Lentil

2.46 The production of lentil which was 9.94 lakh tonnes during 2004-05 declined to 8.12 lakh tonnes in 2007-08, and thereafter increased to 9.53 lakh tonnes during 2008-09. During 2008-09, the production witnessed an increase in the states of Uttar Pradesh, Madhya Pradesh and Rajasthan to the extent of 0.89 lakh tonnes, 0.61 lakh tonnes and 0.07 lakh tonnes respectively when compared with the production of 2007-08. Contrary to this, the production of lentil marginally declined in the states of West Bengal (0.12 lakh tonnes) and Maharashtra (0.02 lakh tonnes).

2.47 Considering the long term trends, there was growth of about 1.71 percent in the production of lentil during 1987-88 to 1997-98, which decreased at the rate of (-) 0.07 percent during 1997-98 to 2008-09. The production of lentil increased from 6.61 lakh tonnes during TE 1987-88 to 8.27 lakh tonnes during TE 1997-98 and further to 8.93 lakh tonnes during TE 2008-09. Most of this increase in output was accounted for by Uttar Pradesh followed by Madhya Pradesh and Bihar. The increase in output was 0.51 lakh tonnes in Uttar Pradesh, 0.23 lakh tonnes in Madhya Pradesh and 0.11 lakh tonnes in Bihar. On the other hand there was setback to the production of lentil to the extent of 0.15 lakh tonnes in Rajasthan and 0.06 lakh tonnes in Haryana. The imports of Lentil (Masur) are given in the Table 2.9.

Table 2.9: Import of Lentil (Masur)

Year	Quantity (000 tonnes)	Value (Rs. crore)
2004-05	26.69	364.32
2005-06	36.11	68.49
2006-07	58.94	106.06
2007-08	230.56	503.70
2008-09	33.21	142.12
2009-10 (Apr-Sep)	31.91	115.57

Source: DGCI&S, Kolkata, M/o C&I

2.48 The growth rate of area was 2.14 percent per annum during 1987-88 to 1997-98 and 0.11 percent per annum during 1997-98 to 2008-09. As regards the area under cultivation of lentil, it was 10.73 lakh hectares during TE 1987-88, 13.06 lakh hectares during TE 1997-98 and further increased to 13.84 lakh hectares during TE 2008-09. During TE 1997-98 to TE 2008-09, Bihar registered an increase in lentil area of 0.14 lakh hectares, Madhya Pradesh 0.27 lakh hectares, Uttar Pradesh 0.48 lakh hectares and West Bengal 0.09 lakh hectares. By TE 2008-09 the total area under lentil was 13.84 lakh hectares, i.e. an increase of 0.78 lakh hectares over TE 1997-98. There was a marginal decline in the area under this crop, estimated at 0.08 lakh hectares in Haryana and 0.12 lakh hectares in Rajasthan during this period, but in Maharashtra, the area under this crop remained stagnant during this period.

2.49 The average productivity of lentil which was 616 kg per hectare during TE 1987-88 improved to 631 kg per hectare during TE 1997-98 and to 645 kg per hectare during TE 2008-09. The level of growth of yield which was (-) 0.43 percent per annum during 1987-88 to 1997-98 has declined and came down to the level of (-) 0.18 per cent in 1997-98 to 2008-09.

2.50 The National Agricultural Cooperative Marketing Federation of India Ltd. (NAFED) is the designated nodal agency for price support operations for pulses. During 2009-10 and 2010-11 rabi marketing seasons, there was no procurement of gram and lentil under price support scheme, since their prices were ruling higher than MSP.

Oilseeds

2.51 Oilseed crops have great significance because of their variety of uses by humans, most important among which is its use as cooking edible oil and as cattle feeds. India is one of the largest producers of oilseed crops in the world. However, its capability to meet domestic consumption demand of edible oils has continuously showed a declining trend which was less than fifty per cent of the requirement in 2009-10. This is primarily because of low productivity levels and rising demand due to rising incomes and population growth thereby necessitating heavy dependence on imports.

2.52 The crops namely rapeseed-mustard, safflower, linseed, groundnut and sunflower are grown in rabi season out of the nine major oilseeds (groundnut, soyabean, sunflower, nigerseed, sesamumseed, castorseed, linseed, rapeseed/mustard and safflower) cultivated in different agro-climatic zones in India. Among these, groundnut and sunflower, which are grown during kharif season, are also cultivated in rabi season. Sunflower produced in rabi season accounts for about three-fourth of its total production. Rapeseed-mustard is the largest crop of the rabi season which accounts for about 71 percent share of the rabi oilseeds production and 26 percent of the total oilseeds production estimated for 2009-10. The rabi oilseeds as per their rankings in area coverage are mainly cultivated in the states of Rajasthan, Uttar Pradesh, Madhya Pradesh, Karnataka, Haryana, Andhra Pradesh, Maharashtra, West Bengal and Gujarat. Among the kharif oilseed crops, groundnut and soyabean accounts for about 88 per cent of the total kharif oilseed production.

(Table 2.1)

2.53 The production of oilseeds declined by 6.85 per cent at 27.72 million tonnes in 2008-09 from the highest production achieved at 29.76 million tonnes during the previous year 2007-08 which was further expected to decline by 2.31 million tonnes (8.3 per cent) at 25.41 million tonnes in 2009-10 (Third Advance Estimates). As against the target of 19.40 million tonnes for 2009-10 kharif oilseeds production, it is estimated at 16.12 million tonnes, to remain short by 3.28 million tonnes (16.9 per cent) and lower by 9.5 per cent from the production achieved in 2008-09. In the case of rabi oilseeds, the production during 2009-10 was anticipated at 9.29 million tonnes, a decline by 0.62 million tonnes (6.3 per cent) over the previous year from 9.91 million tonnes but lower by 23.8 percent from the target of 12.20 million tonnes for 2009-10. The shortfall in the production of kharif oilseeds is further compounded by the lower production estimated for mustard seed, safflower and sunflower in the rabi season. As per the 2008-09 production estimates, India accounts for about 7 per cent of the world oilseeds production and ranks fourth largest producer of oilseeds in the world after China, Brazil and USA. However, due to its low productivity and higher domestic consumption/demand, India has become the largest importer of edible oils in the world.

(Table 2.1)

2.54 The long-term trend in the production of oilseeds has been observed as increasing but with wide ranging inter-year fluctuations. After 1997-98, the production of oilseeds followed a declining path except for the years 1998-99 and 2001-02 and reached the lowest at 14.84 million tonnes in 2002-03, being a drought year. Thereafter, it showed an increasing trend albeit fluctuated between 24.29 million tonnes (2006-07) and 29.76 million tonnes (2007-08) up to 2009-10. Barring 2000-01 and 2002-03, the two deficient years, from 1997-98 to 2009-10, rabi production of oilseeds fluctuated in the range of 7.2 million tonnes (1997-98) to 11.2 million tonnes (2005-06) and had shown an increase in the average production. The production of total oilseeds is given in the Table 2.10.

Table 2.10: Production of Oilseeds

(Lakh tonnes)

Crops	Season	2006-07	2007-08	2008-09 (Final Estimates)	2009-10 (Third Advance Estimates)
1	2	3	4	5	6
Groundnut	Kharif	32.94	73.62	56.17	36.57
Soyabean	Kharif	88.51	109.68	99.05	105.40
Castorseed	Kharif	7.62	10.53	11.71	10.03
Sesamum	Kharif	6.18	7.57	6.40	6.12
Nigerseed	Kharif	1.21	1.10	1.17	1.02
Sunflower	Kharif	3.66	4.63	3.57	2.11
Sub-total	Kharif	140.12	207.13	178.08	161.16
Rapeseed & Mustard	Rabi	74.38	58.34	72.01	65.90
Linseed	Rabi	1.68	1.63	1.69	1.21
Safflower	Rabi	2.40	2.25	1.89	1.55
Sunflower	Rabi	8.62	10.00	8.01	6.99
Groundnut	Rabi	15.69	18.20	15.51	17.26
Sub-total	Rabi	102.77	90.42	99.11	92.91
<i>Grand Total</i>	<i>Kharif + Rabi</i>	<i>242.89</i>	<i>297.55</i>	<i>277.19</i>	<i>254.07</i>

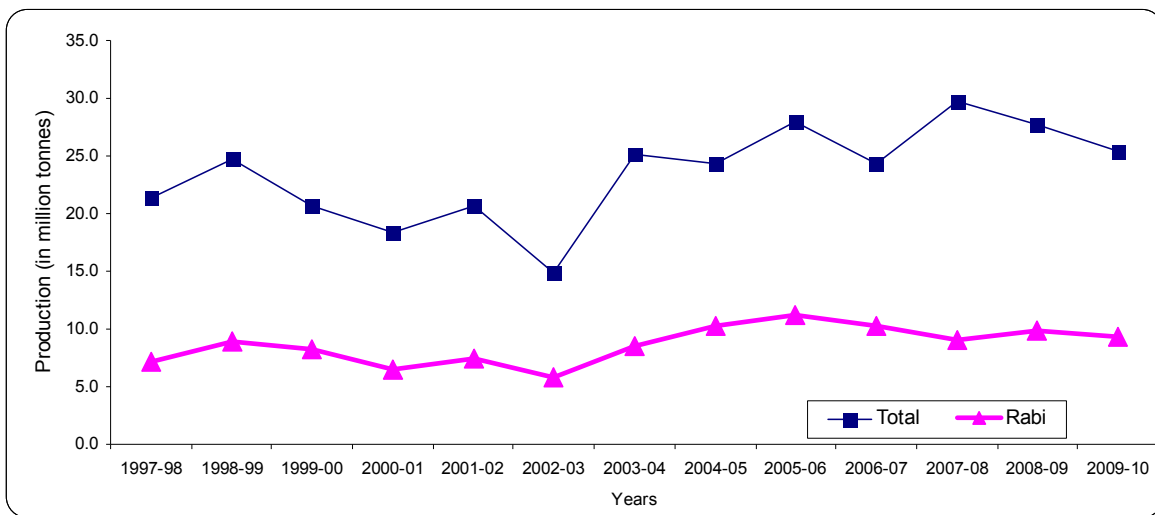
Source: Directorate of Economics & Statistics, Department of Agriculture & Cooperation

2.55 The decadal growth rates in production of total oilseeds during the earlier period (1987-88 to 1997-98) showed better performance compared to the present period (1997-98 to 2008-09). The average annual growth rate in the earlier decade was 4.68 percent per annum as compared to 3.11 percent per annum achieved in the present decade. However, average annual growth rate of rabi oilseeds was marginally higher at 3.29 percent during the present decade (1997-98 to 2008-09) as compared to 2.38 percent achieved in the earlier decade (1987-88 to 1997-98). It

appears that the growth tempo noticed during the Technology Mission on Oilseeds period, could not be sustained in later period due to lack of technology improvement and high yielding seeds suitable to soils in rain-fed areas, limited spread of irrigation and very low/ non-availability of water to irrigate the crops because of receding water levels particularly in the oilseed grown areas. The yearly fluctuations in production clearly indicate the fact that monsoon/weather behaviours may perhaps primarily decide the fate of the oilseeds production. During 2009-10, the production of almost all the oilseed crops except soyabean in kharif and groundnut in rabi had declined due to failure of monsoon and non-conduciveness of weather and also by untimely and uneven distribution of rains and floods occurred in some of the oilseed grown areas. (Tables 2.1 & 2.2)

2.56 The trends in production of total oilseeds and rabi oilseeds are shown in the Chart 3.

Chart 3: Production Trends in Total Oilseeds and Rabi Oilseeds



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

2.57 Similar to the production, the area coverage under total oilseeds was marked with inter-year fluctuations depending upon the monsoon behaviour, availability of irrigated water etc. The area under oilseed crops increased from about 20 million ha in 1987-88 to 27 million ha in 1993-94 during the period when Technology Mission for Oilseeds (TMO) was operational. Since 1994-95, it recorded a decline with ups and downs and touched its low at about 21 million ha in 2002-03, which was a deficient year. Subsequently from 2003-04, it exhibited an increasing trend up to

2008-09 and reached at about 28 million ha except a marginal decline in 2006-07. However, the area coverage is estimated to be down at about 26 million ha (about 5 percent) in 2009-10 due to prevalence of drought (Third Advance Estimates). 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 yield as area increase was marginal (0.7 per cent) while increase in production was substantial (22.5 per cent) due to favourable monsoon with conducive weather except in the case of rapeseed/mustard where both area and yield decreased due to non-conduciveness of weather and shifting of some area to wheat. Like production, the growth rate in area coverage for total oilseeds and rabi oilseeds was 2.36 per cent and 1.99 per cent respectively during 1987-88 to 1997-98 as compared to 1.07 per cent and 0.15 per cent during 1997-98 to 2008-09. The rate of growth in area reduced to more than 50 percent in case of total oilseeds and significantly declined to near static level in the case of rabi season oilseed crops in the current decadal period (1997-98 to 2008-09) from the earlier decade (1987-88 to 1997-98) due to very low growth rate in the area of mustard seed and negative growth for safflower (-6 percent) and groundnut (-2 percent) as shown in the Table 2.11:

Table 2.11 : Area Sown under Total Nine Oilseeds

(In Lakh ha)

	2006-07	2007-08	2008-09	2009-10*
<u>Total Oilseeds</u>	265.13	266.93	275.58	262.18
Total Kharif	167.70	179.49	185.27	179.77
Total Rabi	97.43	87.43	90.31	82.41
Rapeseed/Mustard (Rabi)	67.90	58.26	62.98	57.73
Sunflower	21.65	19.12	18.13	14.86
Kharif	8.60	7.62	6.62	5.59
Rabi	13.04	11.50	11.51	9.27
Safflower (Rabi)	3.77	3.20	2.95	2.66
Linseed (Rabi)	4.37	4.68	4.08	3.43
Groundnut	56.15	62.92	61.65	54.19
Kharif	47.80	53.12	52.86	44.88
Rabi	8.35	9.80	8.79	9.31
Sesamum (Kharif)	17.03	17.99	18.09	20.13
Soyabean (Kharif)	83.29	88.82	95.11	97.92
Nigerseed (Kharif)	4.69	4.08	3.93	3.72
Castor seed (Kharif)	6.28	7.87	8.66	7.52

* Preliminary as per Third Advance Estimates of DES,
Source: DE&S, Ministry of Agriculture.

2.58 The trend in area under nine major oilseeds and rabi oilseeds from 1997-98 to 2009-10 is depicted in the Chart 4:

Chart 4 : Area Coverage under Total Oilseeds and Rabi Oilseeds



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

2.59 Similar to the area and production, the average annual growth rate in productivity of oilseeds during the current period (1997-98 to 2008-09), have been lower at 2.02 percent as compared to 2.27 percent of earlier period (1987-88 to 1997-98) but the rate of reduction in yield is marginal. In the case of rabi oilseeds (Rapeseed/Mustard, Safflower, Sunflower and Groundnut), the average annual growth rate of yield at 3.13 percent has been much better in the present decade than the growth rate of 0.38 percent achieved in the previous decade.

2.60 Widespread differences in yield growth have been observed in the oilseed producing States during the period from 1997-98 to 2008-09 from the All-India composite yield growth rate of 2.02 percent. The annual growth rate of oilseeds yield was highest in the States of Orissa (3.65 percent), Rajasthan (3.58 percent) and Gujarat (3.50 percent), followed by Haryana (2.87 percent), Andhra Pradesh (2.81 percent), Uttar Pradesh (2.59 percent) and Maharashtra (2.06 percent), which were above the national average. Out of these, Orissa, Andhra Pradesh, Haryana and Rajasthan improved a lot in productivity as compared to earlier period of 1987-88 to 1997-98. Though the rate of growth in yield at 1.63 percent of West Bengal is lower

than the national average, the State had gained from (-) 1.15 percent growth rate in the previous period of 1987-88 to 1997-98. The States of Tamil Nadu, Punjab, Karnataka, M.P., Assam and Bihar were trailing behind the national level and their productivity levels deteriorated from the previous period, which is a cause of concern and need to give special emphasis to increase productivity in these States.

2.61 An analysis of the performance of oilseeds during the period of Integrated Scheme of Oilseeds, Pulses, Oil palm and Maize (ISOPOM) operationalised from 2004-05, however, reveals a different growth pattern (based on data from 2004-05 to 2009-10). Average annual growth rate of area, production and yield of total oilseeds was at (-) 0.77 percent, 1.11 percent and 1.89 percent respectively as compared to 1.99 percent, 4.12 percent and 2.09 percent growth achieved in the similar period (1999-2000 to 2004-05) preceding to launch of ISOPOM due to negative yields in Rajasthan, Karnataka, Orissa, Uttar Pradesh, West Bengal and Bihar and reduction of area coverage in Andhra Pradesh, Gujarat, Haryana, Karnataka, Orissa, Punjab, Rajasthan and Tamil Nadu. During the same period, rabi oilseeds depict a more depressed situation than the total oilseeds where during 2004-05 to 2009-10 the growth rate of area was (-) 4.64 percent, production at (-) 2.72 percent and the yield grew at 2.01 percent which offset the area decline to some extent as against the 3.49 percent, 4.61 percent and 1.28 percent growth rate achieved during 1999-2000 to 2004-05. It can be observed from the above analysis that the decline in area during the ISOPOM period was sharp in rabi season (4.64 percent) than the total oilseeds area decline (0.77 percent). The decline in yield and area coverage perhaps could be attributed to deficient/uneven distribution of rains, non-conducive weather and insufficient irrigation due to drying up of tube wells etc.

2.62 Since the ISOPOM could not make any headway in increasing the area, production and productivity of oilseeds in a sustainable way, it has been felt that a Mission Mode Approach separately for oilseeds is the need of the hour for augmenting the production and productivity of oilseeds on a sustainable basis. The proposed Technology Mission for Oilseeds (TMO), should incorporate all oil crops; such as traditional oilseeds, secondary sources, oil palm and tree borne oilseeds into it with provisions of fixing proper monitoring, assured accountability in implementation of the Mission. The Mission Mode approach for oilseeds is likely to

increase the productivity of oilseeds and resultant increased availability of domestic edible oils. Therefore, the Commission reiterates its earlier recommendation that **in order to increase the area, production and productivity of oilseeds as a whole on a sustainable basis enabling increased availability of domestic edible oils, setting up of a Technology Mission for Oilseeds incorporating proper monitoring and assured accountability in implementation of the Mission should be given top priority by replacing the existing Integrated Scheme of Oilseeds, Pulses, Oil palm and Maize (ISOPOM).**

2.63 The productivity levels in India while compared with other producing countries and of the world average yield levels display a disappointing situation, which can be seen from the Table 2.12. The yield of Rapeseed/Mustard stands at 27 percent and 31 percent of the yield levels of Germany and France and about 55 percent of the world average and China. Similarly, the yield levels of Safflower were at about one fourth and one third of the yield of China and USA respectively and about two third of the world average.

Table 2.12: Productivity Levels in Major Producing Countries in 2007-08

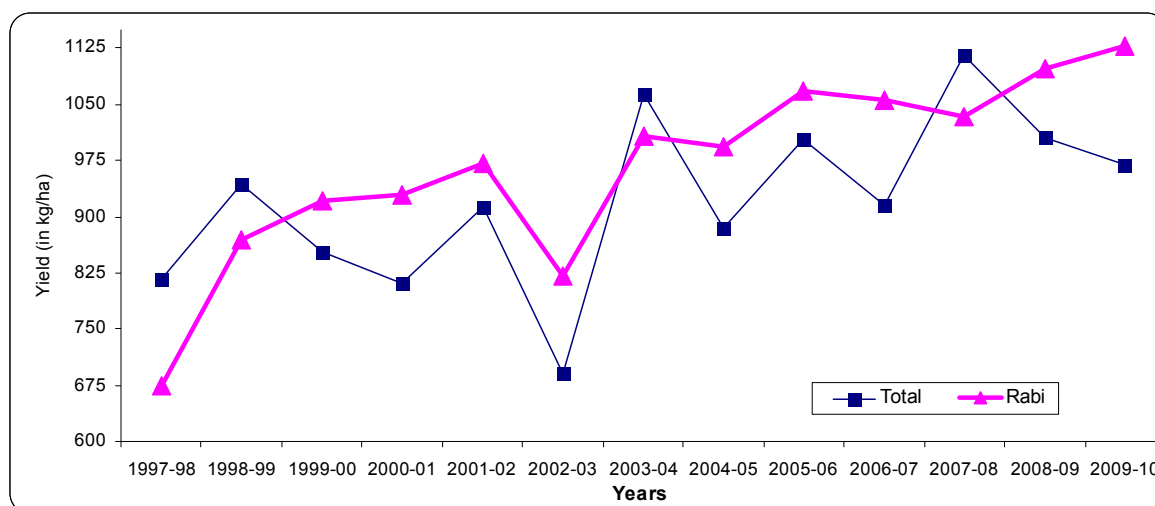
(Yield in kg/ha)

Country	Rapeseed/ Mustard	Safflower
China	1832	2500
Canada	865	-
India	1014	643
Germany	3749	-
France	3319	-
Mexico	-	1483
USA	-	1784
World	1883	890

Source: FAOSTAT

2.64 The movement in the yield levels of oilseeds in the country from 1997-98 to 2009-10 is shown in the Chart 5.

Chart 5: Yield levels of Oilseeds



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

2.65 The factors inter-alia responsible for such lower yield levels of oilseed crops compared to the yields of other major producing countries and from the world average are cultivation in rain-fed conditions and the consequent dependence on rainfall, impact of climate change and global warming, depletion of underground water resulting in lack of water for irrigation, lack of modern farm practices, lack of technology and transfer/upgradation of available technology to farm level, non-availability of quality seeds/hybrid seeds, lack of integrated pest management practices, degradation of soil health and inadequate extension services. Therefore, increased irrigation facilities by way of assured availability of adequate water for irrigation, adoption of research on various aspects of harvest and post-harvest operations and transfer of these to farm level, mechanization of farming, adequate education to farmers and quality extension services would go a long way in improving the yields of oilseed crops in India.

2.66 The wholesale prices of oilseeds as a group have remained subdued for the last two financial years and the same continued in current financial year also. The average rate of increase in wholesale price index (WPI) has continuously declined from 24.1 per cent in 2007-08, 12.8 per cent in 2008-09, 3.7 percent in 2009-10 and 2.7 percent up to May, 2010. The average WPI of oilseeds which was at 218.1 in 2007-08, increased to 245.9, 254.9 and 261.9 in 2008-09, 2009-10 and up to May

2010 respectively but at decreasing rate. While average WPI of all the crops in the oilseeds category showed increase in prices during 2009-10, the same declined in the case of rapeseed/mustard (3.7 percent), sunflowerseed (4.0 percent) and nigerseed (25.5 percent) from their average levels in 2008-09 and also continued to decline up to May 2010. (Table 2.25)

2.67 As against the moderate increase in wholesale price index of oilseeds, the WPI for edible oils during 2009-10 and up to May 2010 decreased by 6.0 per cent as compared to average price increase of 7.4 per cent in 2008-09. The WPI in case of edible oils declined from the average Index at 188.1 for the year 2008-09 to 176.8 in 2009-10 and further to 172.2 up to May 2010. Except a marginal increase (2.4 percent) in the case of sesamum oil, prices declined for all other edible oils but the decrease was more at 10.3 per cent in mustard oil, which has a major share in the cooking oils. The prices of edible oils perhaps declined primarily due to free and cheaper imports of edible oils at zero duty in large quantities. (Table 2.26)

2.68 NAFED has been assigned the role of the procurement agency in case of oilseeds under price support scheme. NAFED during the 2009-10 rabi season has not procured oilseeds under price support scheme as the market prices of rabi oilseeds were ruling above the MSP levels. However, NAFED made commercial purchases of 22515 tonnes of the Mustard seed from Rajasthan, Gujarat, Madhya Pradesh and Punjab as on 21.4.2010.

2.69 The edible oil sector of the country could not keep pace with the increased demand of edible oils (cooking oils) and the gap between domestic availability and consumption demand has been continuously increasing particularly since 2007-08, necessitating large scale imports. The demand and supply situation of edible oils is given in the Table 2.13.

Table 2.13: Total Availability of Edible Oils

(In lakh Tonnes)

Oil year (Nov-Oct)	Production of Oilseeds	Net availability of edible oils from all domestic sources	Gap between domestic supply and total supply (Imports)	Availability/ Consumption of edible oils (domestic+ import sources)
1	2	3	4	5
2001-02	206.63	61.46	43.22	104.68
2002-03	148.39	46.64	43.65	90.29
2003-04	251.86	71.40	52.90	124.30
2004-05	243.54	72.47	45.42	117.89
2005-06	279.79	83.16	42.88	126.04
2006-07	242.89	73.70	42.17	115.87
2007-08	297.55	86.54	56.08	142.62
2008-09	277.19	84.56	81.83	166.39
2009-10@	254.07	80.00	98.00	178.00

Source: Directorate of Vanaspati, Vegetable Oils & Fat
@ Estimated for the whole year

2.70 It can be observed from the Table 2.13 that domestic production of oilseeds and oils had shown wide inter-year fluctuations. Demand for edible oils has been consistently increasing mainly due to increased income, better standards of living and comparative low prices of imported oils. Government, justifiably, has been resorting to imports to meet the domestic consumption demand. Import of edible oils has been increasing substantially since 2007-08 due to widening gap between domestic supply including imports and total requirement. The trend in the imports of vegetable oils/edible oils during the last ten years is shown in the Table 2.14.

Table 2.14: Import of Edible Oils

Year (April-March)	Quantity (in lakh tonnes)	Value (in Rs. crore)	Unit Value (Rs./kg)
2000 - 01	41.77	5976.53	14.31
2001 - 02	43.22	6464.97	14.96
2002 - 03	43.65	8779.64	20.11
2003 - 04	52.90	11683.24	22.08
2004 - 05	47.51	11076.89	23.31
2005 - 06	42.88	8960.99	20.90
2006 - 07	42.69	9539.90	22.34
2007 - 08	49.03	10301.08	21.01
2008 - 09	67.14	15819.01	23.56
2009 - 10	83.34	NA	NA

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

NA: Not Available

2.71 The import duty structure has been reviewed from time to time, keeping in view the likely consumption demand of the edible oils and its domestic availability/supply position. The import duties were drastically reduced to zero level for crude edible oils and 7.5 per cent in the case of refined oils since 1st April 2008 in order to control the price rise. Besides this, export of major edible oils was banned from 17.3.2008 and Government had initiated distribution of one million tonnes of edible oils to States/UTs at a subsidy @ Rs.15/kg which was subsequently enhanced to Rs.25/kg in January 2009, which continued during 2009-10 with a lower rate of subsidy@ Rs.15/kg. Zero import duty on crude palm oil and its distribution at a subsidized price through PDS in the States have placed the domestic oil sector at a disadvantage particularly in the case of mustard oil and groundnut oil in which prices declined consistently since March 2009. Presently when food prices have been increasing at an average rate of about 16 per cent, the prices of edible oils have been declining which is no doubt beneficial to the consumer but place domestic oil sector and farmers at a disadvantageous position. Thus, there is an urgent requirement to review the present import duty structure by the Government. Therefore, the Commission reiterates that **Government needs to review on**

priority, the present import duty structure on edible oils in order to facilitate a level-playing field for the benefit of farmers and domestic oil sector.

2.72 The domestic availability of edible oils in the country for the year 2009-10 has been estimated at 80 lakh tonnes and import of edible oils estimated at 98 lakh tonnes; thus domestic supply accounts for only 44 percent of the consumption demand for edible oils. Continued dependence on imports of edible oils for a large country, like ours may not be a solution of the problem. So, there does not appear to be a better alternative than to enhance the domestic availability of edible oils through augmenting productivity and production of all the oil crops on a sustainable basis.

2.73 International scenario of production, consumption, trade and prices do influence domestic oilseed and oils economy in view of India's status as one of the largest importers of edible oils in the world. Global oilseed production in 2009-10 is forecast to reach at a record 438 million tonnes, an increase of 10.1 per cent from the 2008-09 level, primarily on account of increased area and yield levels in case of soyabeans by favourable weather conditions in South America, United States, Argentina, Paraguay and Brazil (Table 2.15).

Table 2.15: World Production of Major Oilseeds

Crops	(Million tonnes)			
	2007-08	2008-09 estimate	2009-10 forecast	Change 2009-10 over 2008-09
Soyabeans	220.0	211.8	258.3	+22.0
Cottonseed	44.1	41.3	38.9	-5.8
Rapeseed	48.6	58.4	59.7	+2.2
Groundnut (unshelled)	35.4	35.4	32.7	-7.6
Sunflower	29.1	34.2	31.1	-9.1
Palm kernels	11.2	11.6	12.0	+3.4
Copra	5.0	5.2	5.3	+1.9
Total	393.4	397.9	438.0	+10.1

Source: FAO, Food outlook – June 2010

2.74 FAO price indices (Oct-Sep) for oilseeds and oils/fats in 2010 up to May increased from 156 and 144 in 2009 to 159 and 168, an increase of about 2 percent and 17 per cent from the 2009 levels. The factors that contributed to the increase in the prices of oilseeds and oil appear to be the gradual tightening of the global supply

and demand situation and low stock-to-use ratio that persisted in 2009-10. FAO's supply and demand forecast for 2009-10 (October-September) suggests possible firmness in the global prices of oils/fats as world consumption is anticipated to increase by 3.2 per cent and due to constraint in supply and low opening stock, firm mineral oil prices; the prices are expected to remain volatile in the remaining period of 2009-10. However, markets will react subject to several external factors, like weather conditions, national policies, demand from the importing countries, etc.

2.75 Global consumption demand for oil/fat continued to increase by 3.2 per cent, primarily accounted for by increase of food uses in China, India and the other emerging economies in Asia and partly due to non-food uses primarily in the bio-diesel industry.

2.76 The world supply and demand position in respect of oilseeds and products is shown in the Table 2.16.

Table 2.16: World Oilseeds and Products Market

Product	(Million tonnes)			
	2007-08	2008-09 estimate	2009-10 forecast	Change in 2009-10 over 2008-09
Oilseeds	393.4	397.9	438.0	10.1
Oils and Fats	155.9	159.7	168.0	5.1
Supply	180.3	182.8	190.0	3.7
Utilisation	157.0	161.7	167.0	3.2
Trade	80.5	85.1	83.9	0.8
Stock-to-utilisation ratio (%)	14.8	13.6	13.7	0.7
FAO Price Indices (Oct-Sep)	2007-08	2008-09	2009-10	% age change
Oilseeds	217	156	159	2.0
Oils/fats	243	144	168	16.7

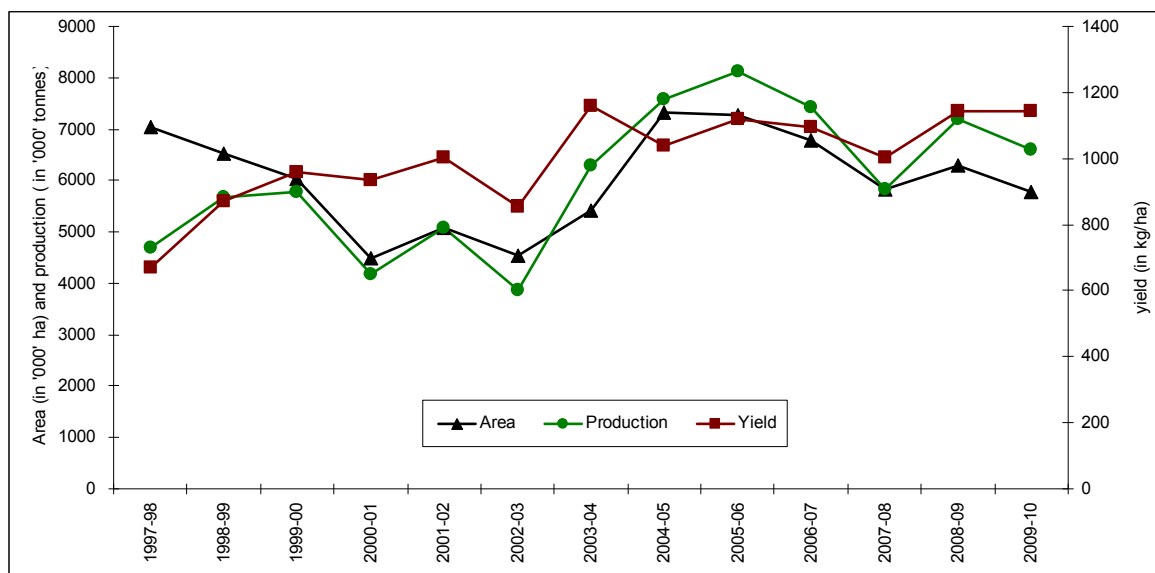
Source: FAO, Food Outlook, June 2010.

2.77 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

2.78 Rapeseed/Mustard plays a prominent role in rabi oilseed crops. Its contribution to the total production of rabi oilseeds is estimated to reduce at about 71 percent in 2009-10 from 74 percent in 2008-09. Similarly its share in the world production is estimated to decline from about 13 percent in 2008-09 to about 10 percent in 2009-10. The State of Rajasthan is leading in terms of area and production of mustard contributing about 41 percent and 46 percent respectively in 2009-10 (Third Advance Estimates). Other major producing states include Uttar Pradesh, M.P., West Bengal, Haryana and Gujarat. The production of mustard has shown sharp fluctuations frequently during 1997-98 to 2009-10 ranging from 38.80 lakh tonnes, the lowest (2002-03, the drought year) to highest 81.31 lakh tonnes (2005-06). After 2005-06, it recorded continuous decline except an increase of 23.4 percent in 2008-09. The production during 2009-10 is estimated to decline by 8.5 percent at 65.90 lakh tonnes from the production of 72.01 lakh tonnes achieved in 2008-09. Area, production and yield under mustard crop have widely fluctuated depending upon the situation of monsoon rains and resultant moisture levels in soil, winter showers, behaviour of weather and availability of water for irrigation. The trend in area, production and yield of mustard from 1997-98 to 2009-10 is given in the Chart 6.

Chart 6: Area, Production and Yield of Rapeseed/Mustard



2.79 During the period 1987-88 to 1997-98, the All-India area, yield and production under rapeseed-mustard had increased at an annual average growth rate of 3.89 percent, 0.22 per cent and 4.12 per cent respectively while in the latter period (1997-98 to 2008-09), the corresponding growth rates were 0.81 percent, 3.34 percent and 4.18 percent. The growth rate of production in the later period witnessed a marginal improvement to the earlier level mainly due to significant increase in yield from 0.22 percent to 3.34 percent but the growth rate of area declined heavily from 3.89 percent to 0.81 percent. The productivity/yield of the crop among the states has been varying. During 2008-09, highest yield was recorded in Haryana (1738 kg/ha), followed by Rajasthan (1234 kg/ha) as against All India average yield of 1143 kg/ha.

2.80 The performance analysis of mustard crop during the ISOPOM period (2004-05 to 2009-10) in comparison with the corresponding previous period (1999-2000 to 2004-05) reveals a negative growth in area (- 4.93 percent) and production (- 3.69 percent) as against 4.19 percent and 6.82 percent growth achieved in the corresponding previous period. However, the yield grew at 1.31 percent but it was also reduced to half from 2.52 percent achieved in the corresponding previous period. This happened due to negative growth rates in area in Rajasthan (8.87 percent), followed by Haryana (7.34 percent) and Gujarat (5.95 percent) and also the negative yields in West Bengal (3.36 percent), M.P.(1.09 percent), Gujarat, (2.52 percent) and Bihar (2.85 percent).

2.81 The Wholesale Price Index (WPI) of rapeseed/mustard which increased by 23.2 per cent in 2008-09 declined by (-) 3.7 percent in 2009-10 and continued to decline in the current year up to May 2010 by (-) 2.1 percent although the supply was less due to low level of production estimated in 2009-10. In case of mustard oil, the WPI decrease was more at average (-) 10.3 per cent in 2009-10 as against the 6.0 percent decrease in all the edible oils combined and also continued to decline by 3.0 percent up to May 2010.

Safflower

2.82 The production in case of Safflower has been declining with some fluctuations mainly due to reduction in its area coverage. The safflower cultivation has been

continuously declining from 9.52 lakh ha (TE 1987-88), 8.71 lakh ha (TE 1997-98) to 3.22 lakh ha (TE 2008-09). The area reduction was more at 4.75 percent per annum during present decade (1997-98 to 2008-09) as against the 3.09 percent per annum reduction in the earlier decade (1987-88 to 1997-98). However, because of increased yield levels at 5.54 percent per annum during 1997-98 to 2008-09, the area decrease was compensated by increase in yield. The crop is being cultivated mainly in the states of Maharashtra and Karnataka. During the same period, the average annual rate of reduction in area was more at 5.73 percent in case of Maharashtra as compared to 4.06 percent in Karnataka but the yield increase at an average 6.91 percent per annum in Maharashtra had offset the area reduction. The prices of safflower, in terms of WPI increased marginally by 1.3 percent during 2009-10 as against the average increase of 14.8 percent in the previous year. Prices of safflower seed remained constant since June 2009 up to May 2010 at 193.8.

(Tables 2.1 & 2.25)

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

CACP has been reviewing comprehensively the cost of production of various rabi crops grown in different regions of the country since it submitted its last Price Policy Report for Rabi crops. Besides, the Commission also held meetings with the State Governments, Farmers' Associations, Central Government Departments and other stakeholders to assess the situation of procurement in different states and procurement made by FCI and also the extent to which the input cost of production of various rabi crops has gone up. The farmers' representatives expressed the view that the recommendations being made by the Commission were required to be made public so that they can better appreciate the nature of these recommendations. It is clarified that these recommendations made by the Commission may not be put in public domain till the Government announces officially minimum support prices based on the CACP's recommendations. It was pointed out by them that in regard to the estimation of cost of production of various crops, the Commission needs to make its cost estimation procedure transparent, given the various levels of cost of cultivation put out by State Governments, farmers, etc. On this issue, it is clarified that the Commission is mandated to use the cost estimates furnished by the Directorate of Economics and Statistics, Ministry of Agriculture, for arriving at the levels of cost state-wise as well as for the country as a whole with a view to price policy formulation. Cost of production data for crops are collected from various states through Agricultural Universities under the Comprehensive Scheme for studying the Cost of Cultivation of Principal Crops. Moreover it needs to be mentioned that the CS data on cost of cultivation/production is continuously generated from a large number of sample operational holdings spread throughout the country.

3.2 There was a demand from the farmers that since the operation of Mahatma Gandhi National Rural Employment Guarantee Act (MNREGA) has caused enormous problem of labour availability for farming operations and has resulted in pressure on agricultural wage, the farmers should be subsidized in cost on account of labour. One of the major problems affecting the agricultural sector was the failure of research and extension services crucial to the production and productivity of the

crop sector. Most of the farmers' representatives argued that there should be Public Private Partnership (PPP) in research and extension services. In response to the introduction of nutrient based subsidy regime, it was pointed out by them that the Government has to initiate programmes on a large scale for amelioration of soil health, and replenishment of nutrients such as gypsum and dolomite through the system of free distribution. It was apprehended by them that nutrient based subsidy policy of the Government would merely lead to the decontrolling of fertilizers sector, and that this would further increase the current level of prices. Agriculture being water stressed, there has to be in place, they expressed, efficient water management system to improve the production and productivity of the agriculture sector. The farmers' representatives mentioned that the MNREGA was required to diversify into production of bio-fertilizers.

3.3 The Commission based on the latest available estimates of 2008-09 has undertaken the exercise to assess the change in the input prices both at the specific input level and at the aggregate level. In order to measure 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.

3.4 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 agree. The average daily wage rate for agricultural labour has gone up by 29.52 percent for Haryana, followed by 26.10 percent for Uttar Pradesh, 22.32 percent for Andhra Pradesh, 20.50 percent for Bihar, 18.46 percent for Assam, 16.68 percent for Kerala during the period May 2009 to May 2010. However, in absolute terms, as per the latest data available upto May 2010 from Labour Bureau, Shimla, the wage rate for Kerala is the highest at Rs.297.77, followed by Haryana, at Rs.182.35, Punjab, at Rs.147.37, Rajasthan, at Rs.145.71, Andhra Pradesh, at Rs.139.14. Majority of the states have shown rapid increase in agricultural wage rate since February, 2010. The extent of percentage increase in

average daily wage rate in all the states ranges between 4.91 percent in Orissa and 29.52 percent in Haryana during the period May 2009 to May 2010.

3.5 The Wholesale Price Indices (WPI) with base 1993-94 = 100 for farm inputs during the period May 2009 to May 2010 reveal that it has dropped by (-)1.93 percent for fertilizers as a whole. However, considering the period from January to May, 2010 it is observed that the prices of fertilizers have gone up by 3.3 percent. The WPI for Light Diesel Oil (LDO) and High Speed Diesel Oil (HSDO) has gone up by 29.20 percent and 15.81 percent respectively. The impact of diesel oil on cost of cultivation is highly visible and it is accounted for in the cost estimates of 2010-11 on two major inputs, namely, machine labour and irrigation charges. Other inputs that have recorded increase during this period are electricity for irrigation purposes (11.33 percent), tractors (9.31 percent), fodder (6.08 percent), non-electrical machinery (4.16 percent). The cattle feed has shown change in the negative terrain in Wholesale Price Index at (-)27.18 percent. This means that there has not been any appreciable increase in prices of cattle feed.

ESTIMATES OF COST OF CULTIVATION AND PROJECTIONS FOR 2010-11 CROP SEASON.

Wheat

3.6 The Commission has received actual estimates of cost of cultivation/production of wheat for 2008-09 for the states of Bihar, Chhattisgarh, Gujarat, Haryana, Himachal Pradesh, Jharkhand, Punjab, Rajasthan, and West Bengal from the Directorate of Economics and Statistics, Ministry of Agriculture. The details of the latest cost estimates of wheat and those for the preceding year of 2007-08 are given in Table 3(A). As is evident from Table 3(A), C2 cost of cultivation has recorded an increase in all the states for the year 2008-09, excepting the state of Himachal Pradesh where it has recorded decline by (-)39.10 percent compared to the preceding year of 2007-08. The decrease in cost of cultivation per hectare in Himachal Pradesh for the year 2008-09 occurred alongwith substantial decrease in yield by (-) 52.30 percent. The per quintal cost of production (C2) has gone up by 40.40 percent in Himachal Pradesh. Other states which have suffered on account of

decrease in yield level in the year 2008-09 vis-à-vis 2007-08 are Gujarat, Punjab, and West Bengal. Their respective yield losses are (-)14.70 percent, (-)14.29 percent, and (-)15.25 percent. The states of Bihar, Haryana, Chhattisgarh, Jharkhand, Rajasthan which have recorded increase in their respective levels of yield in the year 2008-09, compared to the preceding year have not recorded decrease in their per quintal cost of production during the same period due to substantial increase in per hectare cost of cultivation. The implicit price for wheat as compiled from the CS estimates for the year 2008-09 hovers around Rs.1000 per quintal.

3.7 In order to arrive at the likely cost of production of wheat in different wheat growing states for the ensuing season 2010-11, the Commission has as usual adopted the base level cost data generated under the Comprehensive Scheme for the latest 3 years ending 2008-09. 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 movement of input prices being crucial to estimating cost of production per quintal for the year 2010-11, 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 2010-11 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+FL) per quintal and overall cost (C2) 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 (per qtl)
Bihar	2007-08	11457	16738	417.45	609.28	681.92	23.90	936.27	1000
	2008-09	13971	19789	477.45	673.44	745.04	25.59	925.87	1080
Chattisgarh	2007-08	9180	14964	589.18	962.61	1077.97	13.03	1080.68	1000
	2008-09	11190	17776	659.49	1039.66	1158.12	14.56	1136.85	1080
Gujarat	2007-08	14731	21608	396.8	581.12	639.23	35.79	1010.48	1000
	2008-09	16044	22869	504.15	717.70	789.47	30.53	1070.28	1080
Haryana	2007-08	17873	32380	371.69	673.46	754.68	41.99	999.81	1000
	2008-09	20063	37451	383.99	716.55	804.15	45.66	1079.49	1080
Himachal Pradesh	2007-08	13976	23926	504.90	866.86	953.55	18.93	971.21	1000
	2008-09	9064	14570	757.68	1217.08	1436.50	9.03	1022.41	1080
Jharkhand	2007-08	14102	16099	1135.95	1292.45	1421.70	10.73	955.89	1000
	2008-09	16233	20105	1123.36	1390.97	1530.07	12.92	1008.28	1080
Punjab	2007-08	17122	32827	337.94	647.95	723.93	46.47	1000.58	1000
	2008-09	17946	35423	408.63	804.80	892.22	39.83	1095.88	1080
Rajasthan	2007-08	16732	25729	424.08	649.77	714.75	33.39	1035.02	1000
	2008-09	19119	29876	437.62	683.58	757.28	37.19	1101.08	1080
West Bengal	2007-08	18856	25981	708.37	975.17	1085.35	24.92	926.59	1000
	2008-09	20925	27266	923.87	1204.73	1325.20	21.12	991.19	1080

3.8 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 2010-11 is projected to Rs.566.29, Rs.1006.67, Rs.525.62, Rs.443.10, Rs.628.90, Rs.1246.08 , Rs.548.07, Rs.471.10, Rs.498.21, Rs.569.84 and Rs.851.78 per quintal for Bihar, Chhattisgarh, Gujarat, Haryana, Himachal Pradesh, Jharkhand, Madhya Pradesh, Punjab, Rajasthan, Uttar Pradesh and West Bengal respectively. The average projected unit cost of production (C₂) of wheat in these states works out to Rs.762.08, Rs.1364.35, Rs.717.19, Rs.736.69, Rs.1089.11, Rs.1442.26, Rs.925.21, Rs.801.28, Rs.744.44, Rs.876.06 and Rs.1123.40 respectively. The weighted average projected cost of production of wheat for 2010-11 for all these states works out to Rs.527 on A₂ + FL basis and Rs.826 on C₂ cost basis.

[(Tables 3.3, 3.4 and 3 (G))]

BARLEY

3.9 The cost estimates of barley for 2008-09 became available for the state of Rajasthan. As is observed from Table 3 (B), the cost of cultivation/production for the

state of Rajasthan is given for the years 2007-08 and 2008-09. The per hectare cost of cultivation has shown increase by 9.25 percent in respect of Rajasthan for the year 2008-09 as against 2007-08. It is remarkable that the yield level has increased from 29.81 quintals per hectare in 2007-08 to 33.36 quintals per hectare in 2008-09, thus registering an increase by 12.92 percent. This increase in yield has resulted in decline in per quintal cost of production by (-)8.16 percent. The implicit price for barley for the year 2008-09 is estimated at Rs.816.37 per quintal.

Table 3 (B): Cost Estimates for Barley

(In Rupees)

State	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 (per qtl)
Rajasthan	2007-08	14546	22806	405.27	632.04	695.24	29.81	1064.18	650
	2008-09	16535	24915	384.64	580.46	643.30	33.66	816.37	680

3.10 The projected estimates for Uttar Pradesh for the year 2010-11 were made based on 2007-08 estimates. The average A₂ +FL cost of barley for 2010-11 is projected at Rs.434.84 per quintal for Rajasthan and Rs.539.56 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.629.79 and Rs.764.36 per quintal respectively. The all-India weighted average cost of production of barley for 2010-11 works out to Rs.472 on A₂ +FL basis and Rs.677 per quintal on C₂ cost basis.

[Tables 3.6, 3.7 &3(G)]

Gram

3.11 The cost estimates of gram for 2008-09 have been made available for the states of Andhra Pradesh, Bihar, Chhattisgarh, Haryana, Jharkhand, Karnataka, Maharashtra, and Rajasthan. Table 3(C) gives the details of cost of cultivation/production of the above states for gram for two consecutive years of 2007-08 and 2008-09. The Table 3(C) provides contrasting performances in yield levels of different states, with the states of Andhra Pradesh, Bihar, Jharkhand, Karnataka, Maharashtra showing appreciable increase in yield levels between 17.43

percent for Jharkhand and 172.60 percent for Haryana. The yield increase for Haryana for the year 2008-09 compared to 2007-08 has to be seen in the context of the lowest yield levels ranging between 2-6 quintals per hectare in comparison to other states. Haryana's is a case of increase in yield from 2.19 quintals per hectare in 2007-08 to 5.97 quintals per hectare in 2008-09. Other states that recorded decline in yield levels are Chhattisgarh (18.02 percent), Maharashtra (15.62 percent), Rajasthan (3.80 percent). The per quintal cost of production has gone up for Andhra Pradesh by 13.74 percent even with the increase in yield level of 26.44 percent. This can be explained by the fact that the increase in per quintal cost of cultivation has not been compensated for by the increase in yield level. Bihar has shown increase in yield level of 55.80 percent that resulted in decrease in per quintal cost of production by (-)19.79 percent. Jharkhand's is a case where the increase in yield by 17.43 percent has not decreased per quintal cost of production and this can be explained by the disproportionate increase in cost of cultivation.

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 (per qtl)
Andhra Pradesh	2007-08	9859	18119	746.01	1370.76	1507.84	13.20	2091.66	1600
	2008-09	14422	26762	841.62	1559.04	1717.61	16.69	2198.38	1730
Bihar	2007-08	6402	11078	750.92	1299.76	1435.94	8.22	2817.01	1600
	2008-09	8292	13666	631.92	1042.52	1160.36	12.81	2139.37	1730
Chhattisgarh	2007-08	6672	13936	508.09	1061.68	1188.89	12.75	2076.13	1600
	2008-09	9582	15673	866.69	1417.82	1564.28	10.43	1881.56	1730
Haryana	2007-08	5510	8544	2257.05	3479.70	4055.45	2.19	3817.09	1600
	2008-09	6504	13062	978.61	1967.71	2222.49	5.97	2200.12	1730
Jharkhand	2007-08	5599	7384	978.28	1290.27	1419.30	5.45	2974.55	1600
	2008-09	7036	10882	1056.24	1635.06	1798.57	6.40	2756.87	1730
Karnataka	2007-08	7625	11281	1048.62	1545.75	1708.05	7.10	2264.08	1600
	2008-09	9875	14371	1113.59	1619.93	1781.92	8.74	2159.75	1730
Maharashtra	2007-08	10657	15678	1097.53	1614.12	1775.53	9.54	2311.43	1600
	2008-09	12986	18679	1583.86	2277.68	2505.45	8.05	2257.88	1730
Rajasthan	2007-08	8693	13954	1133.74	1817.84	2013.46	7.10	2569.39	1600
	2008-09	8553	12611	1151.33	1691.66	1865.72	6.83	2308.78	1730

3.12 The average A_2+FL costs of gram are projected for 2010-11 at Rs.1030.46, Rs.942.16, Rs.865.46, Rs.1168.00, Rs.1283.64, Rs.1395.81, Rs.1129.85, Rs.1640.34, Rs.1210.65 and Rs.1312.42 for Andhra Pradesh, Bihar, Chhattisgarh, Haryana, Jharkhand, Karnataka, Madhya Pradesh, Maharashtra, Rajasthan and Uttar Pradesh respectively. The corresponding C_2 costs are projected at Rs.1750.60, Rs.1454.86, Rs.1404.03, Rs.1890.39, Rs.1700.56, Rs.1905.71, Rs.1830.66, Rs.2334.74 Rs.1806.09, and Rs.2029.45 per quintal respectively. The weighted average cost of production of gram works out to Rs.1233 per quintal on A_2+FL basis and Rs.1902 per quintal on C_2 cost basis for the year 2010-11.

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

Lentil (Masur)

3.13 The estimates of cost of cultivation of lentil became available for 2008-09 in respect of Bihar and Jharkhand. From Table 3(D) it is observed that the cost of production per quintal for Bihar has increased by 19.48 percent followed by 8.48 percent for Jharkhand. The yield level has shown decline by (-)12.74 percent for Bihar in contrast to appreciable increase in yield by 22.89 percent for Jharkhand. The implicit price for lentil is on average Rs.2911 per quintal for the year 2008-09.

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

(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 (per qtl)
Bihar	2007-08	5453	10676	616.02	1206.57	1338.46	8.40	2444.10	1700
	2008-09	5226	10900	691.22	1441.61	1587.47	7.33	2831.34	1870
Jharkhand	2007-08	4573	6670	766.54	1118.89	1230.78	5.68	2447.91	1700
	2008-09	3648	8809	502.95	1213.78	1335.16	6.98	2991.29	1870

3.14 The A_2+FL cost per quintal of lentil is projected for 2010-11 at Rs.830.93, Rs.789.94, Rs.1075.03, and Rs.1528.61 for Bihar, Jharkhand, Madhya Pradesh and Uttar Pradesh, respectively. The C_2 costs for these states have been projected at Rs.1456.09, Rs.1501.54, Rs.2362.88 and Rs.2336.55 respectively. The weighted average cost of production of lentil works out to Rs.1268 per quintal on A_2+FL basis and Rs.2191 per quintal on C_2 cost basis for the year 2010-11.

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

Rapeseed/Mustard and Safflower

3.15 The estimates of Rapeseed/Mustard have become available for the states of Assam, Gujarat, Haryana, and Rajasthan, for the year 2008-09. Table 3(E) gives comparative cost estimates of Rapeseed/Mustard for the above states for the period 2007-08 to 2008-09. From this table it is observed that Assam has experienced yield loss of (-)10.51 percent together with Gujarat, which has experienced yield loss of (-)34.33 percent during this period. The states that have shown increase in yield are Haryana and Rajasthan, with Haryana reporting increase by 25.96 percent and Rajasthan, by 10.89 percent.

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 (per qtl)
Assam	2007-08	9693	12175	1591.15	1998.81	2198.69	6.09	1727.39	1800
	2008-09	10537	13510	1933.44	2478.94	2726.83	5.45	2377.16	1830
Gujarat	2007-08	9997	18133	560.26	1016.22	1117.84	17.68	2521.69	1800
	2008-09	13741	19084	1159.38	1610.40	1771.44	11.61	1968.58	1830
Haryana	2007-08	12924	23889	754.15	1396.05	1535.66	15.83	2228.04	1800
	2008-09	14715	27508	669.14	1251.12	1376.30	19.94	1932.35	1830
Rajasthan	2007-08	9614	16892	758.61	1332.63	1465.89	12.21	2549.14	1800
	2008-09	11386	19260	791.34	1341.29	1493.96	13.54	2136.28	1830

3.16 The estimated costs of production of Rapeseed/Mustard for states for which latest estimates are available have been projected for 2010-11. As can be seen from Table 3 (G), the overall A₂+FL cost per quintal varies widely between states and it varies between Rs.856.45 per quintal for Rajasthan and Rs.2049.67 per quintal for Assam. The comparatively increased A₂+FL cost for Assam results from comparatively low yield in this state i.e. 5 to 7 quintals per hectare. The projected per quintal A₂+FL cost for the states of Assam, Gujarat, Haryana, Madhya Pradesh, Rajasthan and Uttar Pradesh are put at Rs.2049.67, Rs.966.14, Rs.960.50, Rs.887.57, Rs.856.45 and Rs.1124.96 respectively. The per quintal C₂ cost projected for these states are Rs.2495.56, Rs.1376.20, Rs.1537.27, Rs.1580.67,

Rs.1403.73, and Rs.1751.29 respectively. All India weighted average A₂+FL cost works out to Rs.950 per quintal and C₂ cost works out to Rs.1520 per quintal.

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

3.17 The latest cost estimates for Safflower pertaining to 2008-09 are available for Maharashtra and Karnataka. Table 3 (F) furnishes the comparative estimates of cost of cultivation for the states of Karnataka and Maharashtra for the years 2007-08 and 2008-09. From the table it is observed that the yield rates of these two states are more or less close to each other, with Maharashtra recording increase in yield by 37.32 percent and Karnataka, by 4.57 percent. The implicit price for safflower compiled based on actual CS estimates works out to Rs.1988 per quintal in the state of Karnataka and Rs.2362 per quintal for Maharashtra. As far as cost of production for these two states is concerned, Maharashtra has shown a decline in cost of production by (-)14.02 percent due to increase in yield. Karnataka's is a case where increase in yield has not been accompanied by decrease in cost of production and it has shown an increase by 13.20 percent.

Table 3 (F): Cost Estimates for Safflower

States	Years	(in Rupees)							
		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 (per qtl)
Karnataka	2007-08	5221	7896	840.03	1269.53	1430.78	6.13	1605.52	1650
	2008-09	5680	9232	884.55	1437.14	1580.85	6.41	1987.97	1650
Maharashtra	2007-08	8965	12160	1600.96	2169.62	2386.58	5.60	2608.38	1650
	2008-09	9780	14382	1268.43	1865.36	2051.90	7.69	2361.88	1650

3.18 The estimated cost of production for safflower has been projected for 2010-11 to an average of Rs.1537 and Rs.2038 per quintal on A₂ + FL and C₂ cost basis respectively.

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

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

3.19 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 (H) for comparison.

3.20 The states of Bihar, Chhattisgarh, Gujarat, Haryana, West Bengal, and Maharashtra, have provided cost of production/cultivation estimates for wheat for the year 2008-09. These estimates received from the states have been compared with the CS estimates state-wise to determine the differences in the levels of cost of production, yield, etc. Bihar state estimate of cost of production stands at Rs.1148 per quintal against which CS estimate is put at Rs.673 per quintal. The difference in cost of production is a methodological difference in arriving at cost of production, given the closeness of yield levels given by the two different data sets. Similar is the case for other states like Chhattisgarh, Gujarat, Haryana where CS estimates of per quintal cost of production are far lower than those given by the respective states. With regard to West Bengal, it is noted that the difference in cost of production between CS estimates and those given by the state is a difference in the reported levels of yield in the two data sets. The state of West Bengal has reported per quintal cost of production of Rs.1017 with yield of 28.57 quintals per hectare and CS estimates, Rs.1205 per quintal with yield of 21.12 quintals per hectare.

3.21 The states of Bihar, Chhattisgarh, Haryana, Maharashtra have furnished the cost estimates for Gram for the year 2008-09. Compared with the corresponding cost estimates under CS, it is observed that only in the case of Maharashtra the state reply furnishes the cost estimate of Rs.1675 per quintal and CS estimates, the cost estimate of Rs.2278 per quintal. It is seen that the cost of production is higher on the side of CS estimates despite its comparatively higher yield than given in the state reply at 6.24 quintals per hectare. The remaining states in their respective replies have furnished higher cost of production relative to those given in the CS estimates.

3.22 The state of Bihar has furnished the cost estimates for lentil for the year 2008-09. The per quintal cost of production in the state reply is put at Rs.2141 against which the CS estimate is Rs.1442. Comparing two data sets for Bihar for lentil it is seen that state reply has furnished both higher yield level and higher cost of production vis-à-vis CS estimates.

3.23 In respect of rapeseed and mustard, Gujarat and Haryana have furnished their replies containing the cost of production figures for the year 2008-09. Gujarat's is a case where cost of production figure given in the state reply stands at Rs.1511 compared to Rs.1610 given in the state reply. This is due to the higher yield reported by the state of Gujarat at 16.20 quintals per hectare, compared to 11.61 quintals per hectare in the CS estimates. Haryana provides cost of production estimates at Rs.2392 per quintal for which no yield figure is available. The comparable CS estimate for Haryana is Rs.1251 for 2008-09 with the yield level of 19.94 quintals per hectare.

3.24 Maharashtra's state reply for safflower has put the cost of production figure at Rs.1460 per quintal and the corresponding CS estimates stand at Rs.1865 per quintal. This difference is higher on the side of CS estimates and can be partly explained by lower yield given in the CS estimates at 7.69 quintals per hectare as against 8.19 quintals per hectare in the state reply.

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 Bihar, Haryana, Punjab and Maharashtra for the year 2010-11. 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 Table 3 (I). The projected cost of production of wheat given in the state reply is Rs.1092 per quintal compared to Rs.762 per quintal in CACP's projection. Similarly, for Haryana and Punjab, the projected costs of production for 2010-11 given in the state replies are Rs.1038 per quintal and Rs.1053 per quintal against which the CS estimates stand at Rs.737 per quintal and Rs.801 per quintal respectively. Even though the yield levels given in these two data sets are more or less close to each other in respect of these two states, the projected costs of these two states in the state replies vary from those made in the CACP. This is largely a matter of difference in projection methodology adopted.

3.26 In regard to gram, the cost projections in the state replies of Bihar and Haryana for 2010-11 are given at Rs.2189 per quintal and Rs.2331 per quintal respectively, against which CACP's projections are Rs.1466 per quintal and Rs.1890 per quintal respectively. In regard to Maharashtra, CACP's projection of cost of production is higher at Rs.2335 per quintal against Rs.2037 per quintal projected and given in the state reply.

3.27 Haryana has provided projection of cost of production for rapeseed and mustard in its state reply for 2010-11, in comparison to which CACP's projection is available. CACP's projection stands at Rs.1537 per quintal, and that given in the state reply stands at Rs.2072 per quintal. For lentil, Bihar has given projection for cost of production at Rs.2055 per quintal and CACP projection stands at Rs.1456 for 2010-11.

Inter Crop Price Parity

3.28 It is imperative that there be judicious allocation of area among different crops for the balanced pattern of cultivation of crops. Therefore, care has to be taken to see that inter-crop price parity is preserved by way of MSP differentials among crops having more or less the same difference in their respective per hectare returns. The Wholesale Price Index (WPI) with base 1993-94=100 for all commodities has gone up by 10.2 percent for the month ending May 2010 over the corresponding month of the previous year. In the overall inflation of about 10.2 percent for the month ending

May 2010, the foodgrains inflation is pegged at 9.6 percent. The increase in WPI for wheat during 2009-10 was 10.7 percent over previous year. For the month ending May 2010, the increase in WPI is 4.5 percent for wheat over the corresponding month of previous year. The inflation for pulses upto the month ending May 2010 is 32.4 percent over the corresponding month of the previous year. The extent of inflation in pulses in terms of wholesale price index may be seen in the context of increase in the estimated cost of production of two rabi crops of gram and lentil for the ensuing season 2010-11. It is seen that the cost escalation estimated for these two rabi crops for the year 2010-11 is 15.92 percent for gram and 34.78 percent for lentil. The prices of rapeseed and mustard as also that of all oilseeds have not risen high since the beginning of the year 2009-10. However, cost of production of rapeseed and mustard at all-India level is estimated to increase by 9.11 percent for the year 2010-11. Considering the net returns per hectare of different rabi crops grown in the last crop season, it has been found that net returns based on MSP of 2009-10 are Rs.9831 per hectare for wheat, followed by Rs.6268 per hectare for rapeseed and mustard, Rs.4163 per hectare for barley, Rs.1895 per hectare for lentil, Rs.1013 per hectare for gram.

Terms of Trade

3.29 There has been deterioration in terms of trade for agriculture vis-à-vis 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 declined further until the year 1994-95 when it rose to 106.6. Since then it has dipped to around 101-103 excepting the years 1997-98 and 1998-99 – the years in which ITT recovered considerably well showing on an average 105. According to the figure released by the Directorate of Economics & Statistics, the index of terms of trade is provisionally fixed at 102.0 for the year 2006-07, up from 101.9 for the year 2005-06. This is corroborated by decline in input-output price parity index to 99.9 in 2006-07 from 102.7 in 2005-06. The drop of 2.8 basis points in input output price parity index during the period 2005-06 to 2006-07 shows that the input use efficiency has performed well relative to the value of output.

(Appendix I & II)

Restructured cost of production

3.30 In spite of Government having approved the inclusion of 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 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. The all-India projected cost of production for Rabi Crops for 2010-11 has been derived and given in the Table 3(J).

Table 3 (J): Estimated Cost of Production for Rabi Crops for 2010-11, inclusive of Marketing/Transportation and Crop Insurance Premium (All India)
(Rs./quintal)

Crop	Project ed C ₂ Cost of Product ion	Estimated Cost of Marketing	Estimated Cost of Transportati on	Estimated Cost of Crop Premium	Modified Cost *
Wheat	826.29	3.50	12.55	31.65	874
Rapeseed/ Mustard	1519.88	3.50	12.55	27.06	1563
Gram	1902.19	3.50	12.55	20.16	1938
Lentil	2191.41	3.50	12.55	24.03	2232
Safflower	2037.67	3.50	12.55	19.92	2074
Barley	677.19	3.50	12.55	7.75	701

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

3.31 The modified cost that includes the additional charges on account of marketing, transportation, and crop insurance premium shows that the C₂ cost of production stands at Rs.874 per quintal for wheat, Rs.1563 per quintal for

rapeseed/mustard, Rs.2234 per quintal for gram, Rs.2232 per quintal for lentil, Rs.2074 per quintal for safflower and Rs.701 per quintal for barley. The additional charges on account of transportation, marketing and crop insurance, as given in the state reply do vary across states and also across crops. It so happens that the states giving the information on these charges do not report regularly and also not uniformly. And therefore, while taking weighted average of state level figures, the all-India figures for different crops, particularly in regard to crop premium varies between what the Commission submitted in the last report and the current report for the year 2010-11.

Cost of Production and Minimum Support Prices

3.32 One of the major determinants in arriving at Minimum Support Prices (MSP) is the cost of production. The Commission is concerned about the views more often 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 provide a floor, which protects farmers against actual loss. At all India level, estimated increase in the overall (C_2) cost of production is 17.94 percent for wheat, 11.38 percent for barley, 15.92 percent for gram, 34.78 percent for lentil, 19.11 percent for rapeseed/mustard and 8.14 percent for safflower during the year 2010-11.

Table – 3(G)

Projected Cost of Production of Rabi Crops (Rs./Qtl)

Crops/ States	Base Year	Composite Variable Input Price Indices			Projections for 2010-11 (Revised Method – Using three year averages)		
		2008-09	2009-10	2010-11	Yield (qtl/hec)	A ₂ +FL	C ₂
1	2	3	4	5	6	7	8
WHEAT							
Bihar	01-02	154.57	160.61	174.15	23.33	566.29	762.08
Chhattisgarh	02-03	138.55	142.83	219.08	13.99	1006.67	1364.35
Gujarat	01-02	147.40	150.16	159.56	32.66	525.62	717.19
Haryana	01-02	154.27	157.10	164.93	42.47	443.10	736.69
Himachal Pradesh	01-02	140.79	142.57	148.26	15.84	628.90	1089.11
Jharkhand	02-03	158.21	162.06	168.36	11.86	1246.08	1442.26
Madhya Pradesh	01-02	179.45	187.21	202.39	23.72	548.07	925.21
Punjab	01-02	158.46	165.30	188.21	42.80	471.10	801.28
Rajasthan	01-02	154.49	161.63	170.88	35.68	498.21	744.44
Uttar Pradesh	01-02	172.89	173.72	192.34	33.35	569.84	876.06
West Bengal	05-06	123.50	123.29	125.12	22.51	851.78	1123.40
Weighted Average						527.08	826.29
BARLEY							
Rajasthan	01-02	169.88	176.61	186.45	32.94	434.84	629.79
Uttar Pradesh	01-02	163.81	171.58	190.91	29.25	539.56	764.36
Weighted Average						471.73	677.19
GRAM							
Andhra Pradesh	05-06	153.29	156.31	163.72	14.16	1030.46	1750.60
Bihar	01-02	154.62	164.20	176.90	9.59	942.16	1454.86
Chhattisgarh	02-03	171.27	180.21	202.05	10.99	865.46	1404.03
Haryana	01-02	186.25	197.97	214.97	6.37	1168.00	1890.39
Jharkhand	02-03	153.27	156.34	160.45	5.52	1283.64	1700.56
Karnataka	06-07	121.18	131.43	142.52	7.49	1395.81	1905.71
Madhya Pradesh	01-02	177.33	184.16	198.68	9.57	1129.85	1830.66
Maharashtra	02-03	173.70	187.57	192.24	8.54	1640.34	2334.74
Rajasthan	01-02	162.03	168.86	178.18	8.14	1210.65	1806.09
Uttar Pradesh	01-02	160.67	160.80	168.65	9.68	1312.42	2029.45
Weighted Average						1233.29	1902.19
(Contd...)							

Table – 3(G) (Contd...)

Projected Cost of Production of Rabi Crops (Rs./Qtl)

LENTIL (MASUR)							
Bihar	01-02	148.59	168.59	185.39	8.37	830.93	1456.09
Jharkhand	02-03	150.50	153.79	157.95	5.97	789.94	1501.54
Madhya Pradesh	01-02	157.56	162.25	173.27	7.95	1075.03	2362.88
Uttar Pradesh	01-02	168.88	182.71	199.81	8.43	1528.61	2336.55
Weighted Average						1268.25	2191.41
RAPSEED & MUSTARD							
Assam	01-02	155.90	166.75	178.04	5.90	2049.67	2495.56
Gujarat	01-02	144.04	152.77	162.57	14.66	966.14	1376.20
Haryana	01-02	157.07	158.89	165.94	16.54	960.50	1537.27
Madhya Pradesh	01-02	147.88	151.30	163.74	11.75	887.57	1580.67
Rajasthan	01-02	157.72	162.09	168.58	13.43	856.45	1403.73
Uttar Pradesh	01-02	153.00	155.16	169.84	12.36	1124.96	1751.29
Weighted Average						950.21	1519.88
SAFFLOWER							
Maharashtra	01-02	183.26	196.72	206.87	6.93	1537.22	2037.67
Weighted Average						1537.22	2037.67

Table – 3(H)

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							
Bihar	2009-10	NA	32984	NA	28.00	NA	1178
	2008-09	19789	32144	25.59	28.00	673	1148
Chhattisgarh	2009-10	NA	49250	NA	29.20	NA	1687
	2008-09	17776	28394	14.56	16.70	1040	1701
Gujarat	2008-09	22869	30190	30.53	32.29	718	935
Haryana	2009-10	NA	56009	NA	46.25	NA	1211
	2008-09	37451	53199	45.66	46.14	717	1153
Maharashtra	2009-10	NA	21501	NA	18.16	NA	1267
	2008-09	31425	19355	23.90	16.86	1276	1110
West Bengal	2008-09	27266	29066	21.12	28.57	1205	1017
Gram							
Bihar	2009-10	NA	32634	NA	14.00	NA	2331
	2008-09	13666	31192	12.81	14.00	1043	2228
Chhattisgarh	2009-10	NA	22715	NA	15.00	NA	1514
	2008-09	15673	28689	10.43	12.00	1418	2390
Haryana	2009-10	NA	29904	NA	10.50	NA	2848
	2008-09	13062	22912	5.97	10.41	1968	2201
Maharashtra	2009-10	NA	12989	NA	7.92	NA	1757
	2008-09	18679	10905	8.05	6.24	2278	1675
Lentil							
Bihar	2009-10	NA	24299	NA	11.00	NA	2209
	2008-09	10900	23551	7.33	11.00	1442	2141
Rapeseed & Mustard							
Gujarat	2008-09	19084	25008	11.61	16.20	1610	1511
Haryana	2009-10	NA	NA	NA	NA	NA	2400
	2008-09	27508	NA	19.94	NA	1251	2392
Safflower							
Maharashtra	2009-10	NA	10631	NA	7.03	NA	1657
	2008-09	14382	11976	7.69	8.19	1865	1460

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

Table – 3(I)
Comparison of Projections

(In Rupees)

Crop/State	Year	State Yield	State Projections (determined by state)		* Comparable Estimates (using state data)		Yield (C.S) QtI/hect	Projections for 2010-11 (as done by CACP)	
			QtI/hect	Cost/hec.	Cost/qtl	Cost/hect		Cost/qtl	Cost/ hect
1	2	3	4	5	6	7	8	9	10
Wheat									
Bihar	2010-11	28.00	33623	1500	30567	1092	23.33	20358	762
Haryana	2010-11	43.69	52332	1218	52332	1038	42.47	36512	737
Punjab	2010-11	43.59	50917	1650	50917	1053	42.80	38206	801
Maharashtra	2010-11	20.53	29045	1921	28773	1370	NP	NP	NP
Gram									
Bihar	2010-11	14.00	33710	3008	30646	2189	9.59	14610	1466
Haryana	2010-11	7.81	19379	2706	19379	2331	6.37	13266	1890
Maharashtra	2010-11	7.25	15537	2868	15127	2037	8.54	20286	2335
Barley									
Haryana	2010-11	32.21	29078	937	29078	793	NP	NP	NP
Rapeseed & Mustard									
Bihar	2010-11	10.00	28904	3612	26277	2628	NP	NP	NP
Haryana	2010-11	14.56	30174	2408	30174	2072	16.54	27692	1537
Lentil									
Bihar	2010-11	11.00	24861	2825	22601	2055	8.37	12781	1456
Safflower									
Maharashtra	2010-11	7.59	15518	2791	15120	1979	6.93	14140	2038

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 2010-11 SEASON

In arriving at the Price Policy for Rabi Crops of 2010-11 Season, the Commission considered various relevant factors such as cost of production, domestic and international demand-supply situation, market price trends, inter-sectoral terms of trade, food security situation and inter-crop price parity. In order to ascertain the views of the stakeholders on rabi crops, the Commission had wide consultations with farmers and their organizations, officials of Central and State Governments, agricultural research organizations, millers, exporters, etc. This report made a detailed examination of the recent trends and structure of agricultural production in general and of rabi crops in particular. The Commission has as usual carried out a study of the cost of production of rabi crops and made projections regarding their likely levels during 2010-11.

4.2. The drought conditions that prevailed in several parts of the country due to delayed and deficient rainfall had adverse impact on crop production in the year 2009-10. According to the Third Advance Estimates of the DES, the total foodgrains production for the year is estimated at 218.19 million tonnes. This would be 16.28 million tonnes lower than the final estimated record production of 234.47 million tonnes for the year 2008-09. The decline was mainly due to reduction in kharif foodgrains production (102.34 million tonnes) which is the lowest level since 2002-03. On the other hand, rabi foodgrains declined only marginally from 116.18 million tonnes in 2008-09 to 115.85 million tonnes in 2009-10. The monsoon is expected to be normal in the year 2010-11. As a result, one can expect the foodgrains production in 2010-11 to reach equal or higher levels as compared to the record production of 2008-09. However, the long term trend growth rate of foodgrains production was only around 1.35 percent per annum during the period 1996-97 to 2007-08. This growth rate was less than that of population growth.

4.3. The situation of wheat is relatively better as the production significantly increased over time. The production of wheat rose from 69.35 million tonnes in 2005-06 to 78.40 million tonnes in 2007-08 and to 80.58 million tonnes in 2008-09. In spite of drought year, wheat production marginally increased to 80.98 million tonnes in 2009-10. The production of rabi pulses also increased marginally from 9.88 million

tonnes to 10.41 million tonnes in 2009-10. However, in the case of rabi oilseeds there was a decline in production to 82.14 million tonnes in 2009-10 as compared to 90.31 million tonnes in 2008-09 – the biggest decline being in rapeseed & mustard. The production of rapeseed & mustard declined from 62.98 million tonnes in 2008-09 to 57.73 million tonnes in 2009-10.

4.4. The global supply of wheat production was 683.8 million tonnes in 2008-09 and marginally declined to 682.4 million tonnes in 2009-10. The FAO forecast indicates that global wheat production is expected to decline to 676.5 million tonnes in 2010-11. However, a large opening stock is expected to fully offset the decline in production. The ending stock of wheat is forecasted to be 194.1 million tonnes in 2010-11. The high inventories and good crop prospects in 2010-11 have led to reduction in global wheat prices. The price of US wheat (No.2 Hard Red Winter, f.o.b.Gulf) which averaged US\$ 266 per tonne in May 2009 declined to US\$ 196 per tonne in May, 2010. Wheat futures also have weakened since May, 2010 and it showed a decline of 15 per cent from the start of the year.

4.5. The Wholesale Price Index (WPI) shows that the inflation for wheat was 4.3 per cent and 6.2 per cent respectively in 2007-08 and 2008-09. However, the inflation for wheat rose significantly to 10.7 per cent in 2009-10. There are signs of decline in wheat inflation in recent months. Year to year variations reveal an increase of 9.4 per cent and 4.5 percent in wheat prices respectively in April and May, 2010. In contrast to the rise in wheat prices, inflation rate for barley, gram, masur (lentil) and rapeseed & mustard declined in 2009-10 compared to 2008-09. Inflation rate for gram declined from 4.7 per cent in 2008-09 to (-) 1.7 per cent in 2009-10. Similarly, inflation for masur (lentil) showed a decline to 18.1 per cent in 2009-10 as compared to 23.7 per cent in 2008-09. The inflation rate for rapeseed & mustard was 23.2 per cent in 2008-09 but declined drastically to (-3.7) per cent in 2009-10.

4.6. India had to import wheat for buffer stock purposes due to low procurement in the years 2006-07 (9.2 million tonnes) and 2007-08 (11.1 million tonnes). The procurement of wheat, however, increased sharply to 22.7 million tonnes and to 25.4 million tonnes respectively in marketing years 2008-09 and 2009-10. It is likely to be around 22.5 million tonnes in 2010-11 based on the projected figures. The stock of

wheat at 16.1 million tonnes as on 1st April, 2010, was four times to the buffer norm of 4.00 million tonnes. India is in a comfortable position in terms of buffer stock for the next one year. However, the government is likely to increase the number of BPL population from 6.52 crore households to more than 8 crore households under the proposed National Food Security Act. There are also proposals from the National Advisory Council to introduce universal PDS in one fourth of the districts which are poorest in the country. These proposals may increase the need for higher procurement and buffer stock in future.

4.7. Cost of production is generally considered as the most important factor in the determination of minimum support prices. However, in the last three 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. For example, 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 wheat in the last few years. It increased from Rs.700 per quintal in 2005-06 to Rs.850 per quintal in 2006-07 to Rs.1000 per quintal in 2007-08 and to Rs.1100 in 2009-10. Thus, there has been 57 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. The shift in favour of wheat was probably needed in order to help food security mission to achieve its objective of attaining higher production of wheat.

4.8 The all India weighted C₂ cost of production of wheat for 2010-11 season is estimated at Rs. 826 per quintal and the modified C₂ cost at Rs.874. Even if we maintain last year's MSP of Rs.1100, this would be 33 per cent and 26 per cent respectively higher than the projected C₂ cost and modified C₂ cost for 2010-11. Moreover, the country is comfortable in terms of production and, procurement. There are already storage problems for wheat stocks. The price rise based on wholesale price index is already showing a decline in the year 2010-11. The global situation of wheat stocks is also better and the international prices of wheat are much lower as

compared to last two years. However, keeping in view of the rise in cost of production in 2010-11 as compared to that of 2009-10 and the need for sustained increase in wheat production, there may be a case for marginal increase in MSP of wheat for the year 2010-11. It may be noted that this increase would be over the already high base of Rs.1100 per quintal fixed last year.

4.9. In the case of other rabi crops, the projected C2 cost and modified C2 cost increased substantially in 2010-11. A comparison of last year's MSP and projected cost for 2010-11 shows that the present MSP would not cover the costs for some crops. It may be noted that one notices a few aberrations in the cost data for a few states. These aberrations may have to be ignored while recommending MSP. However, the present MSP is much higher than A2+FL costs for all the rabi crops. The MSP also covers least C2 cost states for barley and rapeseed & mustard but do not cover for gram, lentil and safflower. The government has announced significant rise for kharif pulses like tur, urad and moong in 2010-11 based on CACP's recommendations. There may be a need for increase in MSP of gram and lentil to cover the costs and to have reasonable margins over costs. In the case of rapeseed & mustard, the existing MSP of Rs. 1830 is much higher than the projected C2 cost of Rs. 1520 and the modified cost of Rs.1563.

4.10. Table 4.1. provides summary of cost projections for rabi crops in the year 2010-11. The Table gives: (a) weighted average C2 cost of states ranked in ascending order of C2 upto 75 per cent of total output and (b) weighted average A2+FL in states ranked in descending order of cost upto 25 per cent of output. It may be observed that the present MSP for all the rabi crops meet the criteria of A2+FL cost upto 25 per cent of output. In the case of C2 cost upto 75 per cent of output, the MSP for lentil and safflower are lower and marginally lower in case of gram. However, aberrations in cost data have to be kept in mind in recommending prices.

Table 4.1: Summary of Cost Projections 2010-11

(Rs. per quintal)

Crops	C2 Costs, states with least Cost*		A2+FL costs, states with highest Cost**	
	Overall C2 cost (all -India)	C2 cost upto 75% of output	Overall A2+FL cost (all-India)	A2+FL cost upto 25% of output
Wheat	826.29	809.16	527.08	584.03
Barley	677.19	677.19	471.73	539.56
Gram	1902.19	1797.13	1233.29	1501.96
Lentil(Masur)	2191.41	2191.41	1268.25	1528.61
Rapeseed & Mustard	1519.88	1448.08	950.21	1160.46

* : C2 Cost as weighted average of states in ascending order of C2 cost upto 75% of total output.

** : A2+FL Cost as weighted average of states in descending order of A2+FL cost upto 25% of total output.

4.11. The Commission made comparisons between the projections of costs made by CACP and those provided by the states. The comparable estimates show that the projected C₂ costs of production of wheat per quintal given by the states are higher than those of the Commission in respect of all states except for Maharashtra and West Bengal. In the case of gram, Maharashtra's cost projection is lower while those of other states is 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 estimate of the state is lower than that of CACP.

Table 4.2: Long run farm prices and their coefficient of variation

Crops	Farm Harvest Prices (Rs./qtl)				Implicit Price from Comprehensive Scheme(Rs./qtl)		
	MSP (Rs./qtl) (2010-11)	5 years* average X	Coefficient of Variation Y	1.5 Standard Deviation below 5 years average Z	5 years* average X	Coefficient of Variation Y	1.5 Standard Deviation below 5 years average Z
Wheat	1100.00	1040.93	19.56	735.55	995.32	18.81	714.44
Barley	750.00	958.46	21.47	649.78	826.18	21.09	564.85
Lentil	1870.00	-	-		2466.27	26.52	1485.20
Rapeseed/ Mustard	1830.00	2268.06	18.81	1628.11	2065.81	20.30	1436.69
Gram	1760.00	2300.82	19.29	1635.19	2317.81	17.30	1716.45
Safflower	1680.00	-	-		1911.22	26.49	1151.66

Notes:

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.

$$Z = X * (1 - 0.015 * Y)$$

4.12. In Table 4.2, 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 the DES 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. It shows that the MSP is higher than the farm harvest prices for wheat but 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 procurement operations will be required if the MSP is higher than the indicative price. The Table shows that MSP was higher than the indicative price for all the crops. The five year average of implicit prices are lower than current MSP for wheat but higher for all other crops.

Table 4.3: International Price Parameters

Crop	U S dollar terms (per tonne)				Rupee terms (per quintal)				1.5 SD below 5 years average
	5 Years average	3 Years average	Latest quarter	CV	5 Years average	3 Years average	Latest quarter	CV	
Barley	157.43	179.26	148.03	24.06	632.1	732.11	663.07	26.21	403.98
Wheat	174.36	228.36	288.78	46.57	782.89	1023.29	1276.61	48.27	236.00
Rapeseed/ Mustard	391.99	464.8	379.81	32.49	1738.02	2046.38	1749.32	29.28	891.00
Lentil	931.46	782.72	0	58.65	5183.55	5165.81	0	4.29	623.32

Note:

- (i) 5 years average refers to 2005-06 to 2009-10, 3 years average refers to 2007-08 to 2009-10
- (ii) Rupee conversion as given from Reserve Bank of India for different years.
- (iii) Coefficient of Variation (CV)
- (iv) Standard Deviation (SD)

4.13. 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 4.3, accordingly presents both the 5 year and 3 year dollar price averages ending 2009-10, 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, applying the

exchange rate of last week of every month for different years. 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 4.3 shows that the variations in global prices are lower than the domestic prices for wheat and barley and higher for rapeseed & mustard and lentil. Also, the latest international price was higher than its five year or three year average for wheat and lower for barley and rapeseed & mustard. For wheat, the international price in the last quarter was higher than the MSP but less than the FCI's current economic cost. However, 5 year and three year averages of international prices of wheat were lower than MSP of wheat. In the case of barley, MSP is higher than international prices. For lentil, international prices are much higher than MSP. In the case of rapeseed & mustard, the international prices are lower than MSP for 5 year average and latest quarter but higher than that of 3 year average.

4.14. The Commission has, as usual also considered the issue of price parity across crops and notes that rise of MSP for wheat has shifted price parity in favour of wheat. As against increase of 90 per cent in the MSP for wheat between 2000-01 to 2009-10, the corresponding increase for other crops ranged between 74 per cent for barley to 53 per cent for safflower. The rise in MSP for pulses and oilseeds has been lower than that of wheat. However, it is known that price factors alone can not improve productivity for these crops. Non-price factors like irrigation, technology, credit, etc. are 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 2010-11 be fixed as under:

Commodity	Rs./Quintal
Wheat	1120/-
Barley	780/-
Gram	2100/-
Masur (Lentil)	2250/-
Rapessed/Mustard	1850/-
Safflower	1800/-

Commission further recommends that:

xvii) an arrangement for associating spot exchanges in procurement operations in those places where currently the procurement system is inadequate, seems advisable, and the Government may give due consideration to this after framing the requisite safeguards.

(Para 1.11)

xviii) any payment of MSP including bonus payment to farmers, should be made only by way of crossed A/C payee cheque, to eliminate any chances of other operators in the market cutting into the due entitlement of farmers.

(Para 1.12)

xix) all taxes on items under MSP coverage need to be removed or at least reduced to a reasonable and uniform level across the country, so as to encourage participation by all players in the market, and there emerges a unified and integrated national market in the country.

(Para 1.13)

xx) the Government should urgently put in efforts to enhance the present storage capacity available with the foodgrain procurement agencies, with equal emphasis on ensuring the setting up of modern and scientific storage system and practices that would assure quality preservation and loss prevention. In this regard, associating the private sector through PPP mode or on its own should be given serious consideration.

(Para 1.23)

xxi) attempts at the Second Green Revolution need to ensure that its coverage is across the country focussed on all important agricultural crops, effectively supported by research and extension, with particular thrust on the East and North East parts of the country, and it takes place in an environment-friendly manner.

(Para 1.25)

xxii) the emphasis on efficient growth in the sector through the optimal use of resources such as water and fertilisers should become integral to the efforts for attaining the target for agricultural growth, so that higher growth is attained from utilization of the same quantum of

- resources. (Para 1.27)
- xxiii) Government should maintain constant vigil and monitoring of possible pest and fungus attacks, particularly the coming of Ug99, evolve sturdy varieties of wheat crop that could fight the menace, and guard against its spread. (Para 1.28)
- xxiv) not only the rate of interest on farm credit but also other associated/related costs such as processing and inspection charges for availing credit should be brought down to nominal and affordable levels, so that the effective cost of farm finance gets lowered to the intended extent. (Para 1.29)
- xxv) the implementation of MNREGS should promote the cause of farming, through the fullest possible convergence of its operational guidelines with that of the schemes/programmes of the Ministry of Agriculture, and by effective inclusion of activities that would foster the development of agri-facilitating infrastructure. (Para 1.30)
- xxvi) the promotion of non-farm activities in the rural areas such as food processing that would lead to a substantial reduction in the labour-to-land ratio, needs to be laid emphasis, so that the agricultural sector in the country turns out to be viable and attractive.
(Para 1.32)
- xxvii) The issues in the provision and distribution of fertilisers, arising in the changeover of fertiliser subsidy regime, require to be looked into by the Government for possible corrective measures. (Para1.33)
- xxviii) for fertiliser applications to bring in the intended benefits, there has to be in position a programme for comprehensive analysis of soil profiling and their physical and chemical properties, leading to the provision of soil health cards giving regular updates to farmers in the country, supported with stress on soil health awareness.
(Para1.34)
- xxix) requisite efforts should be brought in to promote 'group action' among farmers, including women farmers, so that they could be empowered to overcome the present constraints and limitations confronting them,

and in the process promote the interests of farming in a more effective manner. (Para1.35)

xxx) concerted efforts have to be made through effective extension services for immediately propagating the pulses varieties and technologies developed in the research organizations to the farmers field. (Para 2.41)

xxxii) in order to increase the area, production and productivity of oilseeds as a whole on a sustainable basis enabling increased availability of domestic edible oils, setting up of a Technology Mission for Oilseeds incorporating proper monitoring and assured accountability in implementation of the Mission should be given top priority by replacing the existing Integrated Scheme of Oilseeds, Pulses, Oil palm and Maize (ISOPOM). (Para 2.62)

xxxiii) Government needs to review on priority, the present import duty structure on edible oils in order to facilitate a level-playing field for the benefit of farmers and domestic oil sector. (Para 2.71)

(S. MAHENDRA DEV)

CHAIRMAN

(R. VISWANATHAN)

MEMBER

(RAJ VIR SINGH)

MEMBER

(K. G. RADHAKRISHNAN)

MEMBER SECRETARY

July 26, 2010