

# **IMPACT OF MINIMUM SUPPORT PRICES ON AGRICULTURAL ECONOMY**

**(CONSOLIDATED REPORT)**

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## PREFACE

Agricultural Price Policy and price support system have come under academic scrutiny due to the recent changes towards liberalisation of the Indian economy. In a true sense, agricultural sector remained far from liberalised despite the fact that agriculture itself is a private activity. In the factor market, the farmer is at receiving end, as the factor prices are largely dictated by the suppliers of the factors of production. At the same time, in the product market, the farmers remain at the receiving end again wherein the prices are decided and dictated by the middlemen or the purchasers. Being at the cross roads from both sides and taking the worst part of the market on either side, agriculture remains at the mercy of the operators in these two markets. Minimum Support Price (MSP) Policy has been one of the supportive mechanisms which was put in place during the wee years of formation of the Agricultural Price Policy. The four decades experience is significant enough to have a close review of the policy.

The initial philosophy behind the Agricultural Price Policy was more directed towards the adoption of the new technology and making available foodgrains to the large number of consumers for ensuring the food security. The incidence of Green Revolution and the consequent changes in the availability of food has changed the context of the price policy to a large extent. However, even today, the 1986 guidelines of the Price Policy are followed and that too not strictly in the spirit of the guidelines.. More than that, the implementation process of the Price Policy has developed a lot of grey area over years. It benefits only a few, be it a region or a group of farmers, thereby creating possible inequalities. It would not be wrong to mention that the time is ripe now to look back at the contours of the Price Policy of mid-eighties and its implementation in the country. The present study was undertaken with this issue as the core.

The study was initiated with a common research design and was conducted in eleven states of the country. The research design was prepared at the Agricultural

Development and Rural Transformation (ADRT) Unit of the Institute for Social and Economic Change ((ISEC), Bangalore, and discussed at the meeting of the Directors of the Agro-Economic Research Centres (AERCs). This was again commented upon by the members of the CACP and finalised at a meeting. The questionnaires were prepared and table formats, the chapter-scheme as well as the basic issues to be addressed to, were sent to all the Centres. We received reports from all the Centres over the last two years and the reports were drafted by various people. Naturally, the approach to the problem and the analytical frame followed by these eleven studies were different despite a common design and scheme. Similarly, the research competence also differed across the studies. Finally, I could bring the studies together in the present form. However, keeping in view, the differential approaches of the studies, I felt it better to have the studies as independent chapters with substantial editing done by me. I have not altered core of the arguments of the original authors, however picked from the studies the relevant material for this purpose.

Overall, we find that the Minimum Support Price Policy has outlived its significance as a procurement price and requires a fresh look. It is certainly not implemented uniformly across the country and in the process a few states and some crops got higher benefits out of its implementation. This is also true across farm groups and therefore it is essential that this needs to be replaced with a proper protective mechanism for the farmers. The study tries to argue this point in the present context and puts forward alternatives for consideration. I am sure that this study will be useful to the policy makers and researchers in the field of Agricultural Price Policy.

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<b>State</b>		
Punjab (Chapter III)	Karm Singh Kamal Vatta Sanjay Kumar	Impact of Minimum Support Prices on Agricultural Economy in Punjab
Hayrana (Chapter IV)	R.P.S. Malik	Impact of Minimum Support Prices on Agricultural Economy in Haryana
Uttar Pradesh (Chapter V)	Rajendra Singh	Impact of Minimum Support Prices on Agricultural Economy in Uttar Pradesh
Karnataka (Chapter VI)	R S Deshpande Ravindra Naik	Impact of Minimum Support Prices on Agricultural Economy in Karnataka
Maharashtra (Chapter VII)	Sangeeta Shroroff	Impact of Minimum Support Prices on Agricultural Economy in Maharashtra
Gujarat (Chapter VIII)	V D Shah H F Patel	Impact of Minimum Support Prices on Agricultural Economy in Gujarat

<b>State</b>		
Andhra Pradesh (Chapter IX)	C. Ratnam B. Chinna Rao	Impact of Minimum Support Prices on Agricultural Economy in Andhra Pradesh
Tamilnadu (Chapter X)	R.Swaminathan and Others	Impact of Minimum Support Prices on Agricultural Economy in Tamilnadu
Madhya Pradesh (Chapter XI)	M.C. Athavale	Impact of Minimum Support Prices on the Agricultural Economy in Madhya Pradesh
Bihar (Chapter XII)	Ranjan Kumar Shinha	Impact of Minimum Support Prices on Agricultural Economy in Bihar
West Bengal (Chapter XIII)	Jiban Kumar Ghosh Debashis Sarkar Vivekananda Datta Fazlul Haque Khan	Impact of Minimum Support Prices on Agricultural Economy in West Bengal

I am grateful to all of them and the other colleagues of mine at various AERCs. They have taken substantial pains to revise, re-revise and sent me the final version of their studies, despite abundant difficulties that they have faced. I am thankful to them for their concentric efforts. It is quite natural that the chapters have differential analytical competence as the analysts are from different academic background. I could not resolve that problem. I am grateful to my assistants viz., Mr. T Raveendra Naika, Mr D Muddu Krishna and Mr Rajendra B Desai for the research assistance provided for this study. They have tolerated my bad temperament and deadlines to work on the data and tables which were to be derived from various studies. I am also grateful to Mr M K Mohan Kumar, who has prepared various drafts of the study and painstakingly got ready the final version. But for his perseverance the study would not have been completed.

Needless to add that the errors of omissions and commissions are entirely mine.

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# **SECTION I**

## **MINIMUM SUPPORT PRICES: IMPACT AND EFFECTIVENESS**

### **CHAPTER I**

# INTRODUCTION

## 1.1 Introduction

The technological change of mid sixties was a step towards meeting the food crisis that threatened food security of the country during those years. At that time it was suggested that the technological change alone may not bring the required dynamism in the growth of agricultural sector and it needs to be supported with proper institutional backup. Therefore, a series of institutional reforms were undertaken in order to supplement and induce growth. As a first step, land reforms were revamped to herald its second phase in early seventies. Agricultural administration and extension formed the second step in the process of institutional change. This was accompanied by strengthening the system of agricultural education. As a crucial step banking sector underwent the metamorphosis through nationalisation with a renewed thrust on priority sector lending.

The most important step simultaneously taken with this was the initiative to evolve agricultural price policy to achieve the planned growth through price incentives. In order to understand and construct a proper price policy framework, Government of India appointed a committee under the Chairmanship of Late Shri L K Jha to suggest the required steps towards organising the agricultural price policy of the country. Jha Committee's recommendations included policy initiatives to protect the consumers as well as the producers. It strongly recommended market interventions for procuring food grains to meet the requirement for distribution as well as a protective price level to the farmers. Following the Jha Committee report, a series of measures were taken and as a result Agricultural Prices Commission (APC) came into being in January 1965. The first report of the APC was submitted in August 1965, covering Kharif Season. The preface of this report makes clear the focus of the then emerging price policy of India. It is stated in the preamble of the report that "The Agricultural Prices Commission was set up in January 1965 to advise Government on price policy for agricultural commodities, with a view to evolving a *balanced and integrated price structure in the perspective of the overall needs of the economy* (emphasis added) and with due regard to the interests of the producer and the consumer" (Govt. of India, APC Report, 1965). The focus on the overall

requirements of the economy was very clear from the beginning itself and that needs to be kept in view. Prof M L Dantwala headed the APC and in its final report in 1965 the Commission suggested the Minimum Support Prices for Paddy. This was the beginning of the price intervention scheme that went through for the last three and half decades. Agricultural Prices Commission through its reports framed and directed the price policy of the country during this period and through that influenced the adoption and spread of the new technology. Prominently, four instruments of the price policy were introduced namely: i. Procurement at pre-decided price as required; ii. Certain proportion of production as compulsory levy at the pre-decided price; iii. Minimum Support Prices (MSP) to protect the producers against sudden price crash; and iv. Public Distribution System to provide foodgrains at lower than the market prices as a protective distribution measure.

In the early years, price policy supported the initiatives taken on the technological front providing incentive to accept the new technology. Over years it became an accepted fact that farmers respond to price incentives more sharply now than in the past. Raj Krishna in his seminal paper first time emphasised the price response of Indian farmers despite the dominance of subsistence farming (Raj Krishna, 1963). Following this, a number of price response studies have shown the strong role of prices as incentives in agricultural sector (for a full review see Deshpande, 1996). It has been noted by Acharya (Former Chairman of CACP) that "In fact, the instruments of Minimum Support Prices, food subsidy and input subsidies have played an important role in achieving the objectives of food security and accelerated growth of economy and benefits all the sections of the society" (Acharya, 1997). Thus the contribution of Agricultural Price Policy towards sustaining the tempo created by the technological change of mid-sixties has been widely acknowledged. During the last four decades the agricultural policy connotations have of course changed significantly. Prices play much wider and more crucial role than just supporting the adoption of technology. It was during eighties, that farmers' organisations emphasised remunerative role of prices and insisted on revisiting the method of arriving at the Minimum Support Prices. Quite a few changes were introduced in the methodology and approach following Sen Committee (GoI, 1980) and Hanumantha Rao Committee (GoI, 1990) reports. The next issue was marked by the debate on Terms of Trade (ToT) between agriculture and non-agricultural sector (GoI, 1995). The Terms of Trade debate almost emerged with a consensus that the ToT are going against agriculture and at the same time capital formation in the agricultural sector is also declining over years. Following these debates the situation in the agricultural sector underwent substantial

changes in the wake of liberalisation. As stated in the first report of the APC 'the perspective and the overall needs of the economy' have undergone a sea change. We have now opened up the domestic markets for the world trade and that will exert significant pressure on the market situations. Now in this context, questions are being raised about the efficacy and effectiveness of the instruments of price policy specifically the Minimum Support Prices. We intend to address to this issue.

## **1.2 Making of the Agricultural Price Policy**

Agricultural Price Policy in India strongly emerged in the context of food scarcity and price fluctuations provoked by drought of mid-sixties and a war with Pakistan. The policy was to be framed keeping in view three different angles viz., (i) providing foodgrains for the Public Distribution System, (ii) ensuring reasonable (affordable to consumers) prices for foodgrains, and (iii) inducing adoption of the new technology. In a specific theoretical term, the Agricultural Price Policy ensured the impact of various economic factors on the rate of growth as well as quality of growth and provoked the most desired crop-mix. This incidentally ensured allocation of resources, capital formation and inter-sectoral terms of trade. All these together formed a theoretical base for the price policy. Initially, on the recommendation of the Jha Committee, the Agricultural Prices Commission was constituted and a set of terms of reference were drafted for the Agricultural Prices Commission viz., "(i) To provide incentive to the producer for adopting technology and for maximising production; (ii) to ensure rational utilisation of land and other production resources; (iii) to keep in view the likely effect of the price policy on the rest of the economy, particularly on the cost of living, level of wages, industrial cost structure, etc.; (iv) to recommend from time to time, in respect of different commodities, measures necessary to make the price policy effective; (v) to examine, where necessary, the prevailing methods and cost of marketing of agricultural commodities in different regions, suggest measures to reduce costs of marketing and recommend fair price margins for different stages of marketing; (vi) to keep under review the developing price situation and to make appropriate recommendations, as and when necessary, within the framework of the overall price policy; (vii) to keep under review studies relating to the price policy and arrangements for collection of information regarding agricultural prices and other related data and suggest improvements in the same; (viii) to advise on any problems relating to agricultural prices and production that may be referred to it by Government from time to time" (Govt. of India, January 1965, pp. 47-48). The specific

steps through which these functions were to be operationalised included: (i) Announcement of Minimum Support Prices for major foodgrains; (ii) Procurement prices for purchasing surplus from the cultivators; (iii) of Public Distribution System and building proper buffer stocks for the purchasers; (iv) Zonal restrictions for movement of foodgrains to manage the supply and demand. Thus began the operations of the price policy through its instruments.

The Agricultural Prices Commission during sixties and in the first half of seventies followed the cost of production approach to arrive at the MSP and procurement prices. They kept under consideration nine important factors while fixing the MSP, levy prices and procurement prices, viz., (i) Cost of production, (ii) Risk under cultivation, (iii) Changes in the input prices, (iv) Trends in the market prices, (v) Demand and supply of the commodities, (vi) Cost of living index and general price index, (vii) Fluctuations of prices in international market, (viii) Price parity between crops input and output across sectors, and (ix) Trends in the market prices. The methodology of arriving at the MSP was questioned and doubts were raised about the use of data, certain concepts and inclusion/exclusion of imputed cost of various items of farm operations. Similarly, rent of the self owned land, premium for risk, price parity and cost towards managerial input also came for discussion among the analysts of price policy. In order to reconsider the prevailing structure of the Agricultural Prices Commission and review its methodology a Committee under the Chairmanship of Dr S R Sen was appointed in 1979. The Committee was to examine the methods in arriving at cost of cultivation, and suggest required modifications. Sen Committee in its report gave a number of recommendations towards this (Gol, 1980). Following this, the nomenclature as well as the focus of the Agricultural Prices Commission was changed. The Commission was named as Commission on Agricultural Costs and Prices (CACP) with completely changed terms of reference. A policy document was issued in 1986 under the title *Agricultural Price Policy: A Long Term Perspective* officially confirming the redefinition of the objectives of the price policy as also the terms of reference of the Commission on Agricultural Costs and Prices as under:

1. (i) The need to provide incentive to the producer for adopting improved technology and for developing a production pattern broadly in the light of national requirements;
- (ii) The need to ensure rational utilisation of land, water and other production resources;

(iii) The likely effect of the price policy on the rest of the economy, particularly on the cost of living, level of wages, industrial cost structure, etc.

2. The Commission may also suggest such non-price measures as would facilitate the achievement of the objectives set out in 1 above.
3. To recommend from time to time, in respect of different agricultural commodities, measures necessary to make the price policy effective.
4. To take into account the changes in terms of trade between agricultural and non-agricultural sectors.
5. To examine, where necessary, the prevailing methods and cost of marketing of agricultural commodities in different regions, suggest measures to reduce costs of marketing and recommend fair price margins for different stages of marketing.
6. To keep under review the developing price situation and to make appropriate recommendations, as and when necessary, within the framework of the overall price policy.
7. To undertake studies in respect of different crops as may be prescribed by Government from time to time.
8. To keep under review studies relating to the price policy and arrangements for collection of information regarding agricultural prices and other related data and suggest improvements in the same, and to organise research studies in the field of price policy.
9. To advise on any problems relating to agricultural prices and production that may be referred to it by Government from time to time." (GoI, 1986, pp. 6-7)

The farmers' agitations during eighties and early nineties in Punjab, Karnataka, Tamilnadu and Maharashtra were provoked by the unfavourable terms of trade to the agricultural sector. The farmer leaders insisted that the method of fixing of MSP be reviewed. The agitations were led by Mr. Sharad Joshi (an Economist with a World Organisation) and Prof Nanjundaswamy (a Professor of Law). The arguments were focused on the method of computation of imputed cost, risk premium, imputed cost of family labour and the terms of trade between agriculture and industry (Nadkarni, 1987; Dhanagare, 1990). Following this the Government of India appointed another Committee under the Chairmanship of Prof C H Hanumantha Rao to review the methodology of cost of production of crops specifically focussing on valuation of labour, imputed costs of family labour and managerial costs. The Committee submitted its report covering these aspects and suggested that actual wages to be taken to value the labour cost and family

labour should be valued at the wage rates of casual labour (Govt. of India, 1990). The Commission also recommended inclusion of 10 per cent managerial cost in the total cost of production. All these provided a 'scientific attire' to the earlier process of arriving at the cost of production. However, as can be seen from the data, the prices recommended by CACP were more often modified by Government of India with the intervention of the political representatives and therefore, fixation of the prices with an elaborate structure and mechanism remained only an exercise for exhibition. The political interventions occurred selectively across crops depending on the crop region and the active lobby. Therefore, some of the crops received better deal whereas a few other crops suffered a deliberate relative neglect. This certainly hampered the price parity across crops. It also created distortions between the trends in factor prices and product prices probably for a few selected crops and groups of farmers growing these crops.

The price parity across sectors reflected through Terms of Trade (ToT) between agriculture and non-agriculture sectors, was first brought forth in Thamarajakshi's seminal paper of Terms of Trade (Thamarajakshi, 1968). This was followed by the work of Dhar (1968), Dantwala (1981), Kahlan & Tyagi (1980), Venkataramanan & Prahladachar (1984) and Nadkarni (1987). During mid-seventies the debate on Terms of Trade between agriculture and non-agricultural sector had picked up, as the Terms of Trade started showing signs of turning against the agricultural sector (See arguments of Sharad Joshi in Dhanagare, D N (1990). This along with the farmers' movements during that decade spanning across the country, led to a review of the price policy and also the methods of arriving at the MSP. Once again we are likely to face the question of 'remunerative prices'. This concept has been recognized in the Agricultural Policy document issued in 2000 by the Government of India. Farmer leaders are already arguing for providing such remunerative prices. The question became sharper now in the context of withdrawal of subsidies on inputs (fertilisers, water, credit and power) as well as increasing demand for consumer durable and consequently the changing relative prices with the non-agricultural sector. Similarly, the price wedge between goods produced in urban sector as against the farm products has given rise to the necessity of looking afresh into this issue of price intervention.

Viewed from this angle the effectiveness of MSP now assumes a totally different context. In gist, the debate pointed out that Terms of Trade went against agricultural sector till mid-sixties and slightly became favourable to agricultural sector for a short

while in late sixties and early seventies to revert back against agriculture during late seventies and early eighties. It is only in the recent past and specifically during nineties that the Terms of Trade are turning in favour of the agricultural sector (Govt. of India, 1995). The computations of the Terms of Trade largely rests on the data from National Accounts Statistics and hence there are a good number of corrections that are required in the data provided in the framework of National Accounts Statistics. Even with these corrections it was observed in one of the recent study that Terms of Trade in the recent past are slightly turning in favour of Agriculture, but need to be watched carefully. (Thippaiah and Deshpande, 1999).

The Terms of Trade have been fluctuating in favour of agriculture and against the agriculture alternatively. The recent data on the terms of trade are presented in Table 1.1 shows the fluctuations during eighties and nineties. It can be seen that, during 1990s the ToT are improving in favour of the agricultural sector but not as expected and as required for the growth of the farm sector. One of the important reasons for such behaviour can be located in depressing trends in the relative prices between agriculture and non-agricultural goods. The prices of agricultural commodities have not been going at the pace at which prices of non-agricultural commodities are going. Therefore, the emphasis on MSP is to provide at least psychological support to the farmers continues.

The price policy related concerns also featured prominently in the Report of the High Level Committee on Long Term Trade Policy. The Committee elaborately discussed the question of Minimum Support Prices in the changed context. They reviewed the MSP operations from the point of view of the effectiveness of the scheme, possible decentralisation of price support and procurement as well as some alternatives to Minimum Support Price scheme. The Committee recommended that Minimum Support

**Table 1.1: Index of Terms of Trade Between Agriculture and Non Agriculture**

(Triennium ending 1971-72 = 100)

Year	Commodities Sold for			Prices Paid for commodities purchased for				Terms of Trade
	Final Consumption	Intermediate consumption	All Commodities	Final Consumption	Intermediate consumption	Capital Formation	All Commodities	
1981-82	216.6	235.4	224.2	249.1	296.4	392.5	270.5	82.9
1982-83	230.8	246.7	237.2	254.5	308.2	429.1	279.9	84.7
1983-84	253.0	273.2	261.1	278.4	325.6	454.2	302.6	86.3
1984-85	265.3	293.9	276.8	298.1	328.8	503.2	321.8	86.0
1985-86	282.4	271.5	278.0	313.2	343.3	524.5	337.4	82.4
1986-87	299.8	320.2	308.0	337.3	368.6	542.5	361.2	85.3
1987-88	328.7	377.0	348.2	382.7	387.6	574.8	400.5	86.9
1988-89	364.3	363.6	364.0	402.5	390.5	652.2	422.2	86.2
1989-90	384.3	407.2	393.5	440.2	401.4	962.5	455.1	86.5
1990-91	423.3	500.3	454.3	490.9	449.0	741.5	505.1	90.0
1991-92	502.8	567.3	528.8	549.9	524.4	834.7	570.1	92.7
1992-93	536.4	544.3	539.6	593.9	606.4	899.3	623.0	86.6
1993-94	595.8	613.5	602.9	626.1	680.1	937.2	663.5	90.9
1994-95	641.5	723.7	674.6	693.9	759.5	1021.8	734.9	91.8
1995-96	683.0	776.7	720.8	762.5	791.0	1103.4	797.8	90.3
1996-97	771.8	784.7	777.0	793.2	839.3	1164.0	834.4	93.1
1997-98	785.0	844.2	808.9	834.1	920.1	1225.2	884.5	91.5
1998-99	901.0	876.5	891.1	890.0	955.4	1331.5	941.0	94.7
1999-2000p	967.7	829.7	912.1	903.5	1047.2	1371.5	971.4	93.9

Note : P - Provisional

Source : Reports of the Commission for Agricultural Costs and Prices-2000-2001

Price should be continued but some of the corrections may be incorporated in its functioning which include: "(i) the CACP should be made an empowered statutory body; (ii) CACP should act directly on the basis of C<sub>2</sub> cost of production; (iii) CACP should also indicate a system of imputing family labour cost; (iv) CACP should recommend only one price for Paddy for the country as a whole; (v) All the procurement agencies and Public Grain Management Institutions should be legally bound by the MSP Policy; (vi) Central government should under-write open purchase of grains under MSP; (vii) FCI should be the buyer of last resort. FCI should withdraw from states like Punjab and Haryana and concentrate on other states" (based on the detailed recommendations given by the Committee, GoI, 2002, pp 9-10). The Committee looked into the possibility of decentralised procurement scheme wherein it recommended that the grain procured under decentralised scheme must be treated as part of the central pool with FCI. It further stated that based on the guarantee of central purchase there should be an open

ended bank credit on the lines of FCI provided to the states involving in decentralised procurement.

The issues that emerged in the debate on price policy from independence till recently are gisted by Tyagi (1990), Krishnaji (1991) and Rao (2001) and GoI, 2002. A few important questions which were discussed in the context of price polity over and over again but remained unanswered include relationship between cost of production and prices; authenticity and quantum of managerial costs and other input costs, distortions in the price parity across crops; building of excess public distribution stock; inefficiency in the Public Distribution System and the overall effectiveness of the price policy to serve the objectives set forth by the policy statement of 1986. In addition to these, other problem that came up for discussion recently and immediate attention is the efficacy of the continuation of the MSP operations in the changed economic scenario in the context of liberalisation. This manifests strongly in the present imperfections prevailing in the agricultural markets and the renewed awareness of the farm lobby.

With the changing scenario of agricultural sector under liberalisation, the price and market intervention schemes may require significant changes. We find two opposite view points expressed by academics emerging in the wake of the changes in agricultural sector. First group believes in fully revamping the price policy in the context of liberalisation (led by Ashok Gulati, Sharad Joshi). The second group suggests retaining the schemes but changing the structure slightly to suit the present needs. (Bhalla (1994) and Sen Committee Report, GoI, 2002). A clear analysis of this question requires a review of the scenario of agricultural price policy in the post 1991. The current trends due to liberalisation are expected to induce competition separately in the factor and product markets. Initial signs of this could be visualised in the new market oriented changes in the cropping pattern and availability of new inputs – seeds, pesticides and fertilisers. Quite a few changes are taking place in the product markets too but these are sporadic in nature. Agricultural marketing being in the State jurisdiction, the changes are not uniform across states and have not been planned with any common theme. A few States have taken initiatives to provide the farmers with updated market information, through electronic media on daily basis and in a few other states on weekly basis. Farmers' markets (*Rayat Santhe*) are established giving away the earlier process of marketing dominated by middlemen. The removal of the restriction on the interstate movement on the agricultural commodities has also contributed significantly in making the markets more vibrant. The

issues that feature in the discussion now, are therefore, quite different than those featured prior to nineties.

### 1.3 Need for Revisiting MSP

Initial emphasis of the Agricultural Prices Commission (APC) was on reducing the fluctuations in foodgrain prices in order to insulate the consumers against the price increase, providing price incentives to the producers and inducing the producers to adopt new technology. As seen earlier, during mid eighties, the emphasis of the price policy however, transformed substantially due to the subsequent changes in the agricultural economy. These changes brought forth modifications in the objectives of price policy as well as its emphasis. Consequently, the focus of analytical issues also changed during this period. MSP is now viewed as a form of market intervention on the part of the State and also as one of the supportive measures (safety nets) to the agricultural producers. Even though it is perfectly WTO compatible eyebrows are raised about its continuance and effectiveness to deal with the objectives set by its architects. The issues that dominate the current debate include reasons for continuation of the price support scheme; its effectiveness in terms of the objectives set forth in the 1986 document and support price vis-à-vis remunerative price approach. More pertinent problem relates to the effectiveness of the implementation of the policy of MSP. In sum, the context of price policy has changed substantially over the years and so also the direction and effectiveness of price policy as a tool to influence the agricultural economy. This provoked many social scientists to argue for a fresh look at MSP as an instrument for interacting with some of the important parameters of the agricultural economy. Initially its role was perceived more from the viewpoint of incentivising farmers to adopt the new seed-water-fertilizer technology. The initial role of MSP as an incentive to adopt technology comes out very clearly in the writing of Professor Dantwala, who was one of the founding architects of India's price policy. He stated that "Though no rigid formula has been accepted to determine the levels of floor prices, the criterion followed is that *progressive farmers should find these levels adequate to encourage enterprise and investment to augment production through the adoption of improved technology with all its risk and uncertainty* (emphasis added)" (Dantwala, 1996, Pp 213 originally published in 1967). After an experience of a quarter of century, in the implementation of the market intervention scheme Prof Dantwala wrote again during early nineties clearly recognising the changing role of MSP and the interventions. He wrote, "Likewise, intervention has to

be selective. *Its need must be clearly established and its effectiveness should be constantly under review* (emphasis added). The real problem is not simply to establish the legitimacy of intervention, but that of ensuring its effective and judicious implementation" (Dantwala, 1996, Pp292, originally published in 1993). That possibly makes it clear that there is a need to have a fresh look at the MSP and such review must consider its operational efficiency as the main objective.

Among the major objectives of the Price Policy (as reflected from the 1986 policy statement), the incentives to adopt new technology, rational utilisation of land and other resources, the effect of prices on the cost of living that includes agricultural wages as well as wages in the other sectors of the economy, have together assumed greater importance. In the wake of liberalisation, MSP assumes a different but a significant role in the form of state intervention in the agricultural product markets as well as a component of the safety net measure. This also has strong linkage to the factor market. In this situation two important aspects deserve attention viz., (i) Insulating the farm producers against the unwarranted sudden fluctuations in prices, provoked by the international price variations (Nair and Sen, 1994) and (ii) creation of an incentive structure for the farm producers in order to direct the allocation of resources towards growth/export oriented crops. The focus should essentially be towards creation of value addition for the cultivators. Therefore, it becomes necessary to review the implementation process and effectiveness of MSP as an instrument on this background.

After a review, the Committee on Long Term Grain Policy has recommended continuation of the Minimum Support Prices but at the same time also provided other instruments for achieving similar results as that of MSP. Among the alternatives discussed by the Committee insurance against income loss caused by depressed prices below the Minimum Support Price has been one such effective instrument. The scheme should provide insurance coverage to the farmers in the event of price collapse by allowing indemnity to the extent of loss incurred due to price of yield loss (the difference between yield and price received as compared to average yield and price of the last three years). However, such scheme may have implementation bottlenecks. Apart from that, it will be a difficult instrument to be operated by private insurance firms without State support. The problems of moral hazard and the siphoning out the money to the undeserving groups will emerge significantly.

It has been noted in the recent past that the growth pattern is changing in favour of certain crops due to various reasons. At times questions are raised about the suitability of area allocated to such crops and the aggregate welfare implication of this changing crop constellation. This has an implicit provocation to check the hypothesis relating to the producer's response to MSP through market prices and infrastructure. Similarly, the trends in the gross capital formation in the recent past are also disturbing especially in the regions where technological change has not made its initial impact. Therefore, it becomes necessary to see the effectiveness of MSP as a tool to encourage adoption of technology in the present context, capital formation as well as to ascertain and document the producers' responses to this scheme of price intervention at micro level. The assessment of the effectiveness of the MSP scheme includes its role as an instrument of price policy as well as an effective tool given the present administrative mechanism. It has to be viewed both in terms of its impact at macro level and in the form of functional ease at micro level. The question of its relevance and operation incidentally becomes an integral part of the analysis. These questions however, will not fetch monosyllable answers and one needs to go in depth to locate other policy tools as possible alternatives.

The present study is undertaken with the focus on effectiveness of the Minimum Support Prices and its impact on various parameters of the agricultural economy. These include growth parameters, distribution aspects, decision making in allocation of resources, environmental effects and above all MSP as an effective operational instrument of the price policy. The specific objectives of the study are as follows:

#### **1.4 Objectives**

1. To analyse the effectiveness of the price policy in the context of the following objectives set forth by the Commission on Agricultural Costs and Prices viz;
  - 1.1. Impact on market prices in terms of reduction in seasonal and cyclical fluctuations and influencing market prices;
  - 1.2. To ascertain the degree of incentives provided to the producers for increasing investment, use of technology for raising growth in output;
  - 1.3. To examine the impact on use of inputs and land and water resources besides adoption of socially desirable cropping pattern;
  - 1.4. To identify regional variations in the degree of implementation of price policy;

- 1.5. To identify factors responsible for success or failure of MSP with special focus on rural infrastructure and optimal use of natural resources; and
2. To analyse the overall relevance and effectiveness of MSP in the case of major crops grown in individual states.
3. To understand and document the process of implementation of Minimum Support Prices and allied measures at state level specifically:  
Evaluating the system of implementation  
Factors responsible for the success or failure of MSP with special focus on rural infrastructure.
4. To assess the impact of MSP on adoption of improved technology and their relative contribution in increasing the production and productivity of the specified crops.
5. To examine the impact of MSP on the income of the farmers and investment in agriculture by them.
6. To study whether the MSP has created inter-crop distortion in their pricing, production and desired production pattern of rainfed crops.
7. To suggest policy measures in order to enhance the effectiveness of MSP in the current economic situation.

The focus of the study is to analyse the very existence of MSP as a tool of price policy in the context of its effectiveness in the changing economic scenario. The study is expected to highlight the factors responsible for the success of MSP as a tool of price policy as well as the parameters responsible for its failure.

### **1.5 Methodology**

This is a consolidated study covering the research reports prepared in the 11 states in the country. The states include Andhra Pradesh, Bihar, Gujarath, Haryana, Karnataka, Maharashtra, Madhya Pradesh, Punjab, Tamil Nadu, Uttar Pradesh and West Bengal. A common research proposal was prepared for all the states and the agro-economic research centres of each of the states were asked to submit the report on the effectiveness of Minimum Support Prices. Alternatives to the present scheme of Minimum Support Prices were also important components of this study. However, it took quite some time to receive all the reports and the results have been at variance across states. Naturally, the instruments of price policy have not been uniformly effective in achieving the targeted intentions of the policy.

The selected states are grouped here into four distinct groups on the basis of the operations under Minimum Support Price. The first group includes Punjab, Haryana and Uttar Pradesh wherein, the Minimum Support Price has been an effective tool for creating incentives for the farmers as well as correcting price policy as desired by the policy makers. These states have been reportedly implementing the policy more effectively and procuring the major share of food grains for PDS. The second group of states includes Karnataka, Maharashtra and Gujarat. The crops that do not come under the core net of procurement have dominated this group. These states have Jowar, Bajra, Ragi and other millets as their major crops, which rarely feature under Minimum Support Price operations. However, a few of the crops are procured from these states. Therefore, largely the farmers of these states have to depend on the market operations. In the event of any price collapse the welfare loss to the farmers in these states is relatively high. The third group includes Andhra Pradesh and Tamil Nadu, largely featuring in the procurement of Paddy. These two southern states also have sizeable production of other crops, which do not feature under Minimum Support Price operations, and paddy dominates their procurement operations. Madhya Pradesh, Bihar and West Bengal constitute the fourth group. These states provide Paddy as well as Wheat to the procurement agencies under the Minimum Support Price scheme but the surplus generated does not get mopped due to the problems in effective implementation of MSP in these states. This study utilized the reports prepared by the Agro-Economic Research Centres covering these states and have used secondary and primary data provided in these reports.

The macro level analysis included in this study is based on time series data of Minimum Support Prices and other prices collected from secondary sources at state level from 1990-91 to the latest year. We have also attempted an overall analysis of the price situation in the state with the help of the data on Wholesale Prices and Farm Harvest Prices at state level. Availability of markets and other infrastructure, market arrivals, procurement of foodgrains, the operations of public distribution system, use of inputs and changes in input prices, changes in the cropping pattern also forms important components of this report wherever needed. In addition to this, our analysis is also supported with the primary data collected from a micro-level survey conducted in three distinct regions of these states. These regions represent i. commercial crop region, ii. high growth food crop region, and iii. coarse cereals-pulses dominated slow growth region. The field survey covered the information on the markets in these regions in

addition to a household survey of the cultivators. The study is also supported by a well-designed PRA exercise carried out at three locations in each of the States. The study is confined to the major crops of the selected States.

The primary data for the present study are collected from three different regions in each of the States one each representing following categories:

- i. A region in the State growing one of the major food crops as a dominant crop and characterised with moderate to high growth of agricultural sector: Represented by a suitable District.
- ii. A region in the State growing one major non-food crop and having commercial crop oriented economy with high growth rates in agricultural sector: Represented by a suitable District
- iii. A region in the State growing mainly food crops characterised with slow growth in the sector: Represented by a suitable District

Table 1.2 gives the selected states, districts, regions and crops covered by different AERCs across the country. We find that the number of crops selected by the research teams provide a mosaic of crop pattern existing in the country. Similarly, the selected districts also show significant variations, across the country providing various agro-climatic and social situations. Thus, the results clearly bring out effectiveness of Minimum Support Prices under various economic and agro-climatic conditions.

As mentioned earlier, the method of design of the studies across the country was common. It was suggested that each of the study team should select three districts as the first stage. The districts were chosen based on the criteria given above, followed by a taluka/village identified in the selected district with similar characteristics. Similarly, the dominant crops in the district determined the village selection. At the last stage, a list of the farmers was prepared having marketable surplus, with the help of village officials, so

**Table 1.2: Regions and Crops Selected for the Field Survey**

State/districts	Taluks	Villages	Major crops	
<b>PUNJAB</b>	Region I	DN P	Paddy and Wheat	
	Region II	DN P	Wheat	
<b>RYANA</b>	Kaithal	DN P	Wheat	
	Sirsa	DN P	Wheat	
	Bhiwani	DN P	WheatDN P	
<b>UTTAR PRADESH</b>	Budaun	DN P	Wheat	
	Muzafarnagar	DN P	Sugarcane	
	Banda	DN P	Gram	
<b>KARNATAKA</b>	Mandya	Mandya, Pandavapura and Srirangapattan	Mallanayakanakatte, Darasaguppe, Kyathanahalli, Holalu and Budanur	Paddy, Ragi and Sugarcane
	Belguam	Belgaum, Gokak and Hukkeri	Gotur, Nerali, Gosbala, Bhachi, Kangaralli B K and Turmuri	Paddy, Groundnut and Jowar
	Gulbarga	Jevargi, Chittapur and Sedam	Kalagi, Sonna, Gotur, Malkhed, Nelogi & Sangari	Jowar, Gram and Tur
<b>MAHARASHTRA</b>	Solapur	Barshi	Pangaon, Kalegaon, Undegaon	Rabi- Jowar
	Kolahapur	Gadhlinglaj	Halkarni, Terni, Basari B K	Groundnut
	Akola	Akola	Agar, Ganeligram, Ugwa	Kharif- Jowar
<b>GUJARAT</b>	Sabarkantha	Himmatnagar	Hajpur, Virwala, Vaktapur	Jowar, Bajra & wheat
	Junagadh	Junagadh	Vijapur, Makhiyala, Jamka	Groundnut
	Panchamahals	Kalal	Delol, Derol, Malav	Tur, wheat, Bajra & jowar
<b>ANDHRA PRADESH</b>	West Godavari	Penumantra Mandal	Mallapudi	Paddy
		Iragavaram Mandal	Iragavaram	Paddy
	Anantapur	Rapatadu	Rapatadu, Gangulakunta	Groundnut and Paddy
	Mahabubnagar	Nawabpet	Rudraram & Daripalli	Jowar, Paddy & Ragi
<b>TAMILNADU</b>	Dharmapuri	N P	N P	Paddy I, Ragi, Groundnut & Pulses
	Thanjavur	N P	N P	Kuruvai paddy, Samba paddy & Sugarcane
	Villapuram	N P	N P	Paddy I, Sugarcane & Groundnut
<b>MADHYA PRADESH</b>	Ujjain	Badnagar, Ujjain, Khachord, Tarana	Maulana, Pipaliaragho, Unhel, Chiklee	Soyabean
	Narsingpur	Narsingapur, Kareli	Dangidhana, Muria, Kareli, Kodsas	Wheat, paddy
	Mandla	Mandla, Nainpur, Bichhia, Narayanganj	Bhapsa, Dhatura, Mand, Mangalgaon	Gram
<b>BIHAR</b>	Rohtas	Sibsagar	Konar, Jalalpur	Paddy & Wheat
	Purnea	Kasba	Daugachhi	Jute
	Darbhanga	i. Darbhanga	Ranipur	Paddy
		ii. Dahadurpur	Kasothar	Wheat
<b>WEST BENGAL</b>	Parganas	N P	N P	N P
	Hooghly	N P	N P	N P
	Darjeeling	N P	N P	N P

Note: DNP- Details Not Provided; Based on the AERCs Research Reports

that the price intervention policy becomes relevant to them. A sample was selected from this group of farmers and structured schedule was canvassed. In addition to this, all the study teams were asked to conduct a PRA exercise to obtain answers to some of the questions that were difficult to be answered by the individual farmers. This experiment had a mixed response

Some important questions were attempted through a Participatory Rural Appraisal (PRA) Method but the researchers mainly depended on survey data. The important aspects that were to be covered under the PRA exercise were:

- i. Awareness of the MSP and related aspects
- ii. Area response parameters and decision making criteria of the farmers
- iii. Prices received during the recent past, price expectations, and the behaviour of relative prices across competing crops and non-agricultural sector.
- iv. Recent trends in production, marketing, consumption, marketable and marketed surplus in the rural economy.
- v. Allocation of resources in response to product prices specifically fertilisers, irrigation charges, pesticides, management practices etc.
- vi. Details of marketing and other infrastructure like distance of market, participation in the market, role of middlemen, procurement by the state, awareness of policy variables etc.
- vii. The difficulties and constraints faced by the farm households in accessing the product market as well as factor market, market inefficiencies.
- viii. The process of implementation of the price policy and difficulties faced.
- ix. Response of farmers to changes in agricultural economy.

The AERCs preferred to use the data gathered through field survey probably for two reasons. First, many of them were not well acquainted with the PRA technique and second that there are two extreme field conditions were available wherein at one end the farmers were well aware with the scheme. On the other extreme they were absolutely unaware of the mechanism.

Size group wise distribution of farmers across the states is given in table 1.3. Except in Uttar Pradesh, we have the distribution of farmers spread over small, medium and large farmers. More or less, the selected farm households are uniformly spread across the size classes (35 per cent small, 29 per cent small and 36 per cent large).

**Table 1.3 : Size group wise distribution of sample household**

State/districts		Small	Medium	Large	Total
PUNJAB	Region I	42	42	36	120
	Region II	41	39	40	120
HARYANA	Kaithal	12	7	17	36
	Sirsa	9	8	24	41
	Bhiwani	8	12	23	43
UTTAR PRADESH	Badaun	NA	NA	NA	40
	Muzafarnagar	NA	NA	NA	40
	Banda	NA	NA	NA	40
KARNATAKA	Mandya	4	25	21	50
	Belguam	15	23	12	50
	Gulbarga	1	4	45	50
MAHARASHTRA	Solapur	20	16	14	50
	Kolahapur	20	16	14	50
	Akola	20	16	14	50
GUJARAT	Sabarkantha	23	13	24	60
	Junagadh	24	13	23	60
	Panchamahals	24	13	23	60
ANDHRA PRADESH	West Godavari	10	10	20	40
	Anantapur	10	10	20	40
	Mahabubnagar	10	10	20	40
TAMILNADU	Dharmapuri	30	5	5	40
	Thanjavur	24	10	6	40
	Villapuram	27	8	5	40
MADHYA PRADESH	Ujjain	0	10	30	40
	Narasingpur	0	8	32	40
	Mandla	0	22	18	40
BIHAR	Rohtas	12	8	10	30
	Purnea	16	8	6	30
	Darbhanga	14	9	7	30
WEST BENGAL	Parganas	23	15	2	40
	Hooghly	29	11	0	40
	Darjeeling	27	13	0	40
<b>Total (Excluding UP)</b>		<b>495</b>	<b>404</b>	<b>511</b>	<b>1410</b>
<b>Percent to total of total</b>		<b>35.11</b>	<b>28.65</b>	<b>36.24</b>	<b>100.00</b>

### 1.7 Plan of the Study

The focus of the study is to assess effectiveness of price intervention scheme as an instrument of price policy. Keeping in view the main focus we have spread the study over six sections. This section has two chapters and the second chapter deals with the administration of MSP as experienced in the 11 states. The next section includes the

results of the studies on Punjab, Haryana and Uttar Pradesh. These are the states where MSP as a scheme has been functioning effectively. The third section has the studies on Karnataka, Maharashtra, and Gujarat. These states have millets as predominant crops in their cropping pattern. These are also the states having large span of areas under drought prone category. Here the analysis focuses along with effectiveness of price policy at state level and a historical review of price intervention scheme. The fourth section contains analysis of effectiveness of MSP in the paddy belt of south India. We include here the resume of the studies on Andhra Pradesh and Tamil Nadu. These two states grow paddy and have partial success in implementing the scheme of support prices. Analysis of the effectiveness of MSP in Madhya Pradesh, Bihar and West Bengal is included in the fifth section. These states have significant marketable surplus but the scheme does not operate effectively in these states. We have focussed here on the factors dictating success or failures of MSP along with the operations in the respective states. Analysis of price trends forms a part of our analysis. The administration of MSP is dealt in detail in one chapter exclusively and thus it does not feature in every section. The process of administration at state level is analysed here. Attempt to locate the problems encountered while effectively administering the policy of MSP at state level and micro-level perceptions about the impact are incorporated in the last chapter. This chapter clearly brings out the effectiveness of the policy.

## **1.8 Limitations**

The policy of price intervention scheme was drafted in a totally different agrarian situation than that is prevailing today. Therefore, searching for its relevance in the present context (with a theme of liberalisation) is difficult, even at hypothetical level. Even then the process of protecting farmers at the instance of distress, is essential and given the problems in land distribution it is also necessary. But probably the scale and coverage is too large and the questions are complex as also highly politicised to arrive at an effective analysis. Our analysis is limited to a few crops and these are the most important crops from the viewpoint of MSP in the State. The regions chosen represent different agro-climatic zones of the country, and with most active farm lobby, however, we do not arrogate to commit that our study has a full coverage of the country at micro level.

## CHAPTER II

### ADMINISTRATION OF MINIMUM SUPPORT PRICES

#### 2.1 Introduction

Formulation of the price policy in the country began with a series of objectives, however, focussed more on price support scheme. The changes occurred mainly due to the transformation that took place in the agricultural sector during last four decades. A significant landmark in the process was in the form of the price policy statement issued by Government of India during 1986 (GOI, 1986). Some of the objectives presented in this document were envisaged to influence directly on the parameters of the economy whereas; the others were to be achieved indirectly through intervening variables. The price intervention scheme operated through Minimum Support Price was expected to influence the crop pattern, correcting the imbalances across crops, providing floor level support prices and establishing price expectations of the producer. All these objectives along with the annual CACP reports tuned the price policy of the country over years. It is considered that the experience gathered in the implementation of the scheme, must have improved the efficiency in implementation of the scheme. However, there is hardly any study looking into the efficiency of the operating system at ground level. This kind of studies are neither initiated by CACP nor taken up by academic fraternity independently. Therefore, there is hardly any literature on effectiveness of Minimum Support Price scheme across states in the country. It is always assumed that the scheme has been operating perfectly across the country and thus providing the required support to the farmers. This assumption probably stems out of the experience of the implementation of the scheme in a few states like Punjab, Haryana and Madhya Pradesh. Further, there were no severe aberrations in the process of implementation or at least these were not felt strongly by the farmers. Therefore, aberrations in implementation if any, never came to the discussion table till mid-eighties. The scheme continued unabatedly without much change in its process of implementation.

Implementation of MSP at the State level is quite an oblique task. Central government takes the decision about the price policy albeit having discussions with the representatives of the State government, but the implementation largely rests with the State machinery alone. As a result the implementation is different across states. Here we

briefly discuss the apex level implementation process and agencies involved in that. We further provide the experience of implementation gathered through the studies conducted at the State level.

## **2.2 Apex Process**

Commission on Agricultural Costs and Prices (CACP) is the apex body under the Ministry of Agriculture that provides the basic structure for the price policy. In addition to the formal price policy statement issued in 1986, after the acceptance of the Sen committee report, CACP through its reports provided direction to the price policy. CACP submits annually two reports to the Central government one at the beginning of the Kharif season and another at the beginning of the Rabi season. The procedure of CACP to prepare these reports goes through a perfect drill with a little modifications depending on the Chairman of CACP. The preparations of the Kharif report normally begins in the month of January of every year and the report is due for submission in the month of March, whereas the preparation of the Rabi report starts in the month of July so that the report can be submitted in the month of October. CACP gets the data from the Economic and Statistical Advisor's office, and these include the Standard tables on Cost of Production, Whole Sale Prices and data on other relevant variables. The preparation for the reports generally begins with a background note internally circulated in the Commission followed by the discussions with the officials of the Departments of Agriculture of various States. The Commission does not visit all the States every year and some of the State governments are required to make submissions to the Commission at New Delhi. Meetings with the farmers' representatives are not mandatory but during the field visits, Members of the Commission sometimes discuss the issues with the farmers. The composition of the Commission includes farmer' representatives (Non-Official members) and understandably they put forth the farmers' view points. Members of the Commission prepare independent notes and these are taken for discussion while preparing the final report. It is observed that in a few reports notes of dissents were also appended and normally these deal with the fixation of MSP during that season. The draft report is prepared and discussed with all the members of the Commission before its submission to the Minister of Agriculture, Government of India. It is taken to the Cabinet of Ministers for the purpose of discussion and for announcing the Support Prices.

## **2.3 Institutions Involved**

Quite a few institutions are involved in the process of implementation of MSP at State level. The involvement of these institutions makes the functioning more complex than easy. These institutions include Food Corporation of India operating through the State level Food and Civil Supply Corporation and State Co-operative Marketing Federation. The National Agricultural Co-operative Marketing Federation (NAFED), operates in most of the States and is a nodal agency in procurement of various commodities. There are other product specific procurement agencies and these differ across States like State level Oil Seed Growers Federation or Primary Agricultural Cooperative Societies. The procurement of food grains is entirely a responsibility of the Food and Civil Supplies Corporation at the State level. Oilseed growers' Federation or other individual non-food crops are covered by NAFED.

### **2.3.1 Food Corporation of India**

The Food Corporation of India (FCI) was set up under the Food Corporation Act of 1969 with three basic objectives. First, it was expected to ensure effective price support policy for safeguarding the interest of the farmers. The second objective deals with distribution of foodgrains throughout the country for the Public Distribution System (PDS). The FCI thus maintains the network of supply to states for the purpose of PDS. Maintaining suitable level of operational buffer stocks of foodgrains to ensure the national food security was the third important task assigned to FCI during the years when food insecurity itself was a major problem. Over the last three decades the operations of FCI have spread substantially. FCI organises price support purchases in about 8,000 centres for Wheat and 4,000 centres for Paddy. The foodgrains procurement during last two decades has increased from 4 Million Tonnes to 25 Million Tonnes. Though the excessive stocks have created concerns the food security at least in terms of available stocks has been achieved. FCI has a capacity to store 23 million tonnes of foodgrains in about 1,700 godowns located all over the country out of which 26.5 millions tonnes have cover facility whereas 5.20 millions tonnes have both cover and plinth. Out of 31.7 million tonnes of storage, 16.6 million tonnes are stored in the hired godowns. About 15 to 20 per cent of India's Wheat production is procured whereas 12 to 15 per cent of rice production is procured.

Food Corporation of India was established to support food security system and establish markets for grains in less developed region. FCI has been quite successful in its procurement operations but not so much in its distribution. The Committee on Long Term Grain Policy recommended the FCI opens procurement centres to provide MSP in the areas, where distress sale is prevailing. This role under section 13 of Chapter II of FCI Act is emphasised in their recommendations. Further, if FCI has to be effective in the changed circumstances it should be autonomous and cost-effective. Four important issues emerge from the analysis of FCI and its operations (GoI, 2002 and Swaminathan 2000). First, there are severe infrastructural bottlenecks for FCI and that hinders its functioning. Second, the spread of the network is quite limited causing the operations to be confined to selected regions. Third, the economic cost of the foodgrains procured is quite high to justify viable economic operations of the institution. Last, the operating systems of FCI needs a complete overhauling in the changed situation.

**Table 2.1: Procurement of Foodgrains by FCI**

(Million Tonnes)

5 Year	Wheat	Rice	Coarse Grains	Total
1994-95	11.9	13.4	-	
1995-96	12.3	9.9	-	
1996-97	8.2	12.2	-	
1997-98	9.3	14.3	-	
1998-99	12.6	11.8	-	
1999-2000	14.1	17.3	-	
2000-01	16.3	19.1	-	
2001-02	20.6	21.2	0.3	
2002-03	19.02	15.82	0.1	
2003-04	15.8	-	-	

Source: Food Corporation of India, Annual Reports.

### **2.3.2 National Agricultural Co-operative Marketing Federation of India (NAFED)**

This is an apex institution dealing with co-operative marketing in the country came into existence on 2<sup>nd</sup> October 1985. NAFED was established to play an effective role in the marketing of the agricultural produce within and outside the country in the fast changing business environment. NAFED involves itself in the following activities :-

- Providing market support to farmers through its commercial purchase.
- Acting as the Central Nodal-Agency of the Government of India for undertaking purchases of oilseeds and pulses under Price Support Scheme.

- Acting as one of the agencies of the Government of India for making purchases under market intervention scheme.
- Acting as a canalising agency of the Government of India for select commodities.
- Assisting farmers to source various agricultural inputs.

NAFED undertakes its operations through two agencies like Taluka Agricultural Produce Cooperatives (TAPC) and Agricultural Produce Marketing Committee (APMC). Regional offices of NAFED are located in four regions and its head office is at New Delhi. NAFED decides about the procurement mainly on the basis of budget available. Generally the procedure followed incorporating three steps. First, the regional office and the branch offices will get the information from State Marketing Boards whenever prices slide down below MSP. Main APMC's send the information of arrival and prices of the commodity to NAFED every day. Second, it is only at the behest of the State Marketing Board, NAFED begins its intervention in the market and starts procurement. But NAFED does not act *suo moto*. Third, NAFED procures groundnut, soyabean, safflower, sunflower and sesamum, gram, tur, black gram and copra as per requirements. Information about the price situation takes about one week to reach from regional or branch office to the Head office. It is only then the Head Office makes available the required funds to the regional office and thus NAFED can enter in to the market and starts procuring.

NAFED imposes the following Charges

Service charges	2%
Sale charges	2%
Handling charges	Rs 95/MT
Market Cess	0.8%

The market intervention operations of NAFED have been earning sufficient profits for the organisation. In the year 2000 the profits of NAFED were Rs 1.99 crores and in the following year it touched Rs 4.93 crores. This clearly indicates the profitability of its market intervention operations and thus it is clear that on one hand even though the interventions are beneficial for the procurement agency that does not meet the farmers' expectations on the other. It does not meet the farmers' expectation either about the procurement at the right time or at the right price. NAFED has a reserve fund named as Price Fluctuation Fund. This Fund was Rs 12.51 crores in 1999 and Rs 11.31 crores in the following year. It is clear that the agency has the needed fund and the infrastructure for the market intervention operations and even then the farmers are not the ultimate

beneficiaries. Our interview with the NAFED Manager revealed that if given free hand the agency could easily increase its profits and effectively intervene the market at proper time. In the context of liberalisation, it will be quite prudent to allow free hand to agencies like NAFED to undertake purchases through market interventions. We have presented in table 2.2 the procurement effected by NAFED in the recent years and it can be observed that there is a significant presence of the organisation in the market.

**Table 2.2: Procurement of Agricultural Commodities by NAFED**

Commodity	Year	Support Price Rs. P.Qtl (FAQ)	Qty Procured MTs	Value Rs. In lakhs	Major States of Procurement
Potato	1997-98	125-130/350	4,697	159.27	Uttar Pradesh Karnataka
Onion	1990-91 (MIS 90)	70	61,984	433.94	Gujarat Maharashtra
	1991-92 (MIS-91)	70K/75R 300	4,500 60	33.31 1.98	Karnataka
Isabgol	1990-91	1,100	1,256	138.14	Gujarat
Grapes	1990-91	2,50B 300A.	416	10.88	Haryana Punjab
	1991-92	300B 350A.	102	3.22	Haryana
Eggs (Qty. in LAC Nos.)	1990-91	65/100	(38.20)	15.28	Hyderabad/Del
	1991-92	65/100	(20.16)	13.11	Andhra Pradesh
	1992-93	65/100	(26.99)	17.94	Andhra Pradesh
	1993-94	75/100	(91.02)	61.63	Andhra Pradesh
	1994-95	75/100	(28.21)	37.61	Andhra Pradesh
	1995-96	82/100	(34.82)	32.96	Andhra Pradesh, Punjab
Mushroom	1999-00	100	(85.89)	86.95	Andhra Pradesh
	1990-91	220	46	10.01	Haryana
Kinoo/Malta	1990-91	250B	6,585	181.71	Rajasthan, Punjab, Haryana, Himachal Pradesh
	1991-92	300A.	2,989	86.81	Punjab, Haryana
	1992-93	325A.	1,703	46.88	Punjab, Haryana
	1993-94	350A.	3,133	49.49	Himachal Pradesh, Haryana, Uttar Pradesh
Wet Ginger	1991-92	300A	21	0.06	Kerala
Caster seed	1990-91	550	2,500	137.47	Gujarat
	1991-92	550	9,999	549.98	Gujarat
Black Pepper	1993-94	3,300	1,491	495.25	Kerala
Chillies	1993-94	1,500	5,000	806.64	Andhra Pradesh
	1996-97	2,200	126	29.48	Andhra Pradesh
	1997-98	2,250	8,123	19.01	Andhra Pradesh
Coriander	1998-99	1,250	378	45.88	Rajasthan

Source: NAFED – Annual Reports for Various Years.

The experience of procurement operations by NAFED points towards three pertinent observations. First, there is hardly any consistency in the MIS operations of NAFED. Therefore their presence or purchase operations will not be effective in reducing

the price risk, nor reduce the variations. Thus the operations do not even assure the farmers against impending price risk. Second, the intervention is so diminutive compared with the marketed surplus that this could hardly make any dent on the market and prices. This is interesting on the background of the fact that NAFED makes good profit. Third, the operations of NAFED are confined only to a few crops leaving a large number of crops out of its ambit. This policy was well suited when there was scarcity in the agricultural production and supply bottlenecks were significant irritants. But now in the changed circumstances it is expected that such institutional intervention be used to achieve positive and long lasting results.

Table 2.3 presents the objectives of NAFED and the operations undertaken by the agency to meet these objectives. On the face of it, one can be satisfied that NAFED, effectively satisfies most of the objectives, however, our interviews with the officers of NAFED, indicated that they would like to intensify their presence in the market. This will not only help to increase competition in the market and enhance market functioning but also protect the producers against fluctuations.

**Table 2.3: National Agricultural Co-operative Marketing Federation (NAFED)**

Sl. No.	Objectives	Operations undertaken to Meet the Objectives
1	Providing market support to farmers through its commercial purchase	Procurement and commercial purchase operations are undertaken
2	Acting as the Central Nodal-Agency of the Government of India for understanding purchases of oilseeds and pulses under price support Scheme.	Oilseeds purchase scheme operates effectively.
3	Acting as the agency of the Government of India for making purchases under market intervention scheme.	Acts as an agency of the GoI, for market intervention but cannot effectively undertake this due to long and extended procedure. Cannot help the farmers in distress.
4	Acting as the canalizing agency of the Government of India for select commodities.	Effectively acts as canalising agency
5	Assisting farmers to source various agriculture inputs.	Sporadic instances
6	NAFED appoints the agent for purchase and delivery of the commodity.	Agents are appointed and the purchase and delivery operations undertaken. This has been developed effectively.
7	NAFED signs the agreement with the agents.	Most of the NAFED operations are carried out with the help of agents
8	NAFED supplies properly stitched and standard weighted gunny bags to the agents	-do-
9	NAFED officers/representatives shall oversee the operations.	-do-

Generally during the harvest season the arrivals in the market start increasing, which is an obvious and well-anticipated phenomena. But as the regulated markets work on only a stipulated day in the week, the clustering of the arrivals in the regulated market takes place more by design. When the arrivals increase in the market it is natural that the prices offered by the traders collapse in the wake of huge arrivals. Many times the prices go well below the MSP, and the procedure requires that the APMC reports this to the District authorities. After receiving such information the District authorities call a meeting of the departments involved in the process of procurement and a decision about procurement is taken. This decision is conveyed to the authorities at state level in order to get clearance and release of funds. After such clearance and release of funds procurement centres are opened. An order from the Government is issued for the purpose of procurement (see Annexure 2.1). The procurement agencies also have to identify state level procurement network. Food Corporation of India has clear network whereas, NAFED depends on other agencies for its procurement. Thus, it is very clear that the time gap between prices falling below the Minimum Support Prices and the starting of procurement is at least two weeks and by this time the farmers would have sold the crop in the regulated market yard\*.

#### **2.4. Methodological Issues in MSP**

The debate on the price policy was hitherto dominated by the issues pertaining to the methodology of fixing MSP and procurement prices. It began with the issues relating to estimation of various components of cost of cultivation/production, collection procedures of the primary data from the cost of cultivation surveys and the process of arriving at MSP. Following the criticism about the process during mid-seventies a special Expert Committee on cost of production estimates was constituted under the Chairmanship of Dr. S.R. Sen (GOI, 1980). The committee reviewed the process of collecting the data and other components of cost. The recommendations of the committee covered methodology of arriving at the cost towards hired human labour, family labour, interest on fixed/working capital, rental value of land, managerial input, and opportunity for mixed crops. Following these recommendations the methods of arriving at cost of cultivation/production was totally revamped at CACP. A subsequent statement of price policy of 1986 provided a list of nine factors to be kept under

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\* It is understood that the State Government has recently taken steps to open procurement centres in the APMC yards. We do not have any experience of this institutional arrangement.

consideration while fixing the MSP, levy prices and procurement prices, viz., (i) Cost of production, (ii) Risk under cultivation, (iii) Changes in the input prices, (iv) Trends in the market prices, (v) Demand and supply of the commodities, (vi) Cost of living index and general price index, (vii) Fluctuations of prices in international market, (viii) Price parity between crops input and output across sectors, and (ix) Trends in the market prices. It is worthwhile to see if at least half of these indicators get reflected in declaration of MSP.

Following the farmers' unrest during eighties in Punjab, Haryana, Karnataka, Tamilnadu and Maharashtra, the Government of India appointed another Expert Committee under the Chairmanship of Prof C H Hanumantha Rao to review the methodology of cost of production of crops. This Committee specifically focussed on valuation of labour, imputed costs of family labour rented value of land, allowance towards transportation, imputed interest on fixed/working capital and share towards managerial costs. The Committee submitted its report covering these aspects and suggested that actual wages to be taken to value the labour cost and family labour should be valued at the wage rates of casual labour (Govt. of India, 1990). The Committee also recommended inclusion of 10 per cent managerial cost in the total cost of production. All these provided a 'scientific attire' to the entire process of arriving at the cost of production. However, as can be seen from the data, the prices recommended by CACP were more often modified by Government of India with the intervention of the political representatives. But the issues were not settled at that. Farmers' representatives kept on voicing their concerns about the methodology.

A few important questions which were discussed in the context of price policy over and over again but remained unanswered include: declaration process of MSP, relationship between cost of production and prices; authenticity and quantum of managerial costs and other input costs, distortions in the price parity across crops due to politicisation; building of excess public distribution stock; inefficiency in the Public Distribution System and ineffectiveness of the price policy to serve the objectives set forth by the policy statement of 1986.

One of the important issues flagged in the paragraphs above is the gap between the recommended MSP by CACP and the support price declared by Government of India. Largely, the two tally with each other but certain differences are quite intriguing. An observation by Prof V M Rao, a former member of CACP, in this context is quite pertinent.

He writes, "It is amusing to see in table 1 (*of the paper sic*), the Government in the role of price leader with the Commission dutifully catching up and quite too fast!" (Rao 2002). The variations between the prices fixed by CACP and declared by the Government of India speak volumes about the happenings between recommendations of CACP and declaration by the Government of India (see Table 2.4). Therefore, fixation of the prices with an elaborate structure and mechanism remained only an exercise for exhibition. Such intervention occurred selectively across crops depending on the political

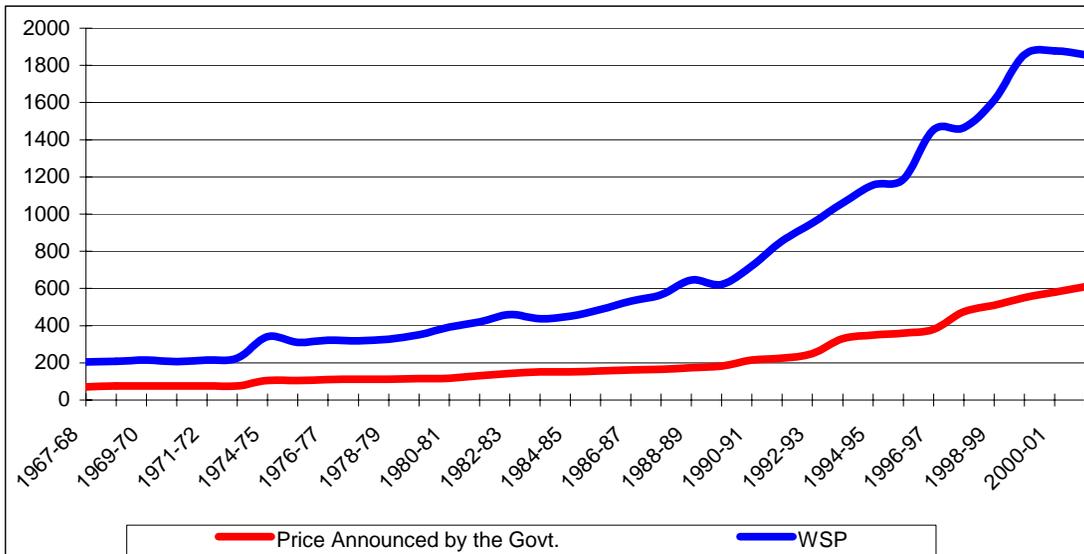
**Table 2.4 : Minimum Support Price Recommended by CACP and MSP Announced by Govt of India – Wheat**

(Rs. per Quintal)

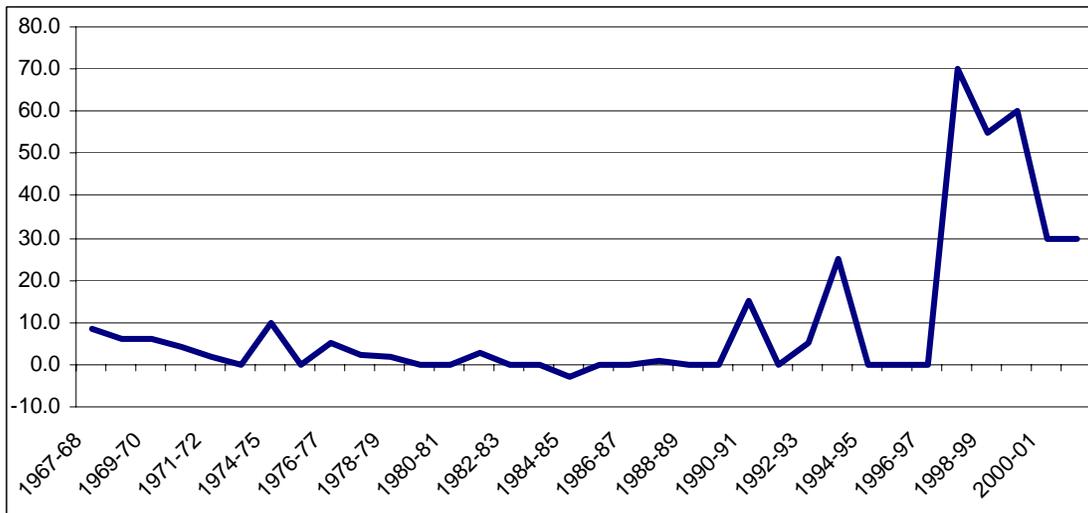
Year	Price Recommended by C.A.C.P	Price Announced by the Govt.	WSP	Diff Between CACP and Govt
1967-68	61.5	70	204.60	8.5
1968-69	70	76	209.10	6.0
1969-70	70	76	214.50	6.0
1970-71	72	76	206.20	4.0
1971-72	74	76	215.80	2.0
1973-74	76	76	225.10	0.0
1974-75	95	105	340.40	10.0
1975-76	105	105	310.54	0.0
1976-77	105	110	321.26	5.0
1977-78	110	112.5	319.20	2.5
1978-79	110	112	327.45	2.0
1979-80	115	115	350.33	0.0
1980-81	117	117	391.78	0.0
1981-82	127	130	419.41	3.0
1982-83	142	142	460.03	0.0
1983-84	151	151	436.32	0.0
1984-85	155	152	451.17	-3.0
1985-86	157	157	487.66	0.0
1986-87	162	162	532.64	0.0
1987-88	165	166	566.19	1.0
1988-89	173	173	645.88	0.0
1989-90	183	183	620.71	0.0
1990-91	200	215	721.37	15.0
1991-92	225	225	855.58	0.0
1992-93	245	250	952.04	5.0
1993-94	305	330	1061.08	25.0
1994-95	350	350	1156.49	0.0
1995-96	360	360	1188.32	0.0
1996-97	380	380	1453.57	0.0
1997-98	405	475	1464.18	70.0
1998-99	455	510	1612.72	55.0
1999-00	490	550	1856.75	60.0
2000-01	550	580	1877.97	30.0
2001-02	580	610	1856.75	30.0

Source: Various books of Agriculture Prices

**Figure 2.1: MSP and Whole Sale Prices of Wheat**



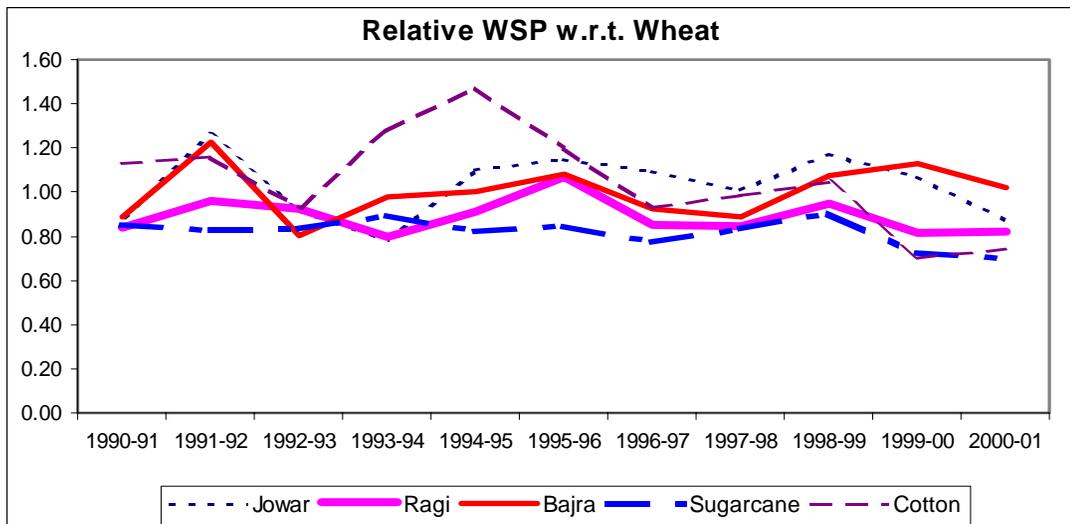
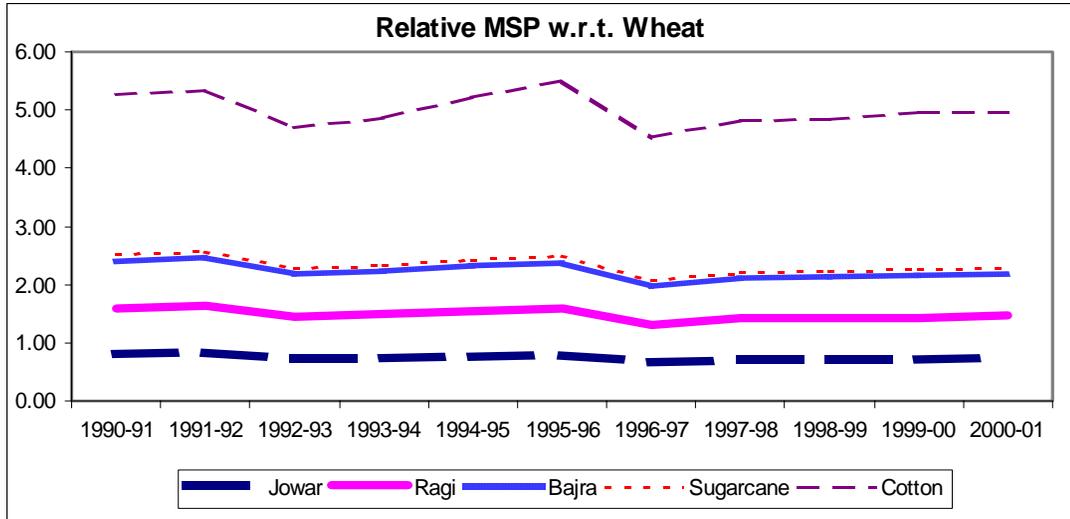
**Difference Between MSP Recommended by CACP and the Same Declared by Govt of India**

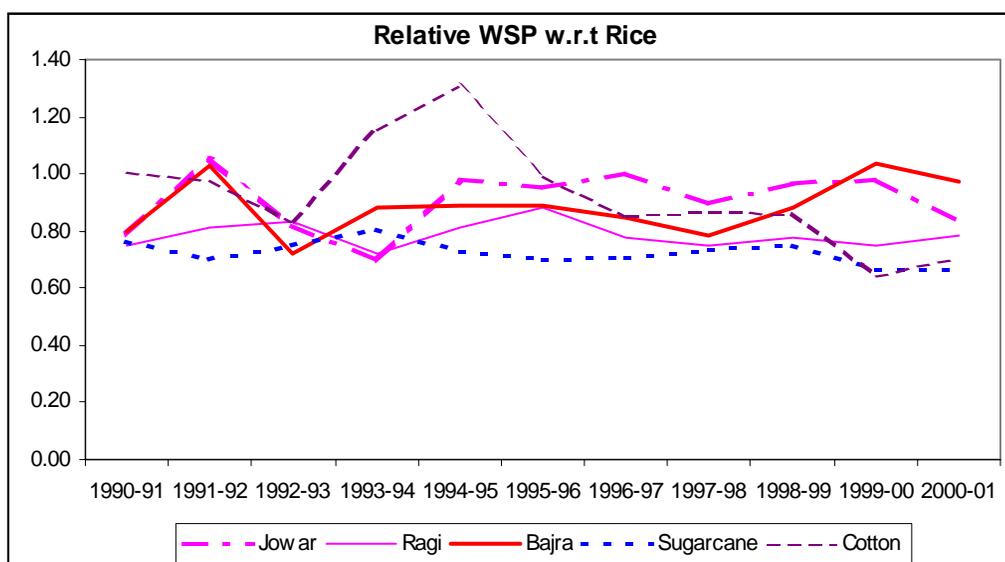
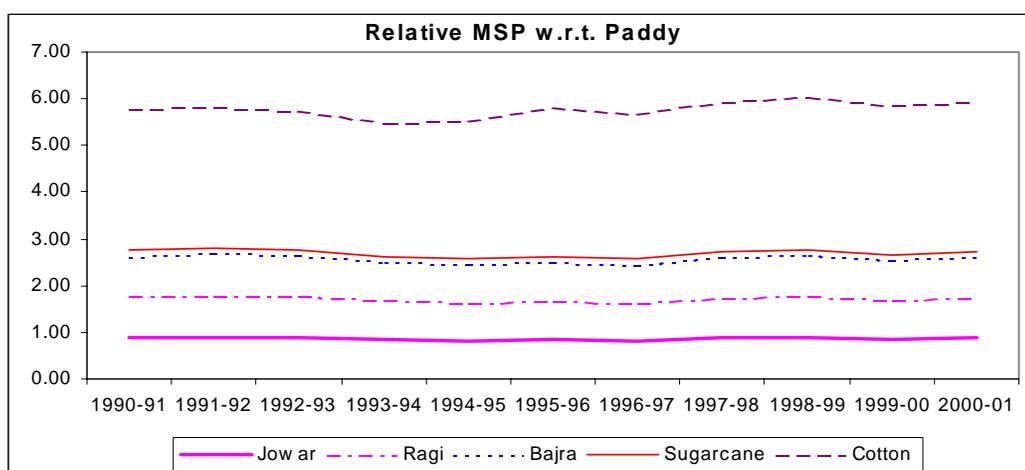


interventions and therefore some of the crops received better deal whereas a few other crops suffered a deliberate neglect. This certainly hampered the price parity across crops.

It also created distortions between the trends in factor prices and product prices probably for a few selected crops and groups of farmers growing these crops.

**Figure 2.2: Relative Prices of Other Crops Compared to Wheat and Paddy**





The comparison of relative prices of the crops with wheat and paddy are shown in figure 2.2. It can be seen that the prices of jowar, ragi, and bajra showed a significant downward trends in the relative prices with respect to wheat. The relative MSP of these crops with respect to MSP of paddy do not show similar trends. In other words, one can see a deliberate price policy push down for jowar, bajra and ragi as against wheat. A situation that causes welfare loss to the growing of these crops largely constituting small and medium farmers.

The second important aspect relates to the time of declaration of MSP. Table 2.5 shows the dates of submission of CACP reports as against the dates of declaration of MSP by the Government of India. It is stipulated that the MSP be declared well before the

sowing season. This is not difficult as the cost data used for computations and arriving at MSP is of the previous years. More than that Sen Committee as well as the Committee headed by C H Hanumantha Rao have given guidelines to arrive at these estimates well in advance. But this took place more as an exception than a rule. Often MSP is declared quite later than the sowing season.

**Table 2.5: Announcement of MSP by the Government**

Year	Season	Crops	Date of Submission of CACP report	Date of Declaration of MSP	Date of Declaration of MSP for Tobacco
1984-85	Kharif	Foodgrains, oilseeds & cotton	-	July 1984 & September 1984	-
1985-86	Kharif	Foodgrains, oilseeds & cotton	-	27.09.1985 & 11.11.1985	-
1986-87	Kharif	Foodgrains, oilseeds & cotton	-	29.08.1986 & 25.09.1986	-
1987-88	Kharif	Paddy, Kharif coarse cereals, pulses, oilseeds & raw cotton	23.02.1987	27.08.1987	03..031987
1988-89	Kharif	Paddy, Kharif coarse cereals, pulses, oilseeds & raw cotton	03.02.1988	04.05.1988	30.03.1988
1989-90		NA	-	-	-
1990-91	Rabi		09.08.1990	06.11.1990	-
1991-92		NA	-	-	-
1992-93	Rabi	Wheat, barley, gram, rapeseed/mustard and sunflower	24.07.1992	25.08.1992	-
1993-94	Rabi		29.07.1993	07.10.1993	-
1993-94	Kharif	Kharif foodgrains, oilseeds & cotton	19.03.1993	22.07.1993	17.08.1993
1994-95	Kharif	Kharif foodgrains, oilseeds & cotton	31.03.1994	09.04.1994	22.06.1994
1995-96			-	-	-
1996-97	Kharif	Kharif foodgrains, oilseeds & cotton	11.04.1996	02.08.1996	28.08.1996
1997-98	Kharif	Kharif foodgrains, oilseeds & cotton	27.04.1997	30.06.1997	12.08.1997
1998-99	Kharif	Kharif foodgrains, oilseeds & cotton	07.04.1998	10.08.1998	04.09.1998
1999-00	Kharif	Kharif foodgrains, oilseeds & cotton	05.04.1999	20.07.1999	13.09.1999

Source : Report of the Commission of Agricultural Cost and Price - 1984-85 to 1999-00

Price parity across sectors and crops has been another important factor in arriving at MSP. The price parity across sectors is reflected through Terms of Trade (ToT) between agriculture and non-agriculture sectors. The divergences were first brought forth in Thamarajakshi's seminal paper of Terms of Trade (Thamarajakshi, 1968). This was followed by the work of Dhar (1968), Dantwala (1981), Kahlan & Tyagi (1980), Venkataramanan & Prahladachar (1984) and Nadkarni (1987). During mid-seventies the debate on Terms of Trade between agriculture and non-agricultural sector had picked up as the Terms of Trade started showing signs of turning against the agricultural sector (See arguments of Sharad Joshi reflected in Dhanagare, D N (1990). This along with the farmers' movements during that decade led to a review of the price policy and also the methods of arriving at the MSP. A Committee was appointed to arrive at inter-sectoral ToT. The Committee submitted its report in 1995 and found that the ToT are getting favourable to the agricultural sector. The process is however, is quite slow and marked with fluctuations.

Once again we are likely to face the question of remunerative prices but now in the context of withdrawal of subsidies on inputs (fertilisers, water, credit and power) as well as increasing demand for consumer durables and consequently the changing relative prices with the non-agricultural sector. Similarly, the price wedge between goods produced in urban sector as against the farm products has given rise to the necessity of looking afresh into this issue of price intervention. The Reports of CACP provide some tables and comments incorporating Terms of Trade. But when we have a casual look at the trends in MSP as against those in ToT, the expectation that ToT forms a part of fixation of MSP, is certainly not borne.

Another issue that emerged recently and needs maximum attention is the efficacy of the continuation of the price policy with the changed economic policy in the context of liberalisation. This manifests strongly in the present imperfections prevailing in the agriculture markets and the renewed awareness of the farm lobby. In addition to this, the very process of implementation questions the efficacy of the scheme. It is beyond doubt that the Price Support Scheme in the present form has no impact on the international trade of these commodities. It only provides a bottom threshold to the producer, more as a psychological support than real and that too only for wheat and rice. At present, 24 commodities are covered under the minimum price support programme. These include cereals (paddy, wheat, sorghum, pearl millet, ragi, maize, barley), pulses (gram tur,

mung, urad), oilseeds (groundnut, rapeseed/mustered, toria, soybean, sunflowerseed, sesamum, nigerseed, copra), fibre crops (cotton, jute/mesta), virginia flue cured tobacco, and sugarcane. But when the operations are involved it is confined only to a few commodities, leaving the rest to market.

Three issues have repeatedly appeared in the discussion on price policy voiced by the farm leaders as well as debated by academicians. The discussion on cost towards risk bearing, managerial input and rent on owned land have featured in the writings from the initial reports of APC to the recent workshop organised by CACP. S.R. Sen Committee as well as the Committee headed by C.H. Hanumantha Rao reviewed these issues but probably their arguments do not satisfy the farm leaders. We discuss below these three issues in the current context.

#### **2.4.1 Estimating Cost to the Farmers' for taking the Risk**

Risk in farming is associated with the sector in many ways. First the risk comes from the climatic and factors that are not in command of the farmer. Second, risk originates due to man-made factors as technology associated risk, market (factor as well as product markets) associated risk. Risk due to personal decisions and risk due to changes in the State policies. Among all these the risk associated with the acceptance of new technology and changing policies needs to be considered for the present purpose. Farmers' acceptance of the new technology involves risk as the farmer will not be sure of the unknown outcome. Therefore, the farmers is made to undertake the technology and bear the risk of failure both on input and product markets. Thus the risk associated with the acceptance of technology manifests itself as cost and allowance needs to be made for that. Similarly, risk associated with new farm policies also being exogenous, needs to be accounted for cost and therefore suitably covered.

We perceive here yield risk and price risk as two important components. Yield risk can be assessed through two distinct approaches namely the Probability of Failure (PF) and the Crop Loss Ratio (CLR). This assessment can be done with the help of secondary data. As the yield data are available only up to district level the estimation will have to be contained to district level only. The estimation will also be confined to the major crops for the districts based on the crop concentration ratios computed for the latest quinquennium/ decade. The probabilities thus arrived at have to be converted to the Expected Values of loss or the Normal Loss Perception. This exercise was attempted in

Deshpande *et. al.* (2003) for the State of Karnataka. These will be further clustered at the homogenous agro-climatic region level. There is another angle to the risk assessment and this involves getting the estimates of price risk and the most rationally expected price as against the actually received price.

#### **2.4.2 Management as input in Agricultural Production**

Returns from agriculture are influenced to a great extent by the managerial capacity or management acumen of the farmer. However, Indian agriculture is dominated by small and marginal holdings and does not employ professional managers to look after farming business. The farmer who is trained over generations in the art of farming and imbibes the skills from childhood manages farming activities. This can be equated to a formal training usually achieved by farm managers in agricultural schools. Numerous attempts have been made in the literature to distinguish between good and bad managers using econometric and mathematical techniques. Notable field applications include those of Mundlak (1961), Massel (1967), Lau and Yotopoulos (1971), Timmer (1970), etc. But there is unanimity about the allowance towards management to be incorporated in the cost. The Committee headed by C.H. Hanumantha Rao recommended 10 per cent of the paid out cost to be accounted for managerial cost and arriving at cost  $C_2$ .

The farm management studies in the early 1950s tried to assign/impute management cost into cost component of crop production and at that time also 10 per cent of the paid out cost was taken as managerial cost. The basic idea was that if the farmers spend their time exclusively for farming then they should earn a monthly income equivalent to some similar level of employee in the government. This issue was revisited by the Committee headed by C.H. Hanumantha Rao. The Committee finally recommended 10 per cent of the cost  $C_2$  as allowance for managerial input but did not provide any logic for arriving at this percentage. The managerial cost needs to be worked out taking into consideration that a farmer can supervise 10 acres of irrigated land or 50 acres of rain-fed land. An equivalent managerial reward can be computed and after deducting the allowance for efforts in the self-owned enterprise, one needs to arrive at the managerial cost. The cost is apportioned as per the acreage under the crop while calculating the cost of cultivation /production of particular crop.

### **2.4.3 Rental Value of Agricultural Land**

The doctrine of rent, while apparently simple and convincing, is really based on a number of assumptions like perfect competition and full employment which are non-existing particularly in the Indian agrarian situation. The theory of rent holds that the return to the tenant for his labour and capital on all lands will be the same. If this doctrine is valid the proportion of rent to the total product should be so marked and increase with the fertility of soil within a group of lands which differ in fertility but similar in other respects. But many studies in Indian agriculture have shown that the rent depends on the agreement between the landowner and the tenant. There are variations in the agreements depending upon the types of crops and the extent of participation of landowner in the cultivation. The studies have not shown that rent formed a high proportion of total product for fertile lands compared non-fertile lands.

The question of rental value of land provoked a new look at tenancy legislation (many states in India abolished tenancy as a part of land reform measures) in the context of viability of size of holdings and the present process of globalization of Indian agriculture. Hence, there is an urgent need to develop a more scientific and practical method of evaluation of rent for agricultural lands at regional levels.

Sen Committee treated the rental value of own land as one of the most disputed issues. In a highly stratified land market, it is difficult to obtain a rational level of rent paid. It was agreed that rent represents an inescapable fixed cost to be realised in long run. Number of alternatives were viewed. Fifth Plan document provided a guideline of limiting rent between one-fifth to one-fourth of the gross value of produce. Sen Committee recommended incorporation of rental value of land at market rate prevailing in the village. The question was again reviewed by the Committee headed by C.H.Hanumantha Rao. It was found that the data on prevailing rent are not readily available. Therefore, it was recommended to collect such data from the selected villages and the ratio of actual rent paid to gross value of output be taken as cost towards rent for own land.

## **2.5 Implementation of MSP : A Regional Picture**

### **(i) Punjab and Haryana**

Administration of MSP is best organised in Punjab and Haryana as historically these two states provided the required surplus to sustain public distribution and achieve

food security. The State dominates in the procurement of wheat from the very beginning of the scheme. Paddy procurement has also been substantially increasing in the recent past. The state is the highest producer of both crops and also has the highest marketable surplus. Naturally with this background the scheme is implemented in better manner in Punjab. There are 144 principal markets and 519 sub yards in Punjab. In addition, during the procurement season, as many as 1645 purchase centers are opened. No farmer anywhere in the state has to travel more than five kilometers to sell wheat and paddy. All these markets/purchase centers are regulated markets governed by the APMCs. The Government of India announces the procurement prices for these crops on the recommendation of Commission for Agricultural Costs and Prices (CACP) and the Government of India directs the state procurement agencies to procure the produce at the procurement price. These agencies are given some minimum quality parameters for the procurement of the produce. But there are regional variations in the implementation of the price policy in the state as these agencies procure the produce based on the minimum quality parameters throughout the state in different markets. District-wise procurement of paddy and wheat in Punjab State shows that these were procured from each district of the State depending on the availability of marketable surplus.

The procurement of paddy varied from 73 per cent to 95 per cent of production in different Districts in 1999-2000. Whereas basmati variety has much higher price than the MSP and is outside the procurement system. The procurement of wheat varied from 36 to 66% of production in different districts in 1985-86 and from 30 to 69% during 1999-2000. It has been reported that the gap between Farm Harvest Prices and MSP has been narrowing down in the recent years. In the case of Punjab it is the MSP which is increasing at a higher rate than the Farm Harvest Prices (FHP) thus making it as a market leading price. This also supports the argument that MSP has been instrumental in raising the market prices than preventing a fall in the market prices.

The administration of MSP in Punjab is perfectly tuned to the requirements of the State. There are five important factors that make the administration of MSP better in Punjab and Haryana. First, there exists sufficiently large marketable surplus of Paddy and Wheat in both the states. Paddy is largely grown for commercial purposes as it is not an important component in the diet of the population. Second, in addition to the higher marketable surplus the procurement machinery is well tuned in these states with a well spread network of marketing infrastructure. Third, the process of politicisation in these

states exerts significant pressure on the process and administration of MSP. That can be visualised from the relative MSP of wheat with that of other crops. Fourth, the initial efforts of procurement and levy for the purpose of public distribution during mid-sixties were largely concentrated in these states and that provided a well organised framework for implementation of the scheme. Lastly, as the farmers of the state are quite aware of the scheme and the benefits out of the scheme that ensures the success of the scheme and Punjab as a price leader for important crops.

## **ii. Uttar Pradesh**

In Uttar Pradesh the administration and functioning of the minimum support price scheme at the State level has been effective at procurement level but ineffective at farmer level. Quite often, in the absence of a well developed infrastructure for crop procurement, the officially announced MSP provides leverage to the traders more than the farmers. As a result the farmers are not able to reap the benefits of either assured procurement of their crops or get the prices announced by the government. In a second situation where, the procurement operations are well developed and are in place to procure the market arrivals of the crop at the announced MSP, farmers may not offer their produce to such agencies as the prevailing market prices are higher than the announced MSP. Even in such cases procurement agencies net out some surplus from the needy farmers. In a still different scenario, the procurement agencies are well operational but farmers find it difficult to sell their produce to these agencies at the announced price either because of the objections raised by the procurement officials as regards crop quality (FAQ). The farmers are compelled to sell their produce to the traders, who finally manage to sell the same to the procurement agencies manoeuvring the process. All these situations occur individually or simultaneously. In this context, Rao quotes from the CACP report of 1977-78, "Producer in certain areas is reported to have had to part with his wheat in 1976-77 marketing season at less than the procurement price. In part, the phenomenon is ascribed to the trader and the bigger farmer having taken advantage of the situation arising from a sudden rush in the market arrivals of wheat to purchase from the small farmers at less than the procurement prices and in part to the failure by the latter to conform to the quality norms specified by the procurement agencies". In all such cases the farmers may not be able to realize the announced procurement price for their crops. Regional newspapers are full of such stories after every harvest season across the states. Uttar Pradesh seem to have intensive experience of this.

The infrastructure for MSP operation including agriculture marketing in almost all the districts of U.P. is relatively bad. It was reported that in most of the areas of the three selected crop regions even the officers of agriculture departments and other concerned department have not heard about the MSP, whereas MSP operations are being successfully implemented elsewhere in the State. But this contradicts the data on procurement provided in the report, probably the regions selected had some typical problems or traders have a significant role in the process. Administrative procedures for implementation of MSP is quite similar to Punjab and Haryana but not well grounded like the two states due to lack of interest on the part of farmers.

### **iii. Maharashtra**

Maharashtra is predominantly a millet region of the country and did not take advantage of the scheme as intensively as in Punjab, Haryana or Uttar Pradesh. Growers of sugarcane and cotton have benefited significantly out of the price support scheme and that operates differently than the scheme for grains. In Maharashtra, the process of procurement is through FCI, NAFED and Agricultural Co-operative Federation. The procedure is similar as that of Punjab-Haryana but the machinery is certainly not well geared to procure millets. Three important factors are responsible for such experience. First, sufficient marketable surplus of the major procurement commodities (wheat and paddy) is not available in the State. Second, the crop pattern of Maharashtra has millets as dominant crops and the procurement of millets has not been the priority of the State or Central Government. The discussions about price policy in the State largely refer to sugarcane or cotton. Millets rarely find a place for discussion even from the farmers' side. Third, the price support scheme is operating effectively for sugarcane and cotton. Therefore, there are hardly any aberrations felt by the farmers in operating of the price policy. Therefore, the experience is of mixed kind.

The availability of infrastructure such as motorable roads, creation of warehouse facilities, market intelligence etc. facilitated access to MSP. Among the three selected regions, the field survey of Solapur district, where Rabi Jowar was the main crop, no sales were made under MSP. Farmers sold their produce in the APMC. The data comparing regulated market prices with MSP in Maharashtra showed that market prices were much higher than MSP and hence price support was not really required. In Kolhapur also sale of groundnut did not require support as farmers sold it mainly to commission agents who in turn sold it to APMC or oil mills which are the ultimate consumers of

groundnut. These are the traditional and well organised marketing channels. In Akola however, there were a few instances of sales under MSP. The field survey showed that farmers were reluctant to sell to the procurement agencies for various reasons. Apart from infrastructure, high handedness and the insistence of FAQ are the main bottlenecks cited by the farmers. In case of Jowar, the procurement agency buys only FAQ graded produce. Again, if Jowar loses its colour and turns black, the procurement agencies do not accept it. Traders however buy all their produce irrespective of the quality, grade these and sell it to the consumers. Farmers have to wait sometime for two or three days to dispose of their produce in case no storage facilities are available with the procurement agencies.

Besides kharif jowar, in the recent past, price support\ had to be undertaken for soyabean. Soyabean, had started gaining popularity in Maharashtra due to technology and market support. However, opening up of the economy with initially low tariffs, landed the soyabean producers into problems. During the season 1999- 2000 and 2000-2001, the prices of soyabean fell below MSP in all major producing states, including Maharashtra. NAFED which is the government agency for performing price support operations intervened in all primary markets and made purchases at support levels. But the procurement of soyabean was not very smooth operation. Payment is also delayed and often that takes two weeks, whereas traders pay immediately. In case of soyabean, farmers who sold to NAFED under support scheme did not receive payments even after six months of sale. There were cases of bounced cheques when presented to District Central Co-operative Banks for encashment, A number of growers who failed to clear the crop loan installment because of the delay in payment, were declared as defaulters and were unable to seek fresh loans.

#### **iv. Karnataka**

The administration of MSP in Karnataka is largely similar to that in the other states. But unlike many other states the official machinery is well aware of the problems in administration of price intervention scheme. Similarly, there is a strong pressure from the farm lobby about the components of MSP and its declaration. Actually, this became one of the major issues during the farmers' movements of seventies and eighties. The Karnataka Food and Civil Supplies Corporation acts as an agent of FCI. In addition to this, NAFED and Oilseed Growers' Federation also play a significant role in administration of procurement.

### (a) Karnataka State Food and Civil Supplies Corporation (KSFCS)

The Karnataka State Food and Civil Supplies Corporation handles procurement, storage and distribution operations of essential commodities on behalf of the Food Corporation of India and for the State of Karnataka. The KSFCS handles procurement of foodgrains and the storage. It also receives food grains for distribution from the Food Corporation of India. Till 1981-82, KSFCS used to procure paddy and process it into rice for the purpose of public distribution, but now paddy is not procured. Rice is taken as levy from rice mills. KSFCS acts as a sub-agent of FCI for the purpose of procurement. The APMC reports about the fall in price to the Deputy Director of Food and Civil Supplies, who in turn appraises the Deputy Commissioner of the district about the situation. The Deputy Commissioner calls a meeting of the Task Force and only after the Task Force clears that the procurement operation should take place it is reported to the State Authorities for the necessary permission and funds. The procurement points are opened only after the State level authorities direct for the procurement. This entire drill takes at least two weeks, and it is not expected that the farmer should wait till then in the market yard. Recently the Government of Karnataka has taken a decision to establish permanent procurement centres in the APMC yards. KSFCS makes significant profit in the procurement and distribution operations. The profits recorded in 1996-97 was Rs 5 crores and it went down to Rs 1.76 crores in 1998-99. The recent procurement of food commodities are indicated below:

#### Commodities Procured by FCI: 2001

Maize	361000	tonnes
Ragi	15000	tonnes
Bajra	4500	tonnes
Paddy	1100	tonnes

Recently FCI procured directly 1,32,000 tons of Maize for Rs. 445/q and KFCSC sold that at Rs 405/q to the processing industry and incurred loss of Rs. 40 per tonne. However, it was pointed out in a recent study by the Directorate of Agriculture that the procurement was largely from the traders (and not from farmers), despite the restriction that procurement will not be made in the absence of Land Records (*Pahni* or ROR) of the farmer. This happened due to three factors. First, there was a sufficiently long time gap between the price collapse of maize and opening of the procurement centres. Second, the farmers who had brought their produce for sale could not wait that long to sell their produce. They preferred to sell the produce immediately and receive the cash. Third,

traders were ready to purchase the produce at lower than the MSP, and effected such purchases. Traders also obtained a copy of the ROR to produce at the procurement centre for the purpose of procurement at MSP. In the entire process, the traders could make profit.

The KSFCS undertakes procurement and the stocks are handed over to the FCI. FCI holds these stocks in the godowns and the state has a good capacity for stocking the grains. KSFCS undertakes the distribution of Rice, Wheat, Sugar and Kerosene to the BPL and APL under PDS scheme. The PDS rates are almost closer to open market rates, therefore BPL households usually buy at the fair price shops. In a taluka 65% of PDS allocation is managed by KFCSC and another 35 per cent is met from the co-operative societies. The State has godowns to store about 3.40 lakh metric tonnes of grains. This is neither sufficient nor well spread in the State.

#### **(b) Karnataka State Co-operative Marketing Federation (KSCMF)**

KSCMF is an institution financed by the State govt for the purpose of market intervention. It is administered as a co-operative society and involves in procurement operations. KSCMF gets the requests for procurement of commodities from APMC or directly from the farmers. It is only then, KSCMF enters the market for procurement. It also undertakes the market disposal of the procured commodities and thus intervenes as seller as well as purchaser. Theoretically, KSCMF should make a significant dent on the market operations and help in correcting price and market distortions. But in practice this does not seem to happen for various reasons. KSCMF is financially self sufficient having 32 branches and well established network with APMCs in the State. But this is not effectively used.

The marketing federation usually procures commercial crops like cotton, maize and tur and other pulses. These form nearly 10-15% of the total commodities procured. The preference for commercial crops is due to the fact that these have longer shelf life and the proportion of wastage is quite low. Apart from that it was told that KSCMFs procurement is demand oriented and their presence in the market is not obligatory. KSCMF had procured huge quantity of cotton a few years back and in the process incurred losses to the tune of Rs 5 crores. Experience suggests that marketing federation should pre-plan their market intervention every year. The target fund provided for

procurement every year is approximately 250 crores and this should be utilised to achieve best results.

**Table 2.6: Karnataka State Co-Operative Marketing Federation (KSCMF)**

No.	Objectives	Meeting the Objectives
	KSCMF purchases fertilizer, pesticides from the industry and provides that to the farmers at reasonable rate.	Usually this is the main function undertaken by KSCMF. Fertilizers and pesticides are provided through Farmers' Co-operative Society but their supply does not meet the total demand. Therefore, farmers have to buy that from open market.
	KSCMF maintains cold storage's in different areas for farmers service.	The construction and maintenance of cold storages is an activity undertaken but the capacity utilisation is quite low. Therefore, this activity is not financially viable.
	KSCMF undertakes construction of cold storage at the necessary places.	---
	KSCMF is required to procure/purchase agriculture produce under Minimum Support Prices.	Procurement operations are not immediately undertaken after the prices collapse. There is no set mechanism for this operation. This needs to be evolved.
	KSCMF is required to maintain godowns for storage of procured quantity.	Godowns are maintained but a good number of them are rented out.
	KSCMF is required to maintain good relationship with APMC.	APMCs and KSCMF have very close ties and good working relationship
	KSCMF takes the loans from different Banks, to distribute the fertilizer to the farmers in advance in the season.	Activity is undertaken
	The main objective of KSCMF is to give a good price for farmer's agriculture products, if the market price goes down.	This does not happen due to the lengthy procedure involved. KSCMF has sporadically participated in market intervention operations
	If the seeds are not available in the sowing season then KSCMF will provide the seeds to the farmers.	This activity is undertaken but has little significance in meeting the overall demand.

**(c) Karnataka Oil Seed Growers Federation (KOF)**

Karnataka Oil Seed Growers Federation (KOF) is a sub-agency for procurement on behalf of NAFED. KOF is authorised to procure oilseeds in the state through the APMCs or directly from the farmers. The procurement is usually done through the Oil seed Growers Co-operative Societies in different parts of the State. The network of these societies has been widespread and even then the market intervention on behalf of the KOF has been not so effective. KOF has developed good infrastructure and has 350 Oilseed Growers Co-operative Societies all over the state which are situated in the villages (14 major oil seed growing district). Every season KOF signs an agreement with NAFED, and after that the funds are given by NAFED to procure the commodities. There is a strict quality control by

NAFED and therefore the procurement operation has to be carried out with due care. Transport charges, gunny bags and labour charges are paid by KOF and reimbursed by NAFED. Three regional unions (situated in Hospet, Raichur & Hubli) control the Oilseed Growers Co-operatives in the State. In the recent past KOF has procured substantial quantity of oilseeds from open market as indicated in table 2.

#### **v. Andhra Pradesh**

The administration of MSP for paddy in the State is implemented through FCI but operated by Andhra Pradesh Civil Supplies Corporation (APCSC). The programme mainly operates through millers by imposing a rice levy on them. The millers who are having food grain dealers license are declared as purchase points. It is the responsibility of the trader who has to deliver the levy rice to FCI and to pay MSP to the farmers. A supervisory team consisting of 5 members headed by a Deputy Tahsildar, with One Technical Officer, One Junior Assistant and Two village servants is provided to supervise the Paddy purchase operations in a cluster of 5 mills of 2 tonnes and above capacity as notified by the collectors. It also enters the market for purchase of Paddy at MSP directly from the farmers, For this purpose, the APCSC notifies the additional paddy purchase centres. But it is only a supplemental effort and it is resorted to only when the millers fail to purchase paddy at the pre-decided MSP. The State Civil Supplies Corporation also operates the programme through Regulated Markets and through notified market yards. It also enters the market for purchase of paddy at MSP directly from the farmers. Each paddy purchase centre set up by Civil Supplies Corporation in the market yard also has a supervisory team of 5 members viz" One Deputy Tahsildar, One Technical Assistant, One Junior Assistant and Two village servants to supervise Paddy purchases,

At the district level Collector is the overall in-charge for ensuring MSP operations assisted by the DSO at the district level and RDO at the division level. The DSO gets the information from time to time and sends it to the Joint Collector, Collector and Commissioner of Civil Supplies through on line facility. The district level committee with joint Collector as the Chairman and Joint Director, Agriculture; District Supply Officer, District Manager, Civil Supplies Corporation; Joint Director, Marketing as members, reviews the arrangements from time to time to ensure MSP for Paddy arriving in the markets and Paddy purchase centres set up by the Government

The other commodities, as mentioned earlier, are covered through NAFED, APMARKFED, Tobacco Board and Cotton Corporation of India. For all these commodities since market prices are higher than minimum support prices, implementation of MSP scheme did not attract much attention in the State. In the event, market prices fall below MSP, the State Marketing Department directs the concerned MSP implementing agencies to enter into the markets and procure the products.

Although, support price was provided to all the major crops that are grown in Andhra Pradesh, the whole sale price and Farm harvest prices are always higher than the MSP for many years for most of the products except rice and groundnuts during the year 1999-2000. The necessary steps were taken by FCI, Andhra Pradesh Co-operative oilseed growers federation limited and Civil Supplies Corporation in purchase of the products. Purchases under MSP for other crops is minimum because of higher prices that ruled for these products in open market.

#### **vi. Tamil Nadu**

Tamil Nadu also has a similar administrative framework as that of Andhra Pradesh and Karnataka. Procurement in the State is operated through Tamil Nadu Civil Supplies Corporation as a sub-agent of FCI. NAFED as well as Special Commodity Boards also operate in the field. Tamilnadu Civil Supplies Corporation procures paddy from the farmers after harvest of *Kuruvai* and *Samba* seasons. Major procurement operations take place in the *samba* season. Paddy is largely procured from the Cauvery delta. Roughly about 10 percent of the total production of paddy in the state is procured. Direct Procurement Centres (DPCs) are opened to procure paddy in the different villages in the Cauvery delta. About 300 DPCs are opened in the *Samba* season and about 150 Centres during *Kuruvai* seasons. The DPC will be increased depending upon the arrival. Farmers brought their harvested paddy to their nearest Centre. They register their name and get tokens. According to seniority every farmer is asked to bring the produce and it is tested with the digital moisture meter and tolerable moisture content is permitted. Price is reduced, if the moisture content was beyond the tolerable limit. Farmers complained that certain discount for dust was not rational and there was underestimation of weight also. It was complained that there were middlemen and these persons operate as sub-agents between farmers and the purchase centres. Farmers from distant districts brought paddy

to DPC in Cauvery delta because the prevailing market prices in their districts were lower than the minimum support price.

#### **vii. Madhya Pradesh**

In Madhya Pradesh, the State Marketing Federation and M.P. State Civil Supplies Corporation act as main purchase agents for Food Corporation of India. For these agencies the District Central Cooperative Marketing Societies of the concerned districts make purchases in the mandis. MSPs are announced in the slate for a total number of 18 crops. If the market prices fall below the declared MSP the produce is purchased by representatives of the District Central Cooperative Marketing Societies in *Krishi Upaj Mandis (KUMs)* through open auction system. *Krishi Upaj Mandis* do not play a direct role in the purchases at MSPs but they only function as a place of purchase and sale. All facilities are provided here to the producers and purchasers like correct weighment, drinking water, open/covered space/sheds for auction, etc. *Krishi Upaj Mandis* charge two per cent of the amount of the produce purchased from the purchasers as cess. Mandis charge annual charges from wholesalers, processors, weighmen, etc. For purchasing foodgrains at MSPs the District Central Co-operative Marketing societies get following amounts.

- a) MSP of the produce purchased
- b) Mandi Tax, payment to labourers and other contingent expenditure
- c) Two per cent of the amount to the MSP as commission.

The quality of produce purchased by the Marketing Societies has to be of FAQ. A sample of FAQ is supplied to the societies. For checking the quality of foodgrains the State Warehousing Corporation has some trained staff. But the marketing societies do not have trained staff. Although the collection of produce of F AQ and correct weighment is the responsibility of the society the provision of gunny bags and other material is the responsibility of the procurement agencies. The transportation from the collection centre to the Godowns is the responsibility of the individual agency. These procedures act as bottlenecks in smooth running of the scheme.

The main difficulties in procurement at MSPs confronted at KUMs and by farmers are:

- (a) Inadequate and untrained staff.

- (b) Shortage of godowns and the lower capacity of godowns.
- (c) Political interference
- (d) Inadequate communication between agencies, mandis and farmers regarding arrivals and prices on day to day basis.

During the year 2001-2002 the procurement at MSP of paddy was 259.72 thousand tonnes and that of wheat 588.02 thousand tonnes. The proportion of procurement at MSP to total arrivals indicates farmers' preference for MSP agencies. It was noted that 72.33 per cent of total arrivals of bajra was procured under MSP. In the case of paddy the percentage was 40.98 and in the case of maize it was 30.15. Wheat had 28.54 per cent of the purchases made at MSP. As regards share of different purchasing agencies for different crops it was noted that in the case of paddy MARKFED purchased 70.11 per cent and remaining 30 per cent was shared equally by State Civil Supplies Corporation and others for Food Corporation of India. In the case of wheat Food Corporation of India procured 53.40 per cent of the total procurement whereas, the State Civil Supplies Corporation purchased 46.60 per cent. All these indicated that the administration of MSP was quite effective in Madhya Pradesh. One of the main features of MSP operations in Madhya Pradesh is the procurement of coarse cereals and sorghum as against paddy and wheat in most of the states.

#### **viii. Bihar**

The administrative structure for the implementation of Minimum Support Price (MSP) scheme in Bihar is well grounded in the co-operative structure of the State. It is operated through Primary Agricultural Co-operative Societies (PACS). The implementation of minimum support prices in the state is under the administrative control of State Food and Civil Supplies Department. The department of Food and Civil Supplies simply notifies the directions about procurement and circulates them among the agencies involved in the process. The department while discharging its duties seeks the co-operation of other institutions also. These institutions are Bihar State Food and Civil Supplies Corporation (BSFCSC), a nodal agency of the state for distribution; Primary Agricultural Co-operative Societies (PACS), Vypar Mandal and Agricultural Marketing Societies (AMS) for procurement of the grains in collaboration with Food Corporation of India (FCI). So far as the distribution aspect is concerned, BSFCSC is working since 1973, but the system of working has changed several times. In the initial years, the Corporation had been

discharging its responsibilities of distribution of food grains through Public Distribution System (PDS) at its own. Subsequently, the dealers used to purchase the allotted quantities of commodities on spot payment. Since 1996, dealers are required to make advance payment against their requirements. Now the Corporation purchases the commodities particularly wheat and rice from the FCI and makes it available to the dealers for its distributions through its PDS on monthly basis. The corporation receives the advance payment from the dealers. Recently PACS are assigned the responsibility of procuring the marketable surplus at the MSP or above that price if required. PACS keep the stock of the commodities and sell these either to FCI at MSP or to the other agencies at a slightly higher price. In the process, PACS are becoming stronger and the system or procurement is also well geared. The Department of Civil Supplies has a monitoring role in the implementation of the programme. The indifferent attitudes of the department and unavailability of funds to nodal agency of the state viz., Bihar State Food and Civil Supplies Corporation and implementing agents (PACS, Vypar Mandal, etc.) as well, are the main reasons, which pose many problems not only in procurement but also in distribution and trading of the grains.

#### **ix. West Bengal**

Price support policy, as it operates in the state of West Bengal, has led support prices keeping closer to the market prices. The support prices in West Bengal have influenced the market prices significantly. This was possible due to the proper transmission of price signals. The procurement operations under MSP in West Bengal are governed by FCI through the Civil Supplies Corporation of the State. The effectiveness of price support policy would depend on the rate of procurement, process of procurement and the operations of this agency. Here again, the state's share in public procurement is negligible. Theoretically, all farmers can avail of the facility of selling their output to the government at support prices. In actual practice, only the farmers with sufficient marketable surplus are protected by the price support. In the state of West Bengal, the volume of marketed surplus is meagre varying between 3 to 7 percent of total production as observed in the case of rice, and invariably, the surplus growing farmers consisted of mainly bigger sized holdings, where the structure of farm holdings is characterized by the predominance of small and marginal sized land holdings. Since market prices ruled higher than minimum support prices, farmers need not wait for government agencies for procurement, rather, they can sell their output at higher prices in the market. However, it

can not be ruled out that the existence of minimum support price scheme has offered healthy competition among the private traders and the government procuring agencies. The government agencies have now opened up the temporary procurement centres in the rural areas which help the farmers for selling their produce in the village itself at the procurement price. NAFED also has a significant role in West Bengal and largely procures the surplus of commercial crops in the State. The procurement is not very significant in the State as compared to the other states in the country.

## **2.6 Conclusions**

Minimum Support Prices have been in operation as a price support scheme for over a quarter of century and it is time to look back at the effectiveness of this scheme. This is also necessitated due to the transition of our agricultural production scenario from scarcity predominant sector to surplus generating sector. This will require examining if the present operations of MSP are meeting the objectives with which the scheme began. The first question that crops up here is the need for intervention especially to correct the market distortions and making the market more competitive. The present institutional structure in the market yard itself is imperfect and that allows further leverage for the process to fail. The Agricultural Produce Marketing Committees and other market intervention agencies under-perform their functions. As a result, the farmer and the primary producers rarely benefit. MSP scheme requires the market institutions to intervene selectively but timely when the market prices fall below the declared MSP or a pre-decided threshold. However, timely intervention in the agricultural markets, in many of the states, seems to be not taking place. The lag between the collapse of prices and procurement is about two weeks and such lag helps the traders and middlemen to buy from the producers at a price lower than the MSP and sell it at the procurement centre at the MSP, in the process earn good profits. This had been reported even by CACP in its report of 1977-78 (Gol, 1979). Recently it also happened in the case of maize procurement in Karnataka. As timely intervention is the core element of the scheme it is necessary to ensure this through proper policy measures. In order to ensure timely intervention a few state governments have opened procurement centres at all the APMCs and a special fund is created for this purpose. But the experience of these operations needs to be observed in the coming years.

There are a number of institutions, which are active in the process of implementation of MSP. But these do not function with full information of the horizontal operations undertaken by the others. They work independently and for different crops. Therefore, their methods of procurement payment to the farmers and the process of administration differ significantly. Such working in isolation does not make the policy effective, therefore it is required that these institutions work in close co-ordination with each other. This will require an apex body to effect such collaboration.

The analysis of the institutions involved in the market intervention operations indicate five important issues. First, the multiplicity of the institutions complicates the MIS operations and therefore, it cannot be effective. Second, there is a considerable lag in the felt need about the operations and actual starting of the procurement. The lapse of time between these two makes the intervention ineffective. Third, the institutions are highly bureaucratic and therefore involve long procedures before entering into the market. Four, they certainly make profits out of their operations but are rarely allowed to have freedom of intervention. Last, the infrastructure provided to these agencies is not adequate, but in terms of man power these institutions have been over-staffed both for the operations as well as infrastructure.

Functioning of the Markets and their interface with the market intervening institutions is one of the problematic areas. APMCs have infrastructural difficulties in their functioning and this provides enough room for the inefficiencies to creep in. Under the domestic market reforms probably we may have to take up the reform of the functions of APMCs on priority. The probable areas that need reform are i. Infrastructure and proper use of infrastructure, ii. Process of grading and removing the inefficiencies in that, iii. Process of auction and the probable nexus between the traders, iv. Reducing the dependence of the farmers on the traders and breaking the under-cover interlocking of the credit and product market. In addition to these the monitoring of the prices and a proper information system is required in all the APMCs. Thus reforms at APMC level should take priority over other factors.

## Annexure 2.1

### TERMS OF REFERENCE FOR THE COMMISSION ON AGRICULTURAL COSTS AND PRICES

- " 1. (i) The need to provide incentive to the producer for adopting improved technology and for developing a production pattern broadly in the light of national requirements;
- (ii) The need to ensure rational utilisation of land, water and other production resources;
- (iii) The likely effect of the price policy on the rest of the economy, particularly on the cost of living, level of wages, industrial cost structure, etc.
10. The Commission may also suggest such non-price measures as would facilitate the achievement of the objectives set out in 1 above.
11. To recommend from time to time, in respect of different agricultural commodities, measures necessary to make the price policy effective.
12. To take into account the changes in terms of trade between agricultural and non-agricultural sectors.
13. To examine, where necessary, the prevailing methods and cost of marketing of agricultural commodities in different regions, suggest measures to reduce costs of marketing and recommend fair price margins for different stages of marketing.
14. To keep under review the developing price situation and to make appropriate recommendations, as and when necessary, within the framework of the overall price policy.
15. To undertake studies in respect of different crops as may be prescribed by Government from time to time.
16. To keep under review studies relating to the price policy and arrangements for collection of information regarding agricultural prices and other related data and suggest improvements in the same, and to organise research studies in the field of price policy.
17. To advise on any problems relating to agricultural prices and production that may be referred to it by Government from time to time."

(Govt. of India, 1986, pp.32-33).



## **SECTION II**

### **CORE PROCUREMENT REGIONS**

**PUNJAB**

**HARYANA**

**UTTAR PRADESH**

## CHAPTER III

### IMPACT AND EFFECTIVENESS OF MINIMUM SUPPORT PRICES IN PUNJAB

#### 3.1 Introduction

The wide spread adoption of improved technology, especially of wheat and rice in Punjab made it possible to achieve reasonable degree of stability of the foodgrain production. In fact it was encouraged by the effective Minimum Support Price (MSP) system, is now well recognised. The impact was visualised by reduction in imports and increased use of modern technology by the farmers due to increased incomes. But along with these achievements through MSP, the Indian agriculture in general and the Punjab agriculture in particular have come across a few problems in recent years. There is a large accumulation of stocks of rice and wheat due to the farm harvest prices getting stuck with the level of MSP, thereby forcing the government to purchase large share of grains offered by the farmers at Minimum Support Price. The capacity of the state government for storing grains is insufficient and diversification of Punjab's agriculture is not taking place as desired. Consequently, large quantum of wheat and rice is procured and languish in the godowns.

The impact of price support policy on various parameters of agricultural economy in Punjab, particularly for major crops of rice, wheat and cotton has been analysed here. The farmers' perception of MSP, their awareness and response to various options are also of interest. Therefore, the present chapter is preset with the objectives of the price policy and is based on the secondary as well as primary data. The impact of MSP on cropping pattern, investment, adoption of technology and on market prices, and arrivals have been studied. The findings are also supplemented with the primary data collected from 240 randomly selected farmers representing two regions of the State; one, representing moderate to high growth region being dominated by food crops and the other representing commercial crop oriented region having a major non-food crop (cotton in this case). In addition, information was also gathered through Participatory Rural Appraisal (PRA) method. The study is confined to three main crops of the State i.e. paddy, wheat and cotton. The secondary data mainly pertains to the Minimum Support Prices, Farm Harvest prices, Wholesale prices, Marketing infrastructure, Market arrivals

and Major growth parameters. These were collected from Statistical Abstracts of Punjab, Punjab State Agricultural Marketing Board and Directorate of Agriculture, Punjab.

### 3.2. MSP and Market Prices

During mid eighties, due to significant changes in the agrarian economy and the price policy overarching the wider objectives. But in the recent years, the emphasis of the price policy has been transformed substantially. Therefore, a structural break in the secondary time series data was expected and this was located at 1970-71 to 1984-85 and 1985-86 to 1999-2000. Phase-wise growth rates of procurement, wholesale price and farm harvest prices show these breaks clearly. Compound Annual Growth Rates (CAGR) have also been calculated for prices to know the comparative growth of minimum support price, average wholesale prices and farm harvest price for the three important crops viz., paddy, wheat and cotton keeping these phases in view. Table 3.1 clearly brings out that the procurement prices, Farm Harvest Prices and Whole Sale Prices increased much faster after 1984-85. The growth rates were quite close to the rate of inflation and thus nullified the impact of price rise. The procurement prices grew at a higher rate of growth during the

**Table 3.1: Compound growth rates of procurement prices, average wholesale prices and farm harvest prices in Punjab, 1970-71 to 1999-2000**

Particulars	(% per annum)		
	Period I (1970-71 to 1984-85)	Period II (1985-86 to 1999-2k)	Overall (1970-71 to 1999-2k)
<b>Paddy</b>			
Procurement price	7.5408* (0.3806)	10.1801* (0.3806)	8.04546* (0.1986)
Wholesale price	7.2269* (0.8224)	8.7253* (0.4943)	8.1013* (0.2427)
Farm Harvest price	5.5040* (0.6740)	9.6228* (0.3734)	7.7200* (0.2712)
<b>Wheat</b>			
Procurement price	5.4353* (0.4322)	9.9476* (0.5067)	6.7464* (0.2821)
Wholesale price	5.2413* (0.4415)	9.8417* (0.3504)	6.7941* (0.2663)
Farm Harvest price	5.2716* (0.5248)	9.9664* (0.4160)	6.4953* (0.2965)
<b>Cotton</b>			
Procurement price	9.0151* (0.2901)	10.7557* (0.3081)	8.6836* (0.1832)
Wholesale price	6.1272* (0.8097)	12.6986* (1.1048)	8.5863* (0.4550)
Farm Harvest price	5.7422* (0.9869)	11.7437* (1.2917)	8.5091* (0.4784)

Note: Figures in parentheses are the standard errors, significant at 1% level

later period for paddy and wheat compared to the same for cotton. Prior to 1985-86, as a rule, the procurement prices grew at a higher rate of growth than Wholesale Prices and Farm Harvest Prices. It was quite understandable that the growth in procurement prices was allowed to be higher than Wholesale Prices and Farm Harvest Prices during seventies due to food security concern. But the continuation of such growth (in fact stepping it up) during the later phase was not required and that provoked larger procurement. However, the relationship between MSP and market prices is quite intriguing.

The impact of MSP on market prices in terms of reduction in seasonal and cyclical fluctuations and influencing wholesale prices and farm harvest prices was analyzed by working out the per cent variation between these prices over the years. Since 1997-98, paddy has been classified into two categories viz., Grade-A and Common. However, the analysis has been restricted to common paddy. During period I (1970-71 to 1984-85), the MSP (invariably known as procurement price as it functioned) grew at a higher rate (7.5 per cent) as compared to the farm harvest prices (FHP) (5.5 per cent). However, the growth trends reversed during the second period (1985-86 to 1999-2000) i.e. the FHP increased at a faster rate (9.6 per cent) and came close to the growth of procurement prices (10.1 per cent). It could be due to the effectiveness of MSP improving over time resulting into farm harvest prices getting closer to the procurement price.

The year-wise comparison of the Farm Harvest Prices with the MSP makes it clear that except for a few exceptions Farm Harvest Prices have been above MSP (Figure 3.1). The farm harvest prices were higher than the procurement price up to 1977-78. Although demand-supply gap in that period explains this difference only partially but this could also be partly due to the data on Farm Harvest Price (FHP) being the average of all the transactions (varieties). Thus, for the common variety of paddy for which the MSP data are contrasted, the Farm Harvest Price would also be the lowest. It was during the brief period of 1978-79 to 1981-82, when the MSP was higher than the Farm Harvest Price realized by the farmers. Again afterwards, Farm Harvest Price was marginally higher than the procurement price and the difference was increasing over time. It shows that the price policy has remained effective for paddy since 1980's and the farmers were able to get the assured prices of the crop. However, the gap between these two prices has been narrowing down since 1994-95. So much so that the MSP of fine variety was higher than the FHP during 1994, onwards and the farmers were finding it hard to dispose of their produce, due to bumper crops causing glut in the market and the government agencies

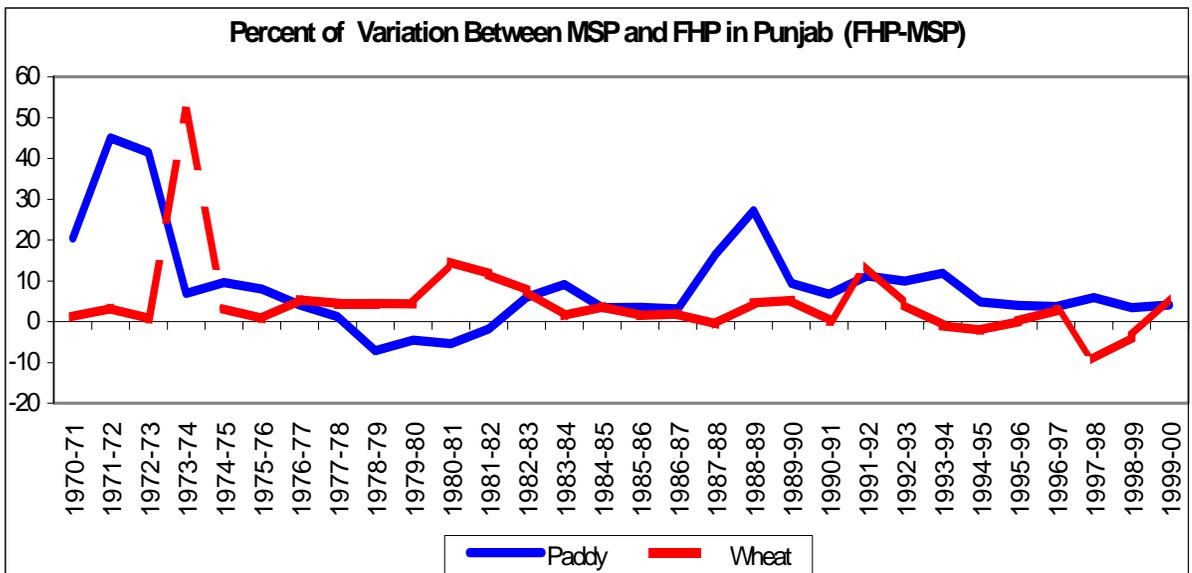
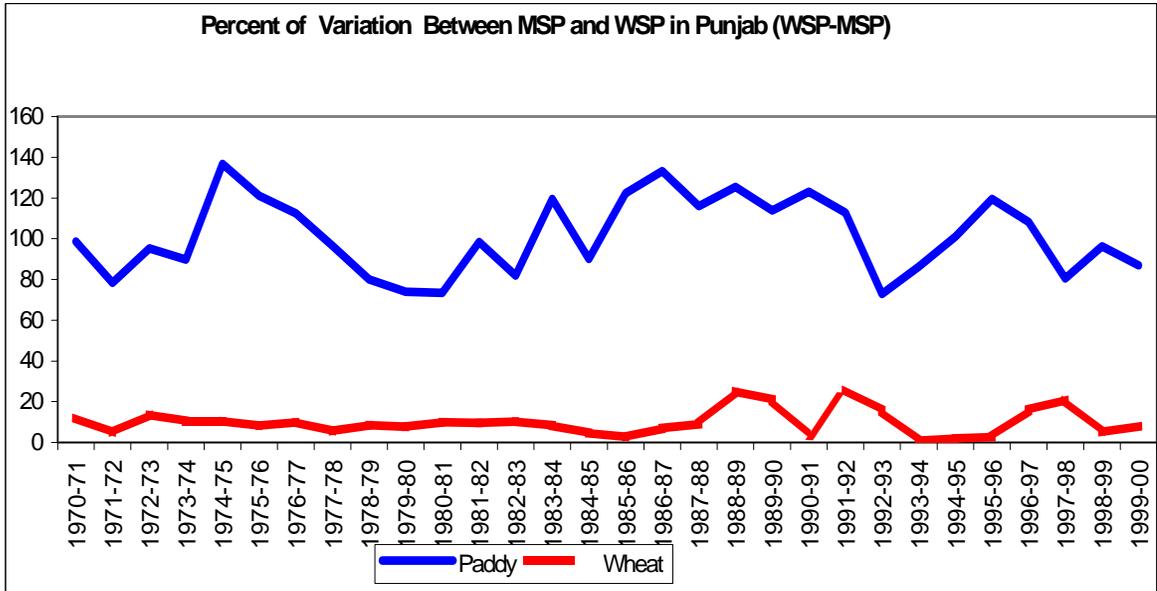
being hesitant to procure large volumes of paddy because of already overwhelming stocks and limited storage capacity.

In the case of wheat, the growth rate of minimum support price, wholesale price and Farm Harvest Price were very close to each other being 5.2 to 5.4 per cent in period I and 9.8 to about 10 per cent in period II. Thus, there was an evident improvement in growth rates for period II as compared to period I for all the three types of prices. There had almost been consistent and almost the same increase in all these prices over the years.

**Table 3.2: Variations of MSP from Wholesale and Farm Harvest Prices in Punjab, 1970-71 to 1999-2000.**

Year	Paddy		Wheat		Cotton	
	% variation between MSP and		% variation between MSP and		% variation between MSP and	
	WSP	FHP	WSP	FHP	WSP	FHP
1970-71	98.56	20.47	12.00	1.11	-	-
1971-72	78.47	44.98	4.82	3.32	-	-
1972-73	95.34	41.50	13.62	0.63	38.06	34.04
1973-74	89.74	6.90	10.55	51.43	-	-
1974-75	136.84	9.59	10.52	3.24	-	-
1975-76	121.12	8.00	8.19	0.64	25.52	17.02
1976-77	112.39	4.05	9.96	5.41	-	-
1977-78	96.42	1.23	5.55	4.44	54.65	48.43
1978-79	79.97	-7.07	8.53	4.44	32.07	15.29
1979-80	73.89	-4.53	7.70	4.39	18.62	26.09
1980-81	73.47	-5.39	9.85	14.66	18.71	28.69
1981-82	98.43	-1.78	9.54	11.69	-	-
1982-83	81.93	5.93	10.35	7.56	17.77	12.05
1983-84	119.50	9.11	8.30	1.46	7.69	14.06
1984-85	90.19	3.38	4.56	3.67	35.30	31.72
1985-86	122.36	3.48	2.61	1.49	19.07	9.97
1986-87	133.29	3.16	6.84	1.85	1.99	9.54
1987-88	115.99	16.45	8.96	-0.63	28.71	76.49
1988-89	125.34	27.16	25.20	4.58	55.50	38.58
1989-90	113.92	9.34	20.90	5.26	26.91	23.46
1990-91	123.09	6.73	3.32	0.17	14.94	44.24
1991-92	112.87	11.22	25.92	13.69	47.22	71.99
1992-93	72.84	9.99	15.58	4.19	47.19	24.72
1993-94	86.21	11.81	0.67	-0.92	21.38	48.49
1994-95	101.14	4.79	2.03	-2.10	84.00	113.99
1995-96	119.51	3.95	2.59	0.09	80.81	62.15
1996-97	108.15	3.72	15.98	2.85	51.83	50.14
1997-98	80.56	5.83	21.01	-9.32	30.86	49.80
1998-99	96.35	3.37	4.98	-3.65	54.40	41.33
1999-2000	86.99	4.11	8.02	6.02	29.43	9.94

Note: The variations are the difference between (WSP - MSP) and (FHP - MSP) as per cent of base. WSP is wholesale price and FHP is farm harvest price. Positive variations mean that the WSP and FHP are higher than MSP.



The variation between procurement price and farm harvest price showed that the latter remained marginally higher till 1986-87 after which it showed reversal in some of the years, particularly in 1997-98 when the difference was more than 9 per cent (Table 3.2). WHP of wheat have been generally higher by about 10 per cent than the MSP except for some brief periods around 1985-86 and 1994-95. The maximum difference ever was in 1991-92, being 26 per cent.

In the case of cotton, the Government of India declares the MSP for two varieties of cotton viz., F-414/H-777 and H-4. For the present analysis, MSP for F-414/H-777 has been taken into consideration. On overall basis, there has been almost equivalent growth in MSP, Wholesale Price and Farm Harvest Prices of cotton since 1972-73 to 1999-2000 (Table 3.1). During period I, the growth was higher for MSP (9 per cent) as compared to FHP (6 per cent), while during period II, it was a little higher for FHP (11.7 per cent) than MSP (10.8 per cent). It shows that the demand of cotton has increased over time and the farmers are recently getting the prices in the open market even higher than the MSP. The growth for all type of prices was higher in period II as compared to period I. The effectiveness of MSP or price policy in case of cotton is irrelevant as the producers have not to wait for government agencies for procurement and they can sell their produce at higher prices in the open market. In such situations rather it can be construed whether the MSP itself is appropriate. In a few years, even the FHP was higher than the WSP due to higher demand of cotton, which forced the more purchases at the harvest time at higher prices than the WSPs during the off-season.

### **3.3 Regional variations in the degree of implementation of price policy**

Punjab has a uniquely organised implementation of the MSP policy and therefore, there are no regional variations in the impact of policy. Most of the districts equally participate in the process of procurement and growth. It may be noted that there are 144 principal markets and 519 sub market yards in the state. No farmer anywhere in the state has to travel more than five kilometers to sell wheat and paddy. All these markets/purchase centers are regulated. Variations in the degree of implementation of price policy in the state for paddy, wheat and cotton crops were identified. The Government of India announces the procurement prices for these crops on the recommendation of Commission on Agricultural Costs and Prices (CACP) and the Government of India directs the different central and state procurement agencies to

procure the produce at the procurement price. These agencies fix some minimum quality parameters for the procurement of the produce. The quantity to be procured by these agencies depends on the already piled up stocks, storage capacity left and quantity to be distributed through Public Distribution System (PDS). But there are no regional variations in the implementation of the price policy in the state as these agencies procure the produce based on the minimum quality parameters throughout the state in different markets at the procurement prices for these crops. The procurement of paddy varied from 73 to 95 per cent of production in different districts in 1985-86 as well as in 1999-2000. The coefficient of variation for procurement of paddy and wheat in Punjab State shows that it was higher for paddy as compared to wheat. The variation varied from about 12 per cent for Jalandhar district to as high as 59 per cent in Bathinda district. This may be due to reallocation of area from cotton to paddy in Bathinda district during recent years. In case of wheat, the procurement varied from 36 to 66 per cent of production in different districts in 1985-86 and from 30 to 69 per cent during 1999-2000. The coefficient of variation varied from about 8 per cent for Patiala district to about 59 per cent for Kapurthala district. It should be kept in view that production alone is not a determinant of procurement. There are many other factors too, which determine the procurement. The over-riding observation is that all the produce (rice and wheat) brought by the farmers in the market during the procurement season is lifted by the procurement agencies at MSP or by the private trade at price higher than MSP. That means MSP is being effectively implemented all over the State. Hence, it may be concluded that there is no variation in implementation of price policy in different districts of the state.

### **3.4 MSP vis-à-vis market arrivals and procurement**

Paddy and wheat in the state are grown on commercial market oriented basis. The market arrivals for paddy have come down from 86 per cent to 78 per cent of total production during the period 1985-86 to 1999-2000 (Table 3.3). On the other hand, for wheat, the market arrivals first increased from about 57 per cent to 59 per cent during 1985-86 to 1995-96 and then suddenly declined to 50 per cent during 1999-2000. The decline in the share of market arrivals of paddy and wheat over time indicates on-farm sales (which may be the distress sales), which may also be due to the reluctance of the government shown recently in purchasing these commodities. However, the share of government agencies in the total procurement has increased. The share shot up from

one-half to three-fourth in case of paddy from 1985-86 to 1999-2000. It is almost a monopoly of the government agencies in case of wheat, accounting for more than 95 percent of the total procurements. The domination of the state procurement is quite visible but that raises an uneasy question about the preference of farmers' selling at MSP, in the presence of higher Whole Sale Prices (See Table 3.3). This may be either due to the problems associated with wholesale trade or the ease of operation under MSP.

**Table 3.3: Market arrivals and procurement of paddy and wheat in Punjab**

Year	Market arrivals (as % of total production)		Procurement by govt. agencies (as % of total procurement)	
	Paddy	Wheat	Paddy	Wheat
<b>1985-86</b>	86.00	57.41	48.40	97.65
<b>1990-91</b>	81.17	58.47	57.68	94.94
<b>1995-96</b>	66.86	59.08	74.74	98.76
<b>1999-2000</b>	78.21	49.90	75.35	98.64

### 3.5 Overall relevance and effectiveness of MSP

Relevance and effectiveness of MSP comes out from its impact on the formation of price expectations. In other words, the process of arriving at price expectation is governed by the variations in prices and the reliance of the farmers on the MSP in the next season. The relationship of MSP with wholesale prices and expected prices brings out this point clearly.

The relationship of MSP with wholesale prices and farmers' expected prices:

The Nerlovian Price Expectation Model of the following form was also fitted:

$$(P_t^* - P_{t-1}^*) = B (P_{t-1} - P_{t-1}^*)$$

Where,

$P_t^*$  = Expected price of the crop in year t;

$P_{t-1}^*$  = Expected price of the crop in the preceding year (t-1)

$P_{t-1}$  = Actual price of the crop in the year t-1; and

$B$  = Coefficient of price expectation.

The estimated expected prices were compared with the previous year prices in order to highlight the rationale of the farmers' expectations.

On the basis of secondary data, the Nerlovian Price Expectation model was fitted to know the farmers expected prices for paddy and wheat crops. The equations are :

For paddy,

$$P_t^* = 8.2024 + 0.0730 A_{t-1} + 0.9271 P_{t-1}$$

For wheat,

$$P_t^* = -355.2419 + 0.2317 A_{t-1} + 0.4736 P_{t+1}$$

The farmers' expected prices were found to be higher than the last year MSP both in case of paddy and wheat (Tables 3.4). However, the increase in expectation has been narrowing down over time. In case of rice, the farmers' expectations of increase in price was more than 70 per cent of the previous year MSP up to 1990-91, which has declined to about 33 per cent by 2000-2001. Likewise, in case of wheat, the farmers' expectation of increase in price was more than 100 per cent over the previous year MSP up to 1990-91, which has come down to 21 per cent in 2000-2001. It seems to be somewhat consistent with the international prices. Farmers expected higher price increases when international prices were much higher than the domestic prices and their increase in expectation narrowed down as the price difference narrowed down.

**Table 3.4: Expected prices of paddy and wheat in Punjab, 1985-86 to 2000-2001**

Particulars	1985-86	1990-91	1995-96	1999-2000	2000-01
<b>Paddy</b>					
1 Last year area (000' ha)	1644	1908	2265	2518	2604
2 Last year MSP (Rs./q)	140	185	340	440	490
3 Expected price (Rs./q)	258	319	489	600	653
4. % increase in the expected price over last years' MSP	84	72	44	36	33
<b>Wheat</b>					
1 Last year area (000' ha)	3094	3247	3311	3278	3388
2 Last year MSP (Rs./q)	162	215	360	550	580
3 Expected price (Rs./q)	438	499	582	665	704
4. % increase in expected price over last years' MSP	170	132	62	21	21

A comparison of the prices actually got by the farmers with those of the prevailing market prices at micro-level is shown in table 3.5. It was found that in case of paddy, the prevailing price in the market was higher than the price actually got by the farmers

(Table 3.5). The small farmers were more disadvantaged; they suffered a price loss of more than 11 per cent, compared with about 6 per cent by medium farmers and about 4 per cent by the large farmers. In case of wheat, the farmers almost got the prevailing price, the overall price loss being hardly 0.08 per cent compared with 7 per cent in case of rice. For cotton, the price actually got by the farmers was found to be about 12 per cent less than the prevailing price in the market. This can be due to the loans taken by farmers to carry out various farm operations, which force the farmers to sell their produce at the prices offered by the wholesalers/commission agents in the market.

**Table 3.5: Percent gap between the prevailing and realized prices by Punjab farmers, 1999-2000**

Particulars	(per cent)			
	Small	Medium	Large	Total
Paddy	11.27	5.60	3.84	6.58
Wheat	-	-	0.26	0.08
Cotton	9.13	10.49	12.48	10.77

### 3.6 Awareness about MSP

The effectiveness of MSP from the secondary data is one indicator to begin with, but what matters more in the effectiveness of MSP, is the farmers' actual awareness of MSP. Farmers were asked about the awareness regarding MSP. It was observed that about 70 per cent of the farmers were aware about the support price for wheat as compared to about 46 per cent for paddy (Table 3.6). In general, higher the farm size, better was the awareness about MSP. Relatively less awareness of small and marginal farmers regarding MSP seems to have translated into lower realized prices. In case of cotton crop the response was not much enthusiastic, as only about 30 per cent of the cotton growers were known to be aware of the support price. Lower response for cotton may be due to the higher market price for cotton than the Minimum Support Price thereby making the awareness about its MSP even more redundant and irrelevant.

**Table 3.6: Farmers' awareness of last year MSP in Punjab, 1999-2000**

Farmers Growing	(Per cent of multiple response)			
	Small	Medium	Large	Total
Paddy	33.73	45.68	59.21	45.83
Cotton	19.51	53.85	17.50	30.00
Wheat	61.44	71.60	78.95	70.42

### 3.8 MSP vis-à-vis investment, technology and output

As different component of investment, technology, and output are exogenous and show varying degree of multi-collinearity, the estimated impact of MSP is only indicative. Therefore, we have presented here only the coefficients of correlation of different variables with MSP over 1985-86 to 1999-2000, which gives rough estimate of the relationship with MSP. Table 3.7 clearly highlights the positive and significant relationship of MSP of paddy and wheat with production, productivity, expenses on irrigation, irrigated area, expenses on fertilizers, fertilizer use, interest on fixed capital and capital formation in agriculture. It is certainly indicative of the price policy for paddy and wheat in Punjab resulting into an increase in the production and productivity. The MSP of paddy has closer relationship with the expenses on irrigation, which is obvious owing to the importance of this input in paddy cultivation. However, the relationship of MSP of cotton with the variables of production and irrigation are weak. It reflects that the price policy in Punjab was more effective for paddy and wheat than cotton and was highly responsible for improvement in output, investment and technology adoption for these crops.

**Table 3.7: Coefficients of correlation of MSP with different variables in Punjab: 1985-86 to 1997-98.**

Particulars	Crops		
	Paddy	Wheat	Cotton
<b>Production</b>	0.86	0.82	-0.33
<b>Productivity</b>	0.29	0.77	-0.06
<b>Expenditure on irrigation</b>	0.92	0.72	0.44
<b>Irrigated area</b>	0.96	0.83	-0.23
<b>Expenditure on fertilizers</b>	0.93	0.99	0.84
<b>Fertiliser Use</b>	0.91	0.92	0.92
<b>Interest on fixed capital</b>	0.92	0.91	0.92
<b>Capital formation in agriculture</b>	0.82	0.84	0.80

### 3.8 MSP vis-à-vis resource use and cropping pattern

The sample farmers were asked about the impact of MSP declaration on cash inputs, wage rate, use of new technology, marketing time, market place and off-season sale (Table 3.8). The influence of MSP on these parameters was the highest in case of paddy followed by cotton and wheat. In case of paddy, there was a negative association with farm size in terms of response for these variables, while it was positive for wheat crop. In case of cotton, the effect of MSP on increased use of inputs, wage rate, technology, marketing time and market place was higher for small and large farms as compared to medium farms.

**Table 3.8: Relation of MSP with important farm decisions in Punjab, 1999-2000  
(% response)**

Decision	Farm Size			
	Small	Medium	Large	Overall
<b>Paddy</b>				
1.Increased use of cash input	87.95	51.85	47.37	62.92
2.Increase in wage rate	87.95	55.56	48.68	64.58
3.Use of new technology	62.65	98.76	90.79	83.75
4.Decrease in marketing time	83.13	49.38	40.79	59.58
5.Change in market place	-	-	-	-
6.Increase in off-season sale	-	14.81	1.32	5.42
<b>Wheat</b>				
1.Increased use of cash input	33.73	34.57	53.95	40.42
2.Increase in wage rate	34.94	46.91	67.10	49.17
3.Use of new technology	34.94	37.04	63.16	44.58
4.Decrease in marketing time	7.23	1.23	44.74	17.08
5.Change in market place	-	7.41	17.10	7.92
6.Increase in off-season sale	6.02	-	-	2.08
<b>Cotton</b>				
1.Increased use of cash input	36.14	19.75	36.84	30.84
2.Increase in wage rate	44.58	30.86	85.00	40.00
3.Use of new technology	40.96	23.46	85.00	36.30
4.Decrease in marketing time	44.58	58.97	44.74	39.17
5.Change in market place	13.25	-	9.21	7.50
6.Increase in off-season sale	-	-	-	-

**Source:** Based on the primary data from the three regions.

### 3.9 Relevance of MSP in the process of farm decisions

As is always the practice, majority of the farmers were not satisfied with the given MSP of paddy, cotton and wheat; with only a few of them reporting the MSP to be adequate (Table 3.9). In case of cotton, the response was obviously nil because the market price was far higher than the MSP. Even in case of paddy and wheat less than 10 per cent farmers were satisfied with the MSP. The farmers were also asked about the possible adjustments when the MSP of a crop is not increased for 2 years. Majority of the farmers (more than 80 per cent) indicated that there would be no change in their crop pattern. The only other adjustment that the farmers opined was that they would decrease the lease in land. However, this adjustment was sharply and positively related with the farm size as opined by 1, 12 and 21 per cent of small, medium and large farmers respectively. Small farmers (92 per cent) hardly had any option of adjustment; the medium and large farmers (74 per cent each) had some flexibility. This would have its impact on the rental value of land, as well as on the emerging phenomenon of reverse tenancy that has set in Punjab over-time.

**Table 3.9: Farmers' response regarding adequacy of MSP in Punjab, 1999-2000**

Particulars	Small	Medium	Large	Overall
Paddy	12.05	7.41	7.79	9.17
Cotton	-	-	-	-
Wheat	13.25	6.17	5.26	8.33
<b>If MSP is not increased for 2 years then future plan</b>				
i) Increase area under other crops	2.41	4.94	3.95	3.75
ii) Decreased leased in land	1.20	12.34	21.05	11.25
iii) Leased-out + fallow + dairy	1.20	2.47	1.32	1.67
iv) Same crops + dairy + fodder	2.41	1.23	-	1.25
v) No change	92.77	74.07	73.68	80.42

### 5.1.1 3.10 Impact of MSP on sustainability of trends emerging in the cropping pattern

The impact of MSP on the sustainability of the trends emerging in the cropping pattern in the state, especially rice-wheat system is quite important. In Punjab, the farmers are facing the problem of glut of paddy and wheat in the market. Government agencies are reluctant to purchase the unsold surplus of the market, as the already purchased produce is over-flowing the godowns due to lesser disposal through PDS and the purchases being higher than the capacity every year. The suggestions for shifting of the area from paddy and wheat to other crops are not finding favour with the farmers of the state due to marketing problems for other crops. Thus, presently no other alternative crop systems seem to be available. The economic reasons (relative profitability of rice-wheat) are also forcing the Punjab farmers to follow the paddy-wheat crop rotation (Table 3.10).

**Table 3.10: Reasons for not going for the crops other than paddy and wheat in Punjab**

Reason	(% multiple farmers' response)			
	Small	Medium	Large	Total
1. Marketing problems	18.07	21.69	25.00	21.67
2. No best alternative	26.51	28.39	27.63	27.50
3. Economic reason	8.43	-	1.32	3.33
4. Not profitable	-	1.20	-	0.42

Paddy and wheat fetch assured minimum support prices in the market but for other crops, except fruit, vegetable and flowers, although there is minimum support price

announced by the Government but these are ineffective as the Government does not involve in the procurement of other crops. The growers are reluctant to cultivate fruits, vegetables or flowers as these are risky and perishable enterprises and there is no provision of support price for these crops and the farmers cannot get remunerative prices for their produce in the market. The other competing crops for paddy and wheat are not providing higher returns than these two crops and are unable to provide better alternative than these crops.

Price of the crop during preceding year, non-availability of market infrastructure for other crops, easy availability of inputs and access to latest technical know-how of the crops were found to be the major factors affecting the allocation of area under paddy, wheat and cotton crops (Table 3.11). The responses were sharper for wheat and paddy, for which MSP is more effectively implemented reaching to 84 per cent and 74 per cent respectively as compared to cotton for which the maximum response to any factor was elicited by not more than 37.5 per cent of the respondents. Farmers were lured by the increasing prices of these crops and effective Minimum Support Prices particularly of wheat and paddy, at which their produce was procured. The productivity of these crops in the state was more than the national average and due to technological improvements in these crops the farmers have benefited substantially and improved their earnings over time. Easy availability of high yielding variety seeds, fertilizers and insecticides and pesticides has added to the reliability of these crops. But recently due to the persistent attack of boll-worms, even the cotton growers had to think about reallocation of cotton area under paddy and other competing crops.

**Table 3.11: Factors affecting the area allocation under major crops in Punjab, 1999-2000.**

Particulars	(% multiple response)		
	Paddy	Wheat	Cotton
1.Last year's price	74.58	83.75	37.50
2.Last three years' average price	23.75	50.83	29.58
3.Price fluctuations	12.50	5.42	15.83
4.Price of other competing crops	27.08	26.67	22.08
5.Subsistence	1.25	-	-
6.Non-availability of market infrastructure	50.00	72.50	30.42
7.Malpractices in the market	11.67	13.33	23.33
8.MSP	17.50	73.33	11.25
9.Availability of inputs	61.25	74.17	35.83
10.Availability of technical know-how	63.33	73.75	36.25

### 3.11 Experience of Punjab

The MSP, particularly of rice and wheat, has been effectively implemented in Punjab State. The farmers' decisions are strongly influenced by the MSP of these crops, notwithstanding their somewhat lower awareness. The small farmers, particularly in case of paddy, were relatively more disadvantaged in getting the proper market price. The gap between farm harvest price and MSP for paddy and wheat in the recent years has been narrowing but MSP has always been lower than Wholesale Price or Farm Harvest Prices of wheat and paddy. The increasing arrivals and limited domestic demand in the State led to higher procurement. The assured prices of rice and wheat through MSP has increased the investment and adoption of technology. The use of fertilizers has increased but more in the nitrogenous fertilizer, which has resulted into disturbance of the soil nutrient structure in the state. This also speaks of the farmers' response to input prices.

Academicians of repute have suggested diversification of Punjab agriculture but due to comparatively assured returns from paddy and wheat than the competing crops this has put the farmers in a dilemma. Though the MSP is announced for other crops too, there is no system to implement it effectively. Therefore, even if a farmer opts for diversification away from paddy-wheat rotation and grow sunflower, mustard, lentil or any other crop, the farmer will be at the mercy of traders. Thus, there is a need to make more efforts to formulate effective price policy for these crops and the Government agencies should evolve an effective market intervention programme for pulses, oilseeds and other crops.

It should be realized that there are ecological and environmental costs of pushing paddy and wheat in Punjab and in contrast there are ecological and environmental (and social and economic) benefits in producing more of pulses, oilseeds and other crops. A system, an effective one, needs to be devised to pass on the benefits to these crops at the farmer level, at least equivalent to the above mentioned costs (of rice-wheat) plus benefits (of other crops). Effective MSP that assures the relative profitability is the "catch-all" adjective. Market prices of these crops being invariably higher than MSP need not necessarily induce hiking the MSP of these crops; passing on the above "economic advantage" in terms of "cost-reduction" might be required.

The stocks with the government have been piling up. There is a need for effective planning for immediate disposal of the already piled up stocks with the Government before the harvesting of crop every season, which forced the Government agencies to go slow on procurement. The rationalisation of issue price will also enhance the disposal through PDS. The farmers should also improve the quality of produce to attract the private trade for enhancing the exports of foodgrains. It was suggested that the government should enforce an effective implementation of extensive food for work programme for rural infrastructure. There is also a need to make technological improvements in cultivation of hitherto neglected crops competing with paddy and wheat since the competing crops were not found to be more economically viable than rice and wheat in the state. There is need to evolve the HYVs which are more responsive to the fertilizer and irrigation. The momentum of production for fruit and vegetable cultivation in the state cannot be sustained unless there is an effective market improvements for these crops so that the problems faced by the farmers during marketing of these crops may be overcome.

These crops receive large subsidies through procurement and distribution. Also, the remunerative prices and effective price policy for rice and wheat has led to the over-expansion in area under these crops, ultimately resulting in over-exploitation of the natural resources and degradation of environment. The diversification to other crops is being suggested but due to non-availability of infrastructure, assured prices of paddy and wheat vis-à-vis, ineffective price policy for other crops and economically unviable competing crops, the situation has further aggravated for the farmers of Punjab State.

5.1.1.1.1 Appendix Table 3.1(a) : Production Under Crops in Punjab

(In '000 Tonnes )

YEAR	RICE	JOWAR	WHEAT	CEREALS (TOTAL)	PULSES (TOTAL)	FOOD GRAINS (TOTAL)	GROUND NUT	OIL SEEDS (TOTAL)
1990-91	6535.0	0.3	12155.0	22407.8	108.4	19248.7	8.0	110.8
1991-92	6755.0	0.2	12295.0	22932.7	79.6	19634.8	12.0	258.5
1992-93	7002.0	0.1	12369.0	23433.1	74.6	20006.7	12.0	231.2
1993-94	7642.0	0.3	13377.0	25317.3	80.7	21577.0	9.0	235.0
1994-95	7703.0	0.3	13542.0	25577.8	90.5	21816.8	8.0	263.6
1995-96	6768.0	2.2	12518.0	23106.2	84.0	19806.2	8.0	306.1
1996-97	7334.0	2.2	13672.0	25140.2	80.1	21553.3	9.0	284.0
1997-98	7904.0	0.4	12715.0	24756.4	60.0	21143.2	8.0	219.0
1998-99	7940.0	..	14460.0	..	51.0	22906.9	5.0	171.0
1999-00	8716.0	..	15910.0	..	45.0	25197.8	6.0	113.0
G Rate	2.13	4.30	2.75	4.08	1.67	2.44	4.97	3.82

Appendix Table 3.1(b) : Yield Under Crops in Punjab

(Kgs/Hectare )

YEAR	RICE	JOWAR	WHEAT	CEREALS (TOTAL)	PULSES (TOTAL)	FOOD GRAINS (TOTAL)	GROUND NUT	OIL SEEDS (TOTAL)
1990-91	3230	1053	3710	4050	740	3390	800	958
1991-92	3260	1053	3800	4136	780	3480	1000	1256
1992-93	3390	1053	3770	4193	730	3520	1090	1224
1993-94	3510	1053	4010	4395	796	3680	900	1329
1994-95	3380	1053	4090	4396	878	3680	1000	1260
1995-96	3130	891	3880	4123	818	3470	890	1214
1996-97	3400	891	4230	4493	821	3790	1000	1322
1997-98	3470	702	3853	4275	683	3600	1000	1129
1998-99	3150	..	4332	..	654	3740	830	1076
1999-00	3350	..	4700	..	692	4030	1000	975
G Rate	4.21	3.28	2.59	3.99	4.71	2.21	3.49	4.22

## CHAPTER IV

### MINIMUM SUPPORT PRICES IN HARYANA AGRICULTURE

#### 4.1 Introduction

Haryana is another food surplus state having Wheat as a predominant crop followed by Paddy. The operations of Minimum Support Prices in Haryana began from the beginning of the policy. It is one of the states in which the policy intervention has been effectively working in providing incentives to the farmers as well as creating awareness among them about the commercialisation of the agricultural sector. This chapter provides a good canvass while analysing the effectiveness of the MSP policy in a fore-runner state. The awareness of the farmers about policy and their participation is quite high.

Based on common criterion, District Kaithal was selected to represent the food crop region; District Sirsa was selected to represent the commercial crop region while District Bhiwani was selected to represent the coarse cereals-pulses-oilseeds region. Within each of the three selected districts, three villages were selected based on the distance of the village from the nearest marketing centre. Thus one village from each district was selected which was close to the market centre, one which was away from the market centre and the third to represent an in between situation. Within each of the identified villages, households were selected randomly. In all, a total sample of 120 farming households, divided roughly equally amongst the three regions, was covered.

The effectiveness of price policy is analysed here with the help of secondary as well as primary data. On the basis of the secondary data, we tried to check the impact of MSP on the market prices and other variables, whereas, the primary data helped us to find out the response to the Minimum Support Prices at micro level.

#### 4.2 Impact of MSP on Market Prices

The time series data on movements in MSP of the selected crops and the corresponding movements in the harvest prices and the wholesale prices of these crops helps us to look into the effectiveness of the policy at macro level. We attempt here to ascertain if MSP bears any relationship with wholesale and farm harvest prices. We

supplement the results obtained from this analysis of the secondary data with the perceptions obtained from the selected farmers about the influence MSP have had on wholesale and farm harvest prices.

It has been often suggested that the declaration of MSP for different crops influence the Farm Harvest Prices and the Wholesale prices. As a consequence, it also helps in stabilization of these prices. To determine the nature of price variations in MSP, Wholesale prices and the Farm Harvest Prices we present in Tables 4.1 to 4.3 the time series data on MSP, Wholesale prices and Farm Harvest Prices in respect of the three important crops of Haryana. While the time series for paddy and wheat relate to the period 1970-71 to 1998-99 the series for cotton relate to a relatively shorter time period 1977-78 to 1997-98.

**Table 4.1 : Movement of MSP, Wholesale Prices and Harvest Prices: Paddy**

Year	Paddy			Per cent Difference	
	MSP	WP	HP	WP-MSP	HP-MSP
1970-71	46	55.18	53.00	19.96	15.22
1971-72	53	58.29	52.24	9.98	-1.43
1972-73	53	68.39	57.72	29.04	8.91
1973-74	70	91.18	73.92	30.26	5.60
1974-75	76	89.30	91.00	17.50	19.74
1975-76	76	81.68	74.76	7.47	-1.63
1976-77	76	83.96	77.25	10.47	1.64
1977-78	77	81.96	78.85	6.44	2.40
1978-79	85	86.88	82.82	2.21	-2.56
1979-80	95	100.05	96.45	5.32	1.53
1980-81	105	115.93	107.63	10.41	2.50
1981-82	115	125.51	122.51	9.14	6.53
1982-83	122	147.26	127.77	20.70	4.73
1983-84	132	147.78	140.89	11.95	6.73
1984-85	137	147.79	142.36	7.88	3.91
1985-86	142	151.60	147.13	6.76	3.61
1986-87	146	173.34	154.67	18.73	5.94
1987-88	150	197.60	181.53	31.73	21.02
1988-89	160	204.16	192.21	27.60	20.13
1989-90	185	214.58	196.29	15.99	6.10
1990-91	205	259.79	218.25	26.73	6.46
1991-92	230	298.32	260.83	29.70	13.40
1992-93	270	320.95	295.92	18.87	9.60
1993-94	310	372.46	343.72	20.15	10.88
1994-95	340	435.84	369.32	28.19	8.62
1995-96	360	432.98	423.15	20.27	17.54
1996-97	380	465.99	425.80	22.63	12.05
1997-98	415	463.37	444.22	11.66	7.04
1998-99	440	N.A.	465.26	-	5.74

Source: Directorate of Agriculture, Haryana.

**Table 4.2 : Movement of MSP, Wholesale Prices and Harvest Prices: Wheat**

Year	Wheat			Percent Diff	
	MSP	WP	HP	WP-MSP	HP-MSP
1970-71	76	77.50	74.55	1.97	-1.91
1971-72	76	84.13	79.57	10.70	4.70
1972-73	76	86.84	79.23	14.26	4.25
1973-74	82	126.17	120.79	53.87	47.30
1974-75	105	121.54	108.90	15.75	3.71
1975-76	105	109.12	104.77	3.92	-0.22
1976-77	105	122.27	116.31	16.45	10.77
1977-78	110	122.00	116.41	10.91	5.83
1978-79	112	124.73	117.43	11.37	4.85
1979-80	115	131.70	124.52	14.52	8.28
1980-81	117	146.20	113.20	24.96	-3.25
1981-82	130	163.27	145.59	25.59	11.99
1982-83	142	171.22	162.35	20.58	14.33
1983-84	151	162.26	156.49	7.46	3.64
1984-85	152	169.01	159.71	11.19	5.07
1985-86	157	175.37	165.12	11.70	5.17
1986-87	162	185.42	169.05	14.46	4.35
1987-88	165	220.03	190.80	33.35	15.64
1988-89	173	226.65	200.99	31.01	16.18
1989-90	183	226.80	217.99	23.93	19.12
1990-91	215	292.75	244.19	36.16	13.58
1991-92	225	342.41	318.88	52.18	41.72
1992-93	280	339.85	331.87	21.38	18.53
1993-94	330	369.47	353.22	11.96	7.04
1994-95	350	379.93	361.46	8.55	3.27
1995-96	360	465.26	407.10	29.24	13.08
1996-97	380	521.06	480.36	37.12	26.41
1997-98	415	544.98	502.68	31.32	21.13
1998-99	510	NA	582.07	-	14.13

Source: Directorate of Agriculture, Haryana.

**Table 4.3 : Movement of MSP, Wholesale Prices and Harvest Prices: Cotton**

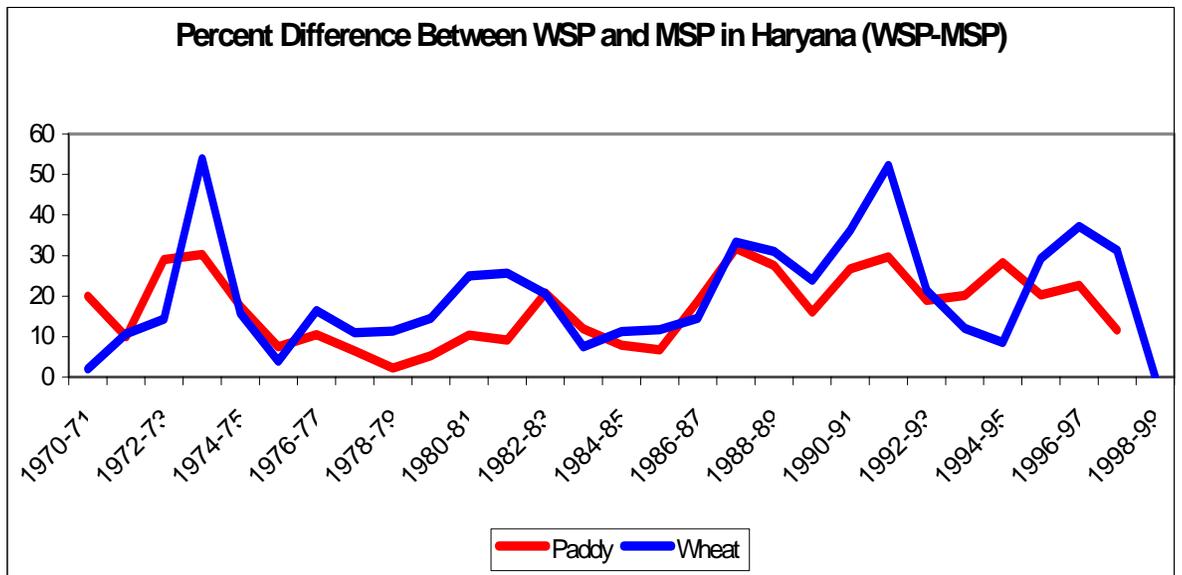
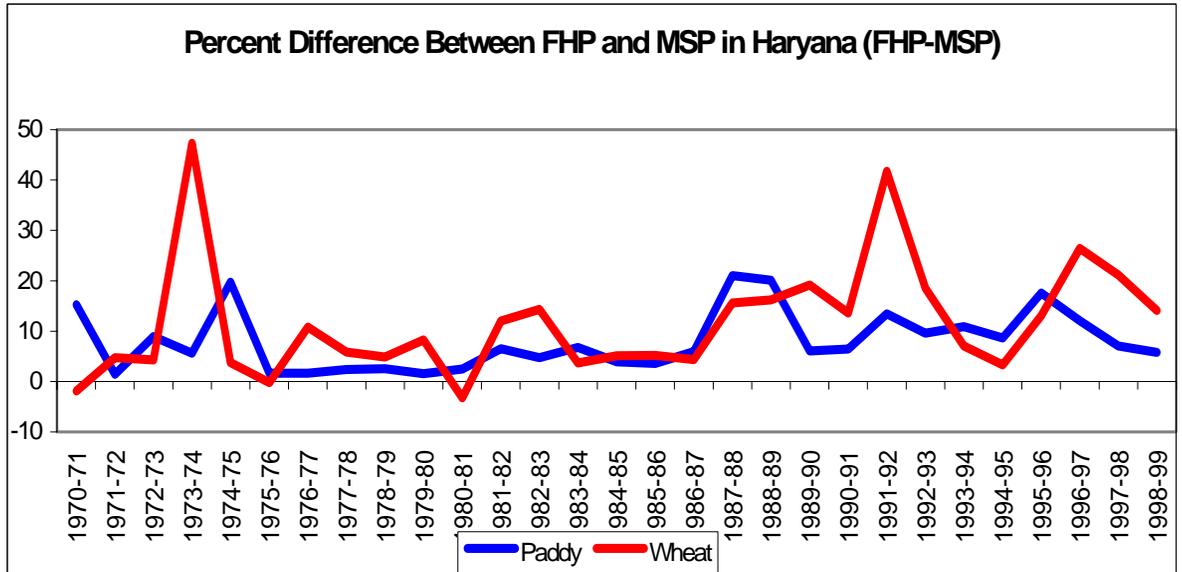
Year	Wheat			Percent Diff	
	MSP	WP	HP	WP-MSP	HP-MSP
1977-78	255	296.75	353.85	16.37	38.76
1978-79	255	283.93	277.26	11.35	8.73
1979-80	275	302.96	276.06	10.17	0.39
1980-81	304	372.01	325.87	22.37	7.19
1981-82	350	435.61	442.27	24.46	26.36
1982-83	380	425.66	401.06	12.02	5.54
1983-84	400	550.65	487.39	37.66	21.85
1984-85	410	505.28	575.04	23.24	40.25
1985-86	425	418.37	443.10	-1.56	4.26
1986-87	430	583.09	429.35	35.60	-0.15
1987-88	440	706.44	757.78	60.55	72.22
1988-89	500	669.79	628.60	33.96	25.72
1989-90	570	656.21	642.08	15.12	12.65
1990-91	620	910.10	731.80	46.79	18.03
1991-92	695	984.54	1030.80	41.66	48.32
1992-93	800	1001.19	879.33	25.15	9.92
1993-94	900	1582.01	1132.65	75.78	25.85
1994-95	1000	1797.85	1785.32	79.79	78.53
1995-96	1150	1186.65	1548.21	3.19	34.63
1996-97	1180	1308.98	1134.34	10.93	-3.87
1997-98	1330	1667.92	1594.44	25.41	19.88
1998-99	1440	NA	1865.58	-	29.55

Source: Directorate of Agriculture, Haryana.

The data presented suggest that in the case of paddy the Wholesale prices have always remained above the MSP though there is no systematic trend in magnitude of deviation in the two sets of prices. Similarly in the case of Farm Harvest Prices, except for three years when the harvest prices were lower than the MSP, in all the other years the harvest prices have always remained above the MSP. Generally the difference between wholesale prices and MSP have been more marked as compared to the difference between harvest prices and MSP.

The pattern of price differentials observed in the case of paddy more or less holds true in the case of wheat crop as well. The Wholesale and Farm Harvest Prices have remained above the MSP in almost all the time periods though, as in the case of paddy, there is no systematic trend in the magnitude of these differences (See Figure 4.1).

Figure 4.1



In the case of cotton we have analyzed the data for a much shorter period 1977-78 to 1997-98. The trend in the nature of price differences between the three sets of prices as observed in the case of paddy and wheat by and large hold true in the case of cotton as well. The wholesale and harvest prices have almost always remained above the MSP in all the years. In certain years the difference in the wholesale prices and MSP has been higher by more than 75 percent. But it is quite clear that procurement in Haryana does not take place due to the distress caused to the farmers under the collapse of market prices.

### **4.3 Growth in Crop Prices**

We present in Table 4.4 the compound growth rates in MSP, wholesale prices and harvest prices of the three crops under consideration in the State of Haryana. The entire time series has been divided in to two sub periods - 1970-71 to 1984-85 and 1985-86 to 1997-98 except in the case of MSP of cotton in which case we have considered the entire period 1977-78 to 1997-98 as a single period.

The results obtained suggest that the rate of growth in the wholesale and harvest prices in the case of all the three crops analyzed during the entire study period have been almost equal but higher than the rate of growth in the MSP in all the three cases. Thus as against a growth rate of 8.29 and 8.28 percent in the wholesale and harvest prices of paddy the growth rate in MSP has been 7.99 percent. Similarly in the case of wheat the growth rates of Wholesale, Farm Harvest and Minimum Support Prices respectively have been 6.86, 6.96 and 6.53 percent respectively. In the case of cotton however, the growth rate of Wholesale prices has been much higher than that of harvest prices and MSP. In this case also, the growth rate of MSP has been lower the growth rate of wholesale and harvest prices.

An analysis of the growth rates of prices in the two sub periods 1970-71 to 1984-85 and 1985-86 to 1987-88 suggest that the growth rates in the case of all the crops and all the three sets of prices have been much higher in the second period as compared to the first sub period. In the case of all the crops the growth rates of harvest prices in the second sub period have been higher than that observed in the case of wholesale prices while in the first sub period the growth rate of harvest prices in the case of paddy have been higher than that in the wholesale prices in the case of the other two crops.

**Table 4.4 : Compound Growth Rates of MSP, Wholesale Prices and Harvest Prices - Select Crops (Percent)**

Period	MSP	Wholesale Prices	Harvest Prices
Paddy			
1970-71 - 1997-98	7.99* (0.002)	8.29* (0.003)	8.28* (0.002)
1970-71 - 1984-85	7.71* (0.004)	6.95* (0.006)	7.38* (0.006)
1985-86 - 1997-98	10.57* (0.004)	10.62* (0.005)	10.68* (0.004)
Wheat			
1970-71 - 1997-98	6.53* (0.003)	6.86* (0.003)	6.96* (0.003)
1970-71 - 1984-85	5.32* (0.004)	5.42* (0.006)	5.20* (0.006)
1985-86 - 1997-98	9.92* (0.005)	10.18* (0.004)	10.47* (0.004)
Cotton			
1977-78 - 1997-98	8.74* (0.003)	9.21* (0.004)	8.92* (0.004)
1970-71 - 1984-85	-	9.40* (0.009)	8.96* (0.011)
1985-86 - 1997-98	-	10.99* (0.004)	11.45* (0.012)

Note: Figures in parentheses denote standard errors.

\* - Significant at 1 percent level of significance

#### 4.4 Relationship Between MSP, Wholesale Prices and Harvest Prices

Having analyzed the growth in the different prices over the study period we now attempt to ascertain if there is a formal relationship between different prices. We first attempt to ascertain the nature of relationship that exists between the wholesale prices and MSP. We hypothesize that Wholesale prices are influenced by the MSP. To test this we fit a simple linear regression with MSP as the independent variable and the wholesale prices as the dependent variable using the entire time series data.

$$WP = f(MSP)$$

The results obtained suggest of a positive relationship between wholesale prices and MSP in the case of the three selected crops (Table 4.5). The regression coefficients in the case of all the three crops are significant and the value of R2 is also very high. The value of regression coefficient is highest in the case of cotton crops. In addition to the

**Table 4.5: Relationship Between Wholesale Prices and MSP (WP = f (MSP))**

Crop	Period	Regression Coefficient	S.E.	R2
Paddy	1970-71 to 1997-98	1.22*	0.02	0.99
Wheat	1970-71 to 1997-98	1.30*	0.05	0.97
Cotton	1977-78 to 1997-98	1.32*	0.12	0.86

\* Significant at 1 percent level of significance

testing of relationship between Wholesale prices and MSP we also attempted to ascertain, if such a relationship also holds in the case of harvest prices and MSP. For testing this we tried a linear regression of the form

$$\mathbf{HP = f (MSP)}$$

The results obtained suggest a type of relationship similar to that obtained in the case of relationship between wholesale prices and MSP, though the magnitude of regression coefficients in the two cases differ. However all the regression coefficients are significant (Table 4.6).

**Table 4.6 : Relationship Between Harvest Prices and MSP  
(HP = f (MSP))**

Crop	Period	Regr Coefficient	S.E.	R2
Paddy	1970-71to 1998-99	1.13*	0.02	0.99
Wheat	1970-71 to 1998-99	1.20*	0.04	0.97
Cotton	1977-78 to 1998-99	1.28*	0.11	0.87

\* Significant at 1 percent level of significance

The MSP of various crops are determined by the CACP, taking in to consideration a large number of factors including the cost of production of different crops. To determine if the MSP of a given crop in a particular year is influenced by the wholesale prices or the farm harvest prices of the crop prevailing in the immediately previous year we attempted to quantify the nature of relationship between the two. For doing so we fitted the following simple linear regressions

$$\mathbf{MSP_t = f (WP_{t-1})}$$

$$\mathbf{MSP_t = f (HP_{t-1})}$$

The results obtained in both the cases (Tables 4.7 and 4.8) suggest of a positive significant relationship between MSP in a given year and both the Wholesale and Farm Harvest Prices in previous year. This holds true in the case of all the three crops.

**Table 4.7 : Relationship Between MSP and Lagged Wholesale Prices**  
( $MSP_t = f(WP_{t-1})$ )

Crop	Period	Regression Coefficient	S.E.	R2
Paddy	1970-71to 1997-98	0.86*	0.02	0.99
Wheat	1970-71 to 1997-98	0.83*	0.03	0.97
Cotton	1977-78 to 1997-98	0.70*	0.07	0.86

\* Significant at 1 percent level of significance

**Table 4.8 : Relationship Between MSP and Lagged Harvest Prices**  
( $MSP_t = f(HP_{t-1})$ )

Crop	Period	Regression Coefficient	S.E.	R2
Paddy	1970-71to 1997-98	0.95*	0.02	0.99
Wheat	1970-71 to 1997-98	0.91*	0.02	0.99
Cotton	1977-78 to 1997-98	0.72*	0.07	0.85

\* Significant at 1 percent level of significance

#### 4.5 Farmer's Expectation of MSP : Factors Influencing Expectation of Minimum Support Prices of Different Crops

We postulate that the MSP expected by a farmer for a given crop in a given year (t) is a function of the MSP of the crop prevailing in previous year (t-1) and the difference between MSP of previous year (t-1) and MSP of previous to previous year {(t-1)-(t-2)}. Stated mathematically

$$P^e = a + b_1 P_{t-1} + b_2 (P_{t-1} - P_{t-2})$$

where

**P<sup>e</sup>** = Expected MSP in year t

**P<sub>t-1</sub>** = MSP in year t-1

**P<sub>t-2</sub>** = MSP in year t-2

**a** = constant

**b<sub>1</sub>, b<sub>2</sub>** = Regression coefficients

The results for paddy, wheat and cotton are given in Table 4.9. The results obtained suggest that in all the three cases the expectation of MSP for a given year is very much based on the prevailing MSP of the last year. In the case of paddy crop, the coefficient of the variables representing difference in the MSP of last year and last to last year is also

significant implying that farmer's apart from basing their expectation on last year's MSP also base their expectation on the increase in MSP that was allowed by the government in the previous year over the MSP that prevailed a year ago. In the case of other two crops however this variable is not significant.

**Table 4.9 : Values of Regression Coefficients**

Crop	Constant	B1	B2	d.f	R2
<b>Paddy</b>	1.04	1.03 (0.023)	0.55 (0.202)	24	0.996
<b>Wheat</b>	-8.79	1.12 (0.043)	0.26 (0.288)	24	0.982
<b>Cotton</b>	-8.25	1.13 (0.038)	-0.19 (0.272)	17	0.992

Note Figures in parentheses denote standard errors

- Significant at 1 percent level of significance

In the case of cotton, as discussed earlier, since the wholesale price has generally remained much above the MSP it is very likely that instead of the difference in the MSP of the two previous year the difference in the wholesale price and MSP in the previous year influence the expected MSP of the farmer. We therefore attempted fitting the following regression in the case of cotton

$$Pe = a + b1 Pt-1 + b2 (WPt-1 - Pt-1)$$

where WPt-1 is the wholesale price of cotton in the year t-1

The estimated equation is

$$Pe = -7.65 + 1.08 Pt-1 + 0.097 (WPt-1 - Pt-1)$$

(0.21)      (0.033)

d.f = 18      R2 = 0.995

The significance of both the coefficients in the above equation imply that in the case of cotton, apart from the MSP of the last year the difference in the wholesale price and the prevailing MSP of last year influence the price expectation of the farmer.

#### **4.6 Farmers' Perception About Impact of MSP**

The announcement of MSP of various crops by the government is unlikely to affect the Farm Harvest Prices or open market prices unless such announcements of MSP are backed by widespread arrangement for undertaking crop procurement operations by the

official agencies. To ascertain farmer's perception about the effect the MSP on the farm harvest prices, open market prices and in reducing fluctuations in prices in a State where official agencies do undertake crop procurement operations in respect of a number of important crops, we collected the necessary information from the selected farmers of the three study zones.

The results obtained are in conformity with the above analysis based on the secondary data. The results obtained suggest that a very large majority of the selected farmers believe and have experienced that MSP affects all the three identified variables - Farm Harvest Prices, Open Market Prices as well as Fluctuations in prices (Table 4.10). This holds true for all the three study zones representing different crop complexes as well as across all the size groups of farms in all the three zones.

**Table 4.10 : Farmer's Perception About Impact of MSP on Farm Harvest Prices and Open Market Prices**

<b>Awareness</b>	Size 1	Size 2	Size 3	All Sizes
	Zone 1			
Influence on FHP	7	5	14	26
Influence on Market Prices	7	4	14	25
Reducing Fluctuations in the Prices	7	5	14	26
	Zone II			
Influence on FHP	9	7	23	39
Influence on Market Prices	8	6	24	38
Reducing Fluctuations in the Prices	9	5	22	36
	Zone III			
Influence on FHP	7	11	21	39
Influence on Market Prices	7	11	22	40
Reducing Fluctuations in the Prices	7	10	21	38
	All Zones			
Influence on FHP	23	23	58	104
Influence on Market Prices	22	21	60	103
Reducing Fluctuations in the Prices	23	20	57	100

Note: Number of farmers giving the opinion. Total no. of Farmers is 120.

#### **4.7 MSP and Farmers' Expectation of the Price : A Comparison**

MSP is announced by the government after taking in to consideration a large number of factors and following a rigorous analytical approach. The farmer on the other hand is guided by considerations based on his own experience and expenses incurred in crop production in expecting a 'fair' price of his produce. The two prices may or may not

match. One would normally expect that the farmer's expectation would be much higher than the officially announced MSP. To ascertain the differences in expected and the announced prices the necessary information was ascertained from the sample farmers. A comparison of Column 3 and Column 6 in Table 4.11 for wheat and in Table 4.12. for other crops would suggest that the average expected price of wheat in Zone I was higher than the official MSP by about 7 percent, in Zone II, by about 2 percent and in Zone III the expected and the official prices were almost equal. Thus one may infer that the officially announced prices for wheat were nearly at par with the expected prices. In the case of Bajra the farmers expected a price for their crop which was about 17 percent higher than that announced as MSP by the government. Similarly in the case of cotton the expectation was about 18 percent higher than the announced price while in the case of paddy the expected price was higher than the announced price by just 4 percent. Thus in the case of the two of the most important crops, wheat and rice, the farmer's expectation and the actually announced prices by the government in the form of MSP nearly y matched.

To ascertain the extent of differences in the officially announced MSP, the price actually prevailing in the market and the price which the farmer actually got for his produce, we collected the necessary information from selected households for the crops. The results in respect of wheat crop, which was cultivated to a significant extent in all the three study zones, are presented in Table 4.11 while the results in respect of other crops specific to different zones are presented in Table 4.12.

The results obtained for wheat suggest that the prices prevailing in the market were at par with the announced MSP in all the three zones. The farmers could also get the announced MSP for their crop. The small and medium farmers did not face any disadvantage vis a vis their large counterparts in terms of price realized for their marketed surplus. Further the smaller farmers did not have to carry their produce for marketing much farther away than the larger farmers to get the announced price. Such a scenario would imply that the procurement operations for wheat in the State have been quite widespread because of which the farmers did not have to carry their produce over long distances for marketing and that this procurement system is functioning efficiently.

In the case of other crops however the prevailing scenario is at some variance from that observed in the case of wheat crop. In the case of Bajra in Zone I, while the average

**Table 4.11 : MSP, Price Prevailing and Price Actually Received– Wheat**

Size Group	Av Distance to Market (km)	MSP (Rs)	Price Prevailing in the Market (Rs)	Price Got by the Farmer (Rs)	Price Expected by the Farmer (Rs)
(1)	(2)	(3)	(4)	(5)	(6)
<b>Zone I</b>					
Size 1	14.14	580	580	570	664
Size 2	20.00	580	587	562	587
Size 3	40.55	580	570	584	613
All	25.77	580	575	575	622
<b>Zone II</b>					
Size 1	7.00	580	576	576	598
Size 2	12.38	580	584	579	590
Size 3	8.00	580	577	576	589
All	8.67	580	578	577	591
<b>Zone III</b>					
Size 1	2.60	580	576	570	582
Size 2	17.40	580	580	580	580
Size 3	3.44	580	580	578	579
All	5.87	580	579	577	580

price reported to be prevailing in the market and the price which the farmers got for their produce was very close to the announced MSP of Rs 445, however, the smaller farmers reported a significantly lower price they got for their produce. In contrast the medium and small farmers could get a little higher than the prevailing and announced MSP.

**Table 4.12 : MSP, Price Prevailing and Price Actually Received– Other Crops**

Size Group	Av Distance to Market (km)	MSP (Rs)	Price Prevailing in the Market (Rs)	Price Got by the Farmer (Rs)	Price Expected by the Farmer (Rs)
(1)	(2)	(3)	(4)	(5)	(6)
<b>Zone I – Bajra</b>					
Size 1	9.25		388	388	475
Size 2	4.25		467	507	550
Size 3	7.67		443	463	526
All	7.24		435	453	519
<b>Zone II – Cotton</b>					
Size 1	6.56	1275	1730	1691	2057
Size 2	11.25	1440	1551	1415	1714
Size 3	11.05	1348	1665	1566	1940
All	10.05	1372	1652	1569	1919
<b>Zone III – Paddy</b>					
Size 1	11.33	534	551	490	589
Size 2	21.58	518	522	492	580
Size 3	12.39	529	493	479	546
All	14.45	526	509	484	561

In the case of cotton in Zone II the price prevailing in the market was reported to be higher than the announced MSP by about 2 percent. This reporting is however at variance from the difference in wholesale and MSP observed in the case of cotton, as was discussed earlier. However the average price realized by the farmers was about 3.5 percent lower than the announced MSP. In the case of cotton however, the smaller farmers were not at a disadvantage vis-à-vis medium and large farmers in getting remunerative prices for their crop.

In the case of Paddy the prices prevailing in the market were lower than that of announced MSP. The farmers got lower prices. The farmers on an average got Rs 484 per quintal as against the MSP of Rs 540. Incidentally this was the year when the government had overflowing godowns and was reluctant to buy paddy from the farmers. The inspectors of the procurement agencies were giving several excuses such as higher moisture content, discoloring either to avoid purchases from the market or to force sellers to provide them commission.

#### **4.8 Impact of MSP on Decision Environment**

The decision about which crops to cultivate and how much area to allocate to different crops is the complex outcome of the interactive effect of a large number of factors – price, non price and various combinations of price and non price factors. Not only these broad groups of factors interact with each other in determining the nature of crop mix, there are a number of factors within each of these groups which also interact with each other in influencing the optimum crop mix. To illustrate some such instances of within group interaction effects are the interactions between input and output prices, within output prices the interaction between MSP and open market prices etc. The relative importance of these factors or combinations thereof could vary between different farmers with differing endowment of resources.

As a result of changes in several underlying price and non price factors the cropping pattern in Haryana has undergone significant changes during last two decades. The proportion of GCA allocated to rice has increased substantially from less than 9 percent in 1980-81 to more than 15 percent now. Similarly the proportion of area allocated to wheat has increased from 27 percent to more than 33 percent while that under cotton has increased from less than 6 percent to more than 10 percent. However the proportion of area allocated to such crops as bajra, maize, barley and gram has

declined over the reference period. To ascertain the relative importance of identified price (MSP) and non price factors in determining the area allocation decisions by different size groups of farmers, we attempted to collect the required information from the selected farmers. The information was collected on the importance of these factors in area allocation for a select number of crops that are covered under MSP. In the case of wheat crop, which is an important crop cultivated in all the three study zones, we also attempted to ascertain if there are any inter zonal differences amongst farmers in their precedence about importance of different factors. The factors have been grouped as output price factors, input price factors and non-price factors. Within each group a number of sub factors are listed. It may be pertinent to mention here that a farmer may consider more than one factor within the broad group as affecting his choice of crops, as such the sub group totals may not add up to the total number of farmers.

In Zone I from amongst the various output price factors influencing area allocation to wheat, the availability of MSP and the last years' MSP were reported to be the important factors by the sample farmers (Table 4.13). The output prices prevailing in the open market or the fluctuations in prices did not influence the farmer's decision in deciding about allocation of area to wheat. While the cost of production, as reflected by the prices of various inputs that go in to crop production, also should normally affect the decision about area allocation, however prices of various inputs were considered important in making decision about crop area allocation by only a few farmers. From amongst the non price factors, the three most important factors considered by farmers as relatively more important are: requirement of the crop for home consumption, availability of irrigation and assured procurement of the crop by the official agencies.

In the case of Zone II also, various output factors considered important for allocation of area to wheat, availability of MSP and last year's MSP were considered important by the sampled farmers of Zone II (Table 4.13). However unlike Zone I, in this zone some of the input prices were also reported to influence area allocation by a relatively large number of farmers. More than 25 percent of the farmers reported that the prices of electricity for irrigation pumping as also the price of surface water does enter in to their decision framework while deciding about the area to be allocated to wheat. From amongst the non price factors influencing area under the crop the important variables reported were requirement for home consumption and availability of marketing facilities in the vicinity.

As in the case of the other two zones the important output price factors affecting the choice of wheat cultivation and the area allocation to wheat crop in Zone III were also the same – availability of MSP and the last year's MSP (Table.4.13) . In the case of input price factors the important factors reported to be influencing area allocation decisions were prices of water, electricity and the cost of the capital (interest rates). From amongst the non price factors affecting area decisions while two of the factors - requirement for home consumption and availability of marketing facility in the vicinity – are common with the other zones, the additional important non price factors reported by farmers of this zone were – assured crop procurement by official agencies and availability of irrigation.

**Table 4.13: Most Important Factors Determining Choice of Crop and Area Allocation to Different Crops – Wheat**

	Zone I	Zone II	Zone III
<b>Output Price Factors</b>			
Availability of MSP	14	26	32
Last Year's MSP	12	24	15
Last Three Years MSP	0	4	5
Last Year's Open Market Price	2	5	5
Fluctuation in Market Prices	1	0	5
Prices of Competing Crops	0	1	5
Relative Crop Profitability	5	4	8
<b>Input Price Factors</b>			
Fertilizer	4	4	7
Electricity	5	10	9
Seed	3	0	3
Water	8	12	19
Insecticide	2	1	6
Credit	5	5	10
<b>Non Price Factors</b>			
Availability of Irrigation	20	35	20
Availability of Other Inputs	2	2	4
Assured Crop procurement by official agencies/mills	11	19	25
Availability of Marketing Facilities in the vicinity	5	4	16
Resistance of Crop to pest attacks	3	1	4
Advise of extension workers	0	1	0
Required for home consumption	23	24	35
No other alternative crop available	2	4	6
Lack of technical know how for cultivation of alternative crop	0	0	1
Unassured market for alternative crop	0	0	0
Constraints on availability of credit	1	0	8
Because others in the village grow this crop	0	3	0

Note: Number of Farmers indicating the impact factor out of 40 respondents in each zone.

Thus in the case of majority of sampled Haryana farmers, the important output price factors, input price factors and non price factors affecting choice of wheat crop for cultivation and the decision about area allocation to this crop have been – availability of MSP and last year's MSP of wheat, price of water, requirement for home consumption and availability of crop marketing facilities in the vicinity. In the case of Zone III, the most progressive agricultural area of the State, two additional non price factors reported by the farmers were availability of irrigation and assured crop procurement by official agencies.

Paddy is an important kharif crop of Zone III only, therefore information required to ascertain the factors determining the choice set of the farmers in area allocation to this crop were collected from the sampled farmers of this zone only. The results obtained (Table 4.14) indicate that the important output price factors in the case of paddy are the same as in the case of wheat viz availability of MSP and last year's MSP. The important input price factor affecting area allocation paddy is however the price of water. From amongst the non price factors affecting area allocation decision, availability of irrigation was cited as the most important followed by the availability of marketing facilities in the vicinity.

Cotton is cultivated on a large scale in Zone II only and as such the information on factors affecting area allocation to this crop was collected from farmers of this zone alone. Importantly unlike in the case of wheat and paddy, the farmers base their area allocation decision to cotton on the basis of last year's open market price of cotton. Two other output price factors, which were reported to be influencing decision of some of these farmers, were last year's MSP and prices of competing crops. In terms of input price factors influencing area allocation to cotton cultivation the factors are different from that reported in the case of other crops (Table 4.14). In this case the important input price factor reported by the largest number of farmers was price of insecticides followed by that of water. From amongst the non price factors the availability of irrigation and availability of marketing facilities in the vicinity were considered relatively more important by a larger number of sampled farmers.

Bajra is cultivated to some extent in the Zone I of the study region, therefore the information on determinants of area allocation to this crop were collected from the farmers of this zone alone. The results obtained presented in Table 4.14 suggest that none of the listed output price factors affect the decision about area allocation to this crop

by a majority of the sampled farmers. From amongst the input price factors the price of water was considered by a majority of the farmers as affecting area allocation. From amongst the non price factors apart from requirement for home consumption, the other important factor affecting area allocation to the crop is availability of irrigation. Thus area allocation factors influencing cultivation of Bajra crop differ from all the other crops analyzed above.

**Table 4.14: Most Important Factors Determining Choice of Crop and Area Allocation to Different Crops – Paddy, Cotton, Bajra**

	Paddy	Cotton	Bajra
	Zone III	Zone II	Zone I
<b>Output Price Factors</b>			
Availability of MSP	22	0	0
Last Year's MSP	12	9	3
Last Three Years MSP	3	3	1
Last Year's Open Market Price	7	27	4
Fluctuation in Market Prices	5	8	1
Prices of Competing Crops	6	9	4
Relative Crop Profitability	8	7	1
<b>Input Price Factors</b>			
Fertilizer	7	6	0
Electricity	9	8	5
Seed	2	1	0
Water	17	10	10
Insecticide	5	11	0
Credit	9	9	7
<b>Non Price Factors</b>			
Availability of Irrigation	30	20	17
Availability of Other Inputs	4	5	1
Assured Crop procurement by official agencies/mills	11	2	1
Availability of Marketing Facilities in the vicinity	15	12	6
Resistance of Crop to pest attacks	4	9	2
Advise of extension workers	0	0	0
Required for home consumption	5	1	14
No other alternative crop available	5	6	5
Lack of technical know how for cultivation of alternative crop	1	0	1
Unassured market for alternative crop	0	1	1
Constraints on availability of credit	7	0	0
Because others in the village grow this crop	0	0	0

Note: Same as in Table 4.13

**Table 4.15: Cropping Pattern in Selected Zones**

(Average area per household  
In Hectares)

Size Group	Sarson			Bajra			Wheat			Other Crops			Total All Crops		
	I	UI	Total	I	UI	Total	I	UI	Total	I	UI	Total	I	UI	Total
	Present														
Zone I	2.90	3.29	6.19 (24.91)	2.87	2.38	5.25 (21.13)	2.74	0.36	3.10 (12.47)	4.83	5.48	10.31 (41.49)	13.35	11.5	24.85 (100.00)
Zone II	3.75	0	3.75 (11.74)	8.37	0.37	8.74 (27.37)	12.73	0.73	13.46 (42.16)	4.96	1.02	5.98 (18.73)	29.81	2.12	32.52 (100.00)
Zone III	16.04	0.05	16.09 (41.77)	15.66	0.19	15.85 (41.15)	1.45	0	1.45 (3.76)	4.32	0.81	5.13 (13.32)	37.46	1.05	38.51 (100.00)
	Before Ten Years														
Zone I	1.86	2.82	4.68 (18.86)	2.26	4.49	6.75 (27.21)	1.53	0.39	1.92 (7.74)	1.97	9.49	11.46 (46.19)	7.63	17.18	24.81 (100.00)
Zone II	0.73	0	0.73 (2.01)	12.67	1.34	14.01 (38.55)	13.81	1.32	15.13 (41.63)	4.86	1.61	6.47 (17.81)	32.07	4.27	36.34 (100.00)
Zone III	11.27	1.19	12.46 (40.51)	11.41	1.26	12.67 (41.19)	0.78	0	0.78 (2.54)	3.89	0.96	4.85 (15.76)	27.36	3.42	30.78 (100.00)

Note: Figures in brackets are per cent to total area cropped under these crops.

#### **4.9 Regional Variations in the Implementation of Price Policy**

It has often been reported that the crop procurement operations by official agencies are either not undertaken in certain States or if undertaken are limited to a few pockets of high production area. As a result the farmer has either to sell off his produce to a private trader at a price usually well below the MSP or has to take his produce several miles away to sell it to the official agencies at the announced MSP. To ascertain if such a pattern exists within the State of Haryana and to examine the degree of variation in procurement of different crops across various regions within the State we present in Tables 4.16 and 4.17. time series district wise data on crop procurement, crop production and the proportion of procurement to production in respect of paddy and wheat crops of the study region.

The results suggest that the proportion of procurement to production in the case of paddy has been declining over the years. In certain years in some districts the proportion of procurement to production is higher than 100 percent. This is on account of movement of the crop from the neighboring districts to the markets of this district. Sometimes the crop from neighboring States is also sold in Haryana. This has specially been the case of crop coming in to Haryana from Western Uttar Pradesh. Since paddy has to be milled and also rice is not a staple diet of the people of this State the marketed surplus as also the proportion of procurement to production is quite high.

In the case of wheat also the proportion of crop procured to the total production has declined slightly over the years. The procurement of the crop is done in all the important crop growing districts of the State. In case the procurement is not undertaken in a specific district the farmers from that district take advantage of the procurement infrastructure of any neighboring district. To that extent therefore the crop procurement operations are quite widespread and there is no significant variation across various regions of the State in implementation of the MSP and the crop procurement operations by various official agencies.

**Table 4.16: District wise Procurement and Production of Paddy**

('000 Tonnes)

District	1985-86			1991-92			1998-99		
	Procured	Production %	Procrd	Procured	Production %	Procrd	Procured	Production %	Procrd
Ambala	232	242	95.9	279	425	65.6	276	496	55.6
Kurukshetra	797	628	123.0	864	870	99.3	908	919	98.8
Karnal	598	666	89.8	516	581	88.8	605	533	13.5
Sonipat	77	77	100	162	269	60.2	224	428	52.3
Rohtak	11	11	100		6	0	5	136	3.7
Faridabad	26	18	144.4	26	31	83.9	59	105	56.2
Gurgaon		3	0		5		9	37	24.3
M.Garh			0				0	3	0
Bhiwani		3	0				0	24	0
Jind	156	128	121.9	114	164	69.5	192	343	56.0
Hissar	122	134	91.0	240	210	114.3	30	145	20.7
Sirsa	708	104	103.8	111	130	85.4	298	461	64.6
State	2127	2034	104.6	2312	2691	85.9	2606	3630	71.8

Note : Percent procured to production could be more than 100 in certain cases due to movement of commodity from neighboring District/State to the markets of that district.

**Table 4.17: District wise Procurement and Production of Wheat**

(000 Tonnes)

District	1985-86			1991-92			1998-99		
	Procured	Production %	Procrd	Procured	Production %	Procrd	Procured	Production %	Procrd
Ambala	105	220	47.7	114	400	28.5	155	579	26.8
Kuruks Hetra	550	779	70.6	621	1045	59.4	569	1117	50.9
Karnal	418	714	58.5	264	635	41.6	332	661	50.2
Sonipat	102	319	32.0	126	731	17.2	160	817	19.6
Rohtak	52	371	14.0	7	425	1.6	52	683	7.6
Faridabad	116	262	44.3	2	357	0	257	459	56.0
Gurgaon	21	195	10.8		230	0	107	414	25.8
M.Garh	2	134	0		280	0	56	392	14.3
Bhiwani	1	111	0		203	0	23	370	6.2
Jind	183	408	44.9	181	534	33.9	314	734	42.8
Hissar	227	550	41.3	300	1005	29.9	234	676	34.6
Sirsa	181	358	50.6	219	651	33.6	909	1666	54.6
State	1959	4421	44.3	1834	6496	28.2	3158	8568	36.9

Note : Percent procured to production could be more than 100 in certain cases due to movement of commodity from neighboring District/State to the markets of that district.

#### 4.10 Farmers' Awareness About Methodology Adopted for Fixation of MSP

Announcement of MSP of various crops by the government every year invites widespread debate amongst farmers, politicians, media and also by the general public. The debate generally centres around the level of fixation of MSP, the magnitude of increase in the price announced in the current year from what was announced in the previous year and whether these prices are remunerative for the farmer or not. However, very few of the players debating the issue are actually aware of the methodology adopted by the government in fixing MSP of various crops in different years. To ascertain if the farmers, the most vocal group in this debate and whose fortunes are affected directly by these announcements, are aware of the methodology the government follows in calculating these prices we collected the required information from the sampled farmers.

The results obtained indicate that less than 10 percent of the selected farmers reported a little awareness about the methodology adopted by the government in calculating MSP of various crops during different years (Table 4.18). More than 90 percent of the selected farmers had no idea of how the MSP of various crops are fixed by the government. Due to lack of awareness on this issue the farmers could offer no comments on their satisfaction or otherwise with the methodology adopted by the government in price fixation. However, out of ten selected farmers who reported some awareness about the methodology of price fixation, only 3 reported their satisfaction with the way the prices are calculated, the remaining 7 expressed their dissatisfaction with the methodology adopted for price fixation.

**Table 4.18 : Awareness About Methodology for Fixation of MSP**

Awareness	Zone I	Zone II	Zone III	All Sizes
Awareness about method for determining MSP by Govt	1	2	7	10
Satisfaction with Methodology of Calculating MSP- No Idea	0	0	3	3
Is MSP sufficient to cover the costs of production	2	1	17	20
Suggestions for Changes in Methodology for calculating MSP- No suggestions	33	41	43	117

Note: Number of Farmers showing awareness about the methodology of MSP. Each zone had 40 farmers each

Majority of the farmers think that the prices announced by the government is insufficient to cover their cost of production. Only 20 of the 121 farmers opined that the

announced price can cover the cost of production, the remaining about 84 percent of the farmers were of the view that the prices do not cover the cost of production.

#### 4.11 Farmer's Awareness about MSP and Sources of Information

The MSPs fixed by the government are announced through the media - newspapers, radio, TV etc. and as such are widely disseminated. Given good communication infrastructure in the study region it is expected that the farmers would be aware of the information about MSPs of various crops. The results to this effect obtained from sampled farmers confirm this. More than 90 percent of the sampled farmers reported awareness about the last year's MSP of the various crops which they had been cultivating (Table 4.19). While the inter-size group differences about awareness were not marked however the extent of awareness in the smallest size group of farms was somewhat less than in the other two size groups. As against 93 percent and 97 percent of the sampled farmers in the medium and large size groups who reported awareness about MSP, the percentage of small farmers reporting awareness was 76 percent.

**Table 4.19 : Awareness About MSP Amongst Sampled Farmers**

Awareness	Zone I	Zone II	Zone III	All Zones
Awareness about MSP of Last year's crops	28	41	41	110
Announcement of MSP made at right time	27	35	28	90
Policy of announcing MSP serve useful purpose	33	41	38	112
Policy of MSP should continue	34	40	42	116

Similarly while inter-zonal differences in the awareness about the MSP were not marked, the extent of awareness was somewhat less in the first zone as compared to the other two zones. Similarly the intra-zonal-inter size group differences in awareness suggest that the awareness was relatively lesser in the smallest size group farms of Zone I.

#### 4.13 Conclusions

Haryana has been one of the states on the forefront of Green Revolution. The credit for adoption and spread of technology in the state should equally go to the price policy and the support made available by procurement administration. Minimum Support Price operates in the State quite comfortably without much of regional differences. However, across crops the concentration is more on the procurement of wheat and paddy leaving away the other crops. As a consequence, increasing quantities of wheat and paddy are being procured. The State has limited capacity to store the grains planned nine decades back, considering the requirements at that time. The procurement now has been higher than the capacity of storage and therefore it results in stock piling. On the other hand, when procurement is halted the farmers' welfare is impacted, that results in a strong pressure from farming lobby to increase the procurement of grains from the State.

Most of the farmers are aware of the policy of Minimum Support Prices. However, they are not very conversant with the administrative mechanism. There is need felt by the farmers for covering other crops which will help them to diversify into other areas of farm enterprises. The declaration of MSP is always delayed and that makes decision-making difficult for the farmers. Due to the increasing trend in Minimum Support Price there had not been no major problems and welfare loss. However, if the cropping pattern is to be maneuvered through Minimum Support Prices, it is essential that the declaration of Minimum Support Price should be before the sowing season. The trends in input prices are increasing at a faster rate than the trends in prices. That raises an alarm which needs to be set right through price policy. Therefore, in the case of Haryana, MSP indicates a tight rope walking with stock piling on one side along with focus on two crops whereas time of declaration, cropping pattern and the increasing input price trends on the other side.

**Appendix Table 4.1: Allocation of Gross Cropped Area Under Different Crops/ Crop Complexes in Haryana**

District	Per cent of GCA Under									No. of Regulated Markets	Area Served/Regul Markets
	Paddy	Wheat	Paddy+Wheat	Coarse Cereals	Pulses	Oil-Seeds	Coarse+Pulses+Oilseeds	Cotton	Cotton+Wheat		
<b>Food Crop Region</b>											
Ambala	32.11	35.84	67.95	0.43	2.27	5.03	7.73	0.11	35.95	6	183
Kurshetr	41.05	37.23	78.28	@	0.82	4.85	5.67	@	37.23	7	174
Kaithal	37.87	44.59	82.46	2.42	0.59	1.52	4.53	2.16	46.75	7	400
Karnal	42.08	43.88	85.96	0.49	0.82	0.91	2.22	0.08	43.96	8	281
Panipat	37.36	44.26	81.62	0.35	1.31	1.53	3.19	0.11	44.37	6	292
Sonipat	18.49	43.93	62.42	11.64	8.12	2.79	22.55	0.77	44.70	2	692
Y. Nagar	24.23	29.85	54.08	0.87	2.58	3.81	7.26	0.10	29.95	6	293
<b>Coarse Cereals-Pulses-Oilseeds Region</b>											
Panchkul	10.39	38.23	48.62	1.57	7.84	4.90	14.31	0.20	38.43	3	182
Rohtak	4.01	33.35	37.36	26.49	6.56	14.41	47.46	4.63	37.98	6	735
Faridaba	6.60	48.77	55.37	18.66	3.20	4.10	25.96	0.16	48.93	5	421
Gurgaon	1.85	38.26	40.11	27.03	3.37	20.83	51.23	0.18	38.44	8	345
Rewari	0.06	22.58	22.64	27.92	2.58	38.54	69.04	0.01	22.59	2	779
M.Garh	@	12.64	12.64	36.44	7.24	36.55	80.23	5.02	17.66	4	421
Bhiwani	0.02	12.37	12.39	29.33	25.80	16.86	71.99	8.13	20.50	7	734
<b>Cotton-Wheat Region</b>											
Jind	17.06	40.62	57.68	9.43	1.99	3.08	14.50	15.92	56.54	6	456
Hissar	5.42	29.50	34.92	9.37	11.50	8.89	29.76	26.42	55.92	13	523
Sirsa	4.14	32.32	36.46	1.86	8.52	9.70	20.08	34.44	66.76	6	713
Haryana	13.89	33.01	46.90	12.42	7.53	10.23	30.18	10.91	43.92	102	442

**Appendix Table 4.2(a): Production Under Crops in Haryana**

(In '000 Tonnes)

YEAR	RICE	JOWAR	WHEAT	CEREALS (TOTAL)	PULSES (TOTAL)	FOOD GRAINS (TOTAL)	GROUND NUT	OILSEEDS (TOTAL)
1990-91	1834.0	65.0	6440.0	9938.0	540.2	9561.2	1.8	646.0
1991-92	1812.0	29.0	6502.0	9729.0	270.2	9093.2	1.7	827.0
1992-93	1869.0	47.0	7083.0	10855.5	330.2	10251.2	1.3	588.4
1993-94	2057.0	25.0	7231.0	10813.5	469.6	10254.6	1.7	869.7
1994-95	2227.0	30.0	7303.0	11613.5	493.6	10993.6	1.8	863.2
1995-96	1847.0	30.0	7291.0	10648.5	412.4	10137.4	1.7	782.9
1996-97	2463.0	30.0	7826.0	12334.5	345.0	11448.0	1.4	1004.8
1997-98	2556.0	30.0	7554.0	12232.5	374.7	11347.7	1.8	423.2
1998-99	2425.0	25.0	8568.0	..	353.0	12123.2	1.1	714.0
1999-00	2594.0	23.0	9642.0	..	77.0	13066.5	0.7	641.0
<b>G Rate</b>	2.45	1.09	2.28	4.23	2.89	2.37	3.34	4.56

**Appendix Table 4.2(b): Yield Under Crops in Haryana**

(Kgs/Hectare)

YEAR	RICE	JOWAR	WHEAT	CEREALS (TOTAL)	PULSES (TOTAL)	FOOD GRAINS (TOTAL)	GROUND NUT	OILSEEDS (TOTAL)
1990-91	2770	500	3480	2979	733	2350	750	1327
1991-92	2830	280	3600	3039	704	2540	740	1110
1992-93	2660	400	3620	3102	705	2580	680	961
1993-94	2730	280	3620	3164	985	2630	740	1392
1994-95	2800	270	3680	3259	1064	2730	750	1393
1995-96	2230	240	3700	2984	974	2540	810	1283
1996-97	2960	230	3880	3417	827	2840	820	1478
1997-98	2800	231	3660	3260	888	2710	900	712
1998-99	2240	194	3916	..	827	2700	1220	1279
1999-00	2390	210	4170	..	572	3047	1000	1325
<b>G Rate</b>	3.89	1.03	2.21	4.02	4.19	1.67	3.47	4.52

## CHAPTER V

### IMPACT OF MINIMUM SUPPORT PRICES ON AGRICULTURAL ECONOMY IN UTTAR PRADESH

#### 5.1 Introduction

Uttar Pradesh is a regionally diversified state and therefore bifurcation of the state into Uttaranchal and Uttar Pradesh has not only provided politically contiguous regions but also economically homogeneous states. The price policy has been effective in western Uttar Pradesh as compared to the eastern Uttar Pradesh. Wheat and Paddy are as usual the important crops and therefore overall effectiveness of Minimum Support Prices is a conclusion foregone. The scheme has been operating successfully both due to its economic effects on the farmers and also can be credited to the area decisions by the farmers. The study in Uttar Pradesh was carried out with the common design provided by the coordinating centre.

In Uttar Pradesh, although the procurement operations have been implemented but these remained largely locally confined in the state covering a few pockets of western region. Incidentally, these pockets provide large marketable surplus. The comprehensive cost of cultivation scheme of collecting data on cost of cultivation, started in U.P. since 1971 under the supervision of Govibind Ballabh Pant University of Agricultural Technology, Pantnagar which was transferred to R.B.S. College, Agra in 1973 where it is still functioning. Uttar Pradesh is one of those states that have recorded higher procurement of foodgrains. The growth rates in the production of foodgrains have been higher than the growth rates in household consumption and that leaves large marketable surplus. The state has a markedly skewed land distribution and therefore the surplus generated originates more from the higher size group of holdings and confined only to a few regions. Wheat, paddy, pulses and sugarcane are the predominant crops in the cropping pattern of the state. Keeping this in view, three districts were chose for the purpose of field study viz., Muzaffarnagar, Budaun and Banda from the western UP and Bundelkhand region. These districts represent typical sugarcane, wheat and gram (pulses) regions of the state.

The undivided state of Uttar Pradesh has been the highest producer of foodgrains across states in the country. Its contribution to total foodgrain production of the country is about 20 per cent and that is about 8 per cent higher than Punjab and is higher than Kerala,

Assam, Gujarat, Orissa, Tamil Nadu and Karnataka put together (Table 5.1). Given the enormous size of the sector and national importance of the State in the crop economy it was quintessential to look at the impact and operation of MSP in the State.

**Table 5.1: Performance of Production and Productivity of Uttar Pradesh 1999-2000**

Crops	Production of Uttar Pradesh (Mill. Tonnes)	As % of the Total Country's Production	Rank in the Country Across States	
			Production	Productivity
Foodgrains	45.24	21.66	First	Fourth
Rice	12.91	14.43	Second	Seventh
Wheat	25.98	34.38	First	Third
Coarse Cereals	3.75	12.30	Third	Sixth
Total Pulses	2.60	19.48	Second	First
Gram	0.78	15.35	Second	Third
Sugarcane	111.42	38.57	First	Eighth

Source: Agricultural Statistics at a Glance, 2001. Ministry of Agriculture, Govt. of India, 2002.

The analysis of growth pattern in selected districts discern interesting patterns. The area under sugarcane in Muzaffarnagar district has increased from 9.68 per cent during 1986-87 to 23.15 per cent in the year 1998-99 with significant variations. It has been increasing till 1998-99 in the western region and in the state as a whole. The area under wheat in Badaun district has increased from 5.41 per cent in the year 1986-87 to 37.04 per cent in the year 1998-99. In the western region it has increased from 2.38 per cent during 1986-87 to 10.99 per cent till the year 1993-94 but thereafter it has decreased to 6.71 per cent till the year 1998-99. In the state it has increased from 1.50 per cent during 1986-87 to 11.47 per cent in the year 1998-99. While in case of Gram in Banda district, the area has increased from 3.88 per cent during 1986-87 to 7.95 per cent till the year 1987-88 and thereafter it has decreased up to 41.39 per cent till the year 1998-99. In Bundelkhand region it has decreased from 6.86 per cent during 1986-87 to 0.18 per cent till 1990-91 but thereafter it has decreased up to 12.05 per cent till the year 1998-99. While in the state as a whole it has decreased from 0.63 per cent during 1986-87 to 38.42 per cent till 1998-99. Thus, the area under Gram has decreased continuously till 1998-99 .

The production of sugarcane in Muzaffarnagar district has increased from 9.79 per cent during 1986-87 to 48.82 per cent till the year 1998-99. In western region it has increased from 16.59 per cent during 1986-87 to 62.50 per cent till 1998-99. In the state as whole, it has increased from 16.02 per cent during 1986-87 to 59.24 per cent till 1998-99. Thus, there has been continuous increase in the production of sugarcane in the state.

While the production of wheat in Budaun district has increased from 2.48 per cent during 1986-87 to 75.96 per cent till 1998-99. In western region the trend has been mixed till 1990-91 but thereafter it has been increasing till 1998-99. But in the state as a whole the trend has been decreasing till 1987-88 and thereafter it has been increasing till 1998-99, with ups and downs in the middle years. Thus, there has not been any impact of MSP on the production of wheat. While the production of Gram in Banda district has decreased with ups and downs in the middle years. In Bundelkhand region the production has decreased negatively. While in the state as a whole it has decreased negatively from 5.17 per cent during 1986-87 to 47.22 per cent till the year 1998-99. Thus, the trend of the production of Gram in the state as a whole has been decreasing till 1998-99.

The productivity of sugar cane in Muzaffarnagar district has increased from 0.11 per cent during 1986-87 to 20.84 per cent till the year 1998-99. Accordingly it has increased from 2.81 during 1986-87 to 27.21 per cent till 1998-99 in western region and in the state it has increased from 3.04 per cent during 1986-87 to 20.40 per cent till 1998-99. But this increase is not due to the increase in MSP in the district. The productivity of wheat in Budaun district has been increasing with ups and downs in the previous years. In the western region the trend has been as the same as in Budaun district. But in the state as a whole it has been decreasing till 1987-88 and thereafter increasing till 1998-99. Thus, the productivity of wheat has not been affected by the MSP in the State of U.P. The productivity of Gram in Banda district has a mixed trend till 1998-99. In Bundelkhand region also, it has a mixed trend and in the state as a whole it has a negative trend till 1991-92 and thereafter a mixed trend till 1998-99. Thus, it has been clarified that MSP have not affected at all the productivity of major crops in the state.

#### **5.4 Effectiveness of Price Policy in the State :**

Relationship between administered prices with the prevailing market prices (Wholesale Price or Farm Harvest Price) indicates the primary influence of the former on the latter. A comparison between MSP, Farm Harvest Prices and Whole Sale Prices indicate that MSP has always been lower than the prevailing prices and that makes procurement under MSP sporadic. In the process probably, only some farmers are taking advantage of the scheme. It was also noted that the increase in the MSP of wheat did not have any impact on the market prices as well as market arrivals of wheat in the mandies as the Farm Harvest Prices, Wholesale and retail prices were always higher. The increase in these prices has been quite steady and kept pace with the increase in MSP. This is obviously clear from the

data given in Table 5.2. In case of Gram also the impact of MSP has been quite ineffective on the various prices and market arrivals in the mandies of the state as a whole (Table 5.3). In case of sugarcane, indeed, the minimum support prices have been found to be directly correlated with the increase in the various prices of sugarcane during the reference years. There has been a continuous increase in the market prices but in case of the arrivals of sugarcane at various sale points, there has not been any uniform pattern in the state as a whole. MSP seem to have little impact on the market prices as the increasing trend in FHP and WSP continued steadily during nineties. Despite the fact that FHP and WSP have had experienced fluctuations during this period, but even during those years the prevailing market prices were higher than MSP.

**Table 5.2: Distribution of Different Prices and Market Arrivals of Wheat in the State of U.P. during the Years from 1985-86 to 1998-99**

(Price in Rs./Qtl arrival in Lakh Qtls)

5.2 Years	M.S.P. (Mini sup. Prices)	Farm Harvest Prices	Average Whole Sale Prices	Average Retail Prices	Market Arrivals
1985-86	157.00	179.85	168.42	185.50	114.79
1986-87	162.00	186.66	174.33	190.75	145.12
1987-88	166.00	213.10	189.55	217.50	149.16
1988-89	173.00	241.79	207.39	245.80	182.17
1989-90	183.00	216.85	199.92	222.75	207.68
1990-91	215.00	265.05	240.02	269.50	214.22
1991-92	225.00	344.43	284.71	349.75	197.12
1992-93	275.00	342.16	308.58	348.50	223.04
1993-94	330.00	380.77	355.38	384.50	247.32
1994-95	350.00	401.67	375.83	406.75	224.36
1995-96	360.00	411.92	385.96	416.75	224.95
1996-97	380.00	577.00	478.50	582.50	197.03
1997-98	475.00	526.00	500.50	535.00	211.61
1998-99	510.00	551.00	530.50	556.50	204.32

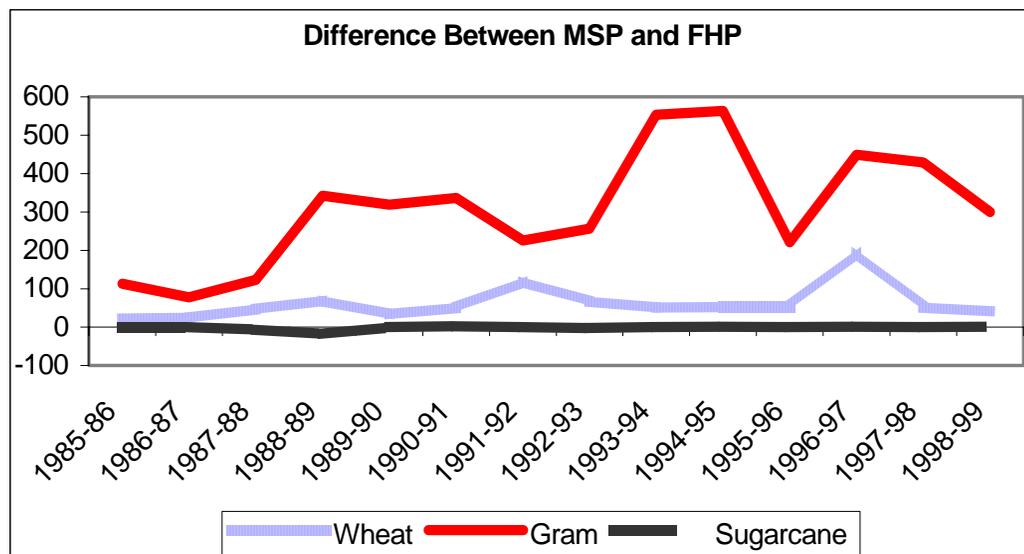
**Source: Directorate of Statistics, Uttar Pradesh**

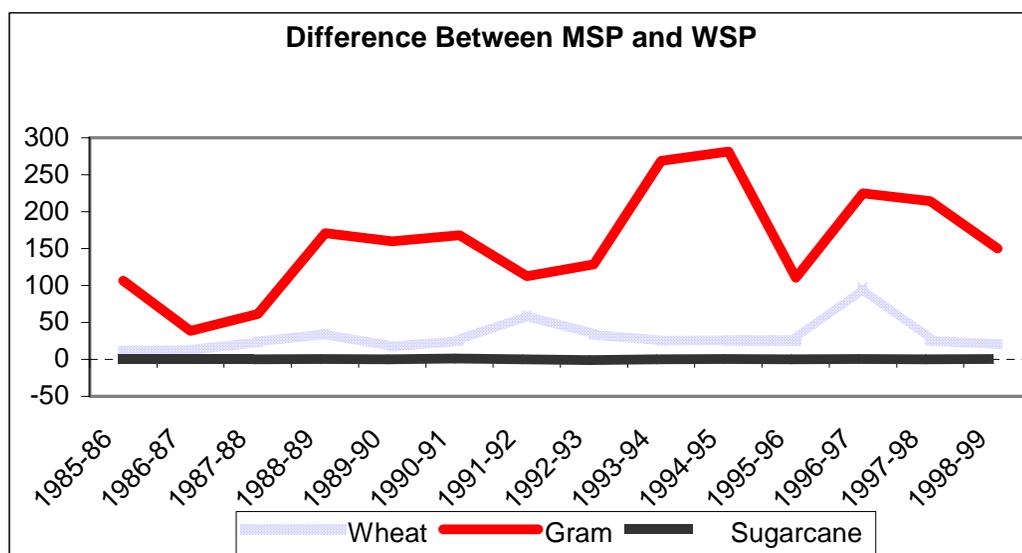
**Table 5.3: Distribution of Different Prices and Market Arrivals of Gram in the State of U.P. during the Years from 1985-86 to 1998-99**

(Price in Rs./Qtl arrival in Lakh Qtls)

Years	M.S.P. (Mini sup. Prices)	Farm Harvest Prices	Average Whole Sale Prices	Average Retail Prices	Market Arrivals
1985-86	250.00	363.38	356.38	369.50	30.57
1986-87	260.00	337.23	298.50	343.50	45.14
1987-88	280.00	402.99	341.49	408.50	49.67
1988-89	290.00	632.30	461.15	638.75	35.82
1989-90	325.00	644.44	484.72	650.50	40.56
1990-91	370.00	706.66	538.33	712.00	37.08
1991-92	450.00	675.36	562.68	682.75	43.81
1992-93	500.00	757.00	628.50	763.50	36.36
1993-94	600.00	1135.37	868.67	1141.50	31.85
1994-95	640.00	1203.00	921.50	1209.75	34.69
1995-96	670.00	891.00	780.50	897.50	30.37
1996-97	700.00	1149.00	924.50	1156.75	29.44
1997-98	740.00	1169.00	954.50	1177.50	30.11
1998-99	895.00	1195.00	1045.00	1205.00	30.24

Source: Directorate of Statistics, Uttar Pradesh





**Table 5.4: Distribution of Different Prices and Market Arrivals of Sugarcane in the State of U.P. during the Years from 1985-86 to 1998-99**

(Price in Rs./Qtl arrival in Lakh Qtls)

Years	M.S.P. (Mini. sup. Prices)	Farm Harvest Prices	Average Whole Sale Prices	Average Retail Prices	Market Arrivals
1985-86	16.50	17.00	16.75	22.00	69.19
1986-87	17.00	17.50	17.25	22.50	76.06
1987-88	18.50	12.00	18.75	27.00	80.51
1988-89	19.50	2.00	20.25	27.50	85.00
1989-90	23.00	23.00	23.00	28.00	89.85
1990-91	22.00	24.00	23.00	30.00	65.12
1991-92	26.00	26.50	26.25	31.50	85.01
1992-93	31.00	29.00	30.00	35.00	85.42
1993-94	34.50	35.00	34.50	41.50	77.37
1994-95	39.10	40.00	39.55	45.00	77.20
1995-96	42.50	43.00	42.75	48.50	85.02
1996-97	45.90	47.00	46.45	52.75	81.07
1997-98	48.45	49.00	48.72	55.50	83.07
1998-99	52.70	54.00	53.35	60.50	82.09

Source: Directorate of Statistics, Uttar Pradesh

### 5.3 Growth in Inputs and Output

Another way of looking at the effectiveness of MSP, is to check the relationship with the input, output and technology. The cost of cultivation per hectare has increased in case of sugarcane and Gram. Wheat has also been showing increasing cost of cultivation. While

the cost of production per quintal has been found increasing at a faster pace in the case of Gram and relatively slow in the case of Sugarcane. The output increase is high in the case of wheat and relatively low in the case of sugarcane. But the net income per hectare in the case of wheat has been found to be lower compared to the net income from sugarcane cultivation. In the case of Gram, net income has been more than wheat. The input-output ratio has been higher in case of Gram as compared to that for wheat and sugarcane. Even though the input-output ratios are favourable for gram, wheat and sugarcane remain the major crops in the region due to the size of gross profits.

**Table 5.5: Distribution of Inputs, Output, Net Income and Input-Output Ratios of Selected Crops during the years 1983-84 to 1998-99**

Crops/ Years	Cost of Cultivation per Ha. In Rs.	Cost of Production per Qtl. In Rs.	Value of output in Rs. Per Ha.	Net-Income in Rs. Per Ha.	Input-output Ratios
<b>1. Wheat</b>					
1983-84	3555.83	185.05	3645.00	87.17	1:1.03
1986-97	4957.34	162.83	5027.00	69.66	1:1.01
1993-94	9286.37	259.09	12544.50	3273.67	1:1.35
1995-96	12136.33	401.48	14510.00	2373.67	1:1.20
1998-99	15545.51	419.50	19455.00	390.49	1:1.25
<b>2. Gram</b>					
1983-84	2099.56	263.50	2975.00	875.44	1:1.14
1986-97	3278.80	310.94	3750.00	471.20	1:1.20
1993-94	6480.70	377.93	10974.60	4493.90	1:1.69
1995-96	7701.93	631.61	10365.00	2663.07	1:1.35
1998-99	9246.96	693.23	14400.00	5153.04	1:1.56
<b>3. Sugarcane</b>					
1983-84	6692.00	23.07	9000.00	2308.00	1:1.26
1986-97	8676.91	19.28	10802.00	2125.09	1:1.20
1993-94	19560.50	30.25	22628.00	3067.50	1:1.13
1995-96	21877.90	42.40	25800.00	3922.10	1:1.18
1998-99	32073.65	62.28	38625.00	6551.35	1:1.20

Source: Directorate of Statistics, Uttar Pradesh

Regarding the effect of MSP on inputs and output, it is clear that the increase in MSP has not impacted the output of all the three main crops except sugarcane where the market prices have increased identically with the increase in the MSP. This happened due to higher proportion of sugarcane produce is marketed either to the sugar mills or to the sale agencies of sugar mills.

#### 5.4 Impact on utilization of Inputs and Resources

The utilization of fertilizers has increased continuously in the state. In the food crop and commercial crop regions (Western Region) the utilization of fertilizers has increased from 120.92 kgs. Per hectare during 1985-86 to 129.00 kgs. Per hectares in the year 1998-99 with a sudden decrease in the years 1989-90 and 1991-92. While the region marked by slow growth crops it has increased from 25.89 kgs. Per hectare during 1985-86 to 31.50 kgs. Per hectare in the year 1998-99. Thus, in slow growth crop region, the use of fertilizers has been quite negligible and the increase has also been very slow. Among the selected districts, the use of fertilizers has been found to be highest in Muzaffarnagar. But in Banda district it has been quite negligible.

The changes in the input structure indicates that more favourable allocation of inputs goes to sugarcane compared to gram and wheat. Despite a favourable input-output ratio gram could not muster a reasonable growth rate in area as compared to wheat or sugarcane. This can be explained through price response alone. The growth in the administered prices (MSP) in the case of sugarcane and wheat has been higher than gram. Therefore, it seems that the allocation of resources is more responsive to price trends than the net profitability.

**Table 5.6: Year-wise Utilization of Fertilizers in the Selected Districts, Regions and State during 1985-86 to 1998-99.**

( In Kgs. Per Hect.)

Years	Selected Districts			Selected Regions		Total State of U.P.
	Banda	Muzaffarnagar	Budaun	Bundelkhand	Western	
1985-86	23.56	143.63	103.18	25.89	120.92	78.68
1986-87	31.63	152.87	101.18	23.38	122.53	70.31
1987-88	17.98	151.69	92.84	26.66	122.50	65.39
1988-89	26.26	139.41	101.76	32.82	124.75	84.76
1989-90	26.96	143.38	109.38	30.50	117.40	85.63
1990-91	30.78	159.22	109.08	30.80	123.10	87.95
1991-92	25.92	151.73	107.89	31.49	119.79	88.71
1992-93	22.00	171.29	112.49	31.39	120.41	84.88
1993-94	27.41	176.18	109.08	27.41	123.84	89.72
1994-95	-	171.31	103.10	29.40	129.23	96.37
1995-96	19.55	162.74	104.15	32.69	126.22	101.00
1996-97	18.97	162.29	101.88	27.67	127.30	105.97
1997-98	19.83	166.92	108.86	30.60	128.50	117.49
1998-99	18.35	190.08	106.24	31.50	129.00	118.32

Source: Directorate of Statistics, Uttar Pradesh

## **5.8 Variations in the Implementation of Price-Policy in the Selected crop**

### **Regions:**

After the declaration of MSP by CACP the State Government takes a close look at it and modify according to the ground situation. Therefore, one finds variation in the declaration of MSP by CACP and that announced by the State. The variations in the prices of sugarcane have been nominal and after 1992-93 there have been the same prices as recommended by the C.A.C.P. and announced by the State Government till the year 1998-99. The variations in the minimum support prices of wheat have been substantial till 1988-89 but thereafter it has increased. Thus, variations in the recent years have been quite high (See Table 5.7). In case of Gram the variations in the minimum support prices have been almost nil in the recent years.

**Table 5.7 : Year-Wise Variations in the Implementation of Procurement, MSP in the Selected Crop-Regions of UP**

(Prices in Rs. Per qtl Variations in Rs. Per Qtl)

Year	Commercial Crop Region (Sugarcane)			Food Grain Crop Region (Wheat)			Slow growth Crop Region (Gram)		
	Prices Recommended by C.A.C.P.	Prices Announced by Govt.	Variations	Prices Recommended by C.A.C.P.	Prices Announced by Govt.	Variations	Prices Recommended by C.A.C.P.	Prices Announced by Govt.	Variations
1985-86	16.50	16.50	00.00	162.00	162.00	00.00	245.00	250.00	+05.00
1986-87	17.00	17.00	00.00	165.00	166.00	+01.00	260.00	260.00	00.00
1987-88	19.50	18.50	-01.00	200.00	215.00	+15.00	325.00	325.00	00.00
1988-89	19.00	19.50	00.50	183.00	183.00	00.00	290.00	290.00	00.00
1989-90	22.00	23.00	01.00	200.00	215.00	+15.00	325.00	325.00	00.00
1990-91	23.00	22.00	-01.00	225.00	225.00	00.00	370.00	421.00	+51.00
1991-92	26.00	26.00	00.00	245.00	250.00	+05.00	450.00	450.00	00.00
1992-93	29.00	31.00	+02.0	305.00	330.00	+25.00	500.00	50.00	00.00
1993-94	34.50	34.50	00.00	350.00	350.00	00.00	580.00	600.00	+20.00
1994-95	39.10	39.10	00.00	360.00	360.00	00.00	640.00	640.00	00.00
1995-96	42.50	42.50	00.00	380.00	380.00	00.00	670.00	670.00	00.00
1996-97	45.90	45.90	00.00	405.00	475.00	+70.00	700.00	700.00	00.00
1997-98	48.45	48.50	00.00	455.00	510.00	+55.00	740.00	740.00	00.00
1998-99	52.70	52.70	00.00	490.00	550.00	+60.00	815.00	815.00	00.00

Source: Directorate of Statistics, Uttar Pradesh

## 5.9 Impact of MSP on Agricultural Economy :

Majority of farmers reported that production decision (based on availability of inputs) has been the main criteria for deciding the crop to be taken in all the three crop regions and MSP has nothing to do with the production and consumption decision for taking crops. In all the three crop regions the owned and operated areas on the farms have increased nominally during the last 10 years. The cropping intensity in commercial crop region has been 241.72 per cent, in food crop region it is 233 per cent and in slow growth crop region it has been estimated to 156 per cent. Thus, in all the three regions MSPs had little impact on cropping pattern and intensity.

**Table 5.8 : Price as Criterion for Decision-making Used by the Sample Farmers**

Size Groups of holdings	Major Crop-Sugar cane					Competing Crop-Wheat							
	Area	Variety	Investment	Cultivation	Marketing	Area	Variety		Investment		Cultivation	Marketing	
	Prod Dec	Prod Dec	Prod Dec	Prod Dec	Prod Dec	Prod Dec	Prod Dec	Consu Dec	Prod Dec	Consu Dec	Prod Dec	Prod Dec	Consu Dec
Muzaffara nagar	40	40	40	40	40	24	24	17	24	17	24	24	17
Budaun	40	40	40	40	40	27	27	13	27	13	27	27	13
Banda	40	40	40	40	40	37	28	12	26	14	26	26	14

Note: Per cent of household indicating the influence of prices on the component of their decision like Area allocation Choice of variety, Cultivation Practices, Marketing Channels; Prod – Production; Dec. – Decision; Consu - Consumption

Regarding adoption of improved farming practices with the support of MSP, the majority of farmers have reported that block officials had told and assisted to sell their produce to the Govt. agencies but it has not been followed or implemented in their areas. For pre-harvest practices block officials have been told to come forward to help farmers about the crop technology and input use. But for the post harvest practices no-body has been told to help or assist the farmers. For plantations, soil conservation, storage and support of MSP a few officials have come forward to assist farmers but it has no impact at all on the practices followed by the sample farmers.

In all the three selected crop regions, the increase in the employment days have been found to be quite nominal and hence it is obviously clear that there has not been any impact of MSP on the employment and wages earnings. The factors such as increased cash inputs, wages of hired labourers marketing time and other increased investments have not been considered at all in the declaration of MSPs for major crops and only due to this main reason the MSP declared have been found to be lower than the actual costs

incurred on the production of almost all the commodities. Thus, impact of MSPs has been found to be quite negative in respects of the market access and its conditions in all the crop regions.

**Table 5.9: Market Access and Conditions of Marketing of Muzaffaranagar, Budaun and Banda Districts During the Year 1998-99**

Region	Selling Place	Distance in Km.	Price Environment			Borrowing from Middlemen		
			Price Prevailed Rs/qtl	Price Received Rs/qtl	Price Expected Rs/qtl	Y	N	Rate of I
Muzaffara nagar	VA=10 Tam=17 SF=13 T 40	12.68	84.07	82.22	89.51	10	17	2% M
Budaun	VA=11 OS=8 Tam=2 1 T 40	4.20	513.14	502.02	519.06	6	34	2%M
Banda	VA=10 OS=16 Tam=14 T 40	4.50	1100	1039	1200	9	31	2%M

Note: VA= Village Arhat; TAM= Town Area Market; OS = On the Spot; I= Interest; Y = Yes; N= No; H= Highest; L= Lowest; 2% M – Rate of Interest 2 per cent per month.

**Table 5.10: Price as a Decision Criteria for Deciding Crops**

Region	Selling Place	Yes	No	Market price Rs/qtl	Last Year Price Rs/qtl
Muzaffara nagar	VA=10 Tam=17 SF=13 T 40	27	13	82.22	77.22
Budaun	VA=11 OS=8 Tam=2 1 T 40	11	29	502.02	490.0
Banda	VA=10 OS=16 Tam=14 T 40	40	-	1039	900

Note: VA= Village Arhat; TAM= Town Area Market; OS = On the Spot; I= Interest; Y = Yes; N= No; H= Highest; L= Lowest; 2% M – Rate of Interest 2 per cent per month.

In case of sugarcane in Muzaffarnagar district the total cost of cultivation per hectare has been accounted to Rs. 16,924 and the value of total production has been estimated to Rs. 45,418 per hectare on an average. The production has been comparatively higher on the small farms but the cost of cultivation has been higher on the

large farmers. The prices paid by sugar mills are decided by the MSP declared by the Govt. while in case of wheat in Budaun district the total cost of cultivation per hectare has been accounted to Rs. 11,768 and the value of total production on an average has been estimated to Rs. 16,083 per hectare. The cost of cultivation as well as production has been found to be higher on the large farms. MSPs have not affected at all in this district. In the case of Gram in Banda district the cost of cultivation per hectare has been Rs. 6,266/- and the value of total production per hectare has been estimated to Rs. 15,973 on an average. Thus, in this district the cost of cultivation has been higher on large farms but the production has been higher on medium farms.

**Table 5.11 : Farmers Indicating Factors to be Considered for Declaration of MSP**

Region	Factors to be considered in Declaration of MSP											
	Cash input		Hired Lab		New Tech		Marketing Season		Marketing Place		Other Investments	
	Y	N	Y	N	Y	N	Y	N	Y	N	Y	N
Muzaffaranagar	..	40	..	40	40	..	..	40	..	40	..	40
Budaun	21	19	8	32	40	..	..	40	31	9	..	40
Banda	40	..	..	40	40	..	..	40	..	40	..	40

Note: VA= Village Arhat; TAM= Town Area Market; OS = On the Spot; I= Interest; Y = Yes; N= No; H= Highest; L= Lowest; Number of Farmers-40

## **5.7 Main Factors Responsible for Success or Failure of MSP, Procurement Prices and Levy:**

In the sugarcane growing region a large proportion of farmers are not aware of MSP as it is operated through sugar factories. Majority of farmers have small holdings and they desire to sell their produce much before the starting of crushing by the sugar mills when there is no purchaser of their produce at that time. The MSP should always be declared well before the sowing time but it is rarely declared that way. Farmers do not know the rates declared by the factory as well as the rates announced by the Government and when they rush to the factory with their produce, they are compelled to sell at the preceding year's price as the current year's MSP is yet to be declared. The rates of MSP declared are usually lower than the farmers' expectations and mostly they get higher price in the market than the MSP declared. The number of sugar factories is not very large and these are scattered at far off places. Therefore, transportation cost is also quite

high for the small farmers. The transportation system is miserably poor in most of the sugarcane grown areas of the state.

Gram is one of the important crops grown in Uttar Pradesh and the MSP for gram is declared every year. The role of middlemen between farmers and government purchase agencies has been the first and foremost factor responsible for the failure of procurement in gram. Farmers find it difficult to reach the Government purchasing agencies due to various problems. There are instances when the procurement agencies denied to purchase their produce due to lack of gunny bags or the produce being not of FAQ or some other reasons. Incidentally, the middlemen take benefit of this situation, purchase their produce at lower rates. Finally, they sell the same produce to the Govt. agencies at MSP through unfair means. Government procurement agencies are located in the mandies or in the towns or cities where farmers have to come from distant places. Farmers felt that mandies be located nearer to their villages or some other arrangement for the sale of their produce should be made. Prices declared by the Government are considered to be lower than the costs incurred by the farmers for production. Lack of proper storage facilities has also been one of the bottlenecks causing failure of MSP to reach farmers' doorstep. Lack of processing units nearer to their villages is also one of the main factors responsible for the failure of MSP for gram.

Government purchasing centres are quite scarce in Budaun district for the purchase of wheat or any other commodity. The procurement centres are opened only for a short duration and wheat is not purchased directly from the farmers. Generally *arhatiyas* (middlemen) purchase the total produce from the farmers at lower rates and immediately they resell the same to the Govt. agencies at MSP. On one side farmers were quite unaware about the MSP or the purchasing centres opened by Govt. in the mandies or towns, whereas on the other the procurement has been increasing. It was felt that the procurement centres should be opened for a longer duration and these should have better spread across districts.

Regular and permanent agencies must be established in the potential areas for better implementation of the declared price policy. Regulation and setting up of new market in the areas where agricultural production has increased must be assured. Extension of suitable improved technology for boosting the production of crops are still

needed. Grading and storage systems for potential agricultural produce must be improved and expanded. Speedy and timely arrangement must be made by the Government for the timely transportation of agricultural produce from the surplus areas. Appropriate processing technology and orderly marketing system, which may reduce physical losses to the minimum and maintain nutritional quality of the produce, must be developed in the potential pockets. Exports of agricultural products must be promoted to stabilize the domestic prices. A sound database must be developed by the Government to formulate an effective price policy.

**Appendix Table 5.1(a) : Production Under Crops in Uttar Pradesh**

(In '000 Tonnes )

YEAR	RICE	JOWAR	RAGI	WHEAT	CEREALS (TOTAL)	PULSES (TOTAL)	FOOD GRAINS (TOTAL)	GROUND NUT	OIL SEEDS (TOTAL)
1990-91	10260.3	493.0	171.0	18600.1	38029.3	2771.9	35671.1	112.7	1342.7
1991-92	9411.4	361.7	171.0	20229.4	37705.3	2522.1	35521.7	102.3	1375.7
1992-93	9709.3	436.7	176.7	19834.3	38565.3	2526.9	36237.5	139.2	1202.2
1993-94	10210.1	422.6	181.7	20822.4	39787.1	2516.0	37198.0	119.4	1423.8
1994-95	10365.0	393.9	191.0	22560.2	41910.9	2479.2	39207.7	101.6	1378.9
1995-96	10362.5	418.0	186.2	21815.6	41359.4	2189.3	38367.5	100.0	1423.8
1996-97	11770.7	361.8	184.8	24049.6	45645.1	2625.4	42385.1	128.7	1538.8
1997-98	12165.4	338.3	185.0	22833.9	45593.7	2285.0	41589.2	127.6	1006.0
1998-99	11386.6	248.0	184.4	23465.2	..	2324.0	40417.2	83.0	1089.0
1999-00	12912.0	307.0	197.9	25976.4	..	2599.0	45238.4	94.9	1301.0
<b>G Rate</b>	3.41	1.83	1.86	1.63	4.14	2.30	2.30	4.45	4.36

**Appendix Table 5.1(b): Yield Under Crops in Uttar Pradesh**

( Kgs/Hectare )

YEAR	RICE	JOWAR	RAGI	WHEAT	CEREALS (TOTAL)	PULSES (TOTAL)	FOOD GRAINS (TOTAL)	GROUND NUT	OIL SEEDS (TOTAL)
1990-91	1830	940	1220	2170	2177	912	1740	740	794
1991-92	1740	790	1220	2340	2215	877	1790	810	777
1992-93	1770	920	1260	2230	2208	865	1780	1170	705
1993-94	1900	960	1280	2310	2287	875	1830	860	828
1994-95	1860	990	1300	2510	2380	875	1920	750	833
1995-96	1860	950	1350	2440	2362	774	1890	720	883
1996-97	2120	840	1280	2670	2613	927	2090	930	876
1997-98	2150	880	1290	2490	2557	830	2030	870	581
1998-99	1940	701	1370	2520	..	827	1950	670	697
1999-00	2180	870	1380	2760	..	965	2180	844	875
<b>G Rate</b>	3.19	3.98	1.99	1.83	4.13	4.23	2.10	4.68	4.52