Study No. 87

IMPACT OF MINIMUM SUPPORT PRICES ON THE AGRICULTURAL ECONOMY OF MADHYA PRADESH

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PREFACE

This is a common study conducted by all the Agro-Economic Research Centre and coordinated by the Institute for Social and Economic Change, Bangalore.

The objectives of the study included to examine the impact of minimum support prices on the agricultural economy of the state. For assessing the impact of MSP of the crop indicators like area, production, yield etc. were used. It was also intended to study the impact of the MSPs on the economy of the selected farmers.

Three districts in the state were selected on the criteria suggested by the Coordinating Institute. The districts were Ujjain, Narsinghpur and Mandla. From each district 40 farmers were selected to have a total sample of 120 farmers.

The purchasing agencies at MSPs were M.P. State Marketing Federation, M.P. State Civil Supplies Corporation and Food Corporation of India. For these agencies District Central Cooperative Marketing Societies purchase foodgrains in the mandis. The main difficulties in procurement at MSPs were, inadequate and untrained staff, shortage of godowns and lower capacities of godowns and political interference. Inadequate communication between agencies, mandis and farmers regarding arrivals and prices on day to day basis was another problem.

The relationship between MSPs of crop with area, production, yield, cost of production, farm harvest prices, wholesale prices etc. was studied for the last 15 years.

The suggestions for better operations of MSPs included better dissemination of market intelligence with regard to arrivals, prices and whether or not procurement was in progress on a particular date, declaration MSPs before sowing of the crop, purchasing agencies should be better equipped with all the necessities for purchases in advance, adequate and trained staff at all levels, better and larger godown facilities opening of larger number of purchasing centres specially in the peak season and faster payment of price amount to farmers.

It is hoped that findings of the study will help to improve the procurement, storage and transportation of foodgrains.

The present study, like other studies of the Centre, is result of combined efforts of staff members of the Centre. Mr. S.J. Singh, planned the study design, conducted field work, supervised tabulation and analysis and drafted the report under overall guidance of the undersigned.

I wish to express my deep sense of gratitude to the officials in the Directorate of Economics and Statistics, Department of Agriculture & Cooperation, Ministry of Agriculture, Govt. of India, New Delhi for entrusting this study to this Centre. I express my sincere thanks to all the officials of the Department of Agriculture at Bhopal, and selected districts of Ujjain, Narsinghpur and Mandla. I also express my sincere thanks to the officials

of different mandis and procurement agencies like District Cooperative Marketing Societies, M.P. State Marketing Federation, M.P. State Civil Supplies Corporation, Food Corporation of India both at state level and district levels. I am also thankful to all the sample farmers for providing necessary information and cooperation, patiently.

I am grateful to Hon. Vice- Chancellor, Director Research Services, Dean, Faculty of Agriculture, Dean, College of Agriculture, and other officials of J.N. Krishi Vishwa Vidyalaya, Jabalpur for providing all facilities and help for smooth conduction of the study.

In the AER Centre, Mr. S.J. Singh received constructive cooperation and help from Mr. J.R. Shinde who also did the field work. In the tabulation and analysis of data Dr. Ashutosh Shrivastava, Mr. Kamta Prasad, Mr. S.C. Jain and Mr. S.K. Upadhye offered their best.

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(M.C. Athavale)
Professor & Head

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CHAPTER - I

INTRODUCTION

Introductory

The objectives of establishing Agricultural Prices Commission were :

1. to reduce the fluctuations in foodgrains prices from season to season,
2. to protect the consumer against abnormal, sudden and steep increase in foodgrains prices, and,
3. to provide incentive to farmers so that they could adopt new agricultural technology requiring higher cost.

In the later years the objectives underwent some changes. These included, alongwith others the following.

1. fixing of remunerative prices in relation to cost of cultivation.
2. evolving methodology to be followed for fixing the Minimum Support Prices (MSPs).
3. Studying the impact of MSPs on the aspects of agricultural economy.

In the mid seventies a majority of farmers and economists thought that the terms of trade turned against agricultural sector. This necessitated the review of price policy and method of arriving at MSPs.

In the policy document of 1986 following major objectives of price policy were enumerated.

1. To offer incentives to the farmers to adopt new (costly) technology.

2. To encourage balanced and rational use of available scarce inputs like land, seed, manures, fertilisers, pesticides, irrigation, etc.

3. To allow better standard of living to both land owners and agricultural and non agricultural labourers.

With the liberalisation of economy, besides other aspects, the tool of Minimum Support Prices (MSPs) is looked upon as a form of market intervention to help the farmers fetch higher prices for their produce.

The MSPs not only enhance the agricultural output value but also enable farmers to have a fresh look on the more rational use of precious inputs especially for those who produce for exports.

With the policy of gradual withdrawal of subsidies on inputs, and increasing demand of consumer durables in rural sector, the price variation between the agricultural produce and products produced in the urban sector the review of MSPs has become all the more important.

1.1 The Objectives

This study is undertaken to know the impact of MSPs on the agricultural economy.

The specific objectives of the study are

1. a) To examine the impact on use of inputs and land and water resources besides adoption of socially desirable cropping pattern.

b) To identify regional variations in the degree of implementation of price policy.

c) To suggest policy measures to enhance effectiveness of agricultural price policy under different situations.

2. To document the impact of minimum support prices on agricultural growth and distribution parameters in the state based on the secondary data.

3. To analyse the overall relevance and effectiveness of MSPs in the case of major crops of the state.

4. To analyse the process of implementation of MSPs and allied measures at state level.

5. To examine the impact of MSPs on the income of the farmers.

6. The factors responsible for the success of MSP and parameters responsible for their failure.

1.2 Methodology

The study is based on both secondary and primary data. The secondary data were collected from the year 1985-86 onwards. Primary data were collected from three distinct regions each represented by i) commercial crop region ii) food crop region, and, iii) coarse cereals- pulses region. The study is confined to the major crops of the state specifically covered under MSPs operations.

1.3 Sample Design

1.3.1 Selection of Districts

For the collection of primary data three districts were selected on the criteria mentioned below.

1. Ujjain district growing one major non food crop (soybean) and having a commercial crop oriented economy.
2. Narsinghpur district growing one of the food crops (wheat) with moderate growth of agricultural sector.
3. Mandla district growing mainly food crops - coarse cereals - and agriculturally slow growth region.

1.4.2 Selection of Blocks

Since the study was concerned with the minimum support prices and was for the area and farms which produced adequate marketable surplus, four blocks each in the selected 3 districts were chosen which made good progress in agricultural production and produced enough for the market in 1999-2000 and years preceeding to that. In Narsinghpur district, however, due to limitations of time and supporting departmental staff of the state government only 2 blocks were selected.

1.4.3 Selection of Village

In every block a village each was selected which made good progress in agricultural production and produced enough for the market in 1999-2000 and in the preceeding years. Thus in Ujjain and Mandla districts 4 villages (a village each in the selected 4 blocks) were selected. In Narsinghpur district since the number of blocks was only two, 2 villages each per block were selected to have 4 villages in the district.

1.4.4 Selection of Farmers

Since the objective of the study was to know the impact of minimum support prices, for the Participatory Rural Appraisal, farms having size of holdings of 2.00 hectares and above were selected. A random sample of 10 farms having size of holdings of more than 2 hectares was drawn in each village. Thus the sample of farms per district was 40 making a total sample of 120 farms (farmers) for the state.

1.4 Reference Years/s

The reference years for the secondary data were from 1980--81 to the latest year for which data were available. For primary data the reference year was 1999-2000.

1.5 Schedules and Questionnaires

Schedules and questionnaires were those supplied by Institute for Social and Economic Change, Bangalore, the Coordinating Institute for the study.

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CHAPTER - II

ADMINISTRATION OF MSPs IN MADHYA PRADESH

The announcement of MSPs for different crops gets wide publicity through radio, television, news papers, etc. In addition, the purchasing agencies viz. District Central Cooperative Marketing Society. The M.P. State Marketing Federation, M.P. State Civil Supplies Corporation and Food Corporation of India are informed about the MSPs in all the seasons by the concerned District Collectors.

In this state MSPs are announced for a total number of 18 crops.

2.1 Purchase of Farm Produce at MSPs

Farmers' Produce is purchased by representatives of the District Central Cooperative Marketing Societies in Krishi Upaj Mandis where open auction system is practised. In Madhya Pradesh there are in all 300 mandis. These have been classified into 4 categories viz.I, II, III& IV. Of the total 300 mandis32 (10.67 per cent) come under category I, 30 (10.00 per cent) under category II, 104 (34.67 per cent) under category III and 134 (44.66 per cent) under category IV. Krishi Upaj Mandis do not play a direct role in the purchase at MSPs in the strict sense because the mandis function as places or centres for purchase and sale and provide facilities to both producers and purchasers, like, correct weighment, drinking water, open/ covered space/sheds for auction, etc. It is also seen that purchases are made not below the MSPs and payments to the producers are made immediately, preferably on the same day. If the purchaser

does not make payment in reasonable period of time he is required to pay interest to producer @ 5%. If he fails to do that his licence to purchase in the mandi is cancelled. For providing various facilities mandis charge from purchaser 2.00 per cent of the amount of produce purchased. In addition the mandis charged annual charges from wholesalers, processors, weighmen, etc.

2.2 Collection of Produce at MSPs

The District Central Cooperative Marketing Societies purchase foodgrains at MSPs in the mandis. There is no interference by private traders where purchases at MSPs are in operation. The responsibilities for weighment, quality of produce and temporary shelter for the produce are that of the societies. Necessary material required for purchase i.e. balance, weights, stencil, string, siever, colour and labourers are arranged by the societies. The District Central Cooperative Marketing Societies receive from the procuring agencies following amounts for the purchases made.

i) MSP of the produce purchased,

ii) Mandi tax, payment to labourers and other contingent expenditure as allowed by Govt. of India,

iii) 2 per cent of the amount of MSP as commission.

The target for collection at MSPs is fixed by District Collector for the district.

2.3 Quality Control

The quality of the produce purchased by the District Central Cooperative Marketing Societies has to be of FAQ (Fair Average Quality). The

quality checking is done by the representatives of the societies. For their guidance and for the guidance of persons at the State Warehousing Corporation a sample of product of FAQ is supplied. The produce to be procured should no be procured should not be below the FAQ. The Societies should make purchases from farmers only. In this regard there is a contract signed between the Societies on the one hand and M.P. State Civil Supplies Corporation, Marketing Federation and Food Corporation of India on the other.

For checking the quality control the State Warehousing Corporation has trained staff which checks the quality of grains for-

a) Variety
b) Extent of breakage of grains
c) Admixture of other grains
d) Humidity
e) Admixture of impurities like stones, soil particles, etc.

In addition to the staff of SWC 3 staff members of the procurement agencies assist in the quality control. However the Societies do not have trained staff members to check the quality control. In the case of procurement of wheat the maximum percentage of acceptable impurities is as fallows.

S.No.	Particulars	Maximum Percentage Admissible
1.	Outside elements	0.75
2.	Other food grains	3.00
3.	Broken grains	3.00
4.	Partly broken grains	6.00
5.	Shrunk & broken grains	8.00

Humidity upto 12% is admissible. Deduction in value is made for humidity between 12 to 14 per cent. Product having humidity above 14 per cent would be rejected. The produce to be accepted should not have impurties and humidity above the levels mentioned.

2.4 Packing Material

Although the collection of produce of FAQ and of the correct weighment is the responsibility of the societies the provision of gunny bags and other material is the responsibility of the M.P. State Civil Supplies Corporation, M.P. State Marketing Federation and Food Corporation of India. Well before the arrivals start the gunny bags are sent to the Marketing Societies. A bag has a capacity of 50 kilograms of foodgrains. On filling of the gunny bags these should be stitched by machine. If the machine is not available these should be stitched by 8 to 10 cross stitches.

2.5 Transportation

The transportation of the bags from the collection centres to the godowns prescribed by the M.P. State Civil Supplies Corporation, M.P. State Marketing Federation or Food Corporation of India is the responsibility of respective agencies. For this tenders are invited from transporters for one year on per quintal/per km. basis.

While depositing the produce at the godowns of the procuring agencies quality and quantity are checked by the representatives of the procuring agencies and the Marketing Societies. All doubts in this regards are to be cleared before the produce is deposited in the godowns.

2.6 Payments

On the deposition of the produce by the District Central Cooperative Marketing Societies in the godowns of the agencies receipt is taken from the respective agency in regard to quantity deposited and its value. The Society also maintains a register in which the details of purchases from farmers are entered such as name of the farmer, food grain purchased, quantity purchased and value of produce.

If the Society has cash in hand it can make the payment to the farmers on the same day. If not, it issue a chit to the farmer mentioning name of the farmer, the foodgrain purchased, the quantity of produce purchased and value of it. The societies are allowed to make advance payment to the fune of Rs.5 lakhs to the farmers.

The Society also submits the details of quantity purchased and its value and different dates to the procuring agency. The procuring agency, on the basis of these details issues cheques of State Bank of India favouring the District Central Cooperative Bank. The cheque would be equal to the amount of the procured produce in favour of the District Central Cooperative Marketing Society for payment to the farmers. On the receipt of the cheques from the procuring agencies the Marketing Society makes the payment to farmers by cheques. This procedure normally requires 5 to 10 days. However, in the peak season when the purchases are enormous and there is a shortage of money with the societies and the procuring agencies the delays in payment to farmers do occur and result in resentment among farmers in general and in political circles in particular. The district level agengies make advance payment to the societies

to the tune of Rs.50 lakhs. The district level procuring agencies get the payment cheques from the State level offices from the Reserve Bank of India, Bhopal.

2.7 Transportation from the District Godowns

The food Corporation of India and the M.P. State Marketing Federation transfer the produce from the district level godowns to the destinations as ordered by the state level officers. The District Level Civil Supplies Corporation Office, on the order of proper authority sends the foodgrains to-

1. Public Distribution System, and,
2. The State Govt. Departments for supply to the beneficiaries of the Rural Employment Schemes such as IRDP, Rojgar Yojana, Mid-Day Meal Scheme, families below poverty line and families above poverty line, etc.

2.8 Difficulties faced in Procurement at MSPs

1. Foremost difficulty is with respect to inadequate staff. It is experienced that of the total sanctioned strength of staff many posts are vacant resulting adversely the output of work.
2. Apart from the quantitative deficiency the existing staff lacks proper training. The staff should be trained in both laboratory testing work and field testing work. Besides testing for quality of produce procured they should be well versed with storage practices and measures to be taken to protect the produce against the stored grain pests and diseases.

3. There is a shortage of number of godowns and the available capacity of godowns. In the peak season there are no adequate number of godowns and the capacity being limited the produce is heaped in bags in the open yards at the mercy of inclement weather conditions like rains and storms.

4. Political interference - to get popularity the politicians put pressure on the authorities to purchase whatever quality of produce is offered and in whatever quantity. Naturally there is dilution in the quality control measures taken.

5. The farmers should be informed through various media if the purchases at MSP are temporarily suspended due to shortage of gunny bags or money with the societies. That will save farmers from transporting the produce unnecessarily to the mandis and transporting it back home.

2.9 Production, Market arrivals and procurement at MSPs in the State

2.9.1 Production

The latest data for production of different crops was available for the year 2000-2001. Therefore for comparison of production with market arrivals the data for the latter was also used for the year 2000-2001. There are in all 13 commodities for which data on production and market arrivals were available. The main cereals of the state were paddy and wheat and the production for these was 960 and 3,887 thousand tonnes respectively. Maize was another important cereal and the production of it was 1,200 thousand tonnes. Among other crops soybean was most important and the production of it was 3,254 thousand tonnes. Among pulses gram was most important, the production of which was 1,436 thousand tonnes.

2.9.2 Market Arrivals

Market arrivals can also be termed as marketable surplus. The market arrivals depend on various factors. These are: volume of production, type of crop whether meant for home consumption or marketing, perishability, need for cash by the farmers, etc. Market arrivals for wheat were 2,775 thousand tonnes and that for paddy, 423 thousand tonnes. Soybean crop had highest market arrivals of 3,195 thousand tonnes. Soybean is a cash oilseed and has been farmer's choice for the last many years. While the production of this crop has ever been increasing the price support by the Govt. has also encouraged the farmers to allot more and more acreage. Gram had marketable surplus of 1,389 thousand tonnes. As mentioned earlier many factors influence the marketable surplus of a crop. It may be interesting to note the proportion of marketable surplus to total production of a crop. In this respect soybean tops the list with 98.19 per cent of the total production being the marketable surplus. Gram follows/ soybean with 96.72 per cent of marketable surplus to production of the total wheat production 71.39 per cent was marketable surplus and the case of moong/ urad it was 55.55 per cent. Paddy had 44.06 per cent marketable surplus and arhar had 39.91 per cent (Table 2.1).

2.9.2.1 Monthly Arrivals

The monthly arrivals of different commodities were noted.

As obtained elsewhere the arrivals of different commodities start with the harvest season and the peak is reached some time in the post harvest season. On the other hand the arrivals are weak in the pre sowing and the sowing season.

Table 2.1 Production and market arrivals of major crops in Mandis in Madhya Pradesh - 2000-2001

(Unit - Thousand Tonnes)

Crop	Production	Market arrivals	Percentage of market arrivals to production
Paddy	960	423	44.06
Jowar	478	27	5.65
Bajra	173	20	11.56
Maize	1,200	123	10.25
Wheat	3,887	2,775	71.39
Arhar	233	93	39.91
Gram	1,436	1,389	96.72
Moong / urd	126	70	55.55
Soybean	3,254	3,195	98.19
Groundnut	242	50	20.66
Sesamum	39	9	23.07
Linseed	53	19	35.85
Mustard	360	257	71.39

In the case of wheat, March, April and May form the peak season of the arrivals. However, some arrivals are also noticed in the months of November, December and January when the remnants of stored wheat are brought to mandi after the needs for seed are fulfilled. In the case of maize, jowar, paddy and bajra (kharif crops) the market arrivals start from October and continue till February.

In the case gram, lentil and teora (rabi crops) the arrivals start from February and continue till May. In the case of arhar the arrivals are maximum in the months of April, May & June, whereas those in the case of moong and urad these are maximum in September, October and November. In the case of soybean and groundnut being kharif crops the market arrivals start fromOctober and continue till January. On the other hand mustard and linseed being rabi crops the arrivals are more during the months of March, April and May. In the case of sesamum the market arrivals start from October and reach the maximum in January. Cotton is a kharif cash crop and can be stored for quite some time. Being a cash crop the farmers opt for staggered sale as and when the need for money arises. Therefore, in cotton the arrivals in mandi start from October and continue till the month of March (Table 2.2).

Table 2.2 Monthwise arrivals of cereals, pulses, oilseeds and cotton, Madhya Pradesh, 2001-2002

(Figures - Metric Tonnes)

Month	Year	Wheat		Maize		Jowar		Paddy		Bajra	
		Arrivals	% to total	Arrivals	% to total	Arrivals	% to total	Arrivals	% to total	Arrivals	% to total
April	2001	358765.1	17.42	10957.5	3.84	1266.0	4.07	14023.2	2.21	1166.9	4.08
May	2001	324704.4	15.76	9299.9	3.26	2372.9	7.64	14497.2	2.28	1144.4	4.00
June	2001	174436.2	8.47	9334.6	3.27	2722.1	8.76	11178.0	1.76	1248.0	4.36
July	2001	150162.3	7.29	7844.9	2.75	403.3	1.30	8835.2	1.39	611.6	2.14
Aug.	2001	141498.6	6.87	8314.6	2.91	521.0	1.68	9512.5	1.50	843.7	2.95
Sept.	2001	148208.7	7.19	11428.3	4.00	697.5	2.24	11765.5	1.86	827.0	2.89
Oct.	2001	96614.5	4.69	35048.5	12.28	2993.1	9.63	16110.1	2.54	3802.5	13.30
Nov.	2001	109197.06	5.30	56595.35	19.82	3163.77	10.19	105184.6	16.60	9183.5	32.12
Dec.	2001	106239.9	5.16	56301.1	19.72	6674.8	21.48	174104.6	27.48	4875.6	17.05
Jan.	2002	137325.1	6.67	36910.7	12.93	4804.7	15.46	126621.4	19.99	2903.6	10.16
Feb.	2002	77964.7	3.78	26227.1	9.19	3455.8	11.12	87665.0	13.84	1131.7	3.96
Mar.	2002	234873.7	11.40	17221.6	6.03	1997.8	6.43	54200.6	8.55	853.9	2.99
Total		2059990.31	100.0	285484.15	100.0	31072.77	100.0	633697.9	100.0	28592.4	100.0

(Figures - Metric Tonnes)

Month	Year	Gram		Lentil		Teora		Arhar		Moong / Urad	
		Arrivals	% to total	Arrivals	% to total	Arrivals	% to total	Arrivals	% to total	Arrivals	% to total
April	2001	2,02,123.3	20.49	29,079.5	10.25	2,487.4	11.89	13,225.2	12.20	608.6	0.68
May	2001	1,56,349.7	15.85	34,680.0	12.23	3,285.7	15.70	22,865.2	21.10	730.7	0.81
June	2001	71,751.1	7.27	25,435.2	8.97	1,712.7	8.18	13,408.8	12.37	3,423.6	3.80
July	2001	44,540.6	4.51	17,469.5	6.16	1,299.2	6.20	9,549.3	8.81	2,028.8	2.25
Aug.	2001	37,751.2	3.82	14,599.9	5.15	1,125.0	5.38	7,615.3	7.03	6,288.8	6.98
Sept.	2001	55,327.8	5.61	21,809.4	7.69	799.0	3.82	7,366.7	6.80	30,332.4	33.66
Oct.	2001	43,753.5	4.43	17,739.7	6.26	617.2	2.95	4,838.9	4.46	17,935.3	19.90
Nov.	2001	44,434.55	4.50	18,140.5	6.40	737.7	3.53	2,891.4	2.67	10,738.7	11.92
Dec.	2001	22,199.7	2.25	16,929.5	5.97	1,165.2	5.57	1,879.8	1.73	5,094.6	5.65
Jan.	2002	20,720.5	2.10	10,587.1	3.73	1,479.1	7.07	5,270.4	4.86	5,311.6	5.89
Feb.	2002	81,150.5	8.22	21,386.8	7.54	2,818.2	13.47	9,870.6	9.11	3,995.1	4.43
Mar.	2002	2,06,655.5	20.95	55,712.8	19.65	3,399.8	16.24	9,597.5	8.86	3,635.3	4.03
Total		9,86,757.95	100.0	2,83,569.9	100.0	20,926.2	100.0	1,08,379.1	100.0	90,123.5	100.0

(Figures - Metric Tonnes)

Month	Year	Soybean		Mustard		Linseed		Groundnut		Sesamum	
		Arrivals	% to total	Arrivals	% to total	Arrivals	% to total	Arrivals	% to total	Arrivals	% to total
April	2001	84,223.3	2.37	26,258.5	13.02	2,123.2	14.70	867.7	1.70	783.9	4.34
May	2001	1,18,931.4	3.34	29,820.5	14.79	1,980.1	13.71	1,634.5	3.20	606.4	3.35
June	2001	1,51,270.8	4.25	20,118.5	9.97	1,412.3	9.77	1,326.6	2.60	812.9	4.50
July	2001	1,33,973.1	3.77	12,197.0	6.04	1,152.3	7.97	736.7	1.44	289.0	1.60
Aug.	2001	44,864.1	1.26	9,320.0	4.62	933.1	6.46	635.1	1.25	258.3	1.43
Sept.	2001	96,123.6	2.70	11,256.9	5.58	772.9	5.35	5,482.7	10.75	538.1	2.98
Oct.	2001	8,47,375.1	23.82	8,229.5	4.08	1,163.2	8.05	6,994.4	13.72	1,514.9	8.38
Nov.	2001	9,68,092.53	27.21	8,168.7	4.05	917.6	6.35	9,798.9	19.21	2.082.9	11.52
Dec.	2001	4,29,887.6	12.08	9,078.5	4.50	773.7	5.35	10,398.3	20.40	738.3	4.08
Jan.	2002	4,18,031.9	11.75	12,368.2	6.13	1,316.2	9.11	7,538.9	14.78	8,900.8	49.23
Feb.	2002	1,60,040.5	4.50	12,968.6	6.42	299.7	2.07	3,489.1	6.84	1,171.2	6.48
Mar.	2002	1,05,133.7	2.95	41,937.9	20.80	1,605.5	11.11	2,098.9	4.11	382.2	2.11
Total		35,57,947.63	100.0	2,01,722.8	100.0	14,449.8	100.0	51,001.8	100.0	18,078.9	100.0

(Figures - Metric Tonnes)

Month	Year	Cotton	
		Arrivals	% to total
April	2001	8,995.8	1.22
May	2001	3,786.6	0.51
June	2001	2,236.2	0.30
July	2001	3,552.6	0.48
Aug.	2001	6,026.5	0.82
Sept.	2001	16,903.9	2.29
Oct.	2001	79,031.4	10.70
Nov.	2001	1,38,240.2	18.72
Dec.	2001	1,76,129.5	23.85
Jan.	2002	1,37,704.6	18.64
Feb.	2002	83,428.6	11.29
Mar.	2002	82,565.9	11.18
Total		7,38,601.8	100.0

2.9.3 Procurement at MSPs

As mentioned earlier the procurement at MSPs in M.P. is done by following 3 agencies.

1. Food Corporation of India
2. M.P. state Civil Supplies Corporation
3. M.P. State Cooperative Marketing Federation

During the year 2001-2002 the procurement of paddy was 259.72 thousand tonnes and that of wheat, 588.02 thousand tonnes. Among other crops the procurement of maize was 86.06 thousand tonnes and that of bajra 20.68 thousand tonnes. It will be interesting to note the proportion of procurement at MSPs to total arrivals. It will show the farmers' preference to sell their produce either at MSPs to the authorised agencies or to traders. It was observed that the maximum percentage (72.33) of procurement at MSPs to total arrivals was in the case of bajra. In the case of paddy the percentage was 40.98 and in the case of maize it was 30.15. Wheat had 28.54 per cent of the purchases made at MSPs to total arrivals (Table 2.3).

Table 2.3 Percentage of procurement at MSP to Mandi arrivals, Madhya Pradesh- 2001-2002

(Figures - Thousand Metric Tonnes)

Crop	Total arrivals in Mandi	Procurement at MSP	Percentage of procurement at MSP to total arrivals
Paddy	633.70	259.72	40.98
Wheat	2,059.99	588.02	28.54
Jowar	31.07	5.72	18.41
Maize	285.48	86.06	30.15
Bajra	28.59	20.68	72.33
Soybean	3,557.95	0.21	0.01
Mustard	201.72	0.18	0.09

It may be mentioned that of the three agencies purchasing the commodities at MSPs, MARKFED purchased only paddy, soybean and mustard. The other two agencies purchased, besides paddy, wheat, jowar maize

and bajra. In the case of paddy MARKFED purchased 70.11 per cent and the remaining 30 per cent was shared about equally by State Civil Supplies Corporation and Food Corporation of India. In the case of wheat, Food Corporation of India procured slightly more than fifty per cent (53.40) and the State Civil Supplies Corporation, remaining 46.60 per cent. In the case of other 3 crops viz. jowar, maize and bajra the share of State Civil Supplies Corporation and Food Corporation of India was about equal (Table 2.4).

Table 2.4 Details of procurement of foodgrain and oilseeds at Minimum Support Prices by three agencies, 2001-2002, Madhya Pradesh

(Figures - Thousand Tonnes)

Crop	M.P. State Civil Supplies Corporation	Food Corporation of India	MARKFED	TOTAL
Paddy	40.29 (15.51)	37.36 (14.38)	182.08 (70.11)	259.73 (100.00)
Wheat	274.02 (46.60)	314.00 (53.40)	--	588.02 (100.00)
Jowar	2.87 (50.08)	2.86 (49.92)	--	(5.73 (100.00)
Maize	43.06 (50.03)	43.01 (49.97)	--	86.07 (100.00)
Bajra	10.34 (50.00)	10.34 (50.00)	--	20.68 (100,00)
Soybean	--	10.38 (50.00)	0.21 (100.00)	0.21 (100.00)
Mustard	--	--	0.18 (100.00)	0.18 (100.00)

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CHAPTER-III

RELATIONSHIP BETWEEN MINIMUM SUPPORT PRICES AND ECONOMIC INDICATORS

3.1 Introductory

As the title of the study indicates the main objective is to know the impact of MSPs on the agricultural economy of the state. For individual crop the indicators of agricultural economy could be area, production and yield as well as indicators like farm harvest price, wholesale price and the cost of production. For secondary data on these indicators the reference period is from 1985-86 to 1999-2000 as directed by the Coordinator of the study. The secondary data on all these indicators and MSPs of the crop were taken from various publications of the Govt. of India and the State Govt.

The relationship of MSPs with the above mentioned indicators was studied for important crops. These were, paddy, soybean, maize, jowar and arhar in kharif season and wheat and gram in rabi season. For comparison of variation in MSPs of a crop with above mentioned indicators, index numbers of the two series viz. MSP and particular indicator were calculated. Further, coefficients of correlation between the above stated series were calculated.

3.2 Paddy

The MSP of paddy in the state in 1985-86 was Rs.142 per qtl. It increased from year to year and was Rs.490 per quintal in 1999-2000. Thus the index (1985-86=100) increased to 345.07. As regards area of paddy it was observed that although the over all trend was increasing the extent of increase was very low as the index increased from 100.00 in 1985-86 to 106.32 in 1999-2000. As regards production of paddy similar trend although slightly higher one was noticed. The index increased from 100.00 in 1985-86 to 117.92 in 1999-2000. As regards yield of paddy the increase in index although

positive was less than area and production and stood at 104.47 in 1999-2000. Thus it would be observed that although there was positive relationship between MSP of paddy and area, production and yield of the crop the increase was much lower in all the three indicators than the MSP indicating thereby that MSPs have not influenced, area production and yield of the crop much. In other words the increment in the MSP could not induce the farmers to expand area under paddy and reap proportionately higher production and yield. The index of FHP increased about equal to MSP. But the index of WSP was lower than MSP. The index of COP was about equal to MSP. (Table 3.1).

For calculating the relationship between MSPs on one hand and Farm Harvest Price, Wholesale Price and Cost of Production of paddy on the other hand, data were noted from 1980-81 to 1999-2000. It was noted that Farm Harvest Prices of paddy were much higher than MSPs in all the years. For each year the percentage variation between MSP and FHPs were calculated. It was noted that the percentage variation was least (12.34) in 1996-97 and highest (204.44) in 1991-92. Two things were clear. Firstly the FHP were higher than MSPs in all the years and secondly the percentage variation between MSP and FHP was more than 100 in most of the years except 5 years. It can be said that the impact of MSP on FHP was positive and quite high in most of the years.

As regards relationship between MSP and cost of production few peculiarities were observed in the time series data. It is known that while fixing the MSPs consideration of cost of production is uppermost in the minds of policy makers.It is presumed that MSP is fixed on the basis of cost of production

Table 3.1 Relationship of MSPs with area, production, yield, farm harvest prices, wholesale prices and cost of production for paddy, Madhya Pradesh

Index - Base Year 1985-86=100.00

Year	Paddy													
	MSP (Rs./ Qtl.)	Index	Area ('000 ha.)	Index	Production ('000 tonnes)	Index	Yield (Kg./ha.)	Index	Farm Harvest Price (Rs./ Qtl.)	Index	Wholesale Price (Rs./ Qtl.)	Index	Cost of Production	Index
1985-86	142	100.00	5,032	100.00	5,418	100.00	1,140	100.00	298.82	100.00	173	100.00	130.24	100.00
1986-87	146	102.82	5,051	100.38	4,178	77.11	877	76.93	314.45	105.23	148	85.55	162.07	124.44
1987-88	150	105.63	4,886	97.10	4,266	78.74	924	81.05	445.15	148.96	254	146.82	171.35	131.56
1988-89	160	112.68	5,009	99.54	4,667	86.14	980	85.96	483.22	161.71	256	147.97	193.04	148.21
1989-90	185	130.28	5,005	99.46	4,492	82.91	944	82.81	496.22	166.06	253	146.24	208.87	160.37
1990-91	205	144.37	5,118	101.71	5,738	105.91	1,181	103.60	588.93	197.08	328	189.59	230.54	177.01
1991-92	230	161.97	5,132	101.99	5,248	96.86	1,077	94.47	700.21	234.32	323	186.70	328.93	252.55
1992-93	270	190.14	5,161	102.56	5,283	97.51	1,078	94.56	532.17	178.09	308	178.03	295.41	226.81
1993-94	310	218.31	5,220	103.74	5,963	110.06	1,203	105.53	613.73	205.38	348	201.15	--	--
1994-95	340	239.44	5,349	106.30	6,463	119.29	1,273	111.67	670.39	224.34	407	235.26	331.09	254.21
1995-96	360	253.52	5,344	106.20	5,839	107.77	1,151	100.96	693.00	231.91	378	218.49	327.45	251.42
1996-97	380	267.61	5,396	107.23	5,979	110.35	1,167	102.37	806.90	270.03	416	240.46	--	--
1997-98	415	292.25	5,426	107.82	4,528	83.57	1,371	120.26	864.20	289.20	444	256.64	--	--
1998-99	470	330.99	4,450	88.43	5,390	99.48	1,212	106.32	--	--	454	262.42	--	--
1999-2000	490	345.07	5,350	106.32	6,380	117.92	1,191	104.47	--	--	--	--	--	--

per quintal and the net profit the farmer might earn over the cost of production. It was observed that in 6 years the cost of production was lower than the Minimum Support Price. In the remaining 8 years the COP was higher than MSP. The reason for this phenomenon could be that Madhya Pradesh is not a very important paddy producing state and the Minimum Support Price per quintal fixed by the Govt. of India could have more weightage of lower cost of production per quintal of more important paddy producing states having higher per hectare yield and therefore lower cost of production per quintal. As regards relationship between MSP and wholesale prices it was noted that in all the years wholesale price of paddy were higher than the MSPs. The percentage variation between MSP and wholesale prices ranged between 5.00 per cent to 69.33 per cent (Table 3.2).

Table 3.2 Minimum support prices, farm harvest prices wholesale prices and cost of production of paddy and percentage variation in Madhya Pradesh

Year	MSP (Rs./ Qtl.)	FHP (Rs./ Qtl.)*	Cost of Production (Rs./ Qtl.)	Wholesale Price (Rs./ Qtl.)	Percentage Variation between		
					MSP and FHP	MSP and cost of Production	MSP and WSP
1980-81	105	210.74	N.A.	144	100.70	--	37.14
1981-82	115	230.50	101.06	145	100.43	- 12.12	26.08
1982-83	122	274.26	116.86	--	124.80	- 4.21	--
1983-84	132	306.29	102.93	--	132.04	- 22.02	--
1984-85	137	293.02	142.52	162	113.86	+ 4.03	18.24
1985-86	142	298.82	130.24	173	110.44	- 8.28	21.83
1986-87	146	314.45	162.07	148	115.38	+ 11.01	01.37
1987-88	150	445.15	171.35	254	196.77	+ 14.23	69.33
1988-89	160	483.22	193.04	256	202.01	+ 20.65	60.00
1989-90	185	496.22	208.87	253	168.22	+ 12.90	36.75
1990-91	205	588.93	230.54	328	187.28	+ 12.46	60.00
1991-92	230	700.21	328.93	323	204.44	+ 43.01	40.43
1992-93	270	532.17	295.41	308	97.10	+ 9.41	14.07
1993-94	310	613.73	--	348	97.97	--	12.26
1994-95	340	670.39	331.09	407	97.17	- 2.62	19.71
1995-96	360	693.00	327.45	378	92.50	- 9.04	5.00
1996-97	380	806.90	--	416	12.34	--	9.47
1997-98	415	864.20	--	444	108.24	--	7.71
1998-99	470	--	--	454	--	--	(-) 3.40
1999-2000	490	--	--	--	--	--	--

* Agricultural Statistics of M.P. 1993-94
In 14 years in six years COP is less than M.S.P.
In 8 years COP is more than M.S.P.

The correlation between the MSP and area was significant at 5.00 per cent. The correlation between MSP and production was significant at 1.00 per cent level. Similarly the correlation between yield, Farm Harvest Prices and cost of production were significant at 1.00 per cent, being the lowest for COP. This shows that there was high correlation between MSP and production, yield, and FHP but lower for area and COP (Table 3.21).

3.3 Soybean

Soybean is the most important cash oilseed of the State. The area under this crop is continuously increasing from year to year. The production of soybean is also showing increasing trend. The yields, however, are not keeping in line with the trends of area and production. The yields have increased but at a much slower rate.

The MSP of soybean is 1985-86 was Rs.275 per quintal. It increased from year to year and was Rs.845 in 1999-2000. The index (1985-86 = 100) increased to 307.27 in 1999-2000. The area index also increased and at a higher rate and was 381.95 in 1999-2000. The index of production increased at higher rate than MSP and was 537.39 in 1999-2000. On the other hand the index of yield increased to only 140.74. The rate of increase was lower than MSP, area and production. It will thus be observed that MSP of soybean had positive impact on both area and production. The impact was also positive in the case of yield but at a lower rate of increase. The index of cost of production (1985-86 = 100) increased to 300.30 in 1995-96 (The year for which the latest data was available as compared to index of MSP of 247.27. This means that the cost of production has increased at a higher rate than the MSP. Moreover, except for the first year of the reference period (1985-86) the cost of production per quintal was higher than the MSP in all the 10 years of the reference period (Table 3.3).

Table 3.3 Relationship of MSPs with area, production yield, farm harvest prices, wholesale prices and cost of production for Soybean, Madhya Pradesh

Index - Base Year 1985-86=100.00

Year	Soybean									
	MSP (Rs./ Qtl.)	Index	Area ('000 ha.)	Index	Produc-tion ('000 tonnes)	Index	Yield (Kg./ ha.)	Index	Cost of Produc-tion (Rs./ Qtl.)	Index
1985-86	275	100.00	1,097	100.00	829	100.00	756	100.00	230.87	100.00
1986-87	290	105.45	1,210	110.30	677	81.66	560	74.07	295.37	127.94
1987-88	300	109.09	1,329	121.15	767	92.52	577	76.32	420.15	181.98
1988-89	320	116.36	1,476	134.55	1,313	158.38	890	117.72	357.61	154.89
1989-90	370	134.54	1,878	171.19	1,497	180.57	797	105.42	399.46	173.02
1990-91	400	145.45	2,149	195.90	2,184	263.45	1,016	134.39	408.43	176.91
1991-92	445	161.82	2,649	241.47	2,093	252.47	790	104.50	592.74	256.74
1992-93	525	190.91	3,054	278.40	2,599	313.51	851	112.57	571.42	247.51
1993-94	580	210.90	3,415	311.30	3,599	434.13	1,054	139.42	590.75	255.87
1994-95	650	236.36	3,225	293.98	2,870	346.20	890	117.72	663.50	287.39
1995-96	680	247.27	3,849	350.86	3,892	469.48	1,011	133.73	693.31	300.30
1996-97	700	254.54	3,947	359.80	3,941	475.39	952	125.92	--	--
1997-98	750	272.72	4,469	407.38	4,845	584.44	1,084	143.39	--	--
1998-99	795	289.09	4,590	418.41	4,639	559.59	1,011	133.73	--	--
1999-2000	845	307.27	4,190	381.95	4,455	537.39	1,064	140.74	--	--

This precisely is the reason for lower total procurement percentage at MSP to total production. Farmers opted for selling the produce to private traders than to the government agencies. This is well supported by data in table 2.3.

The phenomenon of higher cost of production than the MSP was not noticed in the years from 1981-82 to 1985-86 (Table 3.4).

Table 3.4 Minimum Support Price and Cost of Production of Soybean and percentage variation in Madhya Pradesh.

Year	MSP (Rs./ Qtl.)	Cost of Production (Rs./ Qtl.)	Percentage variation between MSP and cost of Production
1980-81	--	--	--
1981-82	230	15695	(-) 31.76
1982-83	245	158.71	(-) 35.22
1983-84	255	228.65	(-)10.33
1984-85	265	214.73	(-) 18.97
1985-86	275	230.87	(-) 16.05
1986-87	290	295.37	1.85
1987-88	300	420.15	40.05
1988-89	320	357.61	11.75
1989-90	370	399.46	7.96
1990-91	400	408.43	2.10
1991-92	445	592.74	33.20
1992-93	525	571.42	8.84
1993-94	580	590.75	1.85
1994-95	650	663.50	2.07
1995-96	680	693.31	1.96
1996-97	700	--	--
1997-98	750	--	--
1998-99	795	--	--
1999-2000	845	--	--

The correlation between MSP and area, production, yield and cost of production were all highly significant but within these indicators the correlation was lower in the case of yield because as indicated earlier the trend of yield was not continuously increasing and there were fluctuations in between the reference years (Table 3.21).

3.4 Wheat

Wheat is an important rabi cereal of the state and area and production are in general, increasing during the reference period. The yield of the crop has also been showing a generally increasing trend with some fluctuations in the intervening years. The MSP of the crop has increased from Rs.157 per quintal in 1985-86 to Rs. 550 per quintal in 1999-2000. The index increased (1985-86 = 100) to 350.32 in 1999-2000. The index of area not only showed a much lower increase (125.24) than the index of MSP but was lower than 100 in 6 of the 15 years. The index of production (1985-86= 100) reached 201.29 in 1999-2000 which was lower than the increase in MSP index but higher than the area index. In the case of yield the index reached 154.10 in 1999-2000. The increase in index was lower than both MSP and production. Moreover the yield reached a plateau of around 150.00 after 1992-93 for a period of 8 years. Both index of Farm Harvest and Wholesale. Prices recorded a gradual increase during the reference years with fluctuations in between. However, the increase was not only lower than the index of MSP but also showed a decline in between from one year to another. As regards cost of production the index (1985-86=100) increased in general from year to year and was 340.07 in 1997-98 wherein it was higher than that of the MSP (302.55). The comparison of cost of production and the MSP showed that not enough justice had been done to the farmers of the state because the cost of production per quintal had been found to be higher than the MSP declared in 11 out of the 12 years of the reference year (Table 3.5).

Table 3.5 Relationship of MSPs with area, production yield, farm harvest prices, wholesale prices and cost of production for Wheat, Madhya Pradesh

Index - Base Year 1985-86 =100.00

Year	w h e a t													
	MSP (Rs./ Qtl.)	Index	Area ('000 ha.)	Index	Produc-tion ('000 tonnes)	Index	Yield (Kg./ha.)	Index	Farm Harvest Price (Rs./ Qtl.)	Index	Whole-sale Price (Rs./ Qtl.)	Index	Cost of Produc-tion (Rs./Qtl.)	Index
1985-86	157	100.00	3,705	100.00	4,202	100.00	1,183	100.00	200.49	100.00	215	100.00	153.72	100.00
1986-87	162	103.18	3,502	94.52	4,264	101.48	1,218	102.96	200.23	99.87	229	106.51	166.79	108.50
1987-88	166	105.73	3667	98.97	4,546	108.19	1,240	104.82	229.70	114.57	250	116.27	178.11	115.87
1988-89	173	110.19	3,667	98.97	4,797	114.16	1,308	110.57	282.18	140.74	293	136.28	222.45	144.71
1989-90	183	116.56	3,284	88.64	4,120	98.05	1,255	106.09	259.78	129.57	358	166.51	232.11	150.99
1990-91	215	136.94	3,834	103.48	5,833	138.81	1,587	134.15	289.38	144.34	377	175.34	256.86	167.09
1991-92	225	143.31	3,547	95.74	5,138	122.28	1,512	127.81	340.43	169.80	369	171.62	317.17	206.32
1992-93	275	175.16	3,672	99.11	5,243	124.77	1,490	125.95	419.93	209.45	433	201.39	343.69	223.58
1993-94	330	210.19	4,148	111.96	6,766	161.02	1,702	143.87	419.38	209.18	414	192.55	--	--
1994-95	350	222.93	4,193	113.17	7,281	173.27	1,812	153.17	422.29	210.62	422	196.28	384.15	249.90
1995-96	360	229.30	4,819	130.07	6,666	158.64	1,738	146.91	462.47	230.67	441	205.11	377.02	245.26
1996-97	380	242.04	4,327	116.79	7,795	185.51	1,879	158.83	599.36	298.94	609	283.25	492.09	320.12
1997-98	475	302.55	4,589	123.86	7,220	171.82	1,641	138.72	530.61	264.65	556	258.60	522.77	340.07
1998-99	510	363.06	4,660	125.78	8,333	198.31	1,788	151.14	--	--	672	312.55	--	--
1999-2000	550	350.32	4,640	125.24	8,458	201.29	1,823	154.10	--	--	614	285.58		--

Another way of comparing MSP with FHP, cost of production and wholesale prices is to calculate percentage increase in each year of the above indicators with that of the MSP. The results of this analysis have been presented in next table. The table shows that higher FHP and higher WSP than the MSP go in favour of farmers but the higher cost of production than the MSP does not favour the farmers (Table 3.6)

The correlation between MSP and area, production, yield, FHP and cost of production were highly significant. However, among the indicators the correlation was lowest in the case of yield (Table 3.21).

Table 3.6 Minimum support price, farm harvest prices wholesale prices and cost of production of wheat and percentage variation in Madhya Pradesh

Year	MSP (Rs./ Qtl.)	FHP (Rs./ Qtl.)	Cost of Production (Rs./ Qtl.)	Wholesale Price (Rs./ Qtl.)	Percentage Variation between		
					MSP and FHP	MSP and cost of Production	MSP and WSP
1980-81	117	171.22	--	177	46.34	--	51.28
1981-82	130	166.01	132.67	200	27.7	+ 2.05	53.85
1982-83	142	201.36	132.00	--	41.80	- 7.04	--
1983-84	151	186.66	140.18	--	23.62	- 7.17	--
1984-85	152	173.25	142.70	--	13.98	- 6.12	--
1985-86	157	200.49	153.72	215	27.70	- 2.09	36.94
1986-87	162	200.23	166.79	229	23.60	+ 2.96	41.35
1987-88	166	229.70	178.11	250	38.37	+ 7.30	50.60
1988-89	173	282.18	222.45	293	63.11	+ 28.58	69.36
1989-90	183	259.78	232.11	358	41.96	+26.84	95.62
1990-91	215	289.38	256.86	377	34.60	+ 19.47	75.34
1991-92	225	340.43	317.17	369	51.30	+ 40.96	64.00
1992-93	275	419.93	343.69	433	52.70	+ 24.98	57.45
1993-94	330	419.38	--	414	27.08	--	25.45
1994-95	350	422.29	384.15	422	20.65	+ 9.76	20.57
1995-96	360	462.47	377.02	441	28.46	+ 4.73	22.5
1996-97	380	599.36	492.09	609	57.73	+ 29.50	60.26
1997-98	475	530.61	522.77	556	11.71	+ 10.06	17.05
1998-99	510	--	--	672	--	--	31.74
1999-2000	550	--	--	614	--	--	11.64

3.5 Gram

Gram is the most important rabi pulse of the state. The MSP of the crop was Rs.240 in 1985-86. Like most of the crops the MSP announced increased from year to year and was Rs.895 in the year 1999-2000. The index, likewise, increased from 1985-86=100 to 372.92 in 1999-2000. There was an overall increase in area under gram but at a much lower rate and with many fluctuations in between the years of reference period. The index reached 120.51 in 1999-2000. Similarly the production of gram although in general, increased during the reference period the increase was quite lower than the increase in MSPs. In this case also the index increased to 160.12 by 1999-2000 with quite a number of fluctuations in the years of the reference period. In the case of yield the index increased to 132.94 in 1999-2000 as compared to that of index of MSP (372.92) and production (160.12). However the increase in yield was bit higher than that of area (120.51).

As regards wholesale price the index increased to 352.38 in the year 1999-2000. The increase was slightly lower than the MSP. It was, however, noted that there were many fluctuations in the reference years unlike the index numbers of MSP.

As regards cost of production it was noted that the rate of increase was higher than the rate of MSP. Another noteworthy feature was that the cost of production, in most of the years of the reference period was higher than the MSP. This resulted in dissatisfaction among the farmers and sale of product to other agencies than the authorised agencies (Table 3.7)

Table 3.7 Relationship of MSPs with area, production yield, farm harvest prices, wholesale prices and cost of production for gram, Madhya Pradesh

Index - Base Year 1985-86 =100.00

Year	g r a m													
	MSP (Rs./ Qtl.)	Index	Area ('000 ha.)	Index	Produc-tion ('000 tonnes)	Index	Yield (Kg./ha.)	Index	Farm Harvest Price (Rs./ Qtl.)	Index	Whole-sale Price (Rs./ Qtl.)	Index	Cost of Produc-tion (Rs./Qtl.	Index
1985-86	240	100.00	2282	100.00	1,557	100.00	683	100.00	378.50	100.00	315	100.00	274.21	100.00
1986-87	260	108.33	2,218	97.20	1,480	95.05	667	97.66	344.63	91.05	319	101.27	247.36	90.21
1987-88	280	116.67	2,236	97.98	1,484	95.31	664	97.22	435.01	114.92	402	127.62	299.44	109.20
1988-89	290	120.83	2,237	98.03	1,567	100.64	700	102.49	553.89	146.34	642	203.81	423.27	154.35
1989-90	325	135.42	2,157	94.52	1,427	91.65	661	96.79	562.99	148.74	668	212.06	461.04	168.13
1990-91	421	175.42	2,462	107.89	1,892	121.52	768	112.45	577.02	152.45	629	199.68	458.57	167.23
1991-92	450	187.50	2,138	93.69	1,715	110.15	802	117.43	595.98	157.45	677	214.92	475.76	173.50
1992-93	500	208.33	2,346	102.80	1,758	112.90	749	109.66	742.28	196.11	675	214.28	563.09	205.35
1993-94	600	250.00	2,342	102.63	1,954	125.50	834	122.11	951.39	251.35	1,103	350.15	--	--
1994-95	640	266.67	2,741	120.11	2,487	159.73	907	132.80	830.85	219.51	1,141	362.22	670.20	244.41
1995-96	670	279.17	2,660	116.56	1,988	127.68	747	109.37	881.02	232.76	782	248.25	819.77	298.95
1996-97	700	291.67	2,684	117.62	2,294	147.33	914	133.82	1,139.10	300.95	1,079	342.53	838.05	305.62
1997-98	740	308.33	2,582	113.15	2,441	156.78	946	138.51	1,009.75	266.77	1,313	416.82	--	--
1998-99	835	347.92	2,690	117.88	2,629	168.85	924	135.29	--	--	1,064	337.77	--	--
1999-2000	895	372.92	2,750	120.51	2,493	160.12	908	132.94	--	--	1,110	352.38	--	--

The relationships between Farm Harvest Prices, wholesale prices and cost of production are also reflected in table 3.8.

The correlation between MSP and area, production, yield, FHP and cost of production were highly significant. Within the indicators the correlation was most significant for cost of production and least for area (table 3.21).

Table 3.8 Minimum support price, farm harvest price and cost of production of gram and percentage variation in Madhya Pradesh

Year	MSP (Rs./ Qtl.)	FHP (Rs./ Qtl.)	Cost of Production (Rs./ Qtl.)	Wholesale Price (Rs./ Qtl.)	Percentage Variation between		
					MSP and FHP	MSP and cost of Production	MSP and WSP
1980-81	145	294.50	--	355	103.10	--	144.82
1981-82	N.A.	228.17	191.42	323	--	--	--
1982-83	N.A.	216.71	166.18	--	--	--	--
1983-84	235	282.25	217.19	--	20.11	- 7.58	--
1984-85	240	395.97	278.07	--	64.99	15.86	--
1985-86	240	378.50	274.21	315	57.71	14.25	31.25
1986-87	260	344.63	247.36	319	32.55	- 4.86	22.69
1987-88	280	435.01	299.44	402	55.36	6.94	43.57
1988-89	290	553.89	423.27	642	99.99	45.95	121.37
1989-90	325	562.99	461.04	668	73.23	41.86	105.53
1990-91	421	577.02	458.57	629	37.06	8.92	49.40
1991-92	450	595.98	475.76	677	32.44	5.72	50.44
1992-93	500	742.28	563.09	675	48.46	12.62	35.00
1993-94	600	951.39	--	1,103	58.57	--	83.83
1994-95	640	830.85	670.20	1,141	29.82	4.72	78.28
1995-96	670	881.02	819.77	782	31.50	22.35	16.72
1996-97	700	1,139.10	838.05	1,079	62.73	19.72	54.14
1997-98	740	1,009.75	--	1,313	36.45	--	77.43
1998-99	835	--	--	1,064	--	--	27.43
1999-2000	895	--	--	1,110	--	--	24.02

3.6 Arhar

It was noted that MSP of arhar increased from year to year from Rs.300 per quintal in 1985-86 to Rs.1,105 per quintal in 1999-2000. The index of area under arhar decreased from (1985-86=100) to 80.83 in 1999-2000. Actually it did not reach the base year level of 480 thousand hectares or index of 100 in

any year of the reference period. The decline progressed from year to year and the index was 75.42 in 1998-99. It increased to 80.83 in the last year of the reference period of 1999-2000. The index of production, in general, declined during the reference period and was 86.59 in 1999-2000. The index of yield although was 107.22 (slightly more than base year in the year 1999-2000) the increase was not consistent. In 5 years the index was less than 100. The index of farm harvest prices, in general, increased during the reference year and was 415.65 in the year 1997-98. Index of cost of production, in general, increased in the reference period and the percentage increase in 1995-96 (164.95) was about equal to (166.66) that of MSP. The noteworthy feature was that the cost of production was higher than the MSP in all the years showing that the MSP could not even level the cost, leave aside the profitability (Table 3.9).

Table 3.9 Relationship of MSPs with area, production yield, farm harvest prices, and cost of production for arhar, Madhya Pradesh

Index - Base Year 1985-86 =100.00

Year	ARHAR											
	MSP (Rs./ Qtl.)	Index	Area ('000 ha.)	Index	Produc-tion ('000 tonnes)	Index	Yield (Kg. /ha.)	Index	Farm Harvest Price (Rs./ Qtl.)	Index	Cost of Produc-tion (Rs./ Qtl)	Index
1985-86	300	100.00	480	100.00	410	100.00	859	100.00	350.69	100.00	344.89	100.00
1986-87	310	103.33	437	91.04	413	100.73	951	110.71	482.37	137.55	400.28	116.06
1987-88	325	108.33	454	94.58	418	101.95	924	107.57	625.15	178.26	346.42	100.44
1988-89	360	120.00	452	94.17	598	145.85	1,331	154.95	521.17	148.61	481.41	139.58
1989-90	400	133.33	442	92.08	417	101.71	949	110.48	656.00	187.06	524.13	151.97
1990-91	480	160.00	442	92.08	437	106.58	995	115.83	808.80	230.63	604.20	175.19
1991-92	545	181.67	407	84.79	315	76.83	779	90.68	910.36	259.59	838.68	243.17
1992-93	640	213.33	424	88.33	362	88.29	858	99.88	763.15	217.61	758.51	219.93
1993-94	700	233.33	429	89.37	415	101.22	973	113.27	907.26	258.71	--	--
1994-95	760	253.33	356	74.17	302	73.66	854	99.42	1,293.66	368.89	763.93	221.50
1995-96	800	266.66	377	78.54	298	72.68	797	92.78	1,612.27	459.74	913.78	264.95
1996-97	840	280.00	372	77.50	321	78.29	863	100.46	1,300.62	370.87	--	--
1997-98	900	300.00	361	75.21	257	62.68	716	83.35	1,457.64	415.65	--	--
1998-99	960	320.00	362	75.42	336	81.95	935	108.85	--	--	--	--
1999-2000	1,105	368.33	388	80.83	355	86.59	921	107.22	--	--	--	--

Thus the area and production showed a declining trend. The yield although increased in last year of the reference year was not increasing in the years and fell much below the index of MSP. The COP was higher than MSP in all the years. It was also noted that the FHP was always higher than the MSP ranging between 60.90 per cent to 102.78 per cent in different years. Similarly the wholesale prices were much higher than the MSPs in all the years for which data were available. The percentage increase ranged between 68.89 to 140.00 per cent (Table 3.10).

Table 3.10 Minimum support price, farm harvest price, cost of production and wholesale price of arhar and percentage variation in Madhya Pradesh

Year	MSP (Rs./ Qtl.)	FHP (Rs./ Qtl.)	Cost of Production (Rs./ Qtl.)	Wholesale Price (Rs./ Qtl.)	Percentage Variation between		
					MSP and FHP	MSP and cost of Production	MSP and WSP
1980-81	190	272.92	--	--	43.64	--	--
1981-82	190	261.22	183.20	--	37.48	(-) 3.53	--
1982-83	215	332.01	--	--	54.42	--	--
1983-84	245	349.04	--	--	42.47	--	--
1984-85	275	334.35	249.38	--	21.58	(-) 9.32	--
1985-86	300	350.69	344.89	--	16.90	14.96	--
1986-87	310	482.37	400.28	--	55.60	29.12	--
1987-88	325	625.15	346.42	--	92.35	6.59	--
1988-89	360	521.17	481.41	--	44.77	33.73	83.00
1989-90	400	656.00	524.13	732	64.00	31.03	125.00
1990-91	480	808.80	604.20	1,081	68.50	25.88	125.20
1991-92	545	910.36	838.68	1,203	67.04	53.89	120.73
1992-93	640	763.15	758.51	1,358	19.24	18.52	112.19
1993-94	700	907.26	--	1,350	29.61	--	92.86
1994-95	760	1,293.66	763.93	1,576	70.22	0.52	107.37
1995-96	800	1,622.27	913.78	1,920	102.78	14.22	140.00
1996-97	840	1,300.62	--	1,549	54.84	--	84.40
1997-98	900	1,457.64	--	1,520	61.96	--	68.89
1998-99	960	--	--	1,886	--	--	96.46
1999-2000	1,105	--	--	--	--	--	--

The co-efficient of correlation clearly showed that area, production and yield were negatively correlated, whereas, farm harvest prices and cost of production were significantly correlated (table 3.21)

3.7 Moong

The MSP of moong was Rs.300 in 1985-86. It increased continuously from year to year and was Rs.900 in the year 1999-2000. In other words the index number increased from 100.00 to 300 during that period. However, the area got reduced drastically during the same period and was 55.45 per cent as compared to base year. The index of production came down to 62.07 per cent in the last year of the reference period. The index of yield, although, did not show increasing trend stood at 111.79 per cent in the last year. The FHPs in general showed increasing trend with fluctuations in between. These (FHPs) were, however, always higher than MSPs. Time series data for WSPs and COP were not available for all the years of the reference period (Table 3.11).

Table 3.11 Relationship of MSPs with area, production, yield, and farm harvest prices for moong, Madhya Pradesh

Base year 1985-86= 100

Year	**m o o n g**									
	MSP (Rs./ Qtl.)	Index	Area ('000 ha.)	Index	Produc-tion ('000 tonnes)	Index	Yield (Kg./ ha.)	Index	Farm Harvest Price (Rs./ Qtl.)	Index
1985-86	300	100.00	211	100.00	58	100.00	280	100.00	391.71	100.00
1986-87	315	105.00	196	92.89	48	82.76	244	87.14	442.20	112.89
1987-88	325	108.33	190	90.05	53	91.38	279	99.64	462.03	117.95
1988-89	360	120.00	172	81.52	57	98.28	337	120.36	613.96	156.74
1989-90	400	133.33	167	79.15	44	75.86	269	96.07	685.58	175.02
1990-91	480	160.00	157	74.41	47	81.03	307	109.64	708.44	180.86
1991-92	545	181.66	141	66.82	37	63.79	262	93.57	832.23	212.46
1992-93	640	213.33	149	70.62	50	86.21	345	123.21	799.47	204.09
1993-94	700	233.33	142	67.30	48	82.76	345	123.21	920.38	234.96
1994-95	760	253.33	125	59.24	37	63.79	302	107.86	1,354.51	345.79
1995-96	800	266.67	121	57.35	39	67.24	329	117.50	1,409.76	359.90
1996-97	840	280.00	121	57.35	41	70.68	347	123.93	1,383.14	353.10
1997-98	900	300.00	118	55.92	39	67.24	333	118.93	1,273.01	324.99
1998-99	900	300.00	113	53.55	37	63.79	333	118.93	--	--
1999-2000	--	--	117	55.45	36	62.07	313	111.79	--	--

The percentage increase in FHP over MSP was from 19.12 to 78.23. The cost of production was always higher than MSP for the years for which data were available. The percentage increase ranged between 6.08 to 72.63 (Table 3.12).

Table 3.12 Minimum support price, farm harvest price and cost of production of moong and percentage variation in Madhya Pradesh

Year	MSP (Rs./ Qtl.)	FHP (Rs./ Qtl.)	Cost of Production (Rs./ Qtl.)	Percentage Variation between	
				MSP and FHP	MSP and cost of Production
1980-81	200	333.27	--	66.64	--
1981-82	200	329.67	257.26	64.84	28.63
1982-83	240	285.89	266.85	19.12	11.19
1983-84	250	317.44	265.70	26.98	6.08
1984-85	275	472.31	319.26	71.75	16.09
1985-86	300	391.71	447.65	30.57	49.22
1986-87	315	442.20	343.47	40.38	9.04
1987-88	325	462.03	414.36	42.16	28.73
1988-89	360	613.96	621.45	70.54	72.63
1989-90	400	685.58	676.32	71.40	69.08
1990-91	480	708.44	--	47.59	--
1991-92	545	832.23	--	52.70	--
1992-93	640	799.44	--	24.91	--
1993-94	700	920.38	--	31.48	--
1994-95	760	1,354.51	--	78.23	--
1995-96	800	1,409.76	--	76.22	--
1996-97	840	1,383.14	--	64.66	--
1997-98	900	1,273.01	--	41.45	--
1998-99	900	--	--	--	--
1999-2000	--	--	--	--	--

3.8 Groundnut

The MSP of groundnut increased from Rs.350 in the year 1985-86 to Rs.1,040 in 1998-99 continuously from year to year. The index increased to 297.14 in the year 1998-99. The area although registered an index of 102.33 the increase was neither regular nor consistent. There were lot of fluctuations. In 5 years the index went below 100. Similar is the case with production. Although the index at the end of the reference period was 148.82 no trend was noticed and although the index never went below 100 there were many

fluctuations. Same is the case with yield, the index in which case was 145.47 at the end of the reference period with very many fluctuations in between. In the case of FHP the trend, in general, was increasing and the index at the end of the reference period was 279.60. However the increasing trend was not strictly noticed in all the years. However one thing was clear that FHPs were higher than MSPs in all the years of the reference period (Table 3.13 and 3.14).

Table 3.13 Relationship of MSPs with area, production yield, and farm harvest prices, for Groundnut, Madhya Pradesh

Base year 1985-86 = 100

Year	Groundnut									
	MSP (Rs./ Qtl.)	Index	Area ('000 ha.)	Index	Produc-tion ('000 tonnes)	Index	Yield (Kg./ha.)	Index	Farm Harvest Price (Rs./ Qtl.)	Index
1985-86	350	100.00	257	100.00	170	100.00	662	100.00	427.58	100.00
1986-87	370	105.71	244	94.94	189	111.18	774	116.92	570.79	133.49
1987-88	390	111.43	264	102.72	246	144.70	934	141.09	706.78	165.30
1988-89	430	122.86	337	131.13	369	217.06	1,096	165.56	553.05	129.34
1989-90	500	142.86	366	142.41	272	160.00	743	112.25	635.47	148.62
1990-91	580	165.71	321	124.90	250	147.06	781	117.97	915.62	214.14
1991-92	645	184.28	280	108.95	206	121.18	734	110.88	1,160.41	271.39
1992-93	750	214.28	259	100.78	288	169.41	1,113	168.13	925.56	216.46
1993-94	800	228.57	277	107.78	275	161.76	995	150.30	987.17	230.87
1994-95	860	245.71	266	103.50	214	125.88	806	121.75	1,209.33	282.83
1995-96	900	257.14	252	98.05	260	152.94	1,033	156.04	1,310.61	306.52
1996-97	920	262.86	255	99.22	253	148.82	994	150.15	1,253.32	293.12
1997-98	980	280.00	255	99.22	254	149.41	998	150.75	1,195.51	279.60
1998-99	1,040	297.14	251	97.67	268	157.65	1,067	161.18	---	--
1999-2000	--	--	263	102.33	253	148.82	963	145.47	---	--

Table 3.14 Minimum support price, and farm harvest price of groundnut and percentage variation in Madhya Pradesh

Year	MSP (Rs./ Qtl.)	FHP (Rs./ Qtl.)	Percentage Variation between MSP and FHP
1980-81	--	358.51	--
1981-82	270	375.39	39.03
1982-83	295	385.41	30.65
1983-84	315	442.46	40.46
1984-85	340	463.30	36.26
1985-86	350	427.58	22.17
1986-87	370	570.79	54.27
1987-88	390	706.78	81.23
1988-89	430	553.05	28.62
1989-90	500	635.47	27.09
1990-91	580	915.62	57.87
1991-92	645	1,160.41	79.91
1992-93	750	925.56	23.41
1993-94	800	987.17	23.40
1994-95	860	1,209.33	40.62
1995-96	900	1,310.61	45.62
1996-97	920	1,253.32	36.23
1997-98	980	1,195.51	21.99
1998-99	1,040	--	--
1999-2000	--	--	--

3.9 Rapeseed & Mustard

The MSP of rapeseed and mustard was Rs.385 in 1985-86. It continuously increased from year to year and was Rs.1000 in 1999-2000. The index increased to 259.74. The index of area although did not follow a trend in strict sense, increased to 207.69 in 1999-2000. There were many fluctuations in the intervening years. The production, like area increased and the index stood at 361.96 in 1999-2000. However there were many fluctuations. Same is the case with yield. Thus increasing MSPs of rapeseed and mustard could not have very positive impact on area, production and yield. F.H. Prices also, in general, increased from year to year but did not show any trend. However it was noted that F.H. Prices were higher than MSP in all the years of reference period (Table 3.15)

Table 3.15 Relationship of MSPs with area, production yield and farm harvest prices for Rapeseed & Mustard in Madhya Pradesh

Base year 1985-86 = 100

Year	Rapeseed & Mustard									
	MSP (Rs./ Qtl.)	Index	Area ('000 ha.)	Index	Production ('000 tonnes)	Index	Yield (Kg./ha.)	Index	Farm Harvest Price (Rs./ Qtl.)	Index
1985-86	385	100.00	338	100.00	184	100.00	541	100.00	479.70	100.00
1986-87	415	107.79	331	97.93	208	113.04	631	116.64	570.91	119.01
1987-88	430	111.69	440	130.18	329	178.80	750	138.63	915.75	190.90
1988-89	460	119.48	478	141.42	430	233.70	905	167.28	560.17	116.78
1989-90	575	149.35	450	133.14	343	186.41	766	141.59	676.65	141.06
1990-91	600	155.84	571	168.93	527	286.41	926	171.16	900.18	187.65
1991-92	670	174.03	606	179.29	500	271.74	828	153.05	872.68	181.92
1992-93	760	197.40	637	188.46	479	260.33	755	139.56	833.11	173.67
1993-94	810	210.39	697	206.21	599	325.54	861	159.15	1,016.26	211.85
1994-95	830	215.58	665	196.74	530	288.04	800	147.87	1,195.44	249.20
1995-96	860	223.38	696	205.92	585	317.93	843	155.82	1,070.59	223.18
1996-97	890	231.17	735	217.46	673	365.76	919	169.87	1,238.63	258.21
1997-98	940	244.16	704	208.28	417	226.63	592	109.43	1,311.14	273.32
1998-99	940	244.16	644	190.53	575	312.50	896	165.62	--	--
1999-2000	1,000	259.74	702	207.69	666	361.96	952	175.97	--	--

The percentage increase in FHP over MSP can be noted from table 3.16.

Table 3.16 Percentage variation between Minimum support price and farm harvest price of Rapeseed & Mustard in Madhya Pradesh

Year	MSP (Rs./ Qtl.)	FHP (Rs./ Qtl.)	Percentage Variation between MSP and FHP
1980-81	--	417.08	--
1981-82	--	376.91	--
1982-83	324	403.90	24.66
1983-84	355	569.40	60.39
1984-85	360	560.53	55.70
1985-86	385	479.70	24.60
1986-87	415	570.91	37.57
1987-88	430	915.75	112.97
1988-89	460	560.17	21.78
1989-90	575	676.65	17.68
1990-91	600	900.18	50.03
1991-92	670	872.68	30.25
1992-93	760	833.11	09.62
1993-94	810	1,066.26	31.64
1994-95	830	1,195.44	44.03
1995-96	860	1,070.59	24.49
1996-97	890	1,238.63	39.17
1997-98	940	1,311.14	39.48

3.10 Jowar

Like most of the other crops the MSPs of jowar announced increased from year to year. It was Rs.130 in 1985-86 and increased to Rs.415 in 1999-2000. The index increased to 319.23 in 1999-2000. The index of area and production, in general followed a decreasing trend and the index at the end of the reference period stood at 36.43 and 31.53 per cent respectively. The index of yield lowered to 86.11 in the last year but did not follow a decreasing trend. There were many fluctuations in between. The index of FHP showed many fluctuations but increased to 282.24 in the last year. It may, however, be noted that FHP in all the years of the reference period was more than MSP. The cost of production was slightly lower than MSP in the base year but was higher than MSP in all the remaining 9 years, indicating thereby that although it followed an increasing trend like MSP, in individual year it was higher than MSP to the loss to farmers (Table 3.17).

Table 3.17 Relationship of MSPs with area, production, yield, farm harvest prices and cost of production for jowar Madhya Pradesh

Base year 1985-86 = 100

Year	Rapeseed & Mustard											
	MSP (Rs./ Qtl.)	Index	Area ('000 ha.)	Index	Produc-tion ('000 tonnes)	Index	Yield (Kg. /ha.)	Index	Farm Harvest Price (Rs./ Qtl.)	Index	cost of prod. (Rs. Qtl.)	Index
1985-86	130	100.00	1,960	100.00	1,773	100.00	907	100.00	150.10	100.00	129.96	100.00
1986-87	132	101.54	1,912	97.55	1,302	73.43	682	75.19	165.26	109.98	136.92	105.36
1987-88	135	103.85	2,092	106.73	1,931	108.91	925	101.98	154.61	102.89	136.74	105.22
1988-89	145	111.54	1,811	92.40	1,635	92.22	903	99.56	212.55	141.45	155.93	119.98
1989-90	165	126.92	1,748	89.18	1,737	97.97	994	109.59	182.29	121.32	197.84	152.23
1990-91	180	138.46	1,648	84.08	1,490	84.04	904	99.67	237.34	157.95	219.19	168.66
1991-92	205	157.69	1,383	70.56	1,008	56.85	728	80.26	379.14	252.32	341.25	262.58
1992-93	240	184.62	1,425	72.70	1,555	87.70	1,094	120.62	252.89	168.30	285.33	219.55
1993-94	260	200.00	1,273	64.95	1,254	70.73	986	108.71	279.91	186.28	--	--
1994-95	280	215.38	1,043	53.21	701	39.54	669	73.76	454.12	302.22	340.92	262.33
1995-96	300	230.77	994	50.71	844	47.60	848	93.50	407.25	271.03	400.90	308.48
1996-97	310	238.46	922	47.04	792	44.67	858	94.60	427.59	314.51	--	--
1997-98	360	276.92	903	46.07	752	42.41	832	91.73	424.09	282.24	--	--
1998-99	390	300.00	764	38.98	740	41.74	970	106.95	--	--	--	--
1999-2000	415	319.23	714	36.43	559	31.53	781	86.11	--	--	--	--

The percentage increase over MSP for FHP and COP are shown in table 3.18. The correlation coefficients showed that area and production were highly negatively correlated to MSP. The relationship with yield was insignificant. The relationship with FHP and COP were highly significant (Table 3.21).

Table 3.18 Minimum support price, farm harvest price and cost of production of Jowar and percentage variation in Madhya Pradesh

Year	MSP (Rs./ Qtl.)	FHP (Rs./ Qtl.)	Cost of Production (Rs./ Qtl.)	Percentage Variation between	
				MSP and FHP	MSP and cost of production
1980-81	105	95.72	--	-8.84	--
1981-82	116	129.32	113.51	11.48	-2.15
1982-83	118	135.34	117.86	4.69	-0.12
1983-84	124	137.96	104.71	11.26	-15.56
1984-85	130	122.43	113.38	-5.82	-12.78
1985-86	130	150.10	129.96	15.46	-0.03
1986-87	132	165.26	136.92	25.20	3.73
1987-88	135	154.61	136.74	14.53	1.29
1988-89	145	212.55	155.93	46.59	7.54
1989-90	165	182.29	197.84	10.48	19.90
1990-91	180	237.34	219.19	31.86	21.77
1991-92	205	379.14	341.25	84.95	66.46
1992-93	240	252.89	285.33	5.37	18.89
1993-94	260	279.91	--	7.66	--
1994-95	280	454.12	340.92	62.19	21.76
1995-96	300	407.25	400.90	35.75	33.63
1996-97	310	472.59	--	17.80	--
1997-98	360	424.09	--	17.80	--
1998-99	390	--	--	--	--
1999-2000	--	--	--	--	--

3.11 Maize

The MSP increased from Rs.130 in 1985-86 to Rs.415 in 1999-2000. The increase was continuous. The index of area, on the other hand increased to 101.91 or only marginally. It was observed that the index of area in general, increased up to the year 1992-93 but thereafter gradually declined. The index of production recorded a much higher increase (191.11) in the last year. However during the intervening years there were many fluctuations. The index of yield recorded slightly lower increase than production and stood at 188.01 in the last year. In this case also there were many fluctuations. The FHP increased at comparatively faster rate and the index stood at 263.05 at the end of the reference period. It may, however, be noted that FHP was higher than MSP in all the years except two years. The cost of production was higher than MSP in all the years of the reference period indicating that farmers were not adequately compensated for the cost of production they incurred. (Table 3.19).

Table 3.19 Relationship of MSPs with area, production, yield, farm harvest prices, wholesale prices and cost of production for maize, Madhya Pradesh

Base year 1985-86 = 100

Year	Rapeseed & Mustard													
	MSP (Rs./ Qtl.)	Index	Area ('000 ha.)	Index	Prod ('000 tonnes)	Index	Yield (Kg. /ha.)	Index	Farm Harvest Price (Rs./ Qtl.)	Index	WSP (Rs./ Qtl.	Index	cost of prod. (Rs. Qtl.)	Index
1985-86	130	100.00	839	100.00	709	100.00	851	100.00	154.68	100.00	--		159.84	100.00
1986-87	132	101.54	850	101.31	761	107.33	902	105.99	151.56	97.98	207		171.27	107.15
1987-88	135	103.85	849	101.19	873	123.13	1,037	121.86	167.39	108.22	205		155.16	97.07
1988-89	145	111.54	860	102.50	1,194	168.41	1400	164.51	160.93	104.04	233		166.88	104.40
1989-90	165	126.92	879	104.77	1,458	205.64	1,674	196.71	181.33	117.23	243		223.05	139.55
1990-91	180	138.46	877	104.53	1,237	174.47	1,423	167.22	181.60	117.40	206		206.83	129.40
1991-92	210	161.54	877	104.53	863	121.72	991	116.45	298.70	193.11	287		308.43	192.96
1992-93	245	188.46	908	108.22	1,428	201.41	1,586	186.37	331.65	214.41	255		253.24	147.17
1993-94	265	203.85	904	107.75	1,332	187.87	1,487	174.74	253.18	163.68	343		--	--
1994-95	290	223.08	858	102.26	836	117.91	980	115.16	383.52	247.94	482		353.75	221.32
1995-96	310	238.46	857	102.15	1,150	162.20	1,354	159.11	302.97	195.87	444		321.77	201.31
1996-97	320	246.15	847	100.95	948	133.71	1,129	132.67	458.81	296.62	481		--	--
1997-98	360	276.92	861	102.62	1,135	160.08	1,331	156.40	406.89	263.05	450		--	--
1998-99	390	300.00	852	101.55	1,238	174.61	1,460	171.56	--	--	451		--	--
1999-2000	415	319.23	855	101.91	1,355	191.11	1,600	188.01	--	--			--	--

The percentage increase of FHP, cost of production and WSP over MSP has been shown in table 3.20.

Table 3.20 Minimum support price, farm harvest price and cost of production and wholesale price of Maize and percentage variation in Madhya Pradesh

Year	MSP (Rs./ Qtl.)	FHP (Rs./ Qtl.)	Cost of Production (Rs./ Qtl.)	Wholesale Price (Rs./ Qtl.)	Percentage Variation between		
					MSP and FHP	MSP and cost of production	MSP and WSP
1980-81	105	114.43	--	--	8.98	--	--
1981-82	116	125.29	117.81	--	8.00	1.56	--
1982-83	118	137.03	144.00	--	16.13	22.03	--
1983-84	124	122.20	107.46	--	(-) 1.45	(-) 13.34	--
1984-85	130	113.63	--	--	(-)12.59	--	--
1985-86	130	154.68	159.84	--	18.98	22.95	--
1986-87	132	151.56	171.27	207	14.82	29.75	51.81
1987-88	135	167.39	155.16	205	23.99	14.93	51.85
1988-89	145	160.93	166.88	233	10.99	15.09	60.69
1989-90	165	181.33	223.05	243	9.90	35.18	47.27
1990-91	180	181.60	206.83	206	0.88	14.91	14.44
1991-92	210	298.70	308.43	287	42.24	46.87	36.66
1992-93	245	331.65	253.24	255	35.37	3.36	4.08
1993-94	265	253.18	--	343	(-) 4.46	--	29.43
1994-95	290	383.52	353.75	482	32.25	21.98	66.21
1995-96	310	302.97	321.77	444	(-) 2.27	3.80	43.23
1996-97	320	458.81	--	481	43.38	--	50.31
1997-98	360	406.89	--	450	13.03	--	25.00
1998-99	390	--	--	451	--	--	15.64
1999-2000	415	--	--	--	--	--	--

The relationship of MSP with area, production and yield were significant at 5% level. The relationship with FHP and cost of production was highly significant (Table 3.21).

Table 3.21 Coefficients of correlation between Minimum Support Price and Area, Production, yield, Farm Harvest Price and cost of production per quintal of important crops in Madhya Pradesh, for 20 years viz. 1980-81 to 1999-2000

Crop	Area		Production		Yield		Farm Harvest Price		Cost of production per quintal	
	r	t	r	t	r	t	r	t	r	t
Paddy	0.4221	1.97	0.6477	2.74	0.7985	5.63	0.9385	11.53	0.8991	2.65
Wheat	0.9059	12.53	0.9560	13.85	0.8842	8.03	0.9442	12.16	0.9742	18.35
Gram	0.8568	7.05	0.9299	10.73	0.9156	9.66	0.9598	14.50	0.9713	17.32
Soybean	0.9706	17.10	0.9620	15.89	0.8454	6.71	--	--	0.9487	12.73
Maize	0.4201	1.96	0.4463	2.11	0.4294	2.01	0.9451	12.27	0.9034	8.93
Jowar	- 0.9749	- 18.57	- 0.8831	- 7.95	0.0744	0.31	0.9104	9.37	0.9440	12.13
Arhar	- 0.9041	- 8.97	- 0.5227	- 2.60	- 0.0117	- 0.05	0.9560	13.82	0.9411	11.82

Value of test of significance at 1% level = 2.25

and at 5% level = 1.73

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Table 4.1 Selected districts, blocks and villages, Madhya Pradesh

District	Block	Village
Ujjain	1. Badnagar 2. Ujjain 3. Khachrod 4. Tarana	Maulana Pipaliaragho Unhel Chiklee
Narsinghpur	1. Narsinghpur 2. Kareli	Dangidhana Muria Kareli Kodsa
Mandla	1. Mandla 2. Nainpur 3. Bichhia 4. Narayanganj	Bhapsa Dhatura Mand Mangalgaon
Total	**10**	**12**

In the selected villages 10 farms each having size of holding of more than 2.00 hectares each were selected. The reason for selecting farms having 2.00 hectares and above was that the farms should be those having marketable surplus and experience regarding marketing and minimum support prices.

4.2 Size of Farms

As mentioned above 40 farms were selected in each of the 3 districts making a total sample of 120 farms. While 40 (33.33 per cent) farms belonged to semi medium size of 2.0 to 4.0 hectares, 57 (47.50 per cent) farms came from medium size category having 4.0 to 10.0 hectares of holding. Large category of farms having holding size of 10.0 hectares and above were 23 (19.17 per cent) in number. While in Ujjain and Narsinghpur district, large size farms accounted for larger percentage, in Mandla district majority of farms were of semi medium size group (Table 4.2).

Table 4.2 Distribution of sample households according to farm size in selected districts of Madhya Pradesh

Districts/ Region/ Size	2 to 4 hectares		4 to 10 hectares		10 hectares and above		Total	
	Number	Percen-tage	Number	Percen-tage	Number	Percen-tage	Number	Percen-tage
Ujjain Region-I	10	25.00	21	36.84	09	39.13	40	33.34
Narsinghpur Region-II	08	20.00	21	36.84	11	47.83	40	33.33
Mandla Region-III	22	55.00	15	26.32	03	13.04	40	33.33
Total	40	100.00	57	100.00	23	100.00	120	100.00

In Ujjain and Narsinghpur districts largest percentage of households belonged to other Backward Castes and no household belonged to scheduled tribe. In Mandla district which is known to be a tribal district one fourth of the selected households belonged to scheduled tribes. In Mandla none of the households belonged to scheduled castes (Table 4.3).

Table 4.3 Distribution of sample households according to castes in selected districts of M.P.

Particulars	Ujjain		Narsinghpur		Mandla		Total	
	Number	Percen-tage	Number	Percen-tage	Number	Percen-tage	Number	Percen-tage
Scheduled Castes	03	7.50	03	7.50	--	--	06	5.00
Scheduled Tribes	--	--	--	--	10	25.00	10	8.30
Other Backward Castes	19	47.50	26	65.00	23	57.50	68	56.70
Others	18	45.00	11	27.50	07	17.50	36	38.00
Total	40	100.00	40	100.00	40	100.00	120	100.00

4.3 Population and Literacy

On the selected households the total population was 987 or 8.22 family members per household. Ujjain had largest family size of 10.52 members followed by Mandla, 7.17 and Narsinghpur, 6.82. Male members formed 37.89

per cent, female members, 33.23 per cent and children, 28.88 per cent. While Narsinghpur and Mandla districts had about similar proportions of male, female and children of 40, 35 and 25 per cent respectively, Ujjain district had lower proportions of male and female members (35 and 31 per cent respectively) and conversely higher proportion (34.00 per cent) of children (Table 4.4).

Table 4.4 Population distribution by sex, selected households, Madhya Pradesh

District	Male		Female		Children		Total	No. of house - holds	No.of family members per household
	Number	Percen-tage	Number	Percen-tage	Number	Percen-tage			
Ujjain	147	34.92	132	31.35	142	33.73	421 (100.00)	40	10.52
Narsinghpur	109	40.07	95	34.97	68	25.00	272 (100.00)	40	6.80
Mandla	118	40.14	101	34.35	75	25.51	294 (100.00)	40	7.17
Total	374	37.89	328	33.23	285	28.88	987 (100.00)	120	8.22

On the selected households, of the total population 24.21 per cent were illiterate and the remaining 75.79 per cent members were literate. Literacy can be graded on the basis of level of school or college education. It was observed that the largest percentage (29.01) of literates were those who had either no formal schooling or had schooling below primary level. Another class of population was of those who had attended the primary level of schooling (24.47). The third important class was of those who had education upto middle school (17.78 per cent)

Among the selected districts Narsinghpur had highest literacy percentage of 81.62. Mandla district had 77.21 per cent of literacy and Ujjain district had 71.02 per cent. In all the 3 districts literacy percentage was significantly higher for males than females. It was also noted that the literacy standards for males were higher than the females in all the districts (Table 4.5).

Table 4.5 Educational status of family members of selected farmers in selected districts of M.P.

Educational Status	Ujjain			Narsinghpur			Mandla			Total		
	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total
Illeterates	43 18.94	79 40.72	122 28.98	16 11.03	34 26.77	50 18.38	23 14.47	44 32.58	67 22.79	82 15.44	157 34.43	239 24.21
Below primary	50 27.17	49 42.61	99 33.11	30 23.25	41 44.09	71 31.98	24 17.65	23 25.27	47 20.70	104 23.16	113 37.79	217 29.01
Primary school	43 23.37	50 43.48	93 31.10	31 24.03	19 20.43	50 25.52	17 12.50	23 25.27	40 17.62	91 20.27	92 30.77	183 24.47
Middle school	37 20.11	11 9.56	48 16.05	37 28.68	20 21.50	57 25.67	20 14.71	8 8.79	28 12.33	94 20.94	39 13.05	133 17.78
High school	29 15.76	01 0.87	30 10.04	14 10.85	08 8.60	22 9.60	19 13.97	13 14.29	32 14.10	62 13.81	22 7.36	84 11.23
Higher Secondary	11 5.98	4 3.48	15 5.03	-- 	-- 	-- 	22 16.18	13 14.29	35 15.42	33 7.35	17 5.68	50 6.68
Graduate	11 5.98	-- 	11 3.67	10 7.75	4 4.30	14 6.30	26 19.12	8 8.79	34 14.98	47 10.46	12 4.01	59 7.89
Post Graduate	3 1.63	-- 	3 1.00	7 5.44	1 1.08	8 3.60	8 5.88	3 3.30	11 4.85	18 4.01	4 1.34	22 2.94
Total Literates	184 100.0	115 100.0	299 100.0	129 100.0	93 100.0	222 100.0	136 100.0	91 100.0	227 100.0	449 100.0	299 100.0	748 100.0
Total population	227	194	421	145	127	272	159	135	294	531	456	987
Literacy Percentage	81.06	59.28	71.02	88.97	73.23	81.62	85.53	67.42	77.21	84.56	65.57	75.79

4.4 Occupational Distribution

On the basis of number of days of working for an occupation agriculture was the most important occupation on the selected farms attracting 69.51 per cent of the labour days spent on it. Dairy was second important occupation on which 14.29 per cent of the employment days were spent. "Other" occupations had 12.06 per cent of the days spent. The employment pattern for males and females was similar. It was further noted that dairy was the important occupation in Ujjain district only. Similarly agricultural labour was comparatively more important on Ujjain district farms. While "other" occupations were absent in Ujjain district, these contributed a very high percentage (38.83) in Mandla district (Table 4.6).

Table 4.6 Occupation and Employment days for the working members of selected farmers in selected districts of M.P.

Occupation	Ujjain			Narsinghpur			Mandla			Total		
	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total
Agriculture	12,615 64.73	7,330 59.86	19,945 62.85	13,025 88.94	4,160 93.27	17,185 89.95	7,075 56.33	3,680 67.09	10,755 59.60	32,715 70.06	15,1700 68.36	47,885 69.51
Dairy	5,310 27.24	4,535 37.03	9,845 31.02	--	--	--	--	--	--	5,310 11.37	4,535 20.44	9,845 14.29
Agricultural Labour	1,565 8.03	380 3.11	1,945 6.13	620 4.23	--	620 3.25	215 1.71	69 1.26	284 1.57	2,400 5.14	449 2.02	2,849 4.14
Others	--	--	--	1,000 6.83	300 7.73	1,300 6.80	5,270 41.96	1,736 31.65	7,006 38.83	6,270 13.43	2,036 9.18	8,306 12.06
Total	19,490 100.00	12,245 100.00	31,735 100.00	14,645 100.00	4,460 100.00	19,105 100.00	12,560 100.00	5,485 100.0	18,045 100.00	46,695 100.00	22,190 100.00	68,885 100.00
Employment days per head (Adult)	133	93	114	134	47	94	106	54	82	123	68	98

4.5 Details of Land

The average operated area of the selected farms was 7.92 hectares in 1999-2000. The average area of these farms 10 years back was 8.39 hectares. In other words the area has declined from that obtained 10 years back by 5.58 per cent. The average farm size was highest (10.79 ha.) in Narsinghpur district. It was 8.01 ha. in Ujjain district and 4.95 ha. in Mandla district. While the average farm size declined in Ujjain and Narsinghpur districts that in Mandla district increased by 2.03 per cent.

About the irrigation status it was noted that the percentage of irrigated area to operated area increased from 47.51 ten years back to 75.38 in 1999-2000 for the average selected farm. Thus the percentage of area irrigated jumped by 27.87. The phenomenon was true for farms of all the selected districts. Among the selected districts Narsinghpur had the highest percentage (87.08) of irrigated area to operated area. Mandla district had 68.68 per cent of the operated area as irrigated area. On Ujjain district farms the percentage was lowest (63.78).

The average value of land per hectare on the selected farms was Rs.1,40,148. The land value was highest in Narsinghpur district (Rs.1,92,564 per hectare). The value per hectare was second highest (Rs.1,29,331) in Ujjain district. In Mandla district the value of land per hectare was lowest (Rs.98,551). Like any other asset land value per hectare increased during the last 10 years in all the selected districts. The average increase in land value was 134.81 per cent on the selected farms. The increase was highest (300.60 per cent) in Ujjain district. It was 107.92 per cent in Narsinghpur district and 81.98 per cent in Mandla district. Very little land was leased in and leased out on the selected farms. No leasing in and leasing out of land was practised in Narsinghpur district (Table 4.7).

Table 4.7 Details of land of sample farmers in selected districts of Madhya Pradesh

(Area in hectares)

Particular	Ujjain			Narsinghpur			Mandla			Total		
	Before 10years	1999-2000	percen-tage change	Before 10years	1999-2000	percen-tage change	Before 10years	1999-2000	percen-tage change	Before 10years	199-2000	percen-tage change
Owned land	421.90	371.31	- 13,62	451.00	449.20	- 0.40	213.07	205.37	- 3.61	1,085.97	1,025.88	- 5.53
Value of land per hect. (Rs.)	32,284	1,29,331	300.60	92,616	1,92,564	107.92	54,155	98,551	81.98	59.685	1,40,148	134.81
Barren land	43.10	51.39	19.15	17.10	17.40	1.75	17.00	14.46	- 14.94	77.20	83.25	7.84
Leased in land	--	0.81	--	--	--	--	--	8.50	--	--	9.31	--
Leased out land	--	--	--	--	--	--	2.02	1.41	- 30.20	2.02	1.41	- 30.20
Total operated Area per farm	378.80 9.47	320.73 8.01	- 15.33	433.90 10.84	431.80 10.79	- 0.48	194.05 4.85	198.00 4.95	2.03	1006.75 8.39	950.53 7.92	- 5.58
Total irrigated Area	96.32	204.57	112.38	315.40	376.00	19.21	66.57	135.98	104.27	478.29	716.55	49.81
% of irrigated area to operated area	25.43	63.78		72.69	87.08		34.31	68.68		47.51	75.38	

4.6 Cropping Pattern

On the selected farms soybean was the most important crop occupying 37.28 per cent of the gross cropped area. Wheat occupied 19.30 per cent and gram, 15.56 per cent. A crop group of sugarcane and other crops occupied 11.56 per cent. Paddy occupied 6.27 per cent. Soybean was most important in

Ujjain district and occupied 48.35 per cent of the gross cropped area. Narsinghpur district also had soybean as the most important crop which occupied 42.36 per cent. Soybean was not grown in Mandla district. While wheat was second important crop in Ujjain district occupying 17.52 per cent area, it was gram in Narsinghpur district and occupied 24.37 per cent of the area. In Ujjain district gram was third important crop and formed 11.15 per cent of the cropped area. In Narsinghpur district, on the other hand, sugarcane and other crops were third important and occupied 18.27 per cent. Wheat followed closely occupying 14.58 per cent. The cropping pattern of Mandla district was quite different. Paddy occupied highest percentage (36.63) and wheat occupied second highest (35.89) per cent. While sugarcane and other crops group occupied 14.73 per cent, pea occupied 8.49 per cent.

On the selected farms, of the various crops grown paddy, wheat, pea, soybean, vegetables and spices had increased proportion of area in 1999-2000 as compared to that obtained 10 years back. In the case of all other crops there was a decline in the proportion of area during the two reference years.

In Ujjain district only percentage of area under soybean increased during the two reference years. All other crops had decreased area. In Narsinghpur district the increase in percentage of area was observed in soybean and crops group of sugarcane and other crops. For all other crops the percentage of area had decreased. In Mandla district the increase in area was observed in the case of paddy and wheat. Slight increase was observed under crops group of sugarcane and others. In the remaining crops a decline under percentage of area was noticed (Table 4.8)

Table 4.8 Cropping pattern- Relative importance of different crops in the Gross cropped area on selected farms during the last decade in Madhya Pradesh.

Crop	Ujjain			Narsinghpur			Mandla			Total		
	Before 10years % to GCA	1999-2000 % to GCA	Increase Decrease in percen tage	Before 10years % to GCA	1999-2000 % to GCA	Increase Decrease in percen tage	Before 10years % to GCA	1999-2000 % to GCA	Increase Decrease in percen tage	Before 10years % to GCA	1999-2000 % to GCA	Increase Decrease in percen tage
Paddy	--	--	--	--	--	--	35.60	36.63	1.03	5.57	6.27	0.70
Wheat	20.30	17.52	- 2.78	15.28	14.58	- 0.70	27.68	35.89	8.21	19.16	19.30	0.14
Maize	6.09	3.07	- 3.02	1.66	--	--	3.57	0.92	- 2.65	3.42	1.27	- 2.15
Jowar	14.68	0.93	- 13.75	--	--	--	--	--	--	4.69	0.22	- 4.47
Gram	11.18	11.15	- 0.03	24.68	24.37	- 0.31	5.35	2.12	- 3.23	16.78	15.56	- 1.22
Arhar	1.97	0.78	- 1.19	0.95	0.16	- 0.79	1.63	0.35	- 1.28	1.40	0.42	- 0.98
Pea	--	2.70	--	0.39	0.26	- 0.13	9.50	8.49	- 1.01	1.95	2.56	0.61
Soybean	28.71	48..35	19.64	42.28	42.36	0.08	--	--	--	30.11	37.28	7.17
Groundnut	4.03	0.11	- 3.92	--	--	--	--	--	--	1.28	0.04	- 1.24
Mustard	--	--	--	--	--	--	1.62	0.21	- 1.41	0.30	--	--
Vegetables	1.89	10.41	8.52	--	--	--	0.71	0.31	- 0.40	0.74	3.83	3.09
Spices	1.11	3.63	2.52	--	--	--	--	0.35	--	0.36	1.38	1.02
Sugarcane & others	10.04	1.35	- 8.69	14.76	18.27	3.51	14.34	14.73	0.39	13.22	11.56	- 1.66
Gross Cropped Area	100.00	100.00	---	100.00	100.00	---	100.00	100.00	---	100.00	100.00	---

When asked about the future planning with regard to cropping pattern the selected farmers stated that they would decrease the area under gram, pea and soybean. For other crops although the area would be increasing the acreage would be quite small. With regard to gram and pea the reasons given for smaller area in future were mainly susceptibility to insects and pests and decreasing profitability of soybean. The reasons given were agronomical, climatic and prices. In the farmers' opinion the rains were erratic, pests and diseases were creeping in, cost per hectare was increasing and therefore profitability was decreasing.

In Ujjain district farmers were inclined to decrease area under maize, vegetables and spices. In Narsinghpur district the popularity of both soybean and gram was on wane. The farmers, therefore, were of the opinion that they would decrease the area under these two crops. In Mandla district the crops which the farmers would like to pay less attention or rather decrease the area under these were maize, gram and crops group of sugarcane and other crops (Table 4.9).

Table 4.9 Future crop planning on selected farms in selected districts, M.P.

Crop	Ujjain			Narsinghpur			Mandla			Total		
	1999-2000 % to GCA	Future crops % to GCA	Increase Decrease in percen tage	1999-2000 % to GCA	Future crops % to GCA	Increase Decrease in percen tage	1999-2000 % to GCA	Future crops % to GCA	Increase Decrease in percen tage	1999-2000 % to GCA	Future crops % to GCA	Increase Decrease in percen tage
Paddy	--	--	--	--	--	--	36.63	37.00	0.37	6.27	6.42	0.15
Wheat	17.52	17.91	0.39	14.58	15.04	0.46	35.89	40.00	4.11	19.30	22.95	3.65
Maize	3.07	1.93	- 1.14	--	3.30	--	0.92	0.75	- 0.17	1.27	2.00	0.73
Jowar	0.93	1.33	0.40	--	--	--	--	--	--	0.22	0.40	0.18
Gram	11.15	11.42	0.27	24.37	22.96	- 1.41	2.12	2.10	- 0.02	15.56	12.16	- 3.14
Arhar	0.78	0.87	0.09	0.16	0.48	0.32	0.35	1.00	0.65	0.42	0.78	0.36
Pea	2.70	3.54	0.84	0.26	1.08	0.82	8.49	9.00	0.51	2.56	4.54	- 1.98
Soybean	48.35	48.48	0.13	42.36	32.42	- 9.94	--	--	--	37.28	32.00	- 5.28
Groundnut	0.11	0.15	0.04	--	--	--	--	--	--	0.04	0.05	0.01
Mustard	--	1.28	--	--	--	--	0.21	1.00	0.79	--	1.12	--
Vegetables	10.41	5.82	- 4.59	--	4.42	--	0.31	1.00	0.69	3.83	4.00	0.17
Spices	3.63	3.60	- 0.03	--	--	--	0.35	1.00	0.65	1.38	1.53	0.15
Sugarcane & others	1.35	3.67	2.32	18.27	20.30	2.03	14.73	7.15	- 7.58	11.56	12.05	0.49
Gross Cropped Area	100.00	100.00	---	100.00	100.00	---	100.00	100.00	---	100.00	100.00	---

4.7 Profit Per Hectare of Different Crops

As found elsewhere the profit per hectare on spices and vegetables was highest on the selected farms. Profit per hectare of garlic was Rs.24,896 and that of potato Rs.22,807. Among foodgrains wheat still dominated and the profit per hectare of this crop was Rs.5,038. Profit per hectare on gram and maize was Rs.4,347 and Rs.3,894 respectively. The profit per hectare on soybean was too small (Rs.2,145) for the reasons already elaborated.

It may thus be concluded that profitability per hectare was highest for vegetables and spices. Among foodgrains it was highest for wheat followed by gram. Soybean did not find favour with the farmers because, on the one hand, production and yield were decreasing and on the other hand price offered has been decreasing specially in the recent years (Table 4.10).

Table 4.10 Per hectare cost of production, productivity, value of output and net profit of major crops on selected farms in selected districts, Madhya Pradesh, 1999-2000

Crop	Ujjain					Narsinghpur					Mandla					Total				
	Cost per hect. (Rs.)	Yield per hect. (Qtls.)	Price per quintal (Rs.)	Output value per hect. (Rs.)	Net profit per hect. (Rs.)	Cost per hect. (Rs.)	Yield per hect. (Qtls.)	Price per quintal (Rs.)	Output value per hect. (Rs.)	Net profit per hect. (Rs.)	Cost per hect. (Rs.)	Yield per hect. (Qtls.)	Price per quintal (Rs.)	Output value per hect. (Rs.)	Net profit per hect. (Rs.)	Cost per hect. (Rs.)	Yield per hect. (Qtls.)	Price per quintal (Rs.)	Output value per hect. (Rs.)	Net profit per hect. (Rs.)
Soybean	7,637.86	12.35	850	10,497.50	2,859.64	8,137.00	13.67	700	9,569.00	1,432.00	--	--	--	--	--	7,887.43	13.01	775.00	10,033.00	2,145.77
Wheat	7889.90	24.21	700	16,947.00	9,057.10	7,912.00	26.44	550	14,542.00	6,630.00	6,475.00	16.58	500	8,290.00	1,815.00	7,426.00	22.41	583.33	13,026.00	5,038.00
Gram	4,509.57	12.35	1,200	14,820.00	10,310.43	6,375.00	13.24	900	11,916.00	5,541.00	6,875.00	8.89	900	8,001.00	1,126.00	5,919.85	11.43	1,000.00	11,579.00	4,347.00
Maize	2,285.67	12.36	500	6,180.00	3,894.33	--	--	--	--	--	--	--	--	--	--	2,285.67	12.36	500.00	6,180	3,894.33
Potato	22,659.00	227.33	200	45,466.00	22,807.00	--	--	--	--	--	--	--	--	--	--	22,659.00	227.33	200.00	45,466.00	22,807.00
Pea	6,239.27	33.75	250	8,437.50	2,198.23	--	--	--	--	--	--	--	--	--	--	6,239.27	33.75	250.00	8,437.50	2,198.23
Garlic	15,592.00	51.69	800	40,488.00	24,896.00	--	--	--	--	--	--	--	--	--	--	15,595.00	51.69	800.00	40,488.00	24,896.00
Paddy	--	--	--	--	--	--	--	--	--	--	8,319.00	21.06	480.00	10,108.00	1,789.00	8,319.00	21.06	480.00	10,108.00	1,789.00

4.8 Disposal of Crop Produce

The pattern of disposal of crops depends on following 3 factors.

1. Type of crop : The disposal of crop will depend on whether the crop is a food crop or cash crop. Secondly, whether the crop is produced for feeding the humans or for cattle.

2. Whether the crop is produced only for market or home consumption as well.

3. Whether the farmers use new or certified seed every year so that they do not keep aside a part of produce as seed.

On the selected farms soybean, pea, gram, lentil, sugarcane and vegetables, were produced mainly for market and the percentage of produce marketed in these cases ranged between 80.00 to 99.00 per cent. Among the food crops maize, arhar, moong, groundnut, paddy and wheat were mainly produced for market although a significant portion was kept for home consumption. On the other hand, urad, kodo-kutki, teora, were mainly produced for home consumption. Similar picture emerged in the selected districts (Table 4.11).

4.9 Employment and Wage Rate

To the question whether there had been an increase in the agricultural wages since the 10 years all the 120 farmers replied in the affirmative. Similarly they all nodded to the question whether the wage rate paid had increased during the last decade. Regarding availability of agricultural labourers

Table 4.11 Production and disposal of crops, selected farms, Madhya Pradesh

(Figures - Percentages)

Crop	Ujjain				Narsinghpur				Mandla				Total			
	Percentage of total production				Percentage of total production				Percentage of total production				Percentage of total production			
	Domestic consumption	For seed	For cattle	Sold	Domestic consumption	For seed	For cattle	Sold	Domestic consumption	For seed	For cattle	Sold	Domestic consumption	For seed	For cattle	Sold
Soybean	--	7.96	--	92.04	--	7.29	--	92.71	--	--	--	--	--	7.67	--	92.33
Maize	26.79	4.07	--	69.24	--	--	--	--	33.05	11.86	--	55.09	27.84	5.49	--	66.67
Jowar	95.31	4.69	--	--	--	--	--	--	--	--	--	--	95.31	4.69	--	--
Urad	65.91	11.36	--	22.73	--	--	--	--	--	--	--	--	65.91	11.36	--	22.73
Arhar	64.38	10.62	--	25.00	20.00	10.00	--	70.00	22.92	10.41	--	66.67	33.00	10.33	--	56.67
Groundnut	28.57	14.29	--	57.14	--	--	--	--	--	--	--	--	28.57	14.29	--	57.14
Kodo-kutki	--	--	--	--	--	--	--	--	56.25	20.31	--	23.44	56.25	20.31	--	23.44
Ramtil	--	--	--	--	--	--	--	--	12.50	25.00	--	62.50	12.50	25.00	--	62.50
Paddy	--	--	--	--	--	--	--	--	19.05	6.85	--	74.10	19.05	8.85	--	74.10
Wheat	16.45	6.95	---	76.60	21.32	13.07	---	65.61	18.02	9.14	---	72.84	18.81	9.98	--	71.21
Gram	9.06	10.81	--	80.13	2.43	12.12	--	85.45	15.74	16.67	--	67.59	3.75	11.99	--	84.26
Pea	0.55	0.93	--	98.52	1.70	12.34	--	85.96	9.83	15.45	--	74.72	2.69	5.63	--	91.68
Lentil	43.33	13.33	--	43.44	3.18	6.53	--	90.29	16.67	17.59	--	65.74	7.35	9.49	--	83.16
Moong	--	--	--	--	20.00	--	--	80.00	--	--	--	--	20.00	--	--	80.00
Sugarcane	--	--	--	100.0	0.27	--	--	99.73	0.70	--	--	99.30	0.31	--	--	99.69
Teora	--	--	--	--	--	--	--	--	85.71	14.29	--	--	85.71	14.29	--	--
Methi	--	1.72	--	98.28	--	--	--	--	--	--	--	--	--	1.72	--	98.28
Potato	0.58	11.08	---	88.34	--	--	---	--	--	--	---	--	0.58	11.08	--	88.34
Garlic	0.32	3.63	--	96.05	--	--	--	--	--	--	--	--	0.32	3.63	--	96.05
Onion	1.86	--	--	98.14	--	--	--	--	--	--	--	--	1.86	--	--	98.14
Vegetables	-	--	--	100.00	--	--	--	--	2.08	12.50	--	85.42	2.91	11.65	--	85.44
Berseem	--	--	33.33	66.67	--	--	--	--	--	--	--	--	--	--	33.33	66.67
Mustard	--	--	--	--	--	--	--	--	100.00	--	--	--	100.00	--	--	--
Coriander	--	--	--	--	--	--	--	--	6.25	6.25	--	87.50	6.25	6.25	--	87.50

majority of them in all the three districts replied in the negative. Further a large majority of the selected farmers agreed that there had been increase in employment opportunities for the family members during the same period (Table 4.12).

Table 4.12 Wage rates and Employment on sample farms in selected districts of Madhya Pradesh

S. No	Particulars	Ujjain		Narsinghpur		Mandla		Total	
		Yes	No	Yes	No	Yes	No	Yes	No
1	Has there been an increase in the agricultural wages during the last decade?	40	--	40	--	40	--	120	--
2	Has the wage rate that you pay for hired labourers increased?	40	--	40	--	40	--	120	--
3	Has the availability of agricultural labourers increased?	11	29	17	23	13	27	41	79
4	Has there been any increase in the employment for your family members?	39	01	32	08	31	09	102	18

4.10 Place of Market

Most of the selected farmers were fortunate to have markets within a periphery of 5 km. from their villages. Such farmers numbered 89 or 74.17 per cent of the total farmers. Another 14 farmers or 11.67 per cent had to travel between 15 to 25 km. for a market place. Ten of the total number (8.33 per cent) had to travel between 10 to 15 km. In Ujjain district half of the total number of farmers had market within a radius of 5 km. Another one fourth of the farmers had a market between 10 to 15 km. Narsinghpur farmers were fortunate to have market within a radius of 5 km. for all of them. In Mandla district about 75 per cent farmers had market within a radius of 5 km. but for remaining 25 per cent farmers the market place was located at a distance of 15 to 25 km. (Table 4.13).

Table 4.13 Distance of market place from the house of sample farmers in selected districts, Madhya Pradesh

Distance of Market place (Km.)	Ujjain		Narsinghpur		Mandla		Total	
	Number of household	%	Number of household	%	Number of household	%	Number of household	%
0 - to 5.00	20	50.00	40	100.00	29	72.50	89	74.17
5.1 to 10.00	07	17.50	--	--	--	--	07	05.83
10.1 to 15.00	10	25.00	--	--	--	--	10	8.33
15.1 to 25.00	03	7.50	--	--	11	27.50	14	11.67
Total	40	100.00	40	100.00	40	100.00	120	100.00

4.11 Distribution of Farmers According to Price obtained in relation to M.S.P.

The following analysis is for the farmers who grew and sold the entire produce or part thereof of the crop in the market. It is not for those farmers who produced a crop but did not sell any part in the market. It was noted that 80 of the 120 selected farmers grew and sold soybean. Of these 45 per cent got price equal to MSP. Of the remaining 55.00 per cent, equal percentage of farmers received more than MSP and less than MSP respectively. Thus a large majority (72.50 per cent) of the farmers selling soybean got price that was to their satisfaction. In the case of wheat as high as 80.49 per cent farmers received price more than MSP and 2.44 per cent received price equal to MSP. In this case also large proportion of farmers had obviously nothing to complain. In the case of gram, however, a lower percentage (60.29) of farmers received price more than MSP and nearly 40.00 per cent received price less than MSP. In the case of maize farmers seem to have benefited most as 88.89 per cent of them received price more than MSP.

In Ujjain district in the case of wheat and gram a large majority of farmers got price either more than or equal to MSP. In Narsinghpur district nearly three fourths (72.50 per cent) of the farmers got price equal to MSP

declared for soybean and 10 per cent got price more than MSP. In the case of wheat more than 95.00 per cent farmers (96.72) received price more than MSP and the remaining 3.28 per cent received price less than MSP. In the case of gram, however, the farmers were not that lucky as only 48.72 per cent got price more than MSP and remaining 51.28 per cent got price less than MSP. In Mandla district which had more area under paddy and maize 40.54 per cent paddy selling farmers received price more than MSP and 10.81 per cent received price equal to MSP. However, a large percentage (48.65) farmers received price less than MSP. In the case of maize and wheat larger percentage of farmers received price more than MSP.

It will thus be noticed that in the case of gram selling farmers proportion of those selling at less than MSP was largest (39.71) among all the crops. In the case of soybean also large (27.50) per cent of farmers sold produce at price less than MSP. In the case of wheat and maize selling farmers more than 80.00 per cent sold the produce at a price higher than MSP (Table 4.14).

4.12 Change in Income of Sample Households

During the last decade the prices of all commodities increased from year to year and one naturally expects the income to increase from the year, a decade back and now. However, in many cases this was offset by unprecedented losses to crops due to natural calamities. The second reason was the disproportionate increase in the prices of inputs. The third reason was unexpected increase in proportion of home consumed items and unexpected expenses on marriages and illnesses. In these circumstances although income from agriculture increased but the net income of the household decreased. Still another reason and a very

Table 4.14 Distribution of number of farmers receiving price in relation to MSP in selected districts of M.P.

Particulars	Ujjain			Narsinghpur				Mandla				Total			
	Soybean	Wheat	Gram	Soybean	Wheat	Gram	Paddy	Maize	Wheat	Gram	Soybean	Wheat	Gram	Maize	Paddy
Minimum Support Price (Rs./Qtl.)	750	510	825	750	510	825	470	390	510	825	750	510	825	390	470
Price received more than MSP (No.)	18	21	22	04	30	19	15	08	15	--	22	66	41	08	15
	(45.00)	(80.77)	(95.65)	(10.00)	(96.77)	(48.72)	(40.54)	(88.89)	(60.00)		(27.50)	(80.49)	(60.29)	(88.89)	(40.54)
Equal to MSP (No.)	07	01	--	29	--	--	04	--	01	--	36	02	--	--	04
	(17.50)	(3.85)	--	(72.50)	--	--	(10.81)	--	(4.00)	--	(45.00)	(2.44)	--	--	(10.81)
Less than MSP (No.)	15	04	01	07	01	20	18	01	09	06	22	14	27	01	18
	(37.50)	(15.38)	(4.35)	(17.50)	(3.23)	(51.28)	(48.65)	(11.11)	(36.00)	(10.00)	(27.50)	(17.07)	(39.71)	(11.11)	(48.65)
	40	26	23	40	31	39	37	09	25	06	80	82	68	09	37
	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00

convincing one was the fragmentation of holdings which reduced the size of operational holdings. Another reason advanced by many farmers was depletion in the quality of soil and in many cases lower percentage of irrigated area to cropped area.

Of the selected farmers 57.50 per cent said that the income had gone up. In 20.83 per cent of the households the income decreased and in 21.67 per cent households the income remained about the same. In Ujjain district the percentage of farmers reporting increase in income was highest (72.50). Those reporting decrease in income formed 12.50 per cent and those reporting stable income, 15.00 per cent. In Narsinghpur district lower percentage of farmers (57.50) reported increase in income and conversely 20.00 per cent reported decrease and 22.50 per cent reported no change. In Mandla district the percentage of farmers reporting higher income was least (42.50). Another 30.00 per cent reported decrease in income and remaining 27.50 per cent opined that there was no change in income (Table 4.15).

Table 4.15 Change in income of sample households in selected districts of Madhya Pradesh

(In percentage)

Status of change	Ujjain	Narsinghpur	Mandla	Over all
Gone up	72.50	57.50	42.50	57.50
Down	12.50	20.00	30.00	20.83
Remained about the same	15.00	22.50	27.50	21.67
Total	100.00	100.00	100.00	100.00

4.13 Changes in Socio-Economic Conditions

The selected farmers were asked to give their opinions as regards changes in certain indicators of socio-economic values. They were asked whether their condition with regard to these indicators improved or worsened or remained same.

With regard to general economic condition 55 per cent of the households commented that these had improved, another 27.50 per cent said that these remained the same. The remaining 17.50 per cent sadly referred to the worsening socio economic condition. Within the selected three districts in Ujjain district highest percentage of farmers (72.50) reported to have improved their status. In Narsinghpur district 60 per cent farmers reported so. In Mandla district, however, only 32.50 per cent of the selected farmers remarked that their socio economic condition improved. More than this percentage (37.50) of farmers reported that their condition remained the same. Surprisingly large percentage of farmers (30.00) stated that their economic condition worsened. As regards food consumption nearly 60 per cent (59.17) stated that there had been no change with regard to food consumption or nutritive value of food. Another 28.33 per cent said that there had been improvement in food consumption habit and remaining 12.50 per cent farmers said that the situation worsened. In all the three districts the largest percentage of farmers were those in whose cases there had been no change.

As regards employment opportunities largest percentage of farmers in all the 3 districts reported that these had improved. With regard to schooling opportunities largest percentage of farmers in Ujjain and Narsinghpur districts endorsed that these had improved significantly. In Mandla district, however, largest percentage of farmers said that there had been no change in this respect. Similarly largest number of farmers in all the three districts commented that access to health care remained as was available 10 years back.

Socio-economic status of the individual had not changed in the last 10 years reported the largest percentage of farmers in all the 3 districts. Similar was the case with regard to relation with village leaders and access to credit wherein largest percentage of farmers reported no change.

As regards indicators like marketing facilities, information about prices, road and communication facilities, input supply system, quality of inputs and agricultural information services a large majority of farmers in all the 3 districts reported that there had not been any change in the last 10 years (Table 4.16).

Table 4.16 Change in various indicators of sample households in percentage in selected districts of Madhya Pradesh

Indicators	Ujjain			Narsinghpur			Mandla			Total		
	Improved	Worsened	Remained same	Improved	Worsened	Remained same	Improved	Worsened	Remained same	Improved	Worsened	Remained same
General Economic Condition	72.50	12.50	15.00	60.00	10.00	30.00	32.50	30.00	37.50	55.00	17.50	27.50
Food consumption/ nutrition	30.00	12.50	57.50	45.50	5.00	52.50	12.50	20.00	67.50	28.33	12.50	59.17
Employment opportunities	45.00	17.50	37.50	60.00	7.50	32.50	55.00	25.00	20.00	53.33	16.17	30.00
Schooling opportunities for children	75.00	10.00	15.00	80.00	12.50	7.50	30.00	22.50	47.50	61.67	15.00	23.33
Access to health care	15.00	35.00	50.00	17.50	47.50	35.00	7.50	25.00	67.50	13.33	35.83	50.84
Socio-economic status in the village	17.50	20.00	62.50	15.00	17.50	67.50	--	--	100.0	10.83	12.50	76.67
Relation with village leaders	5.00	--	95.00	7.50	--	92.50	--	--	100.0	4.17	--	95.83
Access to credit	15.00	15.00	70.00	30.00	--	70.00	10.00	--	90.00	18.33	5.00	76.67

There was near unanimity among selected farmers with regard to the items which should constitute the ultimate Minimum Support Price of a crop. These were cost 'C' including interest on working capital, rent on owned land, rent on leased in land, value of family labour, profit of management, etc.

4.14 Consumption Expenditure

The average consumption expenditure per household was Rs.40,162. It was highest (Rs.46,125) in Narsinghpur district followed by (Rs.41,329) in Ujjain district and Rs.33,033 in Mandla district. Of the total consumption expenditure 50.26 per cent was on food items, 19.49 per cent on medical expenses and 12.74 per cent on clothing. Among the selected districts the percentage of expenditure on food items was highest (67.76) in Mandla district followed by 43.72 per cent in Ujjain district and closely followed by Narsinghpur district (43.60 per cent). In Mandla district the second important item of consumption expenditure was clothing and formed 10.22 per cent followed by medical expenses (7.72 per cent). In the remaining 2 districts medical expenses was the second important item and clothing was the third important item. In Narsinghpur district medical expenses and clothing constituted 28.64 and 15.88 per cent respectively. In Ujjain district these two items constituted 18.69 and 11.25 per cent respectively. Among other items of expenditure education (5.93 per cent) and fuel (4.64 per cent) were important. These constituted 6.34 and 4.26 per cent respectively in Narsinghpur district and 7.69 and 4.84 per cent respectively in Ujjain district (Table 4.17).

4.15 Farming in relation to M.S.P.

1. Regarding the declaration of MSPs by the Govt. nearly all the farmers opined that had the Govt. not declared MSPs the prices of commodities specially in the post harvest season when there was glut in the market would have slipped down very significantly putting the farmers to a big loss.

Table 4.17 Yearly consumption expenditure of sample farmers in selected districts, Madhya Pradesh

S. No	Particulars	Ujjain		Narsinghpur		Mandla		Total	
		Amount (Rs.)	Own farm produce value (Rs.)	Amount (Rs.)	Own farm produce value (Rs.)	Amount (Rs.)	Own farm produce value (Rs.)	Amount (Rs.)	Own farm produce value (Rs.)
1	Food Items	7,22,670 (43.72)	3,45,355 (47.79)	8,04,337 (43.60)	4,50,250 (55.98)	8,95,300 (67.76)	5,20,000 (58.08)	24,22,307 (50.26)	13,15,605 (54.31)
2	Fuel	80,000 (4.84)	38,432 (48.00)	78,550 (4.26)	35,205 (44.82)	65,000 (4.92)	53,732 (82.66)	2,23,550 (4.64)	1,27,369 (56.97)
3	Clothing	1,86,000 (11.25)	--	2,93,000 (15.88)	--	1,35,000 (10.22)	--	6,14,000 (12.74)	--
4	Medical Expenses	3,09,000 (18.69)	--	5,28,500 (28.64)	--	1,02,000 (7.72)	--	9,39,500 (19.49)	--
5	Education	1,27,000 (7.69)	--	1,16,900 (6.34)	--	42,000 (3.18)	--	2,85,900 (5.93)	--
6	Entertainment	1,05,000 (6.35)	--	13,700 (0.74)	--	25,200 (1.90)	--	1,43,900 (2.99)	--
7	Others	1,23,400 (7.46)	--	10,000 (0.54)	--	56,815 (4.30)	--	1,90,215 (3.95)	--
	Total	16,53,170 (100.00)	--	18,44.987 (100.00)	--	13,21,315 (100.00)	--	48,19,472 (100.00)	--
	Per household	41,329	--	46,125	--		--		--

2. Most of the farmers opined that the MSPs declared for different commodities were not adequate and should be increased.

3. About half of the farmers complained that in the post harvest season when most of the farmers brought their production in mandies there were no authorised buyers for the produce. Even if they were in the market they expressed their inability to purchase the commodities at the MSPs either due to non availability of packing material, weights and balances or money for purchase. In such a situation farmers were compelled to sell their produce to the private traders although at lower price for which the payment was made at later date.

4. For crops like soybean, wheat and gram the prices were higher in the market than the MSPs declared. This caused the farmers to sell the produce to the private traders and not to the authorised MSP purchasing centres. Incidentally these were the most profitable crops and farmers adopted the

recommended doses of inputs and new recommended techniques. They also opined that the most important factor for higher market price was the uptrend in MSPs for these crops.

5. In the decision making as to which crop should be grown and under which crop the area should be increased the most important factor was profitability, which in turn, was directly linked with the MSPs declared by the government.

6. Data collected in schedules and questionnaires showed that in the case of soybean 2/3 of the selected farmers grew and sold soybean in the market. Of these 45 per cent got price equal to MSP. Of the remaining 55 per cent half of the farmers received price more than MSP. Thus a large majority (72.50 per cent) of the farmers got price that was to their satisfaction. In the case of wheat as high as 80.49 per cent farmers received price more than MSP and 2.44 per cent received price equal to MSP. Thus in the case of wheat also selected farmers had nothing to complain. In the case of gram, however, a lower percentage (60.00) of farmers received price more than MSP and nearly 40.00 per cent received price less than MSP. In the case of maize farmers were benefitted most as 88.89 per cent of them received price more than MSP.

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CHAPTER - V
SUMMARY, CONCLUSIONS & SUGGESTIONS

5.1 Background

The Directorate of Economics and Statistics, Ministry of Agriculture, Govt. of India assigned a study titled "Impact of Minimum Support Prices on Agricultural Economy of the State" to all the Agro Economic Research Centres in the country. This centre was asked to conduct the study in Madhya Pradesh

Dr. R.S. Deshpande, Prof. & Head at the Institute for social and Economic Change, Bangalore was designated as the coordinator of the study. He supplied the outline, the objectives, the methodology including sample design and household schedules and questionnaires to all the Centre.

5.1.1 Objectives

The specific objectives of the study are

1. a) To examine the impact on use of inputs and land and water resources besides adoption of socially desirable cropping pattern.
   b) To identify regional variations in the degree of implementation of price policy.
   c) To suggest policy measures to enhance effectiveness of agricultural price policy under different situations.
2. To document the impact of minimum support prices on agricultural growth and distribution parameters in the state based on the secondary data.
3. To analyse the overall relevance and effectiveness of MSPs in the case of major crops of the state.
4. To analyse the process of implementation of MSPs and allied measures at state level.

5. To examine the impact of MSPs on the income of the farmers.
6. The factors responsible for the success of MSP and parameters responsible for their failure.

5.1.2 Methodology and Sample design

The study was based on both secondary and primary data. The secondary data were collected from the year 1980-81 ownwards. Primary data were collected from three distinct regions each represented by i) commercial crops region ii) food crops region and iii) coarse cereals- pulses region. The study is confined to the major crops of the state specifically covered under MSP operations.

For the collection of primary data 3 districts were selected on the criteria mentioned below :

1. Ujjain district growing one major non food crop (soybean) and having a commercial crop oriented economy.

2. Narsinghpur district growing one of the food crops (wheat) with moderate growth of agricultural sector.

3. Mandla district growing mainly food crops –coarse cereals and agriculturally slow growth region.

In each of the selected districts 4 Development Blocks which made good progress in agricultural production and produced enough for the market in 1999-2000 and years preceding to that were selected. In every block a village each was selected which made good progress in agricultural production. In each

village a random sample of 10 farmers having size of holding more than 2 hectares was drawn. Thus the sample of farms per district was 40 making a total sample of 120 farms (farmers) for the state. The reference years for the secondary data were from the year 1980-81 to 1999-2000. For primary data the reference year was 1999-2000.

5.2 Administration of MSPs in the State.

In the state purchasing agencies at MSPs are M.P. State Marketing Federation, M.P. State Civil Supplies Corporation and Food Corporation of India. For these agencies the District Central Cooperative Marketing Societies of the concerned districts make purchases in the mandis. MSPs are announced in the state for a total number of 18 crops. Farmers produce is purchased by representatives of the District Central Cooperative Marketing Societies in Krishi Upaj Mandis where open auction system is practised. Krishi Upaj Mandis do not play a direct role in the purchases at MSPs but they function as place of purchase and sale and provide facilities to both producers and purchasers like correct weighment, drinking water, open/convered space/sheds for auction, etc. Mandis charge 2 per cent of the amount of the produce purchased from the purchasers. Mandis charge annual charges from wholesalers, processors, weighmen, etc. For purchasing foodgrains at MSPs the District Central Co-operative Marketing societies get following amounts.

i) MSP of the produce purchased
ii) Mandi Tax, payment to labourers and other contingent expenditure
iii) 2 per cent of the amount of MSP as commission

The quality of produce purchased by the Marketing Societies has to be of FAQ (Fair Average Quality). A sample of FAQ is supplied to the societies. For checking the quality of foodgrains the State Warehousing Corporation has trained staff. Besides the staff of the procurement agencies marketing societies do not have trained staff. Although the collection of produce of FAQ and correct weighment is the responsibility of the society the provision of gunny bags and other material is the responsibility of 3 agencies. The transportation from the collection centre to the Godowns is the responsibility of the individual agency. On the deposition of the produce in the respective agency the societies get payment from the agencies and they make the payment to the farmers.

The main difficulties in procurement at MSPs are-

1. Inadequate and untrained staff.
2. Shortage of godowns and the lower capacity of godowns.
3. Political interference

4. Inadequate communication between agencies, mandis and farmers regarding arrivals and prices on day to day basis. The data on production and market arrivals for the state of Madhya Pradesh was available for 13 commodities. The production of paddy in the state was 960 thousand tonnes and that for wheat 3,887 thousand tonnes. For maize the production was 1,200 thousand tonnes. Among other crops soybean was most important for which the production was 3,254 thousand tonnes. Among pulses the production of gram was 1,436 thousand tonnes.

Similarly the figures for market arrivals were available for all the 13 crops. However, more important aspect is the proportion of marketable surplus to production. In this respect soybean has largest proportion (98.19 per cent) of

marketable surplus to the production. In the case of gram this percentage was 96.72. In the case of wheat the proportion of marketable surplus to total production was 71.39. Paddy had 44.06 per cent marketable surplus.

About the monthly arrivals, as obtained else where the arrivals of different commodities start with the harvest season and the peak is reached some time in the post harvest season. On the other hand the arrivals are weak in the pre sowing and the sowing seasons. In the case of wheat March, April and May form the peak months of the arrivals. In the case of maize, jowar, paddy and bajra the market arrivals start from October and continue till February. In the case of gram, lentil and teora the arrivals are from February till May. In the case of soybean and groundnut the arrivals are from October to January. In the case of mustard and linseed the arrivals are in the months of March, April and May.

During the year 2001-2002 the procurement at MSP of paddy was 259.72 thousand tonnes and that of wheat 588.02 thousand tonnes. It will be interesting to note the proportion of procurement at MSP to total arrivals. It will indicate the farmers' preference for MSP agencies or other wise. It was noted that the maximum percentage (72.33) of procurement at MSPs to total arrivals was in the case of bajra. In the case of paddy the percentage was 40.98 and in the case of maize it was 30.15. Wheat had 28.54 per cent of the purchases made at MSPs to total arrivals.

As regards share of different purchasing agencies for different crops it was noted that in the case of paddy MARKFED purchased 70.11 per cent and remaining 30.00 per cent was shared about equally by State Civil Supplies Corporation and Food Corporation of India. In the case of wheat Food corporation of India procured slightly more than 50.00 per cent (53.40) and the

State Civil Supplies Corporation, remaining 46.60 per cent. In the case other 3 crops of jowar, maize and bajra the share of State Civil Supplies Corporation and Food Croporation of India was about equal.

5.3 Impact of MSPs on Agricultural Economy

This was calculated for individual crops of paddy, soybean, maize, jowar and arhar in kharif season and wheat and gram in rabi season. The indicators of economy of individual crop were area, production, yield, Farm Harvest Price (FHP), wholesale price (WSP) and cost of production (COP). It was observed that in the case of paddy there was positive relationship between MSP of paddy and area, production and yield of the crop. However, the increase was much lower in all the three indicators than the MSPs indicating thereby that MSP have not influenced area, production and yield of the crop much. In other words the increment in the MSP could not induce the farmers to expand area under paddy and reap proportionately higher production and yield.

It was observed that in 6 years the COP was lower than the MSP. In the remaining 8 years the COP was higher than the MSP. The correlation between the MSP and area was significant at 5.00 per cent. The correlation between MSP and production was significant at 1 per cent level. Similarly, the correlation between yield, FHP and COP were significant at 1 per cent the lowest for COP. This shows that there was high correlation between MSP and production yield, FHP and COP but lower for area.

In the case of soybean it was observed that MSP had positive impact on both area and production. The impact was also positive in the case of yield but at a lower rate of increase. The COP increased at a higher rate than MSP.

The correlation between MSP and area, production, yield and COP of soybean were highly significant but within these indicators the correlation was lower in the case of yield. The trend of yield was not continuously increasing and there were fluctuations in between the reference years. In the case of wheat area and production are in general, increasing during the reference year. The yield of the crop also showed in general increasing trend. The index of area was lower than the index of MSP. The index of production was also lower than the index of MSP but was higher than area index. The index of yield was lower than both the MSP and production. As regards cost of production the index generally increased from year to year and was higher than MSP which showed that not enough justice had been done to the farmers as the COP per quintal was higher than MSP in 11 out of the 12 years.

The correlation between MSP and area, production, yield, FHP and COP were highly significant. However, among the indicators the correlation was lowest in the case of yield.

Gram is the most important rabi pulse of the state. Like other crops the MSP of gram increased from year to year. The area under gram also increased but at a much lower rate and with many fluctuations. The production of gram in general increased but the increase was quite lower than the increase in MSP. The yield although increased in the last reference year the index was far lower than MSP and production. However, the increase in yield was bit higher than area. The rate of increase in cost of production was higher than the rate of MSP. In most of the years the COP was higher than the MSP. The correlation between MSP and area, production, yield, FHP and COP were highly significant. Within the indicators the correlation was most significant for COP and least for area.

In the case of arhar the coefficient of correlation of MSP with area, production and yield were negatively correlated. In the case of jowar the correlation coefficient of area and production were highly negatively correlated to MSP. The relationship with yield was insignificant but the relationship with FHP and COP were highly significant. In the case of maize the relationship of MSP with area, production and yield were significant at 5.00 per cent level. The relationship with FHP and COP was highly significant

5.4 Impact of MSPs On The Selected Farmers

In each of the selected 3 districts 40 farms were selected making a total sample of 120 farmers. Of the selected farms 33.33 per cent had an average area of 2 to 4 ha. Another 47.50 per cent farms had size of holding between 4 to 10 hectares. Large category of farms having 10 hectares and above were 19.17 per cent. The average size of family was of 8.22 members. Ujjain had largest family size and Narsinghpur had smallest. Of the total population 24.21 per cent was illiterate and the remaining 75.79 per cent was literate. Narsinghpur district had highest literacy percentage (81.62) and Ujjain district had lowest (71.02) Agriculture was the most important occupation attracting 69.51 per cent of the labour days. Dairy was second important occupation on which 14.29 per cent employment days were spent. Dairy was important occupation in Ujjain district only. The average operated area of the selected farms was 7.92 hectares. Ten years back the farm size was 8.39 hectares. The percentage of irrigated area to operated area increased from 47.51 ten years back to 75.38 per cent in 1999-2000. On the selected farms of the various crops grown paddy, wheat, pea, soybean vegetables and spices had increased proportion of area as compared to that obtained 10 years back. In the case of all other crops there was a decline.

Of the 120 farmers 80 grew and sold soybean. Of these 45.00 per cent got price equal to MSP. Of the remaining 55.00 per cent equal percentage of farmers received price more than MSP and less than MSP respectively. Thus 72.50 per cent of the farmers got price to their satisfaction. In the In the case of wheat 80.49 per cent farmers received price more than MSP. In the case of gram 60.29 per cent of farmers received price more than MSP and about 40.00 per cent received price less than MSP. In the case of maize 88.89 per cent of the farmers received price more than MSP.

Of the selected farmers 57.50 per cent said that the income had gone up since last 10 years. In 20.83 per cent households income decreased and in 21.67 per cent households income remained about the same. With regard to general economic condition 55.00 per cent of the households commented that these had improved. Another 27.50 per cent said that these remained the same. The remaining 17.50 per cent sadly reported worsening of socio economic condition. As regards food consumption nearly 60 per cent (59.17) stated that there has been no change with regard to food consumption or nutritive value of food. Another 28.33 per cent said that there had been improvement in food consumption habit and remaining 12.50 per cent farmers said that the situation worsened. As regards employment opportunities largest percentage of farmers in all the three districts reported that these had improved. There was near unanimity among selected farmers with regard to items which should constitute the Minimum Support Price. They all said that cost ‘C’ should be taken into consideration for fixing the MSP. Regarding declaration of MSPs by the government all the farmers opined that had the government not declared MSP the prices of commodities would have fallen greatly. About half of the farmers

complained that in post harvest season when the arrivals in the market were maximum there were no authorised buyers for the produce. Even if they were there they were unable to make purchases due to lack of packing material, weights and balances and funds for purchase. For crops like soybean and wheat prices in the market were higher than MSP. In the decision making about the crops to be sown profitability was the major consideration.

5.5 Suggestions

i) With regard to marketing of produce at MSP the most important factor was market intelligence that is dissemination of information regarding arrivals and prices in the market. Although these are partly announced on the radio or in print media, the average farmer still does not know the latest information. They also do not know when the purchases through MSPs would start and when these would be stopped. Incidences of farmers came to our knowledge wherein the farmers took their produce to mandi but no purchases were made on that day due to one reason or another compelling the farmers to either sell their produce to private traders at much lower price or to bring back home the lot of the produce.

It is therefore suggested that farmers should be imparted day to day knowledge about arrivals, prices and purchases being made or otherwise so that they do not waste their time and energy.

ii) The common complaint of the farmers was that the MSPs are not declared well in advance. The ideal time of announcement of MSP of a crop is before sowing. This is seldom done.

It is therefore suggested that MSP should be declared prior to sowing so that farmer could plan the cropping pattern for their holdings.

iii) Many a time purchasing agencies are not well equipped with the necessities required for purchases such as weights, balances, packing material and stitching machine and above all, the amount to be paid to the farmers. In the absence of all these or one of these the farmers are turned away from the mandi.

It is suggested that purchasing agencies should be well equipped with all the necessities in advance of the date of starting of the purchasing.

iv) The staff of the purchasing agencies are not well trained with regard to testing the quality of the produce. Instances have come to the notice that the produce brought by the farmer is selected or rejected arbitrarily.

It is suggested that the purchasing agencies should have adequate, experienced and well trained staff. They need training in both in field as well as laboratory testing.

v) The arrivals in the peak season need to be handled properly both in the market and in godowns. It was experienced that the godown facilities were neither adequate nor proper. In the absence of adequate capacity of godowns the produce procured from farmers is heaped in the open, exposed to weather abnormalities like hail storms and rains. It is common knowledge that such produce gets spoiled to such an extent that it is not fit for human consumption.

It is suggested that adequate and quality store facilities should be available at all purchasing points and the staff should be well trained to protect the produce against stored grain pests and diseases.

vi) The produce of the farmer is purchased at MSP in district level mandis and sub mandis of the district. However, a large number of farmers residing in villages far interior to mandis and sub mandis with inadequate transport facilities are at the mercy of small traders and middle men who with some transport facility purchased the produce at much lower price than MSP and sell it in the mandis and sub mandis pocketing the commission/ huge profits.

It is suggested that the government, besides purchase at mandis and sub mandis should establish temporary purchasing centres in villages. This was done by "Soybean Producer's Association" for the purchase of soybean in the past with good results.

vii) Many of the farmers complained that payment for the produce sold takes between one to two weeks because of procedural delay. In some cases it is delayed even by months.

It is suggested that the purchasing agencies should have adequate funds particularly during the peak season of arrivals to make quick payment to the farmers.

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EXECUTIVE SUMMARY

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The quality of produce purchased by the Marketing Societies has to be of FAQ (Fair Average Quality). A sample of FAQ is supplied to the societies. For checking the quality of foodgrains the State Warehousing Corporation has trained staff. Besides the staff of the procurement agencies marketing societies do not have trained staff. Although the collection of produce of FAQ and correct weighment is the responsibility of the society the provision of gunny bags and other material is the responsibility of 3 agencies. The transportation from the collection centre to the Godowns is the responsibility of the individual agency. On the deposition of the produce in the respective agency the societies get payment from the agencies and they make the payment to the farmers.

The main difficulties in procurement at MSPs are-

1. Inadequate and untrained staff.
2. Shortage of godowns and the lower capacity of godowns.
3. Political interference

4. Inadequate communication between agencies, mandis and farmers regarding arrivals and prices on day to day basis. The data on production and market arrivals for the state of Madhya Pradesh was available for 13 commodities. The production of paddy in the state was 960 thousand tonnes and that for wheat 3,887 thousand tonnes. For maize the production was 1,200 thousand tonnes. Among other crops soybean was most important for which the production was 3,254 thousand tonnes. Among pulses the production of gram was 1,436 thousand tonnes.

Similarly the figures for market arrivals were available for all the 13 crops. However, more important aspect is the proportion of marketable surplus to production. In this respect soybean has largest proportion (98.19 per cent) of

marketable surplus to the production. In the case of gram this percentage was 96.72. In the case of wheat the proportion of marketable surplus to total production was 71.39. Paddy had 44.06 per cent marketable surplus.

About the monthly arrivals, as obtained else where the arrivals of different commodities start with the harvest season and the peak is reached some time in the post harvest season. On the other hand the arrivals are weak in the pre sowing and the sowing seasons. In the case of wheat March, April and May form the peak months of the arrivals. In the case of maize, jowar, paddy and bajra the market arrivals start from October and continue till February. In the case of gram, lentil and teora the arrivals are from February till May. In the case of soybean and groundnut the arrivals are from October to January. In the case of mustard and linseed the arrivals are in the months of March, April and May.

During the year 2001-2002 the procurement at MSP of paddy was 259.72 thousand tonnes and that of wheat 588.02 thousand tonnes. It will be interesting to note the proportion of procurement at MSP to total arrivals. It will indicate the farmers' preference for MSP agencies or other wise. It was noted that the maximum percentage (72.33) of procurement at MSPs to total arrivals was in the case of bajra. In the case of paddy the percentage was 40.98 and in the case of maize it was 30.15. Wheat had 28.54 per cent of the purchases made at MSPs to total arrivals.

As regards share of different purchasing agencies for different crops it was noted that in the case of paddy MARKFED purchased 70.11 per cent and remaining 30.00 per cent was shared about equally by State Civil Supplies Corporation and Food Corporation of India. In the case of wheat Food corporation of India procured slightly more than 50.00 per cent (53.40) and the

State Civil Supplies Corporation, remaining 46.60 per cent. In the case other 3 crops of jowar, maize and bajra the share of State Civil Supplies Corporation and Food Croporation of India was about equal.

5. Impact of MSPs on Agricultural Economy

This was calculated for individual crops of paddy, soybean, maize, jowar and arhar in kharif season and wheat and gram in rabi season. The indicators of economy of individual crop were area, production, yield, Farm Harvest Price (FHP), wholesale price (WSP) and cost of production (COP). It was observed that in the case of paddy there was positive relationship between MSP of paddy and area, production and yield of the crop. However, the increase was much lower in all the three indicators than the MSPs indicating thereby that MSP have not influenced area, production and yield of the crop much. In other words the increment in the MSP could not induce the farmers to expand area under paddy and reap proportionately higher production and yield.

It was observed that in 6 years the COP was lower than the MSP. In the remaining 8 years the COP was higher than the MSP. The correlation between the MSP and area was significant at 5.00 per cent. The correlation between MSP and production was significant at 1 per cent level. Similarly, the correlation between yield, FHP and COP were significant at 1 per cent the lowest for COP. This shows that there was high correlation between MSP and production yield, FHP and COP but lower for area.

In the case of soybean it was observed that MSP had positive impact on both area and production. The impact was also positive in the case of yield but at a lower rate of increase. The COP increased at a higher rate than MSP.

The correlation between MSP and area, production, yield and COP of soybean were highly significant but within these indicators the correlation was lower in the case of yield. The trend of yield was not continuously increasing and there were fluctuations in between the reference years. In the case of wheat area and production are in general, increasing during the reference year. The yield of the crop also showed in general increasing trend. The index of area was lower than the index of MSP. The index of production was also lower than the index of MSP but was higher than area index. The index of yield was lower than both the MSP and production. As regards cost of production the index generally increased from year to year and was higher than MSP which showed that not enough justice had been done to the farmers as the COP per quintal was higher than MSP in 11 out of the 12 years.

The correlation between MSP and area, production, yield, FHP and COP were highly significant. However, among the indicators the correlation was lowest in the case of yield.

Gram is the most important rabi pulse of the state. Like other crops the MSP of gram increased from year to year. The area under gram also increased but at a much lower rate and with many fluctuations. The production of gram in general increased but the increase was quite lower than the increase in MSP. The yield although increased in the last reference year the index was far lower than MSP and production. However, the increase in yield was bit higher than area. The rate of increase in cost of production was higher than the rate of MSP. In most of the years the COP was higher than the MSP. The correlation between MSP and area, production, yield, FHP and COP were highly significant. Within the indicators the correlation was most significant for COP and least for area.

In the case of arhar the coefficient of correlation of MSP with area, production and yield were negatively correlated. In the case of jowar the correlation coefficient of area and production were highly negatively correlated to MSP. The relationship with yield was insignificant but the relationship with FHP and COP were highly significant. In the case of maize the relationship of MSP with area, production and yield were significant at 5.00 per cent level. The relationship with FHP and COP was highly significant

6. Impact of MSPs on the Selected Farmers

In each of the selected 3 districts 40 farms were selected making a total sample of 120 farmers. Of the selected farms 33.33 per cent had an average area of 2 to 4 ha. Another 47.50 per cent farms had size of holding between 4 to 10 hectares. Large category of farms having 10 hectares and above were 19.17 per cent. The average size of family was of 8.22 members. Ujjain had largest family size and Narsinghpur had smallest. Of the total population 24.21 per cent was illiterate and the remaining 75.79 per cent was literate. Narsinghpur district had highest literacy percentage (81.62) and Ujjain district had lowest (71.02) Agriculture was the most important occupation attracting 69.51 per cent of the labour days. Dairy was second important occupation on which 14.29 per cent employment days were spent. Dairy was important occupation in Ujjain district only. The average operated area of the selected farms was 7.92 hectares. Ten years back the farm size was 8.39 hectares. The percentage of irrigated area to operated area increased from 47.51 ten years back to 75.38 per cent in 1999-2000. On the selected farms of the various crops grown paddy, wheat, pea, soybean vegetables and spices had increased proportion of area as compared to that obtained 10 years back. In the case of all other crops there was a decline.

Of the 120 farmers 80 grew and sold soybean. Of these 45.00 per cent got price equal to MSP. Of the remaining 55.00 per cent equal percentage of farmers received price more than MSP and less than MSP respectively. Thus 72.50 per cent of the farmers got price to their satisfaction. In the In the case of wheat 80.49 per cent farmers received price more than MSP. In the case of gram 60.29 per cent of farmers received price more than MSP and about 40.00 per cent received price less than MSP. In the case of maize 88.89 per cent of the farmers received price more than MSP.

Of the selected farmers 57.50 per cent said that the income had gone up since last 10 years. In 20.83 per cent households income decreased and in 21.67 per cent households income remained about the same. With regard to general economic condition 55.00 per cent of the households commented that these had improved. Another 27.50 per cent said that these remained the same. The remaining 17.50 per cent sadly reported worsening of socio economic condition. As regards food consumption nearly 60 per cent (59.17) stated that there has been no change with regard to food consumption or nutritive value of food. Another 28.33 per cent said that there had been improvement in food consumption habit and remaining 12.50 per cent farmers said that the situation worsened. As regards employment opportunities largest percentage of farmers in all the three districts reported that these had improved. There was near unanimity among selected farmers with regard to items which should constitute the Minimum Support Price. They all said that cost ‘C’ should be taken into consideration for fixing the MSP. Regarding declaration of MSPs by the government all the farmers opined that had the government not declared MSP the prices of commodities would have fallen greatly. About half of the farmers

complained that in post harvest season when the arrivals in the market were maximum there were no authorised buyers for the produce. Even if they were there they were unable to make purchases due to lack of packing material, weights and balances and funds for purchase. For crops like soybean and wheat prices in the market were higher than MSP. In the decision making about the crops to be sown profitability was the major consideration.

7. Suggestions and Policy Implications

i) With regard to marketing of produce at MSP the most important factor was market intelligence that is dissemination of information regarding arrivals and prices in the market. Although these are partly announced on the radio or in print media, the average farmer still does not know the latest information. They also do not know when the purchases through MSPs would start and when these would be stopped. Incidences of farmers came to our knowledge wherein the farmers took their produce to mandi but no purchases were made on that day due to one reason or another compelling the farmers to either sell their produce to private traders at much lower price or to bring back home the lot of the produce.

It is therefore suggested that farmers should be imparted day to day knowledge about arrivals, prices and purchases being made or otherwise so that they do not waste their time and energy.

Attention: District Central Cooperative Marketing Societies

ii) The common complaint of the farmers was that the MSPs are not declared well in advance. The ideal time of announcement of MSP of a crop is before sowing. This is seldom done.

It is therefore suggested that MSP should be declared prior to sowing so that farmer could plan the cropping pattern for their holdings.

Attention: Commission of Agriculture Costs & Prices, Govt. of India

iii) Many a time purchasing agencies are not well equipped with the necessities required for purchases such as weights, balances, packing material and stitching machine and above all, the amount to be paid to the farmers. In the absence of all these or one of these the farmers are turned away from the mandi.

It is suggested that purchasing agencies should be well equipped with all the necessities in advance of the date of starting of the purchasing.

Attention: District Central Cooperative Marketing Societies, M. P. State Marketing Federation, M.P. State Civil Supplies Corporation, Food Corporation of India and Concerned Banks.

iv) The staff of the purchasing agencies are not well trained with regard to testing the quality of the produce. Instances have come to the notice that the produce brought by the farmer is selected or rejected arbitrarily.

It is suggested that the purchasing agencies should have adequate, experienced and well trained staff. They need training in both in field as well as laboratory testing.

Attention: District Central Cooperative Marketing Societies, M. P. State Marketing Federation, M.P. State Civil Supplies Corporation and Food Corporation of India.

v) The arrivals in the peak season need to be handled properly both in the market and in godowns. It was experienced that the godown facilities were neither adequate nor proper. In the absence of adequate capacity of godowns the produce procured from farmers is heaped in the open, exposed to weather abnormalities like hail storms and rains. It is common

knowledge that such produce gets spoiled to such an extent that it is not fit for human consumption.

It is suggested that adequate and quality store facilities should be available at all purchasing points and the staff should be well trained to protect the produce against stored grain pests and diseases.

Attention: M.P. State Warehousing Corporation

vi) The produce of the farmer is purchased at MSP in district level mandis and sub mandis of the district. However, a large number of farmers residing in villages far interior to mandis and sub mandis with inadequate transport facilities are at the mercy of small traders and middle men who with some transport facility purchased the produce at much lower price than MSP and sell it in the mandis and sub mandis pocketing the commission/ huge profits.

It is suggested that the government, besides purchase at mandis and sub mandis should establish temporary purchasing centres in villages. This was done by "Soybean Producer's Association" for the purchase of soybean in the past with good results.

Attention: State Mandi Board & Krishi Upaj Mandi Samitis

vii) Many of the farmers complained that payment for the produce sold takes between one to two weeks because of procedural delay. In some cases it is delayed even by months.

It is suggested that the purchasing agencies should have adequate funds particularly during the peak season of arrivals to make quick payment to the farmers.

Attention: District Central Cooperative Bank, State Bank of India & Reserve Bank of India, Bhopal

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The major objectives of the price policy are:

I To offer incentives to the farmers to adopt new (costly) technology

II To encourage balanced and rational use of scares inputs

III To allow better standard of living to land owners, agricultural and non agricultural labourers

IV To protect the consumers against abnormal, sudden and steep increase in prices and their fluctuations from season to season.

Administration of MSPs in the State.

In the state purchasing agencies at MSPs are M.P. State Marketing Federation, M.P. State Civil Supplies Corporation and Food Corporation of India. For these agencies the District Central Cooperative Marketing Societies of the concerned districts make purchases in the mandis. MSPs are announced in the state for a total number of 18 crops. Farmers produce is purchased by representatives of the District Central Cooperative Marketing Societies in Krishi Upaj Mandis where open auction system is practised. Krishi Upaj Mandis do not play a direct role in the purchases at MSPs but they function as place of purchase and sale and provide facilities to both producers and purchasers like correct weighment, drinking water, open/convered space/sheds for auction, etc. Mandis charge 2 per cent of the amount of the produce purchased from the purchasers. Mandis charge annual charges from wholesalers, processors, weighmen, etc. For purchasing foodgrains at MSPs the District Central Co-operative Marketing societies get following amounts.

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Suggestions

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It is therefore suggested that farmers should be imparted day to day knowledge about arrivals, prices and purchases being made or otherwise so that they do not waste their time and energy.

ii) The common complaint of the farmers was that the MSPs are not declared well in advance. The ideal time of announcement of MSP of a crop is before sowing. This is seldom done.

It is therefore suggested that MSP should be declared prior to sowing so that farmer could plan the cropping pattern for their holdings.

iii) Many a time purchasing agencies are not well equipped with the necessities required for purchases such as weights, balances, packing material and stitching machine and above all, the amount to be paid to the

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It is suggested that purchasing agencies should be well equipped with all the necessities in advance of the date of starting of the purchasing.

iv) The staff of the purchasing agencies are not well trained with regard to testing the quality of the produce. Instances have come to the notice that the produce brought by the farmer is selected or rejected arbitrarily.

It is suggested that the purchasing agencies should have adequate, experienced and well trained staff. They need training in both in field as well as laboratory testing.

v) The arrivals in the peak season need to be handled properly both in the market and in godowns. It was experienced that the godown facilities were neither adequate nor proper. In the absence of adequate capacity of godowns the produce procured from farmers is heaped in the open, exposed to weather abnormalities like hail storms and rains. It is common knowledge that such produce gets spoiled to such an extent that it is not fit for human consumption.

It is suggested that adequate and quality store facilities should be available at all purchasing points and the staff should be well trained to protect the produce against stored grain pests and diseases.

vi) The produce of the farmer is purchased at MSP in district level mandis and sub mandis of the district. However, a large number of farmers residing in villages far interior to mandis and sub mandis with inadequate transport facilities are at the mercy of small traders and middle men who

with some transport facility purchased the produce at much lower price than MSP and sell it in the mandis and sub mandis pocketing the commission/ huge profits.

It is suggested that the government, besides purchase at mandis and sub mandis should establish temporary purchasing centres in villages. This was done by "Soybean Producer's Association" for the purchase of soybean in the past with good results.

vii) Many of the farmers complained that payment for the produce sold takes between one to two weeks because of procedural delay. In some cases it is delayed even by months.

It is suggested that the purchasing agencies should have adequate funds particularly during the peak season of arrivals to make quick payment to the farmers.

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IMPACT OF MINIMUM SUPPORT PRICES ON THE AGRICULTURAL ECONOMY OF MADHYA PRADESH

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i) With regard to marketing of produce at Minimum Support Price (MSP) the most important factor was market intelligence that is dissemination of information regarding arrivals and prices in the market. Although these are partly announced on the radio or in print media, the average farmer still does not know the latest information. They also do not know when the purchases through MSPs would start and when these would be stopped. Incidences of farmers came to our knowledge wherein the farmers took their produce to mandi but no purchases were made on that day due to one reason or another compelling the farmers to either sell their produce to private traders at much lower price or to bring back home the lot of the produce.

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