



**SOCIAL AND ECONOMIC  
CHANGE MONOGRAPHS**

**7**

**MOON IN THE MIRROR:  
Farmers and Minimum Support  
Prices in Karnataka**

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**Institute for Social and Economic Change  
Bangalore  
2004**

## **SOCIAL AND ECONOMIC CHANGE MONOGRAPH SERIES**

**Number 7**

**January 2004**

**ISBN 81-7791-106-6**

**Series Editor: G. K. KARANTH**

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The Institute for Social and Economic Change  
Bangalore

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Publication of this Monograph has been made possible through the generous support of Sir Ratan Tata Deferred Endowment Fund.

*To My Guru*

*Professor M. V. Nadkarni*

*Who Taught*

*Me Initial Lessons*

*on*

*Price Policy*

*R.S.Deshpande*

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## PREFACE

*Moon in the Mirror* is a famous tale from Indian Epics that connotes providing of a facility without actually doing so. This study analyses the policy of MSP from the angle of its successful implementation in Karnataka. This study began at the initiative of Shri D K Trehan, former Economic and Statistical Adviser, Government of India. It was his vision that spearheaded and steered the proposal of the study. The proposal was discussed with Dr. Bhatia, former Member, Commission on Agricultural Costs & Prices (CACP), as well as other former members of the CACP. They gave encouraging response and we received a large number of suggestions on the proposal. In the light of the new proposal, the study took longer time than expected. However, it was the help from a large number of people that could see the study through. I am grateful to Shri M M Nampoothiry, Economic & Statistical Adviser, Ministry of Agriculture, Government of India, New Delhi, for his support. I must also mention the help received from Prof. G K Chadha, presently Vice Chancellor, Jawaharlal Nehru University, New Delhi, and former Chairman, Agricultural Costs & Prices Commission, Govt of India, New Delhi, and Prof. T Haque, Member and Chairman, Agricultural Prices Commission, Govt of India, New Delhi. The CACP conducted two significantly important workshops at New Delhi and they provided a few interesting issues for analysis. Prof. V M Rao, former member of the CACP, was always helpful in clarifying various issues and he was quite keen that I complete the study at the earliest so that it could initiate some debate. I feel I have lived up to his expectations. My grateful thanks to all of them for their significant contributions in completing this study.

At the Institute, Prof. M Govinda Rao, Former Director, Institute for Social and Economic Change, has been extremely helpful and encouraging in the work that we have undertaken in the ADRT Unit. I am grateful to Professor Gopal Kadekodi, Director, ISEC, for encouraging us to bring out this study as a monograph. This study owes a lot to him for his encouragement. Professor S.K. Ray, a renowned agricultural economist and formerly Professor at the Institute of Economic Growth, New Delhi, painstakingly reviewed the earlier draft of the study and made quite a few suggestions to improve upon it. I am immensely indebted to him for this help. The innovative title of this monograph was suggested by my friend Prof. G K Karanth, Professor and Head, Sociology Unit of the Institute. I am grateful to him for this. I am fully convinced that the title aptly describes the contents in a few words.

Among the close academic colleagues who have contributed to the study through discussions, I must make a mention of Prof. S Bisaliah, Chairman, Agricultural Prices Commission, Government of Karnataka, Dr. S C V Reddy, Additional Director, Dept of Agriculture, Government of Karnataka. They certainly helped me in various aspects of the study and therefore, rightfully deserve a word of gratitude from me. They are very close to me and therefore, I was able

to prevail on them for the information that I required and they complied very happily. My heartfelt thanks are due to them for their help. The officers of the Karnataka State Food & Civil Supply Department, the Managing Director, Karnataka Oil-seed Growers Federation, Managing Director, Karnataka State Marketing Board, Shri Hari, Deputy General Manager, Karnataka State Food & Civil Supplies Corporation, Shri Thangavelu, Asst Manager, National Agricultural Marketing Federation, Shri Nagannanagowda, Karnataka State Co-operative Marketing Federation, have all helped me in clarifying some of the ticklish issues and providing some of the data. I am grateful to them for extending this help and tolerating our nagging questions.

I am dedicating this work to my teacher and mentor Professor M V Nadkarni, who guided the course of my work through all these years. His influence has shaped my career and helped me to improve my analytical skills. I am sure that he would welcome this humble work dedicated to him.

The farmer-respondents from Mandya, Belgaum and Gulbarga districts deserve a special mention for withstanding our long schedule of questions and the arduous process of enquiry. This study entirely owes to their wholehearted support and I will be very happy if the study helps them in terms of policy formulation to augment their welfare. I sincerely thank them for their help. I am also grateful to the field workers who did the excellent job of collecting the data.

Shri T Raveendra Naika has processed the entire data of the study and provided various tables and results. He deserved the co-authorship in the study due to his untiring efforts. Shri M K Mohan Kumar typed the numerous drafts of the study with his excellent control and untiring zeal. I am grateful to him for this ungrudging help despite my awful moods. The errors of interpretation and commissions are entirely mine and I shall be responsible for them.

**R S Deshpande**

## FOREWORD

Agricultural Price Policy has assumed greater significance in the current phase of liberalisation. Historically, after the Jha Committee report of the mid-sixties, the first detailed statement of Price Policy came in the form of a booklet from the Agricultural Costs and Prices Commission in 1986. The Price Policy elaborated in this document included various instruments as well as perceived impact of these instruments on the agricultural economy. During the following years annual reports from the Agricultural Costs and Prices Commission indicated the changes that had taken place in the Price Policy scenario. But these were not put together at one place. In the present context, the open economy within the liberalisation process has opened up new challenges for undertaking new initiatives in this policy sphere. The connotation under which the Price Policy was formulated earlier as well as the parameters of the economy have now undergone substantial changes. Therefore, it became quite imperative to make necessary amends in the Price Policy. The debate about the necessary changes in the present circumstances has already begun in the country at the national level as well as state level. This has induced us to have a fresh look at the major instruments of Price Policy, viz., Minimum Support Price, Procurement and Public Distribution System. The area of Public Distribution System has been reviewed carefully by the Expert Committee on Long Term Grain Policy. However, the other two areas have remained more at the discussion level. This study is an attempt at analysing the effectiveness of Minimum Support Prices (MSP) in Karnataka as an instrument of Price Policy.

In the ADRT Unit, we had the privilege of preparing the proposal of the study and coordinate the wider study across the ten states in the country. This study on Karnataka focusses on arriving at the determinants of effectiveness of MSP and its impact on the agricultural economy of the State. The study reveals that in the case of Karnataka State, the MSP Policy has not played its intended role in the overall Price Policy. In fact, the MSP Policy has provoked intense debate on the political front than impacting the economic parameters in any positive manner. The study also suggests quite a few policy steps to improve the effectiveness of the policy tool in the State of Karnataka. Karnataka, being the pioneering State in establishing an Agricultural Prices Commission under the Chairmanship of a senior Agricultural Economist, has paved the way to incorporate quite a few policy changes in the recent past. It is expected that the other states will also follow suit. I believe that the study will be quite useful in the policy circles and in the Price Policy formulation of the State as well as the country.

*December 2003*  
*Bangalore*

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## CHAPTER I

### INTRODUCTION

#### 1.1. Introduction

The technological change of the 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 might not bring the required dynamism in the growth of agricultural sector and it needed 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 the 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 next crucial step the banking sector underwent the metamorphosis through nationalisation with a renewed thrust on priority sector lending.

The most important step followed by this was the initiative taken to evolve an agricultural price policy encouraging the envisaged growth through price incentive. In order to understand and construct a proper price policy framework, the 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. Following the Jha Committee report, a series of measures were taken and as a result the Agricultural Prices Commission came into being in January 1965. The first report was submitted in August 1965 covering the Kharif season. The preface of this report makes clear the focus of the then emerging price policy. It is stated in the preamble of the report that “The Agricultural Prices Commission was set up in January 1965 to advise the Government on price policy for agricultural commodities, with a view to evolving *abalanced 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” (GOI,1965). The focus on the overall needs of the economy was very clear and it needed to be kept in view. The Commission was headed by Prof M L Dantwala and in its final report the Commission suggested the Minimum Support Price (MSP) 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 the last four decades.

In the early years, the price policy supported the initiatives taken on the technological front providing initiative to accept the new technology. Over the years it became an accepted fact that farmers responded to price incentives more sharply now than in the past. Raj Krishna in his seminal paper, for the 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 showed the strong role of prices as incentives in agricultural sector. It has been noted by Acharya (Former Chairman of the 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 the economy and benefits to all the sections of the society” (1997). Thus, the contribution of Agricultural Price Policy towards sustaining the tempo created by the technological change of the mid-sixties has been widely acknowledged. During the last four decades, the agricultural policy connotations have changed significantly. Prices have played a much wider and more crucial role than just supporting the adoption of technology. It was during the eighties that the 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 between agriculture and non-agricultural sector (GOI 1995). The situation in the agricultural sector underwent substantial changes in the wake of liberalisation. In this context, questions are being raised about the efficacy and effectiveness of the instruments of price policy specifically the Minimum Support Prices. The Report of the High Level Committee on Long-Term Grain Policy dealt with many of the issues but more from the perspective of ‘Grain Policy’ than the ‘Price Policy’. We intend to address this issue from the perspective of Minimum Support Price Policy.

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

Agricultural Price Policy in India emerged in the context of food scarcity and price fluctuations provoked by drought of mid-sixties and war with Pakistan. The policy was 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 the quality of growth and provoked the most desired



crop-mix. This incidentally ensured allocation of resources, capital formation and inter-sectoral terms of trade, which 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 produce for adopting technology and for maximising production; (ii) to ensure the 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; and (viii) to advise on any problems relating to agricultural prices and production that may be referred to it by Government from time to time” (GOI 1965). The specific steps through which these functions were to be operationalised included: (i) announcement of MSP for major foodgrains; (ii) procurement prices for purchasing surplus from the cultivators; (iii) Public Distribution System and building proper buffer stocks for distribution; and (iv) zonal restrictions for the 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 the sixties and 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 the international market, (viii) price parity between crops input and output across sectors, and (ix) trends in the market prices. 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. The Sen Committee in its report gave a number of recommendations towards this (GOI 1980). Following this, the nomenclature as well as focus of the Agricultural Prices Commission were changed. The Commission was named as Commission on Agricultural Costs and Prices (CACP) with a completely changed terms of reference. A policy document issued in 1986 under the title, *Agricultural Price Policy: A Long Term Perspective*, officially confirmed 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 (GOI 1986:32-3):

- “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; and  
(ii) 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 the 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 the Government from time to time.”

Following the farmers' unrest during late eighties and early nineties in Punjab, Karnataka, Tamil Nadu and Maharashtra, 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 entire process of arriving at the cost of production. However, as can be seen from the data, the prices recommended by the CACP were more often modified by the 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. Such intervention occurred selectively across crops depending on the political 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.

The price parity across sectors reflected through Terms of Trade (ToT) between agriculture and non-agriculture sectors was first brought forth in Thamarajakshi's (1969) seminal paper on Terms of Trade. This was followed by the work of Dar (1968), Dantwala (1981), Kahlon & Tyagi (1980), Venkataramanan & Prahladachar (1979) and Nadkarni (1987). During the mid-seventies the debate on Terms of Trade between agriculture and non-agricultural sector had picked up as the of Terms of Trade started showing signs of turning against the agricultural sector (See, arguments of Sharad Joshi in Dhanagare (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. Once again there was the likelihood of facing the question of remunerative prices 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 the goods produced in urban sector as against the farm products gave rise to the necessity of looking afresh into this issue of price intervention.

Viewed from this angle, the effectiveness of MSP assumes a totally different context. In sum, the debate pointed out that the Terms of Trade

went against agricultural sector till the 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 the late seventies and early eighties. It is only in the recent past and specifically during the nineties that the Terms of Trade are turning in favour of the agricultural sector (GOI 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 the Terms of Trade in the recent past were slightly turning in favour of Agriculture, but needed to be watched carefully. (Thippaiah and Deshpande 1998).

The issues that emerged in the debate on price policy from independence till recently are provided by Krishnaji (1991), Rao (2001) and Tyagi (1990). A few important questions which were discussed in the context of price policy 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 due to politicisation, building of excess public distribution stocks, inefficiency in the Public Distribution System and ineffectiveness of the price policy to serve the objectives set forth by the policy statement of 1986. In addition to these, another issue that has emerged recently which 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.

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 in the wake of the changes in agricultural sector. The 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 need (Bhalla 1994; GOI 2002). Therefore, the scenario of agricultural price policy in the post 1991 years needs to be viewed carefully. The current trends due to liberalisation have induced competition separately in the factor and product markets. This can be seen 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 under a proper theme. A few states have taken initiatives to provide the farmers with updated market information through electronic media on daily basis and in some states on weekly basis. Farmers' markets have been established giving away the earlier process of marketing dominated by middlemen. The removal of the restriction on interstate movement on agricultural commodities has also contributed significantly in making the markets more vibrant. The issues that feature the discussion now are, therefore, quite different from those featured prior to nineties.

### **1.3. The Need for Revisiting MSP**

The initial emphasis of the Agricultural Prices Commission (APC) was on reducing the fluctuations in foodgrain prices in order to insulate the consumers against price increase, providing price incentives to the producers and inducing the producers to adopt new technology. As seen earlier, during the mid eighties, the emphasis of the price policy, however, transformed substantially due to subsequent changes in the agricultural economy. These changes brought forth modifications in the objectives of price policy and 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 the 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* statewise 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 has provoked many social scientists to have a fresh look at MSP as an instrument for interacting with the important parameters of the agricultural economy. 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, 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 significant

role in the form of state intervention in the agricultural product markets as well as a component of the safeguard measure. This also has a strong linkage to the factor market. In this situation, two important aspects deserve attention, viz., (i) insulating the farm producers against unwarranted fluctuations in prices, provoked by the international price variations (Nayyar 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 is to create value addition for the cultivators. Therefore, it becomes necessary to review the implementation process and effectiveness of MSP as an instrument in this background.

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 an incentive for adoption of technology. In the present context, it also applies to the process of capital formation as well. We have further ventured to document the producers' responses to this price intervention scheme at the 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 the macro-level and in the form of functional ease at the 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 has been undertaken with the focus on effectiveness of the Minimum Support Prices in its impact on various parameters of agricultural economy. These include growth parameters, distribution aspects, decision-making in the allocation of resources, environmental effects and above all as an operational instrument of the price policy. The specific objectives of the study are as follows:

#### **1.4. Objectives**

The connotations of price policy have changed significantly in the context of liberalisation. Therefore, it is necessary to look critically into the

effectiveness of the instruments of price policy in the focus of the objectives set forth by the Commission on Agricultural Costs and Prices (GoI 1986). Among the analytical issues that evince interest today are the role of these instruments in controlling the un-warranted price fluctuations, as incentive for adoption of new technology and as a guiding instrument in the changing cropping pattern. MSP as an instrument of the price policy has been successful in a few regions of the country and that has provided the required food security by strengthening the foodgrains stocks. But the policy has not been uniformly effective and needs to be reviewed in the context of regions like Karnataka. It will be interesting to look into the primary operations of MSP in the State and perceptions about it at the grass root level. But our analytical pursuit does not end at this point and we intend to go further to scout for a few instruments which could be acclimatised to the present economic scenario.

### **1.5. Process of Learning**

The macro-level analysis in the study is based on time-series data of Minimum Support Prices and other prices collected from secondary sources at the 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 data on wholesale prices and farm harvest prices at the 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 form important components of our study. 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 Karnataka representing commercial crop region, high growth food crop region, and coarse cereals-pulses dominated slow growth region. The field survey has covered the information on 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 the State. The study is confined to the major crops of the State, viz., paddy, jowar, groundnut, ragi, tur and sugarcane covered under MSP operations.

The primary data for the present study were collected from three locations (Belgaum, Mandya and Gulbarga districts) in the State:

- i. A region in the State, growing one of the major food crops as a dominant crop, characterised with moderate to high growth of agricultural sector: Represented by Belgaum District.

- ii. A region in the State, growing one major non-food crop, and having commercial crop-oriented economy, with high growth rates in the agricultural sector: Represented by Mandya District.
- iii. A region in the State, growing mainly food crops, characterised with slow growth in the sector: Represented by Gulbarga District.

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

- Awareness of the MSP and related aspects
- Area response parameters and decision-making criteria of the farmers
- Prices received during the recent past, price expectations, and the behaviour of relative prices across competing crops and non-agricultural sector.
- Recent trends in production, marketing, consumption, marketable and marketed surplus in the rural economy.
- Allocation of resources in response to product prices specifically fertilisers, irrigation charges, pesticides, management practices etc.
- 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.
- The difficulties and constraints faced by the farm households in accessing the product market as well as factor market, market inefficiencies.
- The process of implementation of the price policy and difficulties faced.
- Response of farmers to changes in the agricultural economy.

It was strongly felt that the PRA exercise should be supplemented or superimposed with the hard data collected through the sample survey. The survey required concentration on those farmers who generated at least some marketable surplus. This was required as their participation in the product market was a pre-requisite for ascertaining their views about the implementation process. We followed here a multi-stage, stratified random sampling framework. At the beginning, we identified three districts, typically representing the three typologies mentioned above, namely, Belgaum, Mandya and Gulbarga. Following a similar pattern we selected three talukas from each of the districts with similar characteristics as that of the districts. In other words, the talukas from Belgaum district represented high growth food grain sector, whereas the sample region of Mandya district was typically commercial crop dominant area. The third taluka was selected from Gulbarga



district with a domination of food crops and having slow growth. A cluster of three villages were selected for the purpose of selecting the households for primary survey. After the choice of the villages, the last stage of sampling required segregation of farmers with some marketable surplus, so that the price intervention policy become relevant for them. The lists of farming households were divided into two groups (one, having marketable surplus and the other, not having marketable surplus) based on local level information and sources. And finally, the sample was chosen from the group of households having marketable surplus.

**Table 1.1: Distribution of Sample Households**

(No. of households)

Size Class of Operational Holding	Mandya	Belgaum	Gulbarga	Total
Up to 1 ha	1	3	0	4
1 to 2 ha	3	12	1	16
2 to 4 ha	25	23	4	52
Above 4 ha	21	12	45	78
Total	50	50	50	150

The secondary data analysis covered broadly the following aspects:

- i. Time-series data on Minimum Support Prices for the State from 1990-91 till the latest year by crops.
- ii. Similar data on Farm Harvest Prices for the major crops grown in the State at the State level from 1990-91 onwards.
- iii. Wholesale Prices for major crops of the study at the State level from 1990-91 onwards.
- iv. Area under major crops grown in the state from 1990-91 onwards and the incremental area over the years to analyse the trends in reallocation of area.
- v. The marketing infrastructure and trends in such infrastructure over the years (1990-91 onwards) in order to analyse the access and availability of infrastructure.

### 1.6. The Canvass

As indicated earlier, three districts representing three different crop situations and patterns of growth were selected for the purpose of the study. Mandya district from south Karnataka was selected as a high growth commercial crop dominant economy. The district has a sizeable area under

sugarcane and it is a district known for its commercial crop economy. Belgaum district from north Karnataka was chosen for its food crop based economy with high growth potential. The market-orientation of the agricultural sector of Belgaum is also quite known. The third district chosen was Gulbarga falling in north Karnataka region. This is a typical rainfed district of Karnataka with food crop dominant cropping pattern. We have sketched below a brief profile of the districts and talukas selected for the purpose of the field study. This can serve as a background for further analysis. While selecting the talukas for the study we have discussed with the district and state level officials about the suitability of the region based on the criteria. The talukas represent the crop pattern which combines crops included under MSP with good marketable surplus and market-orientation.

### 1.6.1. High Commercial Crop Region: Mandya

Mandya is a paddy and sugarcane growing district of south Karnataka. It is often referred to as Punjab of Karnataka due to its irrigation based cropping system. The district received irrigation water way back in 1930s and thus, the cropping pattern is predominated by paddy, sugarcane and other commercial crops. There are seven talukas in the district and we have selected three talukas for the present study, namely, Mandya, Pandavapura and Srirangapatna. According to the 1991 census, the population of Mandya district was about 16 lakhs and the density of population was 331 persons per square kilometre. The number of cultivators in the district was 3.93 lakhs and the total geographical area is 5 lakh hectares. Per capita district income at current prices of this district was Rs 7,619 in the year 1998-99. The average size of holding in the district is quite low due to higher productivity, commercial crop economy and consequently, the viability threshold as a lower size of holding.

**Table 1.2a: Population Characteristics of the Three Selected Talukas of Mandya District**

Taluk	(In per cent)			
	Population		Area	SC/ST
	Rural	Urban		
Mandya	19.07	45.1	14.43	22.11
Pandavapura	10.23	7.22	10.88	8.21
Srirangapatna	9.06	11.2	6.79	10.04
% of district total to State total	4.43	1.92	2.59	2.57

Source: Census of India: Mandya District Census Handbook, 1996.

**Table 1.2b: Broad Agricultural Indicators of Mandya District**

Taluk	Source of irrigation							Area under important crops				Net sown area	Gross cropped area	Area sown more than once
	Canal			Tube Well		Others		Total	Paddy	Ragi	Jowar			
	Canal	Tank	Well	Tube	Well	Others								
Mandya *	28.13	5.96	18.24	1.39	29.26	25.35	17.32	13.85	38.76	17.22	17.61	19.28		
Pandavapura *	5.62	2.77	11.86	6.17	13.99	5.95	4.91	12.18	18.52	9.18	8.55	5.83		
Srirangapatna *	11.62	0.9	2.16	0.87	0.72	9.85	13.16	5.67	14.97	8.17	9.09	13.06		
% of district total to State total	10.49	4.41	2.07	0.68	0.50	5.05	6.28	9.03	0.21	2.51	2.57	2.93		

Note : The data pertain to 1995-96; \* - Per cent of taluka to district total.

**Table 1.2c: Agrarian Features of Mandya district**

Taluk	Marginal						Semi-medium			Medium			Large			Total	
	No.		Area		No.		Area		No.		Area		No.		Area		
	No.	Area	No.	Area	No.	Area	No.	Area	No.	Area	No.	Area	No.	Area	No.	Area	
Mandya	77.32	35.22	14.21	27.04	6.89	25.21	1.51	10.98	0.06	1.54	100.00	100.00	100.00	100.00	100.00	100.00	
Pandavapura	70.22	34.00	18.20	31.10	10.06	24.34	1.44	9.42	0.07	1.15	100.00	100.00	100.00	100.00	100.00	100.00	
Srirangapatna	69.83	32.36	17.95	29.64	10.59	26.63	1.55	10.04	0.09	1.33	100.00	100.00	100.00	100.00	100.00	100.00	
% of district total to State total	12.79	10.18	4.07	3.89	2.27	2.21	0.99	0.91	0.30	0.38	7.02	2.76					

Note : The data are based on 1990-91 figures

Source : Karnataka and Mandya at a Glance 1996-97.

### 1.6.2. High Growth Food Crop Region: Belgaum

Belgaum is the northern border district of Karnataka falling partly in the assured rainfall track and semi-arid tracks of the central plateau. The district represents a typical rainfed region as well as presence of commercial agriculture in irrigated tracts. There are 10 talukas in Belgaum districts. Out of these we have selected three talukas for the purpose of our study keeping in view the cropping pattern, level of commercialisation and crops under study. The selected talukas are Belgaum, Hukkeri and Gokak. The predominant crops in these talukas are Sorghum (Jowar), Paddy and Groundnut. This region clearly represents an agricultural economy in transition from food dominant crop economy to a commercial crop pattern. According to the 1991 census, the population of Belgaum district was about 36 lakhs and the density of population was 267 persons per square kilometre. Marginal and small farmers are predominant in the region and irrigation is available to about 25 per cent of the net sown area.

**Table 1.3a : Population Characteristics of Belgaum District**

Taluk	(In per cent)			
	Population		Area	SC/ST
	Rural	Urban		
Belgaum	19.07	45.08	14.43	22.11
Gokak	10.23	7.22	10.88	8.21
Hukkeri	9.06	11.16	6.79	10.04
% of district total to State total	8.83	6.05	6.99	5.28

Source: Census of India: Belgaum District

### 1.6.3. Slow Growth Food Crop Region: Gulbarga

Gulbarga is a rainfed district of north Karnataka with sorghum (jowar) dominated cropping system. There are 10 talukas in Gulbarga district and we have selected three talukas based on the growth pattern and domination of crops, namely, Chittapura, Jewargi and Sedam. Tur, Sorghum (Jowar) and Gram dominate the cropping pattern of these talukas. According to the 1991 census, the population of Gulbarga district was about 26 lakhs and the density of population was 159 persons per square kilometre. The number of cultivators in the district was about 3 lakhs.

**Table 1.3b: Broad Agricultural Indicators of Belgaum District**

Taluk	Source of irrigation				Area under important crops				(In Per cent)			
	Canal	Tank	Well	Tube	Others	Total	Paddy	Jowar	Maize	Net sown area	Gross cropped area	Area sown more than once
Belgaum *	0	10.45	6.25	6.21	0.55	2.78	37.28	5.06	0.42	7.29	7.49	9.08
Gokak *	31.56	0	11.65	3.76	15.34	17.27	0.38	12.86	31.75	12.73	14.33	27.02
Hukkeri *	3.77	17.48	5.79	1.28	5.29	4.66	3.60	3.96	2.84	7.42	7.35	6.83
% of district total												
to State total	8.89	3.59	15.64	10.88	27.22	12.50	4.98	10.86	23.15	8.33	8.12	6.75

Note: The data pertain to 1991-92 ; \* - Per cent of taluka to district total.

**Table 1.3c: Agrarian Features of Belgaum District**

Taluk	Marginal			Small			Semi-medium			Medium			Large			Total			
	No.	Area	No.	Area	No.	Area	No.	Area	No.	Area	No.	Area	No.	Area	No.	Area	No.	Area	
Belgaum	49.99	16.98	28.59	23.54	14.36	25.79	6.18	24.20	0.88	9.49	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	
Gokak	33.49	7.69	29.51	19.25	22.59	27.88	12.39	31.63	2.02	13.56	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	
Hukkeri	50.76	14.56	24.71	22.68	16.37	28.32	7.29	26.45	0.87	7.99	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	
% of district total to State total	6.32	35.59	33.48	33.72	40.37	34.87	29.26	29.07	25.85	26.95	35.38	33.65							

Note : The data are based on 1990-91 figures;

Source : Belgaum at a Glance 1996-97.

**Table 1.4a: Population Characteristics of Gulbarga district**

Taluk	(In per cent)			
	Population		Area	SC/ST
	Rural	Urban		
Jewargi	11.23	9.57	0.00	7.00
Chittapur	10.88	10.6	16.48	13.54
Sedam	6.32	6.59	5.46	5.78
% of district total to State total	8.45	6.34	4.40	7.73

Source: Census of India: Gulbarga District Handbook, 1996.

### 1.7. Limitations

The policy of price intervention scheme was drafted in a totally different agrarian situation than that which is prevailing today. Therefore, search for its relevance in the present context (with a theme of liberalisation) is certainly difficult. Even then the process of protecting farmers in the event of distress is an essential policy requirement. But, probably, the scale is too large and the questions are quite complex as also highly politicised to incorporate an effective analysis. Our analysis is limited to a few crops and even though these are the most important crops from the viewpoint of MSP in the State, the low-key operations of MSP do not bring out the impact significantly. The regions chosen represent three distinct agro-climatic zones of Karnataka, and with most active farm lobby, however, we do not arrogate to commit that our study has the required geographical coverage of the State.

**Table 1.4b: Broad Agricultural Indicators of Gulbarga District**

Taluk	Source of irrigation						Area under important crops				Net sown area	Gross cropped area	Area sown more than once
	Canal	Tank	Well	Tube	Others	Total	Jowar	Gram	Tur	Area			
Jewargi *	0.83	0.00	3.39	0.00	7.91	1.35	11.50	10.40	12.98	13.20	13.05	12.27	
Chittapur *	0.00	0.00	2.03	9.10	4.75	0.64	9.85	14.8	16.87	10.11	9.23	45.36	
Sedam *	0.00	15.5	5.39	2.60	6.80	1.63	6.10	8.27	12.95	6.37	6.48	7.10	
% of district to													
State total	11.56	4.11	6.94	0.56	1.19	7.05	17.98	21.79	52.96	10.76	10.60	9.63	

Note : The data pertain to 1991-92; \* - Per cent of taluka to district total.

**Table 1.4c: Agrarian Features of Gulbarga District**

Taluk	Marginal		Small		Semi-medium		Medium		Large		Total	
	No.	Area	No.	Area	No.	Area	No.	Area	No.	Area	No.	Area
Jewargi	7.74	1.33	28.58	11.82	34.32	25.96	23.34	38.47	6.02	22.42	100.00	100.00
Chittapur	13.25	2.03	28.97	12.29	30.79	24.34	20.75	35.60	6.24	25.73	100.00	100.00
Sedam	23.32	4.21	29.55	14.66	25.65	24.14	17.11	34.77	4.37	22.23	100.00	100.00
% of district to State total	2.75	3.29	8.30	8.58	10.99	11.22	12.83	13.11	16.33	15.58	7.35	11.31

Note : The data are based on 1991-92 figures.

Source : [Gulbarga at a Glance 1997-98](#).

## CHAPTER II

### EFFECTIVENESS OF PRICE POLICY AT THE STATE LEVEL

#### 2.1. Introduction

Marketing of agricultural commodities under the state stipulated regulations began in Karnataka as early as 1927. Under the Bombay Cotton Market Act, the first regulated market was established at Belgaum and subsequent establishment of markets at Hubli and Gadag followed this. The other commodities were brought under the regulations subsequently under the Bombay Agricultural Produce and Marketing Act of 1939 covering a few districts of North Karnataka. The Hyderabad Agricultural Produce Market Act provided the basis for establishing regulated markets in Hyderabad Karnataka region. In south Karnataka, around the same time, the Madras Commercial Crops Act provided the ground for establishing regulated markets. The Mysore Agricultural Produce and Marketing Act governed the regulation of markets in the princely Mysore State. Thus, the multiplicity of acts, at various points of time, governed the agricultural marketing sector in Karnataka and therefore, the prevailing regional diversity in marketing is not any surprise. The intention behind enacting the regulations of markets was to provide a perfect market environment to the farmers but that was largely confined to commercial crops. It was also in tune with the agrarian structure existing at that time, when most of the farming activity was subsistence-oriented, there was a little marketable surplus generated and the markets were meant mainly for the commercial crops.

After independence, the Department of Marketing was established in the State and all the regional agricultural market regulating Acts were merged and brought under one Act. The Act provided for the establishment of sub-markets in the jurisdiction of the main market. The revised Karnataka Agricultural Produce and Marketing (Regulation) Act was enacted in 1966 with twin objectives, viz., i. providing market amenities in the market yard to eliminate the hardship to the farmers; and ii. to eliminate the exploitation of the farmers at the hands of the middlemen. Under this Act, a list of markets covering specified commodities were notified. The act also provided that once a market was designated for a particular commodity, covering a specified area, then the commodities produced in that area should be sold only in those markets, thereby restricting the movement of commodities. The act also provided for a democratic body called Agricultural Produce Market Committee to supervise the functions of marketing with the help of the Secretary of the committee, who was to be appointed by the



State Government. At the time of the reorganisation of the State, there were 54 regulated markets in the State. Now, the State has 140 main markets and 333 sub-markets with a turnover of Rs 6,500 crores (GoK 2001a). The density of the markets works out to 3.842 markets per lakh hectares of gross sown area and one market is required to serve an area of about 26 thousand hectares. This is certainly a stupendous task and can certainly impact the efficiency in operations.

A few interesting observations about the marketing environment will not be out of place here. First, in the development of marketing regulation in India, Karnataka is no exception. It also began with the emphasis on commercial crops and other crops were included in the fold subsequently. Second, various marketing acts controlled the marketing of a few commodities and served only a restricted area. Thus, this process arrested the free movement of commodities across regions for over decades. Third, the Regulated Market Act certainly regulated the process of marketing (restricted being free), but could not eliminate the imperfections induced by the middlemen. In fact, the Act provided for licensing of this institution and making them full legal entities. Finally, the density of markets and coverage is quite inadequate to allow the other informal marketing channels to function freely (For a full discussion, see, Thippaiah and Deshpande 1998; Acharya 2001; and Deshpande and Gopalappa 2004)).

## **2.2. Price Policy at the State Level**

The Constitution of India does not provide for declaring any agricultural price policy at the state level. More than that, in a federal structure, it is not prudent to have such segregation in the interest of the economy. At the national level, we have a price policy statement issued in 1986 but, by and large, the price policy of the country is reflected through the annual reports of the Commission on Agricultural Costs and Prices. In the context of a State, we need to analytically view various enactments connected with marketing and the declaration of the Minimum Support Prices by the CACP, as building blocks for the price policy at the State level. Through this process, the views about price policy at the State level can be consolidated.

As a part of the drill, the CACP discusses the price situation of various commodities with the representatives of the State government, and it can broadly be said that the views held by various stakeholders at the State level get reflected in the prices declared by the CACP, as there are no prominent disagreements thus far. In some of the commercial crops, like sugarcane and cotton, the stakeholders at the State level are seen to be

proactive in their suggestions about the price policy, as they have some degrees of freedom here. But these interventions have created more problems than solutions. It is only recently that some of the State governments established Agricultural Prices Commissions with a view to monitoring the price situation and providing support prices for the commodities not included in the list of CACP. The Agricultural Prices Commission has been established in Karnataka with a preamble focussing on the declaration of MSP for certain commodities. The preamble states: *“It has been felt the need for the constitution of an independent, professional and technically qualified State Agricultural Price Commission. The Commission will recommend standard prices that can be sustained in the market and the support prices at which the State Government may intervene in the market”* (GoK 2001b, see Annexure 2.1). However, while drawing the terms of reference for the Agricultural Prices Commission, the State Government thought it essential to include: recommending necessary measures for making an effective price policy, identifying and recommending measures for increasing export of agricultural commodities and examining the functioning of markets in the State. The terms of reference given to the Agricultural Prices Commission are as follows (GoK 2001b):

- “(a) to advise the State Government on the price policy of all agricultural commodities, which fall within the purview of the national Commission for Agricultural Costs and Prices, enabling the State Government to present its views on the fixation of the Minimum Support Prices for all the crops which are grown in the State;*
- (b) to recommend Minimum Support Prices for crops, which do not fall within the purview of the national Commission for Agricultural Costs and Prices, i.e., initially potato, onion, chillies, coconut and tomato and other crops that may be referred to it by the State Government from time to time;*
- (c) to recommend standard prices for all agricultural commodities that can be sustained in the market in the State;*
- (d) to recommend measures necessary to make the Price Policy effective, with special reference to augmentation of the institutional capability to undertake Minimum Support Price procurement operations like adequate number of procurement points, availability of quality inspectors, availability of sufficient storage space, releases of the procured foodgrains in the market, etc;*

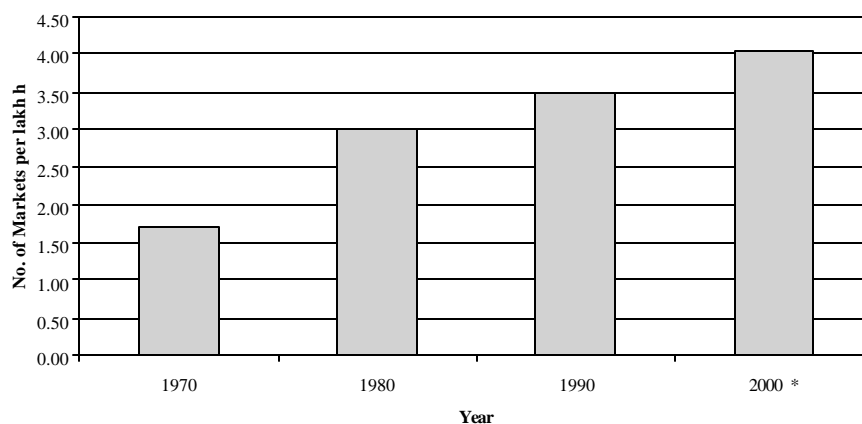
- (e) to recommend measures for the export of agricultural produce from the State;*
- (f) to examine, where necessary, the prevailing methods and cost of marketing of agricultural commodities in the State and suggest measures to reduce marketing costs and recommend fair margins for different stages of marketing; and*
- (g) to keep under review the prevailing price situation and to make appropriate recommendations within the framework of the Price Policy and advise the State Government on all issues relating to agricultural production and prices.”*

In a federal structure of the country separate policy initiatives by the State are not conducive in the context of liberalisation. In view of the current economic trends, it is desirable to allow a free and fair movement of commodities across the country as well as monitor the price trends to protect the welfare of the producers. That will enhance the maturity process of the domestic market. In the current phase of economic development, the domestic market reforms should take priority over the other components of reform. In the background of the fact that the agricultural markets are not properly integrated, the price differentials exist even between two markets separated by a few hundred kms. The Agricultural Prices Commission at the State level takes the responsibility of a monitoring body. It has submitted a few reports on the state level market intervention schemes. It is also in the process of revisiting the methodology of cost of cultivation and plans to hold a discussion session on this aspect.

One of the major lacunae in the implementation of an effective price policy at the state level is the non-availability of proper infrastructure. It has been clearly brought out in the studies conducted earlier that the infrastructure and the processes of marketing of agricultural commodities in Karnataka have severe problems (Deshpande, Dogra and Gajarajan 1993; Deshpande and Raju 2001) The density and coverage of market has not changed much during the last two decades (see Fig. 2.1). The density of markets was about 3 markets per lakh hectares of Gross Cropped Area (GCA) (including sub-markets) and has gone up to 4 markets per lakh hectares of GCA. This certainly poses a severe bottleneck both in terms of its spread, access and effectiveness. Clustering of sellers and commodities severely inhibits the natural functioning of market process. As stated earlier, some of the markets specialise in terms of commodities transacted and such specialisation also inflicts an inherent neglect on other commodities.

We have taken seven crops for the purpose of our analysis here, namely: paddy, ragi, jowar, tur, groundnut, sunflower, and cotton. The major markets assigned to these commodities are indicated in Table 2.1 and these markets deal with the major share of the marketed surplus of these crops in the State. It comes out clearly from the Table that there are markets which deal with more than one commodity and that they cause pressure on the infrastructure (Table 2.1 – see also Annexure 2.2). More than that the geographical spread is also not very conducive for an efficient development of markets. In the final analysis, it becomes very clear that the infrastructure is inadequate and clogs the market places, thereby hindering free market activities.

**Figure 2.1: Trends in the Density of Markets**



**Table 2.1: Major Markets by Commodities**

Crops	Major Regulated Markets						
<b>Paddy</b>	Davanagere	Bhadravathi	T. Narasipura	Hospet	Gangavathi	Sindhanur	
<b>Ragi</b>	Bangalore	Davanagere	Tumkur	Kadur	Hassan	Arasikere	Harapanahalli
<b>Jowar</b>	Gadag	Haveri	Bellary	Bidar	Basava	kalyana	Gulbarga Raichur
<b>Tur</b>	Sedam	Bidar	Gulbarga	Chittapur	Raichur	Basava	kalyana Balki
<b>Groundnut</b>	Davanagere	Challakere	Bijapur	Kottur	Raichur	Tumkur	Bagalkote
<b>Sunflower</b>	Chitradurga	Raichur	Bagalkot	Talikot	Bellary	Gulbarga	
<b>Cotton</b>	Chitradurga	Davanagere	Shimoga	Dharwad	Bijapur	Haveri	Raichur

Source : Karnataka State Marketing Department, Government of Karnataka, Bangalore

### 2.3. Analysis of Agricultural Price Trends

Time-series on agricultural prices in Karnataka are available from three sources. These include Farm Harvest Prices (a long-term time-series) collected from the selected villages and averaged over the districts; Wholesale Prices collected from the regulated market yards for specific commodities and published by the Directorate of Statistics. These two price series are usually taken for the purpose of analysis. The third source for the data on prices comes from the retailers which is not regularly published. When we look at the trends in agricultural prices, our intention is to compare Minimum Support Prices with other price trends so as to understand the impact of MSP on these prices.

For the purpose of analysing trends in MSP, we have taken paddy, jowar, wheat, maize and ragi among cereals; tur and gram among pulses, and sunflower, cotton and groundnut among cash crops. These eight crops together cover more than 60 per cent of the cropped area of the state. The trends in Minimum Support Prices of the major crops have been presented in Figure 2.2 and the growth rates have been presented in Table 2.2. It can be seen from the trends that tur, groundnut, sugarcane and cotton show relatively higher rates of growth in MSP. Interestingly, among these trends we find a distinct upward thrust in 1996-97 and 1997-98 as revealed in Figure 2.2. The relative changes across the crops also give an interesting picture. The figure roughly indicates increasing trends across crops but the rates of such changes are different across crops. A closer look shows that a few crops and especially coarse cereals have lower MSP increments over the years compared to wheat and paddy. This speaks of a clear and deliberate policy bias against these crops. In order to look at this more clearly we have taken the relative prices with respect to wheat and paddy as these two crops have larger coverage under MSP. In this comparison, pulses and oil-seeds also seem to have been suffering from policy neglect.

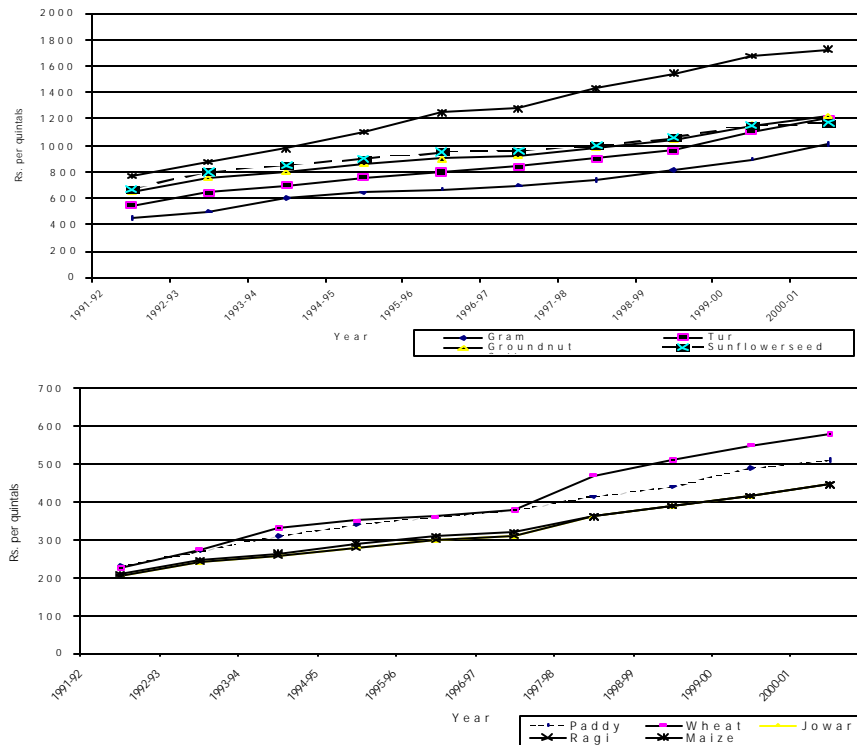
The trends in relative MSP (as a ratio to wheat and paddy) clearly indicate a downward trend till 1996-97 or 1997-98 (see Figure 2.3). Beyond this point the relative prices have stayed more or less at the same position. Given the fact that input prices across crops remained the same, the relative prices should have stayed at the same level or around that in this period. The declining trends clearly indicate that MSP as a policy tool favoured wheat and paddy against pulses, coarse cereals and oil-seeds. The downward trends and the ratios clearly indicate a deliberate bias against jowar, ragi, maize and groundnut compared to wheat and paddy. This observation comes out clearly from Tables 2.3 (a, b & c).

**Table 2.2: Growth Rates in MSP of Major Crops**

Sl. No.	Crops	Growth rates in MSP 1980-81 to 2001-2002
1	Paddy (F)	10.17
2	Wheat	10.83
3	Jowar	10.53
4	Ragi	10.18
5	Maize	10.19
6	Gram	10.49
7	Tur (Arhar)	11.55
8	Groundnut	11.42
9	Sugarcane* (SMP)	11.50
10	Sunflower seed	10.33
11	Cotton	11.22

Note: \*In the case of Sugarcane it is the Statutory Minimum Prices (SMP)

**Figure 2.2: MSP of Different Crops in Karnataka**



A comparison between MSP and the market prices clarifies this point further. Such comparison helps us not only in analysing the relative behaviour of MSP but also its influence on price trends in the market. As a policy too, Minimum Support Prices are expected to be below the Wholesale Prices. But this does not seem to hold in the field. In the case of sunflower, groundnut, and jowar the Wholesale Prices have either coincided or went below the level of Minimum Support Prices (see Figure 2.4). The relationship between Minimum Support Prices and Farm Harvest Prices is shown in Figure 2.5 for a few commodities. Here also, we can see that the trends in Minimum Support Prices are a little different from the Farm Harvest Prices. An interesting point crops up from this figure, that is, the distance between market determined prices and the Minimum Support Prices has been very little and therefore, probably the MSP is playing a role of base prices with which the market prices get closely identified. One tends to wonder if the MSP is providing a base level for fixing the market prices and whether the market prices are sticking more to MSP than responding to the market induced upper fluctuations? In other words, are the fluctuations upwards get minimised under the influence of Minimum Support Prices? If it is so, then, this is certainly not welfare augmenting for the producers.

**Table 2.3a: Minimum Support Prices of Crops Relative to Wheat: Karnataka**

Year	(Ratio)								
	Paddy	Jowar	Ragi	Maize	Gram	Tur (Arhar)	Groundnut	Sunflower Seed	Cotton
1991-92	1.07	0.91	0.91	0.93	2.00	2.42	2.87	2.98	3.41
1992-93	1.02	0.87	0.87	0.89	1.82	2.33	2.73	2.91	3.18
1993-94	1.00	0.79	0.79	0.80	1.82	2.12	2.42	2.58	2.95
1994-95	1.03	0.80	0.80	0.83	1.83	2.17	2.46	2.57	3.14
1995-96	1.04	0.83	0.83	0.86	1.86	2.22	2.50	2.64	3.47
1996-97	1.04	0.82	0.82	0.84	1.84	2.21	2.42	2.53	3.37
1997-98	0.95	0.77	0.77	0.77	1.57	1.91	2.09	2.13	3.04
1998-99	0.92	0.76	0.76	0.76	1.60	1.88	2.04	2.08	3.03
1999-2000	0.95	0.75	0.75	0.75	1.63	2.01	2.10	2.10	3.05
2000-01	0.93	0.77	0.77	0.77	1.75	2.07	2.10	2.02	2.97

Source: Based on the CACP data

**Table 2.3b: Minimum Support Prices of Crops Relative to Paddy: Karnataka**

(Ratio)

Year	Wheat	Jowar	Ragi	Maize	Gram	Tur (Arhar)	Groundnut	Sunflower Seed	Cotton
1991-92	0.94	0.85	0.85	0.88	1.88	2.27	2.69	2.79	3.20
1992-93	0.98	0.86	0.86	0.88	1.79	2.29	2.68	2.86	3.13
1993-94	1.00	0.79	0.79	0.80	1.82	2.12	2.42	2.58	2.95
1994-95	0.97	0.78	0.78	0.81	1.78	2.11	2.39	2.50	3.06
1995-96	0.96	0.80	0.80	0.83	1.79	2.13	2.40	2.53	3.33
1996-97	0.96	0.78	0.78	0.81	1.77	2.13	2.33	2.43	3.24
1997-98	1.06	0.81	0.81	0.81	1.66	2.02	2.20	2.25	3.21
1998-99	1.09	0.83	0.83	0.83	1.73	2.04	2.21	2.26	3.29
1999-2000	1.06	0.80	0.80	0.80	1.72	2.13	2.22	2.22	3.22
2000-01	1.07	0.82	0.82	0.82	1.88	2.22	2.26	2.17	3.19

Source: As in 2.3a

**Table 2.3c: Relative Farm Harvest Prices of Crops Relative to MSP: Karnataka**

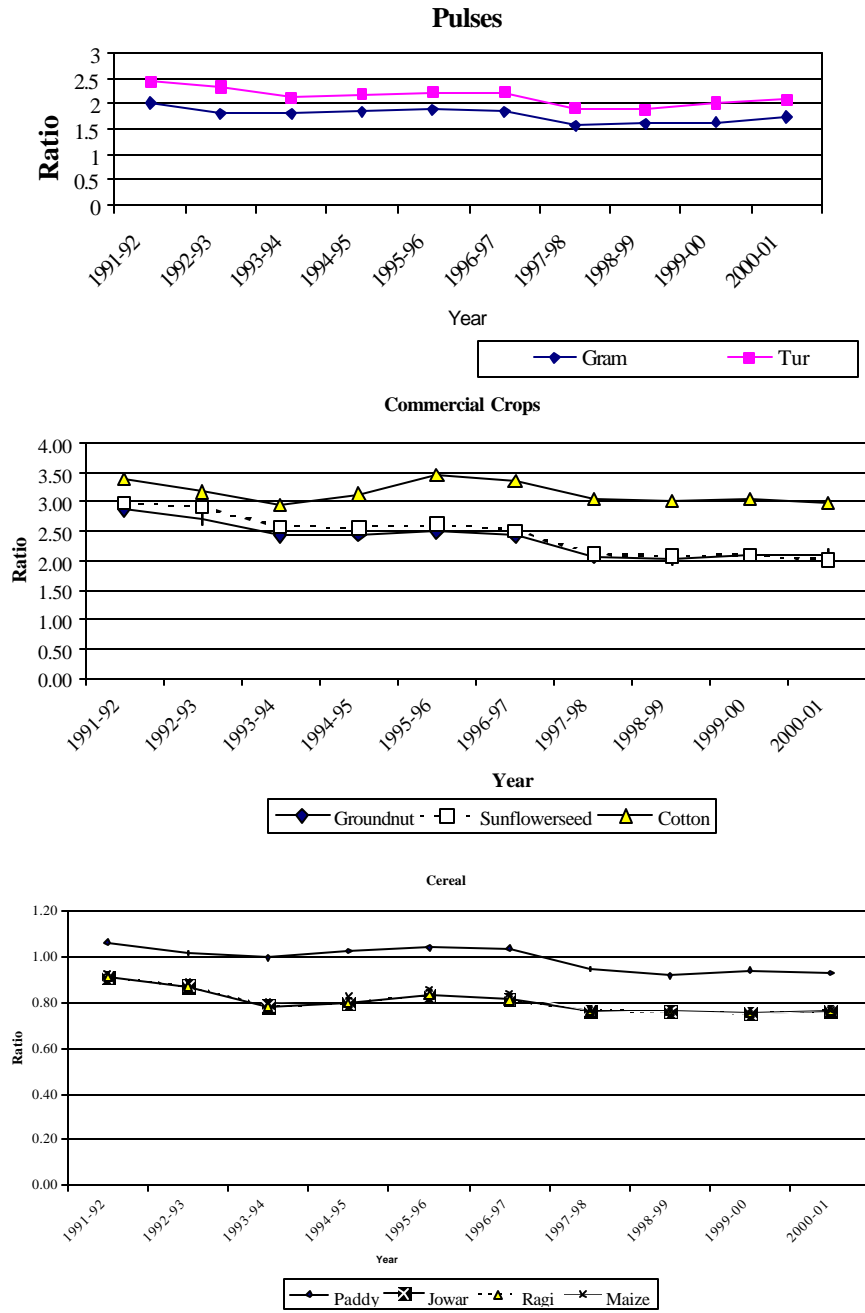
(Ratio)

Year	Paddy	Ragi	Jowar	Tur	Groundnut
1991-92	1.26	1.15	1.55	1.32	1.11
1992-93	1.18	1.20	1.19	1.32	0.88
1993-94	1.03	1.00	1.10	1.43	1.06
1994-95	1.15	1.06	1.31	1.70	1.69
1995-96	1.22	1.31	1.81	1.81	1.57
1996-97	1.25	1.22	1.44	1.86	1.27
1997-98	1.05	0.97	1.11	1.70	1.16
1998-99	1.11	0.98	1.35	1.96	1.21
1999-2000	1.11	1.07	1.34	1.46	1.03
2000-01	0.94	0.86	0.96	1.18	0.96

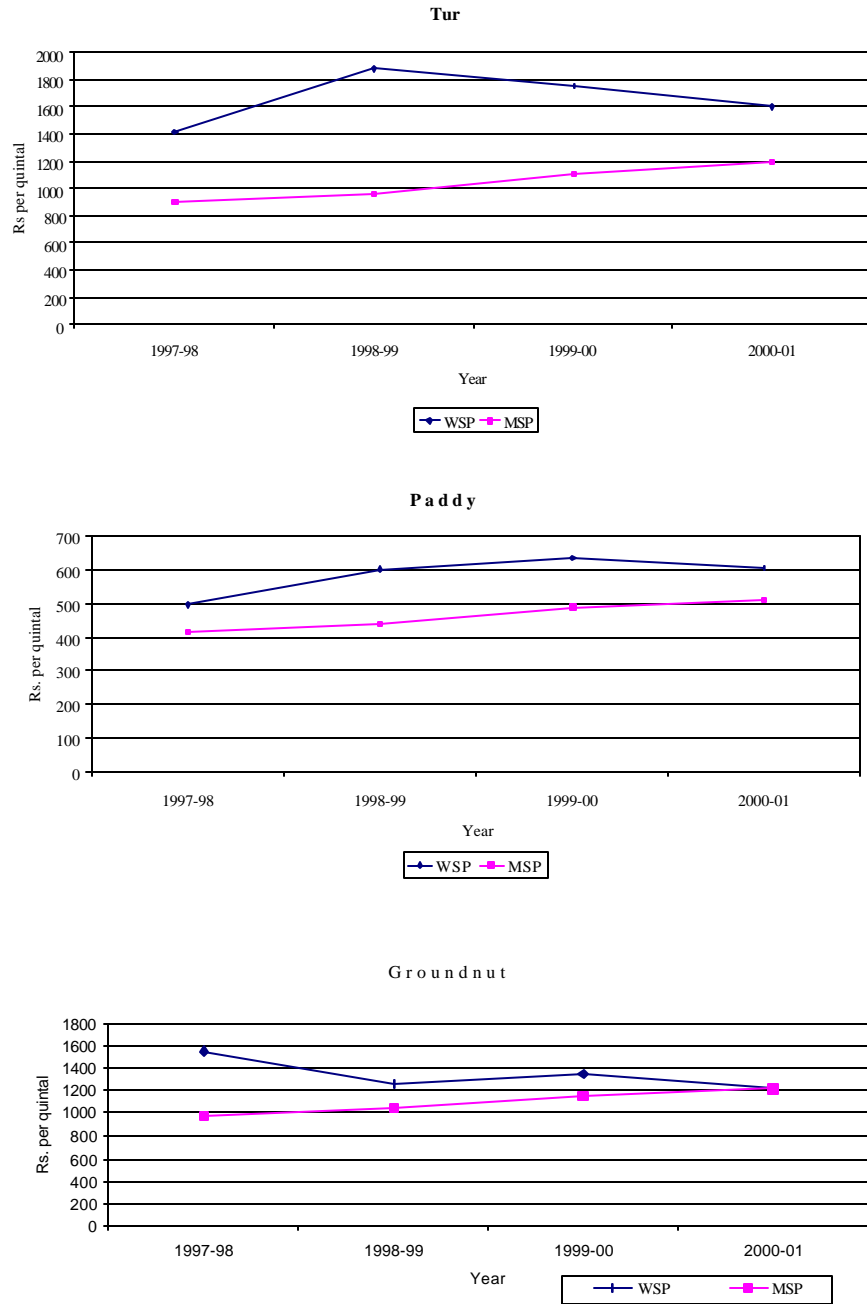
Source: As in 2.3a



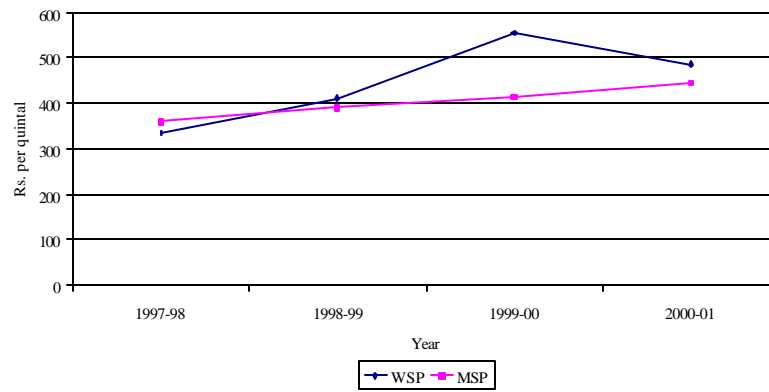
**Figure 2.3: Minimum Support Prices of Crops Relative to Wheat**



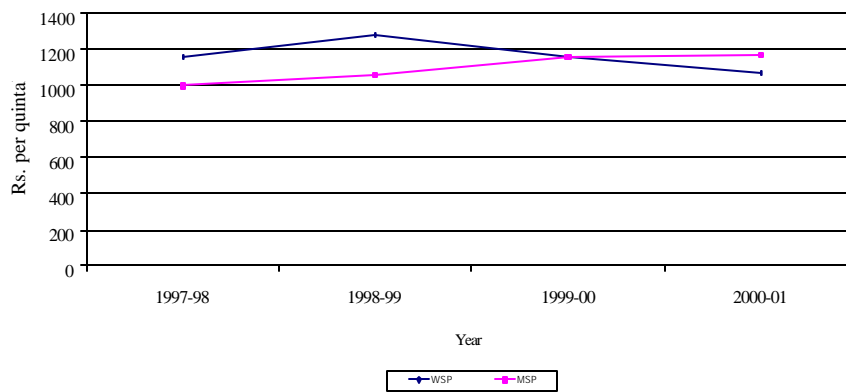
**Figure 2.4: Recent Trends in WSP and MSP: Karnataka**



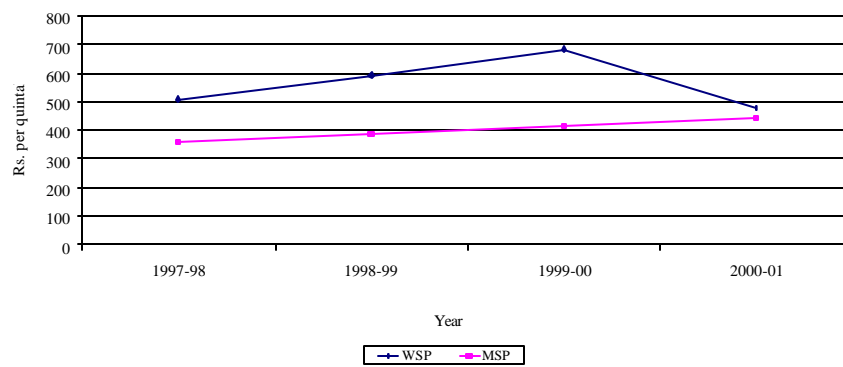
**Ragi**



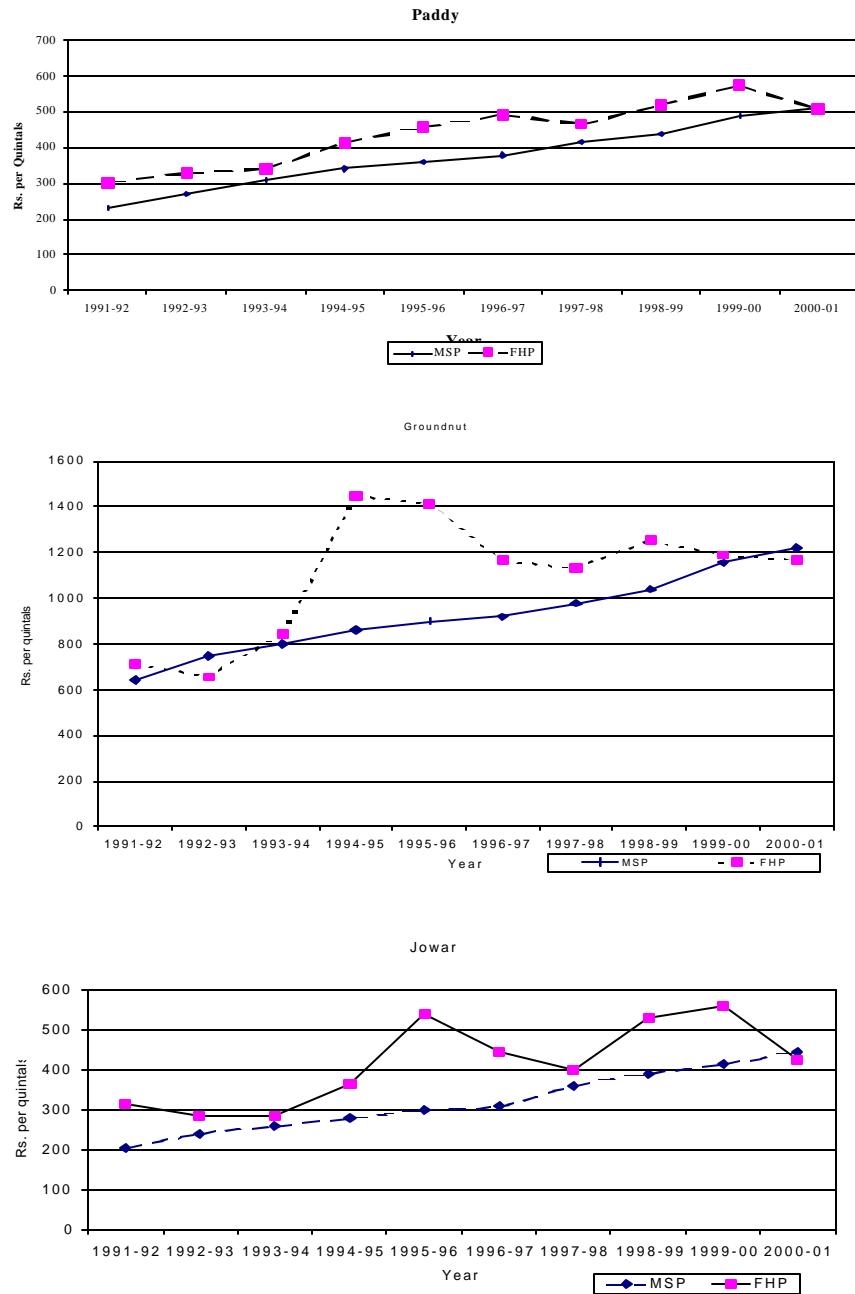
**Sunflower**

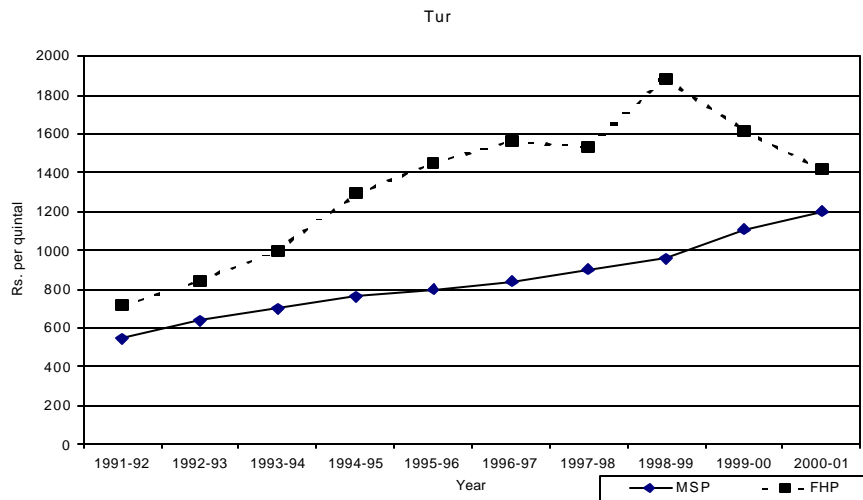
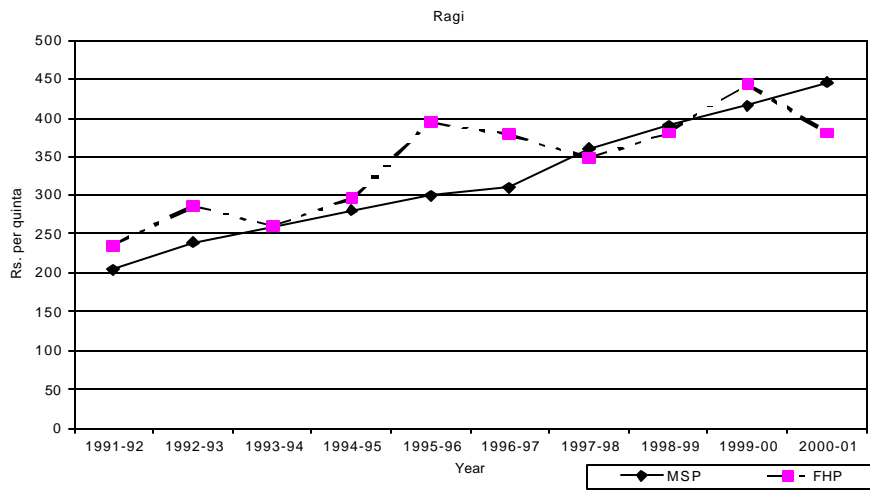


**Jowar**



**Figure 2.5: Relationship Between MSP and FHP**





We have compared the prices of major crops in Karnataka prevailing in different markets in order to understand the market integration and prove a point that different prices exist at the same time across markets separated by a few hundred kilometres (Table 2.4). This comparison provides us a support to the hypothesis that the prices fluctuate violently even across markets during the same month indicating lack of price integration across markets. In other words, while in one market the prices may touch all time lowest and within a distance of a few hundred kms and in the same month,

the prices are three to four times higher in other markets. This clearly shows that market integration is one of the major problems faced by the farmers in agricultural markets. There are several instances when the difference is twice or more than that and the distance between the two markets is less than 150 kms. Such lack of price integration is more prominent in groundnut, cotton and sunflower (see Table 2.4).

**Table 2.4: Minimum and Maximum Prices for Major Crops in Karnataka**

<b>Jowar</b>			<b>(Rs. per quintal)</b>		
<b>1997-98</b>			<b>Minimum</b>		
<b>Market</b>	<b>Month</b>	<b>Price</b>	<b>Market</b>	<b>Month</b>	<b>Price</b>
Dharwad	August	500	Bidar	August	250
Gulbarga	January	810	Dharwad	January	90
Gadag	September	627	Raichur	September	308
<b>1998-99</b>					
Davanagere	July	950	Bidar	July	250
Hosadurga	October	500	Basavakalyan	October	200
Sirguppa	March	700	Ranebennur	March	300
<b>1999-00</b>					
Bellary	April	612	Basavakalyan	April	261
Kottur	June	650	Bellary	June	300
Sindhanur	March	620	Haveri	March	370
Basavakalyan	May	826	Gangavathi	May	300
Ranebennur	October	700	Somvarpet	October	420
Bagalkot	September	778	Sindhanur	September	360
<b>2000-01</b>					
Bagalkot	September	778	Basavakalyan	September	250
Bellary	June	662	Jamakandi	June	180
Gulbarga	April	900	Bangalore	April	600
<b>Tur</b>					
<b>1997-98</b>			<b>Minimum</b>		
<b>Market</b>	<b>Month</b>	<b>Price</b>	<b>Market</b>	<b>Month</b>	<b>Price</b>
Gulbarga	October	1,935	Bidar	October	900
<b>1999-00</b>					
Basavakalyan	April	2,200	Raichur	April	988
<b>2000-01</b>					
Bellary	December	1,850	Chittapur	December	900

**Groundnut**

<b>1997-98</b>			<b>Minimum</b>		
<b>Market</b>	<b>Month</b>	<b>Price</b>	<b>Market</b>	<b>Month</b>	<b>Price</b>
Davanagere	April	1,459	Yalburga	April	850
Hubli	December	1,651	Koppal	December	900
Bagalkot	July	1,421	Turuvekere	July	880
Chitradurga	May	1,621	Chitradurga	May	501
Savanur	October	1,321	Dharwad	October	401
<b>1998-99</b>					
Soundatti	April	1,509	Soundatti	April	715
Yalburga	August	1,830	Mysore	August	960
Raichur	February	1,989	Yadagiri	February	803
Ramadurga	June	1,650	Kollegal	June	900
Chitradurga	November	2,009	Bellary	November	621
Koppal	October	2,026	Hubli	October	501
Laxmeswar	September	1,751	Dharwad	September	739
<b>1999-00</b>					
Tumkur	April	1,500	Hubli	April	501
Koppal	August	1,535	Mysore	August	700
Kottur	December	1,702	Sira	December	1,000
Yadgiri	February	1,492	Rona	February	436
Mysore	January	1,300	Mahalingapura	January	600
Sira	July	1,600	Bagalkot	July	501
Mahalingapura	June	1,300	Ramdurga	June	750
Rona	March	1,443	Hiriyur	March	780
Hubli	November	2,020	Yadgiri	November	560
Shorapur	October	1,552	Shorapur	October	521
Mundargi	September	1,553	Challakere	September	701
<b>2000-2001</b>					
Kollegal	December	1,300	Hubli	December	479
Madhugiri	January	1,300	Davanagere	January	575
Bijapur	June	1,800	Bijapur	June	300
Chikkaballapur	November	1,400	Gundlupet	November	450
Bellary	October	1,545	Bangalore	October	400
Dharwad	September	1,219	Gadag	September	519

**Sunflower**

<b>1997-98</b>			<b>Minimum</b>		
<b>Market</b>	<b>Month</b>	<b>Price</b>	<b>Market</b>	<b>Month</b>	<b>Price</b>
Chitradurga	December	1,472	Rona	December	601
Challakere	April	1,300	Bijapur	April	1,000

**1998-99**

Davanagere	June	2672	Kadur	June	900
Mundargi	October	1,972	Mundargi	October	800
Raichur	November	1,828	Bagalkot	November	621

**1999-00**

Chitradurga	July	1,629	Raichur	July	603
Raichur	April	1,395	Bellary	April	698

**2000-2001**

Arasikere	October	1,200	Raichur	October	620
Challakere	April	1,300	Talikot	April	900
Gadag	November	1,311	Chitradurga	November	600
Mundargi	December	1,269	Arasikere	December	800

**Cotton**

1997-98			1998-99		
Maximum			Minimum		
Market	Month	Price	Market	Month	Price
Bijapur	September	2,300	Davanagere	September	507
Chitradurga	March	3,150	Bailahongal	March	1,001
Davanagere	December	3,038	Raichur	December	300
Gokak	October	2,340	Shimoga	October	1,036
Jamakandi	August	2,270	Haveri	August	1,462
Shimoga	January	3,333	Jamakhandi	January	1,500
<b>1998-99</b>			<b>1998-99</b>		
Chitradurga	July	3,269	Haveri	July	655
Haveri	December	5,258	Bailahongal	December	710
Nanjanagud	August	2,000	Annigeri	August	1,200
Ranebennur	September	3,020	Naragund	September	1,400
Shimoga	January	2,850	Haliyala	January	1,409
Soundatti	November	2,640	Kottur	November	689
<b>1999-2000</b>			<b>1999-2000</b>		
Bagalkot	August	1,875	Bagalkot	August	1,651
Bellary	October	2,230	Gundlupet	October	1,550
Bijapur	September	2,750	Hubli	February	707
Shimoga	January	3,030	Yellapur	January	2,409
Raichur	May	2,559	Arasikere	December	1,680
Ranebennur	February	3,069	Raichur	February	1,262
Sindhanur	April	1,990	Chitradurga	April	950
Yellapur	December	3,289	Laxmeswar	December	950
<b>2000-01</b>			<b>2000-01</b>		
Bailahongal	December	4,069	Nanjangudu	December	1,450
Chitradurga	January	3,781	Laxmeswar	January	1,009
Jamakandi	June	2,375	Haveri	June	701
Nanjangudu	October	2,575	Bagalkot	October	1,001



Yellapur	November	4,029	Gokak	November	1,069
<b>Paddy</b>					
<b>1997-98</b>		<b>Maximum</b>		<b>Minimum</b>	
<b>Market</b>	<b>Month</b>	<b>Price</b>	<b>Market</b>	<b>Month</b>	<b>Price</b>
Davanagere	September	800	Davanagere	September	400
Hospet	July	970	Shimoga	July	400
Koppal	April	733	Sagar	April	490
Sindhanur	October	840	Hospet	October	470
T.Narasipur	May	600	Sindhanur	May	300
<b>1998-99</b>					
Bellary	October	910	Nanjangud	October	400
Gagavathi	September	934	Saklespura	September	350
Hangal	November	650	Sindhanur	November	400
Manvi	June	480	Honnali	June	400
Raichur	December	834	Bellary	December	300
Sindhanur	February	1,300	Gonikoppal	February	350
Sirguppa	March	1,050	Koppal	March	291
<b>1999-00</b>					
Bellary	September	770	Shikaripur	September	450
Davanagere	June	900	Gonikoppal	June	450
Gagavathi	May	1,073	Tarikere	May	475
Gonikoppal	April	650	Tumkur	April	420
Maddur	December	710	Gagavathi	December	573
Mandya	February	1,100	Davanagere	February	525
Nanjangud	January	720	Challakere	January	480
Sagar	July	760	Koppal	July	373
Sindhanur	November	1,065	Mandya	November	450
Sirguppa	October	1,050	Saklespura	October	425
<b>2000-01</b>					
Bhadravathi	October	710	Challakere	October	410
Davanagere	August	705	Sindhanur	August	500
Manvi	June	953	Raichur	June	400
Raichur	November	854	Honnali	November	400
Sindhanur	April	957	Koppal	April	400
<b>Ragi</b>					
<b>1997-98</b>		<b>Maximum</b>		<b>Minimum</b>	
<b>Market</b>	<b>Month</b>	<b>Price</b>	<b>Market</b>	<b>Month</b>	<b>Price</b>
Arasikere	April	370	Bangalore	April	370
Bangalore	May	540	Hassan	May	280

**1998-99**

Davanagere	July	480	Chintamani	July	250
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**2000-01**

Bangalore	May	740	Nagamangala	May	300
Hosadurga	December	450	Channagiri	December	250

Source: Basic data from the Directorate of Economics and Statistics, Govt. of Karnataka, Bangalore.

The very emergence of MSP was to protect the consumers as well as the farmers, when the market prices (represented by Farm Harvest Prices or Wholesale Prices) fell below the base provided by MSP. In Table 2.5 we have compared the Farm Harvest Prices, the Wholesale Prices and the Minimum Support Prices during the nineties. Interestingly, there are quite a few instances where the MSP is greater than the average Farm Harvest Prices. Similarly, there are equal number of instances wherein the Minimum Support Price is greater than the Wholesale Price of the commodity. This indicates the failure of the price intervention mechanism operated through MSP during these years and thus, probably failed to protect the farmers with the policy instrument.

**Table 2.5: Comparison of FHP, WSP and MSP Over the Years  
1997-98 to 2000-01**

Commodities	MSP>FHP	MSP>WSP	FHP>WSP
Paddy	2000-01	-	-
Groundnut	2000-01	2000-01	-
Jowar	-	-	1998-99, 1999-2000, 2000-01
Sunflower	1999-2000	2000-01	2000-01
Ragi	1997-98, 1998-99, 2000-01	1999-2000	1997-98
Tur	-	1997-98	1997-98, 1998-99
Cotton	-	-	2000-01

Note: 1. Based on average FHP and MSP at the state level  
2. FHP – Farm Harvest Price, WSP – Wholesale Price

Source: Directorate of Economics & Statistics, Bangalore.

The correlation between Farm Harvest Prices and Minimum Support Prices indicates the effectiveness of Minimum Support Prices to be associated with market prices. It serves as an indicator of MSP leading the trends in the market prices of the commodities. We find that the correlation between Farm Harvest Prices (FHP) and the Minimum Support Prices is highest in the case of paddy, whereas the correlations are lower in the case

of other cereals and pulses. The weak relationship of MSP with FHP in some commodities raises a question about the role of MSP as an incentive price in the case of these crops. Unfortunately, these are the crops grown by the resource poor farmers and largely dominate in the crop pattern of a resource poor region. Then the uneasy question crops up if MSP is only serving as a tool to protect resourceful farmers and commercial crops alone?

**Table 2.6: Correlation Between FHP and MSP**

Crops	Lagged MSP and FHP (1991-1999)
<b>Paddy</b>	0.90
<b>Jowar</b>	0.68
<b>Ragi</b>	0.78
<b>Tur</b>	0.71
<b>Groundnut</b>	0.48

Note: All correlations are statistically significant at 5 per cent level.

#### 2.4. MSP as an Incentive Price

The price policy adopted during the sixties provided the instrument of Minimum Support Prices not only as a guard against the lower side fluctuations in prices but also as an incentive to grow a particular crop and manoeuvre the cropping pattern. This is achieved by ensuring a steady increase in the MSP price level over the years. It was designed to provide assurance to the farmers about the expected prices during the next season. In other words, MSP as an instrument of price policy provided a rational basis for price expectations to the farmers. We worked out a simple time-series one variable regression equation to find out the area response to lagged Minimum Support Prices. The underlying hypothesis is that the MSP prevailing in a previous year, influences the area allocation decision during the current year under the crop concerned. Since this is a time-series context it is necessary to eliminate the trend effect by introducing 't' for time variable. The specification of the equation is as follows:

$$Y_t = a + b_1 \text{MSP}_{t-1} + b_2 t + e$$

Where  $Y_t$  = Area at time t (In an alternative formulation we have taken wholesale prices and farm harvest prices as dependent variables in place of  $Y_t$ )

- $MSP_{t-1}$  = Lagged minimum support price at t-1 year  
 $t_t$  = Proxy for time trend (1990-2000)  
 $e$  = Stochastic error term  
 $a$  = Constant  
 $b_1$  &  $b_2$  = Regression coefficients

**Table 2.7a: Regression Results with Area as Dependent Variable: 1990-2000**

Crop	Constant	$MSP_{t-1}$	Time	Adjusted R Square
Paddy	1,576.4* (5.21)	-1.59 (0.99)	61.48 (1.19)	0.22
Jowar	2,042.84* (3.62)	1.365 (0.38)	-79.88 (0.89)	0.62
Ragi	1,200.15* (3.28)	-0.789 (0.34)	3.101 (0.054)	0.25
Tur	1,591.38* (4.17)	-2.65* (3.11)	157.97* (3.17)	0.504
Groundnut	1,298.77** (2.05)	0.0517 (0.046)	-26.28 (0.42)	0.31

Note: \* Indicates statistical significance at 5% level; \*\* Indicates statistical significance at 10% level; and figures in the parentheses are t values.

**Table 2.7b: Regression Results with Wholesale Price as Dependent Variable**

Crop	Constant	$MSP_{t-1}$	Time	Adjusted R Square
Paddy	-109.16 (-0.54)	1.4 (1.79)	12.19 (0.52)	0.97
Jowar	-117.35 (0.21)	1.38 (0.52)	36.47 (0.56)	0.82
Ragi	-275.85 (0.48)	2.58 (0.95)	-29.31 (0.43)	0.47
Tur	19160.95 (1.44)	-33.53 (1.49)	2060.25 (1.81)	0.79
Groundnut	341.83 (1.11)	-9.42 (0.99)	550.64 (1.23)	0.54

Note: Figures in the parentheses are t values.

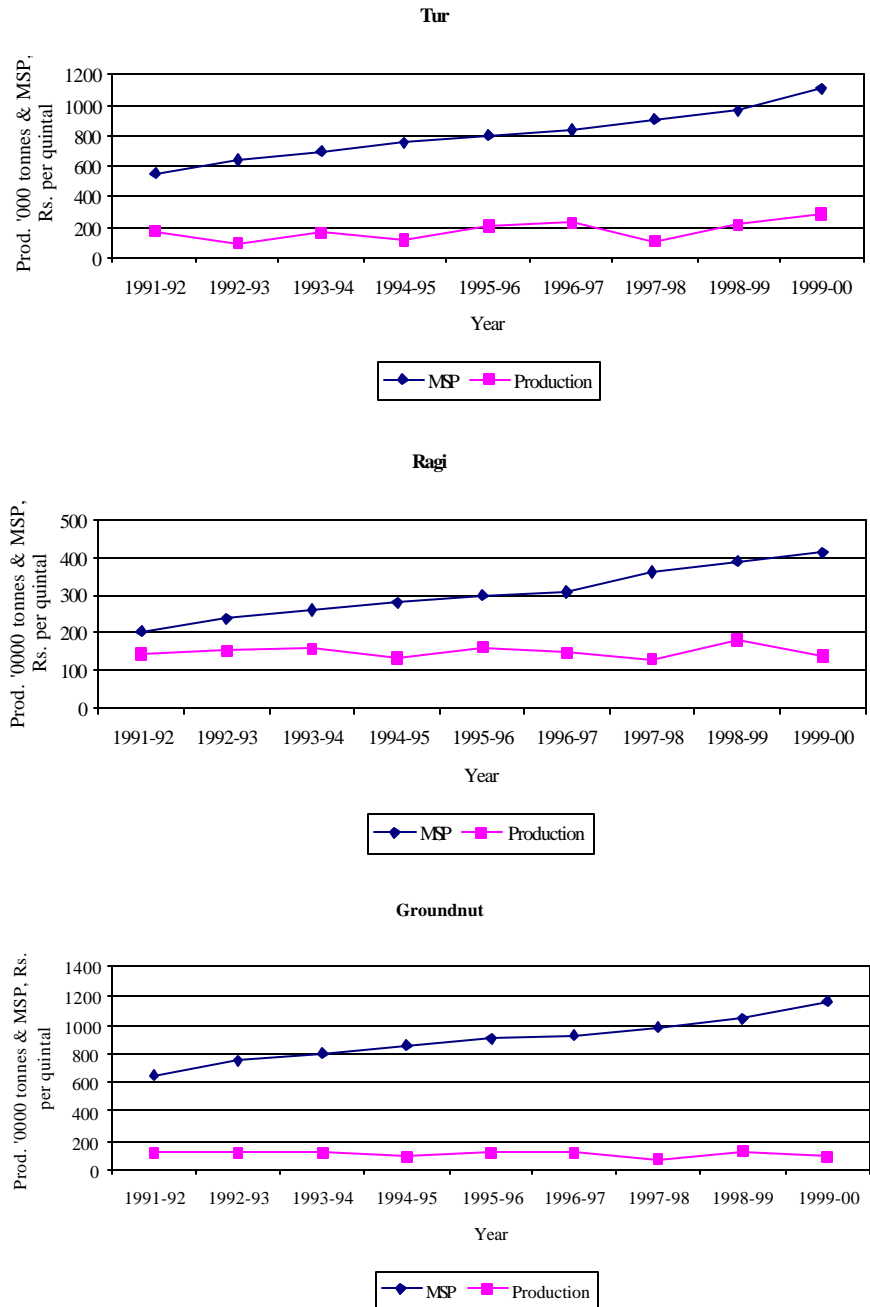
**Table 2.7c: Regression Results with Farm Harvest Prices as Dependent Variable**

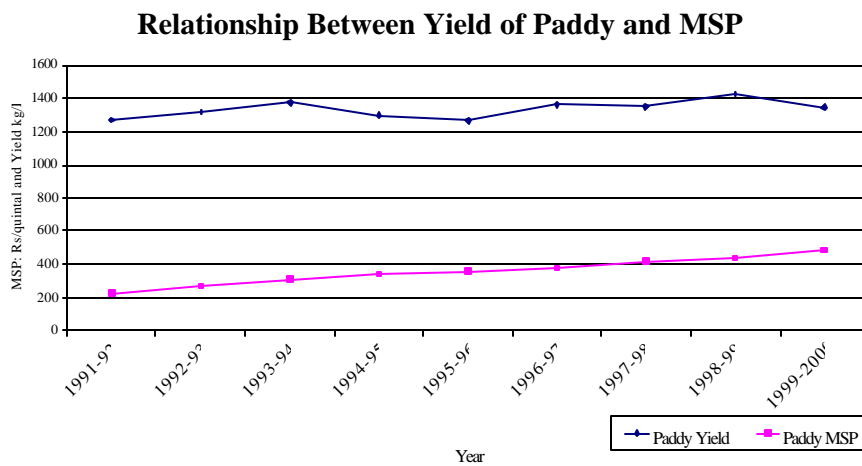
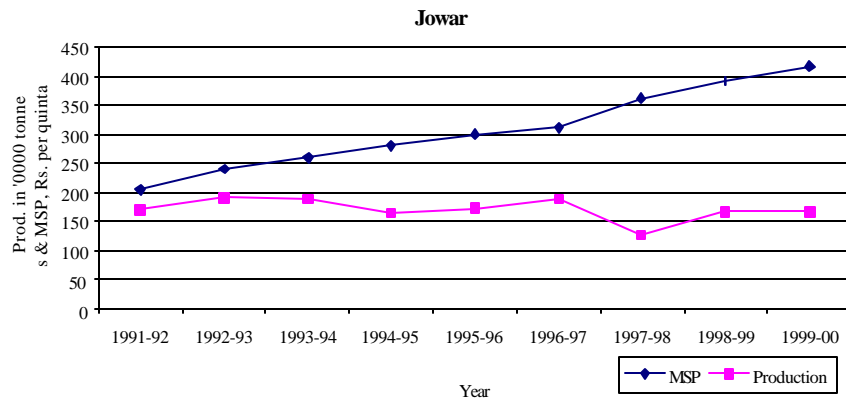
Crop	Constant	MSP t-1	Time	Adjusted R Square
Paddy	191.44 (0.71)	1.25 (1.62)	-6.31 (0.25)	0.93
Jowar	20.05 (0.12)	1.85 (0.68)	-8.51 (1.24)	0.58
Ragi	-78.21 (1.02)	0.323 (0.22)	13.93 (0.38)	0.63
Tur	-1027.69 (0.57)	3.58 (1.024)	-71.64 (0.37)	0.84
Groundnut	-3945.51 (1.72)	7.67** (2.12)	-339.65 (1.79)	0.44

Note: \*\* Indicates statistical significance at 10% level and figures in the parentheses are t values.

The results of the above exercise have been presented in Tables 2.7 (a, b and c) for the selected crops and with alternative formulations. It is surprising that the regression coefficients pertaining to MSP are all statistically not significant even at 20 per cent level except for tur (Table 2.7a) and groundnut (Table 2.7c). It is clear that MSP does not help in deciding the area allocation under the crop during the next season. But there are subtle differences between crops. The area decisions in the case of major crops and inferior cereals do not seem to depend on MSP. The relative economics seem to work more strongly against inferior cereals. The negative coefficient for tur indicates the area under tur going down as MSP increases, which in itself is a perplexing result. But MSP is acting positively on area under groundnut, whereas relative MSP of groundnut in relation to paddy seem to discourage area allocation. However, degrees of freedom are not sufficient to conclude about the role of MSP as incentive prices. The lagged relationship with area as well as production does not indicate the role of MSP as an incentive price and therefore, it seems only to serve as a psychological support in the case of price collapse and not as an instrument of price incentive as envisaged. The graphs in Figure 2.6 indicate no relationship between the production trends and MSP (Lagged or otherwise). Even here we do not get any support for MSP as an incentive price.

**Figure 2.6: Relationship Between MSP and Production**





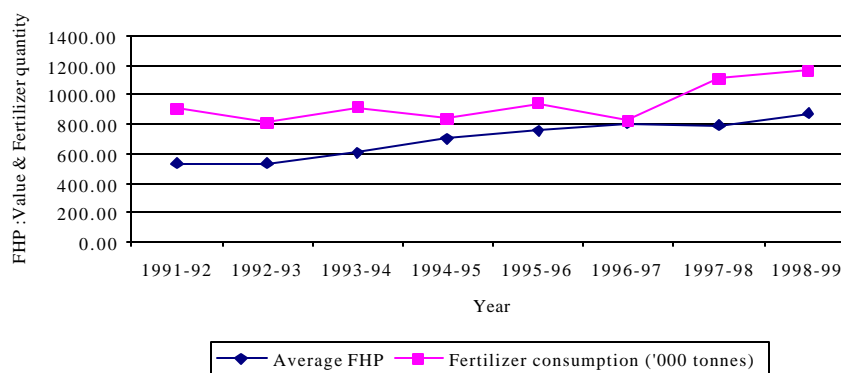
The very foundation of price policy is to support decision-making in area allocation and provide incentive for adopting new technology but that seems to have not been working in the field. It is very clear that MSP does not provoke any area or input decisions, rather it seems that the time trend alone dictates the decision environment. Our analysis indicates that wheat and paddy got the best out of the price policy (through MSP) but unintentionally this worked as an externality to discourage coarse cereals and pulses. Therefore, it will not be wrong if we consider this as a strong policy bias against a few crops. Incidentally, these are the crops grown in agriculturally backward region of the State and mostly by resource poor farmers.

## 2.5. Impact on Input Use

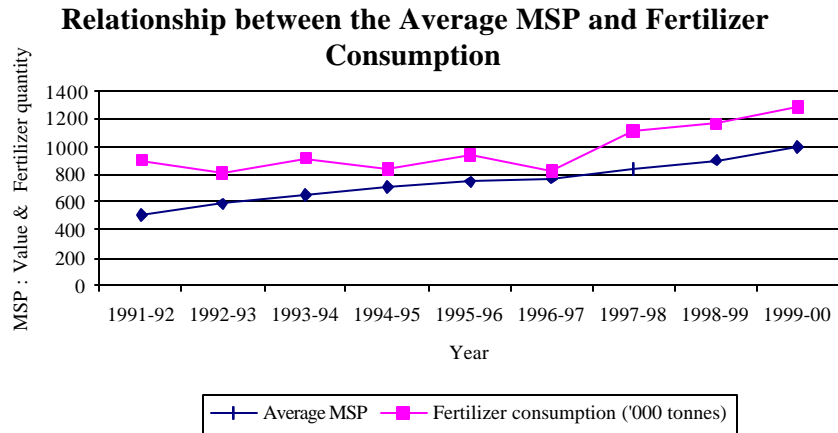
One of the important objectives of the price intervention scheme is to enhance adoption of technology by providing a wedge against the fluctuations in expected prices. When farmers are assured of price level in advance of the next harvest, they feel secure to use proper mix of inputs and technology which requires a little more investment. Essentially, the farmers will not be ‘investment-shy’ in the context of such assurance and they become cautious risk takers. They probably give consideration to the MSP drill and therefore, the declaration of MSP should be before the sowing season for the concerned crop. The experience of last three decades tells us that this happens more as an exception than practice and treating MSP either as incentive price or analysing its impact on input use may only serve as a theoretical discussion.

The trends in input use *vis-à-vis* Minimum Support Prices have been analysed here to track the impact of MSP on input trends. The trends presented in Figure 2.7 show that the input use in the state grows similarly as that of MSP. But can we call this as cause and effect relationship? We hasten to add that this relationship may just be due to time trend rather than a deterministic relationship. Moreover, we have used here average MSP and average Farm Harvest Prices, which serve only as proxies for the trends and do not tell the price effect on an individual crop. The equation explaining ‘detrended’ input use as variable with ‘detrended’ MSP, failed to turn out with any statistically significant coefficients. With this evidence one tends to conclude that MSP hardly has any influence on area allocation or input use.

**Figure 2.7: Relationship Between Average FHP and MSP (Rs/qlt) with Fertilizer Consumption (Rs/qlt)**







$$Y_t = a + b_1 \text{MSP}_{t-1} + b_2 t_t + e$$

Where  $Y_t$  = Fertilizer consumption t;

$\text{MSP}_{t-1}$  = Lagged Minimum Support Price at (t-1) year

$t_t$  = Proxy for time trend

$e$  = Stochastic error term

$a$  = Constant

$b_1$  &  $b_2$  = Regression coefficients

**Table 2.8: Regression Results with Fertilizer Consumption as Dependent Variable: 1990-2000**

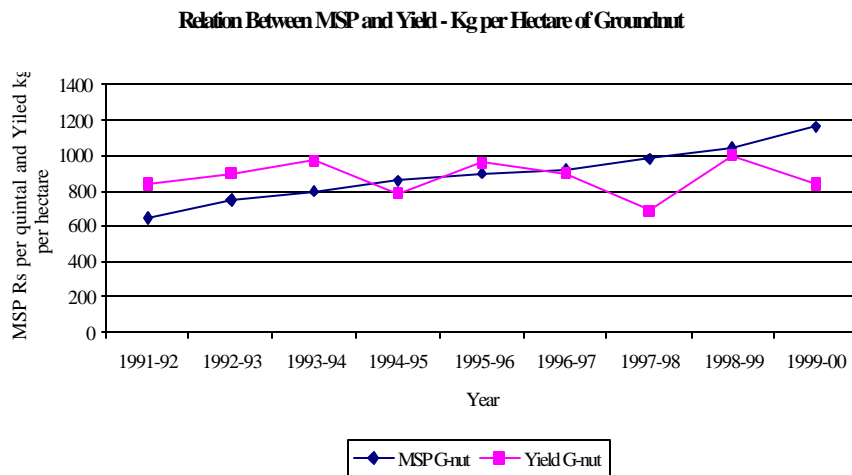
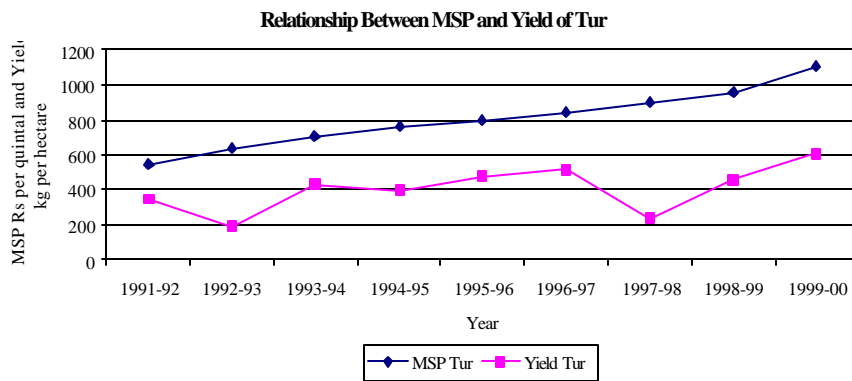
Crop	Constant	$\text{MSP}_{t-1}$	Time	Adjusted R Square
Fertilizer consumption	1,297.79 (1.26)	-1.99 (0.55)	133.52 (0.86)	0.54

Note: Coefficients are not statistically significant even at 20 per cent and figures in the parenthesis are t values

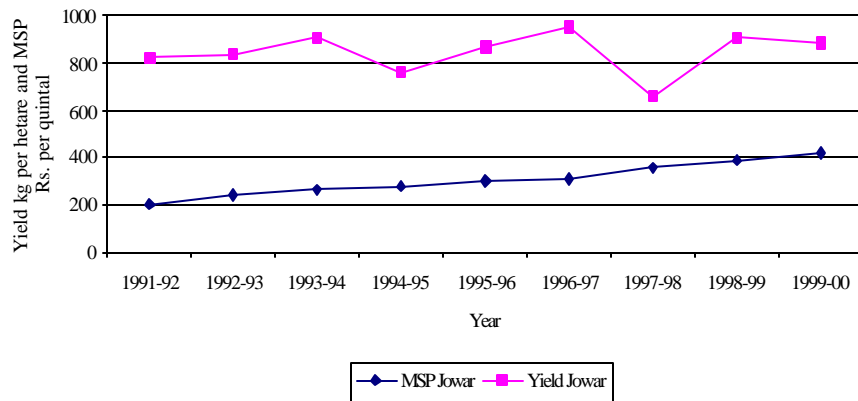
Another way of looking at the impact of MSP on input use is through the relationship between MSP and yield of crops per hectare. In this case the yield of crop stands as an end result of the application of new technology which essentially includes inputs. The trends have been presented in Figure 2.8 and we find that no strong relationship between yield per hectare and MSP can be discerned from these figures. We are now confronted with the evidence that holds us back from concluding that MSP provided incentives

for adoption of the new technology and supports the risk-taking attitude of the farmers during the nineties. But we also keep in view the fact that during the early seventies, MSP did play this role effectively. But, by the nineties even the trends in technological innovation in agricultural sector had slowed down and therefore, it will not be prudent to conclude hurriedly about the technology-inducing role of MSP. This needs to be checked only with the help of the farm level data.

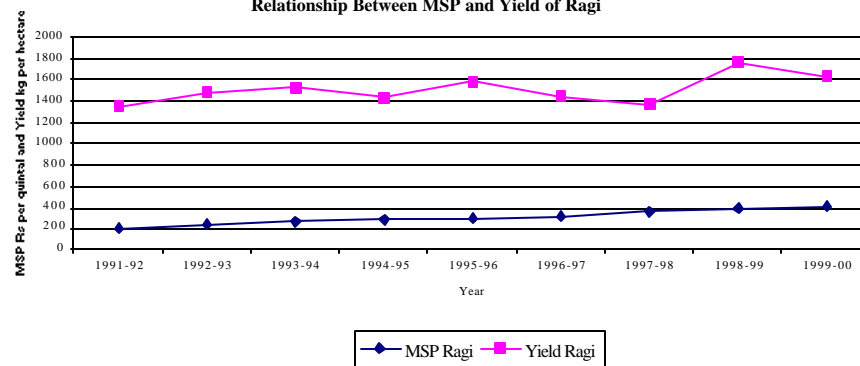
**Figures 2.8: Relation Between MSP and Yield - Kg per Hectare of Tur**



Relationship Between MSP and Yield of Jowar



Relationship Between MSP and Yield of Ragi

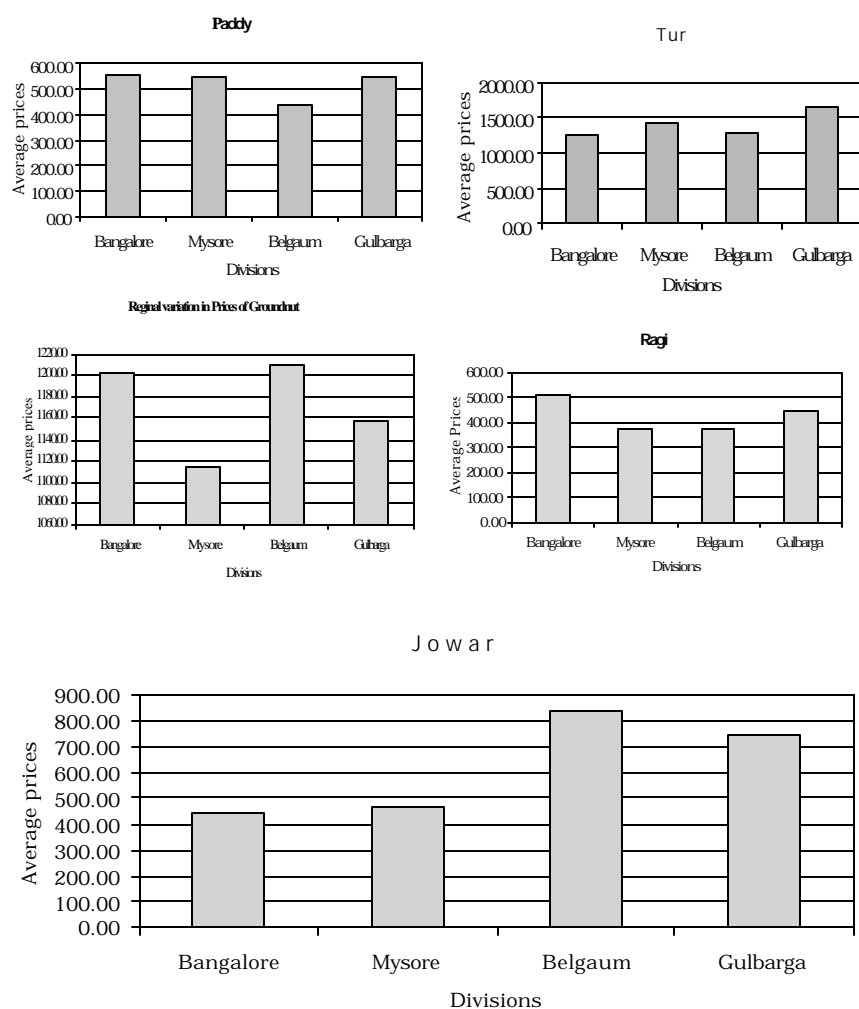


## 2.6. Regional Variation in Prices

Regional variation in prices is one of the important issues in the price policy. Prices vary not only across the states but also across districts within a state and across markets. We have seen earlier that during the same month the prices of the same commodity in one market can be three to five times the prices prevailing in the other market, and these markets are not distanced by more than a few hundred kms. We have used Farm Harvest Prices as these are the only price series that provide time-series data for a longer period. The Coefficient of Variation is as high as 50 per cent and as low as less than 10 per cent across regions and commodities. Variations across the districts are quite interesting and we find that the high variability group of districts mostly belong to central and south Karnataka. We have also categorised the districts falling in high price variability and low price

variability groups across individual crops. It is found that generally the districts having larger area under the crop depicts high price variability. But that is not a strict rule of behaviour, there are districts with significant importance of a crop and still show low price variability. Thus, regional variations in prices seem to be dictated equally by factors other than supply alone.

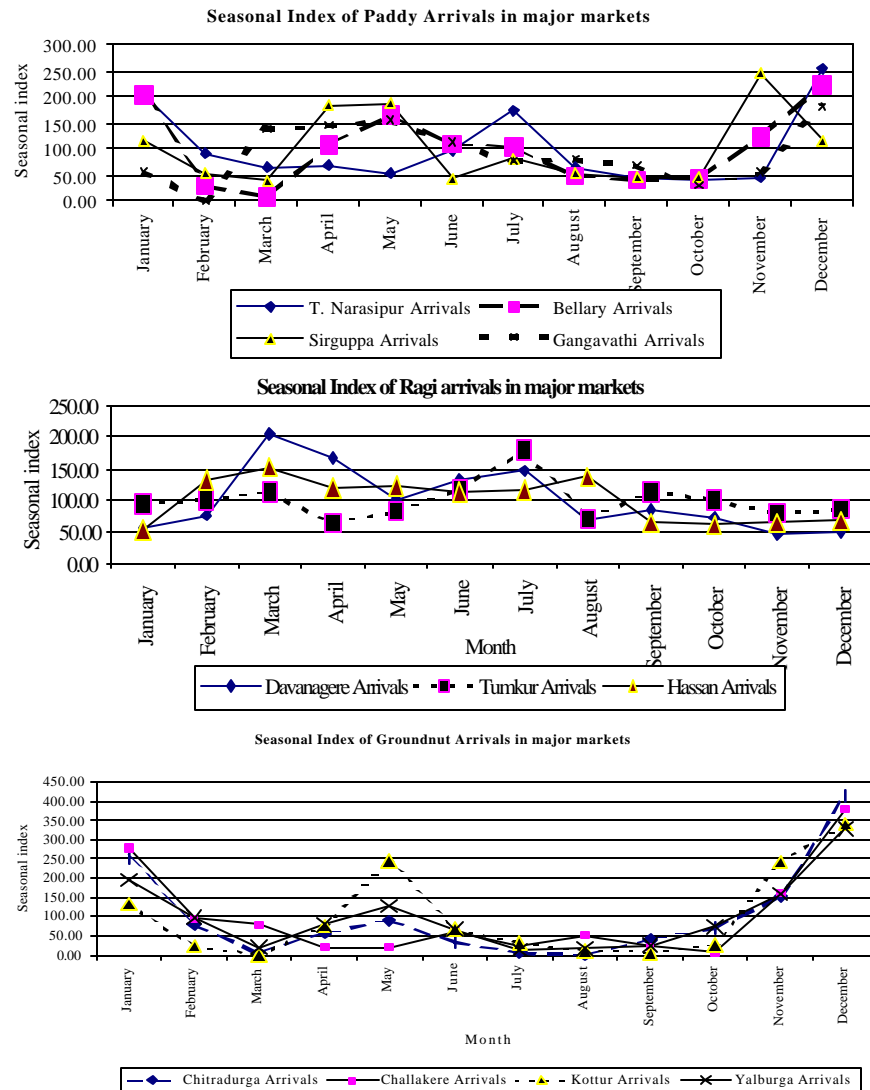
**Figure 2.9: Regional Variation in Prices (Rs/qttl) over Different Crops (1997-98 to 2000-01)**



Seasonal variation in prices is another important problem confronted while formulating the price policy. In order to analyse the seasonal variations we have taken the major markets dealing with the commodities. Our objective

in this analysis is two fold, namely, to find out the peak and slack seasons in respect of each of the commodity and also to locate if at least the major markets behave in a similar seasonal pattern. We can see from the Figure 2.10 that the major markets have more or less similar seasonal behaviour of prices but one cannot say that the seasonal behaviour in one market is an exact replica of another.

**Figure 2.10: Seasonal Index of Different Commodities in the Major Markets**



**Table 2.9: Commodity-wise Peak and Slack Months in the Regulated Markets**

Commodity	Arrivals		Prices	
	Peak Month	Slack Month	Peak Month	Slack Month
Paddy	December	February	June	January
Ragi	April	November	October	May
Jowar	December	March	June	January
Groundnut	June	March	July	February
Cotton	December	June	December	July
Tur	January	October	April	October
Sunflower	October	June	October	December

We have located the peak and slack months in terms of prices across commodities and major markets (Table 2.9). It is certainly a difficult judgement, as even the major markets do not behave similarly. But this exercise if undertaken across markets in the State can provide a clue for providing an alert system for procurement agencies across markets in the State.

## 2.7. Factors Dictating Failure or Success of MSP

Minimum Support Prices as an instrument of the price policy has recorded initial success but in the changed economic scenario, it is necessary to reconsider this instrument. As a policy tool, MSP has served the purpose during the seventies and eighties to procure, build buffer stocks, provide base price for the farmers and induce adoption of the new technology. In the early years of the Green Revolution phase, MSP and Procurement or Levy Prices had this connotation and policy agenda. During those years creation of incentives for the adoption of new technology and providing food security were the most important aspects of price policy. Similarly, procurement for sustaining the Public Distribution System was essential and this was to be achieved through market interventions. The role of MSP as incentive to adopt technology during those years comes out very clearly in the writing of Prof. Dantwala, who was one of the chief architects of our 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: 213, originally published in 1967).

In the present context the factors influencing the effectiveness of MSP assume more importance. Among the factors that dictate the effectiveness of MSP the most important are: i. process of implementation of the policy, ii. dependence on the State for intervention so that the markets function effectively and freely in long run, iii weeding out the information asymmetry prevailing in the agricultural markets and providing farmers with the required information at proper time, iv. monitoring the prices without intervention and assess the situation in the place of *suo motto* intervention, and v. long-term policy steps to replace the present *ad hoc* arrangements.

Over the last three decades significant changes have taken place in the context of price policy. The field of price policy has changed from incentive prices to remunerative prices and now the issues need to be posed in a totally different perspective. The process of liberalisation adopted during the nineties, therefore, gives a new connotation to the price policy. Apart from being an instrument for creating incentive, it is also expected to play a much wider role of fully interacting with the market forces. Farmers are already expressing concern about the ‘remunerative aspect of MSP’, but the concern rather points an accusing finger towards failure of the market mechanism to provide economically viable prices to them. In the wake of larger stocks, now the price policy has to be handled carefully. After an experience of a quarter of century, in the implementation of the market intervention scheme, Prof Dantwala wrote again during the early nineties recognising the changing role of MSP and interventions. He wrote that: “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 1996:292, originally published in 1993). Aptly he suggested to take note of changing circumstances and have a constant review of the interventions. He also emphasises the implementation process which requires a close scrutiny in the changing circumstances. We can only appreciate his vision even in the wee years of liberalisation.

## **2.8. Towards a Sustainable Policy**

The context of price policy has undergone a sea change during the last four decades. In the present process of liberalisation and opening up of the international trade, we require to think afresh about the context of the policy. Even beyond this, it has come into bold relief that the price intervention

scheme has not been effectively implemented and thus failing in ensuring the objectives it has framed to serve. The price policy has been asymmetric in terms of crops as well as regions and thus, can inflict inequality even through a well intended intervention. The externality inflicted by the deliberate policy bias on coarse cereals and pulses sector as well as on the regions growing these crops can be seen in their growth rates and income foregone in the process. In this context, Krishnaji wrote that “In the case of coarse cereals, however, judging by the price criterion, the implementation of the price policy has not been very successful (1991: 189).

It is well known that a segment of the farmers’ lobby has a greater influence on the price policy and at the macro-level it favours a few crops and regions. This, in turn, affects the aggregate welfare. Similarly, input markets too have little influence of the behaviour of MSP. In product market, the expectation of support prices provides ripe situation to the intermediaries to achieve greater advantage. The implementation process itself provides time-lag between the declaration of the intention to procure under MSP and the actual procurement. This gives enough room for the traders to step in and buy the commodities from the farmers to sell it under market intervention scheme to the State Government. This clearly defeats the purpose of the scheme. Politicians of all groups would like to be in good books of the farmers by lauding the MSP and arguing for higher MSP but little realising that the whole process fails the farmers. It is necessary therefore, that prudent steps are taken in order to clearly focus the price policy on ensuring that the weak and marginal farmers/crops do not suffer in the process through distress sale or deliberate policy bias. A long term clear policy perspective is required for this purpose where all the grey areas in the price policy need to be attended to.



## **Annexure 2.1**

### **PROCEEDINGS OF THE GOVERNMENT OF KARNATAKA**

Sub: - Constitution of Karnataka State Agriculture  
Price Commission – reg.

Read: - Note No. CM:AS.772/2001 dt. 25.4.2001 from  
Additional Secretary to Chief Minister,  
Government of Karnataka.

#### **PREAMBLE:**

It has been felt the need for the constitution of an independent, professional and technically qualified State Agricultural Price Commission. The Commission will recommend standard prices that can be sustained in the market and the support prices at which the State Government may intervene in the market.

Keeping this in view, it has been decided to constitute a three member Karnataka State Agricultural Price Commission under the Chairmanship of Dr. S.Bisaliah, Former Vice-Chancellor, U.A.S., Bangalore and hence, this order.

#### **GOVERNMENT ORDER NO. AHO 204 AMS 2001, BANGALORE: DATED: 15.6.2001**

The Government are pleased to accord sanction for the constitution of a three member – “Karnataka State Agricultural Price Commission” with the following composition.

- 1) Dr. S.Bisaliah,  
Former Vice-Chancellor  
U.A.S., Bangalore.  
Chairman
- 2) Dr. Praful Chandra,  
Shimoga.  
Member
- 3) Sri. Narayana Rao,  
Senior Advocate,  
Yadagir Town,  
Gulbarga District.  
Member

The terms of reference of the Karnataka State Agricultural Price Commission is indicated in ANNEXURE 2.1.1.

A working group consisting of the following officers is also hereby constituted to assist the Commission in discharging its functions efficiently and expeditiously.

....2)

- 2 -

- a) Principal Secretary to Government,  
Food, Civil Supplies & Consumer Affairs Dept.,  
Government of Karnataka.
- b) Secretary to Government (Horticulture),  
Agriculture & Horticulture Department.
- c) Commissioner for Agriculture, Bangalore.
- d) Director of Horticulture, Bangalore.
- e) Director of Agril. Marketing, Bangalore.
- f) Head, Department of Agril. Economics, U.A.S., Bangalore.

The Additional Director of Agriculture (Development), Department of Agriculture shall function as the Ex-Officio Secretary of the Agricultural Price Commission with immediate effect and until further orders.

The members of the Commission shall be paid honorarium and allowance on par with the Members of Karnataka State Agriculture Commission.

The Commissioner for Agriculture shall provide all secretarial & logistical assistance required by the Commission and shall also meet all the expenses of the Commission from out of over-all funds earmarked under the Budget Head of account "2401-00-800-1-08 (Plan)" Committee's and Consultancies.

This order shall come into force with immediate effect and until further orders.

**By order & In the Name of  
Governor of Karnataka**

**Sd/-  
(P. Krishna Murthy)  
Under Secretary to Government  
Agriculture & Horticulture Department**

To:

- 1) The Accountant General, Bangalore
- 2) All the Members of the Commission
- 3) Principal Secretary to Chief Minister/Addl. Secretary to Chief Minister
- 4) All P.S. to Ministers/State Ministers
- 5) Chief Secretary, Government of Karnataka
- 6) All Addl. Chief Secretaries/Addl. Chief Secretary & Ex-Officio Development Commissioner
- 7) All Principal Secretaries and Secretaries to State Government
- 8) Commissioner of Agriculture, Bangalore.
- 9) Director, Horticulture, Bangalore.
- 10) Director, Agril. Marketing, Bangalore

.....3

- 3 -

- 11) Vice-Chancellor, U.A.S., Bangalore/Dharwad.
- 12) Head, Department of Agril. Economics, U.A.S., Bangalore.
- 13) Addl. Director of Agriculture (Development), Commissionerate of Agriculture, Bangalore.
- 14) Addl. Director of Agriculture (SLU) and Ex-Officio Secretary, State Agriculture Commission, Bangalore.
- 15) All Under Secretaries/Section Officers, A & H Dept.
- 16) Guard File / Extra copies

Copy For Information

- 1) Secretary (A&C), Govt. of India, Ministry of Agriculture, Dept. of Agril. & Co-operation, Krishi Bhavan, New Delhi.
- 2) Member Secretary, Commissioner for Agriculture Costs & Prices, Government of India, Krishi Bhavan, New Delhi.

**ANNEXURE 2.1.1**

**TERMS OF REFERENCE OF THE COMMISSION**

- (a) To advise the State Government on the price policy of all agricultural commodities, which fall within the purview of the National Commission for Agricultural Costs and Prices, enabling the State Government to present its views on the fixation of the Minimum Support Prices for all the crops which are grown in the State;
- (b) To recommend Minimum Support Prices for crops, which do not fall within the purview of the National Commission for Agricultural Costs and Prices, i.e., initially potato, onion, chillies, coconut and tomato and other crops that may be referred to it by the State Government from time to time;
- (c) To recommend standard prices for all agricultural commodities that can be sustained in the market in the State;
- (d) To recommend measures necessary to make the Price Policy effective, with special reference to augmentation of the institutional capability to undertake Minimum Support Price procurement operations like adequate number of procurement points, availability of quality inspectors, availability of sufficient storage space, releases of the procured foodgrains in the market, etc;
- (e) To recommend measures for the export of agricultural produce from the State;
- (f) To examine, where necessary, the prevailing methods and cost of marketing of agricultural commodities in the State and suggest measures to reduce marketing costs and recommend fair margins for different stages of marketing; and
- (g) To keep under review the prevailing price situation and to make appropriate recommendations within the framework of the Price Policy and advise the State Government on all issues relating to agricultural production and prices.

**By order & In the Name of  
Governor of Karnataka**

**Sd/-  
( P. Krishna Murthy)  
Under Secretary to Government  
Agriculture & Horticulture Department**

**Appendix Table 2.1: Number of Agricultural Regulated Markets in India as on 1998**

State	Regulated Markets		
	Principal market	Sub-market	Total
Andhra Pradesh	284	557	841
Assam	16	19	35
Bihar	122	706	828
Gujarat	165	232	397
Haryana	104	177	281
Himachal Pradesh	8	27	35
Karnataka	137	332	469
Madhya Pradesh	296	311	607
Maharashtra	260	587	847
Orissa	57	87	144
Punjab	143	527	670
Rajasthan	124	273	397
Tamil Nadu	270	-	270
Tripura	21	-	21
Uttar Pradesh	263	382	645
West Bengal	44	496	540
Total	2,328	4,734	7,062

Note : The Total figures refer to all India total markets. Some states have been neglected in the above table.

Source : Indian Agriculture in Brief, 27th edition





## 58 Moon in the Mirror: Farmers and Minimum Support Prices in Karnataka

<b>Groundnut</b>											
<b>District</b>	1990-91	1991-92	1992-93	1993-94	1994-95	1995-96	1996-97	1997-98	1998-99	1999-2000	2000-01
Bangalore (R)	721	650	731	778	753	890	920	1,259	1,294	1,094	952
Bangalore (U)	586	721	710	618	561	560	-	1,150	1,282	1,175	925
Bagalkot	-	-	-	-	-	-	-	-	-	-	-
Belgaum	837	974	878	995	835	1,020	1,038	1,113	-	1,123	1,099
Bellary	914	962	875	971	1,110	1,162	1,140	1,131	1,227	1,217	1,182
Bidar	895	1,156	971	952	1,042	1,247	1,192	1,037	1,300	1,038	1,295
Bijapur	1,001	1,067	912	985	1,166	1,097	1,149	1,207	1,411	115	1,192
Chamarajanagar	-	-	-	-	-	-	-	-	-	-	-
Chikmagalur	545	751	946	823	1,264	1,129	1,143	1,185	1,259	848	868
Chitradurga	963	1,088	812	741	1,041	1,133	1,230	1,195	1,305	1,041	1,172
D. Kannada	-	-	-	-	-	-	-	-	-	-	-
Davanagere	-	-	-	-	-	-	-	-	-	-	-
Dharwad	866	1,069	801	854	981	1,033	1,184	1,170	1,194	1,175	1,023
Gadag	-	-	-	-	-	-	-	-	-	-	-
Gulbarga	844	953	-	959	1,121	1,089	1,151	1,130	1,275	1,246	1,096
Hassan	-	-	-	-	-	-	-	-	-	1,237	-
Haveri	-	-	-	-	-	-	-	-	-	-	-
Kodagu	-	-	-	-	-	-	-	-	-	-	-
Kolar	1,007	994	893	-	972	-	-	-	-	968	1,186
Koppal	-	-	-	-	-	-	-	-	-	-	-
Mandya	847	1,068	-	971	1,028	1,048	1,397	944	980	1,050	1,293
Mysore	656	726	626	970	1,119	872	1,008	929	906	876	839
Raichur	911	1,002	838	963	1,091	1,139	1,082	1,134	1,166	1,041	1,247
Shimoga	625	744	808	700	767	928	970	941	1,099	1,381	1,106
Tumkur	960	1,025	867	899	1,080	1,186	1,285	1,116	1,310	1,133	-
U. Kannada	-	-	-	-	-	-	-	-	-	-	-
Udupi	-	-	-	-	-	-	-	-	-	-	-
<b>Sunflower</b>											
Bangalore (R)	-	-	-	-	-	-	-	-	-	-	-
Bangalore (U)	-	-	-	-	-	-	-	-	-	-	-
Bagalkot	-	-	-	-	-	-	-	-	-	1,122	1,000
Belgaum	972	-	956	903	903	-	-	1,175	-	1,046	1,081
Bellary	879	815	825	852	-	1,035	1,054	1,016	1,231	1,015	977
Bidar	964	848	876	1,082	1,141	1,117	1,219	1,030	1,060	1,021	957
Bijapur	1,018	902	874	910	1,233	1,124	1,198	1,116	1,333	1,132	1,131
Chamarajanagar	-	-	-	-	-	-	-	-	-	967	1,262
Chikmagalur	-	-	-	-	1,098	1,080	1,142	-	1,136	1,232	834
Chitradurga	984	840	-	918	1,189	1,043	1,184	1,120	1,032	1,101	1,023
D. Kannada	-	-	846	-	-	-	-	-	-	1,021	-
Davanagere	931	-	861	841	1,076	1,193	-	-	-	-	-
Dharwad	-	-	-	-	-	-	1,138	-	-	-	-
Gadag	-	-	-	-	-	-	-	-	-	1,031	-
Gulbarga	940	-	873	985	1,222	1,109	1,056	1,092	1,240	1,110	1,146
Hassan	-	-	-	-	-	-	-	-	-	-	912
Haveri	-	-	-	-	-	-	-	-	-	882	902
Kodagu	-	-	-	-	-	-	-	-	-	-	-
Kolar	-	-	-	-	-	-	-	-	-	-	-
Koppal	-	-	-	-	-	-	-	-	-	992	1,011
Mandya	-	-	-	-	-	-	-	-	-	-	-
Mysore	767	-	-	922	1,084	1,194	1,201	1,281	-	1,045	921
Raichur	907	846	772	830	1,146	1,026	1,143	1,050	1,298	847	1050
Shimoga	-	-	-	-	-	-	-	-	-	-	-
Tumkur	-	-	-	-	-	-	-	-	-	-	-
U. Kannada	-	-	-	-	-	-	-	-	-	-	-
Udupi	-	-	-	-	-	-	-	-	-	-	-

Source : Prices of distribution, Directorate of Economics and Statistics, Bangalore, Government of Karnataka.



Appendix Table 2.3 : Minimum Support Prices of Agricultural Commodities (1980-81 to 2001-02)

Crops	(Rs. per Quintal)															
	1980-81	1985-86	1988-89	1989-90	1990-91	1991-92	1992-93	1993-94	1994-95	1995-96	1996-97	1997-98	1998-99	1999-2000	2000-01	2001-02
Paddy (F)	-	-	170	195	215	240	280	330	360	375	395	445	470	520	540	-
Wheat	130	162	183	215	225	250	330	350	360	380	475	510	550	580	610	-
Jowar	105	130	145	165	180	205	240	260	280	300	310	360	390	415	445	560
Ragi	105	130	145	165	180	205	240	260	280	300	310	360	390	415	445	485
Maze	105	130	145	165	180	210	245	265	290	310	320	360	390	415	445	485
Bajra	105	130	145	165	180	210	245	265	290	310	320	360	390	415	445	485
Gram	-	260	325	421	450	500	600	640	670	700	740	815	895	1,015	-	-
Tur (Arhar)	190	300	360	425	480	545	640	700	760	800	840	900	960	1,105	1,220	1,320
Moong	200	300	360	425	480	545	640	700	760	800	840	900	960	1,105	1,220	1,320
Urad	200	300	360	425	480	545	640	700	760	800	840	900	960	1,105	1,220	1,320
Groundnut	205	350	430	500	580	645	750	800	860	900	920	980	1,040	1,155	1,220	1,340
Soyabean Black	183	250	275	325	350	395	475	525	570	600	620	670	705	755	775	785
Soyabean Yellow	198	275	320	370	400	445	525	530	650	680	700	750	795	845	865	885
Rapeseed/Mustard	-	400	460	575	600	670	760	810	830	860	890	1,000	1,060	1,165	1,170	1,185
Safflower	-	400	440	550	575	640	720	760	780	800	830	910	990	1,100	-	-
Copra Milling	-	-	-	1,500	1,600	1,700	-	2,150	2,350	2,500	2,600	2,700	2,900	3,100	3,250	3,300
Copra BaE	-	-	-	-	-	1,850	-	2,350	2,375	2,725	2,725	2,925	3,125	3,325	3,500	3,550
Tobacco																
(Black soil grade)																
Rs/kg	7.75	11.15	11.75	12.5	13.25	14.75	16	18	18.5	19	19	20.5	22.5	25	-	-
Tobacco																
(Light soil L2)	8.25	12	12.8	13.5	14.25	16	17.5	20	21	21.5	22	23.5	25.5	27	-	-
Sugarcane	13	16.5	19.5	22	23	26	31	34.5	39	42.5	45.9	48.45	52.7	56.1	-	-
Sunflower seed	183	335	450	530	600	670	800	850	900	950	960	1,000	1,060	1,155	1,170	1,185
Cotton	304	480	550	630	685	767.5	875	975	1,100	1,250	1,280	1,430	1,545	1,675	1,725	1,775

Source: Department of Agriculture, Government of Karnataka, Bangalore.

**Appendix Table 2.4: Growth Rates in Prices in Karnataka from 1990-91 to 2000-01**

Crops	WSP	FHP	MSP
Paddy	10.65	6.96	10.65
Ragi	7.85	6.08	8.61
Jowar	13.21	6.52	8.61
Tur	3.13	9.13	8.24
Groundnut	-2.11	5.99	6.56
Sunflower	-3.24	-2.54	5.62
Cotton	2.95	6.72	9.48

Note : 1. WSP – Whole Sale Price, FHP – Farm Harvest Prices, MSP – Minimum Support Price

2. WSP data are from 1993-94 to 2000-01

Source: Directorate of Economics & Statistics, Govt of Karnataka and Agricultural Prices Commission Department of Agriculture, Govt. of Karnataka

**Appendix Table 2.5: Procurement of Various Commodities by All the Agencies Under the Minimum Support Price Scheme in Karnataka – 1996-97 to 2001-02**

(In Tonnes)

Sl. No.	Commodity	1996-97	1997-98	1998-99	1999-2000	2000-01	2001-02
1	Rice	82,730	91,874	100,442	1,11,710	2,28,643	1,37,178
2	Paddy	-	-	-	-	1,147.75	110.425
3	Maize	-	-	578.56	966.9	385,309.1	17,782.97
4	Ragi	-	-	-	-	15,741.6	77,598.39
5	Bajra	-	-	-	-	4,514.68	-
6	Tur	-	457.9	351.8	373.4	1,700.5	125.24
7	Bengal Gram	-	-	-	-	-	68.153
8	Green Gram	-	-	-	-	-	-
9	Black Gram	-	-	-	-	-	-
10	Groundnut	-	-	-	-	609.18	6,451.976
11	Safflower	-	-	-	-	2,436.32	3,308.362
12	Sunflower	-	-	-	17,680.48	22,824.91	-
13	Soyabean	-	-	-	963.43	748.23	-
14	Ball Copra	-	-	-	-	-	35,979.36
15	Milling Copra	-	-	-	-	-	696.98
16	Onion	-	-	-	-	-	-
17	Potato	-	-	-	-	-	-
18	Dry Chillies	-	-	-	-	-	-
19	Garlic	-	-	-	-	-	-
20	Oil Palm fruits	-	-	-	-	-	-

Source: Same as in Appendix Table 2.4

**Appendix Table 2.6: Procurement of Various Commodities by All the Agencies Under the Market Intervention Scheme (MIS) in Karnataka – 1996-97 to 2001-02**

(In tonnes)

Sl. No.	Commodity	1996-97	1997-98	1998-99	1999-2000	2000-01	2001-02
1	Rice	-	-	-	-	-	-
2	Paddy	-	-	-	-	-	-
3	Maize	-	-	-	-	-	-
4	Ragi	-	-	-	-	-	-
5	Bajra	-	-	-	-	-	-
6	Tur	-	-	-	-	-	-
7	Bengal Gram	-	-	-	-	-	-
8	Green Gram	-	-	-	-	-	-
9	Black Gram	-	-	-	-	-	-
10	Groundnut	-	-	-	-	610.0	-
11	Safflower	-	-	-	-	2,568.45	-
12	Sunflower	-	-	-	17,680.48	-	-
13	Soyabean	-	-	-	963.43	748.23	-
14	Ball Copra	-	-	-	-	4,719.94	-
15	Milling Copra	-	-	-	136.38	2,790	-
16	Onion	721.4	-	-	-	-	-
17	Potato	-	-	4,285.67	-	11,799.50	-
18	Dry Chillies	-	190.11	-	-	-	-
19	Garlic	-	-	-	-	-	-
20	Oil Palm fruits	-	-	-	437.2	4,141.91	2,489.72

Source: Same as in Appendix Table 2.4

**Appendix Table 2.7: Total Procurement of Various Commodities by All the Agencies Under a Different Price Support Scheme in Karnataka – 1996-97 to 2001-02**

(In tonnes)

S1. No.	Commodity	1996-97	1997-98	1998-99	1999-2000	2000-01	2001-02
1	Rice	82,730	91,874	100,442	111,710	228,643	137,178
2	Paddy	-	-	-	-	1,147.75	110.425
3	Maize	-	-	578.56	966.9	385,309.1	18,077.09
4	Ragi	-	-	-	-	15,741.6	77,598.39
5	Bajra	-	-	-	-	4,514.68	-
6	Tur	-	457.9	351.8	373.4	1,700.5	1,365.24
7	Bengalgram	-	-	-	-	-	68.153
8	Greengram	-	-	-	-	-	1,205.73
9	Blackgram	-	-	-	-	-	758.207
10	Groundnut	-	-	-	18,441.5	23,994.53	13,878.4006
11	Safflower	-	-	-	-	5,004.77	3,308.362
12	Sunflower	-	795.36	795.36	35,360.96	45,649.82	3,326.0
13	Soyabean	-	-	-	1,926.86	1,496.46	-
14	Ball Copra	-	-	-	-	4,719.94	35,979.36
15	Milling Copra	-	-	-	136.38	2,790	696.98
16	Onion	1,228.64	-	-	-	-	-
17	Potato	3,769.58	6,743.6	4,285.67	-	11,799.50	-
18	Dry Chillies	-	190.11	-	-	-	-
19	Garlic	-	-	-	-	-	23.8
20	Oil palm fruits	-	-	-	437.2	4,141.91	2,489.72

Source: Same as in Appendix Table 2.4

**Appendix Table 2.8: Procurement of Various Commodities by All the Agencies Under Different Price Support Schemes During 1996-97 in Karnataka**

(In m. Tonnes)

Commodity	M.S.P.	M.I.S.	Commercial	Total
Rice	82,730	-	-	82,730
Paddy	-	-	-	-
Maize	-	-	-	-
Ragi	-	-	-	-
Bajra	-	-	-	-
Tur	-	-	-	-
Bengal Gram	-	-	-	-
Green Gram	-	-	-	-
Black Gram	-	-	-	-
Groundnut	-	-	-	-
Safflower	-	-	-	-
Sunflower	-	-	-	-
Soyabean	-	-	-	-
Ball Copra	-	-	-	-
Milling Copra	-	-	-	-
Onion	-	721.4	507.24	1,228.64
Potato	-	-	3,769.58	3,769.58
Dry Chillies	-	-	-	-
Garlic	-	-	-	-
Oil Palm fruits	-	-	-	-

Source: Same as in Appendix Table 2.4

**Appendix Table 2.9: Procurement of Various Commodities by All the Agencies Under Different Price Support Schemes During 1997-98 in Karnataka**

(In m. Tonnes)

Commodity	M.S.P.	M.I.S.	Commercial	Total
Rice	91,874	-	-	91,874
Paddy	-	-	-	-
Maize	-	-	-	-
Ragi	-	-	-	-
Bajra	-	-	-	-
Tur	457.9	-	-	457.9
Bengal Gram	-	-	-	-
Green Gram	-	-	-	-
Black Gram	-	-	-	-
Groundnut	-	-	-	-
Safflower	-	-	-	-
Sunflower	-	-	795.36	795.36
Soyabean	-	-	-	-
Ball Copra	-	-	-	-
Milling Copra	-	-	-	-
Onion	-	-	-	-
Potato	-	-	6,743.6	6,743.6
Dry Chillies	-	190.11	-	190.11
Garlic	-	-	-	-
Oil Palm fruits	-	-	-	-

Source: Same as in Appendix Table 2.4

**Appendix Table 2.10: Procurement of Various Commodities by All the Agencies Under Different Price Support Schemes During 1998-99 in Karnataka**

(In m. Tonnes)

Commodity	M.S.P.	M.I.S.	Commercial	Total
Rice	100,442	-	-	100,442
Paddy	-	-	-	-
Maize	578.56	-	-	578.56
Ragi	-	-	-	-
Bajra	-	-	-	-
Tur	351.8	-	-	351.8
Bengalgram	-	-	-	-
Greengram	-	-	-	-
Blackgram	-	-	-	-
Groundnut	-	-	-	-
Safflower	-	-	-	-
Sunflower	-	-	795.36	795.36
Soyabean	-	-	-	-
Ball Copra	-	-	-	-
Milling Copra	-	-	-	-
Onion	-	-	-	-
Potato	-	4,285.67	-	4,285.67
Dry Chillies	-	-	-	-
Garlic	-	-	-	-
Oil palm fruits	-	-	-	-

Source: Same as in Appendix Table 2.4

**Appendix Table 2.11: Procurement of Various Commodities by All the Agencies Under Different Price Support Schemes During 1999-2000 in Karnataka**

(In m. Tonnes)

Commodity	M.S.P.	M.I.S.	Commercial	Total
Rice	111,710	-	-	111,710
Paddy	-	-	-	-
Maize	966.9	-	-	966.9
Ragi	-	-	-	-
Bajra	-	-	-	-
Tur	373.4	-	-	373.4
Bengal Gram	-	-	-	-
Green Gram	-	-	-	-
Black Gram	-	-	-	-
Groundnut	-	-	18,441.5	18,441.5
Safflower	-	-	-	-
Sunflower	17,680.48	17,680.48	-	35,360.96
Soyabean	963.43	963.43	-	1,926.86
Ball Copra	-	-	-	-
Milling Copra	-	136.38	-	136.38
Onion	-	-	-	-
Potato	-	-	-	-
Dry Chillies	-	-	-	-
Garlic	-	-	-	-
Oil Palm fruits	-	437.2	-	437.2

Source: Same as in Appendix Table 2.4



**Appendix Table 2.12: Procurement of Various Commodities by All the Agencies Under Different Price Support Schemes During 2000-01 in Karnataka**

(In m. Tonnes)

<b>Commodity</b>	<b>M.S.P.</b>	<b>M.I.S.</b>	<b>Commercial</b>	<b>Total</b>
Rice	2,28,643	-	-	228,643
Paddy	1,147.75	-	-	1,147.75
Maize	385,309.1	-	-	385,309.1
Ragi	15,741.6	-	-	15,741.6
Bajra	4,514.68	-	-	4,514.68
Tur	1,700.5	-	-	1,700.5
Bengal Gram	-	-	-	-
Green Gram	-	-	-	-
Black Gram	-	-	-	-
Groundnut	609.18	610.0	22775.35	23,994.53
Safflower	2,436.12	2,568.45	-	5,004.77
Sunflower	22,824.91	-	22,824.91	45,649.82
Soyabean	748.23	748.23	-	1,496.46
Ball Copra	-	47,19.94	-	47,19.94
Milling Copra	-	2790	-	2790
Onion	-	-	-	-
Potato	-	11,799.50	-	11,799.50
Dry Chillies	-	-	-	-
Garlic	-	-	-	-
Oil Palm fruits	-	4,141.91	-	4,141.91

Source: Same as in Appendix Table 2.4

**Appendix Table 2.13: Procurement of Various Commodities by All the Agencies under Different Price Support Schemes During 2001-02 in Karnataka**

(in m. tonnes)

Commodity	M.S.P.	M.I.S.	Commercial	Total
Rice	137,178	-	-	137,178
Paddy	110.425	-	-	110.425
Maize	17,782.97	-	294.12	18,077.09
Ragi	77,598.39	-	-	77,598.39
Bajra	-	-	-	-
Tur	125.24	-	1,240.0	1,365.24
Bengal Gram	68.153	-	-	68.1530
Green Gram	-	-	1,205.73	1,205.73
Black Gram	-	-	758.207	758.207
Groundnut	6,451.976	-	7,426.43	13,878.4006
Safflower	3,308.362	-	-	3,308.362
Sunflower	-	-	3,326.0	3,326.0
Soyabean	-	-	-	-
Ball Copra	35,979.36	-	-	35,979.36
Milling Copra	696.98	-	-	696.98
Onion	-	-	-	-
Potato	-	-	-	-
Dry Chillies	-	-	-	-
Garlic	-	-	23.8	23.8
Oil Palm fruits	-	2,489.72	-	2,489.72

Source: Same as in Appendix Table 2.4

## **CHAPTER III**

### **ADMINISTRATION OF MSP**

#### **3.1. Introduction**

The price intervention scheme began with a series of objectives and culminated into a price support scheme with the changes that occurred in the agricultural sector. Some of the objectives envisaged direct influence on the parameters of the economy whereas, the others were to be achieved indirectly through intervening variables. The price intervention scheme envisaged influencing the crop pattern, correcting the imbalances across crops, providing floor level support prices and creating price intently to the producer. All these objectives were toned in the price policy declared over the years under the CACP reports. It can be assumed that a certain level of efficiency in the implementation of the scheme must have been achieved. However, there are hardly any studies looking into the efficiency of the system operating at the ground level. These are neither initiated by the CACP nor taken up by academic fraternity independently. Therefore, there's hardly any literature on the effectiveness of Minimum Support Price scheme across states in the country. It is always assumed that the scheme has been operating perfectly across the countryside and thus providing the required support for the farmers across the length and breadth of the country. This assumption probably stems out of the experience of the implementation of the scheme in Punjab and Haryana only. Further, there were no severe aberrations in the process of implementation or at least these were not felt strongly. Therefore, aberrations if any never came to the discussion table. The scheme has been continuing unabatedly without much change in its implementation process. We are making an attempt here to look into the operations of the Minimum Support Price scheme in the state of Karnataka. Our views have emerged from the field visits made to various agencies, Regulated Market Yards, Karnataka State Agricultural Commission and discussions with the farm leaders.

#### **3.2. Agricultural Growth and MSP**

Agriculture sector in Karnataka has been characterised by intermittent phases of growth and stagnation. It is a matter of deep concern as this sector relates directly to the overall growth performance of the state economy. Efforts, both at policy and at implementation levels are being made to overcome the constraints and encourage growth boosters. The constraints mainly relate to proper price incentive structure, imperfections in the product and factor market, existing infrastructure facilities, forward

and backward linkages, and allied supportive activities. Besides these, current liberalization process has led to the emergence into prominence the role of market and domestic market related policies. If on the policy front proper corrections are incorporated to deal with the market induced imperfections and correct price signals are created in the economy, it will help the state economy to get onto a new path of development.

Karnataka State has a typical composition having large share of its area under severe climatic constraints with a highly diversified agricultural sector. It could not make strong forays in the industrial development except in the regions surrounding the cities of South Karnataka. The fact that the state has the largest share of drought-prone areas of the country and higher than the country's share of poor did not deter the state from achieving better rates of reduction in poverty ratio. The high density of low value and high-risk crops typifies the State agriculture. On the contrary and at the same time, the state has entered in a big way in the high-tech agriculture, only next to a few other states in the country. Therefore, the price incentive structure becomes an important component of agricultural policy in the State. The crop economy of the State has a few typical characteristics. It has a predominantly cereal dominant crop pattern with coarse grains having the largest share of area under them. These crops generally have low yield rates and lower prices and thus commercial crops are reported to support the agricultural economy. The growth pattern depends upon the performance of monsoon and the availability of water.

The area under total cereals in the state stood at 45 per cent (1999-00), down by 11 per cent from 56 per cent in 1955-58. The decline is mainly owing to the reduction in area under jowar and bajra. Incidentally, these two crops are among the lowest priced crops under MSP. The area under paddy increased by 3 per cent, from 8.7 to 11.6 per cent between 1955-58 and 1990-93 and stabilized around that level after that. The area under maize increased from about 0.1 per cent in 1955-58 to 2.5 per cent of the gross cropped area in 1990-93 and further to 4.31 per cent. Though there is a decline in the proportion of area under cereals, paddy, jowar, bajra, maize and wheat continue to be the dominant cereal and millet crops in the State (Table 3.1).

Cereals in general dominate the cropping pattern of the state. Rice is the major cereal crop in the Coastal and Malnad districts whereas, jowar and ragi are important staple foodgrains in northern and southern districts of Karnataka respectively. Area under pulses has remained more or less unchanged (around 14 per cent) during the last four decades.

**Table 3.1: Changes in Cropping Pattern**

(Area as per cent to GCA)

Crops	1955-58	1979-82	1990-93	1997-00
Rice	8.68	10.41	10.86	11.60
Wheat	2.91	3.17	1.80	2.16
Jowar	25.45	19.04	17.76	15.61
Bajra	5.11	5.67	2.98	3.04
Ragi	8.64	10.15	8.71	7.95
Maize	0.10	1.40	2.50	4.31
Total Cereals	56.46	53.28	44.97	45.31
Gram	1.55	1.32	1.90	—
Tur	2.80	3.31	3.60	3.74
Total Pulses	12.64	14.19	13.59	14.62
Groundnut	8.80	7.74	10.53	9.95
Sesamum	—	1.02	1.09	—
Safflower	—	1.48	1.35	—
Sunflower	—	1.00	10.22	—
Total Oil-seeds	12.08	12.56	24.39	19.56
Cotton	10.21	9.31	4.88	4.83
Sugarcane	0.52	1.50	2.32	2.71
Chillies	1.03	1.40	1.36	—
Tobacco	0.39	0.44	0.47	0.64
Coconut	0.86	1.59	2.02	-
Areca nut	0.29	0.50	0.55	-
Banana	—	0.35	0.27	-
Citrus	—	0.28	0.19	-
Mango	—	0.42	0.45	-
Coffee	0.61	1.03	1.19	-
Mulberry	—	1.07	1.29	-
Others	16.27	13.47	9.51	-
Total GCA in Lakh ha	104.3	110.3	121.9	120.02

Source: Directorate of Economics and Statistics, Govt of Karnataka, Bangalore.

However, the introduction of technology mission for oil-seeds and favourable price regime helped in the expansion of area under oil-seeds. The area under oil-seeds in the State, which was around 12 per cent till late 70s, increased to 24.4 per cent after 1980s but went down to 19.6 per cent. The gains in the oil-seeds area during the eighties were at the cost of cotton.

The area under groundnut and sunflower in the state shared about 4.6 and 1 per cent of the total area under respective crops in the country. Cotton is an important cash crop of the State. The area under cotton declined from 10 per cent to 5 per cent and much of the decline came after 1980-81. The area under other cash crops such as sugarcane, coconut, arecanut, etc., increased over the years (See Table 3.2).

**Table 3.2: Growth Rates of Area Under the Crops from the Years 1955-58 to 1999-2000**

Crops	Growth Rate
Rice	0.96
Wheat	-0.35
Jowar	-0.77
Bajra	-0.84
Ragi	0.13
Maize	9.06
Total Cereals	-0.18
Gram	0.95
Tur	0.96
Total Pulses	0.64
Groundnut	0.59
Sesamum	1.20
Safflower	0.06
Sunflower	18.91
Total Oil-seeds	1.39
Cotton	-1.34
Sugarcane	4.06
Chillies	1.15
Tobacco	1.42
Coconut	2.69
Arecanut	2.12
Banana	-1.13
Citrus	-2.03
Mango	1.21
Coffee	2.19
Mulberry	2.07
Others	-1.00
Total GCA	0.31

Source: Based on the data collected from the Directorate of Economics and Statistics, Govt. of Karnataka, Bangalore.

At the macro-level, cash crops shared relatively larger irrigated area when compared with foodgrains across the farm sizes and social groups. The proportion of irrigated area under cereals was relatively higher on small farms when compared to large farms and the opposite was true in the case of oil-seeds. One can visualise three broad trends in the area allocation across crops. Firstly, it is found that the area under cereals and millets is decreasing over the years and this area is largely transferred to commercial crops. Secondly, large share of resources (in terms of irrigation and inputs) is allocated to irrigated high value crops and thus, the yield rates of irrigated crops are comparable to the national averages. Lastly, in northern Karnataka and in the rainfed portions of southern Maidaan, the crop pattern is largely diversified whereas the coastal Karnataka and irrigated regions seem to prefer mono-cropping.

Production trends of important crops have been analysed here with the help of compound rates of growth for production and productivity for the period 1955-56 to 1993-94 and separately for 1990 to 2000. It is observed that the production of cereals in the State has grown at 2.13 per cent per annum during the period 1955-56 and 1993-94. The entire growth has been contributed by the yield as area under cereals in the State decelerated during this period. The expansion in area under cereals during 1955-56 through 1967-68 resulted in significant growth in cereal production in the State (Tables 3.3 and 3.4). The cereal production in the State increased marginally (by 0.0116 per cent per annum) between 1980-81 and 1990-91 and this miniscule growth was due to lower levels of production during the late 1980s. Concerned with this, the State government appointed an Expert Committee (under the Chairmanship of Sri T R Satish Chandran) to probe into the factors responsible for stagnation in agricultural production. However, there was a recovery during 1992-93 and an analysis of production data for 1980-81 through 1993-94 indicated a growth rate of around 1.78 per cent. It is essential to underscore that the growth in production during this period came mainly through yield improvements. But the deceleration was again visible during the nineties. The role of price incentives is certainly important in this structure of growth.

The growth performance till 1993 marks a clear path of growth but during nineties the growth in the crop economy slowed down. This can be seen from Table 3.4.

The growth performance clearly indicates the slow growth of crops and crop groups. The performance is influenced by technology, prices, marketability and relative crop economy. Among these factors the role of

prices and not income, which is quite crucial (Deshpande 1996). While explaining the performance of slow growth crops, the role of relative prices as well as administered prices becomes crucial and significant. Even among these two variables, the administered prices reflect the policy direction and a well thought over policy to influence the decision criteria. Therefore, the analysis of the role of administered prices becomes pivotal to understand the growing imbalances.

**Table 3.3: Average Cropping Pattern Across the Districts in Karnataka (Based on the Average from 1989-90 to 1991-92)**

(Area as per cent to GCA)

Districts	Paddy	Ragi	Jowar	Tur	Groundnut	Sugarcane	Total
Bangalore	6.82	48.66	0.00	2.09	4.96	0.39	62.93
Belgaum	5.96	0.34	24.69	1.34	9.81	9.40	51.55
Bellary	5.79	4.78	23.84	2.47	10.83	1.18	48.89
Bidar	4.55	0.00	27.30	9.85	2.45	4.87	49.03
Bijapur	0.12	0.00	34.79	2.26	8.23	2.13	47.53
Chikmagalur	16.26	17.95	5.90	0.35	2.15	0.59	43.21
Chitradurga	7.25	15.49	10.48	1.67	20.65	1.04	56.59
Dakshina Kannada	50.95	0.00	0.00	0.00	1.00	1.24	53.19
Dharwad	6.67	0.86	19.25	1.49	11.72	0.46	40.45
Gulbarga	1.42	0.01	27.63	19.66	10.16	0.41	59.29
Hassan	12.90	34.86	2.22	0.93	1.09	0.84	52.84
Kodagu	30.04	0.80	0.00	0.00	0.06	0.01	30.91
Kolar	11.26	27.23	1.62	2.23	24.21	1.04	67.59
Mandya	23.04	29.67	1.94	0.79	3.80	9.73	68.96
Mysore	14.17	17.56	11.97	1.37	4.92	2.09	52.07
Raichur	9.72	0.00	28.25	3.87	12.19	0.20	54.23
Shimoga	44.63	8.97	6.55	0.50	5.23	4.82	70.70
Tumkur	5.63	30.49	1.63	1.54	29.76	0.38	69.42
Uttara Kannada	65.83	0.21	0.34	0.16	4.49	1.56	72.59
<b>Karnataka</b>	<b>10.00</b>	<b>9.07</b>	<b>18.20</b>	<b>4.00</b>	<b>10.38</b>	<b>2.14</b>	<b>53.79</b>

Source: Computed from the data collected from the Directorate of Economics and Statistics, Govt. of Karnataka, Bangalore.







**Table 3.6: Area, Production and Yield of Principal Crops:  
Karnataka**

<b>Area : '000 hectares, Production : '000 tonnes, Yield : kg per hectare</b>						
<b>Year</b>	<b>Rice</b>			<b>Jowar</b>		
	Area	Production	Yield	Area	Production	Yield
1990-91	1,173	2,415	2,059	2,155	1,353	628
1991-92	1,269	2,826	2,227	2,086	1,707	818
1992-93	1,317	3,069	2,331	2,306	1,926	835
1993-94	1,374	3,183	2,317	2,086	1,895	909
1994-95	1,296	3,168	2,445	2,165	1,638	756
1995-96	1,265	3,024	2,390	1,976	1,718	869
1996-97	1,359	3,212	2,364	1,999	1,898	950
1997-98	1,353	3,213	2,374	1,897	1,254	661
1998-99	1,426	3,605	2,529	1,845	1,670	905
1999-2000	1,344	3,380	2,515	1,876	1,658	884
<b>Growth Rate</b>	<b>1.29</b>	<b>3.04</b>	<b>1.72</b>	<b>-1.98</b>	<b>-0.25</b>	<b>1.77</b>
<b>Year</b>	<b>Ragi</b>			<b>Tur (Arhar)</b>		
	Area	Production	Yield	Area	Production	Yield
1990-91	1,054	1,043	989	463	175	379
1991-92	1,066	1,444	1,354	503	173	345
1992-93	1,038	1,536	1,479	450	86	192
1993-94	1,029	1,567	1,523	361	155	430
1994-95	944	1,353	1,433	302	119	395
1995-96	1,020	1,618	1,587	424	202	476
1996-97	1,035	1,495	1,444	445	229	514
1997-98	939	1,283	1,367	422	99	234
1998-99	1,027	1,805	1,759	473	216	456
1999-2000	850	1,392	1,638	478	289	605
<b>Growth Rate</b>	<b>-1.57</b>	<b>2.02</b>	<b>3.65</b>	<b>0.30</b>	<b>5.27</b>	<b>4.89</b>

Year	Groundnut		
	Area	Production	Yield
1990-91	1,212	828	683
1991-92	1,332	1,110	833
1992-93	1,276	1,142	895
1993-94	1,243	1,199	964
1994-95	1,200	946	788
1995-96	1,192	1,139	955
1996-97	1,285	1,147	893
1997-98	1,040	714	687
1998-99	1,230	1,229	999
1999-2000	1,095	916	837
<b>Growth Rate</b>	<b>-1.44</b>	<b>-0.41</b>	<b>1.06</b>

Source: Commission on Agricultural Costs and Prices Report, 2001-02, Government of India, New Delhi, 2002.

**Table 3.7: Compound Growth Rates in Crop Economy: 1955-56 to 1993-94**

(Per cent per annum)

Crops	Area	Production	Productivity
Rice	0.60	2.21	1.60
Wheat	-0.63	2.73	3.38
Jowar	-0.84	1.26	2.12
Bajra	-0.47	2.19	2.67
Ragi	0.44	2.17	1.72
Maize	10.76	15.52	4.76
Total Cereals	-0.30	2.13	2.43
Gram	1.02	1.80	0.77
Tur	1.42	1.94	0.52
Total Pulses	0.83	1.79	0.95
Groundnut	0.65	1.55	0.90
Total Oil-seeds	2.18	2.74	0.54
Cotton	-1.60	2.39	4.06
Sugarcane	4.40	4.87	0.45

Source: Deshpande and Raju (2001), Bangalore.

**Table 3.8: Growth Rates in Crop Economy: 1990-91 to 2000-01**  
(Per cent per annum)

Crops	Area	Production.	Productivity
Rice	1.29	3.04	1.72
Ragi	-1.57	2.02	3.65
Jowar	-1.98	-0.25	1.77
Bajra	-1.40	-9.18	-7.89
Maize	7.75	6.86	-0.83
Wheat	3.98	4.78	0.77
Minor Millets	-6.68	-5.43	1.35
Total Cereals	0.14	-0.03	-0.17
Tur	0.30	5.27	4.89
Total Pulses	3.92	-1.11	-4.84
Total Foodgrains	1.02	-0.12	-1.12
Groundnut	-1.44	-0.41	1.06
Total Oil-seeds	-3.81	-9.56	-5.98
Sugarcane	-0.7	1.49	2.21
Cotton	-3.01	-3.42	-0.42
Tobacco	5.74	4.75	-0.93

Source: Based on the data collected from the Directorate of Statistics, Government of Karnataka.

### 3.3. Relevance of MSP for Major Crops of the State

Minimum Support Price scheme is in operation in the State right from the starting of the scheme. The crops covered include paddy, wheat, jowar, ragi, maize, gram, tur, groundnut, sugarcane, sunflower and cotton. These crops are covered under MSP and have been included in the scheme for the last 25 years. The growth rates in MSP over the period 1991-92 to 2000-2001 have been presented in Table 3.9. As it can be seen from the Table, the growth is higher in the commercial sector as against the food crop sector. Paddy is an exception. But the procurement of paddy is not done in the State. Even in the case of other major crops, the State procurement as a ratio of the total production is quite low.

**Table 3.9: Annual Compound Growth Rates (CGR) in MSP:  
1991-2001**

Crop	Paddy	Wheat	Jowar	Ragi	Maize	Gram	Tur	Groundnut	Sugarcane	Sunflower	Cotton
CGR	10.65	5.98	8.61	8.61	8.24	8.46	8.24	6.56	11.29	5.62	9.48

Note: Based on the data of MSP

The relevance of MSP to the farm sector can be viewed from three different angles. First, the declaration of MSP should be at the time when the farmer has to take a decision about the crop. It is stipulated that the Minimum Support Prices 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 year. However, even after more than two decades of exercise the MSP is not declared before decision-making about the sowing. This year the MSP was declared by the end of September when the crops was ready for harvest. Table 3.10 gives the date of declaration of MSP from 1984-85 onwards.

**Table 3.10: 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, oil-seeds & cotton	-	July 1984 & September 1984	-
1985-86	Kharif	Foodgrains, oil-seeds & cotton	-	27.09.1985 & 11.11.1985	-
1986-87	Kharif	Foodgrains, oil-seeds & cotton	-	29.08.1986 & 25.09.1986	-
1987-88	Kharif	Paddy, Kharif coarse cereals, pulses, oil-seeds & raw cotton	23.02.1987	27.08.1987	03..031987
1988-89	Kharif	Paddy, Kharif coarse cereals, pulses, oil-seeds & 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, oil-seeds & cotton	19.03.1993	22.07.1993	17.08.1993
1994-95	Kharif	Kharif foodgrains, oil-seeds & cotton	31.03.1994	09.04.1994	22.06.1994
1995-96			-	-	-
1996-97	Kharif	Kharif foodgrains, oil-seeds & cotton	11.04.1996	02.08.1996	28.08.1996
1997-98	Kharif	Kharif foodgrains, oil-seeds & cotton	27.04.1997	30.06.1997	12.08.1997
1998-99	Kharif	Kharif foodgrains, oil-seeds & cotton	07.04.1998	10.08.1998	04.09.1998
1999-2000	Kharif	Kharif foodgrains, oil-seeds & cotton	05.04.1999	20.07.1999	13.09.1999

Source : Commission of Agricultural Cost and Price Reports form 1984-85 to 1999-00

We can see that there is a considerable gap in the submission of CACP report and the declaration of MSP. In addition to the fact that in most of the years MSP has been declared well after sowing was completed and the farmer was committed to the crop.

Second, MSP needs to provide the floor level price for the crops under consideration. The main objective of MSP is that it should provide

such a floor at the time when prices crash below the promised level. Here, it is not only the declaration of MSP but its implementation process also gets involved. Third, the relevance of MSP emerges in the form of extension of participation of the farmers in the scheme and their exposure to it. The participation certainly depends upon the prices going below the MSP; however, the very fact that the farmers are aware or unaware of the scheme gives clear clue about their participation. We shall look into this aspect from the point of view of the present administrative structure here. The micro-level process will be taken up in the next chapter.

### **3.4. Implementation Process of MSP**

#### **3.4.1. The Process**

Implementation of MSP in the State of Karnataka had been quite an oblique task. 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 the 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 3.1). The procurement agencies also have to identify the State level procurement network. Food Corporation of India has good 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\*.

#### **3.4.2. Institutions Involved**

There are various institutions involved in the process of implementation of MSP at the State level. The involvement of these

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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.

institutions makes the functioning more complex than easy. These institutions include Karnataka Food and Civil Supply Corporation, Karnataka State Co-operative Marketing Federation, Karnataka Oil Seed Growers Federation and the National Agricultural Co-operatives Marketing Federation (NAFED). The procurement of foodgrains is entirely the responsibility of the Food and Civil Supplies Corporation at the State level. Oil-seed growers' Federation deals with oil-seeds whereas NAFED has the responsibility of procuring other commodities. We give below a brief description of their activities.

### **3.4.2.1. National Agricultural Co-operative Marketing Federation of India**

This is an apex institution dealing with co-operative marketing in the country and it 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 oil-seeds and pulses under the Price Support Scheme.
- Acting as one of the agencies of the Government of India for making purchases under market intervention scheme.
- Acting as a channelising agency of the Government of India for select commodities.
- Assisting farmers to source various agricultural inputs.

NAFED undertakes its operations through two agencies, namely, Taluka Agricultural Produce Cooperatives (TAPC) and Agricultural Produce Marketing Committee (APMC). The regional office of NAFED is in Chennai and its head office is in New Delhi. NAFED decides about the procurement mainly on the basis of the budget available: The regional office and the branch offices will get the information from the State Marketing Boards whenever prices slide down below MSP. It is only at the behest of the State Marketing Board that NAFED begins its intervention in the market and starts procurement. Main APMCs send the information of arrival and prices of the commodity to NAFED every day. But it does not act *suo motto*. NAFED procures groundnut, soyabean, safflower, sunflower and sesamum, gram, tur, black gram and copra. Information about the price situation takes about one week to reach from regional or branch office to the Head office. It is only then that the Head Office makes available the required



funds to the regional office and thus NAFED can enter into the market and start procuring.

***NAFED has 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 the one hand, even though the interventions are beneficial for the procurement agency it 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 market at the proper time. In the context of liberalisation, it is quite prudent to allow free hand to agencies like NAFED to undertake purchases through market interventions. We have presented in Table 3.11 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 3.11 on 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 is neither 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 can hardly make any dent on the market and prices. However, this is interesting 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 3.11: Procurement of Agricultural Commodities by NAFED**

Commodity	Year	Support Price Rs. P.Qtl (FAQ)	Qty Produced	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
	1996-97	110/100	(141.43)	137.51	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.

Table 3.12 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, indicate that they would like to intensify their presence in the market. This not only helps

increase competition in the market but also enhances market functioning and protects the producers against fluctuations.

**Table 3.12: National Agricultural Co-Operative Marketing Federation (NAFED)**

Sl. No.	Objectives	Operations Undertaken to Meet the Objectives
1	Providing market support to the 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 undertaking purchases of oil-seeds and pulses under the price support Scheme.	Oil-seeds 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 channelising agency of the Government of India for select commodities.	Effectively acts as channelising agency
5	Assisting farmers to source various agricultural inputs.	Sporadic instances
6	NAFED appoints the agent for the 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-

#### **3.4.2.2. Karnataka Food and Civil Supply 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 the State of Karnataka. The KSFCS handles procurement of foodgrains and the storage. It also receives foodgrains 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 and the procurement takes at all the stages. The APMC reports about the fall in price to the Deputy Director of Food and Civil Supplies, who, in turn, apprises 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 the procurement operation that it should take place after it is reported to the State Authorities for necessary permission and funds. The procurement points are opened only after the State level authorities direct the procurement. This entire exercise takes at least two weeks, and till then the farmer cannot wait in the market yard. Recently, the Government of Karnataka has taken a decision to open permanent procurement centres in the APMC yards. KSFCS makes significant profits 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	361,000	tonnes
Ragi	15,000	tonnes
Bajra	4,500	tonnes
Paddy	1,100	tonnes

Recently, the FCI procured directly 132,000 tonnes of maize for Rs. 445/q and KFCSC sold that at Rs 405/q and incurring a 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 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 the PDS scheme. The PDS rates are almost closer to open market rates and therefore, BPL households usually buy at the fair price shops. In a taluka, 65 per cent of the PDS allocation is managed by the KFCSC and another 35 per cent is met from the co-operative societies.

**Table 3.13: Total Number of Godowns Owned, Hired – Govt. and Private: 2000-01**

Districts	Owned by KFCSC						TAPCMS Godowns hired						Total Godowns	
	Govt. Godowns		Private Godowns hired		Total Godowns		Private Godowns hired		Total Godowns		Total Godowns			
	Numbers	Capacity	Numbers	Capacity	Numbers	Capacity	Numbers	Capacity	Numbers	Capacity	Numbers	Capacity		
Bagalkote	0	0	0	0	4	1,000	3	750	7	1,750				
Bangalore	7	7,500	2	500	2	900	6	2,500	17	11,400				
Bellary	0	0	5	3,150	0	0	1	250	6	3,400				
Bellary	0	0	1	1,000	7	2,650	0	0	8	3,650				
Bidar	2	800	1	350	2	1,650	1	600	6	3,400				
Bijapur	1	300	2	800	1	300	1	200	5	1,600				
Chamarajanagar	1	300	0	0	1	300	1	300	3	900				
Chikmagalur	0	0	2	800	1	600	2	350	5	1,750				
Chitradurga	0	0	2	460	2	800	0	0	4	1,260				
D Kannada	0	0	0	0	4	1,200	0	0	4	1,200				
Davanagere	0	0	1	440	6	2,130	0	0	7	2,570				
Dharwad	0	0	1	500	4	1,050	0	0	5	1,550				
Gadag	0	0	0	0	5	1,420	2	600	7	2,020				
Gulbarga	3	900	4	3,400	3	2,100	1	200	11	6,600				
Hassan	0	0	0	0	8	3,040	1	400	9	3,440				
Haveri	0	0	1	600	2	540	2	600	5	1,740				
Kodagu	0	0	0	0	1	300	1	280	2	580				
Kolar	0	0	2	900	6	2,300	1	250	9	3,450				
Koppal	0	0	1	500	3	2,400	0	0	4	2,900				
Mandya	0	0	1	2,000	0	0	3	1,000	4	3,000				
Mysore	0	0	0	0	3	780	5	2,700	8	3,480				
Raichur	0	0	4	3,650	2	500	0	0	6	4,150				
Shimoga	2	10,000	1	400	6	1,600	1	300	10	12,300				
Tumkur	0	0	2	2,000	3	900	4	3,100	9	6,000				
U Kannada	1	800	1	1,000	2	850	0	0	4	2,650				
<b>Total</b>	<b>17</b>	<b>20,600</b>	<b>34</b>	<b>22,450</b>	<b>78</b>	<b>29,310</b>	<b>36</b>	<b>14,380</b>	<b>165</b>	<b>86,740</b>				

Source: Office of the Karnataka Food and Civil Supplies Corporation, Bangalore.

The State has godowns to store about 3.40 lakh metric tonnes of grains. This is neither sufficient nor well spread in the State (see Table 3.13).

#### **3.4.2.2. 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 is involved in procurement operations. KSCMF gets the requests for procurement of commodities from APMC or directly from the farmers. It is only then that 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 per cent 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. It was also reported that KSCMF's procurement is demand-oriented and their presence in the market is not obligatory. KSCMF had procured huge quantities of cotton a few years back and in the process incurred losses to the tune of Rs 5 crores. Experience suggests that the 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 the best results.

#### **3.4.2.3. 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 oil-seeds 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 Oil-seed Growers Co-operative Societies all over the State which are situated in the villages (14 major oil-seed growing districts). Every season KOF signs an agreement with the NAFED, and after that the funds are given by NAFED to procure the commodities. There is a strict quality

**Table 3.14: Karnataka State Co-Operative Marketing Federation (KSCMF)**

Sl. No.	Objectives	Meeting the Objectives
1	KSCMF purchases fertilizer and pesticides from the industry and provides them to the farmers at reasonable prices.	Usually this is the main function undertaken by the 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 them from the open market.
2	KSCMF maintains cold storages in different areas for farmers' service.	The construction and maintenance of cold storages are the activities undertaken, but the capacity utilisation is quite low. Therefore, these activities are not financially viable.
3	KSCMF undertakes construction of cold storage at the necessary places.	—
4	KSCMF is required to procure/purchase agricultural 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.
5	KSCMF is required to maintain godowns for the storage of procured quantity.	Godowns are maintained but a good number of them are rented out.
6	KSCMF is required to maintain good relationship with APMC.	APMCs and KSCMF have very close ties and good working relationship
7	KSCMF takes loans from different Banks to distribute fertilizer to the farmers in advance in the season.	Activity is undertaken.
8	The main objective of KSCMF is to give good price for farmer's agricultural 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
9	If the seeds are not available in the sowing season then the KSCMF will provide the seeds to the farmers.	This activity is undertaken but it has little significance in meeting the overall demand.

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 and Hubli) control the Oil-seed Growers Co-operatives in the State. In the recent, KOF has procured substantial quantity of oil-seeds from the open market as indicated in Table 3.15.

**Table 3.15: Procurement of Oil-seeds by KOF**

(Quantity in Tonnes)

Commodity	1999-2000	2000-01	2001-02
Groundnut	-	609	-
Sunflower	17,680	23,000	40,000
Safflower	-	2,440	10,650
Soybean	963	740	-

Source: NAFED office, Bangalore.

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. Fourth, they are certainly making 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 these institutions have been over-staffed both for the operations as well as infrastructure.

### 3.5. Improving Implementation

Minimum Support Prices have been in operation as a price support scheme for over a quarter of a century and it is time to look back at the effectiveness of this scheme. 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 itself is imperfect and that provides further scope for the process to fail. The APMCs and other market intervention agencies perform their functions in a way that the farmer and the primary producer rarely benefit. Therefore, if the intervention itself is withdrawn and replaced with proper institutional framework, probably the gain will be on the farmers' side. Such scheme requires the market institutions to intervene selectively but timely when the market prices fall below the declared MSP. However, timely intervention in the agricultural markets, at least in Karnataka, 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 market at a price lower than the MSP and sell it at the procurement centre at the MSP and in the process earn good profits. This had happened in the case of maize procurement in Karnataka recently. 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 the Karnataka Government has opened procurement centres at all the APMCs and a special fund is created for this purpose.

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 of the others. They work independently. 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 the apex bodies to effect such collaboration.

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 reforming of the APMC's functioning 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 traders; and iv. reducing the dependence of the farmers on traders and breaking the interlocking of the credit and product market. In addition to these the monitoring of the prices and a proper information system are required in all the APMCs. Thus, reforms at the APMC level should take priority over other factors.

**Appendix Table 3.1: State-wise Procurement of Rice, Wheat and Foodgrains**  
(In thousand Tonnes)

State	Rice			Wheat			Total Foodgrains					
	1997	1998	1999	2000	1997	1998	1999	2000	1997	1998	1999	2000
Andhra Pradesh	4,538	4,017	5,440	6,033	0	0	0	0	4,540	4,017	5,440	6,050
Assam	1	0	0	0	0	0	0	0	1	0	0	0
Bihar	8	14	0	21	0	0	0	0	8	14	0	21
Gujarat	0	0	0	0	0	2	0	0	13	7	0	0
Haryana	918	805	928	1,360	2,290	3,158	3,870	4,498	3,208	3,963	4,798	5,858
Karnataka	72	107	104	135	0	0	0	0	72	107	104	186
Kerala	0	0	0	0	0	0	0	0	0	0	0	0
Orissa	462	703	498	951	0	0	0	0	462	703	498	951
Punjab	5,629	4,710	6,856	6,600	5,961	6,146	7,831	9,424	11,590	10,856	14,687	16,024
Madya Pradesh	692	910	672	964	107	530	542	350	802	1,443	1,214	1,330
Maharashtra	34	16	22	47	0	0	0	0	38	18	22	114
Rajasthan	6	4	30	5	320	666	636	539	326	670	666	564
Tamil Nadu	1,131	834	794	1,205	0	0	0	0	1,131	834	794	1,205
Uttar Pradesh	618	1,329	1,061	1,357	618	2,141	1,261	1,545	1,236	3,470	2,322	2,902
West Bengal	143	205	196	263	0	0	0	0	143	205	196	263
Chandigarh	11	13	14	18	2	0	0	0	13	13	14	18
All India	14,267	13,676	16,630	18,989	9,298	12,652	14,143	16,357	23,587	26,338	30,773	35,486

Note : Provisional Figures except 1997 are provided.

Source : Bulletin on Food Statistics (1998 - 2000), Directorate of Economics and Statistics, Ministry of Agriculture, Government of India.

Appendix Table 3.2: State-wise Public Distribution of Rice, Wheat and Foodgrains

(In thousand Tonnes)

State	Rice					Wheat					Total Foodgrains					
	1997	1998	1999	2000	1997	1998	1999	2000	1997	1998	1999	2000	1997	1998	1999	2000
Andhra Pradesh	2,216	2,123	2,441	22,621	162	143	161	173	2,378	2,266	2,602	2,794	2,378	2,266	2,602	2,794
Assam	448	568	562	405	263	232	341	163	751	800	903	568	751	800	903	568
Bihar	132	248	244	206	721	722	786	697	742	970	1,030	903	742	970	1,030	903
Chandigarh	3	2	1	0	7	5	2	4	10	7	3	4	10	7	3	4
Gujarat	217	248	220	188	669	456	529	730	886	704	749	918	886	704	749	918
Haryana	31	14	17	14	210	117	297	205	241	131	314	219	241	131	314	219
Karnataka	992	980	933	1,005	309	348	410	431	1,301	1,328	1,343	1,436	1,301	1,328	1,343	1,436
Kerala	1,704	1,701	1,375	681	390	473	352	224	2,094	2,174	1,727	905	2,094	2,174	1,727	905
Madya Pradesh	425	378	407	418	464	404	348	388	889	782	755	806	889	782	755	806
Maharashtra	752	842	935	668	1,017	1,097	1,370	894	1,769	1,939	2,305	1,562	1,769	1,939	2,305	1,562
Orissa	638	660	746	1,075	300	426	263	228	938	1,086	1,009	1,303	938	1,086	1,009	1,303
Punjab	1	22	12	2	1,017	17	46	28	1,018	39	58	30	1,018	39	58	30
Rajasthan	10	44	94	8	811	545	365	838	821	589	459	846	821	589	459	846
Tamil Nadu	1,516	1,358	1,711	1,491	201	259	361	280	1,717	1,617	2,072	1,771	1,717	1,617	2,072	1,771
Uttar Pradesh	472	539	566	107	1,256	1,176	1,156	485	1,728	1,715	1,722	592	1,728	1,715	1,722	592
West Bengal	550	344	381	389	900	1,021	915	768	1,450	1,365	1,296	1,157	1,450	1,365	1,296	1,157
All India	11,635	11,584	12,223	9,987	9,829	8,653	8,700	7,337	21,464	20,237	20,923	17,324	21,464	20,237	20,923	17,324

Note: Same as in Appendix Table 3.1

Source: Same as in Appendix Table 3.1



**Annexure 3.1****GOVERNMENT OF KARNATAKA ORDER****Sub: Procurement of foodgrains through Minimum Support Prices fixed by the Government of India.**

- Ref:** 1. Government of India letter number 06.01.2000 FES, ES Date : 01.09.2000.  
2. Government order number FCS 24 RPR 98 (P) 11 Date : 03.11.1998.

**Preamble :**

According to the circular form Govt. of India Dated 01.09.2000 MSP for Kharif crops for the year 2000-01 are fixed. As mentioned in the state Govt.(2) order, Task Force committee are set up at state and district level for procuring foodgrains through MSP. Government will take all the adequate steps through MSP for foodgrains: cotton, Oil seeds, Cereals and pulses are procured through Karnataka Food and Civil Supply Corporation. Cotton Corporation of India (CCI), Karnataka cooperative Oil seed growers Federation (KOF), National Agricultural Co-operative Market Federation (NAFED) and Karnataka State Co-operative marketing federation are working as sub agency under FCI and NAFED. If market prices of foodgrains : cotton, oil seeds and cereals are less than the minimum support prices then the above federations (FCI/ NAFED) interfere with the market and order to the sub agencies to procure foodgrains from the farmers as usual in every year. So, examine the proposal and ordered as,

**Government order no. FCS 13 RPR 2000 Bangalore Date: 04.10.2000**

As stated above, the Government of India has fixed MSP for below mentioned foodgrains. In the market, if market prices are less than the MSP for below mentioned crops & corresponding price then FCI order to sub agencies to procure.

<u>Sl.no</u>	<u>Crops</u>	<u>MSPRs./quintal</u>
1	Paddy ( common)	510.00
2	Paddy (Grade A.)	540.00
3	Maize (FAQ)	445.00
4	Jowar	445.00
5	Bajra	445.00
6	Ragi	445.00
7	Tur (Arhar)	1,200.00
8	Green gram	1,200.00
9	Urad	1,200.00
10	Groundnut	1,220.00
11	Soyabean(Black)	770.00
12	Soyabean(Yellow)	865.00
13	Sesamum (FAQ)	1,300.00
14	Sunflower	1,170.00
15	Niger seed (FAQ)	1,025.00
16	Cotton (F414,H777 & J34)	1,625.00
17	Cotton H4	1,825.00

2. Government order no. FCS 24 RPR 98 section (2) dated 03.11.1998 is set up the state level and district level task force committee and is also continued to 2000-01 kharif market season and ordered as the programme should conducted under MSP.
3. As above stated if the prices of crops are below MSP then the below mentioned federations interfere in the market and procure the crops from the farmers.

Corporation : Sub agencies of federations are set up as Nodal agencies

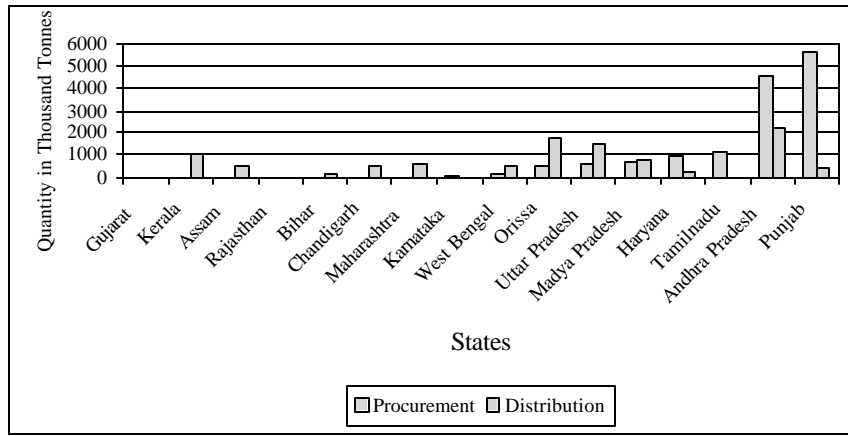
<u>Sl.no.</u>	<u>Cropdetails</u>	<u>Nodalagencies</u>	<u>Subagencies</u>
1	Paddy (common) Paddy (Grade A.) Jowar, Bajra, Ragi and Maize	FCI	KFCSCCLB
2	<u>Pulses</u> Tur, Green Gram Urad	NAFED	1. KFCSCCLB 2. MARKFED (Karnataka State Co- operative Market Federation).  Karnataka State Co- operative Market Federation.
3	<u>Oil Seeds</u> Groundnut Soyabean(Black) Soyabean(Yellow) Sesamum Sunflower Nigerseed	NAFED	Karnataka State Co- operative Oil-seed Growers Federation (KOF)
4	<u>Cotton</u> Cotton F-414 H-777 J-34	FCI	Cotton Corporation of India. (Hubli & Raichur).

2. Based on the opinion of farmers for above mentioned crops for MSP is sold to the mentioned institutions

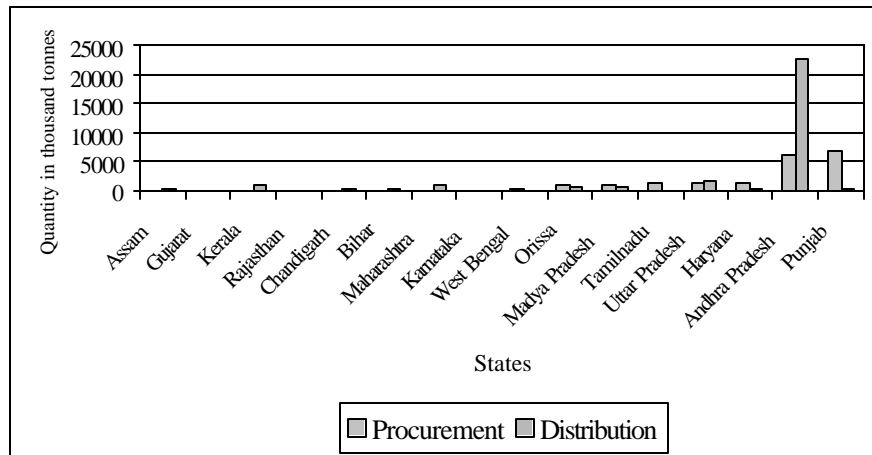
**Annexure 3.2**

**State-wise Procurement and Public Distribution of Rice, Wheat and Foodgrains in 1997 and 2000**

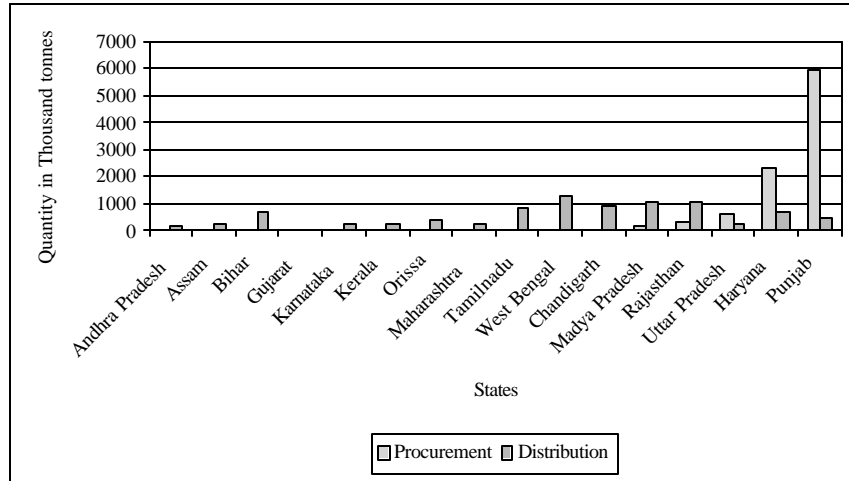
**State-wise Procurement and Public Distribution of Rice in 1997**



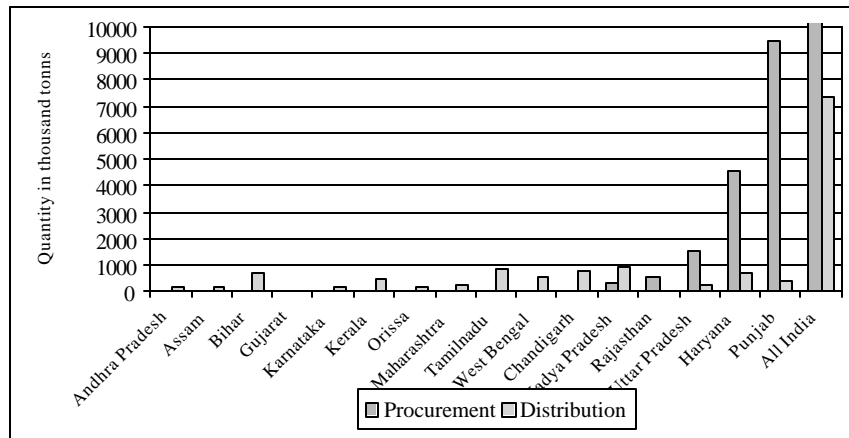
**State-wise Procurement and Public Distribution of Rice in 2000**



**State-wise Procurement and Public Distribution of Wheat in 1997**

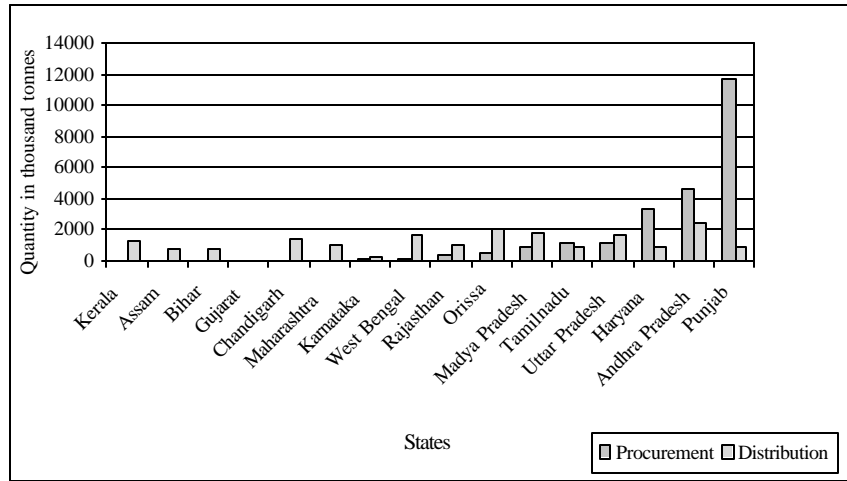


**State-wise Procurement and Public Distribution of Wheat in 2000**

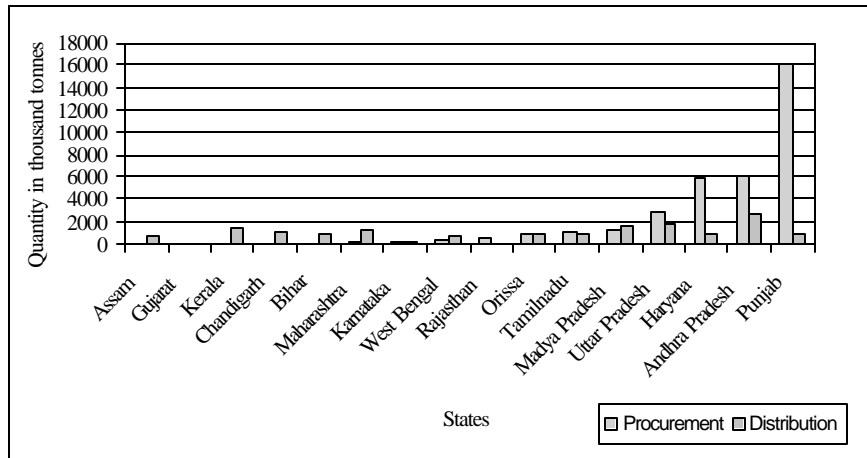




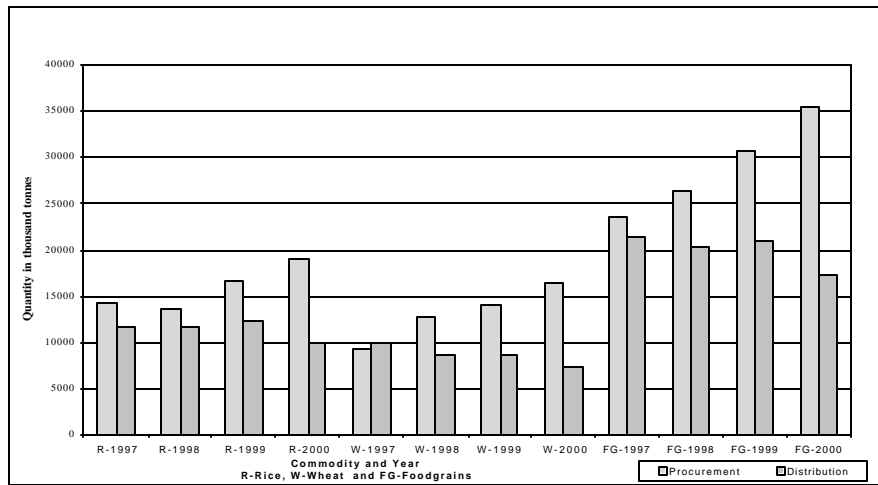
**State-wise Procurement and Public Distribution of Total Foodgrains in 1997**



**State-wise Procurement and Public Distribution of Total Foodgrains in 2000**



### All India Procurement and Public Distribution of Rice, Wheat and Total Foodgrains



## **CHAPTER IV**

### **IMPACT OF MSP**

#### **4.1. Introduction**

The analysis of the impact of MSP at the State and District levels indicates that the policy has not been widespread as expected in the basic design. Therefore, it will be interesting to get at the question of effectiveness of the policy at the micro-level. In order to understand the effectiveness of the policy at the micro-level, we conducted widespread field survey in three districts of Karnataka. The districts were chosen with a focus on the purpose of our analysis. As a first step, we selected a district that had a predominant commercial crop pattern and higher density of market participation by the farmers. It was ensured that the district also had a larger share of marketable surplus. This clearly gave us a region that was active in the process of commercialisation and therefore, expected to have more number of beneficiaries of the MSP scheme. Keeping these requirements in view, we selected Mandya district, which is called the Punjab of Karnataka. This represents a region in the State growing a major non-food crop and having commercial crop-oriented economy. Second, we needed a district with moderate to high growth rates in the food crop economy and predominantly growing the crops included under MSP. We selected Belgaum district as a representative of this situation. Belgaum has food crops dominated crop economy and it is characterised with moderate to high growth in agricultural sector. Third, we selected a slow growing and fragile eco-region predominantly growing food crops covered under MSP. Gulbarga district typically represents such a region in the State growing mainly food crops and having slow growth in its crop economy. Gulbarga also happens to be one among the most backward districts of the State.

In this chapter, we intend to look into the changes in the cropping pattern. These changes cannot be attributed to MSP/Prices alone but reflect a combined effect of many such factors. This is reflected through the data on cropping pattern before a decade and the present cropping pattern. Theoretically, it may be argued that the memory lapses may act as constraint to recall a situation decade back but it did not prove difficult during our fieldwork. We also intended to analyse the impact on the use of inputs and land and other resources besides adoption of socially desirable cropping pattern. Facilitating the adoption of new technology was one of the important functions of the MSP policy. Therefore, adoption of improved technology and their relative contribution in increasing the production and productivity

of the specified crops became an essential accompaniment of the price policy, and thus, examining adoption of technology was taken as an important aspect for the purpose of our analysis.

#### 4.2. Land Use and Crop Pattern

Initially, we provide here a brief background of the sample households across the districts. Tables 4.1 and 4.2 present the distribution of the sample across size classes of holding and by social groups and employment status. Two observations based on these tables are pertinent here. We have a larger concentration of the sample in the size class of holding above 4 hectares, as the marketable surplus is located in this group of farmers. Second, the sample has only a few households having economic support from other than farming. Therefore, the impact of price comes out very clearly.

**Table 4.1: Distribution of Selected Households by Ownership Size**

(Per cent)

Size Class	Mandya	Belgaum	Gulbarga	Total
up to 1 ha.	2.00	6.00	0.00	2.67
1 to 2 ha.	6.00	24.00	2.00	10.67
2 to 4 ha.	50.00	46.00	8.00	34.67
above 4 ha.	42.00	24.00	90.00	52.00
<b>All Households</b>	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>

**Table 4.2: Distribution of Selected Households by Social and Employment Groups**

(Per cent)

Caste	Belgaum	Gulbarga	Total
Scheduled Caste	8.00	4.00	26.00
Scheduled Tribe	0.00	4.00	0.00
Other Backward Classes		92.00	74.00
<b>Total</b>	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>
<b>Employment Status of the Members of the Household</b>			
Cultivation	90.09	61.36	49.76
Agricultural labour	7.21	37.12	32.37
Service	0.90	0.76	0.97
Others	1.80	0.76	16.91
<b>Total</b>	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>

**Table 4.3: Cropping Pattern of the Selected Households**

(Per cent to total cropped area)

Crops	Gulbarga		Belgaum		Mandya	
	BT	NOW	BT	NOW	BT	NOW
Paddy	0.00	0.00	28.57	34.93	31.98	30.88
Ragi	0.00	0.00	0.00	0.00	8.56	7.88
Jowar	43.85	31.58	41.67	38.36	0.00	0.00
Tur	39.47	54.04	0.00	0.00	0.00	0.00
Gram	16.68	14.38	0.00	0.00	0.00	0.00
Groundnut	0.00	0.00	29.76	26.71	0.00	0.00
Sugarcane	0.00	0.00	0.00	0.00	59.46	61.24
<b>GCA (in Ha)</b>	<b>536</b>	<b>590</b>	<b>68</b>	<b>59</b>	<b>180</b>	<b>193</b>
<b>%</b>	<b>(100.00)</b>	<b>(100.00)</b>	<b>(100.00)</b>	<b>(100.00)</b>	<b>(100.00)</b>	<b>(100.00)</b>

Note: The last row gives the Gross Cropped Area (GCA) in each district in hectares  
BT – Before ten years

**Table 4.4: Land Use Pattern**

(Land in hectares)

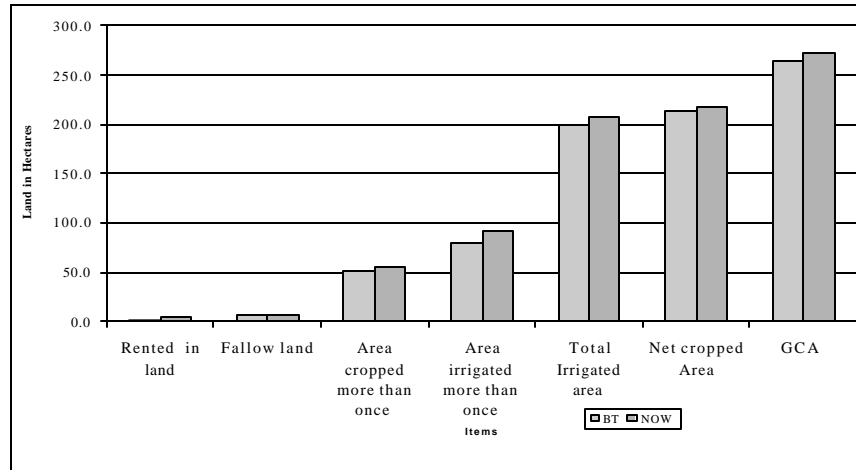
Items	Gulbarga		Belgaum		Mandya	
	BT	Present	BT	Present	BT	Present
Net cropped Area	731.28	603.40	159.45	156.62	213.7	216.5
Rented in land	0.00	40.06	0.00	1.01	0.8	4.7
Total Irrigated area	3.24	11.33	52.21	55.44	198.7	208.0
Area cropped more than once	300.69	211.25	61.51	45.73	51.0	55.8
Area Irrigated more than once	3.24	11.33	36.02	42.09	78.1	91.1
Fallowland	21.45	19.83	2.43	2.83	6.1	7.3
Cropping intensity(%)	141.12	135.01	138.58	129.20	123.86	125.79
Irrigation intensity(%)	200.00	200.00	169.00	175.90	139.3	143.8
Per cent of irrigation to net cropped area	0.44	1.88	32.74	35.40	92.99	96.07

Note : BT-Before ten years

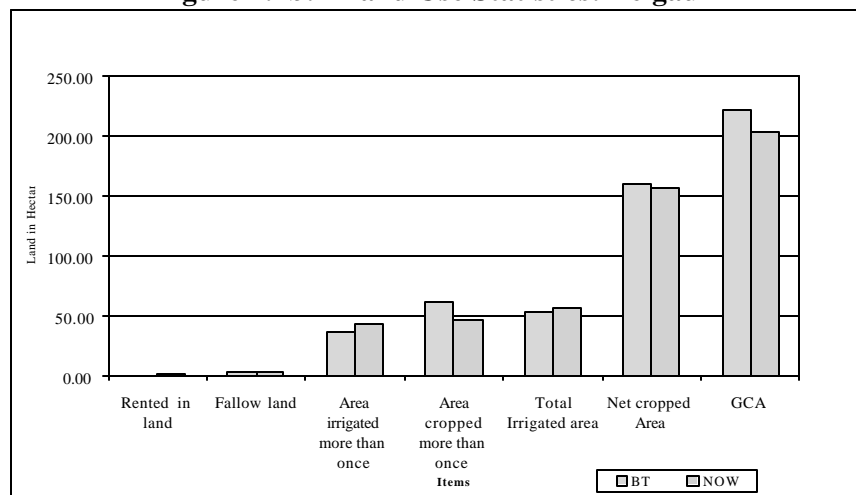
Land use statistics indicates that the net cropped area declined in Belgaum and Gulbarga districts whereas it increased marginally in Mandya (see Figure 4.1). This is in tune with the present land use trends at the macro-level. The area under irrigation is, however, increasing in all the three districts and therefore, the irrigation associated cost also increase. But the

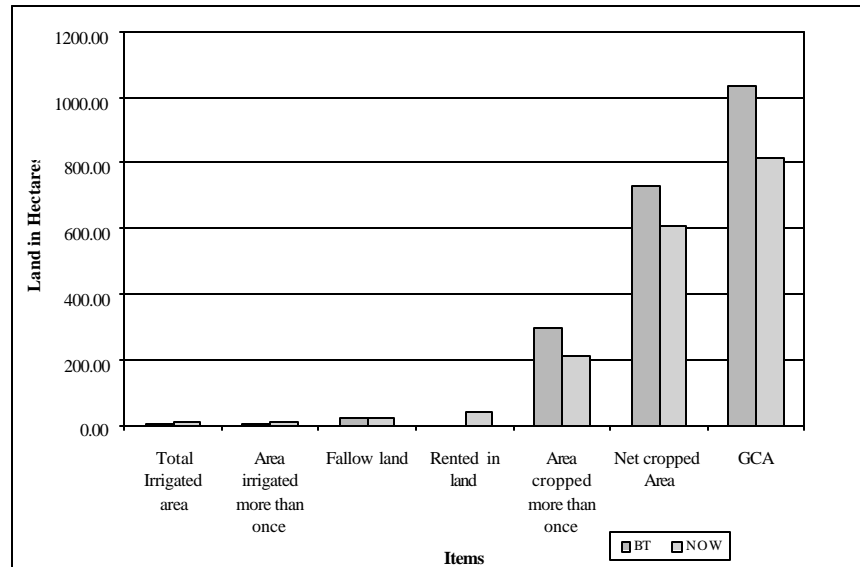
disturbing trend is the declining cropping and irrigation intensity in the districts of Gulbarga and Belgaum. The cropping intensity in Mandya district increased marginally and this is an expected trend in any irrigated region. It is observed that the cropping intensity as well as area irrigated more than once as proportion to the net sown area was higher in Mandya district than that in Gulbarga and Belgaum districts. But area cropped more than once as per cent of NCA was higher in Belgaum and Gulbarga than in Mandya. This emerges sharply on the background of the fact that Mandya district has higher proportion of area under irrigation.

**Figure 4.1a: Land Use Statistics: Mandya**



**Figure 4.1b: Land Use Statistics: Belgaum**

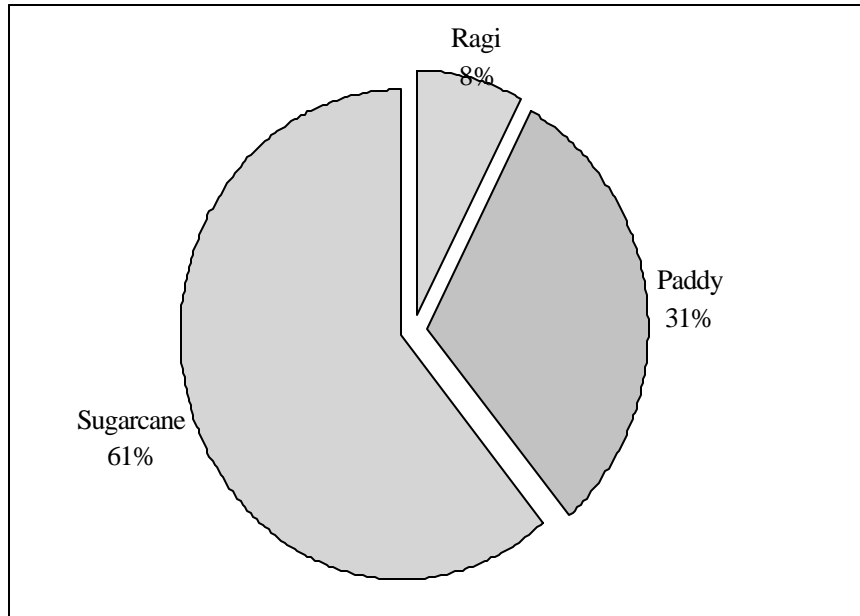


**Figure 4.1c: Land Use Statistics: Gulbarga**

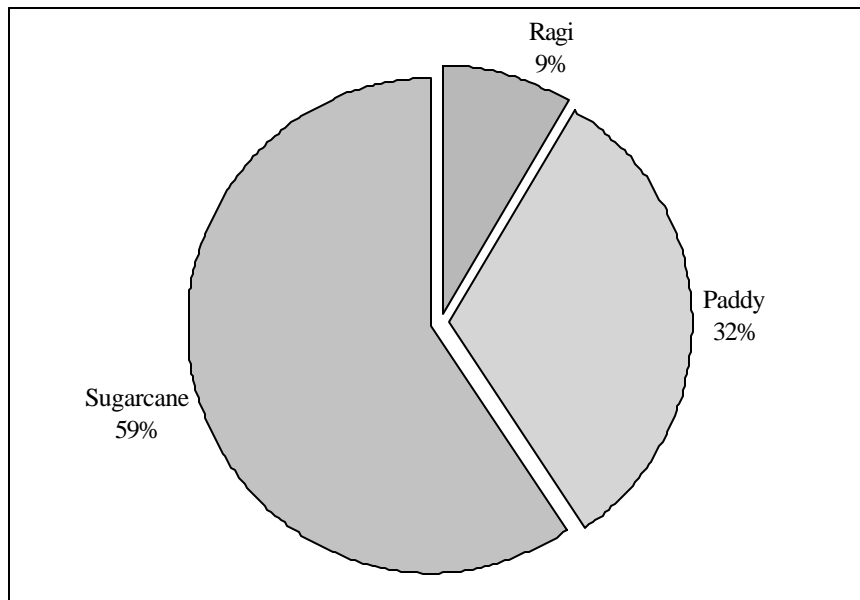
### 4.3. Impact of MSP on Area Allocation Decisions

Price support scheme as an instrument of price policy was intended to create incentives for developing a particular cropping pattern. While writing initially about the incentives and disincentives in the context of price policy during the formation years of the Agricultural Prices Commission Prof. Dantwala wrote that the prices of agricultural commodities should serve as a strong incentive to adopt technology, it should provide impetus for growing foodgrains and help directing the cropping pattern in a desired direction (Dantwala 1967). The policy statements in the form of Plan Documents, Economic Surveys and Budget speeches have repeatedly emphasised the importance of relative prices across crops and the price incentives to create a desired crop pattern. One can argue that it is the net revenue effect that really provokes the decisions on cropping pattern than prices alone but still the impact of relative prices cannot be undermined. Therefore, more than the prices of the commodity the relative prices and net income together play a decisive role (Deshpande and Chandrashekhar 1982). In this context, it is worth testing the hypothesis that relative price and net income impact the changes in cropping pattern.

**Figure 4.2a: Present Cropping Pattern: Mandya**

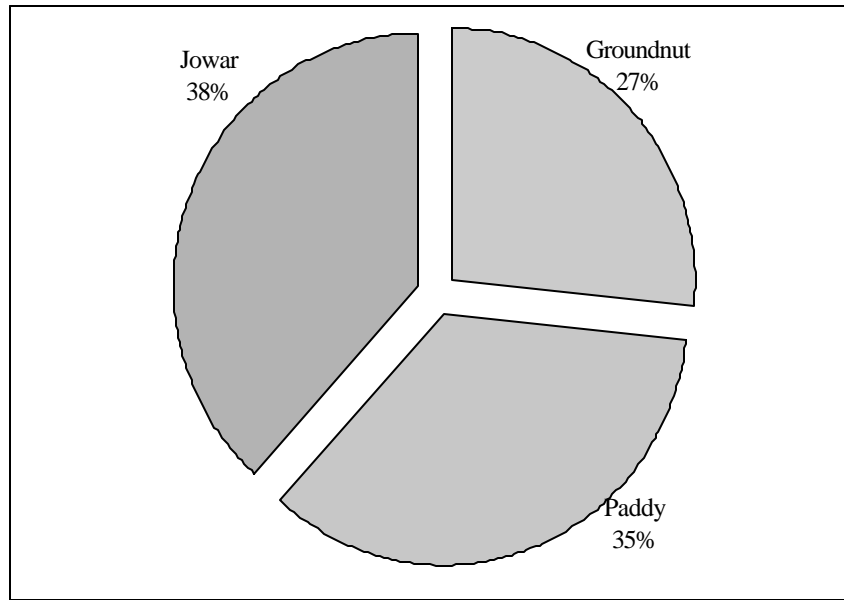


**Figure 4.2b: Cropping Pattern Before Ten Years: Mandya**

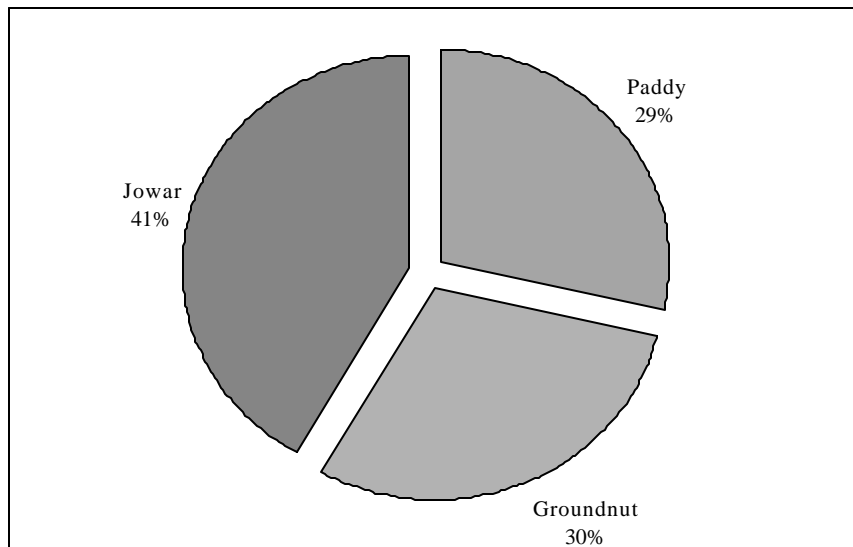




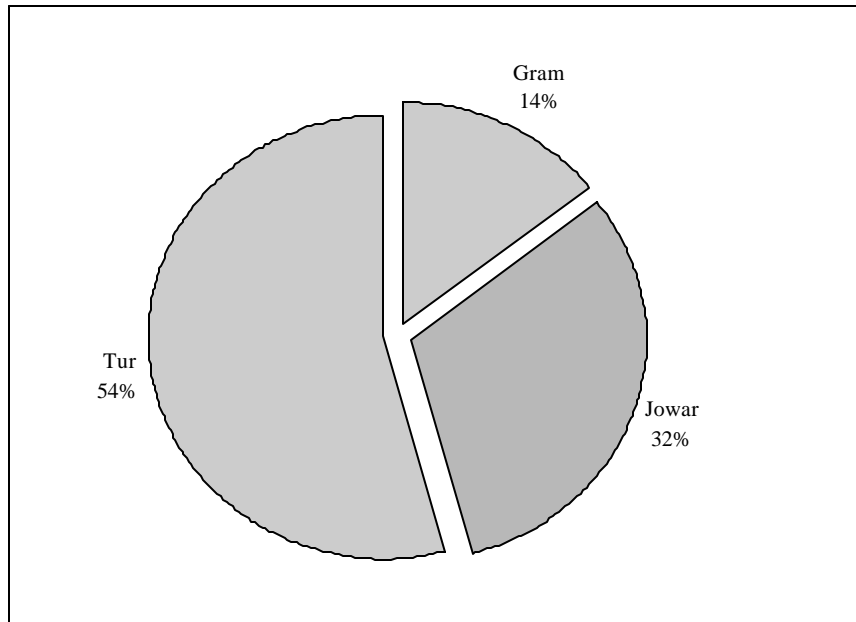
**Figure 4.3a: Present Cropping Pattern: Belgaum**



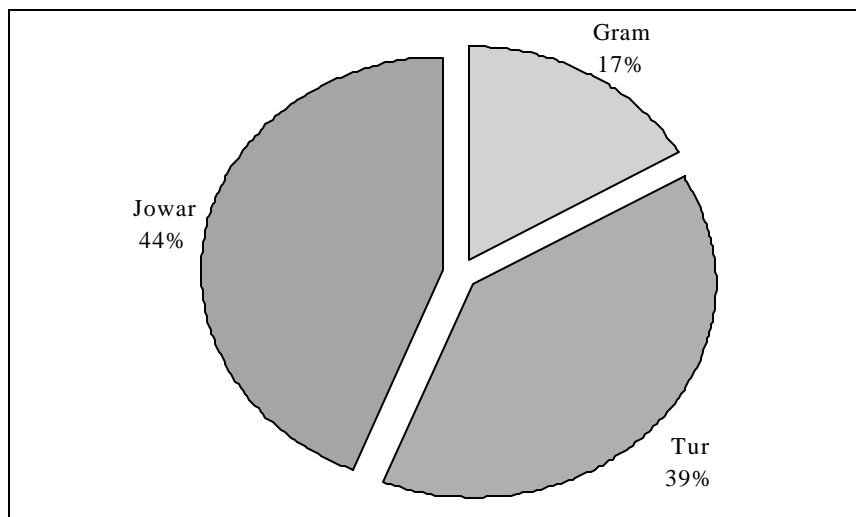
**Figure 4.3b: Cropping Pattern Before Ten Years: Belgaum**



**Figure 4.4a: Present Cropping Pattern: Gulbarga**



**Figure 4.4b: Cropping Pattern Before Ten Years: Gulbarga**



**Table 4.5a: Factors Explaining the Fluctuations in Area Under the Crop: Micro-Level Analysis – Mandya**

Crop	Constant	Cost of Cultivation	Market Distance	Expected Price	Net Income	Price	Relative Price	R Square
Paddy	1.56 (0.64)	0.001*** (7.17)	0.005 (0.28)	-0.001 (-0.88)	0.001*** (5.11)	-0.001 (0.42)	0.02 (0.12)	0.84
	3.59 (1.02)	-	0.007 (0.28)	0.001 (0.89)	0.001*** (8.70)	-0.005 (0.82)	0.01 (0.81)	0.66
	1.06 (0.35)	0.001*** (10.94)	0.007 (0.33)	-0.001 (0.91)	-	-0.001 (-0.11)	-0.19 (0.89)	0.75
	5.06 (0.88)	-	-0.02 (0.42)	0.002 (1.62)	-	-0.006 (0.59)	-0.21 (0.51)	0.07
	1.16 (0.88)	0.001** (4.65)	0.02 (0.94)	-0.001 (0.61)	0.001** (2.51)	-0.006 (1.59)	3.21 (1.58)	0.83
Ragi	2.16 (1.12)	-	0.002 (0.06)	-0.003 (1.68)	0.00* (2.16)	-0.004 (0.74)	3.68 (1.22)	0.61
	2.16 (1.50)	0.001** (4.42)	0.01 (0.36)	-0.002 (1.38)	-	-0.01** (3.11)	6.29** (3.41)	0.77
	3.54 (1.77)	-	-0.01 (0.43)	-0.005** (2.66)	-	-0.01* (2.07)	7.72** (2.98)	0.45
	1.07 (0.38)	0.001*** (9.30)	0.003 (0.15)	0.001 (1.21)	0.001*** (8.97)	-0.002 (0.86)	-	0.96
	-2.60 (0.54)	-	-0.02 (0.63)	0.001 (0.96)	0.001*** (17.37)	0.001 (0.38)	-	0.88
Sugarcane	3.61 (0.77)	0.001*** (17.85)	0.01 (0.35)	0.001 (1.26)	-	-0.006 (1.22)	-	0.89
	-4.83 (0.37)	-	-0.08 (0.91)	0.008 (1.95)	-	0.002 (0.18)	-	0.09

Note: \*, \*\* and \*\*\* Statistically Significant at 10%, 5% and 1% level, respectively.

Figures in the parentheses are t values

No. of observations – 50

**Table 4.5b: Factors Explaining the Fluctuations in Area Under the Crop: Micro-Level Analysis - Belgaum**

Crop	Constant	Cost of Cultivation	Market Distance	Expected Price	Net Income	Price	Relative Price	R Square
Groundnut	3.21 (1.25)	0.001** (2.86)	-0.02 (1.69)	0.001 (0.41)	0.001 (0.48)	-0.002 (1.03)	-0.47* (2.26)	0.51
	3.27 (1.07)	-	-0.05 (0.87)	0.001 (0.02)	0.001 (1.28)	-0.001 (0.40)	-0.52* (2.11)	0.27
	3.42 (1.38)	0.001** (3.27)	-0.02 (1.77)	0.001 (0.39)	-	-0.002 (1.11)	-0.46* (2.27)	0.50
	3.99 (1.32)	-	-0.01 (0.87)	-0.001 (0.01)	-	-0.001 (0.45)	-0.49 (1.97)	0.20
Jowar	-0.44 (-0.58)	0.001** (4.17)	0.01 (1.14)	0.002 (1.21)	0.001 (0.76)	-0.001 (0.85)	0.68 (0.97)	0.74
	0.71 (0.78)	-	0.07* (2.01)	0.007 (0.75)	0.001** (2.87)	-0.002 (1.16)	0.17 (0.19)	0.52
	-0.68 (1.06)	0.001** (5.63)	0.01 (0.02)	0.002 (1.94)	-	-0.001 (1.21)	0.88 (1.37)	0.73
Paddy	-0.12 (0.12)	-	0.02 (1.68)	0.005** (2.79)	-	0.005** (2.86)	1.06 (1.08)	0.35
	-0.11 (0.05)	0.001* (2.07)	-0.09 (1.76)	0.001 (0.87)	0.001** (2.84)	0.001 (0.57)	-1.01 (1.28)	0.75
	-0.96 (0.42)	-	-0.05 (0.87)	0.003 (1.56)	0.001** (3.03)	0.001 (0.45)	-1.66* (2.07)	0.67
	0.47 (0.18)	0.001* (2.25)	-0.13 (1.87)	0.001 (0.62)	-	0.001 (0.69)	-0.73 (0.76)	0.59
	-0.57 (0.20)	-	-0.06 (0.93)	0.003 (1.36)	-	0.001 (0.58)	-1.56 (1.56)	0.45

Note: Same as in the case of Mandya

**Table 4.5c: Factors Explaining the Fluctuations in Area Under the Crop: Micro-Level Analysis - Gulbarga**

Crop	Constant	Cost of Cultivation	Market Distance	Expected Price	Net Income	Price	Relative Price	R Square
Gram	19.07 (1.74)	0.001 (0.53)	-0.01 (0.13)	-0.01 (1.51)	0.001*** (5.13)	-0.01 (0.89)	4.10 (0.43)	0.73
	20.99* (2.07)	-	-0.001 (0.012)	-0.01* (2.03)	0.001*** (5.91)	-0.01 (0.92)	3.96** (0.39)	0.72
	-4.47 (0.27)	0.001 (1.68)	0.06 (0.33)	0.001 (0.12)	-	-0.003 (0.19)	14.31 (0.96)	0.25
	0.98 (0.05)	-	0.14 (0.81)	-0.003 (0.55)	-	-0.0018 (0.13)	14.26 (0.91)	0.11
Jowar	4.08* (2.23)	0.001*** (6.42)	-0.02 (0.51)	0.001 (0.16)	0.001*** (15.92)	-0.01 (1.45)	-1.36 (0.26)	0.96
	7.59** (3.14)	-	-0.03 (0.98)	0.004 (1.37)	0.001*** (21.38)	-0.01 (1.98)	-3.66 (0.49)	0.92
	-4.58 (1.01)	0.001*** (9.91)	0.05 (0.07)	-0.004 (0.76)	-	0.006 (0.74)	1.57 (0.11)	0.70
	1.18 (0.14)	-	-0.04 (0.29)	0.009 (0.09)	-	0.001 (0.07)	-6.82 (0.28)	0.03
Tur	7.65 (0.98)	0.001*** (12.31)	-0.03 (0.74)	0.005 (1.19)	0.001*** (12.22)	-0.01** (4.45)	-0.80 (0.96)	0.93
	26.49 (1.65)	-	0.04 (0.45)	-0.007 (0.79)	0.001*** (8.75)	-0.005 (0.95)	0.16 (0.09)	0.63
	5.97 (0.36)	0.001*** (8.83)	-0.007 (0.07)	0.006 (0.65)	-	-0.009 (1.81)	-0.25 (0.14)	0.67
	35.54 (1.35)	-	0.15 (0.86)	-0.01 (0.93)	-	0.001 (0.21)	1.66 (0.58)	0.08

Note: Same as in the case of Mandya

We have attempted here to identify the factors explaining the fluctuations in area under the crop by using regression equation involving the following variables:

1. Cost of Cultivation of the concerned crop (**CC**)
2. Distance from the market (**DM**)
3. The expected price by the farmer as indicated in the interview (**EP**)
4. Net income of the household from the crop (**NI**)
5. Price received for the crop (**Pr**)
6. Relative price of the crop in relation to the computing crop (**RP**)

Variables as defined above  $\beta_1$  to  $\beta_6$  are regression co-efficients and  $\epsilon$  is the stochastic error term.

The specification of the equation is as follows:

**Area under the Crop =**

$$a + b_1 CC + b_2 MD + b_3 EP + b_4 NI + b_5 Pr + b_6 RP + e$$

The equations were separately estimated for Mandya, Belgaum and Gulbarga districts. The results have been presented in Tables.4.5 (a, b and c). It comes out very clearly from the tables that the net income and cost of cultivation matters in the decision-making process of area allocation in Mandya and Gulbarga districts. Similarly, the relative prices emerge significantly influencing the area allocation in a few cases. However, the expected prices and distance from the market do not seem to have any consistent influence on area allocation. This is quite a surprising result especially in the context of expected price. Probably the farmers did not form their expectations properly or probably their expressions are more connected to total net income than price alone.

#### **4.4. Impact of MSP on Adoption of Technology**

The price intervention scheme started in the mid-sixties and had two major policy thrusts. First, to keep the prices of food commodities in an affordable range for the consumers in the wake of prevailing shortages of food commodities. Thus, procurement and levy policy was taken to support the public distribution system. Second, during the initial years of the introduction of technological change in agriculture, it was necessary to create price incentives for the farmers to adopt new technology and take up the crops that were the vanguards of technology. Thus, inducing to adopt improved farming practices has been one of the important expectations from the price policy. The policy thrust was altered during the early eighties

due to changed situations. During this period, following farmers' agitations, covering the cost of cultivation of the farmer (including an allowance for management of the farm) became one of the main objectives of the price policy. Thus, the incentive for adopting new technology became a secondary objective. We tried to locate the price responsiveness for the adoption of technology by the farmers in the three districts for the selected crops. We took (a) Sugarcane (Mandya); (b) Jowar (Belgaum); (c) Paddy (Belgaum); (d) Jowar (Gulbarga) and (e) Tur (Red Gram) (Gulbarga) for the purpose of viewing the adoption of technology. The results have been presented in Tables 4.6 (a to e). We have resorted to a comparison in the parameters of adoption of technology between now and a decade before. Five observations emerge quite sharply from the Tables. First, there was a perceptible difference in the adoption of technology during the last decade but all of that could not be attributed to price policy alone. It was more related to the optimisation of gross production than response to prices. Second, significant change was observed in the crop varieties across crops. In the case of all the crops the farmers had shifted to new varieties. The differences in taking to new varieties between the small farmers and others were also quite visible. The farmers in the holding size of more than 2 hectares adopted new varieties instantly and chose wide range of varieties compared to their peers. This could be a proxy indicator of the influence of price factor on the adoption of the new technology. Third, the use of fertilisers and pesticides increased and this might be due to the lumpiness of technology. By lumpiness we mean the adoption of one component of new technology making it compulsory to include the other components in a pre-decided ratio. Fourth, the trends in the farming practices were not discernible from the data during the last decade. The farming practices more or less remained the same. Lastly, though there were changes in the adoption of technology these were dissimilar across the components of the technology. We also tried a few regression equations to locate the influence of MSP (represented by dummy indicating awareness of MSP) on adoption of new technology but these equations could not yield any interpretable results.

**Table 4.6a: Adoption of Improved Farming Practices - Mandya (Sugarcane)**

(Per cent of total respondents)

Mandya: Sugarcane Items	Present Level			Before 10 Years		
	up to 2 ha.	Other	All	up to 2 ha.	Other	All
<b>Type of seed variety</b>						
No. 62,175	100.00	71.74	74.00	75.00	26.09	30.00
No. 419	-	10.87	10.00	25.00	71.74	68.00
No. 119	-	-	-	-	2.17	2.00
No. 8,371	-	15.22	14.00	-	-	-
<b>Method of plough</b>						
Tractor+Bullock	-	8.70	8.00	-	-	-
Tiller	-	8.70	8.00	-	-	-
Tiller+Tractor	-	10.87	10.00	-	-	-
Bullock+Tractor+Tiller	-	2.17	2.00	-	-	-
<b>Increase in manure use</b>	100.00	89.13	90.00	-	95.65	88.00
Before sowing	-	2.17	2.00	100.00	2.17	10.00
<b>Fertilizer</b>						
10:26:26	100.00	15.22	22.00	-	-	-
Potash+Urea	-	-	-	-	19.57	18.00
Increased	-	32.61	30.00	-	-	-
17:17:17	-	21.74	20.00	25.00	15.22	16.00
Salt	-	-	-	-	4.35	4.00
Amonium sulphate	-	-	-	-	10.87	10.00
17:17:17+Urea+DAP	-	13.04	12.00	-	-	-
17:17:17+10:26:26+Urea	-	17.39	16.00	-	4.35	4.00
Potash+Amonium sulphate	-	-	-	-	2.17	2.00
<b>Pesticides used</b>	100.00	78.26	80.00	25.00	8.70	10.00
<b>Method of harvesting</b>	-	13.04	12.00	-	6.52	6.00
<b>Threshing</b>						
Factory	100.00	45.65	50.00	50.00	17.39	20.00
Jaggery	-	-	-	50.00	19.57	22.00
Local	-	-	-	-	8.70	8.00
<b>Transport</b>						
Tractor	-	22.00	22.00	-	-	-
Cart	8.00	48.00	56.00	6.00	44.00	50.00
Lorry	-	22.00	22.00	0.00	6.00	6.00
<b>Market places</b>						
Factory (Mandya)	8.00	88.00	96.00	4.00	62.00	66.00
Local	-	4.00	4.00	4.00	24.00	28.00

Note: Based on the field data



**Table 4.6b: Adoption of Improved Farming Practices-Belgaum (Jowar)**

(Per cent of total respondents)

Belgaum: Jowar Items	Present Level			Before 10 Years		
	up to 2 ha.	Other	All	up to 2 ha.	Other	All
<b>Type of seed variety</b>						
Local	-	5.71	4.00	26.67	28.57	28.00
Mico	-	2.86	2.00	-	8.57	6.00
Pioneer	-	34.29	24.00	-	-	-
Jowar	-	0.00	0.00	6.67	20.00	16.00
M-35-1	26.67	11.43	16.00	-	-	-
HB	-	2.86	2.00	-	-	-
CH5	6.67	-	2.00	-	-	-
<b>Method of ploughing</b>						
Tractor	-	22.86	16.00	-	-	-
<b>Sowing implement</b>						
	26.67	40.00	36.00	26.67	40.00	36.00
<b>Increase in manure use</b>						
	20.00	40.00	34.00	20.00	48.57	40.00
<b>Fertilizer</b>						
Urea	6.67	34.29	26.00	6.67	34.29	26.00
Potash+Amonium sulphate	-	2.86	2.00	-	2.86	2.00
<b>Pesticides used</b>						
	13.33	8.57	10.00	-	-	-
<b>Method of harvesting</b>						
<b>Hand material</b>						
	-	<b>2.86</b>	<b>2.00</b>	-	<b>2.86</b>	<b>2.00</b>
Machine	-	2.86	2.00	-	2.86	2.00
Traditional	26.67	20.00	22.00	26.67	20.00	22.00
<b>Threshing</b>						
Machine	26.67	17.14	20.00	20.00	17.14	18.00
Traditional	-	-	-	6.67	-	2.00
<b>Transport</b>						
Cart	6.67	45.71	34.00	6.67	42.86	32.00
Truck	26.67	8.57	14.00	26.67	8.57	14.00
<b>Market places</b>						
Sankeshwara	13.33	37.14	30.00	6.67	11.43	10.00
Hukkeri	-	2.86	2.00	0.00	5.71	4.00
Gokak	13.33	11.43	12.00	13.33	5.71	8.00
Local	6.67	-	2.00	6.67	8.57	8.00
Nellogi	-	-	-	-	8.57	6.00

Note: Based on the field data

**Table 4.6c: Adoption of Improved Farming Practices-Belgaum (Paddy)**

(Per cent of total respondents)

Belgaum: Paddy Items	Present Level			Before 10 Years		
	up to 2 ha.	Other	All	up to 2 ha.	Other	All
<b>Type of seed variety</b>						
Yan	26.67	8.57	14.00	40.00	17.14	24.00
Indon	20.00	5.71	10.00	13.33	5.71	8.00
Basumathi	6.67	2.86	4.00	-	-	-
Manila	-	2.86	2.00	-	2.86	2.00
Indrani	13.33	5.71	8.00	-	-	-
HB	-	2.86	2.00	-	-	-
IR 8	-	-	-	6.67	-	2.00
Maduri	-	-	-	6.67	-	2.00
<b>Method of ploughing</b>						
Tractor	6.67	8.57	8.00	-	-	-
Bullock	53.33	17.14	28.00	66.67	25.71	38.00
Tractor+Bullock	6.67	-	2.00	-	-	-
<b>Sowing implement</b>	6.67	2.86	4.00	6.67	2.86	4.00
<b>Increase in manure use</b>	26.67	17.14	20.00	60.00	25.71	36.00
<b>Fertilizer</b>						
Increased	33.33	14.29	20.00	-	-	-
17:17:17+Urea+DAP	33.33	8.57	16.00	33.33	8.57	16.00
17:17:17+10:26:26+Urea	-	-	2.86	2.00	-	2.86
2.00						
Potash+Amonium sulphate	6.67	-	2.00	6.67	-	2.00
<b>Pesticide used</b>	13.33	5.71	8.00	13.33	-	4.00
<b>Method of harvesting</b>						
Traditional	33.33	14.29	20.00	33.33	14.29	20.00
<b>Drying/ Threshing</b>						
Machine	40.00	11.43	20.00	26.67	5.71	12.00
Traditional	6.67	2.86	4.00	13.33	8.57	10.00
<b>Transport</b>						
Tractor	13.33	8.57	10.00	-	-	-
Cart	26.67	14.29	18.00	46.67	20.00	28.00
Truck	26.67	5.71	12.00	20.00	8.57	12.00
<b>Market places</b>						
Belgaum	6.67	28.57	22.00	13.33	22.86	20.00
Local	-	-	-	6.67	2.86	4.00

Note: Based on the field data

**Table 4.6d: Adoption of Improved Farming Practices - Gulbarga (Jowar)**

(Per cent of total respondents)

Gulbarga: Jowar Items	Present Level			Before 10 Years		
	up to 2 ha.	Other	All	up to 2 ha.	Other	All
<b>Type of seed variety</b>						
Local	-	-	-	-	12.24	12.00
M-35-1	-	12.24	12.00	-	-	-
<b>Method of plough</b>						
Tractor	-	4.08	4.00	-	-	-
<b>Increase in manure use</b>	-	6.12	6.00	-	12.24	12.00
<b>Fertilizer</b>						
Increased	-	8.16	8.00	-	-	-
DAP+20:20	-	4.08	4.00	-	4.08	4.00
<b>Pesticides Used</b>	-	10.20	10.00	-	10.20	10.00
<b>Method of threshing</b>						
Machine	-	12.24	12.00	-	2.04	2.00
<b>Transport</b>						
Cart	-	2.04	2.00	-	10.20	10.00
Tractor	-	6.12	6.00	-	2.04	2.00
Lorry	-	2.04	2.00	-	-	-
Truck	-	2.04	2.00	-	-	-
<b>Market places</b>						
Local	-	-	-	-	10.20	10.00
Jewargi	-	4.08	4.00	-	-	-
Gulbarga	-	8.16	8.00	-	-	-
Sedam	-	2.04	2.00	-	2.04	2.00

Note: Based on the field data

**Table 4.6e: Adoption of Improved Farming Practices-Gulbarga (Tur)**

(Per cent of total respondents)

<b>Gulbarga: Tur</b>						
<b>Type of seed variety</b>						
Maruthi	100.00	63.27	64.00	-	6.12	6.00
G.S-1	-	8.16	8.00	-	44.90	44.00
Local	-	12.24	12.00	100.00	34.69	40.00
M8863	-	2.04	2.00	-	-	-
Redtur	-	-	-	-	2.04	2.00
H.B	-	2.04	2.00	-	0.00	0.00
<b>Method of ploughing</b>						
Tractor	-	10.20	10.00	-	2.04	2.00
Tractor+Bullock	-	4.08	4.00	-	-	-
<b>Increase in manure use</b>	-	44.90	44.00	100.00	36.73	38.00
Before sowing	-	2.04	2.00	-	46.94	46.00
<b>Fertilizer</b>						
Increased	100.00	83.67	84.00	-	46.94	46.00
DAP+20:20	-	2.04	2.00	-	2.04	2.00
<b>Pesticides used</b>	100.00	77.55	78.00	100.00	67.35	68.00
<b>Method of threshing</b>						
Machine	-	81.63	80.00	-	4.08	4.00
Bullocks	-	-	-	-	6.12	6.00
<b>Transport</b>						
Cart	100.00	14.29	16.00	100.00	73.47	74.00
Tractor	-	40.82	40.00	-	10.20	10.00
Lorry	-	28.57	28.00	-	2.04	2.00
Truck	-	4.08	4.00	-	2.04	2.00
<b>Market places</b>						
Local	-	8.16	8.00	-	48.98	48.00
Jewargi	100.00	24.49	26.00	100.00	8.16	10.00
Gulbarga	-	46.94	46.00	-	10.20	10.00
Sedam	-	6.12	6.00	-	10.20	10.00
APMC	-	2.04	2.00	-	2.04	2.00

Source: Based on Survey data

#### **4.5. Cost of Cultivation**

The cost of cultivation is one of the important determinants of the Minimum Support Prices. The data on cost of cultivation were collected from the countrywide survey on cost accounting method for the selected crops for the purpose of declaring MSP. The methodology of the cost of cultivation surveys was developed after interactions over years with farmers and academicians. Therefore, the methodology has been perfected through practice and corrections. But the problem cropped up in the implementation of the scheme in terms of collection of data. Farm leaders challenged some of these data and at times it was also difficult to believe if these were cross-checked in the field. Despite the fact that the cost of cultivation data were collected through cost accounting methodology, the field situations seemed to be quite different. It will, therefore, be necessary to collect a sub-sample independently to test the veracity of these data.

We collected cost of cultivation data by recall method from the selected farmers. The results have been presented in Tables 4.7 (a, b, and c). It can be seen from the Tables that farmers incurred highest cost on the purchased inputs. Among these, it was fertilisers that constituted the major share of the cost. The composition of the cost differed across the crops and regions but broadly the purchased inputs dominated the total cost. Similarly, insecticides and pesticides also consumed substantial cash inputs. In most of the cases average prices received by the farmers were well below the MSP and the relationship between the cost of cultivation and MSP also did not seem to hold across crops and districts. Out of the nine cases we found that in 7 cases the average price received by the farmers was higher than the MSP, and there were at least two instances that the per quintal cost was also lower than both average prices received and the MSP. Another interesting observation emerging from the Table was that hired human labour component was more than family labour. That made need for cash resources more intensive.

**Table 4.7a: Cost of Cultivation: Mandya**

	(Rs per hectare)		
<b>Cost Items</b>	<b>Ragi</b>	<b>Paddy</b>	<b>Sugarcane</b>
<b>Human labour</b>			
Hired	1,608.18	2,158.27	2,087.12
Family	504.26	411.00	304.32
<b>Total</b>	<b>2,112.44</b>	<b>2,569.28</b>	<b>2,391.44</b>
<b>Bullock labour</b>			
Hired	856.05	1,871.71	1,458.35
Owned	2,120.95	1,742.63	1,744.93
<b>Total</b>	<b>2,977.00</b>	<b>3,614.33</b>	<b>3,203.28</b>
<b>Machine labour</b>			
Hired	76.66	185.88	114.63
Owned	383.30	185.88	106.99
<b>Total</b>	<b>459.97</b>	<b>371.76</b>	<b>221.62</b>
Seeds value	126.32	1,062.53	7,310.44
Cost of seed treatment	0.00	82.61	6.37
<b>Total</b>	<b>126.32</b>	<b>1,145.14</b>	<b>7,316.80</b>
<b>Fertilizer and manure used</b>			
Manures Owned	4,876.49	3,597.12	6,190.03
Purchased	489.78	1,259.85	2,190.71
Fertiliser value	3,973.59	4,940.28	14,666.30
<b>Total</b>	<b>9,339.86</b>	<b>9,797.26</b>	<b>23,047.04</b>
Insecticide	78.79	1,014.68	773.71
Irrig/Electricity charges	175.47	605.66	673.94
Any other cost incurred	475.30	1,226.29	1,440.10
<b>Grand total</b>	<b>15,745.14</b>	<b>20,344.40</b>	<b>39,067.93</b>
Yield (in quintals)	33.67	77.27	230.91
MSP (Rs. per quintal)	415	520	561
Price received			
(Rs. per quintal)	408	518	696
Cost (Rs.) per quintal	467.63	263.29	169.19*

Note: \*In the case of Sugarcane, the cost is per tonne

Source: Based on Field data

**Table 4.7b: Cost of Cultivation: Belgaum**

(Rs per hectare)

<b>Cost Items</b>	<b>Paddy</b>	<b>Jowar</b>	<b>Groundnut</b>
<b>Human labour</b>			
Hired	469.61	240.00	342.96
Family	228.31	240.00	200.06
<b>Total</b>	<b>697.91</b>	<b>480.00</b>	<b>543.02</b>
<b>Bullock labour</b>			
Hired	153.13	101.00	410.84
Owned	2,373.55	1,772.00	1,670.16
<b>Total</b>	<b>2,526.68</b>	<b>1,873.00</b>	<b>2,081.00</b>
<b>Machine labour</b>			
Hired	167.05	99.00	166.72
Owned	0.00	0.00	0.00
<b>Total</b>	<b>167.05</b>	<b>99.00</b>	<b>166.72</b>
Seeds value	1,027.84	441.19	1,124.16
Cost of seed treatment	0.00	0.00	6.85
<b>Fertilizer and manure used</b>			
Manure owned	4,547.57	2,538.39	2,590.08
Purchased	754.06	213.40	297.71
Fertiliser value	4,788.87	1,473.61	2,116.72
<b>Total</b>	<b>10,090.50</b>	<b>4,225.41</b>	<b>5,004.52</b>
Insecticide	162.41	195.88	449.54
Irrig/Electricity charges	20.88	0.00	0.00
Any other cost incurred	580.98	916.52	735.35
<b>Grand total</b>	<b>15,274.26</b>	<b>8,231.00</b>	<b>10,111.15</b>
Yield (in quintals)	67.83	29.30	14.13
MSP (Rs. per quintal)	520	415	1155
Price received (Rs. per quintal)	585	525	1276
Cost (Rs) per quintal	225.18	280.92	715.58

Source: Based on Field data

**Table 4.7c: Cost of Cultivation: Gulbarga**

Cost Items	(Rs per hectare)		
	Gram	Tur	Jowar
<b>Human labour</b>			
Hired	276.75	253.02	302.23
Family	89.37	88.30	106.01
<b>Total</b>	<b>366.12</b>	<b>341.32</b>	<b>408.25</b>
<b>Bullock labour</b>			
Hired	165.91	94.99	180.68
Owned	907.21	901.18	1,286.78
<b>Total</b>	<b>1,073.12</b>	<b>996.17</b>	<b>1,467.46</b>
<b>Machine labour</b>			
Hired	4.71	100.39	64.83
Owned	17.65	0.00	10.63
<b>Total</b>	<b>22.36</b>	<b>100.39</b>	<b>75.46</b>
Seeds value	750.42	212.55	97.14
Cost of seed treatment	25.89	26.25	5.85
<b>Total</b>	<b>776.31</b>	<b>238.80</b>	<b>102.99</b>
<b>Fertilizer and manure used</b>			
Manure's Owned	179.44	691.46	795.77
Purchased	235.33	159.14	179.35
Fertilisers value	811.43	851.40	777.01
<b>Total</b>	<b>1,226.20</b>	<b>1,702.00</b>	<b>1,752.12</b>
Insecticide	2,715.75	3,572.49	390.58
Irrig/Electricity charges	0.00	0.00	0.00
Any other cost incurred	547.15	659.23	468.96
<b>Grand total</b>	<b>6,727.00</b>	<b>7,610.41</b>	<b>4,665.81</b>
Yield (in quintals)	11.11	11.32	11.80
MSP (Rs per quintal)	1015	1105	415
Price received (Rs per quintal)	1125	1633	466
Cost (Rs) per quintal	605.49	672.30	395.41

Source: Based on Field data

**4.6. Disposal and Income**

It is clear from the above analysis that in the household economy with an average family size of five members it was difficult to sustain on farming as a profession. At the same time it was also true that rural households did not survive on farming alone. Farming was one of the multiple activities that they undertook and many times it was more due to economic compulsions. This happened either due to the culture of the profession or



due to difficulties in meeting the ends or both. The allied activities included livestock rearing, sale of bi-products, vegetables and sale of fodder. We have presented in Table 4.8 the crop economy of the major crop in an average household in the selected region. Even when we consider all the income earning avenues including labour in the household the aggregate income was not very respectable. Table 4.9 includes the crop-wise distribution of total production and disposal in the market. The proportion of marketable surplus ranged between 33 per cent and 100 per cent. A quick observation from the table corroborates our view that the crop economy alone was difficult to provide substantial economic base and especially in the regions like Gulbarga.

**Table 4.8: Per Household Production and Income from Various Activities**

(Quantity in Qtl./hh. , Income as per cent of total)

Items	Belgaum		Gulbarga		Mandya	
	Jowar		Jowar		Paddy	
	Quantity	Income	Quantity	Income	Quantity	Income
Main Product	14.08	23.06	44.34	59.00	98.20	52.63
By-Product	10.12	12.92	18.14	7.16	15.38	6.72
Green grass	0.96	1.25	0.00	0.00	1.00	0.55
Other fodder	2.76	3.80	6.86	2.94	14.42	6.34
Fuel Wood	7.36	6.32	13.66	8.86	62.56	5.33
Vegetables	0.56	1.52	1.44	2.21	1.12	0.71
Milk & milk product (litres/hh)	901.40	21.81	557.90	7.32	2140.88	20.40
Dung cake (qtls/hh)	43.90	29.33	32.88	12.50	32.26	7.33
Gross value	-	100.00	-	100.00	-	100.00
		(34.30)		(63.35)		(108.61)

Note: Figures are in the paranthesis in the last row are Total income - Rs. in '000s/HH

**Table 4.9: Total Production and Disposal Per Household**

(Quantity in quintals)

Components	Belgaum	Gulbarga	Mandya
	Jowar	Tur	Paddy
<b>Total production</b>			
Main product (per Ha.)	29.30	11.32	77.27
By-product (per Ha.)	8.43	1.43	11.08
Average consumption at Home	5.34	1.89	23.91
Average retained for seed	0.00	0.89	1.55
Average feed	0.00	0.00	4.14
<b>Sold at market</b>			
Average quantity	7.94	69.52	66.48
Average value (Rs. in lakh)	0.04	1.08	0.40
<b>Total production</b>	<b>Groundnut</b>	<b>Jowar</b>	<b>Ragi</b>
Main product (per Ha.)	14.13	11.80	33.66
By-product (per Ha.)	3.29	4.53	8.50
Average consumption at Home	0.55	13.05	7.86
Average retained for seed	0.37	0.83	0.14
Average feed	0.00	0.40	0.90
<b>Sold at market</b>			
Average quantity	3.54	30.14	2.21
Average value (Rs. in lakh)	0.05	0.22	0.01
<b>Total production</b>	<b>Paddy</b>	<b>Gram</b>	<b>Sugarcane</b>
Main product (per Ha.)	67.83	11.11	230.91
By-product (per Ha.)	13.23	0.00	281
Average consumption at home	9.81	0.83	0.00
Average retained for seed	0.53	1.11	15.08
Average feed	0.00	0.00	0.74
<b>Sold at market</b>			
Average quantity	17.66	16.94	267.74
Average value (Rs. in lakh)	0.11	0.21	2.15

Note : Here, the average refers to per household.

#### 4.7. Determinants of Prices Received by the Farmers

Relative prices across crops play a significant role in area and resource allocation decisions. This has been established in various studies (Batra 1978; Deshpande 1996). We have seen in the earlier chapter that relative MSP favoured superior cereals against coarse cereals and pulses. The relative prices were worked out for the crops covered under MSP with wheat and paddy. The inherent hypothesis was that when the input prices across crops had not changed and the composition of inputs also stayed the same, the relative MSP should bear similar ratios over the years (in the absence of any deliberate policy bias), at least during eighties. But our

computations shows a definite and consistent policy bias (either purposive or random) in favour of wheat and paddy. We also looked into the relative price trends in market prices of these crops revealed by the Farm Harvest Prices Series. Surprisingly, the behaviour of market prices did not reflect a strong leaning in favour of wheat and paddy but MSP brought out the policy bias in bold relief. Notwithstanding this, we investigated into the determinants of the prices received by the farmers. It was difficult to incorporate relative prices in the analysis covering cross-section of farmers, but we tried to explain the prices received by them through various factors. In order to trace the determinants of prices we worked out a multiple regression equation of the following specification:

$$P_r = a + b_1 A_c + b_2 Irr + b_3 CC + b_4 Ed + b_5 Prod + b_6 MS + b_7 D + e$$

Where:

- a** = Constant and **b<sub>1</sub>** to **b<sub>7</sub>** – regression coefficients
- A<sub>c</sub>** = Area under the concerned crop in hectare
- Irr** = Per cent of Irrigated area under the crop
- CC** = Cost of cultivation per hectare
- Ed** = Educational level of the HH (Number of years of schooling)
- Prod** = Production of the crop/alternatively      **MS** = Marketable surplus
- D** = Distance from the market
- e** = Stochastic error term
- n** = Number of observations – 50 for each district

The relationship involved tracking the hypothesis related to:

- impact of marketable surplus/production/area (proxies for market participation) on the price received by the farmers;
- impact of irrigation (resource status) on the price received by the farmers;
- impact of level of education (information base) on the price received by the farmers;
- impact of cost of cultivation (quality of produce and intensity of efforts) on the price received by the farmers; and
- impact of distance from the market (infrastructure) on the price received by the farmers.

The results have been presented in Table 4.10. It can be seen from the Table that except per cent of irrigation and education level of the household, none of the variables had any significant impact on the prices received across crops. Incidentally, the results which emerged with statistically non-significant coefficients revealed more interesting findings. The area under the crop and total production or marketable surplus indicated non-significant co-efficients, thereby indicating the limited role of economic

status or intensity of market participation, indicated by area, production or marketable surplus. Similarly, distance of the market did not seem to influence the price received. Most important and revealing finding was that the cost of cultivation (efforts put by the farmer in cultivating the crop, represented in monetary terms) seemed to have no influence on prices received. In other words, the prices received by the farmers were decided by extraneous factors and not by any of those theoretical determinants emerging out of the literature.

**Table 4.10: Factors Explaining the Prices Received by the Farmers: Regressions for Mandya, Belgaum and Gulbarga**

Crops	Constant	Area	Per cent of Irrigation	Household Education	Production	Distance from the Market	Adjusted R Square
<b>Sugarcane</b>	823.38*** (65.65)	0.89 (1.16)	-	-22.67 (1.81)	0.01 (0.08)	0.74 (0.72)	-0.012
<b>Ragi</b>	480.82*** (10.07)	-48.51 (1.33)	-	24.82 (0.87)	1.62 (1.25)	6.24 (0.88)	0.019
<b>Paddy</b>	625.06*** (8.46)	9.97 (0.87)	1.50** (2.82)	-62.48 (0.95)	-1.22 (1.62)	1.21 (0.20)	0.270
<b>Tur</b>	1693.18*** (19.05)	1.99 (0.27)	-	159.39* (2.19)	0.182 (0.11)	-2.217 (0.77)	0.031

Crop	Constant	Cost of Cultivation	Yield	Adjusted R Square
<b>Sugarcane</b>	815.09*** (22.73)	0.00002 (0.23)	0.0002 (0.24)	-0.040
<b>Ragi</b>	459.61*** (13.79)	0.0005 (0.22)	0.02 (1.07)	-0.024
<b>Paddy</b>	589.23** (5.70)	0.0012 (0.29)	0.003 (0.19)	-0.112
<b>Tur</b>	1720.49*** (13.17)	-0.001 (0.66)	-0.09 (0.39)	-0.031

Crop	Constant	Household Education	Area	Cost of Cultivation	Distance from the market	Adjusted R Square
<b>Sugarcane</b>	822.99*** (64.38)	-22.83 (1.82)	12.24 (0.20)	-0.0006 (0.18)	0.74 (0.72)	-0.012
<b>Ragi</b>	492.31*** (9.37)	34.89 (1.27)	-86.39 (-0.96)	0.008 (0.84)	2.02 (0.28)	-0.025
<b>Paddy</b>	736.48*** (7.47)	-144.62 (1.86)	20.93 (1.01)	-0.007 (1.16)	-5.26 (-0.87)	0.004
<b>Tur</b>	1713.29*** (18.59)	142.32 (1.92)	41.93 (0.73)	-0.018 (0.76)	-2.462 (0.86)	0.043

Crop	Constant	Household Education	Cost of Cultivation	Area	Marketed Surplus	Adjusted R Square
Sugarcane	828.01*** (72.16)	-20.73 (1.69)	-0.0005 (0.16)	11.04 (0.18)	-0.08 (0.15)	-0.023
Ragi	471.20*** (18.71)	10.63 (0.47)	0.006 (0.77)	-82.67 (1.25)	4.36** (3.44)	0.38
Paddy	678.46*** (8.56)	-123.99 (1.63)	-0.008 (1.18)	28.00 (1.29)	-0.14 (0.11)	-0.045
Tur	1698.79*** (27.43)	148.60* (2.06)	-0.02 (0.88)	51.57 (0.92)	-40.18 (1.75)	0.089

Crop	Constant	Household Education	Per cent of Irrigation	Area	Cost of Cultivation	Consumption by the Household	Distance from the Market	Adjusted RSquare
Sugarcane	823.35*** (58.17)	-22.85 (1.78)	-	11.97 (0.19)	-0.0006 (0.17)	0.80 (0.04)	0.72 (0.65)	-0.122
Ragi	498.25*** (9.40)	31.42 (1.14)	-	-87.06 (0.97)	0.008 (0.78)	26.71 (0.96)	1.42 (0.19)	-0.030
Paddy	654.53*** (6.68)	-131.50 (1.83)	0.96* (2.23)	23.37 (1.10)	-0.007 (1.09)	-39.79 (0.86)	-0.29 (0.045)	0.170
Tur	1714.15*** (19.34)	142.868 (1.89)	-	42.109 (0.73)	-0.018 (0.75)	-8.907 (0.11)	-2.521 (0.86)	0.022
Sugarcane	824.01*** (59.56)	-22.73 (1.77)	-	.59 (0.09)	1.76 (0.09)	0.69 (0.62)	0.02 (0.13)	-0.127
Ragi	482.69*** (9.77)	26.05 (0.88)	-	-43.88 (1.08)	10.99 (0.30)	5.45 (0.70)	1.29 (0.74)	-0.033
Paddy	615.24*** (7.29)	-60.19 (0.87)	1.52* (2.74)	11.01** (0.88)	-12.28 (0.27)	1.95 (0.28)	-1.16 (1.45)	0.219
Tur	1693.88*** (18.75)	159.47* (2.17)	-	-1.68 (0.20)	-6.61 (0.08)	-2.24 (0.76)	0.135 (0.07)	0.009

- Note : 1. Per cent of irrigated area for Sugarcane and Ragi is constant. They are deleted from the analysis
2. Figures in the parenthesis are t-Values.
3. Sugarcane and Ragi are taken from Mandya, Paddy is taken from Belgaum and Tur is taken from Gulbarga.
4. \*, \*\* and \*\*\* Represent Statistical Significance at 10%, 5% and 1% level, respectively.

#### 4.8. MSP Process at the Micro-Level

##### 4.8.1. Awareness and Participation in the Process

More than the declaration of MSP, its implementation is an important aspect. We have discussed the process of implementation earlier and have found that it was quite cumbersome to implement the policy avoiding crucial time-lag in the present system. This time-lag alone alienated the farmer from the policy. In the process many of those for whom the policy had been formulated were not aware of the basic structure of such policy. The food grain economy of the country underwent a substantial change during the

last four decades. It was in the early eighties, following the farmers' agitation that the price policy took a new shape in terms of providing price support to the farmers as a shield against market fluctuations. In this context, it is required to understand whether the farmers were at least aware of the policy that was supposed to shield them. Keeping this in view we investigated from among our sample about the awareness of the MSP. The results have been presented in Table 4.11. It was only in Mandya district that about half of the sample farmers showed awareness about the MSP. In Belgaum and Gulbarga districts, less than 15 per cent of the farmers were aware of the scheme. Despite the lower awareness, we also tried to ascertain the kind of impact that MSP made, as perceived by the farmers. The perceptions of the respondents were obtained after explaining to them the concept of MSP as they were unaware of it as well as the operations. Our data indicates that MSP was unlikely to impact the prices in peak season, and if at all the impact was feasible it would result in bringing the market price closer to MSP.

**Table 4.11: Aware of Minimum Support Price**

(Per cent of total respondents)

<b>Mandya</b>	<b>Sugarcane</b>	<b>Paddy</b>	<b>Ragi</b>
Aware of Minimum Support Price	58.00	54.00	42.00
<b>Belgaum</b>	<b>Paddy</b>	<b>Jowar</b>	<b>Groundnut</b>
Aware of Minimum Support Price	8.00	18.00	12.00
<b>Gulbarga</b>	<b>Jowar</b>	<b>Tur</b>	<b>Gram</b>
Aware of Minimum Support Price	12.00	12.00	2.00

#### 4.8.2. Market Access

Access to market has a different connotation at the micro-level. It is not only the physical access to market, determined usually by the distance to the market place or density of the markets, but the ease with which the farmers are able to sell their products in the market and sell at the prevailing price. We looked into these aspects of market access here. The average distance indicating physical access is about seven kms, and that is fairly reasonable in the context of Karnataka. The second aspect of access is the distance between the prevailing prices and the prices received by the farmers. It can be seen from Tables 4.12 (a, b, c) that largely the farmers received lower price than those prevailing in the market during their participation. This happened due two reasons, namely; i. commission to the middleman; and, ii. the loss (or low price) due to grading (quality assessed by the purchaser). This was more intensive in Belgaum and Gulbarga districts

than in Mandya. The reasons are obvious and that Mandya district had higher market participation than the other two regions as well as better information base. Moreover, farmers of Mandya district were well aware of the market conditions.

#### 4.8.3. Decision-Making

Expected price is an important factor in farm decision-making. All Nerlovian and modified Nerlovian studies have considered expected price but in all these studies lagged price has been taken as a proxy for expected price, probably, with the strong assumption that the earlier years' price is the best expectation of the farmer. A cold-blooded approach indeed. At the micro-level, however, one can get the expected price of the farmers and these are not certainly the last season's prices. Given the prior declaration, Minimum Support Prices provide a better alternative for expected prices. Decision-making at the farm level also involves the use of inputs, their choice, timeliness and quantum of inputs. Among all the inputs, area allocation for the crop takes priority. MSP also hinges on the decision-making about the use of a crop variety in the production process. Similarly, it also impacts the process of cultivation represented by cultivation practices, application of inputs and marketing of the product. We have presented the results for the three different regions in Tables 4.13 (a, b, c) wherein the proportions of farm households linking such decisions have been presented. ***It should be borne in mind that the entire exercise here is a kind of simulation as most of the farmers were not aware of MSP. Our investigators explained the present MSP system to the farmers and asked their responses in case the system worked effectively.*** The results present a picture of mixed type, even then we got a view that MSP would matter in decision-making and especially in the decision about choice of variety and area allocation. It is necessary to clarify at this juncture the questions posed by the interviewer, especially keeping in view the respondents' unawareness of MSP operation. Therefore, these responses should be taken cautiously. Figures 4.5 (a, b and c) show the per cent of farmers basing their various decisions on the increase or decrease in the MSP, provided the scheme is implemented effectively. The results of Mandya and Belgaum are bit similar, but Gulbarga depicts a different behaviour. It can be observed that use of cash inputs, adoption of new technology and wage payments to the labourers seem to get a positive influence of MSP. Gulbarga sample also shows the influence on time for marketing (chance of selling at the convenience of the producer).





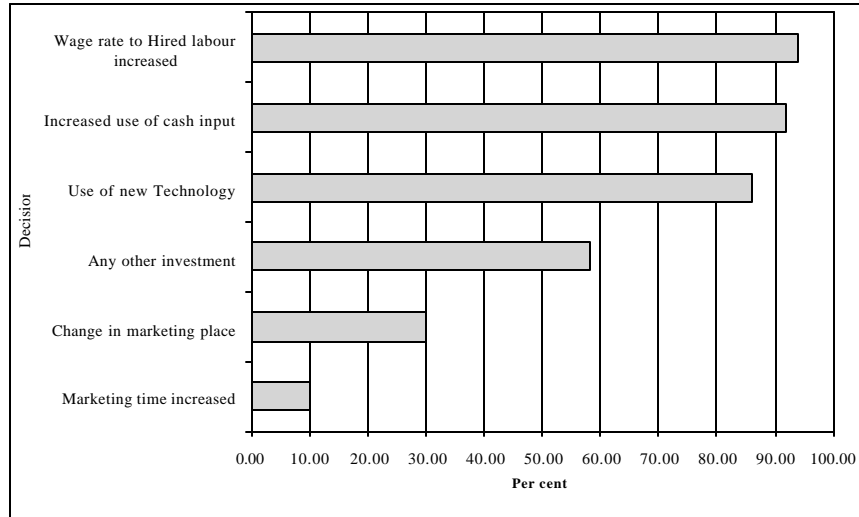
Table 4.12b: Market Access and Awareness of its Conditions

Items	Jowar				Paddy				Groundnut						
	Up to 1 ha	1 to 2 ha	2 to 4 ha	Above 4 ha	All	Up to 1 ha	1 to 2 ha	2 to 4 ha	Above 4 ha	All	Up to 1 ha	1 to 2 ha	2 to 4 ha	Above 4 ha	All
<b>Sankeswara</b>															
Avg. Distance (km.)	4.00	5.00	4.25	7.40	5.33	-	-	-	-	-	-	5.00	4.25	7.40	5.43
<b>Average expected price in the market (Rs.)</b>															
Prevailing prices	500.00	700.00	481.25	440.00	530.31	-	-	-	-	-	-	1,300.00	1,075.00	1,100.00	1,100.00
Price accessed	500.00	1000.00	500.00	460.00	615.00	-	-	-	-	-	-	1,300.00	1,050.00	1,100.00	1,085.71
Expected price	800.00	1200.00	730.13	780.00	877.53	-	-	-	-	-	-	2,000.00	1,325.00	1,380.00	1,392.86
<b>Nippani</b>															
Avg. Distance (km.)	-	25	-	25	25	-	-	-	-	-	-	25	-	25	25
<b>Average expected price in the market (Rs.)</b>															
Prevailing prices	-	450.00	-	350.00	400.00	-	-	-	-	-	-	1,500.00	-	1,400.00	1,450.00
Price accessed	-	450.00	-	350.00	400.00	-	-	-	-	-	-	1,100.00	-	1,400.00	1,250.00
Expected price	-	750.00	-	500.00	625.00	-	-	-	-	-	-	1,500.00	-	2,000.00	1,750.00
<b>Gokak</b>															
Avg. Distance (km.)	-	27	28.8	31	29.42	-	-	-	-	-	-	27	-	31	29.857
<b>Average expected price in the market (Rs.)</b>															
Prevailing prices	-	350.00	320.00	330.00	333.33	-	-	-	-	-	-	1,300.00	-	830.00	1,065.00
Price accessed	-	700.00	430.00	410.00	513.33	-	-	-	-	-	-	1,300.00	-	940.00	1,120.00
Expected price	-	800.00	540.00	620.00	653.33	-	-	-	-	-	-	1,750.00	-	1,060.00	1,405.00
<b>Hukkari</b>															
Avg. Distance (km.)	-	-	-	7	7	-	-	-	-	-	-	-	-	7	7
<b>Average expected price in the market (Rs.)</b>															
Prevailing prices	-	-	-	400.00	400.00	-	-	-	-	-	-	-	-	1,200.00	1,200.00
Price accessed	-	-	-	300.00	300.00	-	-	-	-	-	-	-	-	1,200.00	1,200.00
Expected price	-	-	-	500.00	500.00	-	-	-	-	-	-	-	-	1,600.00	1,600.00
<b>Belgaum</b>															
Avg. Distance (km.)	-	-	42.5	-	42.5	9.5	8.88	8.5	0	8.75	-	8.88	8.5	-	8.67
<b>Average expected price in the market (Rs.)</b>															
Prevailing prices	-	-	325.00	-	325.00	675.00	668.75	610.00	-	640.00	-	1,300.00	1,240.00	-	1,270.00
Price accessed	-	-	525.00	-	525.00	645.00	618.13	548.00	-	585.75	-	1,312.50	1,240.00	-	1,276.25
Expected price	-	-	550.00	-	550.00	900.00	900.00	800.00	-	850.00	-	1,750.00	1,600.00	-	1,675.00

Table 4.12c: Market Access and Awareness of its Conditions (Contd)

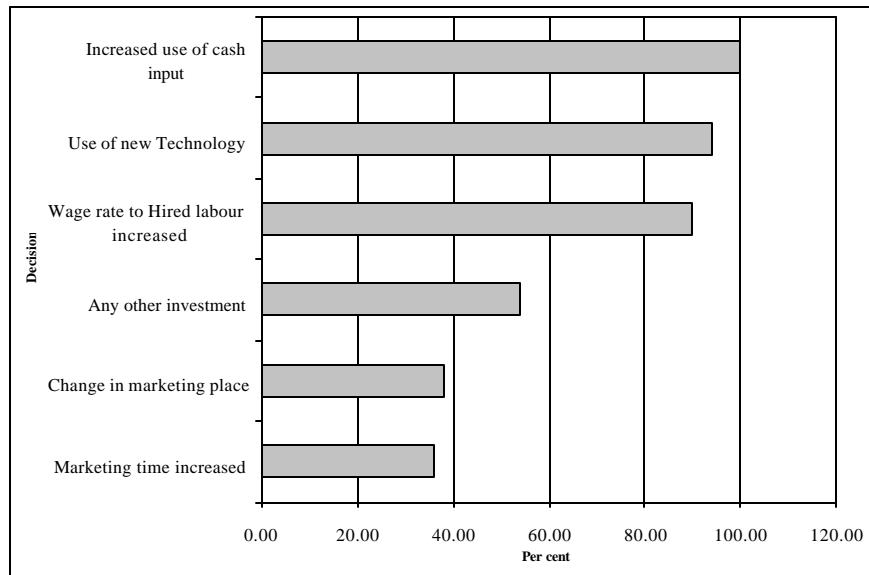
Items	Tur			Jowar			Gram		
	1 to 2 ha.	2 to 4 ha.	above 4 ha.	All	1 to 2 ha.	2 to 4 ha.	above 4 ha.	All	
<b>Jewargi</b> Distance (km.)	22	15.5	-	17.67	22	15.5	-	17.67	19
<b>Average expected price in the market (Rs.)</b>									
Prevailing prices	1,600.00	1,550.00	-	1,566.67	450.00	225.00	-	300.00	-
Price accessed	1,600.00	1,650.00	-	1,633.33	500.00	450.00	-	466.67	1,125.00
Expected price	2,000.00	2,000.00	-	2,000.00	1,000.00	500.00	-	666.67	1,125.00
<b>Gulbarga</b> Distance (Km)	-	35.0	-	37.88	-	35	-	37.88	38
<b>Average expected price in the market (Rs.)</b>									
Prevailing price	-	1,500.00	1,522.00	1,521.15	-	550.00	474.00	512.00	1,108.00
Price accessed	-	2,000.00	1,596.80	1,612.31	-	600.00	696.00	648.00	890.00
Expected price	-	2,500.00	1,984.00	2,003.85	-	900.00	988.00	944.00	1,420.00
<b>Sedam</b> Distance (Km)	-	16.0	12.3	13.00	-	16	12.25	13.00	12.25
<b>Average expected price in the market (Rs.)</b>									
Prevailing price	-	1,550.00	1,500.00	1,510.00	-	450.00	500.00	490.00	750.00
Price accessed	-	1,250.00	1,525.00	1,470.00	-	800.00	725.00	740.00	600.00
Expected price	-	2,000.00	2,000.00	2,000.00	-	1,000.00	1,000.00	1,000.00	875.00

**Figure 4.5a: Relate the Following Decisions to the Declaration of MSP: Mandya**

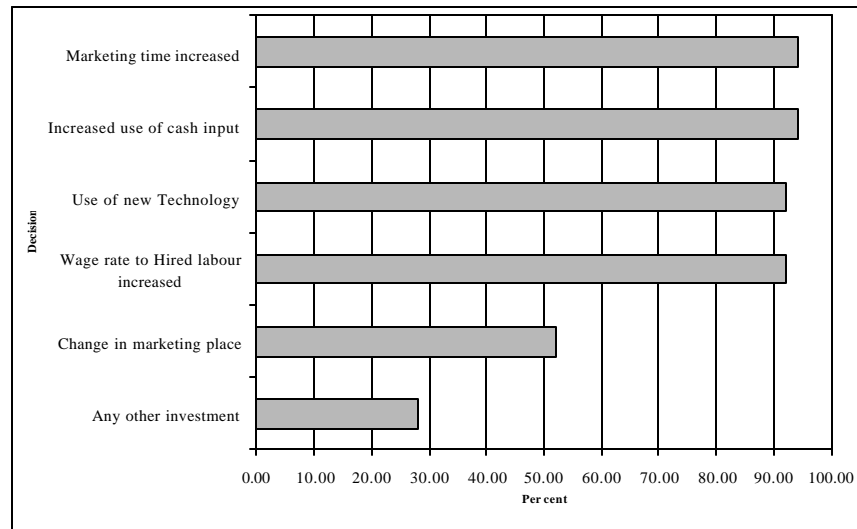


Note: These are simulated results, obtained after providing a hypothetical situation wherein proper functioning and administration of MSP was assumed.

**Figure 4.5b: Relate the Following Decisions to the Declaration of MSP: Belgaum**



Note : Same as in Figure 4.5 (a).

**Figure 4.5c: Relate the Following Decisions to the Declaration of MSP : Gulbarga**

Note : Same as in Figure 4.5 (a).

**Table 4.13a: Relate the Following Decisions to the Declaration of MSP: Mandya**

(Per cent of total respondents)

Decision	1 to 2 ha.	2 to 4 ha.	Above 4 ha.	All
<b>Increase in the use of cash input due to the increase in MSP</b>	66.67	96.00	95.24	92.00
<b>Increase in wage rate to hired labour due to increase in MSP</b>	100.00	96.00	95.24	94.00
<b>Use of new technology due to increase in MSP</b>	33.33	96.00	85.71	86.00
<b>Increase in the market time due to increase in MSP</b>	0.00	4.00	19.05	10.00
<b>Change in the market place due to increase in MSP</b>	33.33	32.00	28.57	30.00
<b>In other investments due to increase in MSP</b>	33.33	64.00	57.14	58.00

Note: The proportion of respondents who responded 'yes' to the question to total number of respondents.

2. Same as in Fig. 4.5 (a)

**Table 4.13b: Relate the Following Decisions to the Declaration of MSP: Belgaum**

(Per cent of total respondents)

Decision	up to 1 ha.	1 to 2 ha.	2 to 4 ha.	Above 4 ha.	All
<b>Increase in the use of cash input due to increase in MSP</b>	100.00	100.00	100.00	100.00	100.00
<b>Increase in the wage rate to hired labour due to increase in MSP</b>	66.67	100.00	86.96	91.67	90.00
<b>Use of new technology due to increase in MSP</b>	100.00	100.00	86.96	100.00	94.00
<b>Increase in the market time due to increase in MSP</b>	33.33	16.67	26.09	75.00	36.00
<b>Change in the market place due to increase in MSP</b>	33.33	33.33	47.83	25.00	38.00
<b>In other investments due to increase in MSP</b>	66.67	58.33	43.48	66.67	54.00

Note: As in table 4.13(a)

**Table 4.13c: Relate the Following Decisions to the Declaration of MSP: Gulbarga**

(Per cent of total respondents)

Decision	2 to 4 ha.	Above 4 ha.	All
<b>Increase in the use of cash input due to increase in MSP</b>	100.00	95.56	94.00
<b>Increase in the wage rate to hired labour due to increase in MSP</b>	100.00	93.33	92.00
<b>Use of new technology due to increase in MSP</b>	100.00	93.33	92.00
<b>Increase in the market time due to increase in MSP</b>	100.00	95.56	94.00
<b>Change in the market place due to increase in MSP</b>	100.00	48.89	52.00
<b>In other investments due to increase in MSP</b>	50.00	26.67	28.00

Note: As in table 4.13(a)

We repeat that the responses about decision-making obtained here are more like a simulation exercise conducted at the village level. But even with the limitation of such an exercise, we can still say that if the MSP intervention is proper and if the farmers are made fully aware of it the instrument will help in dealing positively with the decision environment. The exercise was also repeated in a group of farmers to understand how far they based various decisions on expected price (given MSP as expected price and under the assumption that MSP will cover the cost of cultivation and include respectable allowance for managing the farm). The results have been presented in Table 4.14. We can see from the table that MSP played a vital role in the process of decision-making, given the caveats listed by the farmers. These caveats include a remunerative MSP, declared before sowing season, administrative mechanism set in place and above all, involving minimum transaction cost.

**Table 4.14: Farmers' Responses to the Impact of MSP on Farm Decision-Making**

Decision-Making Field	Mandya	Belgaum	Gulbarga
Area allocation decisions	AF	PA	PA
Input Application	PA	AF	AF
Fertiliser	AF	AF	PA
Pesticides	PA	RA	NI
Irrigation	NI	RA	NI
Other Cash	AF	AF	AF
Cultivation practices	PA	RA	NI
Wages paid to hired labour/ Use of hired labour	NI	AF	RA
Marketing (Place, Time and Price Negotiations)	AF	PA	RA

Note: AF - Almost fully, PA - Partially, RA – Rarely, NI - No Impact

2. Same as in Figure 4.5 (a).

In Tables 4.15 (a, b, c), we have presented the actual decisions taken by the farmers in the real production environment. The decisions about varieties adopted, the method of cultivation and credit as well as investment decisions could be seen here. But these were not exclusively in response to the price environment and depended on a host of other factors. Largely, the contours of decisions were revealed by the actual decisions and we found that the farm households with strong resource base had a hesitation in going either for an innovative technology or method of cultivation.

**Table 4.15a: Production Environment of the Respondents:  
Mandya**

(Per cent of total respondents)

<b>Cereals: Paddy</b>	<b>Up to 1 ha.</b>	<b>1 to 2 ha.</b>	<b>2 to 4 ha.</b>	<b>Above 4 ha.</b>	<b>All</b>
Production decision	-	38.00	61.00	49.00	50.00
Type of variety					
Sisila	-	-	4.00	4.76	4.00
Mandyavijay	-	33.33	12.00	9.52	12.00
BR	-	-	44.00	52.38	44.00
Sonamasuri	-	-	-	9.52	4.00
Jaya	-	33.33	32.00	19.05	26.00
I.R.64	-	-	-	4.76	2.00
Gowri cross	-	-	4.00	-	2.00
I.R.20	-	33.33	-	-	2.00
Credit / Investment	-	33.33	28.00	28.57	28.00
Cultivation of crops					
Bullock	-	100.00	88.00	100.00	94.00
Tiller	-	-	-	4.76	2.00
Bullock + Tractor	-	-	12.00	23.81	16.00
Bullock+Tractor+Tiller	-	-	-	4.76	2.00
Market place Local	-	100.00	92.00	90.48	90.00
Mandya	-	-	-	4.76	2.00
Rice mill	-	-	4.00	4.76	4.00
<b>Sugarcane</b>	<b>Up to 1 ha.</b>	<b>1 to 2 ha.</b>	<b>2 to 4 ha.</b>	<b>Above 4 ha.</b>	<b>All</b>
Type of variety Local	100.00	100.00	88.00	76.19	84.00
C.O-8371	-	-	8.00	19.05	12.00
C.O-419	-	-	4.00	4.76	4.00
Credit / Investment	100.00	66.67	80.00	71.43	76.00
Cultivation of crops					
Bullock	100.00	100.00	84.00	61.90	76.00
Tractor	-	-	4.00	4.76	4.00
Bullock + Tractor	-	-	12.00	28.57	18.00
Market place					
Mandya : Factory	100.00	100.00	76.00	90.48	84.00
Sankeshwara	-	-	24.00	9.52	16.00
<b>Cereals : Ragi</b>	<b>Up to 1 ha.</b>	<b>1 to 2 ha.</b>	<b>2 to 4 ha.</b>	<b>Above 4 ha.</b>	<b>All</b>
Production decision	-	-	-	14.29	6.00
Type of variety Indap-9	-	-	-	9.52	4.00
HR-911	-	-	-	9.52	4.00
Credit / Investment					
(Average)	-	-	-	4.76	2.00
Cultivation of crops					
Bullock	-	-	-	4.76	2.00
Tractor	-	-	-	4.76	2.00
Bullock + Tractor					
Market place Local	-	-	4.00	9.52	6.00

**Table 4.15b: Production Environment of the Respondents:  
Belgaum**

(Per cent of total respondents)

<b>Cereals: Jowar</b>	<b>Up to 1 ha.</b>	<b>1 to 2 ha.</b>	<b>2 to 4 ha.</b>	<b>Above 4 ha.</b>	<b>All</b>
Production decision	33.33	25.00	39.13	75.00	44.00
Type of variety Mico	-	-	-	25.00	6.00
Pioneer	-	-	21.74	33.33	18.00
M-35	33.33	16.67	39.13	8.33	26.00
HB	-	-	4.35	8.33	4.00
CH-5	-	8.33	-	-	2.00
Credit / Investment	33.33	25.00	8.70	41.67	22.00
Cultivation of crops					
Bullock	33.33	25.00	39.13	50.00	38.00
Tractor	-	-	-	16.67	4.00
Bullock + Tractor	-	-	-	16.67	4.00
Market places					
Sankeswara	33.33	8.33	34.78	41.67	30.00
Nippani	-	-	-	16.67	4.00
Gokak	-	16.67	4.35	25.00	12.00
<b>Cereals : Paddy</b>	<b>Up to 1 ha.</b>	<b>1 to 2 ha.</b>	<b>2 to 4 ha.</b>	<b>Above 4 ha.</b>	<b>All</b>
Production decision	33.33	58.33	43.48	-	36.00
Type of variety Jaya	-	25.00	17.39	-	14.00
HB	-	-	8.70	-	4.00
Intan	-	16.67	8.70	-	8.00
Manila	-	8.33	4.35	-	4.00
Indrani	-	8.33	4.35	-	4.00
Basumathi	33.33	-	-	-	2.00
Credit / Investment	-	8.33	8.70	-	6.00
Cultivation of crops					
Bullock	33.33	58.33	34.78	-	32.00
Tractor	-	-	8.70	-	4.00
Market places					
Belgaum	33.33	58.33	43.48	-	36.00
<b>Oil Seeds : Groundnut</b>	<b>Up to 1 ha.</b>	<b>1 to 2 ha.</b>	<b>2 to 4 ha.</b>	<b>Above 4 ha.</b>	<b>All</b>
Production decision	-	-	16.00	78.00	86.00
Type of variety					
Anigeri	-	-	4.35	8.33	4.00
Cultivation of crops					
Bullock	-	-	-	8.33	2.00
Tractor+Bullock	-	-	4.35	-	2.00
Market place					
Sankeswara	-	-	4.35	8.33	4.00



**Table 4.15c: Production Environment of the Respondents:  
Gulbarga**

(Per cent of total respondents)

<b>Cereals: Jowar</b>	<b>2 to 4 ha.</b>	<b>Above 4 ha.</b>	<b>All</b>
Production decision	75.00	91.11	88.00
Type of variety M-35	50.00	77.78	74.00
Maruthi	0.00	2.22	2.00
Mugatui	0.00	2.22	2.00
Local	0.00	8.89	8.00
White	0.00	2.22	2.00
M8863	0.00	2.22	2.00
HB	0.00	2.22	2.00
Credit / Investment	0.00	22.22	20.00
Cultivation of crops			
Bullock	75.00	75.56	74.00
Tractor	0.00	6.67	6.00
Tiller	0.00	8.89	8.00
Market places			
Local	25.00	13.33	14.00
Jewargi	0.00	20.00	18.00
Gulbarga	25.00	51.11	48.00
Sedam	25.00	6.67	8.00

<b>Cereals : Tur</b>	<b>1 to 2 ha.</b>	<b>2 to 4 ha.</b>	<b>Above 4 ha.</b>	<b>All</b>
Production decision	100.00	25.00	8.89	90.00
Type of variety				
M-35	100.00	25.00	0.00	4.00
C.O-8371	0.00	0.00	8.89	48.00
C.O-419	0.00	0.00	0.00	20.00
Credit / Investment (Average)	0.00	0.00	4.44	68.00
Cultivation of crops				
Bullock	100.00	25.00	8.89	76.00
Tractor	0.00	0.00	0.00	6.00
Bullock + Tractor	0.00	0.00	0.00	8.00
Market places				
Local	0.00	0.00	0.00	6.00
Jewargi	100.00	25.00	2.22	24.00
Gulbarga	0.00	0.00	2.22	54.00
Sedam	0.00	0.00	2.22	6.00

In the Tables 4.16 (a, b, and c) we have tried to consolidate the picture on factors influencing the area allocation under a crop as observed in the field. The data used earlier [Tables 4.15 (a, b, and c)] indicate the actual micro-level decision-making process of the farmers but here we are trying to isolate the variables that influenced area allocation decision. Prices certainly may have a significant influence on area decisions. But availability of technology also plays an important role. In the context of commercial agriculture, the response of the expected price can be clearly seen, whereas, in the backward regions the farmers' response is still slow. Their perception about expected price itself may be quite inadequate to respond to such stimuli. We have also viewed the process of decision-making from another angle, namely, the factors considered while taking area allocation decisions. The decision-making process at the micro-level is easy to understand but difficult to comprehend. It is certain that prices play an important role in the farmers' decision calculus, but the non-price factors also have significant presence in the process. Our exercise suggests that the non-price factors are equally important in crop decisions.

**Table 4.16a: The Factors Featured in Respondents' Decision in Area Allocation for the Crops: Mandya**

(Per cent of total respondents)

Items	Factors Promoting Increase in Area		
	Sugarcane	Paddy	Ragi
Last year's price	60.00	38.00	2.00
Last 3 years' average price	6.00	0.00	0.00
Price fluctuations	26.00	12.00	2.00
Prices of other competing crops	50.00	36.00	2.00
Subsistence or to be used in the house	0.00	74.00	30.00
Non-availability of the market infrastructure	4.00	0.00	2.00
Cheating in the market	0.00	0.00	0.00
Minimum support price	32.00	8.00	0.00
Availability of the inputs	26.00	12.00	0.00
Availability of the technology know-how	42.00	32.00	0.00
Any other	4.00	6.00	0.00

**Table 4.16b: The Factors Featured in Respondents' Decision in Area Allocation for the Crops: Belgaum**

(Per cent of total respondents)

Items	Factors Promoting Increase in Area		
	Jowar	Paddy	Groundnut
Last year's price	46.00	24.00	22.00
Last 3 years average price	2.00	6.00	20.00
Price fluctuations	16.00	0.00	12.00
Prices of other competing crops	10.00	16.00	32.00
Subsistence or to be used in the house	52.00	38.00	14.00
Non-availability of the market infrastructure	2.00	0.00	6.00
Cheating in the market	0.00	0.00	2.00
Minimum support price	24.00	0.00	8.00
Availability of the inputs	0.00	4.00	4.00
Availability of the technology know-how	4.00	4.00	8.00
Any other	2.00	0.00	2.00

**Table 4.16c: The Factors Featured in Respondents' Decision in Area Allocation for the Crops: Gulbarga**

(Per cent of total respondents)

Items	Factors Promoting Increase in Area		
	Jowar	Tur	Gram
Last year's price	46.00	72.00	26.00
Last 3 years average price	24.00	36.00	30.00
Price fluctuations	0.00	20.00	10.00
Prices of other competing crops	20.00	80.00	32.00
Subsistence or to be used in the house	78.00	4.00	4.00
Non-availability of the market infrastructure	0.00	4.00	2.00
Cheating in the market	0.00	2.00	0.00
Minimum support price	2.00	2.00	0.00
Availability of the inputs	8.00	24.00	16.00
Availability of the technology know-how	24.00	48.00	12.00
Any other	0.00	0.00	0.00

#### **4.9. Resume**

The analysis of price incentives at the micro-level has received least attention in the literature on supply response. The price response studies of Nerlovian genus assume the price expectation of the farmers, with one year lag, by introducing an element of stagnancy in the process of decision-making. At the micro-level, however, the process operates quite differently. Price certainly continues to play a significant role in the decision-making process but it is unfortunately not the Minimum Support Price. A very high proportion of farmers are neither aware of the MSP nor the administrative process and when explained they recognised its role as a price policy instrument. But they did not forget to put caveats for its effective and efficient utilisation. The experience of the last decade suggests that cropping pattern, crop varieties and adoption of technology are largely dictated by the trends in market prices. The Cost of Cultivation (that serves a fulcrum for arriving at MSP) suggests that farmers actually spend higher than they recover through MSP or the market. In addition to this, the market imperfection continues to dog those who manage to take some marketable surplus to the market and a majority of them are unanimously of the view that their price expectations are never met in the market. Many of them have to sell the products well below the MSP which is also borne by the secondary data. As stated above, price as an instrument in decision-making keeps its prominent position albeit theoretically. When explained about the MSP, the farmers did recognise its importance as a decision-making tool and an instrument to augment farmers' welfare. But unfortunately, it is not being implemented effectively.

## **CHAPTER V**

### **TOWARDS POLICY FRAME**

#### **5.1. Introduction**

Most of the reviews of the Price Policy touched only the theoretical aspects of the policy and surprisingly, the empirical studies did not uphold the theoretical scaffoldings firmly. In the entire process, ground realities pertaining to the intended impact of the Price Policy were relegated to the backyard or were taken for granted. The emergence of the Price Policy came in the context of institutionalising the agricultural price monitoring mechanism under the recommendations of the Jha Committee Report. These were framed under the heavy shadow of food insecurity as well as distribution mechanism prevailing during those years. These efforts had helped significantly during the three decades, but significant changes took place in the policy parameters of agricultural economy during the nineties. The situations changed from incentive prices to remunerative prices and now the issues need to be posed in a totally different perspective. After an experience of a quarter of century, in the implementation of the market intervention scheme, Prof. Dantwala (an architect of the price policy) wrote again during the early nineties urging to recognise the changing role of MSP and market interventions.

The process of liberalisation adopted during the nineties put the price policy under new connotations. In the wake of this process and opening up of the international trade, we are required to think afresh about the context of the policy. Apart from being an instrument for creating incentives, it is now expected to play a much wider role of fully interacting with the market forces and facilitating the integration of domestic market with the world market. It needs to be ensured that in this change there should not be any welfare loss to the stakeholders. Farmers are already expressing deep concern about the 'remunerative aspect of MSP', but this rather points an accusing finger towards the frequent failure of the market mechanism to provide economically viable prices to them. In the wake of larger stocks, now the price policy has to be handled carefully. Even beyond this, it has come into bold relief that the price intervention scheme hitherto has not been very effectively implemented and thus, could not fully stand by the objectives it has framed to serve. The price policy has been asymmetric in terms of crops as well as regions and thus, can inflict inequality even through a well intended intervention scheme. Such externalities inflicted by a deliberate policy bias on coarse cereals and pulses sector as well as on the regions

growing these crops can be seen in their growth rates and income foregone in the process. Therefore, a fresh look at the price intervention scheme is most imminent. This study was undertaken specifically to analyse the effectiveness of Minimum Support Prices (MSP) as a tool of Agricultural Price Policy at the State level across the selected states in the country.

The context of price policy 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 ask for a fresh look at MSP as an instrument for interacting with the important parameters of the agricultural economy. 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, 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 an additional and a significant role in the form of state intervention in the agricultural product markets as well as a component of the safety-net measures under WTO. This will also have a strong linkage to the factor markets. In the present situation, two important aspects deserve attention, viz., (i) insulating the farm producers against the unwarranted fluctuations in prices, provoked by the international price variations, and (ii) creation of an incentive price structure for the farm producers in order to direct the allocation of resources towards growth/export-oriented crops. The focus has to change towards creating value addition for the cultivators. Therefore, it has become necessary to review the implementation process and effectiveness of MSP as an instrument in this background.

In the recent past, the growth pattern has been changing in favour of certain crops due to various reasons. At times, questions are asked about the suitability of area allocated to such crops and the aggregate welfare implications of this changing crop constellations. 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, in the present context, it becomes necessary to see the effectiveness of MSP as a tool to encourage adoption of technology. Understanding capital formation as well as ascertaining and documenting the producers' responses to this scheme of price intervention at the micro-level become necessary in the process. 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 the macro-level as well as functional ease and at the micro-level about its felt impact. 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 effectiveness is viewed from five distinct angles, viz., (i) impact on the fluctuations in prices, (ii) role of MSP as an incentive price, (iii) its impact on cropping pattern, (iv) distribution parameters, and (v) operational effectiveness of MSP. The study also incorporates the analysis of the administrative process in the implementation of MSP. In such an exercise, we have taken help from secondary as well as primary data sources at the State level. For the purpose of secondary data, a good number of indicators were collected at State and district levels, and for the primary data, three districts were selected with the following characteristics: (i) A district with strong trends in commercialisation of agriculture and having high growth rates coupled with concentration of cash crops. We selected Mandya district for this purpose. (ii) A district which largely depends on the food economy and grows food crops with an accelerated rate of growth. Such district provides ground for looking into hypothesis that Minimum Support Prices have influenced the farmers growing food crops. We chose Belgaum to represent this. (iii) The third district was chosen from a typical rainfed region of the state with predominance of low value low-density crops with a relatively lower rate of growth. We chose Gulbarga district as representing this situation. The crops chosen were sugarcane, paddy and ragi for Mandya district; jowar, paddy, groundnut for Belgaum district and Jowar, tur and gram for Gulbarga district.

## **5.2. MSP in the Context of Karnataka**

Marketing of agricultural commodities under State stipulated regulations began in Karnataka from 1927 and through various regional acts covering marketing of agricultural products it came under the purview of Karnataka Agricultural Produce and Marketing (Regulation) Act. The Act provided good scope for establishing a democratic marketing body. The regulation of marketing in Karnataka began with a focus on commercial crops and under the situation marked by scarcity in the supply of agricultural commodities. Movement restrictions and market specialisations effected concentration of commodities in a few markets. Above all, the density of markets was too thin and could not effectively eliminate the role of

middlemen. Marketing infrastructure was another important component of the effective price policy. The availability of this infrastructure directly reflected on a successful market operating mechanism in terms of prices. It has been pointed out that market density in Karnataka increased over the last three decades. It went up from 1.6 markets per lakh hectare of gross cropped area in 1970 to about 4 markets per lakh hectares of gross cropped area by 2001. But still it was not sufficient to ease the functioning and effectiveness of market as an institution. The insufficiency of market infrastructure has been an important aspect for the success or failure of the price mechanism.

Karnataka State has a typical composition having large share of its area under severe climatic constraints with a highly diversified agricultural sector. The state has the largest share of drought-prone areas of the country and higher than the country's share of poor but that did not deter the state from achieving better rates of reduction in poverty ratio. The high density of low value and high-risk crops typifies the State agriculture. The crop economy of the state has a few typical characteristics. It has a predominantly cereal dominant crop pattern with coarse grains having largest share of area under them. These crops generally have low yield rates and lower prices and thus commercial crops are resorted to support the agricultural economy. The growth pattern depends upon the performance of monsoon and the availability of water. On the contrary and at the same time, the state has entered in a big way in high-tech agriculture, only next to a few states in the country. Therefore, the price incentive structure becomes an important component of agricultural policy in the State.

The effectiveness of Price Policy at the State level involves the availability of market infrastructure at the State level and the initiative taken by the state governments in creating institutional structure for monitoring agricultural prices. In the case of Karnataka, the State government has recently constituted the Agricultural Price Commission. The Government of Karnataka in its order establishing the Price Commission states that the Commission on Agricultural Prices is constituted to recommend standard prices, which can be sustained in the market, and support prices at which the state government should intervene in the agricultural market. Therefore, at the institutional level the State government has taken a bold step towards formalising a price monitoring system and thereby it has given a fillip to organising a Price Policy at the State level. This institutional initiative will go a long way in establishing the price policy at the State level.

We have analysed the trends in agricultural prices in the State for the last decade. The trends have been analysed from two perspectives,



viz., market prices and in the relative perspective of market prices with the administered prices. The trends in MSP across crops indicate a growth of about 10 per cent per annum but there are variations across crops and regions. The relative neglect of jowar, ragi, maize and groundnut compared to wheat and paddy comes out very clearly especially when we look at the relative prices of these crops in relation to administered prices of paddy and wheat. Similarly, the market imperfection and fragile market integration come out from the analysis wherein it is pointed out that the price differences prevail 2-3 times in the markets separated by about 150 kms and at times even less than that for the same crop in the same month. Similarly, it is also pointed out that the farm harvest prices and wholesale prices do not bear a strong lead-lag relationship with the Minimum Support Prices. Further, it is located that MSP does not bear any consistent and statistically significant relationship with either the wholesale prices or farm harvest prices. This is indicative of the fact that MSP fails to influence trends in the market prices or even act as a guide price. In fact, it is bringing out that for a few years MSP was higher than farm harvest prices and the wholesale prices. The failure of market prices to keep pace with administered prices thus comes out very clearly. Therefore, the role of MSP as guiding price seems to be minimal.

Minimum Support Price also does not seem to work as an incentive price dictating the area under major crops in the State as well as at the micro-level. In other words, the cropping pattern largely gets influenced by the market prices than the MSP. Similarly, the input use structure also has little influence on the administered prices. The yield response functions in terms of prices with yield of crops do not bear any statistically significant relationship with the lagged prices of the commodity. In other words, the administered price fails to act either as an incentive in directing the cropping pattern or as an incentive to increase the input intensity. This trend is specifically clear during the last decade. The regional and seasonal variations in prices have been observed and we have located the peak and slack months across markets and commodities in the State. This information can be effectively utilised in order to plan proper market strategy. The role of MSP in reducing the seasonal and regional fluctuations is absolutely absent. These fluctuations still continue to dominate the field. Effectiveness as analysed from the perspective of market infrastructure and influence of administered prices on the price trends does not yield the commonly acceptable results. Our analysis clearly suggests that MSP has ceased to act as an incentive to influence the area allocation under a crop and it also

ceases to show any significant impact on the input use structure. This behaviour is very clear during the nineties.

Implementation of MSP in the State of Karnataka has been quite an oblique task. 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 than by chance. When the arrivals increase in the market it is natural that the prices offered by the traders are quite low 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 'Task Force' including 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. The procurement agencies also have to identify state level procurement network. Food Corporation of India has a proper 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\*.

Administration of Minimum Support Prices is an important step in our analysis. We have analysed the administrative mechanism in terms of the institutions as well as the process of implementation. The administration of MSP goes through quite a few institutions and therefore, creates complex situations. This also prohibits ease in the process of implementation and introduces a significant lag between the price collapse and the purchase operations. The scheme assumes quick intervention so that welfare loss is minimum. However, timely intervention seem to be not taking place and the lag between the collapse of prices and procurement is about 2-3 weeks. Such lag provides sufficient time for the traders to purchase from the farmers at lower price and sell it to the state at MSP, making significant profits in the process. Therefore, reforms in the agricultural marketing process should feature prominently in the next steps of reform.

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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.

It has come out clearly that MSP does not help in deciding the area allocation under the crops during the next season. But there are subtle differences between the crops. The area decisions in the case of major crops and inferior cereals do not seem to depend on MSP. The relative prices seem to work against inferior cereals. The negative coefficient for tur indicates area under tur going down as MSP increases, which in itself is a perplexing result and undermines the role of MSP. But MSP is acting positively on area under groundnut, whereas relative MSP of groundnut in relation to paddy may probably discourage such area allocation. However, degrees of freedom are not sufficient to conclude about the role of MSP as an incentive price at the macro-level during the nineties. The lagged relationship with area as well as production does not indicate the role of MSP as an incentive price and therefore, it seems only to serve as a psychological support in the case of price collapse and not as an instrument of price incentive as envisaged.

The very foundation of price policy is to support decision-making in area allocation and provide incentive for adopting new technology but that seem to have not been working in the field. It is very clear that MSP does not provoke any area or input decisions, rather it seems that the time trend alone dictates the decision environment. Our analysis indicates that wheat and paddy got the best out of the price policy (through MSP) but unintentionally this worked as an inflictor of negative externality to discourage coarse cereals and pulses. Therefore, it is not wrong if we consider this as a strong policy bias against a few crops. Incidentally, these are the crops grown in agriculturally backward region of the State and mostly by the resource poor farmers.

One of the important objectives of the price intervention scheme is to enhance adoption of technology by providing a wedge against the fluctuations in expected prices. When farmers are assured about price level before the next harvest, they feel secure to use proper mix of inputs and technology which requires a little more investment. Essentially the farmers are not 'investment-shy' in the context of such assurance and they become cautious risk takers. They probably give consideration to the current MSP exercise and therefore, the declaration of MSP should be before the sowing season for the concerned crop. The experience of last three decades tells us that this happens more as an exception than practice. Treating MSP either as an incentive price or analysing its impact on input use may only serve as a ground for theoretical discussion, it has no relevance on the ground. With this evidence in hand one tends to conclude that MSP hardly has any influence on area allocation or input use at the micro-level.

In the present context, the factors influencing the effectiveness of MSP assume more importance. Among the factors that dictate the effectiveness of MSP the most important are: i. process of implementation of the policy; ii. undue dependence on the State for intervention so that the markets function effectively and freely in long run; iii. weeding out the information asymmetry prevailing in the agricultural markets and providing farmers with the required information at proper time; iv. monitoring the prices without intervention and assess the situation in the place of *suo motto* intervention; and v. long-term policy steps to replace the present *ad hoc* arrangements.

The process of implementation favours a few crops against another group of crops. This is ensured by a few interest groups. It is well known that a segment of the farmers' lobby has a greater influence on the price policy and at the macro-level it favours a few crops and regions. This, in turn, affects the aggregate welfare. Similarly, input markets too have little influence of the behaviour of MSP. In product market, the expectation about support prices provide ripe situation to the intermediaries to achieve greater advantage. The implementation process itself provides time-lag between declaration of the intention to procure under MSP and the actual procurement. This gives enough room for the traders to step in and buy the commodities from the farmers to sell it under market intervention scheme to the State Government. This clearly defeats the purpose of the scheme. Politicians of all groups would like to be in good books of the farmers by lauding the MSP and arguing for higher MSP but little realising that the whole process fails the farmers. It is necessary therefore, that prudent steps are taken in order to clearly focus the price policy on ensuring that the weak and marginal farmers/crops do not suffer in the process through distress sale or deliberate policy bias. A long-term clear policy statement is therefore, required for weeding out the grey areas in the price policy need to be attended to.

In the history of the last three decades, it has come out boldly that the process of implementation has a significant dependence on State bureaucracy. This undermines its relevance as an instrument of the Price Policy. The relevance of MSP to the farm sector can be viewed from three different angles. First, the declaration of MSP should be at the time when the farmer has to take a decision about the crop. It is stipulated that the Minimum Support Prices 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. However, even after more than two decades of exercise the MSP is not declared before the decision-making about sowing.

This year (2001) the MSP was declared at the end of September when the crops were ready for harvest. We located a considerable gap in the submission of CACP report and the declaration of MSP. In addition to the fact that in most of the years MSP was declared well after sowing was completed and the farmer was committed to the crop. Second, MSP needs to provide the floor level price for the crops under consideration. The main objective of MSP is that it should provide such floor at the time when prices crash below the promised level. Here, it is not only the declaration of MSP but its implementation which becomes crucial. Third, the relevance of MSP emerges in the form of extension of participation of the farmers in the scheme and their exposure to it. The participation certainly depends upon the prices going below the MSP; however, the very fact that the farmers are aware or unaware of the scheme gives a clear clue about their participation.

Minimum Support Prices have been in operation as a price support scheme for over a quarter of a century and it is time to look back at the effectiveness of this scheme. This requires an examination of the present operations of MSP and to see if they are meeting the objectives with which the scheme began. The first question that comes 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 itself is imperfect and that provides further scope for the process to fail. The APMCs and other market intervention agencies perform their functions in such a way that the farmers and the primary producer rarely benefit out of the process. If the intervention is streamlined and supported with proper institutional framework, probably the gain will be on the farmers' side. Such scheme requires the market institutions to intervene selectively but timely when the market prices fall below the declared MSP. However, timely intervention in the agricultural markets, at least in Karnataka, seems to be not taking place. In order to ensure timely intervention the Karnataka Government has opened procurement centres at all the APMCs and a special fund is created for this purpose.

### **5.3. Conspectus**

We have looked at the effectiveness of Minimum Support Prices with a focus on its fulfilling the objectives set forth by the price policy declared in 1986. The following paragraphs give a succinct view of the findings from our macro-level and field data analysis of the objectives set for the study. Our results pertain to the State of Karnataka.

- i) The impact of MSP on market prices (FHP or WHP) in terms of reducing the seasonal and cyclical fluctuations during the nineties has been quite negligible.
- ii) MSP could not act as an incentive price since more often it is declared well after the sowing season. Moreover, the mechanism of implementing MSP does not fully allow it to perform the role of an incentive price.
- iii) It also does not help in the adoption of technology as the declarations come well after the sowing of the crop is undertaken. The determinants of the adoption of technology were largely located in the market prices and market behaviour.
- iv) The MSP has not influenced the structure as well as quantum of inputs since many of the farmers are not even aware of MSP.
- v) MSP does not influence the regional variations in the prices and these continued to dog the market of agricultural commodities.
- vi) Among the factors that dictate the effectiveness of MSP, the following assume significant importance:
  - (a) Process of implementation of the scheme.
  - (b) Undue dependence on the state machinery every time for the purpose of initiating the procurement.
  - (c) Information asymmetry prevailing in agricultural market thereby causing severe market imperfections.
  - (d) Absence of state level mechanism for monitoring agricultural prices to initiate *suo motto* intervention.
- vii) MSP, if implemented properly, can effectively play the expected roles: to act as incentive price, crop pattern and input intensity navigator, risk abater and technology promoter. Our simulation exercise suggests that if the process of MSP is overhauled probably its envisaged role can be witnessed.
- viii) The relevance of MSP in the case of Karnataka proves to be extremely marginal and its influence could be seen only on the Paddy and Sugarcane growers.
- ix) MSP reveals only theoretical impact on agricultural growth and distribution parameters. However, the implementation of the scheme is such that it prevents empirical assessment of any such impact.
- x) The process of implementation of MSP requires a thorough overhauling and it needs to be made market as well as farmer friendly. We have suggested some of the measures to enhance the effectiveness of MSP.
- xi) The questions regarding the micro-level impact of MSP on adoption of technology, investment in agriculture, inter-crop price parity, impact on

cropping pattern and sustainability of cropping pattern has been analysed and it was found that the scheme is not perfectly implemented to influence these parameters at micro level. Therefore, it will not have any such impact. Probably, an overhauled scheme and the process of implementation will make up for these lacunae.

#### 5.4. Policy Options

The objectives of the price policy were formulated in three different phases. Among these, the first phase was a typical food scarcity phase with major focus on making foodgrains available to the consumers. The second phase started with the recommendations of the S R Sen Committee report (GOI 1980) and revisiting the methodology of computing cost of production. The first formal price policy declaration came in the form of the Price Policy document of 1986 and that provided a long list of objectives to the Price Policy. Subsequently, the focus was divided between farmers and consumers. Price Policy soon assumed strong political overtones. Among the positive gains buffer stock as well as distribution became quite satisfactory. The decade of the nineties witnessed several changes in the agricultural sector as well as in the agricultural policy. In the background of these changes it was felt that the primary objectives of the price policy should be: (i) to protect the agricultural producers from the sharp fall in prices (providing insurance); (ii) to encourage a definite cropping pattern in the context of overall growth imperatives; and (iii) to ensure the participation of primary producer in international market as well as to protect the farmers' interest against the price fluctuations due to world price/market situations. Therefore, the change in the focus of price policy was quite imperative. The Agricultural Policy document of 2000 goes on in a similar vein and it was stated that "the Central Government will continue to discharge its responsibility to ensure *remunerative* (emphasis added) prices for agricultural produce through announcement of Minimum Support Prices Policy for major agricultural commodities (GOI 2000:14). The document has also reflected on several aspects which required changes in the approach to Price Policy. It is therefore, required that the contours of Price Policy be reviewed carefully. The concept of '*remunerative prices*' entered for first time in the policy vocabulary. This should be made clear emphatically since it would have deeper significance for the farmers and the agricultural economy.

Minimum Support Prices as a tool of Price Policy covers a large number of crops across the length and breadth of the country. Over the years, CACP has added quite a few crops to this list, probably not seriously reviewing the list of crops already included. That shows presence of even

insignificant crops in the list. In the process, the inter-crop price parity got vitiated and the policy became instrumental to such process of deliberate neglect. Discouraging certain crops and crop-groups also brought about inequality across regions (favouring a few states) and farmer groups (growing wheat and rice). Largely, the crops which received raw deal in terms of relative prices were the ones grown by resource poor farmers and in slow growth regions. This experience requires a selective Price Policy with a clear focus on the outcome. We suggest that the MSP should be selectively applied for crops and in the regions specified based on three criteria, namely, – growth pattern, competitiveness and trade response.

Administration of Minimum Support Prices has been quite a circuitous task in most of the States in the country. No wonder we have a large number of instances in which market prices rule below MSP and even average Farm Harvest Prices are also below MSP. The peak arrivals in regulated markets are naturally clustered during harvesting season and added to that the regulated markets function on pre-decided days in the week. These two together result in clustering of the arrivals in the market on a particular day and consequently push the producers in a dis-advantaged situation. When the arrivals increase, it is natural that the prices collapse. After getting this information a meeting of the Task Force is conducted under the Chairmanship of the District Commissioner involving all the concerned institutions in the process of procurement. The decision for procurement is taken and locations of the centres for procurement are decided. The whole procedure takes more than two weeks to complete, despite the present days communication facilities. But by this time, farmers are compelled by the circumstances to sell the products to the middlemen/traders at the prices dictated. It is necessary to simplify the procedure and have permanent procurement centres at the APMC yards, with funds to procure at a time when prices collapse below MSP. One such step has been taken by the Govt of Karnataka, but the experience needs to be reviewed. There are a number of institutions involved in the procurement process and there is hardly any coordination between them. For an effective policy, it is necessary to have a single agency coordinating the whole procedure without any time-lag involved. It is suggested that FCI should handle food commodities as is done now and NAFED may be made responsible for other non-food commodities and international trade. The rest of the bureaucratic structure causing distance between procurement agencies and the farmer should be done away.

The process of determination of Minimum Support Price has led to several debates and reviews during the last three decades. But even then it



has not been widely accepted by the farmers and a certain group of academicians. During the last two years, two workshops were conducted by the CACP to thrash out the methodology problems. But we are yet to get a comprehensive policy statement based on these deliberations. There are hardly any attempts to check the authenticity of the data collected under cost of cultivation schemes, which is often challenged by the farmers. CACP arrives at MSP after long deliberations and based on the cost of production data collected from the countrywide centres. Notwithstanding the quality of these data, it is necessary to keep cost  $C_2$  in view while fixing MSP. Unfortunately, the recommended MSP by CACP is changed while it is declared by the Central Government, mostly based on political interventions and to score some political mileage. Such changes are effected quite often, rather as a rule than exceptions. Moreover, these changes in MSP are not substantiated by any rational arguments, ridiculing the so called 'scientific process' of CACP in arriving at the MSP. Therefore, it is required that deliberation with the interested Cabinet Ministers and farm leaders are undertaken by the CACP well before the declaration of MSP. Another way of achieving this is to make CACP a statutory body of the Government. It is mandated that MSP should be announced before sowing of the crops in every season. But this is done rarely. We have seen that the MSP is rarely announced before the sowing season. MSP when announced after the sowing season loses its reference as a price policy tool. Therefore, it is necessary to announce MSP before the sowing season.

During the sixties and early seventies the price policy focussed on protecting the consumers and procuring buffer stocks required for supplying the Public Distribution System. The prices were to be kept at an affordable range for the consumers and that formed the fulcrum of the policy. Providing remunerative prices to the farm produce came as an important change after 1979 and precisely during post 1986 period. We located a distinct shift in the trends of MSP at that point and the second break was visible in 1996-97. The second change was more in response to the process of liberalisation and with an eye on international markets and prices. This change though noted subtly in their reports by the CACP, nothing specific has been done to support the producers willing to participate in the exports of agricultural produce. Agencies like NAFED, also have a significant presence in international trade but have not been geared through policy to undertake such initiatives. Therefore, it is necessary that institutions like NAFED or specially constituted Commodity Boards (like Tur Board of Karnataka) also intervene in the market with the prices declared well in advance for the purpose of trade.

*Moon in the Mirror* is one of the famous tales from Indian epic Ramayana, where mother satisfies a child's demand for moon by showing the moon in the mirror. It clearly describes the possibilities as high as that of moon but actual capabilities equivalent only to a mirror image. The scheme of Minimum Support Prices in the State of Karnataka shows a very good promise in terms of an effective tool of Price Policy. However, its application and the implementation process does not allow its effective presence on the ground. There have been some debates on the Minimum Support Prices in Karnataka within and outside the farmers' groups. When it comes to awareness and the process of implementation of the Policy, one gets stunned by a little impact the policy has on the ground. Nevertheless, the potential of the policy is not undermined here and therefore, one needs to correct the process of implementation as suggested above and the steps needed for such reform are given below.

Price and market monitoring mechanism at the State level is the most urgent requirement. A few sporadic experiments are available in the country but there is hardly any policy support for such initiatives. These mechanisms should cater for providing information on domestic/ international prices, technical advise in marketing, interface with specific Commodity Boards and market intervening agencies. In the absence of such market reforms it will be difficult to transfer the benefits of liberalisation to the most deserving sections among farmers.

### **5.5. Specific Steps Needed**

- There should be a thorough review of the methodology of arriving at MSP, discussed with farm leaders and academicians. Such review should be taken periodically and should be transparent in nature.
- Sample checks of the data collected under Cost of Cultivation scheme by independent agencies are extremely necessary. This process should be made mandatory for each of the State.
- MSP, if declared before the sowing season, can become an effective tool of Price Policy. Similarly, the gap between the recommended price by the CACP and the MSP declared by the Government of India should be rationally explained.
- The procurement mechanism needs some streamlining and the State governments should be encouraged to set up their own Agricultural Prices Commissions. Such Commissions will help monitor the prices and the procedure of intervention on similar lines as has been done in Karnataka.

- Inter-crop price parity can be utilised to encourage or discourage a particular cropping pattern. Probably, during the nineties little attention was paid to this aspect. Therefore, coarse cereals suffered a relative neglect at the policy threshold. This policy should be used by encouraging growth-oriented crops.
- Price Policy now needs to keep in view the crops having international trade potential. Two aspects have to be kept in view to encourage agricultural trade. First, to monitor and maneuver the Price Policy between domestic prices and international prices and second, to encourage the cropping pattern in favour of the export-oriented crops.
- MSP policy has not reached the farmers except in the regions with predominantly commercial agriculture. This is both due to the present process of implementation and declaration of MSP. To overcome this lacuna the information of MSP should reach the farmers through the well-oiled extension agencies.
- In addition to the above reforms in the policy and administration of MSP, it is necessary to create a strong link between the farmer and organised markets. Market interventions by agencies like NAFED, KSACP (Karnataka State Agro Corn Products), Karnataka Oilseed Growers Federation, Karnataka Tur board and other commodity boards have to become proactive.

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