



AERC REPORT 149

Evaluation of Price Support and Market Intervention Scheme in Rajasthan

**S. S. Kalamkar
M. R. Ojha
T. B. Parihar**

April 2013



Agro-Economic Research Centre
For the states of Gujarat and Rajasthan
(Sponsored by the Ministry of Agriculture, Govt. of India)
Sardar Patel University,
Vallabh Vidyanagar, Dist. Anand, Gujarat

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*Report submitted to the
Ministry of Agriculture, Government of India,
New Delhi*



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Foreword

In view of the distorted and unregulated market conditions prevailing for agricultural produces in India, support prices are very imperative for farmers to get assured income from their crop cultivation. The agricultural price policy is aimed at intervening in agricultural produce markets to influence the level of fluctuations in prices and the price-spread from farm gate to the retail level. The Minimum Price Support Policy (MSP) linked to procurement has served the country well in the past three decades. However, in recent years it has started encountering problems mainly because of surpluses of several agricultural commodities and excessive built up of stocks with FCI. Agricultural price policy has come under serious attack in recent years for recommending higher support prices than warranted by the costs of production (CoP) and supposed distortion of the market, leading to food deprivation. The Central agency often incurs loss in their operation of PSS and MIS and the amount of expenditure incurred in the above schemes suggest that Union and State Government spend considerable amount of public money in undertaking the above scheme; yet plight of growers of many of the agriculture commodities continues. The market price of many agricultural commodities continues to rule below the MSP of commodity. The wide gap between price received by producer and price paid by consumer of commodity is another important concern of marketing of agriculture commodities in the country. In this backdrop, the Department of Economics and Statistics, Department of Agriculture and Cooperation, Ministry of Agriculture, Government of India has proposed state specific studies to evaluate the PSS and MIS, which were assigned to the different AERCs/units. Rajasthan ranks first in area under garlic and second in gram cultivation, while it ranks second in gram production and third in garlic production in India. Therefore, the AERC, Vallabh Vidyanagar was entrusted to conduct the study for the states of Rajasthan covering gram and garlic crop with specific objectives. The Agro-Economic Research Unit, Institute of Economic Growth (IEG), Delhi acted as a coordinator of this empirical study and provided sampling framework and table format.

From the study, it is clear that there are bottlenecks in the operations of MIS and PSS in the state. The major problems perceived by farmers in marketing of selected crops are delay in payments, lack of processing units, non-availability of cold storage/warehousing facility and existing market price of produce is not sufficient. Thus, in order to give remunerative prices to the farmers and to prevent them from distress sale, these bottlenecks need to be removed. The storage and processing facilities need to be created on priority basis.

I would like to congratulate to Dr. Kalamkar and his entire project team for preparing this excellent research report. I hope findings of the study would be useful for academicians, policy makers and researchers.

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I have benefited immensely from various scholars and officials from different government departments while carrying out this study. At the outset, we would like to thank **Dr. Mahesh Pathak**, Honorary Advisor of our Centre for his constant encouragement and support in completing the study. I am grateful to the coordinator of the study, **Prof. Brajesh Jha**, Agro-Economic Research Unit, Institute of Economic Growth (IEG), Delhi for providing required support, study framework and necessary inputs in completing the study.

A number of officials/office bearers from Rajasthan Government Offices, NAFED, RAJFED, Tilam Sangh, APMC/KUMS, District Statistical Offices, etc. helped us especially in providing secondary information related to the study. I would like to mention a few persons who have helped us in completing the study. I thank Smt. Anandhi (Managing Director, RAJFED, Jaipur); Shri Dayal (Assitt. General Manager, NAFED, Jaipur); Shri Hanuman (Managing Director, Tilam Sangh Rajasthan); Shri Anil Gupta (Director, Agriculture Marketing Department, Government of Gujarat, Jaipur). I also thanks Shri R.G. Sharma (Deputy Director Agriculture Extension, Govt. of Rajasthan, Jodhpur); Shri Harish Sharma (Deputy Director, Agriculture, Jaisalmer); Shri Tejsinh Nirman (RAJFED, Kota); Shri Ajay Belcha (RAJFED, Jodhpur); Shri Kailash N. Bajpa (General Manager, Tilam Sangh Rajasthan, Kota); Shri J. S. Chana (Additional Manager, Kota); Shri Gurbak Singh (Agriculture Officer, Jaisalmer); Dr. Brijlal Meena (District Statistical Officer, Jaisalmer). I would like to record our sincere thanks to all the government officials for their invaluable help. I also thank all of them who have directly and indirectly helped in conducting this study.

The study would not have reached to this stage without the active co-operation of the sample farmers, who provided all the required data for the study without any hesitation and expectation. I thank each one of them for their invaluable support.

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List of Abbreviations

APC	Agricultural Prices Commission
APMC	Agricultural Produce Marketing Committee
ASMO	Area Sown More Than Once
Av.	Average
C.I.	Cropping Intensity
CACP	Commission for Agricultural Costs and Prices
CCI	Cotton Corporation of India
CMS	Cooperative Marketing Society
CoC	Cost of Cultivation
DOC	Division of Cooperation
ECA	Essential Commodities Act
FAQ	Fair Average Quality
FCI	Food Corporation of India
GCA	Gross Cropped Area
GIA	Gross Irrigated Area
GOI	Government of India
ha	hectare
I.I.	Irrigation Intensity
JCI	Jute Corporation of India
kg	kilograms
KUMS	Krishi Upaj Mandi Sammittee (APMC)
KVSS	Kraya Vikray Sahakari Society (Cooperative Marketing Society)
mha	Million hectares
MIS	Market Intervention Scheme
MOA	Ministry of Agriculture
MIP	Market Intervention Price
MSP	Minimum Support Price
mt	Metric Tonnes
mt	Million tonnes
NAFED	National Agricultural Cooperative Marketing Federation of India Ltd.

NBHC	National Bulk Handling Corporation
NCA	Net Cropped Area
NCMSL	National Collateral Management Services Limited
NIA	Net Irrigated Area
NSA	Net Sown Area
PDS	Targeted Public Distribution System
PSS	Price Support Scheme
RAJFED	Rajasthan State Cooperative Marketing Federation
RSWC	Rajasthan State Warehouse Corporation
SLS	State Level Supporter
TE	Triennium Endings
TPDS	Targeted Public Distribution System
TS (Tilam Sangh)	Tilam Sangh -Rajasthan State Cooperative Oil Seed Growers Federation Limited)

Introduction

1.1 Introduction:

Food production and agricultural development have been core areas of concern for policymakers in India since Independence. In the 1960s, food shortages and foreign-exchange shortages led to major political challenges after the United States decided to use food exports as an instrument of foreign policy (Birner, *et al.*, 2011). As a consequence, the government of India (GOI) adopted policies that aimed at making the country self-sufficient in food grains production (Subramaniam, 1995). India made significant advances towards achieving its goals of rapid agricultural growth, improving food security, and reducing rural poverty during the last six decades. It has set new milestones in its progress. Since independence, major strides have been made in production of food grains, not only due to increase in area but also due to technology. As a result, the food grains production increased from 50.82 million tonnes in 1950-51 to 257.44 million tonnes in 2011-12 (GOI, 2012). Policy support, production strategies, public investment in infrastructure, research and extension for crops, livestock and fisheries have significantly helped in increasing the agricultural productivity (Kumar and Mittal, 2006). Among the different agricultural economic policies pursued by the government of India, the agricultural price policy has been playing a significant role in bringing about noticeable changes in production and productivity of the agricultural sector. It also plays an important role in achieving growth and equity in the Indian economy in general, and the agriculture sector in particular. The major underlying objective of the Indian governments' price policy is to protect both producer and consumers (Dev and Rao, 2010).

India now ranks first in the world in production of pulses and milk, second in wheat, rice, groundnut, sugarcane, cotton and fruits and vegetables and third in production of total cereals, rapeseed, tea and eggs (GOI, 2012). This increased production has brought in its wake new challenges to handle in terms of huge marketable surplus. Marketing of agricultural produce serves as a link between the farm sector on one hand and other sectors on the other hand. An efficient marketing system helps in the optimization of resource use, output management, increase in farm incomes, widening of markets, growth of agro-based industry and addition to national income through value addition and employment creation

(Acharya and Agrawal, 2004; Acharya, 2006). The current agricultural marketing system in the country is the outcome of several years of Government intervention. The system has undergone several changes during the last 50 years owing to the increased marketed surplus; increase in urbanization and income levels and consequent changes in the pattern of demand for marketing services, increase in linkages with distant and overseas markets; and changes in the form and degree of government intervention.

Agricultural markets in India have traditionally been marked by heavy government interventions since independence due to the fact that our demand had often exceeded supplies to start with. Government intervention in India had the twin objective of price support and buffer stocks. Further, with not so open borders in the case of globally traded commodities, there had always not been consistency towards governments policy on international trade in many of the primary commodities and more specifically in the agricultural commodities leading to artificial (policy created) price fluctuation (Shanmugam,2009). The problems being faced by the farmers received the attention of the government, which took several measures including (a) regulation of marketing practices, (b) creation of infrastructure, (c) provision of price support, (d) promotion of farmers cooperative organizations, and (e) provision of technology transfer and input supply support systems including credit delivery to the farmers (Acharya, 2004). Due to efforts put by various organizations and the intervention by the government as well as the creation of awareness among the farmers towards marketing of farm produces brought out the significant changes in both in the farmers marketing practices and agricultural marketing system.

1.2 Grain Marketing Parastatals around the Globe: Focus on Asia¹:

Governments have played an important role in influencing policies in the agricultural sector all over the world (Bathla, 2004). In developing countries, agriculture accounts for a substantial share of all productive activity and food is a dominant share of total consumption. In this situation, price interventions in food markets can have far reaching consequences. Furthermore, since cultivators derive a major proportion of their incomes from food production, fluctuations in food prices lead to large scale fluctuations in the income of a large proportion of agricultural producers. Agricultural prices in a

¹ For more details, please see, Rashiid, *et al*, 2008.

developing economy are highly influenced by the interaction between producer, consumer and groups of trader and their relative effectiveness in influencing government decision-making (Bhatia, 1994). One of the major objectives of price policy in developing countries is therefore to impart stability to prices of important agricultural commodities like food grains. Other objectives are to give price assurance to farmers through a system of minimum support prices to increase their production and simultaneously to keep prices low for consumers for food security reasons (Bhalla, 2007).

In the neo-liberal framework of economic development, 'free market' is important; but there have been instances of market failure. These instances are frequent for agricultural commodities and developing countries. Consequences of market failure for either producer or consumer of agricultural commodities are enormous. Government therefore intervenes in agriculture market. It goes without saying in a country where agriculture dominates; market failure and equity act as silent factors behind governmental mediation. The initial economic conditions and the rationales for public intervention in food grains markets were remarkably similar in those Asian Countries whose governments intervened in their food grains markets. Agriculture was largely weather dependent, production variability was high, domestic markets were poorly integrated, international markets were highly volatile, and the countries had severe liquidity constraint owing on buying from the international market at times of scarcity. These countries were vulnerable to crop failures, their foreign exchange reserve was meager, and their national food security depended, apart from 'mother nature' on the goodwill of and relationship with donor countries. These relationships, however, were not always smooth because of sharp differences in political ideology. Therefore, policy thinking of all of these countries converged on attaining self-sufficiency, improving food distribution, and managing food security threats arising from weather-related production shocks. This thinking coincided with the advent of the Green Revolution, giving the governments another justification for intervention, i.e. mitigating risks and uncertainties of the new technology (Rashid, et al, 2008).

Historically, a range of government regulations has supported parastatals or other government agencies involved in food intervention programs. Agricultural parastatals are quasi-government agencies charged with carrying out public marketing activities. In Asia, these agencies have been linked with food policies that are the countries in the region have practiced for decades. Although operational approaches have varied, the central policy

objective has been similar to stabilize prices of basic agricultural commodities by ensuring a floor price for farmers a ceiling price for consumers. In implementing these policies, the parastatals have been mandated to carry out a range of marketing activities under a variety of legal and regulatory supports, including monopoly control over export and import of food, movement restrictions for private trade, subsidized storage facilities, and preferential access to credit and transportations (Rashid, et al., 2008). Monopoly controls in international trade, restrictions on movements of food grains by the private sector, cheap credit and preferential access to transportation for the parastatals, and limits on private storage have been extensively used in all of the countries. A summary is presented in the Table 1.1.

Table 1.1: Regulatory Framework to Facilitate Parastatal Operations in Asian Countries

Regulations/ Restrictions	India	Indonesia	Philippines	Bangladesh	Pakistan	Vietnam
<i>Monopoly on export</i>						
Year introduced	1965	Never had large surplus	Never had large surplus	Never had large surplus	1974	1989
Still enforced	No, but quota on export	n.a.	n.a.	n.a.	Private sector export allowed since 1987	Yes
<i>Monopoly on Import</i>						
Year introduced	1965	1967	1972	1972	1948	1975
Still enforced	Yes	Officially withdrew in 1998, but reinstated	Yes	No, lifted in 1992-93	Private import freed in 1987, but quickly reversed	Yes
<i>Movement restrictions</i>						
Year introduced	1941 (during British rule)	1967	n.a.	1941 (during British rule)	1941 (during British rule)	1975
Still enforced	Yes, partially	Yes, partially	No	No, lifted in 1989	Lifted in 2001, but enforced in 2004	
<i>Credit Concession</i>						
Year introduced	1973-74	1979	1972	1948 (during East Pakistan era)	1948	1989
Still enforced	Yes, although interest rate revised in 1994	No, reformed in 1998, but has credit guarantee from central bank	Yes, occasionally	No, reformed in 1992	Yes	Yes
<i>Preferential access</i>						
Year introduced	1965	n.a.	n.a.	Preferential access to rail & waterways	No	n.a.
Still enforced	Yes	n.a.	n.a.	Reformed in 1997	n.a.	n.a.

Source: Adopted from Rashid et al., 2008.

Asian food markets are undergoing a profound and extremely rapid transformation, with implications for employment in value added and primary production for small scale processors, intermediaries, farmers and landless labourers (Gulati and Reardon, 2008). In the developing countries, these policies are found to act as tax on agriculture and subsidy on food consumption, an opposite policy is observed in the developed countries where urban population is taxed to support farm production and incomes (Hoekman and Kostecki, 2004; Acharya and Agarwal, 1999; Pursell and Gulati, 1993; Gulati and Sharma, 1991; and Goldin and Knudsen, 1990). Nonetheless, the broad common objectives of the policies everywhere are to increase agriculture production and productivity, achieve stability in farm prices, transfer of resources to non-agricultural sector, reduce dependence on exports and attain minimum nutritional standards (Bathla, 2004).

1.3 Food Policy and Parastatals in India:

Policy interventions in agricultural markets in India have a long history. Till the mid 1960s, it was mainly meant to facilitate the smooth functioning of markets and to keep a check on activities that were considered inimical to producers and/or consumers. Subsequently, the country opted for a package of direct and indirect interventions in agricultural markets and prices, initially targeted at procuring and distributing wheat and paddy. This gradually expanded to cover several other crops/products and aspects of domestic trade in agriculture (Chand, 2012). In India, Government intervention in agriculture market takes different form, Price Support Scheme (PSS) and Market Intervention Scheme (MIS) are some of them.

The emergence of agricultural policy in the Indian context can be traced back to the official documents beginning from Food grains Policy Committee of 1943 (Gregory, 1943). The great Bengal famine of 1943, widely cited as a classic example of market failure, provided the momentum of public interventions in Indian food grains markets (Rashid, *et al.*, 2008). The Famine Enquiry Committee Report, as well as subsequent studies, concluded that the root cause of famine was the failure of markets in responding to supply shortages in Bengal (that is, lack of spatial integration), rather than the availability of food grains in India as a whole, in that particular years.² Thus, the central

² Sen's (1981) interpretation of famine, the entitlement failure, differs from this view. Although Sen's works have been extremely influential, many have disagreed with his view. See, Devereux (2001), as quoted in Rashid, et al (2008).

premise for heavy public involvement was to address the perceived inability of private traders to ensure efficient allocation of essential commodities across space and time. Government actions focused on ensuring a steady flow of supplies as 'reasonable' prices to consumers through domestic production supplemented by imports whenever production suffered a setback. Until about 1965, consumers were generally assured of a minimum supply, but a guaranteed income to the producers remained an elusive promise³.

Two major events coincided to prompt a change in policy. First, in 1965-66 and 1966-67, the country experienced two consecutive droughts to unprecedented severity that reduced food grains production almost 20 per cent below their previous best levels. India was in crisis. It was bailed out only by a large volume of U.S. food aid that severely strained the country's pride. Second, in 1963, the new high yielding wheat varieties (HYVs) were first grown experimentally in India, and by 1966 prospects of the Green Revolution appeared promising. The New Strategy of Agricultural Development, articulated in the Fourth Plan marked a bold step beyond previous policies (Rashid et al, 2008). Thus, an integrated food and agricultural policy emerged.

After Independence, India continued with tight war time controls on prices and movements of most of the essential commodities. In case of agricultural commodities, the controls consisted on movement of crops from open market purchases and rationing in almost all the states. The Food grains Price Committee of 1947 recommended progressive decontrol of food grains trade and as a result there was some relaxation subsequently. But the controls resurfaced during bad crop years. For example, food production was low in 1948 and prices started rising sharply with the result that the controls were re-imposed. It was only in 1953-54 that consequent to a good crop the prices started declining and controls were completely abolished. But prices started rising again from 1955 onwards with the results that partial controls were again introduced. The regime of controls continued till the late 1950's. The Food grains Enquiry Committee of 1957 recommended social control over the wholesale trade in food grains. Consequently, in 1959 an attempt was made to introduce state trading in wheat and rice. But the scheme failed because the administered prices were fixed at too low a level and despite good crop, very little surpluses came into the market and very little procurement took place (Bhalla, 2007) .

³ This concern was based, in part, on the assumption that production responds slowly to price, but price responds swiftly and demand or to fluctuations in supplies (Rashid, *et al*, 2008).

Nevertheless, administered price system continued and the prices of food grains were kept low. Large imports also depressed prices. Hence, there was very little price incentive for the farmers to undertake investment for increasing their production. The imposition of heavy compulsory levy on the wholesale traders also did not yield much return. In order to implement the system, the government introduced food zones. Eight zones were created for wheat and some zones were created for rice in South India. Whereas food grains could move within a zone, inter-zonal movement of food grains was banned. The scheme also did not give good results and consequently, each state was declared a zone. The government took upon itself the responsibility of moving food grains from the surplus to the deficit states. Despite all these steps, the food management continued to be in serious crisis.

It was in the context of acute food scarcity during the sixties and the failure of various schemes for food management that the Indian Government appointed the Food grains Prices Committee in 1964 under the chairmanship of Jha (Jha Committee) to look at the entire question of food management in India. One of the major contributions of the Jha Committee was the introduction of a positive price policy. While recognizing the need for protecting the interests of the consumers, the Committee underlined the role of appropriate prices as an instrument for augmenting production. One of its major recommendations was the suggestion for the creation of the Food Corporation of India and the Agricultural Prices Commission.

An elaborate system of food management consisting of procurement, storage and public distribution of food grains was instituted subsequent to the Committee's proposals. The main objective of the food management system is to give price insurance to farmers to encourage them to increase food production and to provide food to consumers at reasonable prices. The Food Corporation of India (FCI) and the Agricultural Prices Commission (APC) was set up in 1965 to help administer food security in the country. Today, the FCI is the agency to purchase food grains at the minimum support price (MSP) or the procurement price, and to stock and distribute these to the consumers through the public distribution system (PDS) which consists of as many as 4.99 lakh fair price shops spread all over the India in rural and urban areas. The food grains are stocked and then distributed through fair price shops. The FCI also undertakes open market operations with a view to stabilizing prices.

The main function of the Agricultural Prices Commission which renamed as Commission for Agricultural Cost and Prices⁴ in 1983, is to advise the Government on price policy for agricultural commodities. It is also enjoined to evolve a balanced and integrated price structure in the perspective of the overall needs of the producers and the consumers. While making its recommendations, the commission is, *inter-alia*, to keep in view the need to provide incentives to producers for adopting technology for enhanced production, to ensure rational utilisation of land and other productive resources; to take account of the likely effect of the prices on the rest of the economy, broadly on the cost of living, level of wages, industrial cost etc., and to also keep in view the terms of trade between the agricultural sector and the non-agricultural sector. The cost of cultivation (C2) covers not only paid out costs (out-of-pocket expenses) (A2) but also imputed value of owned assets including rental value of owned land, family labour and interest on owned fixed capital for which the farmers do not incur cash expenses⁵.

1.4 Price Policy and Support for Farmers

Price support for farmers has been an important instrument of agricultural development and food policy since the mid-1960s. The main objectives of price policy are: (a) to provide incentives to farmers for adopting new technology and maximizing production, (b) to safeguard the interests of consumers or users of farm products by maintaining market prices at reasonable levels, and (c) to keep the fluctuations in prices within certain limits. The main instruments of price policy, *inter alia* are minimum support prices, buffer stocking, and operation of a public distribution system of cereals. The main challenge of the policy has always been to reconcile the conflicting price interests of farmers and consumers. It is partly achieved through the provision of food subsidy and supply of essential farm inputs (fertilizers, electricity and canal water) to farmers at reasonable prices or user charges.

⁴ Discussed in Chapter III.

⁵ In India, the Directorate of Economics and Statistics (DES) in the Ministry of Agriculture is the main organization responsible for collection of data on cost of production of crops. This Directorate operates a scheme entitled "Comprehensive Scheme for Studying Cost of Cultivation / Production of Principal Crops in India". The scheme was launched in the year 1970-71. It was meant to collect representative data on inputs and output in physical and monetary terms which could then be used for estimation of cost of cultivation per hectare and cost of production per quintal of principal crops. The data under this scheme is collected on a continuous basis in the form of a detailed survey in respect of principal crops. The estimates of Cost of Cultivation of principal crops are used by the Commission for Agricultural Costs and Prices (CACP) for recommending Minimum Support Prices (MSPs) of 25 crops.

Currently, minimum support prices (MSPs) are announced for 25 farm products, that include cereals, pulses, oilseeds, raw cotton, raw jute, sugarcane and copra (dried coconut). Buffer stocking and public distribution system are operated for rice, wheat and to some extent for sugar. Commission for Agricultural Costs and Prices (CACP) is the advisory body of Government of India in all matters relating to agricultural price policy. The quantities that the government agencies need to purchase at support prices depend on the behaviour of market prices and private trade, and fluctuate from year to year. For example, price support purchases of rice and wheat accounted for 15.8 per cent of the production during TE 1992-93, 24.6 per cent during TE 2002-03 and 22.7 per cent during TE 2006-07. In terms of absolute quantities, these varied between 20 metric tonnes (mt) and 39 mt at these points of time. About 25 per cent is retained by the producer farmers for self-consumption and rest, i.e. more than half of the production is handled by private trade (Acharya, 2009).

Several committees in recent years have reviewed the current price policy regime. These include Long-Term Grain Policy Committee (Abhijit Sen); Repositioning of CACP Committee (Y.K. Alagh); Planning Commission's Working Group for XI Five-Year Plan (S.S. Acharya); Foodgrain Policy Review Committee (Ramesh Chand); and National Commission for Farmers (M.S. Swaminathan). Going by the recommendations of the various Committees, the government is continuing the policy of minimum support prices, buffer stocking of cereals, and distribution of subsidized food grains. In addition, the FCI is continuing to perform its critical role of food management on behalf of the government. Implicitly, the need for maintaining a high degree of self sufficiency in cereals is also recognized. The suggestion to fix MSPs at levels 50 per cent higher than the cost of production has rightly been not accepted by the government because there are several issues involved in this suggestion. As regards other suggestions, there is perhaps no firm decision on either side (Acharya, 2009).

1.5 Penetration of the Market (Marketed Surplus):

During the last six decades of plan development in India, there has been continuous increase in marketed surplus ratio for all important non-cash crops like rice, wheat and maize, cash crops like sugarcane, cotton and jute (see, Table 1.2). Particularly, the ratio of marketed surplus in case of rice and wheat have gone up from 30 percent each in 1950-51 to 80.65 and 73.20 percent in 2010-11, respectively. The increase was more

significant in maize (from 24 per cent to 86 percent) followed by jowar (24 per cent to 62 percent) during corresponding period. While MSR was much lower for wheat and coarse cereals in Rajasthan as compared to national average in 2010-11. As volume of marketed surplus affects the supplies of food for the non-farm population, increasing trend in marketed surplus is to lower the pressure related to basic food items. Thus massive increase in the marketed surplus ratio for key crops indicates an increasing penetration of the market over the last six decades. However, most of the marketed surplus is accounted by the large landholders, in relative terms even the smallest landholders sell a non-negligible share of their output (Basole and Basu, 2011). Thus almost half of produce is being reserved by the landless and marginal farmers for their family consumption and sell the other half.

Table 1.2: Growth in Marketed Surplus Ratio (MSR) of Important Agricultural Commodities in Rajasthan & India during 1950-51 to 2010-11.

Crop Group	Crops	State	MSR (% to total production)					
			1950-51	2005-06	2006-07	2007-08	2008-09	2010-11
Food grains: Cereals	1. Rice	All-India	30.0	71.25	79.17	78.61	75.55	80.65
	2. Wheat	Rajasthan	n.a.	49.25	62.61	64.38	53.30	44.41
		All-India	30.0	54.90	66.09	61.87	70.87	73.20
	3. Maize	Rajasthan	n.a.	55.30	58.24	67.34	70.89	67.77
		All-India	24.0	80.01	78.56	82.87	85.52	86.00
	4. Jowar	All-India	n.a.	50.39	59.39	60.91	45.66	64.86
		All-India	24.0	46.25	61.02	61.47	54.60	62.03
5. Bajra	Rajasthan	n.a.	44.77	62.43	44.21	42.90	53.03	
	All-India	27.0	61.44	72.21	61.78	57.78	67.38	
6. Barley	Rajasthan	n.a.	-	70.06	72.43	62.13	86.08	
	All-India	n.a.	11.72	58.85	71.91	53.12	73.81	
7. Ragi	All-India	n.a.	-	27.58	22.17	20.11	25.73	
Food grains: Pulses	8. Arhar	All-India	50.0	73.29	83.61	79.15	75.40	73.82
	9. Gram	Rajasthan	n.a.	77.78	62.43	77.09	72.31	86.46
		All-India	35.0	74.06	76.81	90.81	74.15	86.58
	10. Urad	Rajasthan	n.a.	41.25	71.66	68.87	69.64	73.96
		All-India	n.a.	75.55	78.40	80.06	60.78	63.61
11. Moong	Rajasthan	n.a.	72.47	83.76	77.17	82.92	76.16	
	All-India	n.a.	77.69	80.26	84.37	82.48	81.54	
12. Lentil	All-India	55.0	68.73	79.03	85.66	73.38	77.91	
Oilseeds	13. Groundnut	All-India	68.3	85.88	91.60	88.61	91.76	93.36
	14. Rapeseed & Mustard	Rajasthan	n.a.	88.43	93.85	98.65	91.24	77.12
		All-India	84.3	80.20	87.72	95.44	89.37	82.14
	15. Soyabean	All-India	n.a.	93.89	95.79	96.35	77.26	95.69
	16. Sunflower	All-India	n.a.	76.86	97.18	96.44	65.18	99.58
	17. Sesamum	Rajasthan	n.a.	82.02	82.98	72.74	67.82	68.49
		All-India	n.a.	87.48	91.28	85.98	83.66	83.18
18. Safflower	All-India	n.a.	98.22	46.67	100.00	72.65	55.12	
19. Nigerseed	All-India	n.a.	92.52	73.58	97.13	94.51	83.66	
Other Commercial Crops	20. Sugarcane	All-India	100.0	99.85	100.00	100.00	100.00	78.92
	21. Cotton	Rajasthan	n.a.	100.00	97.57	96.33	97.97	100.00
		All-India	100.0	96.91	96.23	96.15	97.72	99.79
	22. Jute	All-India	100.0	76.80	97.35	83.01	85.72	99.43
	23. Onion	All-India	n.a.	99.46	99.62	99.46	98.17	97.25
24. Potato	All-India	n.a.	82.52	80.19	63.98	81.60	81.04	

Source: GOI (various issues, Agricultural Statistics at a Glance).

1.6 Importance of and Problems in Marketing of Agricultural Produce:

Despite its shrinking share in national income and losing its dominance in rural income, the performance of the agriculture sector remains a matter of central concern to policymakers and the public at large. The main reasons for this are that, one, till date, more than half the total workforce in the country remains employed in this sector and agriculture is a source of livelihood for a majority of the population; two, the performance of agriculture is much more important than other sectors for inclusive growth and for reducing poverty (Ravallion and Datt 1996; Datt and Ravallion 1998; Virmani 2008); three, the performance of agriculture determines the food and nutrition security of the population of the country, which cannot depend on external sources of supply; four, the growth of agriculture has a significant bearing on food and overall inflation and macroeconomic stability; and five, much of trade and commerce and industrial activity are linked to agriculture (Chand and Parappurathu, 2012). Thus, assured and remunerative marketing opportunities hold the key to continued progress in agriculture and enhancing farm productivity and profitability. Several significant market reforms have already been initiated by the Central and the State governments. These reforms provide more options to farmers for selling their produce, allowing the private sector, including cooperatives, to develop markets, promote direct sales to consumers, processors and retail chain suppliers / exporters and remove scope for corruption and harassment. However, still the markets are not that efficient as should have been.

Agricultural marketing in India suffers from efficiency, a disconnect between the prices received by producers and the prices paid by consumers, fragmented marketing channels, poor infrastructure and policy distortions (Chand, 2012). The spread and success of the green revolution during the 1970s and 1980s led to an increase in the political power of the farming class and their clout in policy making. This was reflected in the creation and strengthening of farmer-friendly institutions and a policy environment favorable to farmers. Marketing institutions like market committees, state level marketing boards and many others in the public and cooperative sectors served the interests of the farming community. However, over the period of time after achieving the self sufficiency in food grains, public policy began losing its focus and targets. The marketing system and marketing institutions were plagued by inefficiencies, bureaucratic control, and politicization.

Table 1.3: Number of Wholesale, Rural Primary and Regulated Markets in India (as on 31.03.2011)

State/ U.TS	Number of Markets			Regulated Markets			Area covered by each market in sq. kms.	Require- ment of Markets	Population Served by each Market
	Whole - Sale	Rural Primary	Total	Principal	Submarket Yards	Total			
Andhra Pradesh	329	576	905	329	576	905	303.92	3501	84210
Arunachal Pradesh	6	63	69	16	113	129	1213.67	1066	8511
Assam	405	735	1140	20	206	226	347.07	998	117945
Bihar *	325	1469	1794	* APMR Act Repealed			0	1198	
Jharkhand	205	603	808	28	173	201	396.59	1015	134059
Goa	4	24	28	1	7	8	462.75	47	168459
Gujarat	207	129	336	196	218	414	473.49	2495	122394
Haryana	284	189	473	106	178	284	155.68	563	74453
Himachal Pradesh	42	35	77	10	38	48	1184.53	709	126623
J & K	26	8	34	APMR Act not implemented			0	2829	
Karnataka	504	730	1234	152	352	504	382.82	2441	104862
Kerala	348	1014	1362	APMR Act not implemented			0	495	
Madhya Pradesh	241	1321	1562	241	276	517	601.06	3924	116799
Chhattisgarh	2	1132	1134	73	112	185	734.24	1721	112615
Maharashtra	880	3500	4380	299	581	880	349.65	3916	110089
Manipur	20	98	118	APMR Act not implemented			0	284	
Meghalaya	35	84	119	2	-	2	11214.5	285	1159411
Mizoram	10	105	115	APMR Act not implemented			0	268	
Nagaland	19	174	193	18	Nil	-----	0	211	
Orissa	398	1150	1548	45	269	314	495.88	1982	117212
Punjab	488	115	603	139	349	488	103.2	641	49916
Rajasthan	431	312	743	129	302	431	795.9	4356	131107
Sikkim	7	12	19	1	-	1	7096	90	56473122
Tamil Nadu	300	677	977	277	15	292	445.4	1655	213718
Tripura	84	554	638	21	-	21	499.33	133	152343
Uttar Pradesh	584	3464	4048	249	356	605	394.32	3036	274707
Uttarakhand	36	30	66	25	33	58	962.84	711	146368
West Bengal	279	2925	3204	43	641	684	129.19	1130	117282
A & N Island	0	0	0	APMR Act not implemented			0	105	
Chandigarh	1	0	1	1	-	1	114	1	900914
D & N Haveli	0	8	8	APMR Act not implemented			0	6	
Daman & Diu	0	2	2	Reported	Nil	0	0	1	
Delhi	30	0	30	8	13	21	70.62	19	659548
Lakshadweep	0	0	0	APMR Act not implemented			0	0	
Puducherry	9	0	9	4	5	9	54.67	6	108261
Total	6539	21238	27777	2433	4813	7246	28982.67	41838	149717

Notes: - * Bihar Agril. Produce Marketing (Regulation) Act Repealed from 1st September, 2006. In West Bengal sub yards include cold storages and hence figures of total regulated markets and wholesale markets are not comparable. All principal regulated markets are wholesale markets, whereas sub market yards may / may not be a wholesale market as it also includes some of Rural Primary Markets notified for regulation.

Source: <http://agmarknet.nic.in>

Though over the period of time there is significant increase in total number of regulated markets in India (i.e. 3528 in 1976 to 7246 in 2011), the growth of market facilities did not keep pace with the growth in market arrivals, forcing producers to seek the help from middleman (Chand , 2012). There are in all 7246 regulated markets in the

country (as on 30.06.2011) and 21238 rural periodic markets, about 20 percent of which, function under the ambit of regulations. Actual buying and selling of commodities mainly take place in market yards, sub-yards and rural periodic markets. Though there is significant expansion in the number of regulated markets, the area served per market yard is quite high. The farmers are, therefore, required to travel long distances to reach a market place. Between 1976 to 1991, the total number of regulated markets in the country increased from 3528 to 6217, a 76 percent increase over 15 years, while agricultural production has increased by 74 percent. However, after 1991, the number of regulated markets grew only 22 percent in 17 year till 2008, while volume of production increased by 70 percent. Thus marketing infrastructure did not grow at the rate of output, which has resulted in crowding, putting sellers in a disadvantage position and providing advantages to buyers. Therefore, with small surplus to sell, most of the farmers try to evade these markets (Chand, 2012; IGIDR, 2011). Also, there are several regulatory measures which come in the way of efficient functioning of the domestic market for agricultural commodities and adversely affect both the growers and the consumers (Acharya, 1998). These include levy on rice millers; statutory rationing of rice and wheat in Calcutta; monopoly procurement of raw cotton in Maharashtra⁶; levy on sugar mills, and system of state advised prices of sugarcane prevalent in some states.

The supply chain of agriculture produce also remains very fragmented with a large number of intermediaries. Despite of significant increase in quantity of marketed surplus and increase in market income through market fee charged, there has been huge gap in marketing infrastructure. Due to the glaring gaps in marketing infrastructure, existing markets operate very inefficiently and the transaction costs are high. It is reported that one third of regulated markets in the country do not have a common auction platform. The infrastructure for marketing perishables like fruits and vegetables which require special facilities for storage and processing are very inadequate (Planning Commission, 2007). Multiple handling by various players in the fragmented supply chain and the lack of warehouse and cold storage facilities also result in high post-harvest losses. Rural periodic markets which are basically primary assembly markets such as *Haat*, *Bazaar* are most neglected. There is wide variation in their governance. Most of them do not have even

⁶ The Government of Maharashtra had launched the Cotton Monopoly Scheme in 1971 by enacting The Maharashtra Raw Cotton (Procurement, processing & Marketing) Act 1971 with objectives to get fair share in the prices to the cultivators and to ensure supply of unadulterated graded cotton at reasonable prices to the consumers. Due to increasing losses/financial burden, government has closed this scheme after 2001-02.

basic amenities. Also marketing system suffers from multiple tax regimes and multiple licensing systems. The Working Group on Agricultural Marketing for the XII Five Year Plan highlighted the following gaps in the marketing infrastructure (Planning Commission, 2011).

- There has been virtually no progress in setting wholesale markets, except in Kerala;
- There are only 1637 grading units at the primary level in the whole country
- Of 7246 regulated markets in India, grading units are found in less than 20 percent of the market yards/sub-yards;
- Only around 7 percent of the total quantity sold by farmers is graded before sale;
- The scientific storage capacity is only 30 percent of what is required;
- Cold storage facilities are available for only 10 percent of fruits and vegetables.

In view of the existing conditions as mentioned above, much needed steps need to be taken to ensure that the farmers get higher realization without putting additional burden on the consumers. However, as agricultural marketing is a state subject and many states are either slow or reluctant to implement various reforms and legislations related to marketing, even though they are considered necessary for developing the market and trade and for improving the welfare of producers and consumers. Some experts suggest moving agricultural marketing to the concurrent list so that the required changes can be implemented quickly and smoothly (Chand, 2012).

1.7 Need and Different forms of Government Interventions in Marketing:

Before 1960, the major preoccupation of agricultural price policy used to be with the problem of high prices in periods of shortage and therefore with that of ensuring the availability of agricultural products, especially food grains, to the consumer at fair prices. Since the adoption of a package approach to bring about improvements in agricultural productivity, the question of protecting the agricultural producer against an undue fall in prices came to the fore. In fact, the provision of guaranteed floor prices form part of the package (Narain, 1973). As mentioned earlier, these prices were the first time fixed in 1964 by the Jha Committee. In pursuance of the recommendations of this committee, the Agricultural Price Commission was set up in 1965, entrusted with the task of making recommendations on administered prices for agricultural commodities. Since then the two major sets of administered prices have been recommended by the Commission are the procurement prices and minimum support prices.

Currently, the food security system and price policy basically consist of three instruments: procurement prices/minimum support prices (MSPs), buffer stocks and public distribution system (PDS). In fact, agricultural price policy is one of the important instruments in achieving food security by improving production, employment and incomes of the farmers. Therefore, there is a need to provide remunerative prices for farmers in order to maintain food security and increase the incomes of farmers. There has been a debate on price versus non-price factors in the literature. However, a review of literature⁷ shows that they are complements rather than substitutes (Dev and Ranade 1998; Rao 2004, 2006; Schiff and Montenegro 1997).

Minimum Support Prices:

The price support policy aims to provide farmers insurance against any sharp price fall and help ensure a reasonable farm income. Keeping in the view the interests of the farmers as also the need for self reliance, the government sets minimum support prices for 25 major crops⁸, namely paddy, jowar, bajra, maize, ragi, arhar (tur), moong, urad, cotton, groundnut-in-shell, sunflower seed, soyabean, sesamum, nigerseed, wheat, barley, gram, masur (lentil), rapeseed/mustard, safflower, toria, copra, jute and tobacco and Statutory Minimum Price (SMP) for sugarcane. These 25 crops accounts for about 85 percent of cropped area. Farmers are free to sell their produce in the open market or to the Government at the MSP, depending upon what is more advantageous to them.

Minimum Support Prices have been cornerstone of the agricultural policy since 1965. The objective is to ensure remunerative prices to the growers for their produce with a view to encourage higher investment and production and evolve a balanced and integrated price structure in the context of overall needs of the economy while safeguarding the interest of consumers by making available supplies at reasonable prices (see, Box 1.1). The aim, however, is a modest one: to provide the farmer with the assurance that the price of the product would not be allowed to fall below the cost of production and would leave a margin of profit. Implementation of MSP is undertaken through procurement by central and state level agencies. The procurement of wheat and

⁷ Brief review of literature is presented after this section.

⁸ Until approximately 1973-74, the government announced two prices, the MSP and procurement prices. The MSP was intended to reserve as a floor price. The procurement price was the price at which cereals were procured by FCI for release through the public distribution system. Since there was significant pressure from farmers to raise the MSP, in 1975-76, the two prices were merged (GOI, 2003).

rice is undertaken by the Food Corporation of India under the Department of Food and Public Distribution, primarily to meet the requirements of buffer stock; Targeted Public Distribution Scheme (TDPS) and other welfare schemes of the government. However, the designated agencies intervention in the market for undertaking procurement operations assists market prices not to fall below MSPs fixed by the government.

The rationale behind determination of MSP include i) the need to provide incentive to the producer/farmer for adopting improved technology and for developing a production pattern broadly in the light of national requirements; ii) the need to ensure rational utilization of land, water and other production resources, iii) the likely effect on the price policy on the rest of the economy; iv) the terms of trade between agricultural sector and non-agricultural sector. Appropriate procurement arrangements are made by the designated agencies to buy agricultural produce at MSP in different States. Further, with the amendment of the Agricultural Produce Marketing Committee (APMC) Act, the farmers now have more options to sell their produce to the prospective buyers. If the market price is more than the MSP fixed by the Government, farmers are free to sell their produce in the open market.

Box 1.1: Minimum Support Prices: A Historical Perspective

The Price Support Policy of the Government is directed at providing insurance to agricultural producers against any sharp fall in farm prices. The minimum guaranteed prices are fixed to set a floor below which market prices cannot fall. Till the mid 1970s, Government announced two types of administered prices.

(i) Minimum Support Prices (MSP) and (ii) Procurement Prices

The MSPs served as the floor prices and were fixed by the Government in the nature of a long-term guarantee for investment decisions of producers, with the assurance that prices of their commodities would not be allowed to fall below the level fixed by the Government, even in the case of a bumper crops.

Procurement prices were the prices of kharif and rabi cereals at which the grains was to be domestically produced by public agencies (like the FCI) for release through PDS. It was announced soon after harvest began. Normally procurement price was lower than the open market price and higher than the MSP.

This policy to two official prices being announced continues with some variation up to 1973-74, in the case of paddy. In the case of wheat, it was discontinued in 1969, and then revived in 1974-75 for one year only. Since there were too many demands for stepping up the MSP, in 1975-76, the present system was evolved in which only one set of prices was announced for paddy (and other kharif crops) and wheat being procured for buffer stocks operations.

Source: www.indiabudget.nic.in

Changes in MSP

The Commission for Agricultural Cost and Prices (CACP), while formulating the recommendations on Price Policy, considers a number of important factors, which inter alia, include cost of production, changes in input price, trends in market prices, demand and supply situation, etc. Cost of Cultivation data for principal crops are collected under plan scheme to generate state wise and crop wise estimates of cost of cultivation/production and made available to the CACP for use in connection with their recommendations of MSPs. Table 1.4 presents the changes in MSP for selected crops.

Table 1.4: Changes in MSPs for Selected Crops (according to Crop year)

Sl. No	Commodity	Variety	MSP (Rs per quintal)							
			1965-66	1970-71	1980-81	1990-91	2000-01	2010-11	2011-12	2012-13
	Kharif Crops									
1	Paddy	Common	40	53	105	205	510	1000	1080	1250
		Grade 'A'	-	-	-	-	540	1030	1110	1280
2	Jowar	Hybrid	-	-	105	180	445	880	980	1500
		Maldandi	36-40	45	-	-	-	900	1000	1520
3	Bajra		36-40	45	105	180	445	880	980	1175
4	Maize		36-41	45	105	180	445	880	980	1175
5	Ragi		36-42	45	105	180	445	965	1050	1500
6	Arhar(Tur)		-	-	190	480	1200	3000*	3200*	3850
7	Moong		-	-	200	480	1200	3170*	3500*	4400
8	Urad		-	-	200	480	1200	2900*	3300*	4300
9	Cotton	F-414/H-777/J34	247 ⁺	299 ⁺	304	620	1625	2500 ^a	2800 ^{a1}	3600
		H-4	-	-	-	750	1825	3000 ^{aa}	3300 ^{aa}	3900
10	Groundnut In Shell		-	-	206	580	1220	2300	2700	3700
11	Sunflower Seed		-	-	183			2350	2800	3700
12	Soyabean	Black	-	-	183	600	1170	1400	1650	2200
		Yellow	-	-	190	400	865	1440	1690	2240
13	Sesamum		-	-	-	-	1300	2900	3400	4200
14	Nigerseed		-	-	-	-	1025	2450	2900	3500
	Rabi Crops									
15	Wheat		59	76	130	225	580	1120\$	1285	1350
16	Barley		-	-	105	200	430	780	980	980
17	Gram		40	-	145	450	1100	2100	2800	3000
18	Masur (Lentil)		-	-	-			2250	2800	2900
19	Rapeseed/Mustard		-	-	-	600	1100	1850	2500	3000
20	Safflower		-	-	-	575	1100	1800	2500	2800
21	Toria		-	-	-	570	1065	1780	2425	-
	Other Crops									
22	Copra (Calender Year)	Miling	-	-	-	1600	3250	4450	4525	5100
		Ball	-	-	-	-	3500	4700	4775	5350
23	De-Husked Coconut		-	-	-	-	-	1200	1200	1400
24	Jute		-	-	160	320	785	1575	1675	2200
25	Sugarcane@		-	7.37	13.00	23.00	59.50	139.12	145.0	170.0

Notes: * Additional incentives @ of Rs. 500/- per quintal of tur, mung and urad sold to procurement agencies payable during the harvest/arrival period of two months; # An additional incentive bonus of Rs. 50 per quintal is payable over the MSP; @ Fair and Remunerative Price; a- Staple length (mm) of 24.5-25.5 and Micronaire value of 4.3-5.1; aa- Staple length (mm) of 29.5-30.5 and Micronaire value of 4.5-4.3.

Source: GOI (2012, various issues).

In the past, till 1996-97, MSP recommended by CACP was by and large adhered to by the Government and there were limited market distortions. Private trade played its role as long as market prices were higher than MSP. The first major aberration occurred in 1997-98, when CACP recommended price of Rs. 405 per quintal for wheat was raised by the Government to Rs. 475 per quintal. During the period 1996-97 to 1999-2000, MSP of wheat was raised by Rs. 170 per quintal as against the CACP recommended raise of Rs. 110 per quintal. The changes in MSP show that the increase in rice and wheat prices are the highest during the period 2000-01 to 2010-11 as compared to the earlier decades. The trends in growth of MSP during 1980-81 to 2012-13 (Table 1.5) shows that despite of high dependence on imports of oil by the country, the rate of growth in MSP of oilseed crops has been lower (except sunflower during 1980-81 to 1990-91) than food grain crops. There was significant increase in MSP rate for pulses during 2000-01 to 2012-13, followed by cereals and oilseeds. As compared to decade of 1980s, significant increase in MSP of all the crop has been noticed in 1990s and 2000s (see, Figures 1.1 to 1.4).

Table 1.5: Trend Growth Rates in MSPs (1980-81 to 2012-13)

Year	Growth Rates in MSPs (Percent per annum)		
	1980-81 to 1990-91*	1990-91 to 2000-2001	2000-2001 to 2012-2013
Paddy Common	5.97	9.26	8.04
Coarse Cereals	4.56	9.08	9.09
Wheat	4.93	9.98	8.06
Gram	8.69	8.61	7.77
Arhar(Tur)	9.43	8.75	9.60
Moong	8.43	8.75	11.32
Urad	8.69	8.75	10.67
Sugarcane	6.53	10.00	8.73
Cotton	5.01	9.50	6.51
Jute	6.85	8.79	8.30
Groundnut (in shell)	8.81	7.06	8.11
Soyabean Black	5.57	7.86	8.25
Soyabean Yellow	6.22	7.79	7.28
Sunflower Seed	11.00	6.33	9.57
Rapeseed / Mustard	6.77	6.22	6.05
Safflower	8.08	6.79	6.72

Notes: For the period 1980-81 to 1990-91- figures refers as Gram -1982-83 to 1990-91; Cotton 1983-84 to 1990-91; Rapeseed Mustard- 1982-83 to 1990-91; Safflower 1985-86 to 1990-91.

Source: Computed using data from www.rbi.org.in

Fig 1.1: Growth in MSP of Cereals (1980-2013)

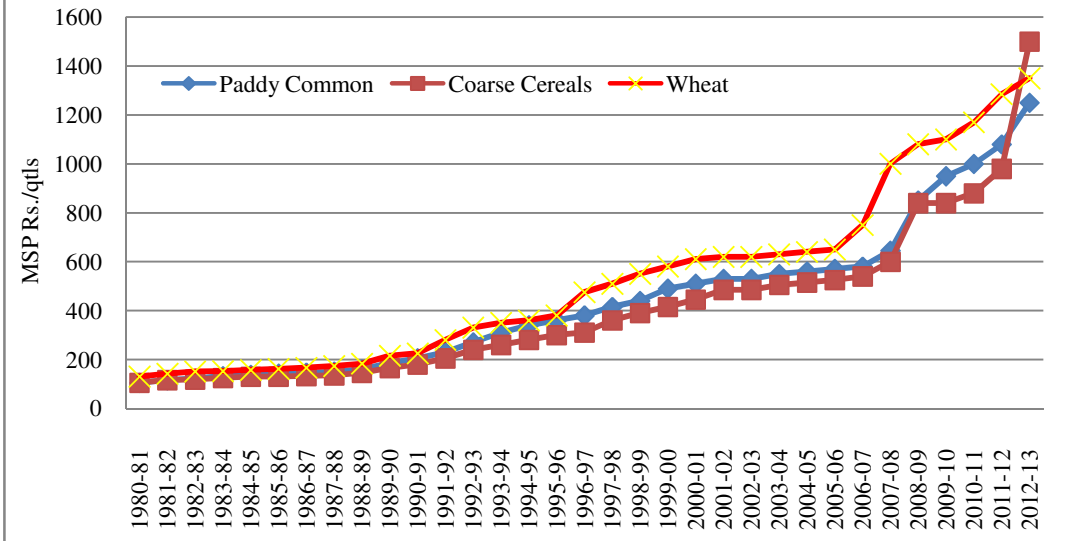


Fig 1.2: Growth in MSP of Pulses (1980-2013)

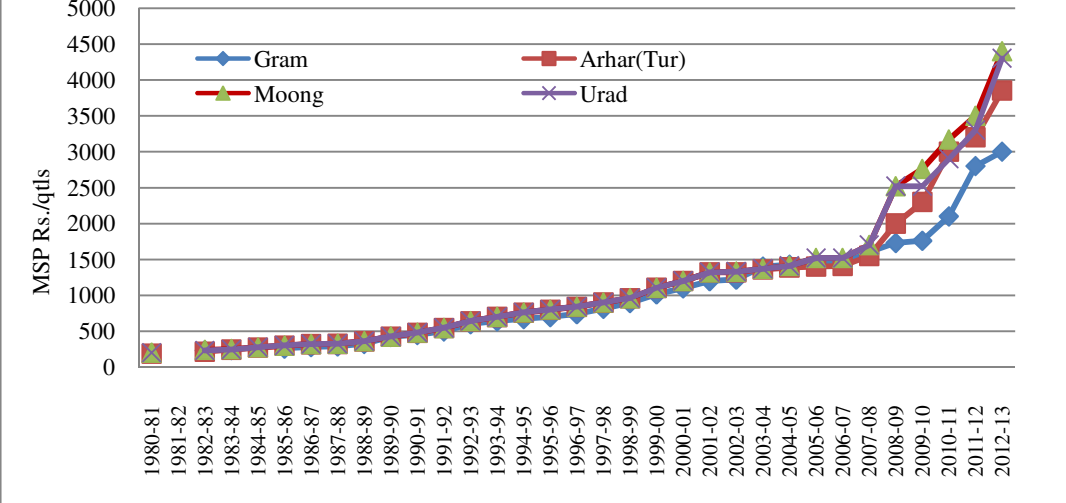
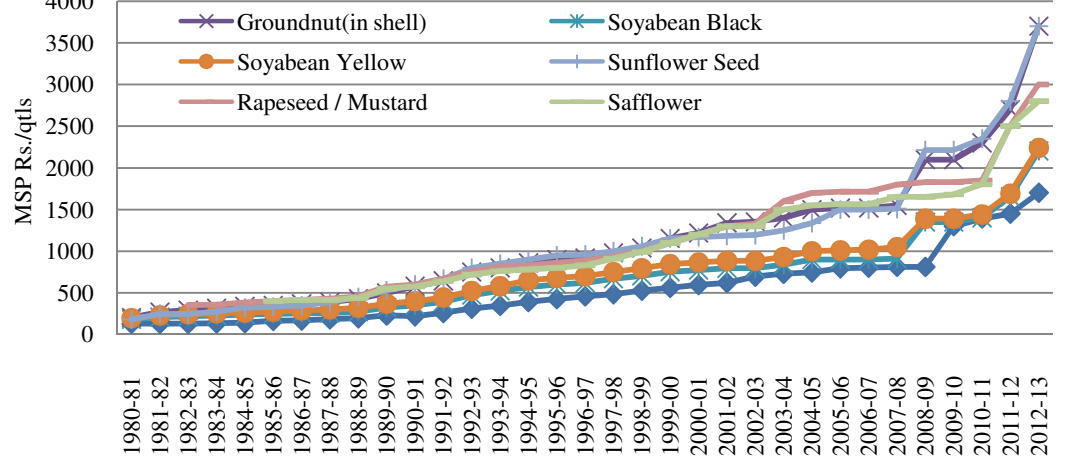
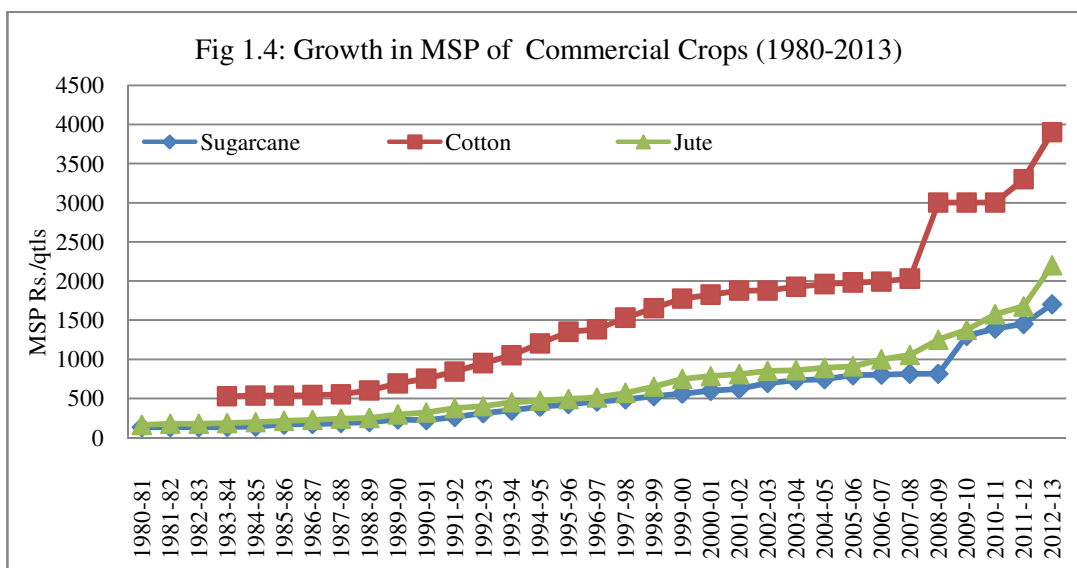


Fig 1.3: Growth in MSP of Oilseeds (1980-2013)





Price Supports Scheme (PSS)

The Department of Agriculture and Cooperation implements the PSS for procurement of oilseeds, pulses and cotton at the Minimum Support Prices (MSP) declared by the government through NAFED which is the Central nodal agency. NAFED undertakes procurement of these crops under PSS as and when prices fall below the MSP. Procurement under PSS is continued till prices stabilize at or above the MSP. Losses if any incurred by NAFED in undertaking MSP operations are reimbursed by the Central government. Profit, if any, earned in undertaking MSP operations is credited to the central government. Under the PSS during 2010-11, procurement was made Milling Copra in four states, viz. Tamil Nadu (7434 metric tonnes), Kerala (12408 metric tonnes), Andaman and Nicobnar Island (5335 metric tonnes) and Karnataka (3086 metric tonnes) for a total value of Rs. 1350 crore.

Market Intervention Scheme:

Market Intervention is another marketing support policy of the government. Over and above the commodities covered under minimum support price scheme, the prices of some other commodities especially of horticultural crops tend to fall drastically during peak arrival period in the market forcing the farmers for distress sales. Under these circumstances with the help of state government, GOI launches Market Intervention Scheme for that particular crop in that season so as to avoid distress sales by the farmers. The Department of Agriculture and Cooperation implement the Market Intervention

Scheme (MIS) for procurement of horticultural commodities and other agricultural commodities which are perishable in nature and are not covered under the Price Support Scheme. The objective of intervention is to protect the growers of these commodities from making distress sale in the event of a bumper crop during the peak arrival period when the prices tend to fall below economic levels and production or a 10 percent decrease in the ruling market prices over the previous normal year. Prices based on the cost of production and other factors for that season are decided for Market Intervention. Government agencies are assigned the job of intervention. The losses are shared equally by Government of India and State Government.

The MIS is ad-hoc scheme and implemented at the request of a State/UTs government which is ready to bear 50 percent of the loss (25 percent in case of North eastern States), if any, incurred on its implementation. The extent of total amount of loss to be shared on a 50:50 basis between the central government and state government is restricted to 25 percent of the total procurement value which includes cost of the commodity procured plus permitted overhead expenses. Under the scheme, in accordance with MIS guidelines, a pre-determined quantity at a fixed Market Intervention Price (MIP) is procured by NAFED as the Central Agency and the agencies designated by the State government for a fixed period or till the prices are stabilized above the MIP whichever is earlier. The area of operation is restricted to the concerned state only. Table 1.6 presents the list of the State with major commodities procured under MIS and PSS⁹.

This policy of Market Intervention also has proved a boon to the farmers in distress. The MIS so far implemented is for commodities like apples, kinnoo/malta, garlic, oranges, galgal, grapes, mushrooms, clove, black pepper, pineapple, ginger, red-chillies, coriander seed, isabgol, chicory, onions, potatoes, cabbage, mustard seed, castor seed, copra, palm oil etc. in the States of Himachal Pradesh, Haryana, Punjab, Andhra Pradesh, Maharashtra, Karnataka, Rajasthan, Gujarat, Kerala, Jammu and Kashmir, Mizoram, Sikkim, Meghalaya, Tripura, Uttar Pradesh, West Bengal, Madhya Pradesh, Andaman and Nicobar islands, Lakshadweep etc. During the year 2010-11, the MIS has been implemented in the five states covering potato (Uttar Pradesh, West Bengal with a total quantity of 10 lakh metric tonnes), oil palm (Andhra Pradesh- 47500 metric tonnes), apple (Himachal Pradesh 6100 metric tonnes) and arecanut (Karnataka 1200 metric tonnes).

⁹ The nodal procurement agencies and commodity-wise procurement is presented in Chapter III.

Table 1.6: List of State with Commodities procured under MIS and PSS

<i>State</i>	<i>Commodities under MIS</i>	<i>Commodities under PSS</i>
Andhra Pradesh	Oil palm, Chilly	Milling copra, Cotton, Sunflower, tur
Haryana	-	Sunflower, Mustard
Himachal Pradesh	Apple-‘C’ grade	-
Karnataka	Oil palm, Arecanut	Ball copra, Sunflower, Safflower, Tur
Kerala	Black Pepper	Milling copra, Ball copra
Madya Pradesh		Urad, Mustard
Maharashtra		Tur, Sunflower, Safflower
Mizoram	Chillies, Ginger, passion fruit, Chow- chow (Iskut)	
Rajasthan	Onion, Garlic	Gram, Mustard
Uttar Pradesh	Potato	Groundnut, Mustard
Uttarakhand	Apple-‘C’ grade	
West Bengal	Potato	Sesamum

Source: Jha, 2012.

Looses Shared by Central and State Governments:

The Central agency often incurs loss in their operation of PSS and MIS. The loss incurred in undertaking the PSS is reimbursed up to 15 percent of MSP of commodity by the central government. In the MIS operation loss is shared equally between Central and state government. In the case of North-Eastern states, share of Central Government in the above loss in operation of MIS is as high as 75 percent. The amount of expenditure incurred in the above schemes suggest that Union and State Government spend considerable amount of public money in undertaking the above scheme; yet plight of growers of many of the above commodity continues. Also, the market price of many agricultural commodities continues to rule below the Government announced support price of commodity. There is also wide gap between price received by producer and price paid by consumer of commodity, which is another important concern of marketing of agriculture commodities in the country.

1.8 Brief Review of Literature:

The brief review of literature is presented here in order to get overview about the views and observations along with the suggestions of the researchers on the price support policy of the government of India.

Dandekar (1966) suggested the guidelines for fixation of support prices of food grains. Author suggested to begin with a programme of minimum support prices under short-term considerations, namely a programmed of support prices to be operated in conjunction with ceiling prices in such a manner that it does not lead to any net accumulation of stocks over a period of years. Author suggested to begin with a low price support and high ceiling. Gradually, as experience gathers, raise the support and lower the ceiling, until the difference between the two is just enough to cover the operational expenses of the programme. The stage will then be reached where the price support may assume the long-term character. While on fixation of price in agriculture on the basis of cost of production, Rath (1966) opined that scientifically and properly collected data on cost of production would be direct help for fixing prices. However, Naraian (1973) opined that income levels in agriculture have to be lifted up not through a policy of high prices involving subsidies but through a continuing drive to improve its efficiency.

The Study Group on Agricultural Price Policy for Balanced Development of Agriculture, appointed by Planning Commission, Government of India (Planning Commission, 1986) mentioned that while agricultural price policy has played a positive role towards raising agricultural production in a situating of general shortages in agricultural production vis-a-vis demand, it would be simplistic to expect that adjustments in relative administered price structure alone would help to overcome shortages. In fact what is of relevance in such a context for appropriate policy formulation is the recognition of the relatively weak response of aggregate agricultural supplies to rising relative prices of agricultural commodities in general. In the absence of price support for major crops, there is no doubt that the terms of trade for agriculture would have deteriorated significantly. In this sense, agricultural price policy pursued so far has helped to maintain the tempo of agricultural development and stabilize agricultural incomes.

FAO (1987) underlines that while deciding intervention price programmes, attention should be paid to the products grown mainly by small farmers. Purchase depot need to be located where small farmers have access to them.

Indu (1987) examined whether or not the purchase operations by NAFED, particularly in case of mustard under price support operations have directly benefited farmers in Rajasthan. Based on the information collected from sixty farmers for two years period (1984-85 and 1985-86), author observed that during 1985-86, out of selected farmers, 86.56 percent farmers disposed of their produce to traders in order to meet their cash requirement. In fact, no marginal farmer had sold produce to Cooperative marketing Society/Kraya Vikray Sahakari Society (KVSS) during year under report. However, totally opposite picture was reported for the year 1984-85, when 100 percent produce of marginal and small farmers and 85.49 percent of large farmer was procured by KVSS. This happened due to lower prices in market in 1984-85, while opposite situation prevailed in 1985-86. Author opined that whatever be the role of NAFED or the co-operative marketing system, still the general market is tightly governed by the traders only. Farmer suggested that NAFED should come to purchase as soon as the harvesting is over, not after 15-20 days of harvest. Also farmers did not have faith in KVSS because of the inefficient management.

After making a devastating case against commodity price stabilization, Williams and Wright (1991) concluded that it is mysterious why so many economists favour price stabilization and so many governments practice it. This question points out to the central challenge of reforming parastatals, the political economy of food price policy. While, some scholars (Vyas 2000) have suggested that crops which can be considered as price leader or the crops for which technological breakthrough is imminent ought to be covered under the MSP and other candidates for support price would be the crops grown in high risk environment. Vyas further adds that in all these cases MSP should be treated as a transient measure *i.e.* till we are able to have viable crop insurance and or forward trade programme.

Acharya (2001) estimated the impact of agricultural price policies and summarized that the policy has been instrumental in creating a fairly stable price environment for farmers to induce them to adopt new production technology and thereby increase the output of food grains. The improvement in the level of food security in India during the last three decades has been widely acknowledged the world over.

The Expert Committee on Strengthening and Developing of Agricultural Marketing, Government of India (2001) mentioned that the policy of Market Intervention has proved a boon to the farmers in distress. The Committee suggested that the operational

efficiency of purchasing agencies need to be toned up in the context of cost efficient purchases vis-a-vis competitive sales so as to avoid or reduce losses. Therefore, the Committee not only recommends continuation of Market Intervention Scheme but also suggests expanding the coverage of this scheme to more commodities. The Expert Committee also recommends that the Government of India may encourage the state government to initiated market intervention operations well in advance for saving the farmers in distress.

Deshpande and Naika (2002) analyzed effectiveness of the Minimum Support Prices in its impact on various parameters of the agricultural economy of Karnataka state. These include growth parameters, distribution aspects, decision-making in allocation of resources, environmental effects and above all as an operational instrument of the price policy. The study reveals that in the case of Karnataka State, the MSP Policy has not played its intended role in the overall Price Policy. This study indicates that wheat and rice got the best out of price policy through MSP but unintentionally this worked as an externality to discourage coarse cereal and pulses. Therefore, the policy is biased against certain crops which are grown in agriculturally backward regions and mostly by resource poor farmers. There are certain factors influencing the effectiveness of MSP e.g. the manner of implementation of the policy, undue dependence on the state for intervention lack of required information at appropriate time, etc. It was also experienced that there are a number of institutions involved in procurement process having inadequate coordination between them. In fact, the MSP Policy has provoked intense debate on the political front than impacting the economic parameters in any positive manner. The study also suggests that MSP should be selectively applied for crops and in the regions specified based on three criteria namely – growth pattern, competitiveness and trade response. The procurement mechanism needs some streamlining and the State governments should be encouraged to setup their own Agricultural Prices Commissions. Such Commissions will help to monitor the prices and the procedure of intervention on the similar lines as has been done in Karnataka.

Further, analysis of this new hypothetical extended procurement system in both the analysis periods are showing by and large same trend that the consumer and producer gains are increasing on the cost of substantially rising fiscal outlays. Substantial increase in fiscal support is accounted to an extensive coverage of procurement by bringing uncovered districts under procurement net. The important fact emerging from the study is

that the fiscal support extended to carry out extended procurement is translating into a gain to a large section of poor farmers. Government subsidy which is benefiting only small pockets of farmers residing in the areas covered under procurement operation to the farmers throughout the state. Since this is a sample based analysis and the percentage changes are calculated based on the reference period figures. It is still an open ended question by this analysis that whether the rise in fiscal burden is compensated by the aggregate gain to the societies or not. Rice and wheat figures prominently in the food grain basket of the people. One would therefore expect that the gain to people, particularly the poor ones, would offset the impact of higher fiscal outlay. Therefore, efforts are needed to achieve lower consumer prices, greater food consumption, and sufficient grain stocks to meet any unforeseen contingencies in future.

Ramaswami (2002) reviewed the economic rationale of food market interventions in India, the problems that arise in designing these policies and their performance. Author observed that India's food market intervention is in crisis. Unable to resist procurement lobbies, public money in the last decade has been used to build grains stocks, subtract supplies and increase in food grains prices. Author argued that price stabilization of food crops favors them over the crops that are not supported. The supply response to price supports must not be underestimated. In markets where procurers hold rational expectations of future prices and supply, price stabilization decreases price variability and procurers increase supply a response of reduction in risk. These effects are even greater in developing country markets, where without futures markets and information dissemination services, producers have little means of forming rational price expectations. In addition, price stabilization reduces irrational forecasting errors and substantially reduces risk relative to the non supported crops.

Singh *et al*, (2002) opined that the price policy is considered to have favored food crops more than the other crops. While Chand (2003) argue that procurement alone can't serve purpose of ensuring MSP in all regions and for all cereals. Alternative options like Deficiency Price Payment (DPP) should be used along with procurement.

Dev (2003) noted that many reports the politicians and farmers in the surplus states have recently been able to influence the minimum support prices in India. Another study by Karwasra, Kundu and Jain (2003) observed the impact of domestic price policy on the production of rice and wheat. The study supported the fact that the MSP for wheat and rice, which have been maintained reasonably high, has helped the farmers to increase their

production. Similarly, Sidhu and Singh (2003) also found that the provision of MSP for wheat and paddy encouraged the farmers to produce the grains as marketable surplus. Shah and Patel (2003) analysed the impact of MSP on the agricultural economy of Gujarat, by collecting the data for the year 2000-01 from 180 farmers of three districts of Gujarat. Authors reported that about 95 per cent sample farmers had decided crops to be sown without taking into consideration of MSP of particular crop/s. Author opined that in view of inter-state variation in cost of cultivation as well as production of crops, uniform application of MSP created regional disparities. More than 50 percent of selected farmers sold their produce within the village. In view of huge buffer stock of rice and wheat and at the same time shortfalls in the supply of oilseeds and pulses, MSP policy should be used for correcting this imbalance and for achieving the desired crop diversification.

Bathla (2004) explored the genesis of interventionist policies of government in the agriculture output markets, evaluated their compatibility with external trade and analyzed essentiality of interventions in the present situation. Author observed that government's role in agriculture output markets has taken place in varied forms and magnitude and its presence is deep rooted. The central as well as the state government regulate output markets through legislative, price policy and regulatory measures within institutional framework. Further, state-wise temporal behavior of production stocks, off-take and procurement of agricultural commodities from 1980 to 2000 reveals that FCI procure annually 10-19 percent the total wheat and rice from major crop producing states. Groundnut seed and rapeseed-mustard face regulations under the Essential Commodities Act (1955), but are free from public procurement. For raw cotton and jute, government functions to serve the needs of the corporate sector and for oilseeds and edible oils, it plays a regulatory role in the markets. Interventions are minimal in the case of potato, turmeric, pepper, horticultural and milk and milk products as these do not fall directly under the government's institutional, legislative and price policy domains. Author concluded that main reasons given behind pervasive government mediation in domestic commodity markets look trivial in today's free market situation. Limited opportunities for private trade under the ECA, commodity specific controls, zonal restrictions on movement of produce, compulsory procurement through levy etc are stated to be counterproductive and have distortionary impact on the interests of farmers, traders, millers and other stakeholders in the marketing system. The policies have not only made the system dependent on government fixed prices and procurement operations with little role of the

market forces to play; they are seen as drain on the exchequer. These are also stated to have resulted in misallocation of resources, unsustainable farming practices guided by support price, regional bias, absence of modernization in the marketing system and low public and private investment.

World Bank (2004) noted that current food grain policy framework in India is not sustainable from the fiscal, economic and agricultural productivity perspectives. The cost of existing policies is very high, especially when implementation of the price support programme is found to be benefited only farmers in a few states, and within these states, mainly large farmers. Moreover, the price bias in favour of rice and wheat, which encourage their cultivation in less ideal agro-ecological areas, is causing environmental damage that will progressively undermine the longer-term productive capacity of agriculture lands in these areas. The study brought out the some reform options such as set rice and wheat MSPs at C2 costs and freeze current levels over the longer term and phase out price support completely.

Deepa (2005) assessed the performance and impact of Market Intervention Scheme for Agricultural Commodities in Karnataka for the period 2000-01 to 2004-05. Author observed that the scheme came into preparation in the year 1993-94 in Karnataka and was not operated continuously from its inception. The share of procurement in the case of maize varies from 0.03 to 10.04 percent to its total production and 0.02 to 23.22 percent of market arrivals in the study period. Similarly, in the case of ragi varies from 1.97 to 3.07 per cent, for Bengal gram 0.46 to 1.06 per cent of total production. However, tur, onion, and potato were procured in only one year. The scheme has a positive impact on price movement in all the commodities except in tur. Benefits accrued to the farmers by selling their produce in the procurement centers was found to be positive and ranges from Rs. 261.21 to Rs. 14.63 per quintal in almost all crops except in tur and potato.

The Situation Assessment Surveys of the National Sample Survey Organization (2005)¹⁰ indicated that of the total surveyed farmers, only 29 percent were farmers were aware about the MSP. About 19 percent farmers not only understood the idea of

¹⁰ The National Sample Survey Organization (NSSO) undertook a comprehensive survey to assess the status of farmers in the country in the year 2003 at the request of the Union Ministry of Agriculture. NSSO (2005) covering data of 59th Round (January-December 2003) published series of *Situation Assessment Survey of Farmers* in five issues/reports, viz. Consumption Expenditure of Farmers Household (Report No. 495), Some Aspects of Farming (Report No. 496) Expenditure and Productive Assets of Farmers Households, Report No. 497, Indebtedness of Farmer Households(Report No. 498), Access to Modern technology for Farming (Report No. 499).

minimum support price but also knew the agency (if not its name, its location) to which they could sell their crop if its market price fell below the minimum support price. Again, 10 percent of farmers were aware of the concept of MSP but not of the procurement agency. The remaining 71 percent did not know or understand the concept of MSP. Among the major states, awareness was far the highest in Haryana (62 percent), followed by Kerala (61 per cent), and the lowest in Rajasthan (11 per cent only). Thus, about 89 per cent of sample farmers in Rajasthan were unaware about the MSP.

As noted earlier by other authors, Chand (2006) also opined that MSPs have been very effectively implemented for some crops and in some regions through procurement of produce by official agencies. These include procurement of paddy and wheat by FCI and other official agencies in the states/regions like Punjab, Haryana, Western Uttar Pradesh and Tamil Nadu, which were early adopters of green revolution and offer sizeable marketed surplus. While related to recent debate of recommending higher support prices, it is important note here is that National Commission on farmers (NCF, 2006) had recommended that MSP should be at least 50 percent more than the cost of production and that the 'net take home income' of farmers should be comparable to those of civil servants.

Bhalla (2007) mentioned that success of minimum support price can be judged by the fact whether prices fell below the MSP during a bumper crop season. Author quoted that most of studies on the implementation of price policy bring out that price policy was fairly successful in enabling the producer to obtain minimum price for their produce. Although in some years, prices did rule slightly below the MSP, but these differences can be attributed to moisture or quality differences. In any case the differences were very small. Large scale purchases by the FCI were instrumental in keeping the prices above MSP in surplus areas. Hence, implementation of MSP has been quite successful.

Deshpande (2008) noted that price policy has been asymmetric in terms of crops as well as regions and this can inflict inequality even though a well-intended intervention measure. Such externalities inflicted by a deliberate policy bias on coarse cereals and pulses sector as well as on regions growing these crops, can be seen in their growth rates and income foregone in the process. This experience requires a selective price policy with clear focus on the outcome. Author suggested that MSP should be selectively applied for crops and regions, based on three criteria: growth pattern, competitiveness, and trade response. Also suggest three alternatives considers as either supporting or replacing the

MSP: direct payment system, income/price linked insurance scheme, and operations of forward/future markets.

Rajkumar *et al.*, (2008) analyzed the coverage of onion and maize growers under Market Intervention Scheme (MIS) in Karnataka by selecting two northern districts of the state, viz. Dharwad and Gadag. The coverage of farmers, especially small farmers, under the scheme has not been found satisfactory. The main problems being faced by the farmers in availing MIS benefits have been identified to include procedural complexities of the scheme, delayed payments and the requirement of meeting Fair Average Quality (FAQ) stipulations for the crops. It has also been revealed that farther are the procurement centres, more is the likelihood of the farmers to go in for open market sales. The study has suggested to cover a larger number of farmers under MIS by simplifying the procedures, making timely payments and increasing the number of procurement centres.

Rashid, *et al.*, (2008) assessed the policy justifications for public intervention, critically reviewed the current policy practices, and infer the cost implications of the Indian government's grain policy. They observed that rationales for public intervention in grain markets have changed over the years. None of the commonly accepted rationales for intervention appears persuasive in this century. Though there is improvement in transport and communication infrastructure, new technology adoption by farmers and non-existence of international liquidity constraints, yet the policy paradigm continues to be more or less the same as during the early years of the Green revolution. Further, FCI continues to enjoy the preferential treatments under a host of regulations, including cheap and large amounts of credit, preferential access to transport, and monopoly control over export of wheat and import of pretty much all types of grains. By contrast, the private sector's operations are constrained by storage restrictions, limited access to trade credit, and a myriad of state regulations. The consequences of holding on to the old paradigm have manifested themselves in many ways: program are becoming increasingly expensive and inefficient, crowding out resources from alternative investment, and are increasingly dictated by rent-seeking individuals and special interest. Authors suggested for reform by lifting the restrictions on domestic markets by eliminating rice levies, delinking minimum support prices from procurement prices, eliminating restrictions on private stocks, and discontinuing cheap credit and preferential treatments to FCI. This course of action will reduce procurement (and stock), help private markets and institutions (including risk mitigation) evolve and diminish FCI's role in India's grain markets.

Acharya (2009) suggested that the policy of minimum support prices should be rigorously pursued and its effective implementation should be ensured for all the crops covered under the scheme and in all the areas, including the eastern states. Chand (2003) argues that the price policy implemented in the last four and half decades has mainly benefited wheat and rice among food grains and sugarcane and cotton among other crops, which has resulted in a shift of good quality land and other resources to these crops away from pulses, oilseeds and other crops. The policy has had a positive impact on farm income and has led to economic transformation in the well endowed, mainly irrigated regions. Author suggested that the many changes that have taken place in the country's agriculture, most important of all the changes in the demand supply balance in respect of the major crops, urgently call for a fresh look at the role and relevance of the system of minimum support prices.

Suwen *et al.*, (2009) analyzed the impacts of increased minimum support prices in India on World and US cotton markets and observed that increase in Indian MSP has significant impact on world cotton production and trade flows. It is not subject to WTO discipline because India designated as developing country. Indian MSP has roughly the same total impact of world markets prices as total U.S. cotton program.

Dev and Rao (2010) opined that agricultural price policy has been largely successful in playing a major role in regard to providing reasonable level of margins of around 20 per cent over total costs to the farmers of both rice and wheat. In turn, it seems to have encouraged farmers' investments in yield increasing technology and in increasing production and enabling sufficient procurement for buffer stocks and providing physical access to food by achieving and maintaining self sufficiency. They suggested that higher emphasis has to be given to non-price interventions through public investments to supplement price policy measures.

Rao (2012) described the three weaknesses in the present price support measures using the clues given by the crossroads, those are concept of remunerative prices, biases in the fixation of MSPs across crops and in making adequate arrangements at the state level for procurement, and they are part of a policy regime depending heavily on subsidies rather than investments in its priorities. He concludes that political clout of farmer lobbies and their bargaining with the government remain a major influence on conceptualization of remunerative prices, fixing of MSP and adequacy of arrangement for procurement of crop outputs. As a consequence, the economic aspects of price support like providing

incentives to farmers and promoting growth did not receive the emphasis they need and a large part of agriculture remained excluded from the benefits of price support measures.

Ali, et al., (2012) examined the effectiveness of minimum support price policy for the Paddy in different regions of India and its role and contribution towards production in surplus states like Punjab, by using secondary data for the period from 1980-81 to 2006-07. Author observed that while the MSP policy has been very effective in surplus producing states like Punjab and Andhra Pradesh, it has not been so effective in the deficit states. In Punjab, the effective implementation of the price policy has helped in improving the production and productivity of rice. Non-price factors such as use of improved varieties, availability of assured irrigation at subsidized rates and high fertilizer-use have been found to be significant determinants of growth in rice production. The study has suggested that without losing sight of the environmental concerns, the Punjab model can be used for increasing the production of rice in other potential areas of the country.

Narayanamoorthy (2012) argues that MSP for most crops was not increased in consonance with the rise in the costs of production. Therefore, as recommended by the National Commission on Farmers (NCF, 2006) and supported by the working group on agriculture production appointed by the government of India, MSP should be fixed at least 50% more than the cost of production. Further, MSP should also be linked with WPI to protect the farmers from inflation in the inputs market. Announcing a hike in MSP alone will not guarantee any profit for cultivators, unless post-harvesting arrangements such as procurement centres, storage facilities, transport, etc, are established. Except paddy and wheat crops, the procurement facilities for other crops are woefully poor even today, which allows the middlemen to fiddle with the process. No great improvement has been seen in the post-harvesting facilities in recent years and, therefore, this needs to be improved at a war footing speed. However Chand (2012) opined that honoring price guarantee through procurement, which always involve raise in price, also leads to serious price distortions, and therefore new mechanisms have to be devised to protect producers against the risk of the price falling below the threshold level. A few experiments such as direct procurement backed by technical support have benefited farmers immensely. These indicate that the participation of cooperatives and private sector firms in marketing agricultural produce under specific conditions can help farmers. This calls for a thorough review of existing agricultural marketing policies, and implementing changes to bring producers closer to consumers.

Narayanamoorthy and Suresh (2012) examined that whether or not the agricultural price policy in India has benefited the paddy farmers by using secondary data covering period from 1950-51 to 2011-12 and observed that although the absolute price provided for paddy is relatively lower than wheat over the years, the rate of increase in paddy price is found to have increased at a faster rate as compared to wheat price between 1965-66 to 2011-12. The procurement of paddy today accounts for over one-third of its production, whereas the same is only about one fourth of the production of wheat. The analysis shows that except for Punjab where paddy farmers have been consistently making profit since 1980-81, farmers from all other states both from low and high productivity groups have incurred losses in relation to cost C2. Authors suggest that there is a need to strengthen the procurement infrastructure to have consistent profit from paddy cultivation, which is clearly evident from the experience of Punjab farmers. Therefore, procurement agencies should make efforts to improve upon the procurement arrangements along with the announcement of MSP.

Narayanamoorthy and Ali (2013) argued that costs of cultivation of sugarcane have gone way beyond the fair and remunerative prices announced by the Government and therefore there should be increase procurement price for the crop. Author mentioned that distressed farmers from the state of Maharashtra, Tamil Nadu, Andhra Pradesh and Haryana have been urging the State government to raise sugarcane price as suggested by the National Commission on farmers headed by M.S. Swaminathan, which recommended a price of 50 percent more than the cost of cultivation (C2 cost). The data published by the CACP for major sugarcane growing states vividly portrays that sugarcane cultivation is unviable as inputs cost have gone up and about 40 percent of their cost of cultivation on harvesting alone. Author suggests that implementing the recommendations of the Rangarajan Committee and fixing cane price in accordance with the National Commission on Farmers will improve the situation.

Overall, the review of literature shows that the price support policy has been provided some degree of insurance to the farmers. However, there are bottlenecks in implementation of these schemes as well as its relative benefits to the farmers. In the recent years, the MSP policy has been criticized by both farmers and proponents of free trade. Farmers always demand a substantial hike in MSP, whereas pro-free agricultural trade tinkers feel that most of the times, MSP is not in the line with the international prices as well as domestic demand and supply situation. This brings distortions and inefficiencies

in the production patterns (Ali et al, 2012). There is also a feeling among some quarters that the support price for paddy has been increased substantially over the years, which is unwarranted (Bhalla, 2012). Agricultural price policy has been argued to have widened the farm income inequalities also (Singh et al, 1986). It is further contended that the MSP has outlived its utility and is being used more as a political tool than an economic instrument (Ali *et al.*, 2012). Therefore, it is important to study this aspect.

1.9 Need of the Study:

There is broad recognition that the recent rapid increase in the minimum support prices for rice and wheat was a major contributor to recent problems of mounting buffer stocks (World Bank, 2004). Therefore, agricultural price policy has come under serious attack in recent years for recommending higher support prices than warranted by the costs of production (CoP) and supposed distortion of the market, leading to food deprivation. It is also blamed frequently for the spikes in prices of food items that reached their peaks in 2009 (Dev and Rao, 2010). The Central agency often incurs loss in their operation of PSS and MIS and the amount of expenditure incurred in the above schemes suggest that Union and State Government spend considerable amount of public money in undertaking the above scheme; yet plight of growers of many of the agriculture commodities continues. Also, the market price of many agricultural commodities continues to rule below the Government announced support price of commodity. The wide gap between price received by producer and price paid by consumer of commodity is another important concern of marketing of agriculture commodities in the country. In this backdrop, the Department of Economics and Statistics, Department of Agriculture and Cooperation, Ministry of Agriculture, Government of India has proposed state specific studies to evaluate the PSS and MIS, which were assigned to the AERCs/units located at different states in India. Rajasthan is the second largest gram growing and producing states in India after Madhya Pradesh, accounting for 17.24 percent area and 13.07 percent production of the country in 2011-2012. In case of garlic also, Rajasthan rank first in terms of area under this crop (24.25 percent) and third in production (19.26 percent) during 2011-2012. Thus, having predominance cultivation of these crops and on the basis of procurement of these crops under these schemes during recent past, it would be important to evaluate the PSS and MIS. Therefore, our centre was entrusted to conduct the study for the states of Rajasthan covering Gram and Garlic crop with following specific objectives:

1.10 Objectives of the Study:

The specific objectives of the study are

- i) To understand coverage of MIS and PSS across crops and regions.
- ii) To ascertain factors that influence coverage of crops across regions in Rajasthan.
- iii) To understand levels and basis of participation of farmers in MIS and PSS of selected crops in Rajasthan.
- iv) To understand problem of different stakeholders in operation of MIS and PSS of selected crops in Rajasthan.
- v) To study the effect of MIS and PSS on the market price of selected commodity in Rajasthan.
- vi) To assess efficiency of Central/State Agencies in operation of MIS and PSS of selected crops in Rajasthan.
- vii) To suggest policy measures to improve operations of MIS and PSS in Rajasthan.

1.11 Limitation of the Study:

The main limitation of the study is that as per the study design, it was not possible to get the adequate number of beneficiary farmers from only two villages. Thus, we had to survey more number of villages, which were considered in one cluster. Secondary statistics on most of the parameters related to selected village and some parameters of selected block/tehsil were not available. Therefore, non availability of same is noted in the respective places. The selection of crop was done by the Coordinator of the Study (IEG, Delhi) and thus one crop each from PSS and MIS (Gram and Garlic) was selected and data were collected on the basis on procurement year. Therefore, data year are different for selected crops.

1.12 Organization of the Study:

The study is divided into six chapters. Chapter 1 is the introductory chapter, followed by Chapter 2 which presents data and methodology used in the present study. In Chapter 3, procurement agencies and their purchases are discussed. The socio-economic profile of selected state, districts and sample farmers, etc. is discussed in Chapter 4. The findings from the primary data are presented and discussed in Chapter 5. The broad conclusions and policy implications are discussed in the last chapter.

Data and Methodology

2.1 Data Sources:

This study has been carried out for the state of Rajasthan by using primary and secondary level information. The main objective of the present study was to evaluate the coverage and implementation of Price Support Scheme and Market Intervention Scheme in Rajasthan State. While macro-level data have been used to study the coverage of MIS and PSS in different districts of Rajasthan, micro-level data collected from the sample farmers have been used to evaluate the coverage and impact of MIS and PSS. The secondary information about coverage of PSS and MIS for crops was obtained directly from the various government and cooperative organizations. The existing information on MIS/PSS operation available at the level of State has been collected from NAFED, RAJFED and Tilam Sangh, Jaipur. The first objective about coverage of MIS and PSS is based on the above information.

The second objective was to ascertain the factors that influence selection of crops for states. A glance to coverage of crops in states and our experiences with the price of commodities in different market suggest that the MIS/PSS decisions are not exclusively based on price consideration. The non price related factors that possibly influence decision of MIS/PSS have been discussed after assessing the State Government policy for market, MIS operations, political and economic importance of commodity for state and similar other issues. Information on procurement of selected crops under PSS and MIS in State and districts was obtained from State agencies mandates for MIS and PSS.

The third and fourth objectives of the present study is based on primary information collected from the selected growers of gram (PSS) and garlic (MIS) crop. The sampling technique used for the selection of farmers from villages and other state holders is discussed separately in 'Sampling Framework' section of this chapter. Information on coverage of farmers in different regions of state, their levels of satisfaction from the scheme and similar other information collected from procurement agencies and selected farmers from the chosen districts. The information related to the problems faced by different stakeholders in the above schemes (MIS and PSS) is collected from the Department of Agriculture, Govt. of Rajasthan; Central and State procurement agencies (like NAFED, RAJFED, Tilam Sangh,

etc.), Agriculture Product Marketing Committee (APMC) officials, State and district officials especially the District Agricultural Officer, local land revenue officials, Village heads and farmers.

The effect of MIS on market prices of commodities has been assessed by analyzing secondary information on market price of commodities in districts during different period (months and years) and their collation with the MIS/PSS activity in the region. The time series information on price and related information was obtained from secondary sources.

The efficiency of various government parastatals / agencies like NAFED, RAJFED, Tilam Sangh (in operation of MIS and PSS) has been assessed by collecting information from the above agencies about their operation of MIS and PSS for different commodities across districts. The key officials of the above agencies were questioned about the operation of MIS/PSS. The information on kind of problems these agencies face in coordinating various activities related to MIS / PSS operations were collected.

2.2 Selection of Crops and Districts

As mentioned in earlier chapter, the government sets minimum support prices for 25 major crops, namely paddy, jowar, bajra, maize, ragi, arhar (tur), moong, urad, cotton, groundnut-in-shell, sunflower seed, soyabean, sesamum, nigerseed, wheat, barley, gram, masur (lentil), rapeseed/mustard, safflower, toria, copra, jute and tobacco and Statutory Minimum Price (SMP) for sugarcane. The literature on MIS compiled from different sources suggest that MIS has been in operation for apples, kinoo/malta, garlic, orange, galgal, grapes, mushroom, clove, black pepper, pine apple, ginger, red chillies, coriander seed, isabgol, chicory, onions, potatoes, cabbage, mustard seed, castor seed, copra, palm oil. The beneficiary States in MIS are Himachal Pradesh, Haryana, Punjab, Andhra Pradesh, Maharashtra, Karnataka, Rajasthan, Gujarat, Kerala, Jammu and Kashmir, Mizoram, Sikkim, Meghalaya, Tripura, Uttar Pradesh, West Bengal, Madhya Pradesh, Andman and Nicobar islands, Lakshadweep etc. Though is in operation for many commodities, in different states; Division of cooperation (DOC) Ministry of Agriculture (MoA) had suggested to evaluate PSS for pulses and oilseeds only.

In the state of Rajasthan, during recent past, PSS operations are carried out for two food grain crops such as gram and wheat, one oil seed crop i.e. rapeseed mustard. The perishable/semi-perishable commodity such as garlic is procured by the procurement

agencies under MIS. After obtaining data on statewide coverage of PSS and MIS (see, Table 1.6) and crop-wise procurement in Rajasthan during the last ten years (Table 2.1), two crops (one from each scheme), i.e. gram (for PSS) and garlic (for MIS) were selected for this study. The details about the crop procurement under PSS and MIS in Rajasthan shows that RAJFED and Tilam Sangh are the two nodal agencies involved in the procurement of the agricultural commodities, particularly procurement of wheat, gram, rapeseed mustard under PSS and garlic under MIS during recent past.

Table 2.1: Details about the Crop Procurement under PSS and MIS in Rajasthan during last five years

Year	Commodity	Scheme	Major Procurement Agency
2008-09	Wheat	PSS	RAJFED (KVSS), Tilam Sangh
2009-10	Wheat	PSS	RAJFED (KVSS), Tilam Sangh
2010-11	Wheat	PSS	Tilam Sangh
2011-12	Wheat	PSS	RAJFED (KVSS), Tilam Sangh
2012-13	Garlic	MIS	RAJFED(KVSS), Tilam Sangh
2012-13	Urad	PSS	RAJFED

Source: NAFED, Jaipur.

The details about district-wise production, market arrival and procurement of gram under PSS are presented in Table 2.2A. It can be seen from the table that there was significant decrease in gram production in 2011-12 as compared to earlier year 2010-11. Jaipur, Churu, Bikaner followed by Jaisalmer are the major gram producing districts. Where as in case of garlic crop (Table 2.2B), Kota, Baran, Jhalawar and Chittorgarh are the major garlic growing districts. There was significant increase in garlic production in 2011-12 as compared to earlier year 2010-11. However, the garlic procurement under MIS during 2012-2013 was hardly 62799 quintals mainly from four districts namely Kota, Baran, Bundi and Jhalawar.

It was observed that in some case, the percentage of total arrival to total production of that particular district has been estimated more than 100 percent, which may be because of inter-district movement due to market price variation. As seen in earlier Chapter (Table 1.2), MSR for gram in Rajasthan is recorded to be 86.58 percent in 2010-11, whereas ratio

of market arrival to total production at State level during 2010-11 was hardly 10 percent in 2010-11 and about 45 percent in 2011-12.

Table 2.2 A: Data regarding Production, Total market arrivals and Procurement of Gram crop under PSS in different districts of Rajasthan

Districts	Production (Qtls.)		Market Arrivals (Qtls)		Procurement under PSS (Qtls)
	2010-11	2011-12	2010-11	2011-12	2011-12
Ajmer	924070	666450	34124	464310	12783
Jaipur	1894220	924760	73484	318582	7583
Dausa	120860	128280	47791	177335	1245
Sikar	941210	605340	66377	185663	5830
Jhunjhunu	1418120	777170	79838	62628	0
Alwar	206430	147240	28854	95964	0
Bharatpur	85720	63240	3641	5187	0
Dholpur	20340	19390	1454	0	0
S. Madhopur	279780	183230	90614	173225	192
Karauli	222260	196140	9063	41330	86
Bikaner	1454500	1221270	379639	797990	0
Churu	2228120	409560	64350	182256	0
Jaisalmer	520350	810070	49751	230991	10161
Sri Ganganagar	988540	733790	125570	437684	0
Hanumangarh	1268500	785010	65427	199862	0
Jodhpur	52080	30710	43542	67586	0
Barmer	9620	3640	3152	6818	0
Nagaur	680760	109270	60624	126436	0
Jalore	32900	Neg.	Neg.	182	0
Pali	400920	137640	17572	149151	381
Sirohi	67460	56070	1139	1893	0
Kota	73870	84720	111374	180661	447
Baran	120590	51000	36806	53175	187
Bundi	106800	72660	16974	27286	2453
Jhalawar	283230	151520	58499	44638	0
Tonk	472110	613330	28373	287145	18595
Banswara	107630	134970	340	240	0
Dungarpur	125870	188970	1048	768	0
Udaipur	150040	109390	20839	24621	0
Bhilwara	434960	232230	8704	33389	3381
Chittorgarh	87310	56770	2955	5759	0
Rajsamand	12010	9400	0	0	0
Pratapgarh	216000	186630	33396	35928	0
Total State	16007180	9899860	1565314	4418683	63324

Notes: Neg.- Negligible; figures are rounded off.

Sources: GOR (2012), Vital Agricultural Statistics, 2010-11, Directorate of Agriculture, Rajasthan; www.krishi.rajasthan.gov.in, and http://www.rsamb.rajasthan.gov.in/amb/1/mandishow.asp

Table 2.2B: Data regarding Production, Total market arrivals and Procurement of Garlic crop under MIS in different districts of Rajasthan

Districts	Production (Qtls.)		Market Arrivals (Qtls)		Procurement under MIS (Qtls)
	2010-11	2011-12	2010-11	2012-13	2012-13
Ajmer	130	100	89	13567	0
Jaipur	540	730	1096	46462	0
Dausa	0	50	0	0	0
Sikar	910	2630	0	0	0
Jhunjhunu	9300	0	2246	0	0
Alwar	20	60	2660	0	0
Bharatpur	0	40	700	0	0
Dholpur	30	720	159	0	0
S. Madhopur	380	560	0	0	0
Karauli	0	190	0	0	0
Bikaner	0	100	0	7526	0
Churu	0	0	349	0	0
Jaisalmer	0	0	0	0	0
Sri Ganganagar	11480	21600	5854	6277	0
Hanumangarh	200	690	313	0	0
Jodhpur	49520	46890	330	54189	0
Barmer	0	0	16	0	0
Nagaur	2220	6210	0	0	0
Jalore	50	60	0	0	0
Pali	150	160	515	0	0
Sirohi	130	120	16	0	0
Kota	685440	982560	515	709790	37115
Baran	423100	128290	148669	60845	13334
Bundi	24490	83860	0	0	5302
Jhalawar	205520	448770	358	0	7048
Tonk	20	80	0	0	0
Banswara	30	240	32	0	0
Dungarpur	300	300	0	0	0
Udaipur	1310	1870	0	15864	0
Bhilwara	11640	21350	8991	0	0
Chittorgarh	260380	381790	16180	0	0
Rajsamand	3360	7290	0	0	0
Pratapgarh	173760	222480	28732	0	0
Total State	1864410	2359790	217820	914520	62799

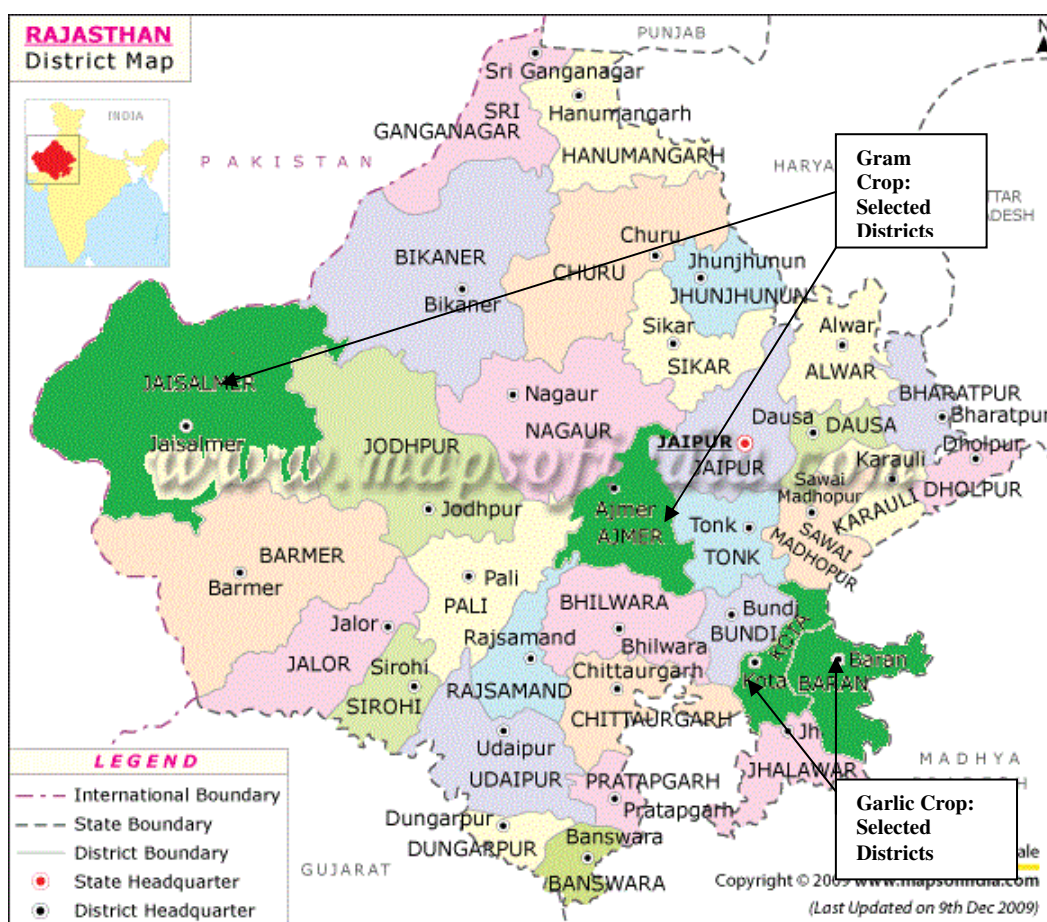
Note: Figures are rounded off.

Sources: GOR (2012), Vital Agricultural Statistics, 2010-11, Directorate of Agriculture, Rajasthan; www.krishi.rajasthan.gov.in, and <http://www.rsamb.rajasthan.gov.in/amb/1/mandishow.asp>

2.2 Sampling Framework

After preliminary investigation about the crop-wise and year-wise procurement under MIS/PSS in the State, two crops, one crop from each scheme i.e. PSS and MIS were selected. The selected crops were Gram (PSS) and Garlic (MIS). For each of the above mentioned crop, two districts were selected on the basis of procurement done by the agencies appointed by the Government. In case of Gram, Ajmer and Jaisalmer district were selected¹, as these districts represent extreme market related infrastructure for the crop. In case of garlic, Kota and Baran² district were selected (Map 2.1).

Map 2.1: Location of the Study Area in Rajasthan State



¹ These two districts shows extreme variation in productivity as well as other related infrastructure. Jaisalmer district located in Thar Desert recorded as the one of the lowest productivity districts (Rs. 3317/ha) while Ajmer is relatively better off (Rs. 6616/ha) (Chand et al, 2009).

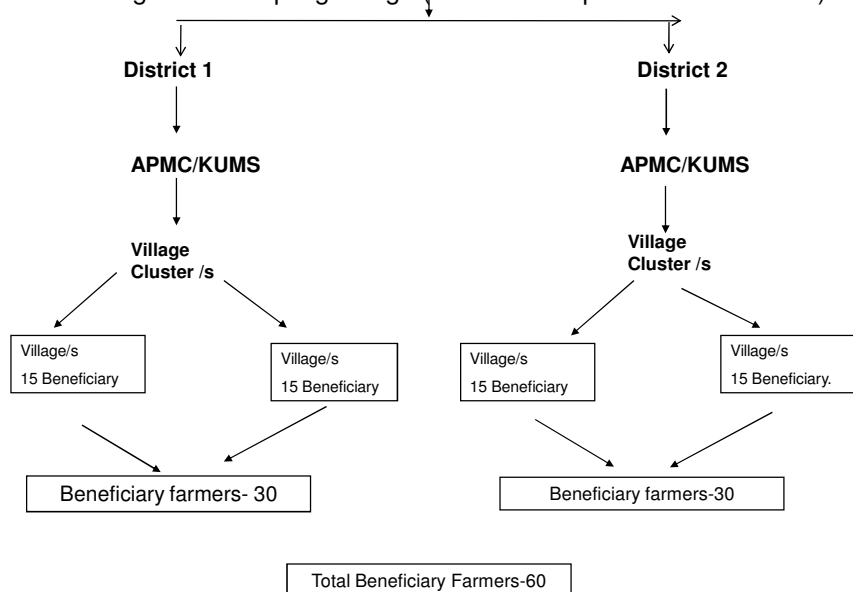
² Baran and Kota are the found to be most productive district in the state of Rajasthan with per hectare output of Rs. 31-33 thousand.

In each of the selected district the most important regulated market was chosen. The same is used as benchmark of selection of two village clusters. Total 15 farmers were selected randomly from each village cluster (of two to three villages) so as to make the sample size of 30 in each district. Thus, total 60 farmers for each of the selected crop were selected (Table 2.3 and Fig. 2.1).

Table 2.3: Details about Selected Crops and Districts in Rajasthan

Crop	District	Block /Market	Main Yard/Sub- yard	Villages	Distance from Main Yard/Sub- yard (Av.)	No. of selected farmers
Gram	Jaisalmer	Nachana and Mohangarh	Sub-yards	Nachana, Mohangarh	2 kms	30
	Ajmer	Kishangarh, Kekadi	KUMS	Tiloniya, Faloda, Kekari, Kaleda, Molakiya, Titariya, Kohada, Mehoda kala	15 kms	30
				Total		60
Garlic	Kota	Ladpura and Sultanpur	KUMS	Tathed, Brajeshpura, Manasgaon, Sultanpur, Amarpura, Nautada Kherula	7 kms	30
	Baran	Chipabarod	KUMS	Chipabarod, Tancha, Tanchi, Dholam, Borkhedi, Bherupura Gordhanpura, Setkolu	8 kms	30
Total						60

Fig. 2.1 : Sampling design (Selected Crops: Gram and Garlic)



The distribution details of selected farmers as per market and land holding is presented in Table 2.4. In total, in case of gram, four village clusters from two selected districts were selected and visited to cover 60 sample farmers, while three village clusters from two selected districts selected and visited to cover 60 sample farmers for garlic crop. If we look at the distribution of farmers as per size of land holding, no farmer from the marginal and small category (i.e. less than 2 ha) in Jaisalmer district and marginal farmer in Ajmer district could included/interviewed. This was because of the fact that average land holding size was 10.47 ha and 2.06 ha respectively in Jaisalmer and Ajmer (2005-06) and that to participation of these categories of farmers in PSS is very low. Therefore, we could not get any farmer from these categories. It could be seen from the table that marginal and small farmers accounts very low share in total selected sample in both the cases. The share of number of medium farmer in total selected sample size was 18.33 percent in gram and 33.33 percent in garlic. In total, 20 percent farmers belongs to the farmer group having land less than 5 ha in case of gram, while corresponding figure is 42.33 percent in case of garlic cop.

Table 2.4: Details about the distribution of Sample Farmers

Crop	District	Regulated market	Blocks/ Tehsil	Village cluster	No. of farmers selected MIS/PSS	Category of farmers (as per size of holding)			
						Marginal (< 1 ha)	Small (1-2 ha)	Med. (2-5 ha)	Large (>5 ha)
Gram	Jaisalmer	2 (5)	2 (3)	2	30	0 (0.0)	0 (0.0)	2 (6.67)	28 (93.33)
	Ajmer	2 (20)	2 (9)	2	30	0 (0.0)	1 (3.33)	9 (30.0)	20 (66.67)
	Total respondent	4 (25)	4 (12)	4	60	0 (0.0)	1 (1.67)	11 (18.33)	48 (80.00)
Garlic	Kota	2 (12)	2 (5)	2	35	1 (2.86)	1 (2.86)	12 (34.29)	21 (60.00)
	Baran	1 (12)	1 (8)	1	25	1 (4.00)	2 (8.00)	8 (32.00)	14 (56.00)
	Total respondent	3 (24)	3 (13)	3	60	2 (4.00)	3 (5.00)	20 (33.33)	35 (58.33)

Note: Figures in parenthesis are total no. of Regulated market/Blocks/ in respective districts.

Source: Field survey

Reference Year:

As the selection of crop was done on the basis of procurement carried out by the nodal agencies in Rajasthan during the recent past, therefore reference year differs. In case of Gram, the data were collected from the beneficiaries for the agriculture year 2010-11 (Rabi 2011) and sold during the period from April 2011 to June 2011. While in case of Garlic, data were collected for the agriculture year 2011-12 (Rabi 2012) and sold during the period from June 2012 and July 2012.

After having discussed about the data and methodology used in the present study, next chapter present the details about the procurement agencies and their purchases in India and Rajasthan during the recent years, with special focus on gram and garlic.

Purchase Agencies and their Procurements

3.1 Introduction:

A large number of public-sector institutions and cooperative marketing organizations were set up after Independence to improve the market structure, its conduct and performance, and to help growers realize better returns for their produce. The Govt. policy of procurement of food grains has the broad objectives of ensuring MSP to the farmers and also ensuring availability of food grains to the weaker sections at affordable prices. It also ensures effective market intervention thereby keeping the prices under check and also adding to the overall food security of the country. As mentioned in earlier chapter, India's agricultural price policy comprises four element: (i) a minimum support price to be announced before the sowing season to assure the producers of certain commodities, mainly cereals, that the state will purchase all the quantities offered for sale should the market price fall below the MSP in the post-harvest period with higher production, thereby providing an incentive to adopt new technologies; (ii) a procurement price at which the government agency would procure food grains from the producers; (iii) a buffer stock to cushion the country from any large shortfall in domestic production of food grains; and (iv) the Public Distribution System (PDS), which will distribute procured food grains to the poorest at an issue price lower than the prevailing market price. Food Corporation of India (FCI), the nodal central agency of Govt. of India, along with other State Agencies undertakes procurement of wheat, paddy and coarse grains under price support scheme and rice under statutory levy scheme. The procurement under Price Support is taken up mainly to ensure remunerative prices to the farmers for their produce which works as an incentive for achieving better production. To facilitate procurement of food grains, FCI and various State Agencies in consultation with the State Government establish a large number of purchase centers at various mandis and key points. The number of centers and their locations are decided by the State Governments, based on various parameters, so as to maximize the MSP operations. It would be important to have look of the important procurement agencies and their procurement at all India and State level.

Before we discuss about the various organizations/procurement agencies involved in the operation of PSS and MIS, it is important to know about the Commission for Agricultural Cost and Prices who suggest the basic price for declaration to the government.

3.2 Commission for Agricultural Costs and Prices (CACP¹):

The Government of India declared MSP for notified agricultural commodities every crop season based on the recommendations of Commission for Agricultural Costs and Prices well before the sowing season of the crop. For about one and half decade after independence, the primary role of the agricultural price policy had been to sub-serve the central objective of making available food to consumers at reasonable prices. While up to the mid-sixties, the instruments of agricultural price policy comprised mainly the controls/restrictions of various forms, imports of food grains and distribution of imported grains at below the market prices, after the mid-sixties, when new seed fertiliser technology became available, the price policy was assigned a positive role for augmenting the availability by increasing the domestic production. The broad framework of the policy was specified in the terms of reference of the Agricultural Prices Commission, which was set up in January, 1965 to advise the Government on price policy of major agricultural commodities with a view to evolving a balance and integrated price structure in the perspective of the overall needs of the economy and with due regard to the interests of the producer and the consumer. The terms of reference of the Commission were as under:

1. To advise on the price policy of paddy, rice, wheat, jowar, bajra, maize, ragi, barley, gram, tur, moong, urad, sugarcane, groundnut, soybean, sunflower seed, rapeseed and mustard, cotton, jute, tobacco and such other commodities as the Government may indicate from time to time with a view to evolving a balanced and integrated price structure in the perspective of the overall needs of the economy and with due regard to the interests of the producer and the consumer.
2. While recommending the price policy and the relative price structure, the Commission may keep in view the following:
 - a. The need to provide incentive to the producer for adopting improved technology and for developing a production pattern broadly in the light of national requirements:
 - b. The need to ensure rational utilization of land, water and other production resources:
 - c. The likely effect of the price policy on the rest of the economy, particularly on the cost of living, level of wages, industrial cost structure, etc.

¹ <http://cacp.dacnet.nic.in/>

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

Since March 1985, the Commission has been known as Commission for Agricultural Costs and Prices. Assurance of a remunerative and stable price environment is considered very important for increasing agricultural production and productivity since the market place for agricultural produce tends to be inherently unstable, which often inflict undue losses on the growers, even when they adopt the best available technology package and produce efficiently. Towards this end, minimum support prices (MSP) for major agricultural products are fixed by the government, each year, after taking into account the recommendations of the Commission for Agricultural Costs and Prices (CACP). While formulating these recommendations, the Commission analyses a wide spectrum of data, covering the costs of cultivation/production, trends and spread of input use, production and productivity of the crop concerned, market prices, both domestic and global inter-crop price parity, emerging supply-demand situation, procurement and distribution, terms of trade between agriculture and non-agriculture sectors, and so on. Since the price policy involves

certain considerations of long-run consequences, the Commission also looks at the yield-raising research being conducted by institutions like ICAR. The basic data are generally collected from the Directorate of Economics and Statistics, State Governments, Central Ministries and the nodal agencies concerned with the implementation of agricultural price policy. Besides, the Commission undertakes field visits for close interaction with farmers in different parts of the country and also has wider consultation with senior officers, researchers and managers of relevant organizations.

From time to time, the terms of reference of the Commission have been modified and expanded to keep in step with the changes in agricultural scenario of the country. From the year 1994-95 onwards, Niger-seed and Sesamum were included under the Minimum Support Price (MSP) Scheme of CACP, in addition to the edible oilseeds already covered by the Commission. Similarly, during 2001-2002, the government enhanced the terms of reference of the Commission by including one additional commodity, namely, lentil (masur). The number of crops covered by the MSP scheme has thus increased to 25.

Determination of Minimum Support Prices

In formulating the recommendations in respect of the level of minimum support prices and other non-price measures, the Commission takes into account, apart from a comprehensive view of the entire structure of the economy of a particular commodity or group of commodities, the following factors:

- i) Cost of production
- ii) Changes in input prices
- iii) Input-output price parity
- iv) Trends in market prices
- v) Demand and supply
- vi) Inter-crop price parity
- vii) Effect on industrial cost structure
- viii) Effect on cost of living
- ix) Effect on general price level
- x) International price situation
- xi) Effect on general price level
- xii) International price Situation
- xiii) Parity between prices paid and prices received by the farmers
- xiv) Effect on issue prices and implications for subsidy

Non price measures

While recommending the price policy, the Commission also suggests such non-price measures as would facilitate achievement of the objectives of the policy. In this regard, the Commission has been emphasizing, inter-alia, the following:

- (i) Establishment/Strengthening of agencies for implementation of declared price support policy;
- (ii) Extension of proven technology to areas where it still needs to be adopted;
- (iii) Evolution of suitable technology for augmenting yield and production of crops;
- (iv) Reform of market regulations and setting up new markets in areas where agricultural production has made sizeable improvement;
- (v) Improvement in grading of agricultural produce and expansion of proper storage facilities;
- (vi) Arrangement for timely and speedy transportation of agricultural commodities from surplus areas;
- (vii) Buffer-stock operations to impart stability to domestic price stabilization;
- (viii) Utilizing the medium of external trade for domestic price stabilization;
- (ix) Fiscal measures including adjustments in duties/taxes/levies;
- (x) Development of appropriate technology for processing of agricultural produce;
- (xi) Improving the data base for formulation of price policy.

3.3 Marketing Institutions/Procurement Agencies:

Government interventions in purchase of agricultural commodities under minimum price support programme, procurement of food grains, market intervention scheme (MIS), monopoly purchase, open market purchases of commodities through Food Corporation of India (FCI), Cotton Corporation of India (CCI), Jute Corporation of India (JCI), Central Warehouse Corporation (CWC), National Consumer Cooperative Federation of India (NCCF), National Cooperative Marketing Federation (NAFED), Tobacco Board, and State Oilseed Federations, etc. have attained importance in recent years. With the intervention in the purchase and distribution of food grains (especially rice and wheat), government purchase agency (Food Corporation of India) entered as an important market functionary in the trade of cereals. Cooperatives have also assumed importance in the marketing channel with the encouraged to producers. NAFED and State Oilseed Federations act as a nodal agency for purchase of oilseeds at the government announced support price. The quantity

of commodities purchased by these agencies depended on the objective and target fixed for purchase to fulfill the defined objective. The entry of these public and cooperative agencies has altered the existing channels and also their importance in terms of quantity marketed through them (Acharya, 2004).

The government follows an open ended procurement policy and generally there is no procurement target. It buys whatever is offered for sale at MSP. Rice and Wheat are the two principal commodities where Government's role is most pronounced. Procurement operations for other crops are carried out only when market prices fall below MSP. The Ministry of Agriculture prepared guidelines² towards carrying out the operations (Box 3.1). Also, NAFED issues necessary instructions³ for field staff for procurement under Price Support Scheme from time to time. Whatever stocks which are brought to the Purchase centres falling within the specifications fixed by the Govt. of India are purchased at the fixed support price. If the farmers get prices better than the support price from other buyers such as traders / millers etc., the farmers are free to sell their produce to them. FCI and the State Government/its agencies ensure that the farmers are not compelled to sell their produce below support price. After creating necessary awareness among the farmers through different media⁴, farmer has to submit proper land record *Girdawaries*⁵/ SAAT BARA UTARA and receive token/chalan⁶ wherein date of procurement is mentioned. On that particular day, farmer has to bring the produce at the procurement centre. On the basis of FAQ⁷ norms fixed by the government, procurement operations carries out.

3.3.1 Food Corporation of India⁸:

The Food Corporation of India (FCI) has been set up with mission to be an effective instrument of Govt. of India's National Food Policy. FCI was set up under the Food Corporation Act 1964, in order to fulfill following objectives of the Food Policy:

1. To provide effective price support operations for safeguarding the interests of the farmers,

² Ministry of Agriculture had directed CAG to carry out detailed audit report of PSS operations undertaken by NAFED. In compliance thereof, the CAG had initially carried out the inspection of procurement of muster seed, safflower seed, cotton, etc. for the year 2005-06. The Ministry of Agriculture, GOI vide their letters dated April 7, 2008 and May 16, 2008 has conveyed the CAG directions to NAFED.

³ See, Annexure I.

⁴ For specimen of Wall Poster, see Annexure II.

⁵ For specimen of Land Record/Girdawari, see Annexure III.

⁶ For specimen of Token/Challan, see Annexure IV.

⁷ For FAQ Norms for Gram and Garlic, see Annexure V.

⁸ <http://fciweb.nic.in/>

2. To distribute the food grains throughout the country for public distribution system
3. To maintain satisfactory level of operational and buffer stocks of food grains to ensure National Food Security.

Box 3.1: Government of India's recommendations for test check of Procurement under PSS

- Stock should be purchased by the Primary Societies in proportion to the landholding and average yield fixed by the local authorities of concerned areas/State government.
- Proper record of land holding issued by local authorities in the form of *Girdawaries*/SAAT BARA UTARA or any other record for ensuring genuineness of farmers must be verified before receipt of stock from the farmers at centers and photocopy of such records may be kept by the societies/SLAs for making them available for verification as and when required.
- It may be ensured that there is no cutting, overwriting or tampering in the land holding records.
- Availability of Moisture Meters at centers with the Primary Societies and maintenance of records of moisture content at the time of the procurement and disposal.
- Branches should maintain record of sample drawn from out of procured stocks and such random sample should be got tested for ensuring FAQ stocks.
- Branches should keep record of moisture content both at the time of deposit and delivery of the stock to work out grain/loss in weight.
- Branches should recover the value for any short recovery as per the terms of the agreement entered into with the millers.

Source: NAFED (2012).

The FCI undertakes the functions of procurement including price support operations, storage, movement/transportation, distribution and sale of food grains and in an economical and efficient manner in order to achieve the objectives of the National Food Policy. Initially, the FCI served only four states in the southern part of the country. Slowly, it extended its services throughout the country. Today, the FCI is the unrivalled food marketing agency serving the interest of the farmers and consumers throughout the country. Financially, it is one of the largest public sector undertakings. Thus, FCI has been essential institutional instrument for implementation of food grains pricing policy. It has worked as national nodal agency for providing price support to cereals producing farmers, maintenance of buffer stocks and food grains reserves and distribution of food grains to state agencies under the public distribution system (Acharya, 2004). Over the years, there is

significant increase in stock of food grains in the central pool over the period of time (Table 2.1). As on January 1, 2012, 55.49 million tons of food grains were in stock against the buffer stock norms of 25.0 million tons (Box 3.2).

Table 3.1: Stock of Food grains in the Central Pool as on 1st January of every year since 1991

(Million Tonnes)

Year	Rice	Wheat	Coarse Cereals	Total
1991	9.63	9.38	0.12	19.13
1992	9.29	5.43	0.01	14.73
1993	9.48	3.47	0.18	13.13
1994	11.95	11.10	0.47	23.52
1995	17.42	12.88	-	30.30
1996	15.41	13.15	-	28.56
1997	12.94	7.08	-	20.02
1998	11.49	6.76	-	18.25
1999	11.68	12.70	-	24.38
2000	14.18	17.17	-	31.35
2001	20.70	25.04	0.03	45.77
2002	25.62	32.41	0.08	58.11
2003	19.37	28.83	-	48.20
2004	11.73	12.69	0.60	25.02
2005	12.76	8.93	0.00	21.70
2006	12.64	6.19	0.43	19.26
2007	11.98	5.43	0.09	15.50
2008	11.47	7.71	0.00	19.18
2009	17.58	18.21	0.40	36.19
2010	24.35	23.09	0.25	47.69
2011	25.58	21.54	0.10	47.22
2012	29.72	25.67	0.10	55.49

Source: GOI (2012, Department of Food & Public Distribution).

Box 3.2: Existing Buffer Stock Norms for Food grains in India

Date	Buffer Stock Norms for food grains (Million Tonnes)		
	Rice	Wheat	Total
1st April	14.2	7.0	21.2
1st July	11.8	20.1	31.9
1st October	7.2	14.0	21.2
1st January	13.8	11.2	25.0

Notes: The above norms include a Food Security Reserve of 30 Lakh tons of Wheat from 1.7.2008 and 20 lakh tons of rice from 1.1.2009.

Source: GOI (2012, Department of Food & Public Distribution).

The statewise procurements of rice and wheat in major producing states is presented in Table 3.2. It can be seen from the table that Punjab and Haryana are dominant states

where large quantities of rice and wheat were procured. Rajasthan accounts relatively better position in terms of wheat procurement during 2011-12 as compared to earlier years.

Table 3.2: State-wise Procurement of Rice and Wheat in Major Rice and Wheat Producing States

(According to Market year-Figures in '000 tons)

State	1996-97	2000-01	2005-06	2010-11	2011-12*	2012-13*
Rice (Oct-Sept)						
Punjab	4249	6964	8855	8634	7731	7469
Haryana	1205	1481	2054	1687	2007	2370
Uttar Pradesh	910	1174	3151	2554	3355	6
Andhra Pradesh	4525	7174	4971	9609	7540	9
Madhya Pradesh	580	175	136	516	635	neg.
Orissa	476	918	1785	2465	2864	-
Tamil Nadu	727	1695	926	1543	1596	1
West Bengal	159	434	1275	1310	2036	-
Chhattisgarh	-	857	3265	3746	4115	-
Uttarakhand	-	42	336	422	378	4
Others	137	267	902	1712	2769	11
All-India	12968	21181	27656	34198	35026	9870
Wheat (April-March)**						
Punjab	5612	9423	9010	10209	10958	12834
Uttar Pradesh	261	1545	560	1645	3461	5063
Haryana	2022	4497	4529	6347	6928	8665
Rajasthan	2	539	159	476	1303	1964
Chhattisgarh	-	-	-	-	-	-
Uttarakhand	-	-	41	86	42	139
Bihar	-	-	1	183	557	772
Chandigarh	-	-	-	9	7	17
Delhi	-	-	2	10	8	31
Gujarat	-	-	-	1	105	156
Himachal Pradesh	-	-	Neg	1	1	1
Jammu & Kashmir	-	-	Neg	-	-	9
Madhya Pradesh	4	351	484	3538	4965	8493
Maharashtra	-	-	-	-	-	2
Jharkhand	-	-	-	Neg.	-	-
West Bengal	-	-	-	9	-	2
Other	-	-	488	3751	5643	9483
All-India	8162	16706	15272	22079	28335	38148

Notes: Neg. Negligible (below 500 tonnes); * Position up to 07.11.2012; ** Position up to 02.08.2012 for RMS 2012-13.
Source: GOI (2012).

In case of state-wise procurement of coarse grains, it can be seen from the Table 3.3 that in the recent years, the states like Karnataka, Haryana and Madhya Pradesh shared significantly in total quantum of purchase. The procurement of coarse cereals were significantly high in Rajasthan during the years from 2001 to 2003 as compared to almost nil during the recent past.

Table 3.3: State-wise Procurement of Coarse Grains in Major Producing States

State	Procurement of Coarse Grains ('000 tons)				
	2001-02	2003-04	2005-06	2010-11	2011-2012*
Andhra Pradesh	14.96	276.92	593.89	0.00	0.00
Chhattisgarh	0.32	2.86	8.74	2.61	1.00
Gujarat	54.03	0.71	0.00	0.00	0.00
Haryana	0.00	199.12	4.90	73.65	17.00
Karnataka	95.38	15.59	446.00	39.94	1.00
Madhya Pradesh	56.26	21.26	3.01	8.91	17.00
Maharashtra	57.63	60.01	96.97	2.70	neg
Punjab	0.00	0.00	0.00	0.00	0.00
Rajasthan	36.16	73.57	0.00	0.01	0.00
Bihar	0.00	0.71	0.00	0.00	0.00
Total	314.75	650.75	1153.50	127.83	36.00

Note: * as on 07.11.2012; neg.-negligible (less than 500 tonnes)

Source: GOI (2012).

FCI in Rajasthan:

FCI is functioning in Rajasthan since 01.01.1966 and activities of procurement, storage, preservation of stocks and distribution have been undertaken successfully. In Rajasthan, at present eight FCI district offices are functioning namely Ajmer, Alwar, Bikaner, Jaipur, Jodhpur, Kota, Sriganganagar and Udaipur having their jurisdiction over 33 Revenue Districts. There are 36 FCI own depot, one CAP and 27 hired covered godowns and CAPs. Besides, godowns of CWC and RSWC are also being utilized for storage purpose as and when required. The overall capacity having FCI in Rajasthan region as on 31.12.2010 was around 17.57 lakh mt which includes the CAP storage capacity of 3.22 lakh mt. Further, acquiring additional capacity, hiring of godowns from CWC/RSWC and private parties are under progress.

The FCI generally not open procurement centers where the volume of procurement was likely to be uneconomical, i.e. less than 500 mt. In such areas, other mechanism involving State agencies/other agencies like NAFED and NBHC operates the Centers. However, FCI will operate such centers to give MSP to farmers where State agencies do not operate. The purchase of wheat was undertaken by the FCI during last five years in Rajasthan. The district-wise/FCI district-wise procurement of wheat by FCI in Rajasthan is presented in Table 3.4. It can be seen from the table that procurement of wheat by FCI was mostly concentrated in Sriganganagar, Jaipur, Alawar and Kota districts. The cost of food grains was paid by cheque to the farmers by procurement agencies through

bearer cheques up to value of Rs. 50,000/- and account payee cheque over Rs. 50,000/- of the local/nearest branch of the Bank to avoid delay in payment to the farmers. As per existing practice two staff members at every FCI purchase centre, i.e. Quality Inspector and Pay point In-charge are authorized to sign the cheque facility.

Table 3.4: District-wise Procurement of Wheat by FCI in Rajasthan

FCI districts	No. of Centers	Procurement of Wheat (mt)					
		2006-07	2007-08	2008-09	2009-10	2010-11	2011-12
Ajmer	07	0	0	17031	5168	0	n.a.
Alwar	21	0	19215	105053	194005	80126	n.a.
Bikaner	18	0	1185	0	5757	0	n.a.
Jaipur	14	0	20411	180459	359430	106405	n.a.
Jodhpur	40						n.a.
Kota	27	0	11	23244	138517	20166	n.a.
Sriganganagar	40	1486	305552	363915	696082	351547	n.a.
Udaipur	27	0	0	67984	26421	0	n.a.
Rajasthan	194	1486	325963	547444	1059747	457952	n.a.

Note: n.a. Not Available.

Source: FCI, Jaipur.

3.3.2 NAFED:

National Agricultural Cooperative Marketing Federation of India Ltd. (NAFED)⁹ is the nodal agency for procurement of selected oilseeds [groundnut, soybean (black and yellow), mustard seed, toria, sunflower seed, safflower seed, sesamum seeds, niger seed, copra (ball and milling)] and pulses [urad, moong, arhar and gram] under Price Support Scheme of Government of India¹⁰. NAFED also undertake the purchase of Cotton on Minimum Support Price for Cotton Corporation of India.

NAFED is the national level apex origination of agricultural marketing cooperatives in India, with its headquarters at New Delhi. It was established on 2nd October 1958, with the object to promote Co-operative marketing of Agricultural Produce to benefit the farmers. NAFED is registered under the Multi State Co-operative Societies Act. Agricultural farmers are the main members of NAFED, who have the authority to say in the form of members of the General Body in the working of NAFED. NAFED is owned and run by the farmers through State Level Cooperative Marketing Federations/ Commodity Cooperative Federations/ District- Regional Marketing Societies and Primary Cooperative Marketing Societies.

⁹ <http://www.nafed-india.com>

¹⁰ GOI Letter for the Season Rabi 2010-2011, see Annexure VI.

The objects of the NAFED are to organize, promote and develop marketing, processing and storage of agricultural, horticultural and forest produce, distribution of agricultural machinery, implements and other inputs, undertake inter-State, import and export trade, wholesale or retail as the case may be and to act and assist for technical advice in agricultural production for the promotion and the working of its members and cooperative marketing, processing and supply societies in India. NAFED commences the procurement from the farmers directly through its State Level Supporters¹¹ (SLS) cooperative network when the market rates of a particular commodity fall below or touch at MSP. These supports procure stocks from farmers as per prescribed quality/grade specifications¹² through the Primary Cooperative Marketing Societies whereas Oilseeds Growers' Federations shall procure the stocks through their oilseeds growers; cooperative societies/unions. The funds required for procurement under PSS are arranged by NAFED as well as by SLS if required. Payment to the farmer for the stock delivered under this scheme is made through account payee cheque (bearer cheque is also issued up to admissible limit).

During the year 2011-2012, NAFED registered a business turnover of Rs. 1063.28 crore. Out of this, domestic trade accounted for Rs. 1051.76 crore (about 98.92 percent). During the year 2011-12, the prices of milling copra, toor and urad ruled below the respective minimum support (MSP) fixed by the government of India for the relevant marketing season. NAFED procured a quantity of 2096 mt of milling copra valued at Rs. 10.52 crore in the states of Kerala, Tamil Nadu, Andaman and Nicobar Island under Price Supported Scheme (<http://www.nafed-india.com>). In addition, NAFED has also procured a quantity of 1.60 mt urad valued at Rs. 0.06 crore in Rajasthan and 168 mt arhar/tur valued at Rs. 0.52 crore in Maharashtra under Price Support Scheme (Table 3.5).

Table 3.5: Details of Oilseeds and Pulses procured by NAFED under PSS (2011-12)

S. No	Commodity	Oilseeds and Pulses procurement	
		Qty. Purchased (mt)	Values (Loose) (Rs in lakh)
<i>A</i>	<i>Oilseeds</i>		
1	Copra(Milling)	2096	1051.79
	Total	2096	1051.8
<i>B</i>	<i>Pulses</i>		
1	Arahar (Toor)	168	52.46
2	Urad	1.6	0.63
	Grand Total	169.6	53.09

Source: NAFED, New Delhi.

¹¹ State Level Supporters such as RAJFED, Tilam Sangh, KVSS. Format of Agreement between NAFED and SLS is presented in Annexure VII and NAFED letter to SLS for Gram procurement – see, **Annexure VIII**.

¹² Government of India has prescribed only one grade, i.e. Fair Average Quality (FAQ) for the procurement of pulses and oilseeds (see, **Annexure V** for FAQ norms prescribed for gram and garlic).

Table 3.6: Procurement of Major Oilseeds, Pulses and Cotton by NAFED under Price Support Scheme (PSS) during 2000-01 to 2012-13

Commodity/ Year	Support Price Rs./Qtls for FAQ	Quantity procured in MTs.	Value in Rs in lakhs	Major Status of Procurement
1	2	3	4	5
Soyabean				
2000-2001	865	55342	5021.57	MP. Mah. Kar. AP. Rajasthan
2005-2006	1010	886	97.49	AP. Chhattisgarh
2006- 2007	1020	7	0.74	AP
Groundnut				
2000-2001	1220	28253	3451.55	AP. Kar.Orissa
2001-2002	1340	164530	22034.57	Guj. Raj. AP. Kar. UP. Orissa
2004-2005	1500	418	68.94	UP
2005-2006	1520	3428	552.19	AP. UP, Karnataka
2006-2007	1520	116	21.67	Orissa
2008-2009	2100	40	8.82	UP
Safflower Seed				
2000-2001	1100	6583	779.01	Mah.Kar.AP.
2001-2002	1200	3202	384.21	Kar.AP.Mah.
2002-2003	1300	2020	280.00	Mah.AP.Karnataka
2004-2005	1500/1550	8942	1505.94	MP.Mah.Kar.AP.
2005-2006	1550/1560	24278	4005.05	Mah.Kar.AP.
2006-2007	1565	4932	7905.45	Mah.Kar.AP.
2007-2008	1650	117	18.48	Mah. AP.
Mustard Seed				
2000-2001	1100	247933	28113.93	Raj.MP.Guj.UP.Haryana
2001-2002	1200	329524	39542.88	Raj.Har.Guj.MP.UP. Delhi
2002-2003	1300	469000	63330.00	Raj.MP.Guj.UP.Har,Delhi, Puj, Chgarh
2003-2004	1600	10	1.65	Raj
2004-2005	1600/1700	403031	71290.02	Raj.Chhatt.UP.MP.Guj.Har.UP.Pun.
2005-2006	1700/1715	1998969	364708.78	Raj.Chhatt.UP.MP.Guj.Har.UP.Pun.
2006-2007	1715	1913437	341344.60	Raj.Har.Guj.UP.MP.Delhi.
2007-2008	1715/1800	1923	340.14	Raj.Chhatt.UP.MP.Guj.Har.UP.Pun.
Copra				
2000-2001	3250 (Milling) 3500 (Ball)	224059	73412.22	Kerala, TN, AP, Kar, Goa, LDweep
2001-2002	3300 (Milling) 3550 (Ball)	57259	19333.14	A&N, TN, Kerala, Goa, Kar, AP, Ldweep
2002-2003	3300 (Milling)	8496	2579.0	A&N, Kerala, Goa, Ldweep
2003-2004	2840 (Milling)	787	231.47	A&N
2005-2006	3570 (Milling)	5144	2013.42	Kerala, TN, A&N, Karanataka
2006-2007	3590 (Milling) 3840 (Ball)	20941	7902.61	Kerala, Karnataka, TN, Ldweep
2007-2008	3620 (Milling) 3870 (Ball)	27672 5803	9666.46 2394.72	Kerela, TN, A&N, AP Kerala, Karanataka
2008-2009	3660 (Milling) 3910 (Ball)	478 174	179.07 69.51	Kerela, A&N, Island Karnataka
2009-2010	4450 (Milling) 4700 (Ball)	66750 1250	29953.14 587.41	Kerala,TN, A&N, Ldweep, AP Karnataka
2010-2011	4450 (Milling) 4700 (Ball)	28371 895	12762.23 420.57	Kerala,TN, A&N, Ldweep Karnataka
2011-2012	4525/5100 (Milling)	2096	1051.79	Kerala,TN, A&NIsland
2012	5100/5350	74068	38001.67	Kerala, TN, Karnataka, Ldweep, A&N Island, AP
Sesamum				
2005-2006	1500	2162	354.29	West Bengal
2006-2007	1560	377	64.66	West Bengal
2007-2008	1580	91	15.02	West Bengal
2010-2011	2900	1914	550.92	West Bengal

Table 3.6 continues....

1	2	3	4	5
Sunflower Seed				
2000-2001	1170	46430	5657.46	Kar.AP.MP.Guj.UP.
2001-2002	1185	26	3.01	Chhattisgarh
2002-2003	1185	29	4.00	Chhattisgarh
2004-2005	1250/1340	2393	314.90	Bihar.Karnataka
2005-2006	1500	3218	469.14	AP.Chhatis.Punj.Bihar.Kar.
2006-2007	1500	3835	601.36	Har.WB.Chhatt.Bihar.AP.
2008-2009	2215	10335	2307.51	Karntaka.Maharashtra&AP.
2009-2010	2215	1690	760.90	Maha.Karnataka.Haryana & AP
2010-2011	2350	861	193.01	Haryana
2012-2013	3700	339	125.46	Karnataka
Toria				
2004-2005	1665	90	15.69	MP
Gram				
2003-2004	1400	29257	4405.57	Guj, MP, Mah, UP, Chatis, AP
2004-2005	1400	288723	42591.79	Guj, MP, Mah, UP, Chatis, AP, Raj, Delhi
2005-2006	1425	72741	11305.23	Raj, MP, UP, Mah, Chatis
Urad				
2002-2003	1330+5	17729	2408.00	UP, MP, Chitis, Guj, Bihar, WB, Assam
2003-2004	1370	128534	21892.13	MP, UP, Mah, Guj, WB, Bihar
2004-2005	1410	2113	310.65	UP
2008-2009	2520	482	125.31	WB
2010-2011	2900	131	45.88	MP
2011-2012	3300	157	0.63	Raj
2012-2013	4300	55107	23696.21	Maha, AP, UP, MP, Raj, Guj, Kar
Arhar				
2000-2001	1200	99	11.76	AP
2001-2002	1320	3775	498.30	Delhi, AP, Karnataka
2002-2003	1320+5	51	7.00	AP
2010-2011	3000	291	97.45	Maharashtra, Karnataka, AP
2011-2012	3200	168	52.46	Maharashtra
2012-2013	3850	187	71.00	Maharashtra
Moong				
2003-2004	1370	2490	355.60	AP, Karnataka
Masur				
2004-2005	1525	3946	632.52	MP
2005-2006	1525	1551	256.57	MP
Cotton				
2004-2005	V797-1640/s6-1960/J34-1815	17139	3252.00	Gujarat, Punjab, MP, Maharashtra
2005-2006	NHH44-1675/LRA-1835	1276	250.50	
2008-2009	2500/3000	1234846	358487.97	Maharashtra, Gujarat and AP
2009-2010	2500/3000	574550	163471.00	Maharashtra, Gujarat, and AP
2012-2013	3600/3900	110555	43080.24	Maharashtra and AP

Note: Figures are tentative for the year 2012-13.

Source: NAFED (2013)

The procurement of oilseeds, pulses and cotton by NAFED under PSS during 2000-01 to 2010-11 is presented in Table 3.6. It can be seen from the table that over the period of time, quantum of oilseeds procured by the NAFED under PSS has lower down. It indicates the lowering interest of NAFED as well as less need of procurement, which may be due to the fact that market prices always prevail above MSP. In case of cotton procurement, since 2006-07, no procurement under MSP was undertaken by the NAFED (Table 3.7).

Table 3.7: Procurement of Cotton by NAFED under MSP during 2006-07 to 2010-11

States	Procurement of Cotton (in thousand bales of 170 kgs each)					
	2006-07		2009-10		2010-11	
	MSP	Commercial	MSP	Commercial	MSP	Commercial
Maharashtra	0.00	0.00	2.86	0.00	0.00	0.00
Gujarat	0.00	3.36	0.00	4.80	0.00	1.67
Andhra Pradesh	0.00	0.00	0.00	0.00	0.00	0.00
Total	0.00	3.36	2.86	4.80	0.00	1.67

Source : NAFED, New Delhi.

During the last rabi 2012 season, the market prices of Fair Average Quality of gram and masur (lentil) ruled above the Minimum Support Prices declared by the Government of India, hence the procurement of Rabi pulses under PSS during rabi 2012 season was not necessitated.

Table 3.8: Procurement of Onion by NAFED under Market Intervention Scheme (MIS)

Year	Procurement of Onion under MIS			
	Price (Rs./Quintal)	Quantity Procured (Tonnes)	Value (Rs. Lakh)	Major State(s) of Procurement
1996-97	300	60	1.98	Karnataka
1999-00	250	65000	1625	Maharashtra
2000-01	0	0	0	-
2001-02	0	0	0	-
2002-03	0	0	0	-
2003-04	0	0	0	-
2004-05	280	5000	0.73	Rajasthan
2005-06	0	0	0	-
2006-07	0	0	0	-
2007-08	0	0	0	-
2008-09	0	0	0	-
2009-10	0	0	0	-
2010-11	0	0	0	-
2011-12	0	0	0	-

Source: GOI (2012).

The procurement operation under MIS for the onion crop was undertaken by NAFED at the instance of Government of India (when prices crash to un-remunerative levels, detrimental to the farmers' interest and also for maintaining the buffer stock) in the state of Karnataka (1996-97); Maharashtra (1999-2000) and Rajasthan (2004-05). However, after 2004-05, no procurement of onion was carried out by NAFED under MIS (Table 3.8).

NAFED in Rajasthan

During 2007-08, NAFED had procured total 41952 mt of wheat from total 55 procurement centers located at different districts of Rajasthan (Table 3.9). Then after, no procurement has been carried out by the NAFED in Rajasthan.

Table 3.9: Wheat Procured during last five years by NAFED in Rajasthan

FCI District	No. of Procurement Centre	Wheat Procurement (mt)					
		2006-07	2007-08	2008-09	2009-10	2010-11	2011-12
Alwar	01	0	84	0	0	0	0
Kota	18	0	21055	0	0	0	0
Jaipur	06	0	1276	0	0	0	0
Bikaner	04	0	1683	0	0	0	0
Udaipur	26	0	17854	0	0	0	0
Raj. Total	55	0	41952	0	0	0	0

Source: NAFED, Jaipur.

3.3.3 Cotton Corporation of India (CCI):

As a premier organization in public sector and engaged in marketing of cotton, Cotton Corporation of India (CCI) acts as a role model in the procurement of kapas (seed cotton) through open auction, conducted by the APMCs, in the notified market yards. For every crop year, Government of India fixes a Minimum Support Prices (MSP) for the basic two varieties viz. J-34 (Rajasthan) and H-4. The MSP for other varieties are then fixed by the Office of the Textile Commissioner, Mumbai, depending upon quality differentials and market differentials of different varieties from the two basic varieties.

As and when kapas prices of any variety touch the level of MSP, CCI as a Nodal Agency of Government of India, resorts to immediate market intervention and makes purchases of kapas at MSP without any quantitative limits. The MSPs of different varieties are fixed for FAQ grade kapas stipulating minimum quality parameters on staple length and mic value. Since total kapas arrivals in the market yards, do not match the prescribed parameters of FAQ grade, Corporation allows purchases of below FAQ grade kapas also by offering prices in commensurate with quality and within the MSP of the variety concerned. This helps the cotton farmers in selling their kapas produce under MSP operations and avoid distress sales. Depending upon the intensity of these operations, Corporation creates required infrastructure in the form of regular procurement centres as well as satellite centres so that farmers are not compelled to travel long distances for selling their kapas produce. The state-wise operation of CCI is presented in Table 3.10. It can be seen from the table that level of cotton procurement at all India level was significantly high during the year 2008-09 as compared any other year under report. Among the states, Andhra Pradesh which is the third largest state in India in terms of area and production of cotton during 2011-2012, was major procurement hub of CCI. In Rajasthan, cotton procurement operations were carried out at Bhilwara and Sriganagar centers.

Table 3.10: State-Wise MSP Operations of CCI

State	Branch	MSP Operations of CCI (in thousand bales of 170 kgs each)						
		2004-05	2005-06	2006-07	2007-08	2008-09	2009-10	2010-11
Punjab	Bathinda	143,018	52,389	-	-	10,43,814	86,597	-
Haryana	Sirsa	162,917	4,429	-	-	2,55,342	21,763	-
Rajasthan	Sriganganagar	220,586	63,957	-	-	39,895	2115	-
	Bhilwara	39,229	6,202	-	-	1,15,322	2380	-
	Rajasthan total	259,815	70,159	-	-	1,55,217	4495	-
Gujarat	Ahmedabad	357,060	195,034	-	-	5,83,251	162	-
	Rajkot	125,496	98,133	-	-	6,52,863	-	-
	Gujarat total	482,556	293,167	-	-	12,36,114	162	-
M.P.	Indore	153,307	118,267	248,325	-	7,36,526	-	-
Maharashtra	Akola	86,266	135,228	291,429	-	9,46,714	509	-
	Aurangabad	81,101	159,978	89,844	-	10,50,377	-	-
	Maharashtra	167,367	295,206	381,273	-	19,97,091	509	-
A.P.	Adilabad	2,20,689	1,03,517	3,17,463	21,895	7,14,173	68,470	-
	Guntur	713,678	210,297	83,362	1,31,575	11,95,128	1,30,525	-
	Warangal	251,520	36,244	126821	65,224	13,66,453	2,46,594	-
	Raichur(AP)	24,748	3,534	-	-	-	-	-
	AP Total	1,210,635	353,592	5,27,646	2,18,694	32,75,754	4,45,589	-
Karnataka	Raichur(Kar)	15,803	0	-	-	-	-	-
	Hubli	130,730	59,030	4954	-	1,63,123	4,763	-
	Karnataka total	146,533	59,030	4954	-	1,63,123	4,763	-
T.N.	Coimbatore	478	0	-	-	-	-	-
W. B.I	Kolkatta	228	245	-	-	132	137	152
Orissa	Raigada	23,611	6,064	16257	4,611	71,717	16,581	-
Total	-	2,750,465	1,252,548	11,78,455	2,23,305	89,34,830	5,80,596	152

Source: <http://cotcorp.gov.in/msp.aspx>

3.3.4 Rajasthan-State Level Procurement Agencies:

3.3.4.1 RAJFED:

Rajasthan State Cooperative Marketing Federation (RAJFED¹³) is apex state level organization of agricultural marketing cooperatives in Rajasthan. It was founded under Rajasthan Cooperative Society Act 1953 (Section 13) on 26th November 1957. It has head office at Jaipur. The main objectives of RAJFED are as follows:

1. To procure agricultural produce of farmers through the member societies on support price declare by Govt. of India and on commercial basis.
2. To provide good quality fertilizer and seed at competitive rates and proper time farmers.
3. To produce and sale pesticide and cattle feed in its factories.
4. To distribute domestic gas to consumers of Jaipur and for this purpose running Indane gas agencies.
5. As an apex institution of 199 corporative marketing societies guide and help in business development and also arrange the comprehensive training of their officers/employees.

¹³ <http://rajfed.gov.in/>

6. To make avail loans/ revolving fund to selected weak societies at concession rates of 4 percent annual and make them economically viable.

During the year 2011-12, RAJFED registered the business of agriculture commodities to the tune of Rs. 3114.88 lakh. Besides this, RAJFED acted as an agent of FCI in procurement of wheat and bajara (worth of Rs. 116.62 lakh), and for NAFED in procurement of gram and urad (worth of Rs. 1395.31 lakh) (see, Table 3.11).

Table 3.11: PSS Procurement by RAJFED during 2008-09 to 2012-12

Year	Sub-agent to FCI		Sub-agent to NAFED	
	Commodity	Procurement (Rs. in Crore)	Commodity	Procurement (Rs. in Crore)
2008-09	Wheat	2.85	-	-
2009-10	Wheat	1.38	-	-
2010-11	Bajra	0.06	-	-
2011-12	Wheat, Bajara	116.62	Gram, Urad	13.95
2012-13 (up to Jan. 2013)	Wheat	532.87	Urad	36.19

Source: RAJFED, Jaipur.

Table 3.12: Procurement of Wheat by RAJFED

FCI District	No. of Centers	Wheat procurement by RAJED (mt)					
		2006-07	2007-08	2008-09	2009-10	2010-11	2011-12
Alwar	01	0	0	221	0	0	n.a.
Bikaner	01	0	1000	0	0	0	n.a.
Kota	01	0	245	0	0	0	n.a.
Baran	02	0	0	190	0	0	n.a.
Jhalawar	02	0	30	34	786	0	n.a.
Karauli	01	0	0	108	0	0	n.a.
Dausa	02	0	0	135	0	0	n.a.
S.Ganganagar	02	0	1583	3	0	0	n.a.
Hanumangarh	08	0	10432	0	478	0	n.a.
Udaipur	01	0	0	181	0	0	n.a.
Banswara	04	0	0	1693	0	0	n.a.
Dungarpur	03	0	0	266	0	0	n.a.
Jhunjhunu	01	0	0	2	0	0	n.a.
Jaipur	01	0	0	23	12	0	n.a.
Raj. Total	30	0	13290	2856	1276	0	n.a.

Note: n.a. Not Available

Source: RAJFED, Jaipur.

The district-wise procurement of wheat and gram by RAJFED in Rajasthan during 2006-07 to 2011-12 is presented in Tables 3.12 and 3.13. It can be seen from the tables that wheat procurement by RAJFED has been concentrated in the district of Sriganganagar, part of Kota and Udaipur. During last two years, wheat procurement was very low or negligible. The market rates were higher than MSP, therefore, no

procurement was carried out at most of the places. In case of gram, RAJED had procured about 6332 metric tonnes from total 123 procurement centers in the state during the period from April to June, 2011, total worth of about Rs.1330 lakhs.

Table 3.13: Procurement of Gram by RAJFED

Sr. No.	Regional Office	Total No. of Procurement Centre	Gram Procurement till 30.06.2011(in bori of Av. Weight of 95 kgs each)	Weight as per Warehouse receipt (qtls)
1	Ajmer	11	17145.00	16163.41
2	Bharatpur	17	293.00	278.33
3	Bikaner	14	0	0
4	Jaipur	30	35013.00	33252.66
5	Jodhpur	11	11097.00	10542.15
6	Kota	15	3251.00	3087.32
7	Udaipur	09	0	0
8	Shriganaganagar	16	0	0
	Total	123	66799.00	63323.85
				(Rs. 1329.58 lakh)

Source: RAJFED, Jaipur.

The garlic procurement under MIS was also undertaken in Rajasthan as per the directions of Govt. of India during the period from June 2012 to July 2012¹⁴. The details of garlic procurement by RAJFED is presented in Table 3.14. The procurement of garlic was confined to two districts, viz. Kota and Jodhpur and three centres therein. Total 3711.50 mt of garlic was procured by the RAJFED at the rate of Rs. 1700/- per quintal.

Table 3.14: Procurement of Garlic by RAJFED

Sr. No.	Districts	Procurement Centre	Quantity Procured (mt)
1	Kota	Kota	2921.85
		Sultanpur	789.65
2	Jodhpur	Mathaniya	0.00
Total			3711.50
Total Cost (Rs. In lakh)			630.96

Source: RAJFED, Jaipur.

After procurement of garlic from the three procurement centres as mentioned below, RAJFED sold it in outside state markets such as Chandigarh, Ninach and Delhi (Table 3.15A). Due to low market price for garlic and high procurement cost plus marketing cost has put this business under loss (Table 3.15B). The loss incurred by the RAJFED in garlic procurement was Rs. 21.86 lakh, while State government total loss was estimated to the tune of Rs. 430 Lakhs.

¹⁴ As per GOI Letter dated June 1, 2012- see Annexure IX.

Table 3.15A: Details of Procurement and Sale of Garlic under MIS¹⁵ by RAJFED in Rabi 2012

Sr No	Procurement Centre	Dispatched quantity (by Procurement Centre)		Quantity Sold		Gross Sale Value (Rs)	Expenditure at Sale Centre ¹⁶ (Rs.)	Net Sale Value (Rs.)	Deduction at Centre (NAFED) (Rs.)
		Bags (nos)	Weight (qtls)	Bags (nos)	Weight (qtls)				
1	RC, Jaipur	1100	550.6	1100	542.90	3827.0	42935	339835	-
2	Chandigarh	2880	1438.9	2880	1409.10	13306880	273234	1057454	8800
3	Nimach	25849	12924.5	25768	12791.93	10000557	1357506	8643051	-
4	Delhi	44401	22200.5	44393	22215.45	17938546	3773886	14164660	3500
	Total	74230	37114.5	74141	36959.38	29652551	5447561	24204990	12300

Source: RAJFED, Jaipur.

Table 3.15B: Loss incurred by the State Government in procurement of Garlic under MIS in 2012¹⁷

Sr. no.	Particulars	Amount
1	Procurement Cost incurred towards purchase of Garlic by Societies	65968303
2	RAJFED Administrative Cost @ 2%	1261910
3	Total Cost towards Garlic Procurement by RAJFED (1+2)	67230213
4	Garlic Net Sale Value/amount received	24217290
5	Grant received from State Government	40826500
6	Total amount received by RAJFED (4+5)	65043790
7	Profit/Loss to RAJFED in Garlic procurement under MIS (6-3)	-2186423
8	Profit/Loss to State Government (4-3)	-43012823

Source: RAJED, Jaipur.

3.3.4.2 Tilam Sangh:

Tilam Sangh is the apex organization in Rajasthan State Cooperative Oil Seed Growers Federation Limited (Tilam Sangh), Rajasthan. Tilam Sangh was established in July 3, 1990 under the Rajasthan State Cooperative Act 1985 (Clause 122 LC). From January 1, 1991, Tilam Sangh started functioning, which has benefited the large number of oilseed growers in the state as well as help the state to share significantly in national oilseed production.

¹⁵ The MIS was in force from 06.06.2012 till 06.07.2012. The targeted quantity to be procured by state agencies was 60000 mt by GOI and 30000 by GOR at the rate of Rs. 1700 per quintal with the overhead expenses of Rs. 425 per quintal or actual, whichever is less. The losses, if any, to be shared on 50:50 between State and Central Government.

¹⁶ Expenditure at Sale Centre

Sr No.	Procurement Centre	Expenditure at Sale Centre				
		Service Charges @ 2%	Extra Service Charges	Transportation by truck	Labour cost	Total Expenditure
1	RC, Jaipur	7655	0	32600	2680	42935
2	Chandigarh	266140	0	240860	5760	273234
3	Nimach	200011	20001	829562	307932	1357506
4	Delhi	358772	0	3237542	177572	3773886
	Total	593052	20001	4340564	493944	5447561

¹⁷ For details, see Annexure X.

The details about the procurement of wheat by Tilam Sangh during last five years are presented in Table 3.16. It can be seen from the table that quantum of procurement of wheat by Tilam Sangh has consistently lower down during last few years. It had procured as high as 149540 mt of wheat during 2008-09, then after procurement has come down to 17891 mt in 2010-11.

Table 3.16: Procurement of Wheat by Tilam Sangh in Rajasthan

FCI districts	No. of Center	Wheat procured by Tilam Sangh (mt)					
		2006-07	2007-08	2008-09	2009-10	2010-11	2011-12
Alwar	01	0	0	0	0	118	n.a.
Kota	20	0	702	108270	18293	4915	n.a.
Bundi	15	0	228	15197	20022	4077	n.a.
Baran	18	0	384	3568	16949	6281	n.a.
Jhalawar	05	0	0	0	3018	197	n.a.
Karauli	01	0	0	0	132	0	n.a.
S. Madhopur	01	0	0	0	51	0	n.a.
S.Ganganagar	16	0	674	17745	9274	1676	n.a.
Hanumangarh	10	0	283	1844	1100	627	n.a.
Udaipur	01	0	0	2916	0	0	n.a.
Raj. Total	88	0	2271	149540	68839	17891	n.a.

Note: n.a. Not Available.

Source: Tilam Sangh, Jaipur.

The details about the procurement of oilseeds, food grains and other commodities by Tilam Sangh under PSS and MIS during 2005-2012 are presented in Table 3.17. It can be seen from the table that Tilam Sangh participated in procurement of oilseed crop, i.e. Rapeseed Mustard during 2002, 2005 to 2007. After that, only wheat procurement was undertaken by Tilam Sangh on large scale.

Table 3.17: Procurement of Oilseeds, Food grains and other Commodities by Tilam Sangh, Rajasthan under PSS and MIS during 2005-2012

Year	Commodity	Scheme	No. of Purchase Centers	Purchase Quantity (in Metric Tonnes)	Purchase Amount (In Lakh)
2001	Nil	-	-	-	-
2002	Mustard	PSS	n.a.	184.64	24.002
2003	Nil	-	-	-	-
2004	Nil	-	-	-	-
2005	Mustard	PSS	59	168488.41	28643.03
2006	Mustard	PSS	57	211503.29	36272.81
2007	Mustard	PSS	57	5565.82	954.54
2007	Wheat	PSS	52	2267.65	192.75
2008	Wheat	PSS	117	149539.81	14953.98
2009	Wheat	PSS	128	69014.55	7453.57
2010	Wheat	PSS	70	17929.55	1972.25
2011	Wheat	PSS	82	93938.45	10990.81
2012	Wheat	PSS	113	391388.75	54207.34
2012	Garlic	MIS	3	2569.88	436.88

Source: Tilam Sangh, Jaipur.

During 2012, Tilam Sangh had procured about 2570 million tones of garlic from three procurement center under MIS. The procurement of garlic under MIS was undertaken at the rate of Rs. 1700/- per quintal at Chipabadaud, Zalraparapatan and Keshoraypatan centers (Table 3.18). After procurement of garlic from the farmers (on an average total cost procurement was estimated to be Rs. 1817/- per quintal) (Table 3.19), Tilam Sangh invited quotations towards sale of purchased garlic (with condition to sell produce outside the State). On the basis of highest tender quotation, the produce was sold to the respective party. The price realized by the Tilam Sangh through tender process was around Rs. 7.72 per kg, while procurement cost was Rs. 18.17- per kg. Thus, after deducting total procurement plus incidental charges from sale realization, per kg loss incurred by Tilam Sangh was estimated to be Rs. 10.45/- (Table 3.19). The trader who purchased garlic through tender reported that garlic was sold in Madhya Pradesh, Gujarat and south Indian states.

Table 3.18: Procurement of Garlic by Tilam Sangh under MIS (June and July 2012)

Sr. No.	Districts	Procurement Centre	Quantity Procured (mt)
1	Jhalawar	Jhalara patan	704.80
2	Bundi	Kesorai Patan	530.16
3	Baran	Chippa Barod	1333.40
		Total	2568.36

Source: Tilam Sangh, Jaipur.

Table 3.19: Profit & Loss Statement of Garlic Procurement under MIS by Tilam Sangh

Sr. No.	Particulars	Procurement Centre (June and July 2012)						Total	
		K.Patan (Bundi)		Jhalarapatan		Chhipabarod		Rajasthan	
		Quantity (qtls)	Value (Rs.)	Quantity (qtls)	Value (Rs.)	Quantity (qtls)	Value (Rs.)	Quantity (qtls)	Value (Rs.)
I	Basic cost	5301.6	9012720	7063.2	12007440	13334	22667800	25698.8	43687960
II	Incidental Expenses	-	676854	-	908905	-	1424838	-	3010597
1	(A) Total Purchase cost including incidental expenses	5301.6	9689574	7063.2	12916345	13334	24092638	25698.8	46698557
2	(B) Sales realization	5301.6	3672700	7063.2	4652024	13334	11523682	25698.8	19848406
3	(C) Profit/Loss (B-A)	-	(-)6016874	-	(-)8264321	-	(-)12568956	-	(-)26850151

Source: Tilam Sangh, Kota.

The profit and loss statement indicates that during last few years, Tilam Sangh recorded financially positive results as compared to the early period of 1991-1995. However, the accumulated loss of the federation has reached to the tune of Rs. 20325.90 lakh in 2011-2012 (Table 3.20).

Table 3.20: Economic Condition of Tilam Sangh (1990-91 to 2012-2013)

S. No	Year	Economic Condition of Tilam Sangh (Rs in lakh)			
		Sales	Operation Profit/ Loss	Actual Profit/ Loss	Accumulated Loss
1	1990-91	1061.86	88.27	-109.5	-
2	1991-92	5203.83	-74.71	-530.18	-
3	1992-93	6788.43	-1009.76	-1679.77	-
4	1993-94	11906.96	-44.87	-1097.81	-
5	1994-95	11790.59	-195.4	-1956.06	-
6	1995-96	11072.08	81.48	-1760.29	-
7	1996-97	10867.75	181.77	-1718.46	-
8	1997-98	10534.23	-58.11	-2040.55	-
9	1998-99	6022.54	-391.78	196.51	-
10	1999-00	6229.53	-483.18	-1998.5	-
11	2000-01	4536.11	-252.64	-1542.56	-
12	2001-02	4800.89	-118.34	-1315.44	-
13	2002-03	5138.66	281.04	-824.82	-
14	2003-04	6537.49	96.11	-973.15	-
15	2004-05	4395.65	28.81	-987.09	-
16	2005-06	2396.77	2.98	-1015.19	-
17	2006-07	4561.41	479.69	-461.28	-
18	2007-08	9768.46	652.93	-379.24	-
19	2008-09	7606.61	527.69	-498.82	-
20	2009-10	6172.45	336.7	231.9	-21135.78
21	2010-11	8313.54	136.39	226.17	-20909.61
22	2011-12 (achieved)	5563.78	573.49	583.71	-20325.91
23	2012-13 (upto June 12) estimated	3393.66	1113.95	1230.52	-19095.08

Source: Tilam Sangh, Jaipur.

3.3.4.3 Other Purchase Partners of FCI:

The other purchase partners of FCI in the state have not been actively participating or purchased negligible quantity of agricultural commodities from the market during last few years.

a) Rajasthan State Warehouse Corporation (RSWC):

The Rajasthan State Warehouse Corporation (RSWC) did not participate in wheat procurement during the period from 2007-08 to 2010-11.

Table 3.21: Wheat procured by RSWC during last five years in Rajasthan

FCI district	No. of Centers	Wheat procurement (mt)					
		2006-07	2007-08	2008-09	2009-10	2010-11	2011-12
S. Ganganagar	05	3	0	0	0	0	0
Total	05	3	0	0	0	0	0

Source: FCI, Jaipur.

b) National Bulk Handling Corporation (NBHC) Ltd.:

The National Bulk Handling Corporation (NBHC) Ltd., also did not participate in procurement of wheat during 2006-07, 2007-08, 2009-10 and 2010-2011. During 2008-09, NBHC procured 170532 mt of wheat in Rajasthan (Table 3.22).

Table 3.22: Wheat Procured by NBHC during last five years in Rajasthan

FCI district	No. of Centers	Wheat procurement (mt)					
		2006-07	2007-08	2008-09	2009-10	2010-11	2011-12
Bikaner	03	0	0	800	0	0	n.a.
Jaipur (Tonk)	01	0	0	4248	0	0	n.a.
Kota	07	0	0	10603	0	0	n.a.
Baran (Kota)	09	0	0	62510	0	0	n.a.
Bundi (Kota)	07	0	0	78241	0	0	n.a.
Jhalawar (Kota)	05	0	0	3910	0	0	n.a.
Hanumangarh (SGNR)	05	0	0	10221	0	0	n.a.
Rajasthan	37	0	0	170533	0	0	n.a.

Source: FCI, Jaipur.

c) National Collateral Management Services Limited (NCMSL)

The National Collateral Management Services Limited (NCMSL) also did not participate during 2007-08 to 2010-11 (Table 3.23).

Table 3.23: Wheat Procured by NCMSL during last five years in Rajasthan

FCI district/Rev Distt	No. of Centers	Wheat procurement (mt)					
		2006-07	2007-08	2008-09	2009-10	2010-11	2011-12
Alwar	05	0	0	0	0	0	0
Bharatpur	13	0	0	0	0	0	0
Dholpur	01	0	0	0	0	0	0
Kota	03	0	0	0	0	0	0
Karauli	03	0	0	0	0	0	0
Bundi	04	0	0	0	0	0	0
Baran	03	0	0	0	0	0	0
S.Madavpur	01	0	0	0	0	0	0
Sriganganagar	08	0	0	0	0	0	0
Hanumangarh	09	93	0	0	0	0	0
Rajasthan	45	93	0	0	0	0	0

Source: FCI, Jaipur.

Thus, from above discussion it is clear that RAJFED and Tilam Sangh are the major partner of FCI involved in the procurement of wheat, rapeseed mustard and gram under PSS, while onion, coriander and garlic under MIS in Rajasthan.

After having discussed about the procurement agencies, next chapter present the socio-economic status and characteristics of selected state, districts, blocks and crops,

Socio-Economic Characteristics of Selected Area, Crops and Sample Households

4.1 Introduction:

Cropping patterns are determined in large measure by agro-climatic factors: soil, temperature and rainfall distribution, i.e., the physical condition of a region. Crops suited to the given conditions are grown, resulting in what can be considered the traditional cropping pattern of the region. Generally, agro-climatic factors are fairly stable over time, while demographic, social and economic factors are less so, particularly in the present context of rapid induced change. Thus, while agro-climatic factors determine the conditions under which crops are grown, farmers are increasingly inclined to change cropping patterns in response to changes in economic factors (input and output prices), technological factors (improved seeds and irrigation), institutional factors (market and road density, and access to credit), and policy- induced factors (fertilizer and irrigation subsidy, procurement prices viz. MSP, MIS, etc.). The aggregate effects of the decisions of individual farmers establish new cropping in the region which becomes visible in the long run. All these broad trends can be analyzed with considerable accuracy, sometimes even before they become fully visible.

According to the theory of comparative advantage, a regional specialization in crops would occur under conditions of perfect mobility of resources and commodities. Every region would produce crops for which it had a comparative advantage and the produce would be exchanged between regions. Under these perfect conditions of free movement, the cropping patterns emerging in each region would both reflect and promote resource-use efficiency, and hence be conducive to overall agricultural productivity. However, the empirical reality never corresponds to such an ideal. Market imperfection, government policies (MSP, MIS) and trade restrictions often encourage a cropping pattern that deviates from high resource use efficiency, and in turn dampen productivity growth. Therefore, it is important to have idea about the socio-economic characteristics of selected districts and blocks for the study.

Before that, let us have brief overview about the Rajasthan state.

4.2 About the State:

Rajasthan, the largest state of India (3,42, 239 sq. km.) situated in the northwestern part of the Indian Union (23 30' and 30 11' North latitude and 69 29' and 78 17' East longitude) is largely an arid state for most of its part. The state has a maximum length of 869 km from west to east and 826 km. from north to south. The western boundary of the state is part of the Indo-Pak international boundary, running to an extent of 1,070 km. It touches four main districts of region, namely, Barmer, Jaisalmer, Bikaner and Ganganagar. The state is girdled by Punjab and Haryana states in the north, Uttar Pradesh in the east, Madhya Pradesh in the southeast and Gujarat in the southwest.

Rajasthan is the largest state of India constituting 10.4 per cent of total geographical area and 5.67 per cent of total population of India. Physiographically, the State can be divided into 4 major regions, namely the western desert: with barren hills, rocky plains and sandy plains, the Aravalli hills: running south-west to north-east starting from Gujarat and ending in Delhi, the eastern plains: with rich alluvial soils and south-eastern plateau. Mahi, Chambal and Banas are the three major rivers of the State (GOR, 2011). The state enjoys a strategic geographical position wherein it is situated between Northern and Western growth hubs in the country and 40 per cent of Delhi Mumbai Industrial Corridor (DMIC) runs through it. The state is divided into 7 divisions, 33 districts, which are further subdivided into 244 Tehsils, 249 Panchayat Samitis and 9,168 Gram Panchayats. The state has well identified 10 agro-climatic zones. The state is endowed with diverse soil and weather conditions comprising of several agro-climatic situations, warm humid in south-eastern parts to dry cool in western parts of the state. About 65 per cent population (56.5 million) of the state are dependent on agriculture and allied activities for their livelihood. The three major canal irrigations, other than the vast area under arid and dry lands offer great help for agricultural development of the state. Agriculture in Rajasthan is primarily rainfed covering country's 13.27 per cent of available land. The diversity in climatic conditions of the state creates potentiality to develop certain belts of horticultural crops in the state. The arid state which receives not more than an annual rainfall of 25 cm thrives on agriculture that is done with irrigation systems and painstaking efforts of the poor farmers of Rajasthan. As a major portion of the state is parched and infertile, the risk and instability in agricultural production and productivity are quite high. The agriculture production in the State mainly depends on monsoon and irrigation potential which is low in comparison of the vast land of the State.

The area of Sriganganagar, Hanumangarh, Kota and Banswara districts has canal facilities (Swain *et al.*, 2013) while others are dependent on monsoon.

As per Chand *et al.*, (2009) estimates, Rajasthan state shows variation in productivity with a ratio of 1:11 between lowest and highest productivity district. Districts like Barmer, Jaisalmer and Churu located in Thar Desert are among the lowest productivity districts of the country. Extreme climate and soil type are the main factors for low productivity in these districts. One hectare of land was found to be generate crop output of value less than Rs. 5 thousand. However, productivity was more than Rs. 31 thousand in districts Baran and Kota (Table 4.1). There exist regional differences in agriculture due to terrain, rainfall, irrigation facilities and technology inputs. In districts like Ganganaggar, Hanumangarh, Bharatpur, Dausa, Alwar, Kota and Sawai Madhaopur, farmers produce high input based cash crops, whereas southern and western Rajasthan single crop for domestic consumption is the norm. The major rabi crops are barley, wheat, gram, pulses and oil seeds. The kharif crops include bajara, pulses, jowar, maize, groundnuts and paddy in some areas (see, Map 4.1).

Map 4.1: Agriculture Map of Rajasthan



Source: www.mapsofindia.com

Table 4.1: Districtwise Per hectare Productivity in Rajasthan, 2009 (*Rs. ha*)

District	Prod./ ha	Prod./ worker	FERT_ NSA- NPK/ ha	NIA %	GIA %	FVA %	C.I. %	Worker / ha	Rainfall (mm)	NSA (000ha)	Rural poor %
Ajmer	7364	7510	23	16	16	1.1	115	0.98	601.8	419	7.40
Alwar	27727	13540	84	88	62	1.9	161	2.05	657.3	506	9.90
Banswara	14383	5538	117	34	26	0.1	140	2.60	950.3	235	50.10
Baran	31054	29423	145	85	62	0.4	143	1.06	873.8	323	6.50
Barmer	2909	6386	3	7	10	0.0	106	0.46	265.7	1574	13.30
Bharatpur	25350	15762	88	75	54	0.7	143	1.61	663.9	394	16.60
Bhilwara	14604	9464	63	33	27	0.4	134	1.54	683.2	390	18.50
Bikaner	8075	28538	9	11	16	0.3	107	0.28	243.0	1437	35.40
Bundi	25055	19233	125	76	59	0.8	145	1.30	773.4	253	3.50
Chittorgarh	23232	13536	107	39	29	0.4	146	1.72	841.5	420	15.50
Churu	4770	8379	2	4	4	0.0	118	0.57	354.7	1160	13.60
Dausa	21843	12034	103	73	48	0.5	155	1.82	561.0	220	19.60
Dholpur	23796	14814	88	67	51	1.2	136	1.61	744.0	151	8.70
Dungarpur	12708	3875	59	29	21	0.1	143	3.28	728.9	124	25.20
Ganganagar	23091	36590	100	71	78	0.7	132	0.63	226.4	693	22.80
Hanumangarh	18127	29540	63	39	48	0.1	142	0.61	273.5	779	27.20
Jaipur	18463	16032	71	48	41	2.0	147	1.15	563.8	666	12.50
Jaisalmer	3317	13403	9	12	19	0.0	109	0.25	185.5	472	3.30
Jalore	9200	10768	24	30	28	0.3	121	0.85	370.0	659	13.40
Jhalawar	25361	17747	92	58	39	1.5	154	1.43	844.3	315	18.20
Jhunjhunu	16027	12915	27	52	36	0.3	154	1.24	405.1	426	3.60
Jodhpur	6616	12975	17	11	15	1.1	106	0.51	313.7	1287	23.90
Karauli	26091	14868	53	56	36	0.6	156	1.75	670.7	196	6.40
Kota	32925	39311	192	82	58	0.6	148	0.84	732.4	270	3.90
Nagaur	9085	14174	21	21	23	0.8	116	0.64	311.7	1273	31.80
Pali	7965	11301	20	14	15	0.3	108	0.70	424.4	579	27.20
Rajsamand	9338	4028	27	8	9	0.3	108	2.32	567.8	94	24.90
S. Madhopur	18686	15349	116	63	50	0.3	128	1.22	873.4	280	18.50
Sikar	14157	12631	30	43	38	1.0	142	1.12	440.3	525	10.50
Sirohi	13718	11573	56	37	39	1.3	130	1.19	591.2	146	27.00
Tonk	13538	17012	49	39	32	0.7	124	0.80	668.3	461	24.80
Udaipur	14091	4938	59	24	19	0.3	129	2.85	645.0	246	20.90

Source: Chand, et al, 2009.

Districtwise Villages, APMC/KUMS and Sub-yards in Rajasthan

Agricultural marketing is the critical link between agricultural production and farm sector revenue percolating to the farmers. Apart from performing transferring agricultural goods to consumers, it transmits the price signals in the marketing chain. Transactions of

goods take place in market yards and sub-yards and periodic markets like haats or mandis. Therefore, it is important to know about the spread of agricultural markets in Rajasthan. The districtwise number of villages, KUMS and Sub-yards in Rajasthan is presented in Table 4.2.

Table 4.2: Districtwise Villages, KUMS and Sub-yards in Rajasthan

District	Total Inhabited villages	District wise KUMS	Sub Yards	Total KUMS +Sub Yards	No. of Villages under KUMS	No. of Villages under KUMS and Sub Yards
Ajmer	1025	6	14	20	171	51
Alwar	1954	4	15	19	489	103
Banswara	1476	1	5	6	1476	246
Baran	1089	4	8	12	272	91
Barmer	1933	2	9	11	967	176
Bharatpur	1366	6	9	15	228	91
Bhilwara	1693	4	14	18	423	94
Bikaner	804	5	11	16	161	50
Bundi	839	3	9	12	280	70
Chittorgarh	2201	5	12	17	440	129
Churu	854	6	8	14	142	61
Dausa	1025	5	6	11	205	93
Dholpur	786	1	5	6	786	131
Dungarpur	854	1	3	4	854	214
Sri Ganganagar	2830	15	7	22	189	129
Hanumangarh	1773	7	9	16	253	111
Jaipur	2077	6	25	31	346	67
Jaisalmer	600	1	4	5	600	120
Jalore	697	3	9	12	232	58
Jhalawar	1477	4	11	15	369	98
Jhunjhunu	855	4	8	12	214	71
Jodhpur	1058	5	7	12	212	88
Karauli	755	1	5	6	755	126
Kota	812	4	8	12	203	68
Nagaur	1480	5	15	20	296	74
Pali	936	5	16	21	187	45
Pratapgarh	NA	1	4	5	n.a.	n.a.
Rajsamand	973	1	4	5	973	195
S. Madhopur	719	2	11	13	360	55
Sikar	986	4	7	11	247	90
Sirohi	455	1	5	6	455	76
Tonk	1032	5	12	17	206	61
Udaipur	2339	3	10	13	780	180
State Total	39753	130	305	435	306	91

Note: n.a. –Not Available

It can be seen from the table 4.2 that there were 130 KUMS in the state with 305 sub yards. Sri Ganganagar district has total 15 KUMS while eight districts of the state have only

one KUMS¹. The ratio of villages served per KUMS was lowest in Ajmer district and highest was for Banaswara, while state average was 306 villages per KUMS. In case of number of villages served by KUMS plus Sub Yards, it is observed that lowest figure was noted for Pali district and the highest was for Banswara district.

4.3 Selected Districts:

On the basis of the latest procurement data of the gram during the year 2011-12, i.e. June 2012 (production in *rabi* season 2011) and garlic during the year 2012-13, i.e. June 2012 (production in *rabi* season 2012), Jaisalmer and Ajmer districts were selected for gram crop, whereas Kota and Baran districts were selected for garlic crop. The selected characteristics of these districts are presented below.

Jaisalmer district²:

Jaisalmer district is located within a rectangle lying between 26°.4' –28°.23' North parallel and 69°.20'-72°.42' east meridians. It is the largest district of Rajasthan and one of the largest in the country. The breath (East-West) of the district is 270 kms and the length (North-South) is 186 Kms. On the present map, district Jaisalmer is bounded on the north by Bikaner, on the west & south-west by Indian boarder, on the south by Barmer and Jodhpur, and on the east by Jodhpur and Bikaner Districts. The length of international boarder attached to district Jaisalmer is 471 kms. Jaisalmer district, a part of the Great Indian Thar Desert, is sandy, dry and scorched. The terrain around, within a radius of about 60 kms is stony and rocky. The area is barren, undulating with its famous sand dunes and slopes towards the Indus valley and the Runn of Kutch. The soil here is grateful even to a little rain and turns lush green during monsoon. There is no perennial river in the district. The underground water level is very low. Geographically this district is spread over in 38,401 sq. kms which is one of the largest district and almost equal to the state of Kerala. Joined together, the district of Barmer and Jaisalmer is the largest parliamentary constituency in India. Jaisalmer district has a very dry climate with very hot summer; a cold winter and sparse rains. The climate is extremely hot during summer with maximum temperature reaching up to 49.2 degree celcius and extremely cold during winter with minimum temperature in the range of 1 degree celcius. The variation in temperature from morning to noon and the late midnight is a sudden phenomenon. The average rainfall is only

¹ Complete list of the division, district, KUMS and Sub-Yards is presented in Annexure XI.

² <http://jaisalmer.nic.in/>, SIAM (2008).

16.4 cms as against the state average of 57.51 cms. The district is not homogenous in respect of topography, rainfall, temperature, soil, agricultural conditions and resource endowments. There are some variations in land use patterns, dominant crops, irrigation facilities available, etc. Jaisalmer has important place for cumin, isabgol, bajra, guar, groundnut, mustard and gram production in Rajasthan.

Ajmer district³:

Ajmer district is a district of the state of Rajasthan in western India. The city of Ajmer is the district headquarters. Ajmer district has an area of 8,481 km², and a population of 2,180,526. The district is situated in the centre of Rajasthan, and is bounded by Nagaur District to the north, Jaipur and Tonk districts to the east, Bhilwara district to the south, and Pali district to the west. The eastern portion of the district is generally flat, broken only by gentle undulations. The western parts, from north-west to south-west, are intersected by the Aravalli Range. Many of the valleys in this region are sandy deserts, part of India's Thar Desert, with an occasional oasis of cultivation. Some fertile tracts are also present; among these is the plain on which lies the town of Ajmer. This valley has an artificial lake, and is protected by the massive walls of the Nagpathar range or Serpent rock, which forms a barrier against the sand. The only hills in the district are the Aravalli Range and its offshoots. Ajmer is almost totally devoid of rivers. The Banas river touches the south-eastern boundary of the district so as to irrigate the pargana of Samur. Four small streams, the Sagarmati, Saraswati, Khari and Dai also intersect the district. The district is divided into four subdivisions, Ajmer, Beawar, Kekri and Kishangarh, and further subdivided into six tehsils, Ajmer, Beawar, Nasirabad, India, Kekri, Kishangarh.

Ajmer has a hot semi-arid climate with over 55 centimetres (25.4 in) of rain every year but most of the rain occurs in the monsoon months, between June and September. Temperatures remain relatively high throughout the year, with the summer months of April to early July having an average daily temperature of about 30°C (86°F). During the monsoon there are frequent heavy rains and thunderstorms but flooding is not a common occurrence. The winter months of November to February are mild and temperate with average temperatures ranging from 15–18°C (59–64°F) with little or no humidity. There are, however, occasional cold weather front that cause temperatures to fall to near freezing levels. Major crops grown in this district are sorghum, gram, wheat and cotton.

³ <http://ajmer.nic.in/his.html>.

Kota district:

Kota is a district of the state of Rajasthan in western India. The city of Kota is the administrative headquarters of the district. The district is bounded on the north by Bundi district, on the east by Baran district, on the south by Jhalawar district, and on the west by Chittorgarh district. It is now the hub of educational institutions and is home to Asia's biggest manufacturer of fertiliser. According to the 2011 census Kota district has a population of 1,950,491. This gives it a ranking of 239th in India (out of a total of 640). The district has a population density of 374 inhabitants per square kilometre (970 /sq mi). Its population growth rate over the decade 2001-2011 was 24.35 per cent. Kota has a sex ratio of 906 females for every 1000 males, and a literacy rate of 77.48 per cent. Kota is important place for soybean, wheat, coriander, garlic production in Rajasthan.

Baran district:

Baran is a district of the state of Rajasthan in western India. The city of Baran is the districts' headquarters. In 1948, joint Rajasthan was formed and at that time Baran was one of the districts in the joint Rajasthan. On March 31, 1949, Rajasthan was reconstituted and the Baran district headquarters was converted into sub division headquarters of Kota district. Baran was carved out of erstwhile Kota district on April 10, 1991. The total area of the district is 6992 km² out of which only 82.18 km² is urban. The total forest area in the district is 2.17 lakh ha. The total population of the district is around 1,22,3921. This gives it a ranking of 389th in India (out of a total of 640); Sex Ratio (no. of females per 1000 males) was 926 and population density per sq. km was 175 as per Census 2011. Main dialect is Hadoti language. The District has a tremendous scope for the rapid industrialization, especially among agro-based industries. There are eight tehsils in the district, namely Baran, Anta, Atru, Mangrol, Chhabra, Chhipabarod, Kishanganj and Shahabad. Baran is Municipal Council (nagar parishad) after Rajasthan Budget 2012. The City has a dry climate except in the monsoon seasons. The winter season runs from mid of November to February and summer season runs from March to mid of June. The period from mid of June to September is the monsoon season followed by the months October to mid of November constitute the post monsoon or the retreating monsoon. The average rainfall in the district is 895.2 mm. January is the coldest month with the average daily maximum temperature of 24.3°C and the average daily minimum temperature of 10.6°C. Baran is important place for soybean, rapeseed mustard, paddy, wheat, coriander, garlic production in Rajasthan.

Table 4.3: Economic Indicators of Ajmer, Jaisalmer, Kota and Baran districts of Rajasthan

Economic Indicators	Ajmer	Jaisalmer	Kota	Baran	Rajasthan
Human Development index (HDI 2007-08)	0.677	0.673	0.787	0.653	0.434
Rank in Rajasthan: HDI	10	11	2	12	17
Total Population, 2011 (Provisional) in Lakh	25.85	6.72	19.50	12.24	686.21
Rural Population (%)	59.91	86.72	39.7	79.21	75.11
Urban Population (%)	40.09	13.28	60.3	20.79	24.89
% Population of Scheduled Caste	17.70	14.58	19.16	17.72	17.20
% Population of Scheduled Tribe	2.40	5.48	9.69	21.23	12.60
Density (per sq. Km), 2011 (P)	305	17	374	175	201
Literacy rate All (%), 2011 (P)	70.46	58.04	77.48	67.38	67.06
Total Area (Sq. Km), 2001	8481	38401	5217	6992	342239
Total villages (Nos.) (2011) (P)	1111	799	874	1221	44672
No. of Gram Panchayat (2010)	266	128	156	214	9166
Towns (Statutory + Census)	11	2	11	8	297
Households with access to Electricity, 2001(%)	66.04	28.91	82.27	53.33	54.69
Total (Overall Sex ratio, 2011 (P))	950	849	906	926	926
% of Electrified villages (31.12.2010)	100	88.23	94.28	1089	94.97
Road (PWD) length in km.	3543	4532	1650	2040	113774
Per Capita NSDP, 2008-09					
At current prices (Rs.)	39315	34376	39331	35889	31279
At Constant (2004-05) Prices (Rs.)	30174	24537	28658	23969	23356
Share of Primary sector (%), 2001	47.8	55.1	41.6	77.1	65.9
Share of secondary & tertiary sectors (%), 2001	52.2	44.9	58.4	22.9	34.1
Average land holding (ha.)	2.06	10.47	2.71	2.26	3.38
Cropping intensity (%) 2008-09	116.76	117.58	160.62	162.53	129.74
% of Forest area to reporting area,2008-09	6.69	1.16	24.05	30.97	7.96
% of NIA to NSA, 2008-09	11.27	17.16	87.97	88.86	35.38
% of GIA to GCA, 2008-09	11.72	28.76	58.01	56.71	34.74
Share of Crop Area in GCA (TE 2011-12)					
Cereals	52.97	23.01	31.76	27.87	42.91
Pulses	29.92	11.00	3.77	1.69	17.63
Food grains	82.89	34.00	35.52	29.57	60.54
Oilseeds	12.74	10.41	52.24	54.99	19.95
Gram	10.93	9.61	1.58	0.93	5.75
Garlic	neg.	neg.	1.63	1.77	0.16
Yield in (qtls/ha) (TE 2011-12)					
Cereals	16.94	7.08	35.90	37.07	19.70
Pulses	8.09	7.96	9.48	14.85	7.04
Food grains	13.75	7.36	33.10	35.79	16.02
Oilseeds	10.72	8.95	12.69	16.48	13.32
Gram	8.00	6.72	11.26	13.61	7.62
Garlic	12.78	N.A.	89.78	28.20	45.06
Normal Rainfall (mm) June2010 to May 2011	462.2	181.2	807.9	852.7	463.6
Actual Rainfall (mm) June2010 to May 2011	685.6	380.8	618.7	613.6	696.6
Total KUMS and Sub Yards	20	5	12	12	435
No. of Villages per KUMS and Sub Yards	51	120	68	91	91
Rural population/ Per KUMS and Sub Yards	77431	116553	64529	80789	118486

Notes: P – Provisional; neg.- Negligible.

Source: www.statistics.rajasthan.gov.in

The economic indicators of the selected districts are presented in Table 4.3. It can be seen from the table that as mentioned earlier, in terms of human development, Kota ranks second in the state. Though share of agriculture sector in NSDP is relatively higher in Jaisalmer and Ajmer than Kota, the cropping intensity is higher in Kota and Baran as compared to other two selected district as well as state average due to high irrigation intensity. The difference in agricultural development can be easily seen from the yield level in dry districts compared to irrigated districts (Kota and Baran). Also the normal rainfall is also higher in these districts. The number of rural population fed per market is highest in Jaisalmer followed by Ajmer indicating low spread of markets in these districts.

4.4 Selected Crops:

As mentioned earlier, one crop each from PSS and MIS scheme, viz. gram and garlic respectively was selected as study crop. Gram is major rabi crop grown in Rajasthan, with area of 1.43 million ha (mha) and 0.99 million tonnes (mt) of production in 2011-12. Rajasthan accounts for 17.24 per cent area and 13.07 percent of production at national level. About 46.5 percent area under gram was covered with irrigation in 2009-10 as compared to 32.2 percent at national level (Table 4.4). However, productivity level of gram in Rajasthan (763 kg/ha) was much lower than national average (906 kg/ha) during TE 2011-12.

Table 4.4: Area, Production and Yield of Gram in Major Producing States in India (TE 2011-12)

State	TE 2011-12					Area under Irrigation (2009-10)
	Area (mha)	% to all India	Production (mt)	% to all India	Yield (kg/ha)	
Madhya Pradesh	3.08	35.96	3.09	39.88	1005	49.1
Rajasthan	1.36	15.94	1.04	13.42	763	46.5
Maharashtra	1.26	14.72	1.08	13.89	855	24.3
Uttar Pradesh	0.59	6.88	0.59	7.56	995	16.6
Andhra Pradesh	0.60	7.00	0.70	8.96	1161	1.0
Karnataka	0.91	10.64	0.53	6.80	580	13.5
Gujarat	0.18	2.15	0.20	2.56	1078	28.8
Chattisgarh	0.25	2.89	0.23	3.02	946	30.8
Haryana	0.09	1.07	0.08	1.04	883	17.2
Bihar	0.06	0.65	0.06	0.77	1064	5.6
Orissa	0.04	0.49	0.03	0.40	750	-
West Bengal	0.02	0.24	0.02	0.32	1201	30.6
Others	0.12	1.36	0.11	1.41	944	-
All India	8.56	100.00	7.76	99.98	906	32.2

Source: GOI (2012).

The district-wise area, production and productivity of gram in Rajasthan is presented in Table 4.5. It can be seen from the table that the top five gram growing districts (during TE 2009-10) were Churu, Hanumangarh, Bikaner, Ganganagar and Jhunjhun. The Jaisalmer

district stands at sixth position in terms of area under gram and seventh in terms of production during TE 2009-10. However, significant quantity of gram⁴ was procured under PSS at the centers located at Ajmer, Jaisalmer, Tonk, Jaipur and Sikar districts.

Table 4.5: District-wise Area, Production and Productivity of Gram in Rajasthan (TE 2010-11)

District	TE 2010-11			% Share TE 2010-11		Procurement under PSS in 2011-12 (mt)
	Area (ha)	Production (mt)	Yield (kg/ha)	Area	Production	
Ajmer	44025	33976	772	3.36	3.27	1278.3
Alwar	12636	16621	1315	0.97	1.60	0.0
Banswara	13039	11867	910	1.00	1.14	0.0
Baran	5148	6788	1319	0.39	0.65	18.7
Barmer	369	327	885	0.03	0.03	0.0
Bharatpur	5887	8221	1396	0.45	0.79	0.0
Bhilwara	23870	19192	804	1.82	1.85	338.1
Bikaner	151420	117800	778	11.57	11.34	0.0
Bundi	6999	7179	1026	0.53	0.69	245.3
Chittorgarh	7036	6621	941	0.54	0.64	0.0
Churu	269670	132977	493	20.60	12.80	0.0
Dausa	7707	8231	1068	0.59	0.79	124.5
Dholpur	2931	3587	1224	0.22	0.35	0.0
Dungarpur	11560	10327	893	0.88	0.99	0.0
Hanumangarh	181185	101583	561	13.84	9.78	0.0
Jaipur	46514	74607	1604	3.55	7.18	758.3
Jaisalmer	66389	35482	534	5.07	3.42	1016.1
Jalore	2963	1269	428	0.23	0.12	0.0
Jhalawar	37532	33560	894	2.87	3.23	0.0
Jhunjhunu	87012	92108	1059	6.65	8.87	0.0
Jodhpur	2194	1929	879	0.17	0.19	0.0
Karauli	16809	19041	1133	1.28	1.83	8.6
Kota	6605	6799	1029	0.50	0.65	44.7
Nagaur	32153	43002	1337	2.46	4.14	0.0
Pali	20405	15655	767	1.56	1.51	38.1
Pratapgarh	25606	24277	948	1.96	2.34	0.0
Rajsamand	637	539	847	0.05	0.05	0.0
S. Madhopur	18902	23079	1221	1.44	2.22	19.2
Sikar	53222	58343	1096	4.07	5.62	583.0
Sirohi	3131	2570	821	0.24	0.25	0.0
Sri Ganganagar	102307	88332	863	7.81	8.50	0.0
Tonk	34896	23498	673	2.67	2.26	1859.5
Udaipur	8372	9530	1138	0.64	0.92	0.0
Total State	1309130	1038916	794	100.00	100.00	6332.4

Source: Department of Agriculture, Govt. of Rajasthan.

The details on procurement of gram in Rajasthan during 2011-2012 are presented in Table 4.6. The procurement was carried out by RAJFED on June 29 and 30, 2011 at main

⁴ As Tonk and Ajmer are nearby districts, we selected Jaisalmer in order to represent extreme market related infrastructure for the crop.

mandis of five districts of Rajasthan and total 63323.9 quintals of gram was procured under PSS.

Table 4.6: Procurement of Gram under PSS in Rajasthan during 2011-12 (June 29 and 30, 2011)

Sr. No.	Covering districts	Agency	Important Mandis	Total Purchasing (in bori of average weight of 95 kg)	Total Weight (quintals)
1	Ajmer	RAJFED, Ajmer	Sarwad, Kishangadh, Kekdi	17145	16163.4
		RAJFED, Ajmer	Sarwad	5925	5612.13
		RAJFED, Ajmer	Kishangarh	5297	5032.33
2	Bharatpur	RAJFED, Bharatpur	Choth ka Barwada, Todabhim	293	278.31
3	Jaipur	RAJFED, Jaipur	Todaraisingh, Malpura, Dudu	35013	33252.7
		RAJFED, Jaipur	Todaraisingh (Tonk)	8822	8379.77
		RAJFED, Jaipur	Malpura (Tonk)	6920	6574
		RAJFED, Jaipur	Dudu (Jaipur)	5686	5401
4	Jodhpur	RAJFED, Jodhpur	Mohangadh, Nachna, Sultana, Pali	11097	10542.2
		RAJFED, Jodhpur	Mohangadh (Jaisalmer)	5100	4845
5	Kota	RAJFED, kota	Dei, Sagod, Atru	3251	3087.32
Total Rajasthan				66799	63323.9

Source: Department of Agriculture, Govt. of Rajasthan.

Garlic is the second crop selected for the study under the scheme of MIS. Garlic (*Allium sativum*) is one of the important horticultural bulb crops grown and used as a spice or condiment throughout India. It is also important foreign exchange earner for India. It is consumed by almost all people who take onion. The production and productivity of garlic in India are very low compared to many other countries. Among the garlic growing states in India, Rajasthan rank second in terms of its share in area (24.25 percent) and third in terms of production (19.26 percent) at national level in 2011-2012 (Table 4.7). However productivity level is much low in Rajasthan as compared to other competing states. Unawareness of farmers about improved varieties, climate, soil and agro-techniques, diseases and pest damaging the crops and their control measures as well as post-harvest management are though main reasons, inadequate market support is also responsible for limiting the production and productivity indirectly.

Table 4.7: State-wise Area, Production and Productivity of Garlic in India during 2011-12

State	Garlic crop				
	Area (000 ha)	Area in % to all India	Production (000 mt)	Production in % to all India	Yield (kg/ha)
Andhra Pradesh	0.4	0.16	0	0.00	0
Assam	9.69	3.95	62.53	5.10	6.45
Bihar	4.25	1.73	4	0.33	0.94
Chhattisgarh	0.99	0.40	2.52	0.21	2.55
Gujarat	40	16.32	275	22.44	6.88
Haryana	1.36	0.55	11.61	0.95	8.54
Himachal Pradesh	3.6	1.47	1.85	0.15	0.51
Jammu & Kashmir	0.28	0.11	0.3	0.02	1.07
Karnataka	5.69	2.32	6	0.49	1.05
Kerala	0.08	0.03	0.65	0.05	8.13
Madhya Pradesh	60	24.47	270	22.03	4.5
Maharashtra	3.5	1.43	40	3.26	11.43
Manipur	0.17	0.07	0	0.00	0
Meghalaya	0.28	0.11	1.11	0.09	3.96
Mizoram	1.3	0.53	5.6	0.46	4.31
Nagaland	0.1	0.04	0.15	0.01	1.5
Orissa	10.9	4.45	35.5	2.90	3.26
Punjab	3.7	1.51	45	3.67	12.16
Rajasthan	59.45	24.25	235.98	19.26	3.97
Tamil Nadu	0.44	0.18	2.56	0.21	5.82
Uttar Pradesh	34.43	14.04	177.92	14.52	5.17
Uttaranchal	1.2	0.49	7.22	0.59	6.02
West Bengal	3.35	1.37	40	3.26	11.94
Total :	245.16	100.00	1,225.50	100.00	5.00

Source: www.nhrdf.com

The districtwise picture in Rajasthan presented in Table 4.8 indicates that the districts like Baran, Chittorgarh, Jalawad, Jodhpur are major garlic producing districts in the State. However, most of the procurement of garlic under MIS in Rajasthan was carried out Kota, Jodhpur, Jhalawar, Bundi and Baran districts in June 2012. RAJFED and Tilam Sangh have carried out the operations on the direction of Government of India.

Table 4.8: District-wise Area, Production and Productivity of Garlic in Rajasthan (TE 2010-11)

District	TE 2010-11			% Share TE 2009-10		Procurement under MIS during 2012-13 (mt)
	Area (ha)	Production (mt.)	Yield (kg/ha)	Area	Production	
Ajmer	6	10	1824	0.02	0.01	0
Alwar	4	3	818	0.01	0.00	0
Banswara	3	2	500	0.01	0.00	0
Baran	5467	31897	5834	20.43	23.52	1333
Barmer	0	0	#DIV/0!	0.00	0.00	0
Bharatpur	0	0	1000	0.00	0.00	0
Bhilwara	409	1075	2630	1.53	0.79	0
Bikaner	0	0	-	0.00	0.00	0
Bundi	911	1736	1905	3.41	1.28	530
Chittorgarh	4479	27896	6228	16.74	20.57	0
Churu	1	0	0	0.00	0.00	0
Dausa	1	1	1500	0.00	0.00	0
Dholpur	3	3	800	0.01	0.00	0
Dungarpur	5	20	4286	0.02	0.01	0
Sri Ganganagar	12	24	1973	0.05	0.02	0
Hanumangarh	41	59	1451	0.15	0.04	0
Jaipur	0	0	-	0.00	0.00	0
Jaisalmer	6	10	1611	0.02	0.01	0
Jalore	4023	14663	3645	15.03	10.81	0
Jhalawar	455	911	2000	1.70	0.67	705
Jhunjhunu	3571	6441	1804	13.34	4.75	0
Jodhpur	0	0	-	0.00	0.00	0
Karauli	4205	38705	9205	15.71	28.54	0
Kota	50	95	1913	0.19	0.07	3712
Nagaur	16	10	646	0.06	0.01	0
Pali	2746	10982	4000	10.26	8.10	0
Pratapgarh	98	203	2075	0.37	0.15	0
Rajsamand	20	40	2000	0.07	0.03	0
S. Madhopur	87	87	1000	0.32	0.06	0
Sikar	9	8	821	0.03	0.01	0
Sirohi	69	636	9168	0.26	0.47	0
Tonk	4	1	250	0.01	0.00	0
Udaipur	62	121	1962	0.23	0.09	0
State Total	26762	135637	5068	100.00	100.00	6280

Source: Department of Agriculture, Govt. of Rajasthan.

However, despite of target⁵ fixed for procurement of Garlic under MIS of 30000 mt by the Government of India, RAJFED and Tilam Sangh could procure only about 6280 mt , which was short of 79 percent of target fixed (Table 4.9)

Table 4.9: Procurement of Garlic under MIS in Rajasthan

Sr. No.	Procurement Agency	Districts	Procurement Centre	Targeted Quantity (mt)	Quantity Procured (mt)	Short of Procurement Target	
						(mt)	%
1	RAJFED	Kota	Kota	6800	2921.85	3088.50	45.42
			Sultanpur		789.65		
		Jodhpur	Mathaniya	500	0.00	500.00	100.00
		Total	-	7300	3711.50	3588.50	49.16
2	TILAM SANGH	Jhalawar	Jhalara patan	2400	704.80	1695.20	70.63
		Bundi	Kesorai Patan	2300	530.16	1769.84	76.95
		Baran	Chippa Barod	18000	1333.40	16666.60	92.59
		Total	-	22700	2568.36	20131.64	88.69
	Grand Total			30000	6279.86	23720.14	79.07

Source: RAJFED, Jaipur.

4.5 Districtwise details of Study Area:

4.5.1 Demographic features of Selected Districts:

The changes in demographic features of selected districts as well as at State level during three period points are presented in Table 4.10 Over the last two decades, except Kota, there is not much change in share of rural population in total population. Hardly 2-5 percent lower down share of rural population has been recorded in Jaisalmer and Baran, while it increased marginally in Ajmer district. However, in case of Kota district, 12 percent rural population has been shifted in urban category, indicating rapid urbanization of this district as compared to other three districts as well as at state level. The share of female population in total population has increased in all districts as well as at state level which is welcome feature. Though male are more literate than female in all district and at state level, increase in percentage of women literacy is significantly noticeable than men.

⁵ See, Govt. of Rajasthan letter dated 02.06.2012 - Annexure XII.

Table 4.10: Changes in Demographic features of Ajmer, Jaisalmer, Kota and Baran districts as compared to the State

Particulars	Ajmer			Jaisalmer			Kota			Baran			State		
	1990-91	2000-01	2010-11	1990-91	2000-01	2010-11	1990-91	2000-01	2010-11	1990-91	2000-01	2010-11	1990-91	2000-01	2010-11
Geographical area (lakh ha)	8.42	8.42	8.43	38.40	38.39	38.39	5.18	5.18	5.18	7.01	7.00	6.99	342.53	342.65	342.70
No. of inhabited villages	1005	1066	1122	518	600	799	810	852	874	1070	1089	1221	37889	39753	44672
Total Population (00)	17290	21820	25849	3440	5080	6720	12210	15685	19504	8110	10220	12239	440060	565070	686210
Rural Population (% to total)	59.34	59.90	59.91	84.59	85.04	86.73	51.68	46.53	39.69	84.71	83.17	79.21	77.12	76.62	75.11
Urban population (% to total)	40.66	40.10	40.09	15.41	14.96	13.27	48.32	53.47	60.31	15.29	16.83	20.79	22.88	23.38	24.89
Male Population (% to total)	52.11	51.79	43.72	55.23	54.92	54.06	53.15	52.71	52.46	52.65	52.35	51.92	52.36	52.06	51.91
Female population (% to total)	47.89	48.21	56.28	44.77	45.08	45.94	46.85	47.29	47.54	47.23	47.65	48.08	47.64	47.94	48.09
Male literacy (%)	68.75	79.96	83.93	36.18	66.3	73.09	57.15	86.25	87.63	53.76	75.8	81.23	54.99	75.7	80.51
Female literacy (%)	34.5	49.1	56.42	8.94	32.1	40.23	30.11	61.25	66.32	17.22	41.6	52.48	20.44	43.9	52.62

Sources: GOR (various issues of District Statistical Abstracts), GOR (2011, 2012); Some Facts about Rajasthan, 2011 and <http://www.statistics.rajasthan.gov.in>

4.5.2 Land Use Classification of Selected Districts:

The land use classification of selected districts over three time periods is presented in Table 4.11. It can be seen from the table that the net sown area has increased by about 5 to 6 percent point in 2010-11 over 1990-91 in Ajmer, Baran district as well as at State level, while it has marginally increased in Kota district. However, in case of Jaisalmer, where hardly 6 percent of geographical area land was under cultivation, increased by about 13 percent points during corresponding years. While opposite picture could be noticed in case of area sown more than once. Ajmer, Kota and Baran districts could able to bring more area under area sown more than once which may be due to availability of irrigation and good monsoon during recent past. Because of same, the cropping intensity of these three districts was much higher than Jaisalmer district as well as State as a whole.

Table 4.11: Land Use Classification of Ajmer, Jaisalmer, Kota and Baran districts

Particulars	Ajmer			Jaisalmer			Kota			Baran			State		
	1990-91	2000-01	2010-11	1990-91	2000-01	2010-11	1990-91	2000-01	2010-11	1990-91	2000-01	2010-11	1990-91	2000-01	2010-11
Geographical area (GA) ha	842	842	843	3840	3839	3839	521	521	521	701	700	699	34253	34265	34270
Land put to non agriculture uses. (% to GA)	16.8	16.4	16.3	11.6	12.5	13.3	13.3	12.4	12.8	9.8	9.5	9.5	4.4	5.1	12.5
Net area sown. (% to GA)	48.1	46.2	54.1	6.0	11.1	18.9	51.4	48.1	51.8	43.5	44.6	48.4	47.8	46.3	53.5
Area sown more than once. (% to GA)	9.5	10.4	37.9	0.0	1.1	4.0	14.5	26.4	36.2	7.9	19.9	33.7	8.8	9.8	22.3
Gross Cropped Area. (% to GA)	57.6	56.6	92.0	6.1	12.2	22.9	66.0	74.5	88.0	51.4	64.5	82.1	56.6	56.1	75.9
Cropping Intensity (%)	119.8	122.5	169.9	100.3	109.9	120.9	128.3	154.8	169.9	118.2	144.7	169.7	118.3	121.2	141.7

Notes: Data for district Baran refers to 1991-92 instead of data 1990-91.

Sources: same as in Table 4.10.

4.5.3 Land Holding Pattern of Selected Districts:

The details about the land holding pattern across the farm are presented in Table 4.12. As mentioned earlier, the average land holding in Rajasthan was 3.07 ha in 2010-11, which was fourth highest size of state average holdings (after Punjab, Nagaland, and Arunachal Pradesh), while national average was 1.16 ha. Among the selected districts as well, Jaisalmer had highest size of holding of (10.5 ha), while other three districts has between 2.1-2.7 ha. Though the average land holding of farmers in Rajasthan is relatively better than the holdings of farmers in rest of the country, the inequality in land holding is an important issue. Small and marginal farmers constitute about 50 percent of the total farmers with only about 11 percent of the total land area. The large land owners account for 9.1 percent of the number of landholders and account for about 43 percent of the land area. Among the districts as well, it can be seen that small and marginal farmers constitute about more than 50 percent of the total farmers with only about 11-15 percent of the total land area. Thus, dependence of large number of farmers on small area indicates uneven distribution of land holdings as well as role of agriculture in the welfare of the rural areas.

Table 4.12: Different Categories of Farm Households in Ajmer, Jaisalmer, Kota and Baran districts

Size of Farm (ha)	Ajmer			Jaisalmer			Kota			Baran			State		
	1995-96	2000-01	2005-06	1995-96	2000-01	2005-06	1995-96	2000-01	2005-06	1995-96	2000-01	2005-06	1995-96	2000-01	2005-06
No.															
0-1.0	44.29	47.37	48.24	5.73	2.95	1.88	27.37	32.93	28.06	29.90	33.87	35.43	30.03	31.78	33.51
1.1-2.0	20.86	20.71	21.14	7.06	4.05	4.76	23.23	24.58	25.75	23.70	25.85	25.96	20.23	20.79	21.36
2.1-4.0	18.18	17.30	17.06	9.55	10.16	10.94	24.68	23.01	25.38	24.53	23.25	23.19	20.83	20.62	20.37
4.1-10.0	13.07	11.71	10.92	33.55	50.81	51.38	20.63	16.71	18.14	18.36	14.66	13.52	19.84	18.90	17.83
> 10 ha	3.59	2.91	2.65	44.11	32.02	31.05	4.10	2.76	2.67	3.52	2.37	1.90	9.07	7.91	6.93
All	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Area															
0-1.0	7.98	9.18	10.09	0.31	0.17	0.13	4.63	6.15	5.58	5.46	7.14	8.03	3.67	4.21	4.85
1.1-2.0	13.01	13.96	14.82	0.80	0.58	0.72	11.21	13.70	13.84	12.33	15.55	16.68	7.37	8.20	9.05
2.1-4.0	21.77	22.70	23.25	2.17	2.92	3.17	23.13	24.91	26.59	24.76	27.09	28.42	14.99	16.07	17.05
4.1-10.0	33.32	32.86	31.81	17.20	29.83	31.18	40.98	38.14	39.70	39.19	35.77	35.20	31.14	32.05	32.46
> 10 ha	23.92	21.30	20.03	79.51	66.50	64.79	20.04	17.10	14.29	18.26	14.46	11.67	42.83	39.46	36.59
All	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
AV size	2.33	2.15	2.06	13.1	10.7	10.47	3.04	2.62	2.71	2.81	2.42	2.26	3.96	3.65	3.38

Sources: same as in Table 4.10.

4.5.4 Implements, Infrastructure and Institutions in Selected Districts:

The details about the implements, infrastructure and institutions in selected districts are presented in Table 4.13 at three point periods, viz., 1992-93, 2000-01, and 2011-12. It can be seen from the table that there is significant increase in number of tractors in 2011-12 as compared to 1992-93, i.e. by 315 percent. The highest rate of increase was in Ajmer district (586 percent), followed by Kota (546 percent). The rate of increase in use/number of tractors in the district was lowest in Jaisalmer during period under study. Most of the villages are electrified and connected with the roads. Except Jaisalmer districts, the cooperative societies network has widen in other districts as well as at State as a whole. Number of Krishi Vigyan Kendra (KVK) and Krishi Upag mandi (KUMS) are not changed much during the period under report.

Table 4.13: Details about Implements, Infrastructure and Institutions in Ajmer, Jaisalmer, Kota and Baran districts

Particulars	Ajmer			Jaisalmer			Kota			Baran			State		
	1992-93	2000-01	2011-12	1992-93	2000-01	2011-12	1992-93	2000-01	2011-12	1992-93	2000-01	2011-12	1992-93	2000-01	2011-12
Tractors (no.)	1969	4457	13498	570	2988	2808	3125	8511	20218	2576	8708	13762	146006	355822	605539
No. of Villages	985	1066	1122	518	637	810	810	947	892	1205	1207	1244	37889	41353	44672
No. of electrified Villages	985	1001	1025	127	223	505	NA	854	874	273	1119	1134	37124	39810	39496
% of villages electrified	100	93.9	91.35	24.52	35.01	62.35	NA	90.18	97.98	22.66	92.71	91.16	97.98	96.27	88.41
Electric operated tube wells (no.)	NA	366	1653	NA	501	3018	962	2937	7853	787	2904	7118	26700	NA	253441
Motorable road (km)	2240	2956.3	4308.57	2304	4872	6953.14	983	1823.09	3017-03	953	1651.75	2039	61520	87462	189402
% of villages connected with roads	65.79	77.49	79.86	42.47	51.65	61.11	31.48	40.34	63.34	12.12	37.28	34.08	NA	NA	72.21
Bank Offices	141	153	241	35	NA	51	113	NA	183	62	NA	NA	3108	3323	4414
Post office	429	431	414	151	150	154	193	196	186	196	198	197	10247	10416	10324
Co-operative Society	968	1139	1437	861	265	341	483	605	907	307	354	441	20255	22917	27586
Existence of K GK / KVK	1	1	1	1	1	2	1	1	1	1	1	1	25	32	42
Ag. Produce Market	5	5	6	NA	1	1	NA	4	4	NA	NA	4	NA	125	129
PSS centre	n.a.	n.a.	4	n.a.	n.a.	3	n.a.	n.a.	3	n.a.	n.a.	5	n.a.	n.a.	123
MIS centre	n.a.	n.a.	-	n.a.	n.a.	-	n.a.	n.a.	2	n.a.	n.a.	1	n.a.	n.a.	06

Notes: Numbers of tractors refers to the year 2009-10 (all districts and states) and 2003-04 (Jaisalmer and Baran) instead of 2011-12 and 2000-2001 respectively; Numbers of villages refers to the year 1991-92 (Baran districts and states) and 2002-03 (Kota) instead of 1992-93 and 2000-01 respectively; Numbers of villages electrified refers to the year 2004-05 (Baran) and 1991-92 (State) instead of 2010-11 and 1992-93 respectively; Motorable roads refers to the year 2009-10 instead of 2011-12 for Baran; Numbers of villages connected with roads refers to the year 2004-05 instead of 2011-12 for Baran; Numbers of post offices refers to the year 2009-10 instead of 2011-12 for Baran; Numbers of Co-operative societies refers to the year 2006-07 (Baran), 2002-03 and 2007-08 (State) instead of 2011-12 and 2001-02, respectively; Numbers of Ag. Produce Market refers to the year 2004-05 and 2010-11 instead of 2001-02 and 2011-12 for state; n.a.- Not available.

Sources: same as in Table 4.10.

4.5.5 Sources of Irrigation in Selected Districts:

The irrigation is the most important input of agriculture which determines the level of output. It can be seen from the Table 4.14 that percentage of net irrigated area to net sown area was 24.0 percent in 2008-09, increased by 10.2 percent points over 1990-91. The well and tube wells are the major sources of irrigation at the State level. Among the selected districts, Kota and Baran districts are highly irrigated having more than 88 percent cultivated land under irrigation. In case of Kota district, canal is the major source of irrigation followed by well and tube wells, while groundwater is major source in case of Baran district. Ajmer district depends on groundwater for irrigation accounting about 30 percent net sown area under irrigation. Jaisalmer district has hardly 15 percent net sown area under irrigation, which largely depend on canal water. This may be due to soil and climatic conditions of this district.

Table 4.14: Net Area Irrigated with alternate Source of Irrigation for Ajmer, Jaisalmer, Kota and Baran districts

Sources	Ajmer			Jaisalmer			Kota			Baran			State		
	1990-91	2000-01	2008-09	1990-91	2000-01	2008-09	1990-91	2000-01	2008-09	1990-91	2000-01	2008-09	1990-91	2000-01	2008-09
% NIA to NSA	18.6	29.8	10.4	0.9	11.5	14.6	53.6	74.5	88.3	47.2	70.5	88.8	23.8	30.9	34.0
Sources															
Well & Tube-well	79.8	83.5	95.8	24.5	20.6	32.5	22.4	45.5	45.8	39.7	59.9	71.1	60.0	70.8	73.0
Canals	4.1	3.6	0.7	75.3	79.4	67.5	74.6	49.0	53.0	50.9	33.1	22.3	34.7	27.6	25.3
Tanks	16.2	11.8	0.6	0.0	0.0	0.0	0.4	0.2	0.1	4.9	1.3	1.9	4.7	0.8	0.5
Others	0.2	1.1	2.9	0.2	0.0	0.0	2.6	5.3	1.0	4.5	5.7	4.8	0.6	0.9	1.2

Sources: same as in Table 4.10.

4.5.6 Cropping Pattern of Selected Districts:

The cropping pattern of the selected district and the State is presented in Tables 4.15 A to 4.15D. It can be seen from the tables that over a period of time, there is slight change in the cropping pattern of the selected districts. Jowar, bajara and moog are the major kharif crops, while gram and wheat are the major rabi crops grown in Ajmer district. Moog has emerged as major kharif pulse crops since 2001 onward. However in case of cash crop such as cotton, its share in GCA has declined over the period of time.

Table 4.15 A: Area under Important Crops in Ajmer district for selected years

Crops	Area under Crop - Percentage to Gross Cropped Area (%)					
	Av. 1980-82	Av. 1990-92	Av. 2000-02	2009-10	2010-11	2011-12
Jowar	28.66	22.26	28.21	33.92	21.05	18.55
Bajra	11.68	13.84	15.03	19.68	12.38	11.89
Maize	13.28	8.35	9.04	8.13	4.65	5.17
Moong	1.43	7.20	11.50	18.21	10.95	21.04
Urad	0.05	0.04	1.45	2.12	1.16	3.78
Moth	1.10	1.52	0.46	0.47	0.19	0.02
Sesamum	2.06	6.01	1.36	5.87	2.80	3.44
Groundnut	3.82	1.00	0.61	0.55	0.27	0.43
Soyabean	-	0.00	0.00	0.00	0.00	0.00
Cotton	4.44	1.79	2.20	1.49	0.43	1.86
Guar	0.36	0.28	2.28	1.99	1.10	0.85
Deshi Cotton	-	1.51	1.30	0.00	0.00	0.00
Wheat	13.70	8.07	8.46	2.02	8.44	7.43
Barley	5.85	3.44	2.41	0.91	5.56	2.78
Gram	9.00	3.60	3.47	0.04	14.59	13.99
Cowpea	0.25	0.25	0.35	0.00	0.00	0.00
Rape	0.18	3.59	2.88	0.66	3.25	4.30
Linseed	0.21	0.47	0.01	0.00	0.01	0.01
Garlic	-	0.01	0.00	0.00	0.00	0.00
Onion	-	0.54	0.16	0.12	0.03	0.16
Gross Total	100.00	100.00	100.00	100.00	100.00	100.00
<i>GCA (ha)</i>	<i>402152</i>	<i>534410</i>	<i>448210</i>	<i>433643</i>	<i>761914</i>	<i>626793</i>

Source: GOR (various issues, District Statistical Abstracts, Ajmer).

In case of Jaisalmer district, bajara and guar crops are grown as major kharif crop, while gram and rapeseed are major rabi crops. Though bajara accounts for about 17 percent of GCA in 2011-12, its share has declined from as high as 69.27 percent in 1980-1982, while share of guar crop increased to 50.68 percent in 2011-12 from 28.85 percent in 1980-82. Among the rabi crops, share of gram and rapeseed mustard increased after 2001.

Table 4.15 B: Area under different Crops in Jaisalmer district for selected years

Crops	Area under Crop - Percentage to Gross Cropped Area (%)					
	Av. 1980-82	Av. 1990-92	Av. 2000-02	2009-10	2010-11	2011-12
Jowar	1.02	1.06	0.49	0.08	0.28	0.20
Bajra	69.27	45.98	22.69	25.63	21.28	16.94
Maize	0.00	0.00	0.00	0.00	0.00	0.00
Moong	0.04	0.02	0.20	0.39	1.11	1.51
Urad	0.00	0.00	0.00	0.00	0.00	0.00
Moth	0.03	0.00	0.24	0.07	0.35	0.42
Sesamum	0.33	0.09	0.05	0.16	0.09	0.16
Groundnut	0.00	0.12	0.18	1.46	1.25	1.68
Soyabean	-	0.00	0.00	0.00	0.00	0.00
Cotton	0.00	0.00	0.02	0.02	0.00	0.04
Guar	28.85	50.66	62.59	50.33	47.21	50.68
Desi Cotton	-	0.00	0.00	0.00	0.00	0.00
Wheat	0.33	0.83	2.23	1.71	1.68	1.66
Barley	0.00	0.00	0.02	0.02	0.02	0.01
Gram	0.03	0.07	1.17	8.35	8.85	11.10
Cowpea	0.00	0.00	0.00	0.00	0.00	0.00
Rape	0.02	0.48	5.47	5.50	7.71	7.43
Linseed	0.00	0.00	0.00	0.00	0.00	0.00
Garlic	-	0.00	0.00	0.00	0.00	0.00
Onion	-	0.01	0.00	0.00	0.00	0.00
Gross Total	100.00	100.00	100.00	100.00	100.00	100.00
GCA (in ha)	267878	221716	504187	630831	898713	847103

Source: GOR (various issues, District Statistical Abstracts, Jaisalmer).

In case of Kota and Baran districts, major kharif crops grown are soybean, rice, maize, urad and sesamum, while wheat and gram are major rabi crops. Soybean accounts for more than 32 percent of GCA in case of Kota, while same accounts for about 40 percent in Baran district. Selected crop, i.e. garlic area share in GCA in both the selected districts ranges between 2.7 to 3.0 percent in 2011-12. Over the period of time, there is decline in the share of jowar and maize crop in both districts; this may be due to shift in acreage from this crop to soybean crop. Increase in area under wheat and rapeseed in Kota, and only in case of wheat in Baran resulted in decline in area under gram crop. This may be due to increase in level of profit in wheat as compared to gram cultivation, may to be due to significant increase in MSP.

Table 4.15C: Area under different Crops in Kota district for selected years

Crops	Area under Crop - Percentage to Gross Cropped Area (%)					
	Av. 1980-82	Av. 1990-92	Av. 2000-02	2009-10	2010-11	2011-12
Rice	2.16	0.69	1.73	3.93	3.07	2.33
Jowar	27.33	10.82	3.61	1.35	1.48	0.67
Bajra	0.69	0.01	0.01	0.02	0.02	0.02
Maize	5.17	4.05	2.06	2.65	3.09	1.79
Moong	2.02	0.80	0.18	0.04	0.05	0.07
Urad	2.30	3.00	1.02	0.57	1.47	3.97
Moth	0.02	0.00	0.00	0.00	0.00	0.00
Sesamum	3.74	0.94	0.16	4.89	11.79	3.08
Groundnut	0.89	0.52	0.17	0.07	0.07	0.09
Soyabean	-	8.16	35.21	27.69	24.63	32.36
Sugarcane	0.13	0.03	0.01	0.00	0.00	0.00
Cotton	0.00	0.00	0.00	0.00	0.00	0.01
Guar	0.04	0.00	0.39	0.00	0.00	0.00
Wheat	20.82	16.40	21.93	20.83	25.30	24.61
Barley	0.96	0.49	0.24	0.09	0.15	0.12
Gram	12.79	9.65	3.50	1.53	1.74	1.28
Cowpea	0.01	0.03	0.00	0.00	0.00	0.00
Rape	0.78	23.13	12.73	19.49	12.21	13.37
Linseed	3.17	1.66	0.48	0.14	0.05	0.03
Garlic	-	0.03	0.20	0.87	1.25	2.70
Onion	-	0.01	0.01	0.01	0.01	0.03
Gross Total	100.00	100.00	100.00	100.00	100.00	100.00
<i>GCA (ha)</i>	<i>673944</i>	<i>356311</i>	<i>399772</i>	<i>441679</i>	<i>455604</i>	<i>454289</i>

Source: GOR (various issues, District Statistical Abstract, Kota).

Table 4.15 D: Area under different Crops in Baran district for selected years

Crops	Area under Crop - Percentage to Gross Cropped Area (%)					
	Av. 1980-82	Av. 1990-92	Av. 2000-02	2009-10	2010-11	2011-12
Rice	n.a.	0.45	0.88	1.51	1.39	1.04
Jowar	n.a.	13.21	1.81	0.17	0.34	0.08
Bajra	n.a.	0.79	0.44	0.65	0.59	0.48
Maize	n.a.	6.82	4.83	2.45	2.86	2.14
Moong	n.a.	0.81	0.05	0.05	0.08	0.07
Urad	n.a.	0.41	0.38	0.19	0.43	1.33
Moth	n.a.	0.01	0.00	0.00	0.00	0.00
Sesamum	n.a.	1.73	0.28	1.84	6.16	1.28
Groundnut	n.a.	1.45	0.27	0.11	0.10	0.13
Soyabean	n.a.	8.56	31.69	35.32	32.98	39.77
Sugarcane	n.a.	0.10	0.02	0.00	0.01	0.01
Cotton	n.a.	0.00	0.00	0.01	0.00	0.01
Guar	n.a.	0.00	0.00	0.00	0.00	0.00
Wheat	n.a.	15.46	17.28	19.19	25.01	24.20
Barley	n.a.	0.35	0.13	0.06	0.09	0.06
Gram	n.a.	13.02	3.63	0.77	1.29	0.67
Cowpea	n.a.	0.00	0.00	0.00	0.00	0.00
Rape	n.a.	17.94	19.05	20.74	13.13	11.06
Linseed	n.a.	3.54	0.33	0.01	0.03	0.01
Garlic	n.a.	0.06	0.55	0.94	1.26	2.99
Onion	n.a.	0.03	0.01	0.01	0.01	0.02
Gross Total	n.a.	100.00	100.00	100.00	100.00	100.00
<i>GCA</i>	<i>n.a.</i>	<i>378696</i>	<i>453781</i>	<i>550447</i>	<i>591493</i>	<i>589268</i>

Notes: n.a. – Not Available, neg.- negligible.

Source: GOR (various issues, District Statistical Abstract, Baran).

4.6 Block/Tahsil-wise details of study area for recent years:

4.6.1 Demographic Features of Selected Blocks:

The demographic features of the blocks in selected districts are presented in Tables 4.16A to 4.16D. It can be seen from the tables that in case of Ajmer districts, except Ajmer and some extent Bewar blocks, rural dominance can be seen in other blocks. However, all the blocks in Jaisalmer are rural in nature. Male population accounts for more than half share of the population in all blocks of both the districts. Also the rate of literacy was relatively high in case of male in both districts.

Table 4.16A: Demographic Features of blocks as compared to the Ajmer District

Particulars	Ajmer	Bewar	Bhinay	Kekadi	Kishangarh	Masooda	Nasirabad	Pisangan	Sarwad	Total
Geographical area (2011-12)	91195	64709	74858	68029	86646	99338	81931	103448	172894	843048
No. of inhabited villages (no.)	86	199	91	99	162	139	82	56	111	1025
Total Population (00's)	6900	2839	1082	1751	3350	1873	1622	1089	1312	21820
Rural Population (%)	26.76	55.62	100.0	80.50	65.31	85.21	69.71	100.00	87.65	59.91
Urban population (%)	73.24	44.38	0.00	19.50	34.69	14.79	30.29	0.00	12.35	40.09
Male Population (%)	52.28	51.15	50.93	51.22	51.88	51.32	53.30	51.28	51.09	51.79
Female population (%)	47.72	48.85	49.07	48.78	48.12	48.68	46.70	48.72	48.91	48.21
Male literacy (%)	86.11	90.95	65.38	71.42	73.69	77.93	78.76	70.57	63.1	79.37
Female literacy (%)	65.47	64.07	23.45	32.73	41.73	37.88	40.55	31.67	25.88	48.86

Source: District Outline, Ajmer, 2008

Table 4.16B: Demographic Features of blocks as compared to the Jaisalmer District

Particulars	Jaisalmer	Pokaran	Fatehgarh	Total
Geographical area	24519	9517	4352	38389
No. of inhabited villages (no.)	279	212	109	600
Total Population (00's)	2050	2291	741	5080
Rural Population (%)	71.94	91.77	100.00	84.97
Urban population (%)	28.06	8.23	0.00	15.03
Male Population (%)	53.89	53.62	55.00	53.93
Female population (%)	46.11	46.38	45.00	46.07
Male literacy (%)	69.31	64.08	63.80	66.26
Female literacy (%)	35.81	30.14	27.76	32.05

Source: District outline, Jaisalmer 2008

In case of the blocks of the other two selected districts, except Ladpura and Ramganj block of Kota district and Baran block of Baran district, which are in urban/semi-urban in nature, all other blocks of both the districts are having dominance of rural population. Male population ratio is slightly higher than the female indicates the adverse sex ratio in these blocks. The literacy rate is relatively very high in male as compared to female in all the blocks of two districts.

Table 4.16 C: Demographic Features of blocks as compared to the Kota District

Particulars	Digod	Ladpura	Pipalda	Ramganj	Sangod	Total
Geographical area (2011-12)	91296	153824	89809	76527	106889	518345
No. of inhabited villages (no.)	163	145	163	144	197	812
Total Population (00's)	1506	8682	1556	2285	1656	15685
Rural Population (%)	100.00	16.67	100.00	57.81	88.74	46.54
Urban population (%)	0.00	83.33	0.00	42.19	11.26	53.46
Male Population (%)	52.28	52.95	52.47	52.76	52.20	52.73
Female population (%)	47.72	47.05	47.53	47.24	47.80	47.27
Male literacy (%)	83.64	87.37	77.67	83.59	84.34	85.23
Female literacy (%)	53.43	67.12	44.06	55.26	53.3	60.43

Source: District outline, Kota 2008.

Table 4.16 D: Demographic Features of blocks as compared to the Baran District

Particulars	Anta	Atru	Baran	Chhabra	Chhipabarod	Kishanganj	Mangrol	Shahabad	Total
Geographical area	525	847	632	802	833	1431	459	1469	6997
No. of inhabited villages (no.)	75	136	99	186	173	180	73	167	1089
Total Population (00's)	1038	1329	1818	1223	1439	1352	936	1081	10220
Rural Population (%)	74.21	95.56	56.73	81.36	88.86	100.00	76.65	100.00	83.16
Urban population (%)	25.79	4.44	43.27	18.64	11.14	0.00	23.35	0.00	16.84
Male Population (%)	52.34	52.50	52.43	52.85	52.11	52.11	51.95	52.74	52.38
Female population (%)	47.66	47.50	47.57	47.15	47.89	47.89	48.05	47.26	47.62
Male literacy (%)	82.00	80.01	83.89	73.34	69.97	67.34	79.12	68.27	75.78
Female literacy (%)	48.77	43.64	54.01	37.53	31.41	35.12	44.89	33.16	41.55

Source: District outline, Baran, 2008

4.6.2 Land Use Classification of Selected Blocks:

The land use classification shows that how available land is put under cultivation and other uses. The land use classification of blocks of selected districts is presented in Tables 4.17A to 4.17D. It can be observed from these tables that in the blocks those are rural dominance, share of net sown area to the geographical area is higher than the other semi urban blocks in Ajmer districts. The cropping intensity among the blocks ranges from as low as 116 percent in case of Pisangam block to as high as 166.8 perxcent in Seewad block, with average of 142.6 percent at district level. Hardly 9.6 percent of geographical area of Jaisalmer district is as net sown area which is almost rainfed, therefore cropping intensity of the block ranges between 101 to 122 percent with district average of 108.2 percent.

Table 4.17 A: Land Use Classifications of Studied blocks of Ajmer district

Particulars	Percentage to Geographical Area									
	Ajmer	Pisangan	Nasirabad	Bewar	Masooda	Kekri	Bhinay	Saewad	Kishangarh	Total
Land put to non agriculture uses*	43.8	31.5	28.7	64.7	36.9	20.4	26.4	24.2	27.8	32.3
Net area sown*	37.7	55.9	54.0	25.2	46.8	64.1	57.0	62.4	61.0	53.3
Area sown more than once*	7.9	8.7	10.2	7.3	15.0	42.6	20.6	41.7	29.2	22.7
Gross Cropped Area*	45.6	64.6	64.2	32.5	61.8	106.7	77.6	104.0	90.2	75.9
Cropping intensity (%)	120.9	115.6	118.9	128.9	132.1	166.4	136.2	166.8	147.8	142.6

Note:*- Figures are percentage to total geographical area.

Source: District Outline, Ajmer, 2008

Table 4.17 B: Land Use Classifications of Studied blocks of Jaisalmer district

Particulars	Percentage to Geographical Area			
	Jaisalmer	Pokaran	Fatehgarh	Total
Land put to non agriculture uses*	2.7	4.5	4.5	3.3
Net area sown*	3.4	23.5	14.3	9.6
Area sown more than once*	0.8	1.2	10.9	2.0
Gross Cropped Area*	4.2	24.6	14.5	10.4
Cropping intensity (%)	122.1	105.1	100.8	108.2

Note:*- Figures are percentage to total geographical area.

Source: District Outline, Jaisalmer, 2008

In case of blocks of Kota and Baran districts, except ladpura block in Kota and Kisangandh and Shahabad blocks in Boaran districts, in all other blocks about 50-60 percent of geographical area is as net sown area. Due to availability of water, area sown more than once is very high which has resulted in very high cropping intensity in these blocks of selected districts.

Table 4.17 C: Land Use Classifications of Studied blocks of Kota district

Particulars	Percentage to Geographical Area					
	Digod	Ladpura	Pipalda	Ramganj	Angod	Total
Land put to non agriculture uses*	24.3	65.9	19.2	34.1	33.2	39.0
Net area sown*	66.5	26.2	68.2	56.5	61.5	52.3
Area sown more than once.*	48.7	19.8	35.6	40.2	49.5	36.8
Gross Cropped Area	115.1	46.1	103.7	96.7	111.0	89.1
Cropping intensity (%)	173.2	175.7	152.2	171.1	180.5	170.3

Note: *- Figures are percentage to total geographical area.

Source: District Outline, Kota, 2008

Table 4.17 D: Land Use Classifications of Studied blocks of Baran district

Particulars	Anta	Atru	Baran	Chhabra	Chhipabarod	Kishanganj	Mangrol	Shahabad	Total
Land put to non agriculture uses *	14.8	9.3	9.6	10.7	7.0	6.3	13.6	8.3	9.1
Net area sown*	70.0	59.6	75.8	54.1	43.6	33.2	74.2	22.2	47.0
Area sown more than once*	32.9	21.3	21.1	28.2	28.4	15.4	27.9	10.4	20.7
Gross Cropped Area*	102.9	80.9	96.9	82.3	72.0	48.6	102.2	32.6	67.8
Cropping intensity (%)	147.0	135.7	127.8	152.2	165.3	146.3	137.7	146.7	144.1

Note: *- Figures are percentage to total geographical area.

Source: District Outline, Baran, 2008

4.6.3 Land Holding Pattern of Selected Blocks:

The block wise share of number of different land holding size categories of farm households in selected districts is presented in Table 4.18A to 4.18D. It can be seen from the table that except Kisangandh block in Ajmer, small and marginal together accounted for major share in total number of farmers, ranges from about 60 percent in Sarwad to 90 percent in Bewar. Opposite to the Ajmer district, more than 75 percent of farmers household fall in the category of large farmers having land more than 5 ha. Kota and Baran districts however show the distribution of farmers household as like Ajmer having dominance of small and marginal farmers. Thus except Jaisalmer district, the blocks of other three districts except few exceptions have dominance of small and marginal farmers and therefore the

welfare of the small and marginal farmers plays important role in the development of these blocks.

Table 4.18A: Block-wise Share of Number of Different Categories of Farm Households in Ajmer district

Size of Farm	Ajmer	Bewar	Bhinay	Kekadi	Kishangarh	Masooda	Nasirabad	Pisangan	Sarwad	Total
No.										
0-1.0	59.38	76.30	40.30	40.52	24.99	59.89	50.16	42.08	36.67	48.24
1.1-2.0	19.36	13.73	23.68	23.44	24.49	19.66	20.55	23.78	23.15	21.14
2.1-4.0	12.91	7.25	20.35	19.44	24.31	13.30	16.60	19.72	21.48	17.06
4.1-10.0	7.00	2.48	12.91	13.96	19.34	6.19	10.41	12.00	14.73	10.92
> 10 ha	1.34	0.25	2.77	2.64	6.87	0.96	2.29	2.43	3.97	2.65
All	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Area										
0-1.0	15.88	30.43	8.66	8.73	3.91	17.34	10.68	9.42	7.34	10.09
1.1-2.0	18.42	23.65	14.91	14.75	10.26	20.19	15.25	15.83	12.76	14.82
2.1-4.0	23.95	24.29	24.95	23.88	19.64	26.47	23.94	25.36	22.88	23.25
4.1-10.0	27.57	16.96	33.60	36.74	33.76	25.74	31.70	33.33	33.49	31.81
> 10 ha	14.18	4.68	17.89	15.90	32.44	10.25	18.43	16.06	23.54	20.03
All	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
AV size (ha)	1.49	0.82	2.30	2.30	3.51	1.39	1.95	2.17	2.64	2.06

Source: District Outline, Ajmer, 2008

Table 4.18B: Block-wise Share of Number of Different Categories of Farm Households in Jaisalmer district

Size of Farm	Jaisalmer	Pokaran	Fatehgarh	Total
No.				
0-1.0	2.26	0.87	4.11	1.88
1.1-2.0	4.94	2.39	11.90	4.76
2.1-4.0	13.21	9.59	9.32	10.94
4.1-10.0	65.71	48.74	22.39	51.38
> 10 ha	13.88	38.41	52.28	31.05
All	100.0	100.0	100.0	100.0
Area				
0-1.0	0.24	0.04	0.29	0.13
1.1-2.0	1.11	0.29	1.53	0.72
2.1-4.0	5.85	2.34	2.09	3.17
4.1-10.0	58.56	25.07	12.41	31.18
> 10 ha	34.24	72.26	83.69	64.79
All	100.0	100.0	100.0	100.0
AV size (ha)	6.86	12.66	12.91	10.47

Source: District Outline, Jaisalmer, 2008

Table 4.18C: Block-wise Share of Number of Different Categories of Farm Households in Kota district

Size of Farm	Digod	Ladpura	Pipalda	Ramganj	Sangod	Total
No.						
0-1.0	28.72	35.82	23.14	25.81	27.93	28.06
1.1-2.0	22.23	24.27	26.15	31.20	24.82	25.75
2.1-4.0	24.26	22.83	27.06	27.30	25.11	25.38
4.1-10.0	20.75	15.35	20.74	14.48	18.85	18.14
> 10 ha	4.05	1.72	2.91	1.20	3.29	2.67
All	100.0	100.0	100.0	100.0	100.0	100.0
Area						
0-1.0	4.78	7.38	4.44	6.67	5.43	5.58
1.1-2.0	10.83	14.89	13.00	19.29	12.76	13.84
2.1-4.0	23.05	27.50	26.41	32.46	25.18	26.59
4.1-10.0	41.47	38.55	42.16	35.18	39.77	39.70
> 10 ha	19.87	11.68	13.99	6.40	16.85	14.29
All	100.0	100.0	100.0	100.0	100.0	100.0
AV size (ha)	3.00	2.35	2.93	2.37	2.85	2.71

Source: District Outline, Kota, 2008

Table 4.18D: Block-wise Share of Number of Different Categories of Farm Households in Baran district

Size of Farm	Anta	Arui	Baran	Chhabra	Chhipabarod	Kishanganj	Mangrol	Shahabad	Total
No.									
0-1.0	31.83	27.38	30.55	30.89	41.37	35.80	35.37	46.10	35.43
1.1-2.0	22.45	26.63	24.45	25.41	27.74	27.80	24.61	26.61	25.96
2.1-4.0	24.13	25.88	22.82	26.61	21.68	23.17	23.20	19.32	23.19
4.1-10.0	18.49	17.76	18.56	15.39	8.53	11.19	15.27	7.13	13.52
> 10 ha	3.08	2.36	3.63	1.70	0.68	2.03	1.55	0.84	1.90
All	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Area									
0-1.0	5.96	5.56	5.41	6.04	11.26	9.50	7.98	5.96	5.56
1.1-2.0	12.03	14.77	12.80	15.29	23.51	18.28	15.54	12.03	14.77
2.1-4.0	25.61	27.71	23.41	31.69	31.41	29.05	28.58	25.61	27.71
4.1-10.0	40.88	39.79	40.46	37.17	28.73	29.58	38.53	40.88	39.79
> 10 ha	15.52	12.17	17.92	9.81	5.09	13.59	9.38	15.52	12.17
All	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
AV size (ha)	2.70	2.64	2.79	2.39	1.69	2.21	2.29	1.68	2.26

Source: District Outline, Baran, 2008

4.6.4 Sources of Irrigation of Selected Blocks:

The block-wise area irrigated by source is presented in Table 4.19A to 4.19D. As mentioned earlier Kota and Baran are the irrigated districts having about more than 80 percent of net sown area under irrigation, while Ajmer has hardly 16 percent. Jaisalmer district is heavily depending on the monsoon for crop cultivation as area under irrigation was almost negligible. Tubewell and wells are the major source of irrigation in all the blocks of Ajmer. Jaisalmer block depends heavily on Canal for irrigation water followed by Pokharan, while availability of groundwater gets water for fateshgarh. Except Sangod block in Kota district, all other blocks depend on canal water for irrigation. The tubewell and wells are major source for irrigation for most of the blocks in Baran, except Magrol followed by Anta where canal water accounts major share in irrigation water.

Table 4.19A: Source-wise share in Total Irrigation in the blocks of Ajmer district

Sources	Ajmer	Bewar	Bhimay	Kekadi	Kishangarh	Masooda	Nasirabad	Pisangan	Sarwad	Total
Tube-well & Well*	100.0	91.6	78.1	91.7	97.6	87.9	97.1	100.0	87.4	91.3
Canals*	0.0	0.0	0.0	4.3	0.0	3.4	0.0	0.0	5.7	2.5
Tanks*	0.0	8.4	21.9	1.3	2.4	8.7	2.9	0.0	5.9	5.3
Others*	0.0	0.0	0.0	2.8	0.0	0.0	0.0	0.0	1.0	0.9
% NIA TO NSA	17.39	11.89	14.82	10.58	10.33	19.65	4.94	9.43	7.70	15.24

Note: *- Figures are percentage to net irrigated area.

Source: District Outline, Ajmer, 2008

Table 4.19B: Source-wise share in Total Irrigation in the blocks of Jaisalmer district

Sources	Jaisalmer	Pokaran	Fatehgarh	Total
Tube-well & Well*	22.8	51.0	100.0	32.0
Canals*	77.2	49.0	0.0	68.0
Tanks*	0.0	0.0	0.0	0.0
Others*	0.0	0.0	0.0	0.0
% NIA TO NSA	1.31	0.58	0.01	3.87

Note: *- Figures are percentage to net irrigated area.

Source: District Outline, Jaisalmer, 2008

Table 4.19C: Source-wise share in Total Irrigation in the blocks of Kota district

Sources	Digod	Ladpura	Pipalda	Ramganj	Sangod	Total
Tube-well & Well*	18.5	29.2	20.4	99.8	89.0	47.4
Canals*	79.6	69.5	77.8	0.0	9.5	51.1
Tanks*	0.0	0.9	0.0	0.0	0.1	0.2
Others*	1.9	0.4	1.7	0.2	1.4	1.3
% NIA TO NSA	95.25	87.05	97.28	54.29	98.41	88.72

Note: *- Figures are percentage to net irrigated area.

Source: District Outline, Kota, 2008

Table 4.19 D: Source-wise share in Total Irrigation in the blocks of Baran district

Sources	Anta	Atru	Baran	Chhabra	Chhipabarod	Kishanganj	Mangrol	Shahabad	Total
Tube-well & Well*	41.6	86.2	89.4	86.3	99.1	42.9	24.1	81.4	68.8
Canals*	51.9	7.6	10.1	0.4	0.0	24.5	72.4	9.0	21.7
Tanks*	0.5	0.0	0.0	0.0	0.1	8.9	0.0	3.0	1.6
Others*	6.1	6.2	0.5	13.3	0.8	23.7	3.5	6.7	7.9
% NIA to NSA	97.32	97.17	92.84	83.96	84.79	89.94	98.06	58.45	88.66

Note: *- Figures are percentage to net irrigated area.

Source: District Outline, Baran, 2008

4.6.5 Cropping Pattern of Selected Blocks:

The changes in cropping pattern of studies blocks are presented in Table 2.13 A to 2.13D. It can be seen from the table 2.13A that food grains accounts for significant share in total cropped area of these blocks. Moong and gram crops have regained importance in total gross cropped area in recent years. Other important crops of selected blocks in Ajmer districts are urad, mustard, taramera, jowar, wheat and sesamum. In studied blocks of Jaisalmer district, Bajara is the major crop grown followed by gram, jowar and wheat.

Table 4.20A: Percent Area under Important Crops in Kishangarh and Kekadi blocks of Ajmer district for selected years

Crops	Kishangarh						Kekadi					
	1981-82	1992-93	2001-02	2009-10	2010-11	2011-12	1981-82	1992-93	2001-02	2009-10	2010-11	2011-12
Maize	7.70	4.64	4.06	3.42	1.90	2.19	14.13	13.04	10.16	7.71	4.35	3.41
Jowar	24.25	21.87	26.30	30.90	18.52	16.26	27.37	28.40	30.42	32.53	19.92	9.40
Bajara	22.13	26.28	28.49	26.66	15.19	15.26	1.28	2.68	4.26	11.39	7.63	3.55
Wheat	9.58	6.74	2.32	1.14	3.40	4.05	19.04	16.32	5.79	3.88	12.26	10.13
Barley	7.34	6.66	2.12	1.21	6.75	3.35	4.56	2.62	0.73	1.09	3.19	2.42
Moth	0.00	0.00	0.00	1.88	0.76	0.68	0.00	0.00	0.00	0.00	0.00	0.00
Udad	0.00	0.00	0.00		0.00	0.00	0.00	0.00	0.00	11.11	6.01	17.16
Moong	0.00	0.00	0.00	23.74	12.76	23.81	0.00	0.00	0.00	8.31	7.67	11.58
Cowpea	0.00	0.00	0.00	0.86	0.56	0.87	0.00	0.00	0.00	0.00	0.00	0.01
Gram	12.77	5.01	0.03	0.02	23.66	23.88	13.72	5.91	0.19	0.12	10.67	12.50
Sesamum	3.89	8.86	0.96	7.22	2.53	3.09	1.71	4.18	2.33	12.47	5.68	6.15
Groundnut	1.43	0.34	0.06	0.01	0.01	0.02	3.16	1.07	0.28	0.05	0.02	0.06
Mustard	0.14	4.68	0.04	0.04	2.30	1.55	0.15	7.92	1.47	3.87	6.21	14.38
Taramera	3.39	2.36	0.00	0.10	11.53	0.99	6.47	1.21	0.00	2.52	14.70	0.70
Guar	0.00	0.00	0.00	2.41	1.12	1.27	0.00	0.00	0.00	0.71	0.30	0.20
Cotton	1.28	0.13	0.76	0.05	0.01	0.07	5.02	1.47	3.02	3.90	1.12	3.41
Cumin	0.00	0.00	0.00	0.35	0.80	0.86	0.00	0.00	0.00	0.33	0.53	2.59

Note: Figures are percentage to gross cropped area.

Source: District Outline, Ajmer (various issues).

Table 4.20B: Percent Area under Important Crops in Jaisalmer and Pokaran blocks of Jaisalmer district for selected years

Crops	Jaisalmer				Pokran			
	1983-84	1992-93	2001-02	2004-05	1983-84	1992-93	2001-02	2004-05
Jowar	1.62	3.73	0.91	0.03	3.82	3.46	1.37	4.01
Bajara	93.42	89.23	26.09	7.38	94.03	93.35	82.88	74.45
Wheat	4.28	4.29	9.24	4.84	0.52	1.77	5.43	2.37
Barley	0.14	0.00	0.05	0.01	0.00	0.00	0.05	0.01
Gram	0.26	0.56	3.12	5.15	0.00	0.04	4.82	8.34
Seamum	0.16	0.23	0.24	0.13	1.38	0.04	0.11	0.29
Groundnut	0.00	0.02	3.25	7.04	0.00	0.74	0.10	1.18
Castor	0.00	0.00	0.00	0.25	0.00	0.00	0.01	0.34
Mustard	0.02	1.74	52.64	72.28	0.04	0.57	3.79	7.48

Note: Figures are percentage to gross cropped area.

Source: District Outline, Jaisalmer (various issues).

Table 4.20C: Percent Area under Important Crops in ladpura and Digod blocks of Kota district for selected years

Crops	Ladpura						Digod					
	1981-82	1992-93	2001-02	2009-10	2010-11	2011-12	1981-82	1992-93	2001-02	2009-10	2010-11	2011-12
Rice	2.05	6.23	6.69	17.65	13.33	11.55	0.11	3.66	1.33	2.75	2.41	1.44
Maize	14.85	5.00	2.90	3.00	4.92	2.77	1.50	0.25	0.19	0.12	0.40	0.20
Jowar	15.20	3.28	1.66	0.21	0.41	0.10	36.03	5.39	1.74	0.21	0.07	0.01
Bajara	0.01	0.01	0.00	0.00	0.00	0.01	0.17	0.00	0.00	0.00	0.00	0.00
Wheat	31.02	34.53	30.00	27.61	28.47	32.59	30.02	31.51	23.06	32.96	36.73	36.35
Barley	0.67	0.33	0.18	0.11	0.11	0.08	1.30	0.53	0.30	0.08	0.26	0.20
Moth	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Udad	0.00	0.00	0.54	0.06	0.22	0.51	0.00	0.00	0.17	0.08	0.24	1.57
Moong	0.00	0.00	0.11	0.02	0.03	0.04	0.00	0.00	0.06	0.01	0.03	0.05
Gram	14.42	3.74	3.53	1.88	2.73	0.80	16.26	2.62	8.51	0.43	1.77	0.39
Seamum	10.37	1.44	0.53	1.56	6.78	3.10	6.96	0.76	0.14	3.51	8.04	2.63
Groundnut	0.45	0.38	0.32	0.08	0.08	0.10	1.02	0.16	0.09	0.03	0.05	0.12
Soyabean	0.00	0.14	32.26	21.84	18.05	25.48	0.00	0.44	42.55	34.83	32.91	37.15
Mustard	0.62	16.02	6.38	11.49	9.65	9.35	1.19	24.78	7.82	16.84	8.70	9.43
Tarameera	0.00	19.01	0.04	0.18	0.43	0.04	0.00	24.37	0.10	0.04	0.73	0.03
Guar	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Cotton	0.00	0.00	0.00	0.00	0.00	0.05	0.00	0.00	0.00	0.00	0.00	0.00
Cumin	0.00	0.00	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Garlic	0.00	0.00	0.96	1.85	2.43	3.27	0.00	0.00	0.09	1.28	1.97	4.66
Coriander	0.00	6.58	6.93	7.32	6.83	5.19	0.00	4.10	5.23	5.33	4.14	4.71
Fenugreek	0.00	0.00	1.09	0.04	0.05	0.05	0.00	0.00	6.99	0.54	0.75	0.35
Red Chilly	0.29	0.31	0.07	0.03	0.00	0.00	0.10	0.09	0.02	0.01	0.00	0.00

Note: Figures are percentage to gross cropped area.

Source: District Outline, Kota (various issues).

In Laltura and Digod blocks of Kota district, soybean is the major kharif crop followed by wheat in rabi season. Other important crops are mustard, garlic and coriander. In selected blocks of Baran district, highest share in GCA is recorded in recent years by mustard crop, followed by soybean, coriander and the wheat. Thus, cropping pattern in rainfed blocks concentrated on gram and other pulse crops while other irrigated blocks cultivate soybean, wheat, and spices crops.

Table 4.20D: Percent Area under Important Crops in Chhipabarod blocks of Baran district for selected years

Crops	Chhipabarod			
	1981-82	1992-93	2001-02	2004-05
Rice	0.01	0.00	0.00	0.00
Maize	20.38	28.81	20.27	23.62
Jowar	39.70	12.13	0.17	0.31
Bajara	0.00	0.00	0.00	0.00
Wheat	16.25	17.05	13.22	8.83
Barley	0.41	0.09	0.03	0.00
Tur	0.00	0.00	0.00	0.01
Udad	0.00	0.00	0.19	0.05
Moong	0.00	0.00	0.00	0.04
Gram	11.26	14.52	2.76	0.29
Seamum	4.12	1.05	0.13	0.58
Groundnut	0.65	1.67	0.31	0.14
Soyabean	0.00	13.26	27.36	18.76
Mustard	0.01	6.03	9.27	35.39
Tarameera	0.00	0.00	0.00	0.00
Cotton	0.00	0.00	0.00	0.01
Cumin	0.00	0.00	0.00	0.00
Garlic	0.00	0.00	1.95	0.97
Coriander	0.00	0.00	21.29	9.50
Fenugreek	0.00	0.00	0.13	0.01
Red Chilly	0.51	0.35	0.03	0.03

Note: Figures are percentage to gross cropped area.

Source: District Outline, Baran (various issues).

4.7 Village Cluster- wise details of Study area for current year

The details about the market and marketed related other infrastructure and institution available in and or near village cluster are presented in Table 4.21. It is observed that the all the selected village cluster were having basic necessary infrastructure and institutions. But none of them have farm produce storage structure indicates immediate investment in this

aspect. Due to non-availability of same, farmers are force to sell their produce immediately after harvest when generally prices are low.

Table 4.21: Details of Market and Marketed related other Infrastructure and Institution in/near Village Cluster/s of Jaisalmer, Ajmer, Kota and Baran districts of Rajasthan

Facility	Jaisalmer				Ajmer				Kota				Baran	
	VC 1		VC 2		VC 3		VC 4		VC 5		VC 6		VC 7	
	Y/N	D (km)	Y/N	D (km)	Y/N	D (km)	Y/N	D (km)	Y/N	D (km)	Y/N	D (km)	Y/N	D (km)
1. Primary School.	Y	-	Y	-	Y	-	Y	-	Y	-	Y	-	Y	-
2. Public School	Y	-	Y	-	Y	-	Y	-	0	15	Y	-	0	5
3. Primary Health Center	Y	-	Y	-	Y	-	Y	-	Y		Y	-	Y	-
4. Private Medical Practitioner	Y	-	Y	-	Y	-	Y	-	0	15	Y	-	Y	-
5. Veterinary dispensary	Y	-	Y	-	Y	-	Y	-	0	15	0	5	N	5
6. Govt. Training Centers (ITI, polytechnic etc)	N	80	Y	-	N	12	N	10	N	15	Y	-	N	5
7. Private Training Center (with trade of training)	N	80	Y	-	Y	-	N	10	N	15	Y	40	N	50
8. Presence of Khadi and Village Industries Corporation Office	N	80	0	60	N	15	N	10	N	15	0	40	N	50
9. Active NGO or SHGs (No.)	Y	-	Y	-	Y	-	Y	-	Y	-	Y	-	Y	
10. Nearest Motorable road	Y	-	Y	-	Y	-	Y	-	Y	-	Y	-	Y	-
11. Post Office.	Y	-	Y	-	Y	-	Y	-	N	15	Y	-	N	5
12. Commercial Banks	Y	-	Y	-	Y	-	N	5	N	15	Y	-	N	5
13. Co-operative Society	Y	-	Y	-	Y	-	Y	-	Y	-	Y	-	Y	-
14. Existence of factories	Y	-	Y	-	N	12	N	3	Y	-	N	5	N	15
15. Farm Produce Storage Facility	N	60	N	60	N	15	N	10	N	15	N	5	N	5
16. Fair Price Shop/Ration Dept.	Y	-	Y	-	Y	-	Y	-	Y	-	Y	-	Y	-
17. Ag. Produce Market (APMC)	Y	-	Y	-	N	15	N	10	N	15	N	5	N	5
18. MIS/PSS Procurement Centre	Y	-	Y	-	N	15	N	10	N	15	N	5	N	5
19. Existence of Village market/hat	Y	-	Y	-	N	15	N	10	N	15	N	5	N	5

Notes: VC- village circle; Y=yes, N=no, D(km)- Distance in km from village.

Source: Field Survey Data.

4.8 Details of Targeted Crop in the Study Area

As mentioned earlier, gram crop was selected for PSS and garlic crops were selected for MIS scheme. The emergence and importance of targeted crop/crops in selected districts and selected blocks over the years is presented in Tables 4.22A and 4.22D. Area under selected crop has increased over a period of time in all selected blocks and districts. As mentioned earlier, gram crop accounts for about 14.0 percent and 11.3 percent share in

gross cropped area of Ajmer and Jaisalmer, while garlic crop accounts for about 2.8 percent and 3.0 percent share in Kota and Baran districts, respectively during the 2011-2012.

Table 4.22A: Emergence and Importance of Gram in Jaisalmer & Ajmer and Garlic in Kota and Baran districts of Rajasthan over the years

District	Targeted Crops	Av. 1980-82	Av. 1990-92	Av. 2000-02	2009-10	2010-11	2011-12
Ajmer	Gram	9.00	3.60	3.47	0.04	14.59	13.99
Jaisalmer	Gram	0.03	0.07	1.17	8.35	8.85	11.10
Kota	Garlic	-	0.03	0.20	0.87	1.25	2.70
Baran	Garlic	n.a.	0.06	0.55	0.94	1.26	2.99

Table 4.22B: Emergence and Importance of Gram and Garlic crops in selected blocks of Jaisalmer, Ajmer, Kota and Baran districts of Rajasthan over the years

District	Blocks	Targeted Crops	1981-82	1992-93	2001-02	2009-10	2010-11	2011-12
Ajmer	Kishangarh	Gram	12.77	5.01	0.03	0.02	23.66	23.88
	Kekri	Gram	13.72	5.91	0.19	0.12	10.67	12.50
Jaisalmer	Jaisalmer	Gram	0.26	0.56	3.12	5.15	n.a.	n.a.
	Pokran	Gram	0.00	0.04	4.82	*8.34	n.a.	n.a.
Kota	Ladpura	Garlic	0.00	0.00	0.96	1.85	2.43	3.27
	Digod	Garlic	0.00	0.00	0.09	1.28	1.97	4.66
Baran	Chhipabarod	Garlic	0.00	0.00	1.95	*0.97	n.a.	n.a.

Notes:* Figures relates to 2004-05; n.a. Not Available.

In case of selected blocks as well, the area under gram crop has increased over a period of time and emerged as an important crop which account for about 24 percent and about 13 percent share in gross cropped area of Kishangarh and Kekri blocks of Ajmer district respectively. In case of garlic crop also, significant increase in area in Ladpura and Digod blocks indicates the emergence of this crop.

After having discussed about the features of selected districts, blocks and village clusters, next chapter presents the findings from the field data on these two schemes.

Results and Discussions

5.1 Introduction:

Assured and remunerative prices are not only the known instrument of organizing and integrating the production activities of the farmers but also proved to be the most imperative factor for increasing the production of food grains and other agricultural commodities in India and elsewhere in the world (Schultz, 1964). In view of the distorted and unregulated market conditions prevailing for agricultural produces in India, support prices are very imperative for farmers to get assured income from their crop cultivation (Acharya, 1997; Sen and Bhatia, 2004). Besides, since the elasticity of demand for agricultural commodities particularly for food grains is less than unit in most cases, increased production during the period of bumper harvest brings down the prices of agricultural commodities sharply that severely harms the farmers (Narayanamoorthy and Suresh, 2012). Also, the assured prices are helping the farmers for efficiently allocating the scarce resources among different crops (Acharya, 1997; Deshpande, 1996; Rao, 2001; Dev and Rao, 2010). Although MSP has helped to achieve the record production of food grains such as rice and wheat, it has come under severe scrutiny and attack for various reasons in the recent years. Thus, it is useful to find the effectiveness of MIS and PSS scheme from the field data. After having discussed about the procurement agencies, their procurement and target achievements, it is important to know about the macro level picture. Whether farmers have benefited from the MIS and PSS scheme or not?. Let us understand first about the level and basis of participation of farmers in selected area in both the schemes under study.

5.2 Coverage of MIS and PSS:

The procurement carried out by the procurement agencies in Rajasthan during last ten years is presented in Table 5.1. It can be seen from the table that under PSS, procurement operations was carried in Rajasthan for the selected crops such as wheat, gram and rapeseed mustard, while garlic, coriander and onion were procured under MIS. The monthwise arrival and market prices for gram and garlic crops in selected mandis during period under investigation would give us idea about the price trends, which is presented below.

Table 5.1: MIS/PSS in different districts of state in different years

Sr. no.	Year	Crops	Covering districts	Major Procurement Agencies	MIS/PSS
1	2005-06	Rapeseed and Mustard	Ajmer, Jaipur, Jodhpur, Kota, Sikar, Jhunjhunu, Bikaner, Churu, Ganganagar, Hanumangarh, Jaisalmer, Nagore, Pali, Baran and Jalore	RAJFED and Tilam Sangh	PSS
2	2006-07	Rapeseed and Mustard	Ajmer, Bharatpur, Kota, Bikaner, Jaipur, S.Ganganagar, Jodhpur and Udaipur	Tilam Sangh	PSS
3	2007-08	Rapeseed and Mustard	Ajmer, Bharatpur, Kota, Bikaner, Jaipur, S.Ganganagar, Jodhpur and Udaipur	RAJFED and Tilam Sangh	PSS
4	2004-05	Onion	Jodhpur, Nagore, Sikar, Jhunjhunu, Jaipur	RAJFED	MIS
5	2004-05	Coriander	Kota, Baran, Jhalawar	RAJFED and NAFED	MIS
6	2006-07	Wheat	Alwar, Ajmer, Kota, Bikaner, Jaipur, S.Ganganagar, Jodhpur and Udaipur	FCI,RSWC	PSS
7	2007-08	Wheat	Alwar, Ajmer, Kota, Bikaner, Jaipur, S.Ganganagar, Jodhpur and Udaipur	FCI, RAJFED, Tilam Sangh, NAFED	PSS
8	2008-09	Wheat	Alwar, Ajmer, Kota, Bikaner, Jaipur, S.Ganganagar, Jodhpur and Udaipur	FCI, RAJFED Tilam Sangh	PSS
9	2009-10	Wheat	Alwar, Ajmer, Kota, Bikaner, Jaipur, S.Ganganagar, Jodhpur and Udaipur	FCI, RAJFED, Tilam Sangh	PSS
10	2010-11	Wheat	Alwar, Ajmer, Kota, Bikaner, Jaipur, S.Ganganagar, Jodhpur and Udaipur	FCI, Tilam Sangh	PSS
11	2011-12	Gram	Ajmer, Bhilwara, Karuli, S.Madhopur, Dausa, Jaipur, Jhunjhunu, Tonk, Jaisalmer, Pali, Kota, Baran and Bundi	RAJFED and Tilam Sangh	PSS
12	2012-13	Garlic	Kota, Baran, Jhalawar and Bundi	RAJFED, Tilam Sangh	MIS
13	2012-13	Urad	Ajmer, Bhilwara, etc	RAJFED	PSS

Source: NAFED, Jaipur.

Arrival and Prices of Gram and Garlic in Important Mandies:

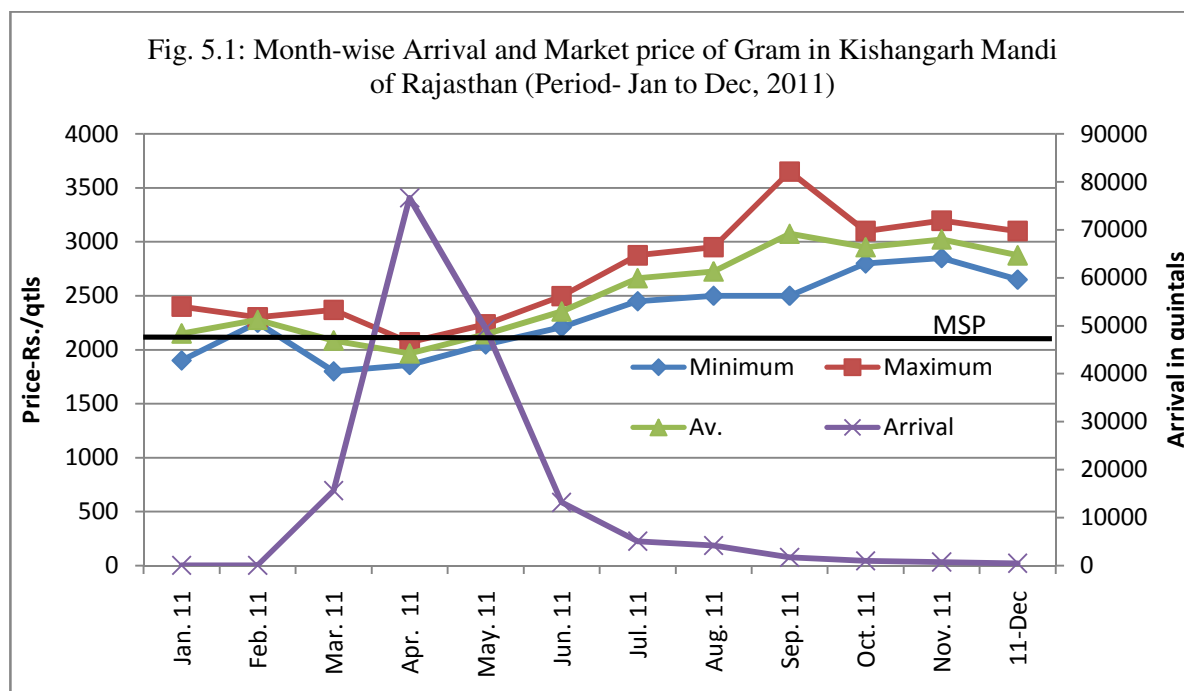
The month-wise arrival and prices of gram during the year 2011 and garlic during the period from January 2012 to February 2013 in selected mandies of Rajasthan is presented in Table 5.2A and 5.2B. As it was expected, the highest market price of the gram was realized in the month of October and November when the arrival was the lowest in the year (Fig. 5.1 and Fig. 5.2). At the time of arrival of gram in the market, price per quintal of gram ranged between Rs. 1965/- to Rs. 2085/- per quintal in Kisangadh mandi and Rs. 1970/- per quintal

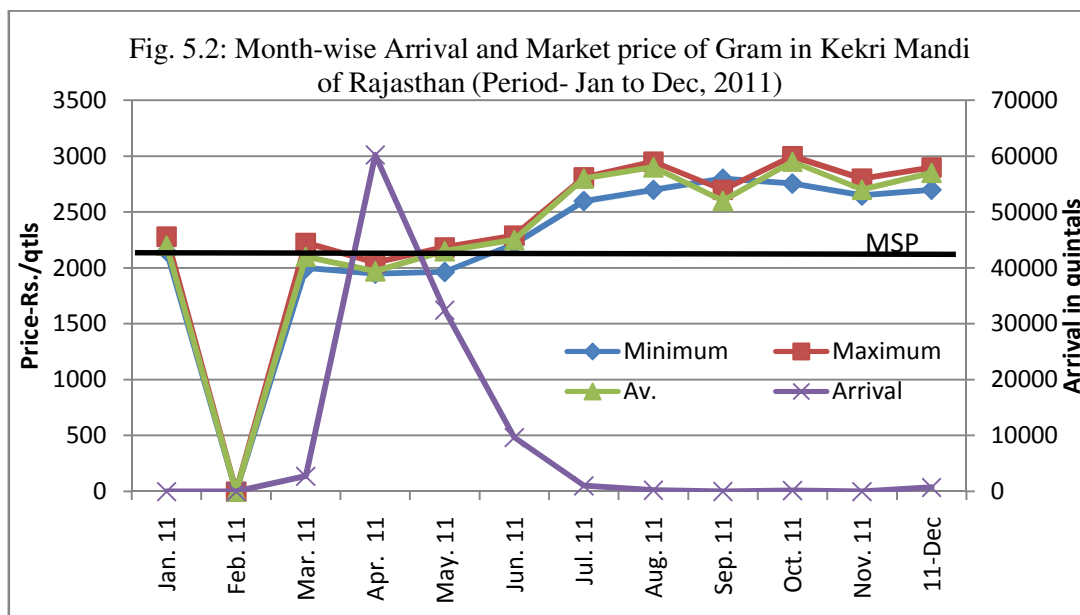
in April 2011 in Kekri mandi. Thus, market prices of gram ruled below declared MSP of Rs. 2100/- during two month and therefore Government had carried out procurement operation during the three month period of April to June 2011.

Table 5.2 A: Month-wise arrival and market price of Gram in Kishangadh and Kekri mandis of Rajasthan (Period- Jan to Dec, 2011)

Months	Gram Crop							
	Kishangadh Mandi				Kekri Mandi			
	Minimum (Rs/qtls)	Maximum (Rs/qtls)	Average (Rs/qtls)	Arrival (Qt.)	Minimum (Rs/qtls)	Maximum (Rs/qtls)	Average (Rs/qtls)	Arrival (Qt.)
Jan. 2011	1900	2400	2150	30.0	2150	2280	2200	3
Feb. 2011	2251	2300	2276	27.0	-	-	-	-
Mar. 2011	1800	2370	2085	15610	2000	2225	2100	2736
Apr. 2011	1860	2070	1965	76635	1950	2050	1970	60221
May 2011	2050	2235	2143	49434	1965	2185	2150	32444
June 2011	2210	2497	2354	13140	2215	2290	2250	9679
July 2011	2450	2875	2663	5046	2600	2811	2800	1038
Aug. 2011	2500	2950	2725	4167	2700	2950	2900	239
Sep. 2011	2500	3650	3075	1706	2800	2700	2600	21
Oct. 2011	2800	3100	2950	950	2756	3000	2950	190
Nov. 2011	2850	3195	3023	708	2650	2800	2700	6
Dec. 2011	2650	3100	2875	460	2700	2900	2850	750

Source: <http://rsamb.rajasthan.gov.in/>





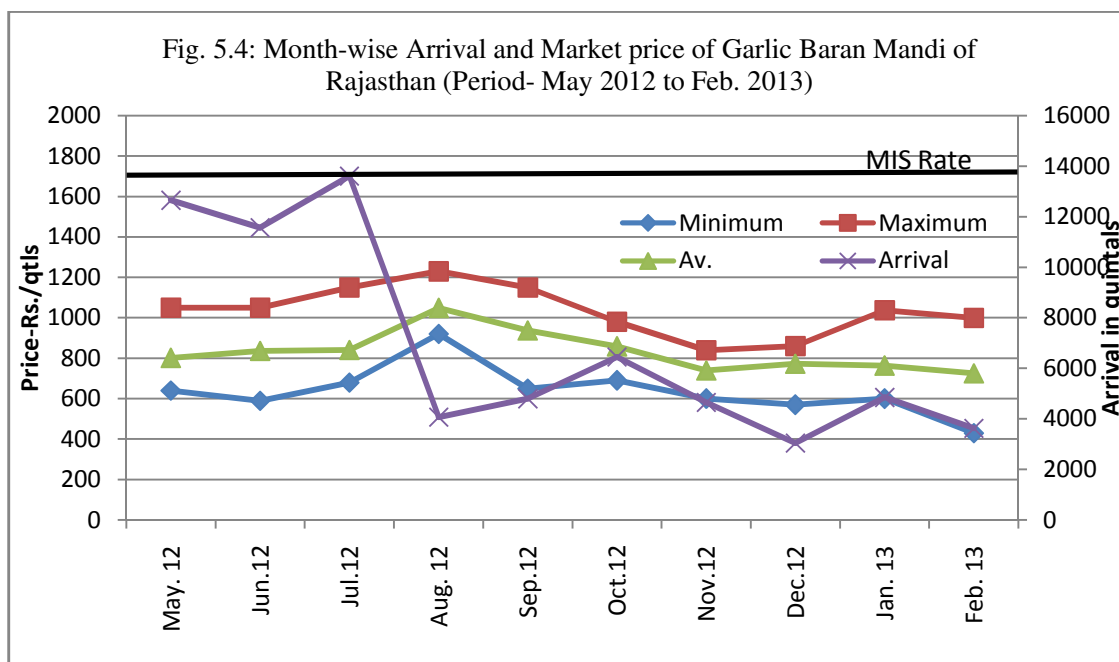
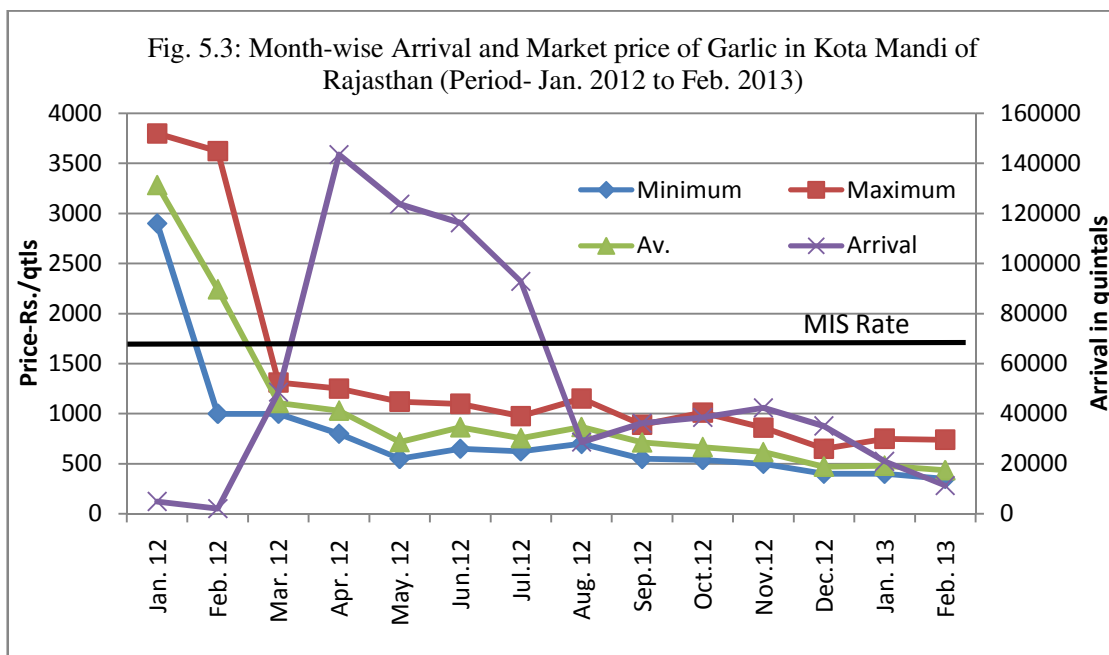
In case of garlic, data shows that during the high arrival month of April to May, the price was around Rs. 650/- per quintal as compared to slack month of January to March, when it was between Rs. 1100/- to 3300/- per quintal (Table 5.2B). The procurement of garlic under MIS was carried out during the period from June 6, 2012 to July 6, 2012 at the rate of Rs. 1700/- per quintal, when prices were very low. Due to low market price and procurement at very high rate, huge loss has incurred the government¹. Thus, policy of Market Intervention also has proved a boon to the farmers in distress (Figures 5.3 and 5.4).

Table 5.2 B: Month-wise arrival and market price of Garlic in Kota and Baran mandis of Rajasthan (Jan 2012 to Feb 2013)

Months	Garlic							
	Kota				Baran			
	Minimum (Rs/qtls)	Maximum (Rs/qtls)	Average (Rs/qtls)	Arrival (Qt.)	Minimum (Rs/qtls)	Maximum (Rs/qtls)	Average (Rs/qtls)	Arrival (Qt.)
Jan. 2012	2900	3800	3284	4894	n.a.	n.a.	n.a.	n.a.
Feb. 2012	1000	3625	2243	2051	n.a.	n.a.	n.a.	n.a.
Mar. 2012	1000	1312	1108	48643	n.a.	n.a.	n.a.	n.a.
Apr. 2012	800	1250	1031	143507	n.a.	n.a.	n.a.	n.a.
May 2012	550	1121	715	123716	640	1050	801	12650
June 2012	650	1099	865	116296	590	1050	837	11570
July 2012	626	975	756	92893	680	1150	841	13600
Aug. 2012	700	1151	867	28620	920	1230	1048	4075
Sep.2012	550	890	712	36223	650	1150	938	4800
Oct.2012	538	1012	666	38525	690	980	858	6450
Nov.2012	500	861	616	42324	600	840	740	4650
Dec.2012	400	650	471	35098	570	860	773	3050
Jan. 2013	400	750	481	20921	600	1037	763	4850
Feb. 2013	350	741	435	11274	430	1000	726	3625

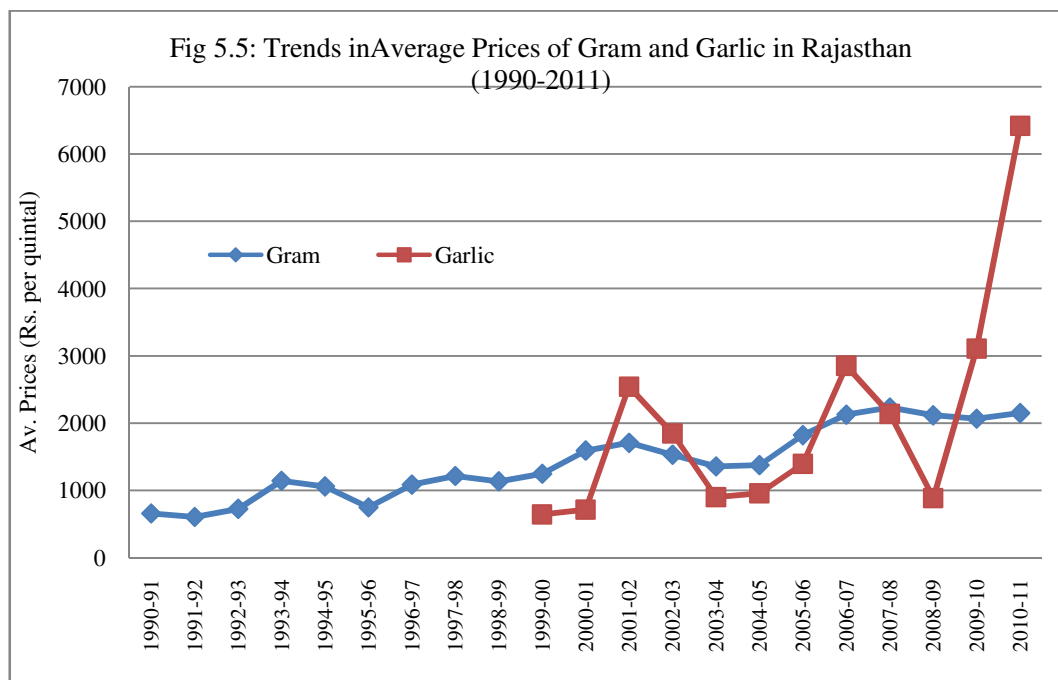
Notes: Garlic was procured under MIS in Rajasthan was during the period of 06/06/2012 to 06/07/2012; n.a.- Not available.
Source: <http://rsamb.rajasthan.gov.in/>

¹ See, Tables 3.15 A and 3.15B for details.



Trend in Average Prices of Gram and Garlic in Rajasthan:

During the period from 1990-91 to 2010-11, average wholesale prices of gram in Rajasthan has increased steadily from Rs. 658 per quintal in 1990-91 to Rs. 2150 per quintal in 2010-11, with some exceptions of slight lower down during 1995-96, 2002-2003 and 2003-2004. However, in case of garlic, prices of garlic have been highly fluctuating during the years 1999-2000 to 2010-11 (as low as Rs. 645/- and as high as Rs. 6420/-) (Fig. 5.5). Garlic is semi-perishable commodity and thus prices fluctuate heavily which ultimately affect the income of the farmer.



Proportion of Procurement to Market Arrival:

The proportion of procurement to total market arrival (in metric tons) of targeted crop in selected districts is presented in Table 5.3. It can be seen from the table that ratio of procurement to market arrival at state level is higher in case of garlic than gram, while opposite picture could notice at selected district level (Fig. 5.6 and 5.7). Thus, there is a need to cover a larger number of farmers under MIS by simplifying the procedures, making timely payments and increasing the number of procurement centres.

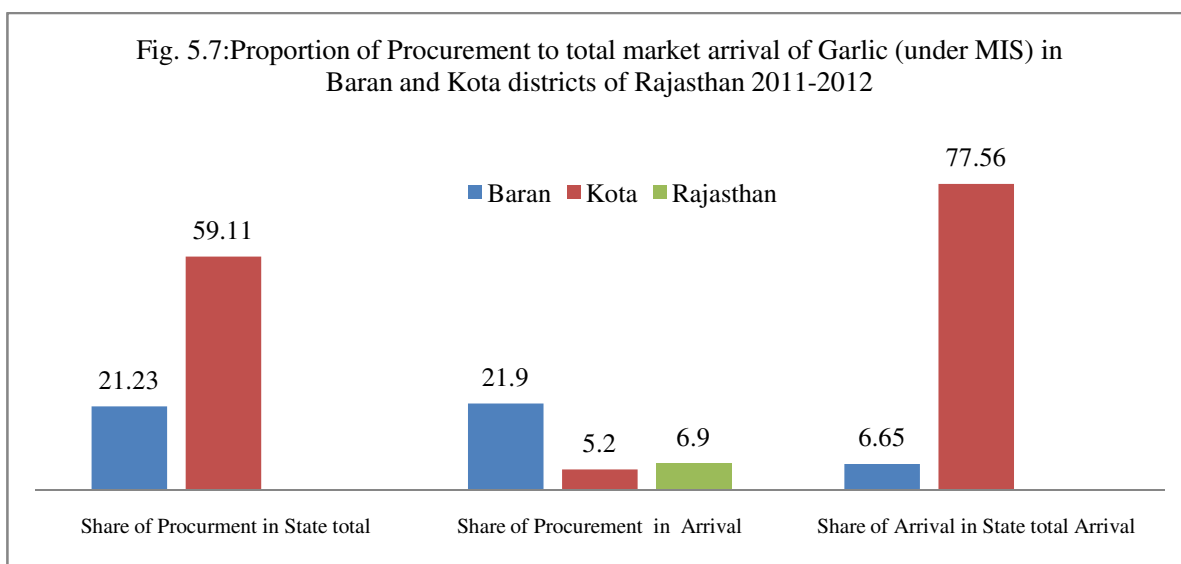
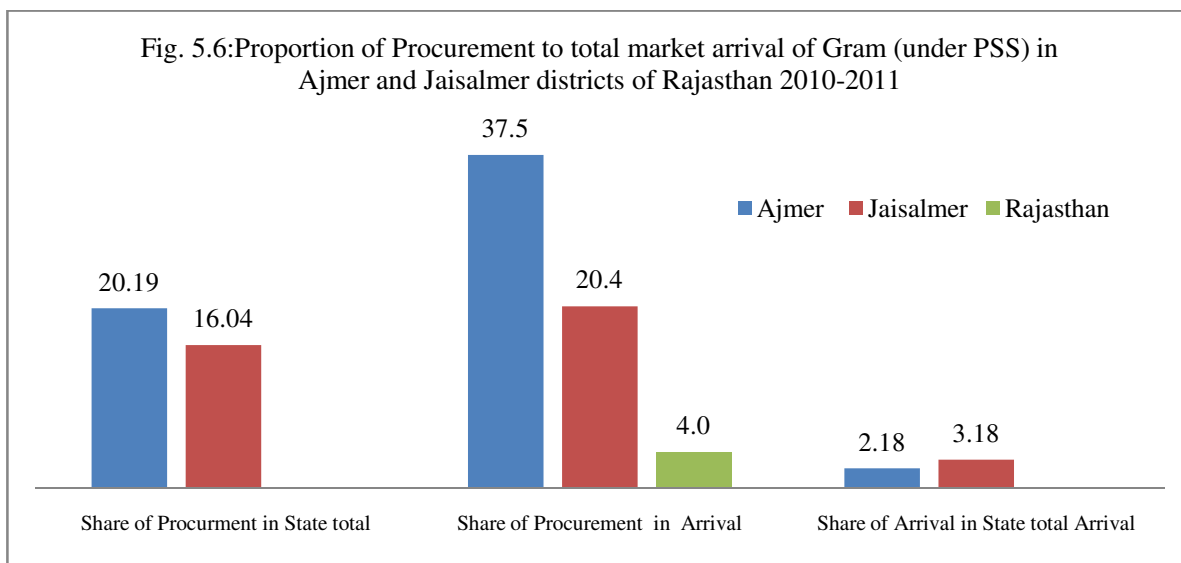
Table 5.3: Proportion of Procurement to Total Market Arrival of Gram (Ajmer and Jaisalmer district) and Garlic (Baran and Kota district)

(Figures in metric tones)

Crops	Districts	2008-09		2009-10		2010-11		2011-12	
		Qty. Procured	Total Market Arrivals	Qty. Procured	Total Market Arrivals	Qty. Procured	Total Market Arrivals	Qty. Procured	Total Market Arrivals
Gram	Ajmer	-	3275	-	2663	1278 (37.5)	3412	-	46431
	Jaisalmer	-	4595	-	12310	1016 (20.4)	4975	-	23099
	Rajasthan	-	336943	-	460422	6333 (4.0)	156531	-	852622
Garlic*	Baran	-	25808	-	15695	-	14867	1333 (21.9)	6085
	Kota	-	1449	-	118	-	52	3712 (5.2)	70979
	Rajasthan	-	51590	-	25616	-	21782	6280 (6.9)	91519

Notre: Figures in parenthesis are percentage to total market arrival; Arrival figures for Garlic for the year 2011-12 is total of arrival during all the months of 2012 (as data was not available).

Source: www.mandionline.com



As coverage of farmers under these scheme was less than 25 percent except Ajmer, and that to benefit of this scheme hardly reached to small and marginal farmers, therefore, the number and location of purchase centers by the nodal agency should be decided sufficiently in advance and given wide publicity followed by procurement immediately after harvest. The nodal agencies should decide, in consultation with the State Governments, the location and number of purchase centers to be set up much in advance of the marketing season. The information regarding number and location of purchase centers should be given wide publicity through media, radio, television, leaflets, etc.

APMC/KUMS about MIS/PSS operation for targeted crop:

The price fixed by the government for gram (MSP under PSS) and for garlic (under MIS) was Rs. 2100/- per quintal and Rs. 1700/- per quintal respectively. All the charges towards procurement including mandi tax, labour and transport, cost of bag, etc. was paid by the procurement agency.

Table 5.4: Details from Agriculture Produce Marketing Committee (APMC)/ Regulated market about MIS/PSS operation for Gram and Garlic

Crops procured under MIS/PSS	Procurement Starting Month for crop in MIS/PSS	Procuring Agency	Total quantity of crops procured under PSS/MIS (mt)	Price of Crop in Rs./qtls (MIS/PSS)	Charges, if any paid to APMC, if yes, by whom
Gram (PSS)	April 7, 2011	RAJFED	6332.38	2100	by Procurement Agency
Garlic (MIS)	June 6, 2012	RAJFED and TILAMSANGH	6279.86	1700	by Procurement Agency

5.3 Factors Influencing Coverage of Crops under MIS and PSS

The information related to the factors influencing the coverage of crops under MIS and PSS was collected and presented in Table 5.5A to 5.5B. Area under targeted crop has increased in the selected districts during last few years. The productivity of gram is fluctuating during period under consideration in the both districts, this may be due to heavy dependence on rainfall and low soil moisture availability.

Table 5.5A: Information about Gram crop in Ajmer and Jaisalmer districts during recent years

Particulars	Ajmer						Jaisalmer					
	2006-07	2007-08	2008-09	2009-10	2010-11	2011-12	2006-07	2007-08	2008-09	2009-10	2010-11	2011-12
Area under Targeted crop (ha)	7966	3689	20783	158	111133	87692	27854	70928	66962	52675	79529	94024
Gross Cropped Area	464590	458461	486255	433643	761914	626793	621334	637103	727303	630831	898713	847103
%age of targeted crop in GCA	1.71	0.80	4.27	0.04	14.59	13.99	4.48	11.13	9.21	8.35	8.85	11.10
Total Production (qtls)	48580	23390	94560	650	924070	666450	264180	317530	353670	190440	520350	810070
Productivity (per Qtl./ha)	6.10	6.34	4.55	4.11	8.31	7.60	9.48	4.48	5.28	3.62	6.54	8.62
Avg. price (Rs./qtl)	2127	2232	2116	2067	2150	n.a.	2127	2232	2116	2067	2150	n.a.

Note: n.a. Not Available.

Sources: Vital Agricultural Statistics, 2010-11, Directorate of Agriculture, Rajasthan; www.krishi.rajasthan.gov.in; <http://www.rsamb.rajasthan.gov.in/amb/1/mandishow.asp>

As 2009-10 was a bad year in terms of rainfall (as only 50 percent of total normal rainfall received in Ajmer and Jaisalmer), the area under gram has declined drastically and low productivity level was recorded. In case of garlic crop, significant increase in area under this crop indicates the emergence as an importance crop in selected district.

Table 5.5 B: Information about Garlic crop in Kota and Baran district during recent years

Particulars	Kota						Baran					
	2006-07	2007-08	2008-09	2009-10	2010-11	2011-12	2006-07	2007-08	2008-09	2009-10	2010-11	2011-12
Area under Targeted crop (ha)	2235	5211	3079	3823	5712	12282	1978	5308	3796	5159	7446	17645
GCA (000 ha)	376.9	416.1	431.5	441.7	455.6	454.3	473.6	524.9	547.8	550.4	591.5	589.3
%age of targeted crop in GCA	0.59	1.25	0.71	0.87	1.25	2.70	0.42	1.01	0.69	0.94	1.26	2.99
Total Production (qtls)	220310	521100	246320	229380	685440	982560	111750	354060	232290	301520	423100	128290
Productivity (per Qtl./ ha)	98.57	100.00	80.00	60.00	120.00	80.00	56.50	66.70	61.19	58.45	56.82	7.27

Sources: Vital Agricultural Statistics, 2010-11, Directorate of Agriculture, Rajasthan; www.krishi.rajasthan.gov.in; http://www.rsamb.rajasthan.gov.in/amb/1/mandishow.asp

Procurement Costs:

The details of the costs incurred in procurement of gram and garlic crop under PSS and MIS in APMC/KUMS as perceived by the nodal agency is presented in Tables 5.4A to 5.6C. It can be seen from the Table 5.6A that RAJFED which was nodal agency for procurement of gram incurred about average cost of Rs. 296/- per quintal in addition to MSP rate of Rs. 2100/- per quintal. The KVSS and RAJFED each adds 1 percent amount of MSP rate as their margin in procurement operations.

Table 5.6A: Costs incurred in Procurement of Gram crop under PSS in APMC/KUMS as perceived by the RAJFED, Jodhpur in 2011

S. No.	Particulars	Gram- Costs incurred by RAJFED	
		Rate	Rs. Per Quintal
1	Purchasing Rate of Gram	Minimum Support Value	2100.00
2	Mandi Tax	1.60%	33.60
3	Commission	6%	126.00
4	Handling Expenses	Rs. 13.9/- per bag	14.60
5	Gunny Bag Transport	20 per bag	40.00
6	Local Transport	38 per bag	40.00
7	Society Margin	1.0% of MSP	21.00
8	RAJFED Margin	1.0% of MSP	21.00
	Total		2396.20

Note: Gram bag of 95 kg.
Source: RAJFED, Jaipur.

Table 5.6B: Costs incurred in Procurement of Garlic crop under MIS in APMC/KUMS as perceived by the RAJFED, Jaipur

S. No.	Particulars	Garlic- Costs incurred by RAJFED	
		Rate	Rs. Per Quintal
1	Purchasing Rate of Garlic	MIS Declared Value	1700.00
2	Mandi Tax	1.60%	27.20
3	Commission	6%	102.00
4	Handling Expenses	Rs. 9 /- per bag	18.00
5	Grading Changes	20 per bag	40.00
6	Local Transport	20 per bag	20.00
7	External Transport	-	ACTUAL
8	Depreciation	10%	170.00
9	Administrative Expenses	2.5% of MIP	42.50
10	Overhead charges	-	419.70
	Total		2119.70

Note: Load- 50 kgs per Bag.
Source: RAJFED, Jaipur.

In case of garlic crop, procurement operations was carried out by the RAJFED and Tilam Sangh during June 2012, and the procurement cost incurred by both the agencies ranges between Rs. 2120/- to Rs. 2174/- per quintal including the MIS declared rate of Rs. 1700/- per quintal. The administrative expenses were charged by RAJFED/Tilam Sangh at the rate of 2.5 percent of Market Intervention Price (MIS) declared by the government.

Table 5.6 C: Costs incurred in procurement of Garlic crop under MIS in APMC as perceived by the Tilam Sangh, Jaipur

S. No.	Particulars	Garlic- Costs incurred by Tilam Sangh	
		Rate	Rs. Per Quintal
1	Purchasing Rate of Garlic	MIS Declared Value	1700.00
2	Mandi Tax	1.60%	27.20
3	Commission	6%	102.00
4	Handling Expenses	Rs. 9 /- per bag	18.00
5	Local Transport	-	30.00
6	External Transport	-	ACTUAL
7	Depreciation	15%	255.00
8	Administrative Expenses	2.5% of MIP	42.50
9	Total		2174.70

Source: Tilam Sangh, Jaipur.

Input-Output Details of Gram and Garlic:

The input-output details of gram and garlic are presented in Table 5.7A. It can be seen from the table that both the crops are grown in *rabi* season. The crops are sown directly on the field in the month of October at the seed rate of 60 kg/ha in case of gram and 250 qtls/ha bulbs of garlic. Pod borer and thrips is the major insect pest on Gram and Garlic respectively. Both the crops generally reach to the harvesting stage in 130-150 days of sowing. The average productivity level at KVK centre recorded is 15-20 quintals/ha in case of gram and 100-120 qtls/ha in case of garlic. However, information received from other sources slightly differs (Table 5.7B)

Table 5.7A: Input-output details of Gram and Garlic as per KVK, Ajmer (2012)

Particulars		Crop- Gram	Crop- Garlic
Expected sowing time (week & month)		October	October
Nursery Area for one hectare of transplanted crop		Direct sowing	Direct sowing of cloves
Land preparation cost (Rs.)		800	1700
Seed Qty. (Kg)		60 kg/ha.	250 qtl/ha
FYM Qty. (in ton)		10-12 (once in 3 years)	20-25
Seedling transfer time / period		-	-
Fertilizer & nutrients (in kg of nutrients)	Urea	-	100-120 kg
	DAP	50 kg	-
	Other 'P' fertilizer (SSP)	-	300 kg
	MOP/other 'K' fertilizer	-	50 kg
	Zinc	10 kg	10 kg
Prevalent pests and Pesticides	Name	Pod borer	Thrips
	Qty	Dusting of methyl parathion 2% @ 25 kg/ha	2 sprays of imidachlopride @ 150ml/ha
	Name	-	Purple blotch
	Qty	-	Dithane M-45 @ 2kg/ha
Irrigation Timings and Qty		Rainfed	10-12 days interval (10-15 irrigations)
Land rent		-	-
Any other recommended operation		-	-
Harvesting period / weeks / months		130-140 days	5 months
Expected quantity of Main Product (qtls.)		15-20	100-110
By Product (qtls.)		-	-

Source: Krishi Vigyan Kendra, Tabiji, Ajmer.

Table 5.7B: Cost of Cultivation of Gram and Garlic Crops (RAJFED)

Particulars	Gram				Garlic			
	Jaisalmer		Ajmer		Kota		Baran	
	Unit	Cost (Rs.)	Unit	Cost (Rs.)	Unit	Cost (Rs.)	Unit	Cost (Rs.)
Expected sowing time (week & month)	15 Oct.- 15 Nov.		10 Oct.- 15 Nov.		Sep.- Nov.		Sep.- Nov.	
Nursery Area for one hect. of transplanted crop	NA		NA		NA		NA	
Land preparation cost (Rs.)	4000	4000	2800	2800	8000	8000	6000	6000
Seed Qty. (Kg)	32	840	32	850	400	35000	350	28000
FYM Qty. (in ton)	8	8000	8	7000	20	10000	8	4000
Seedling transfer time / period	NA		NA		NA		NA	
Fertilizer & nutrients (in kg of nutrients)								
Urea	40	240	40	240	125	750	125	750
DAP	32	600	32	600	60	1020	60	1020
Other 'P' fertilizer	40	240	40	240	NA	0	NA	0
MOP/other 'K' fertilizer	NA	0	NA		100	1000	100	1000
Zinc	NA	0	NA		NA			
Other nutrients	NA	0	NA		NA			
Prevalent pests and Pesticides	Pod Borer		Pod Borer		Thrips		Thrips	
Name	Methyl Parathion		Methyl Parathion		Monocrotophos		Monocrotophos	
Qty	16 Kg	320	16 Kg	320	1 Litter	450	1 Litter	450
Name	Endosulphan/Chlorodophos		Endosulphan/Chlorodophos					
Qty	0.8 Litter	200	0.8 Litter	200				
Irrigation Timings & Qty-								
1 ST Irrigation	after 40/50 days	500	Rainfed	0	10-12 days	20000	10-12 days interval	15000
2 nd Irrigation	after pod formation				Interval (10-15)		(10-15 irrigations)	
Land rent	10000	10000	NA	0		20000		20000
Any other recommended operation								
Weeding	after 25/35 days	2000	after 25/35 days	2200	after 25/30 days	2000	after 25/30 days	2000
Harvesting period / weeks / months	15 Feb.- 25 March	2500	15 Feb.- 25 March	2500	15 Mar.- 30 April	2000	15 Mar.- 30 April	2000
Total Cost of Cultivation (Rs/ Ha.)		29440		16950		100220		80220
Expected quantity of Main Product (qtls.)	14	31864	12	27312	120-140	158160	100-110	131800
By Product (qtls.)	4	2000	4	2000		0		0

Source: District Schedules.

MSP and Cost of Production of Gram:

We also tried to understand the relationship between MSP and Cost of Cultivation of gram in Rajasthan by using CACP data for the period from 1992-93 to 2009-10. It can be seen from the table 5.7C that the estimated cost of cultivation for gram at cost A2 has increased by about 265 percent in 2009-10 over base year 1992-1993 (from Rs. 1655/- in 1992-93 to Rs. 6032/- in 2009-10), while per hectare returns over Cost A2 increased at lower rate of 197 percent during corresponding period. However, MSP rate for gram has been increased significantly by more than 188 percent in 2009-10 over the base year 1992-93 (i.e. increased from Rs. 600/- per quintal in 1992-93 to Rs. 1730/- per quintal in 2009-10). If you consider the per quintal production cost (at C2) of gram and MSP, one could see that despite significant increase in MSP during last one decade, if prices fall below the MSP, it would not covered the production cost (at C2).

Table 5.7C: Cost of Cultivation of Gram in Rajasthan (1992-93 to 2009-10)

Year	Cost of Cultivation		Gross Return (Rs./ha.)	Return (Rs/ha) Over		Cost of Production (Rs/qt.)		MSP (Rs/qtls)
	Paid cost (Cost A2)	Total cost (Cost C2)		Cost C2	Cost A2	Paid cost (Cost A2)	Total cost (Cost C2)	
1992-93	1655	3453	5863	2410	4208	222	450	600
1994-95	2037	4503	7069	2566	5032	232	513	640
1995-96	2190	4878	7471	2593	5281	287	628	670
1996-97	2302	5201	7948	2747	5646	365	806	700 ↓
1997-98	2962	5983	8632	2649	5670	369	728	740
1998-99	2530	5096	6960	1864	4430	393	790	815
1999-00	2807	7315	8284	969	5477	481	1250	895
2000-01	4158	10500	15171	4671	11013	517	1244	1015
2001-02	5503	11154	12302	1148	6799	732	1451	1100
2002-03	4738	11303	13181	1878	8443	642	1543	1200
2003-04	3335	7368	8535	1167	5200	592	1339	1220
2004-05	3298	7038	10157	3119	6859	522	1095	1400
2005-06	4754	11878	17954	6076	13200	648	1488	1425
2006-07	5882	14381	25592	11211	19711	519	1248	1435
2007-08	5996	13954	19702	5748	13705	814	1818	1445
2008-09	6045	12611	17151	4540	11105	891	1692	1600
2009-10	6032	14386	18531	4145	12498	738	1774	1730

Source: Varghese, et al, 2009 (Maharana Pratap University of Agriculture and Technology, Udaipur).

5.4 Levels and Basis of Participation of Farmers in MIS and PSS:

The process of procuring crops under MIS and PSS by nodal agency in the selected area is highlighted in Box 5.1. As mentioned earlier, the procurement operations were carried out by the agencies such as RAJED and Tilam Sangh after they receive necessary instructions from their head office/state government/central government. The KVSS/cooperative societies accordingly directed to procure the commodities (after following the necessary steps/procedure such as advertisement, issuing coupon, checking FAQ norms, etc.) from the decided procurement centers.

Sr. No.	Particulars	PSS- Gram (2011-2012)	MIS- Garlic (2012-2013)	
1	Procurement Agency	RAJFED	RAJFED	TILAM SANGH
2	Date of Notification by GOI to State Horticulture Department	Not Applicable	01.06.2012	01.06.2012
3	Date of Notification by GOI to Procurement Agency	29.03.2011	Not Applicable	Not Applicable
4	Date of Notification by State Govt. to Procurement Agency	30.03.2011	02.06.2012	02.06.2012
5	Date of Notification Procurement Agency to Cooperative Societies	30.03.2011	02.06.2012	02.06.2012
6	Period declared by GOI for procurement	07.04.2011 to 30.06.2011	One month June 6, 2012 to July 7, 2012	One month June 6, 2012 to July 7, 2012
7	Procurement target fixed (mt)	Not fixed	Not fixed	30,000
8	Price (Rs/qtls)	2100/-	1700/-	1700/-
9	Overhead expenses (Rs./qtls)	296/-	420/-	425/-

Source: Office of RAJFED and Tilam Sangh, Jaipur.

It has been argued by many scholars that coverage of farmers under MIS as well as PSS is very low. The details about the same for the selected crops and districts are presented in Table 5.8. It can be seen from the table that total number of farmers who had availed benefited from MSI are relatively more than the number of beneficiary of PSS scheme. Obvious, the semi-perishable nature of garlic and no scientific storage availability for same

pushed the farmers to sale under MIS scheme. However, absolute² number of farmers who have availed benefit of either scheme was very low.

Table 5.8: Coverage of farmers under MIS/PSS in Jaisalmer, Ajmer, Kota and Baran districts of State

Crops	District	Village clusters	Total number of targeted crop growers	Total no. of farmers who have availed the benefit of MIS/PSS	MIS/PSS Benefit availed selected farmers	% of selected farmers to total beneficiaries
Gram	Jaisalmer	Cluster 1	n.a.	68	13	19.12
	Jaisalmer	Cluster 2	n.a.	73	17	23.29
	Ajmer	Cluster 3	n.a.	195	13	6.67
	Ajmer	Cluster 4	n.a.	64	17	26.56
		Total	n.a.	400	60	15.00
Garlic	Kota	Cluster 5	n.a.	456	15	3.29
	Kota	Cluster 6	n.a.	128	20	15.63
	Baran	Cluster 7	n.a.	630	25	3.97
		Total	n.a.	1214	60	4.94

Note: n.a.- Not Available.

Source: Field survey data.

5.4.1 Details about the assets of sample farmers:

The details about the assets of sample farmers in selected districts are presented in Tables 5.9A and 5.9B. It can be seen from the tables that in case of gram growing farmers, only large farmers had taken land on lease in both Ajmer and Jaisalmer districts. However in case of garlic crop, small and medium farmers of Kota district has taken land on lease during the year under study. As it was expected, due to having availability of irrigation facilities with Kota and Baran districts, the numbers of pump sets, milch animals are relatively higher than Jaisalmer and Ajmer districts. Almost 80 percent of households in all the selected districts are having concrete house.

² As we could not get statistics related to total number of farmers growing targeted crops, actual share of beneficiaries in total could not be estimated.

Table 5.9A: Assets of Sample farmers in Jaisalmer and Ajmer district for Gram (Village cluster 1 to 4)

Sr. No.	Assets	Jaisalmer					Ajmer				
		M	S	M	L	Av.	M	S	M	L	Av.
1	Size of land (ha)	-	-	4.88	10.27	9.91	-	2.00	6.06	12.81	10.43
	a) Leased in	-	-	0	4.6	4.29	-	0.00	0	1.25	0.83
	b) Leased out	-	-	0	0	0	-	0.00	1.19	0	0.36
	Total	-	-	4.88	14.87	14.2	-	2.00	4.86	14.06	10.9
2	Total operational holding (ha)	-	-	4.88	14.87	14.2	-	2.00	4.86	14.06	10.9
	a) Area Under Crop Cultivation	-	-	8.25	18.1	17.45	-	4.00	10.06	19.58	16.2
	b) Area Under Orchard	-	-	0	0	0	-	0	0	0	0
3	Cropped Area (ha)	-	-	8.25	18.1	17.45	-	4.00	10.06	19.58	16.2
	a) Irrigated	-	-	4.88	12.56	12.05	-	2.00	2.67	6.38	5.11
	b) Un-irrigated	-	-	3.38	5.54	5.40	-	2.00	7.39	13.21	11.09
4	Irrigation Source (%)	-	-				-				
	a) Canal	-	-	100.0	100.0	100.0	-	0.0	0.0	0.0	0.0
	b) Well	-	-	0.00	0.00	0.00	-	100.0	100.0	87.45	89.58
	c) Tube Well	-	-	0.00	0.00	0.00	-	0.00	0.00	0.00	0.00
	d) Tank	-	-	0.00	0.00	0.00	-	0.00	0.00	12.55	10.42
5	No. of milch Animals (Av)	-	-	0.50	3.43	3.23	-	4	2.22	4.05	3.50
6	No. of Pump sets (Av)	-	-	0.00	0.14	0.13	-	1	0.67	0.70	0.70
7	Tractor (Av. Nos)	-	-	0.50	0.61	0.60	-	0	0.33	0.65	0.53
8	Home (% to total)	-	-				-				
	a) Threshed	-	-	50.00	10.71	13.33	-	100.0	33.00	15.00	23.00
	b) Concrete Roof	-	-	50.00	89.29	86.67	-	0.00	67.00	85.00	77.00
9	No. of Farmers Interviewed	-	-	2	28	30	-	1	9	20	30

Source: Field Survey data.

Table 5.9B: Assets of Sample farmers in Kota and Baran districts for Garlic (Village cluster 5 to 7)

SL	Assets	Kota					Baran				
		M	S	M	L	Av.	M	S	M	L	Av.
1	Size of land (ha)	0.96	0.32	2.82	7.28	5.37	0.80	1.92	2.86	7.33	5.20
	a) Leased in	0	1.6	0.72	5.13	3.37	0.00	0.00	0.00	0.38	0.21
	b) Leased out	0	0	0	0	0	0.00	0.00	0.00	0.00	0.00
	Total	0.96	1.92	3.54	12.41	8.74	0.80	1.92	2.86	7.71	5.41
2	Total operational holding (ha)	0.96	1.92	3.54	12.41	8.74	0.80	1.92	2.86	7.71	5.41
	a) Area Under Crop Cultivation	1.92	1.84	6.09	22.22	15.53	1.60	3.84	5.20	15.06	10.47
	b) Area Under Orchard	0	0	0	0.57	0.34	0.00	0.00	0.00	0.03	0.02
3	Cropped Area (ha)	1.92	1.84	6.09	22.22	15.53	1.60	3.84	5.20	15.06	10.47
	a) Irrigated	1.6	1.84	3.51	11.9	8.44	0.80	1.92	2.76	6.87	4.92
	b) Un-irrigated	0.32	0	2.58	10.32	7.09	0.80	1.92	2.44	8.19	5.56
4	Irrigation Source (%)										
	a) Canal	0.00	100.0	64.70	52.62	54.36	0.00	0.00	0.00	0.00	0.00
	b) Well	100.0	0.00	16.32	7.82	9.47	0.00	0.00	32.61	17.47	19.53
	c) Tube Well	0.00	0.00	18.98	39.56	36.17	100.0	100.0	67.39	82.56	80.47
	d) Tank	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
5	No. of milch Animals (Av)	3.00	2.00	1.42	4.57	3.37	1.00	3.50	1.63	2.86	2.44
6	No. of Pump sets (Av)	1.00	0.00	0.42	1.33	0.97	1.00	1.00	0.63	1.00	0.88
7	Tractor (Av. Nos)	0.00	0.00	0.75	0.90	0.80	1.00	1.00	0.38	0.79	0.68
8	Home (% to total)										
	a) Threshed	0.00	100.0	33.33	9.52	20.00	100.0	0.00	37.50	14.28	24.00
	b) Concrete Roof	100.0	0.00	66.67	90.48	80.00	0.00	100.0	62.50	85.72	76.00
9	No. of Farmers Interviewed	1	1	12	21	35	1	2	8	14	25

Source: Field Survey data.

5.4.2 Institutional Support to the sample farmers:

The data on institutional support in terms of bank loan received by the farmers were collected in order to know reach of these agencies in rural areas. It can be observed from Table 5.10 that all the selected farmers has availed the loan facility. Very surprisingly, small and marginal farmers from Baran district has availed loan facility to the tune of Rs. 1.4 to

1.5 lakhs, which is higher than other groups in that district. The purpose of loan was mainly for production followed by construction and purchase of implements.

Table 5.10: Borrowing by different Categories of Sample farmers in Jaisalmer, Ajmer, Kota and Baran districts of Rajasthan

SL.	Details of debt	Marginal	Small	Medium	Large	Avg.
Jaisalmer						
1	Amount of loan taken (Rs.)	-	-	325000	134643	147333
2	Av. Amount of Loan (Rs.)			325000	188500	200909
3	Source (% to total)	-	-			
	a) Commercial Bank	-	-	50.00	80.00	77.27
	b) Co-operative Bank	-	-	50.00	0.00	4.55
	c) Land Development Bank	-	-	0.00	20.00	18.18
4	Purpose of loan (% to total)	-	-			
	a) Production	-	-	100.00	95.00	95.45
	b) Construction and Implement (Tractor)	-	-	0.00	5.00	4.55
5	No. of farmers availed Loan			2	20	22
Ajmer						
1	Amount of loan taken (Rs.)	-	-	57778	237000	173207
2	Av. Amount of Loan (Rs.)			173333	300200	279056
3	Source (% to total)	-	-			
	a) Commercial Bank	-	-	100.00	68.75	73.68
	b) Co-operative Bank	-	-	0.00	31.25	26.32
	c) Land Development Bank	-	-	0.00	0.00	0.00
4	Purpose of loan (% to total)	-	-			
	a) Production	-	-	100.00	100.00	100.00
	b) Construction and Implement (Tractor)	-	-			
5	No. of farmers availed Loan			3	16	19
Kota						
1	Amount of loan taken (Rs.)	-	-	96667	270000	195143
2	Av. Amount of Loan (Rs.)			232000	333529	310455
3	Source (% to total)	-	-			
	a) Commercial Bank	-	-	100.00	58.82	68.18
	b) Co-operative Bank	-	-	0.00	23.53	18.18
	c) Land Development Bank	-	-	0.00	17.65	13.64
4	Purpose of loan (% to total)	-	-			
	a) Production	-	-	100.00	88.24	90.91
	b) Construction and Implement (Tractor)	-	-	0.00	11.76	9.09
5	No. of farmers availed Loan			5	17	22
Baran						
1	Amount of loan taken (Rs.)	140000	150000	73357	146429	123080
2	Av. Amount of Loan (Rs.)	140000	300000	117400	205000	181000
3	Source (% to total)					
	a) Commercial Bank	100.00	100.00	80.00	60.00	70.59
	b) Co-operative Bank	0.00	0.00	20.00	40.00	29.41
	c) Land Development Bank	0.00	0.00	0.00	0.00	0.00
4	Purpose of loan (% to total)					
	a) Production	100.00	100.00	100.00	100.00	100.00
	b) Construction and Implement (Tractor)	0.00	0.00	0.00	0.00	0.00
5	No. of farmers availed Loan	1	1	5	10	17

Source: Field survey data.

5.4.3 Cropping pattern of the sample farmers:

The cropping pattern followed by the sample farmers in selected districts are presented in Table 5.11A to 5.11D. It can be seen from the table that during both the years (2010-11 and 2011-12), more than 50 percent cultivated area was under gram in case of small farmers, while corresponding figures were ranges between 24-32 percent in case of medium and large farmers in Ajmer district. Whereas around 40 percent area of GCA of medium and large land holding size farmers was under gram in Jaisalmer district.

Table 5.11A: Cropping Pattern of Selected Farmers for Agriculture year (July-June) of Ajmer district

Crops	Ajmer district- Percentage Area to Gross Cropped Area									
	2010-11					2011-12				
	M	S	Med	L	Av.	M	S	Med	L	Av.
Jowar	-	12.50	4.14	9.70	8.69	-	14.29	4.32	11.46	10.13
Bajra	-	12.50	14.92	14.24	14.35	-	14.29	11.82	11.67	11.72
Maize	-	0.00	6.63	4.95	5.22	-	0.00	8.36	5.49	6.00
Moong	-	12.50	17.40	6.38	8.49	-	0.00	18.16	9.35	10.95
Urad	-	0.00	6.91	7.41	7.25	-	0.00	5.76	9.14	8.43
Sesamum	-	12.50	0.83	3.89	3.39	-	14.29	0.86	5.05	4.33
Guar	-	0.00	0.00	0.64	0.51	-	0.00	0.00	0.68	0.55
Wheat	-	0.00	12.43	9.70	10.13	-	0.00	13.83	12.96	13.03
Barley	-	0.00	1.66	3.19	2.88	-	0.00	1.73	2.39	2.24
Gram	-	50.00	29.56	32.11	31.78	-	57.14	30.26	24.22	25.62
Rapeseed	-	0.00	3.04	6.06	5.45	-	0.00	2.31	4.78	4.27
Taramira	-	0.00	0.55	0.00	0.10	-	0.00	0.58	0.00	0.11
Sauf	-	0.00	0.55	0.00	0.10	-	0.00	0.58	0.00	0.11
Cumin	-	0.00	1.38	1.60	1.54	-	0.00	1.44	2.73	2.46
Fodder (Rizka)	-	0.00	0.00	0.13	0.10	-	0.00	0.00	0.07	0.05

Notes: M- Marginal; S- Small; Med-Medium, L-Large; and Av.- Average.

Source: Field Survey data.

Table 5.11B: Cropping Pattern of Selected Farmers for Agriculture year (July-June) of Jaisalmer district

Crops	Jaisalmer district- Percentage Area to Gross Cropped Area									
	2010-11					2011-12				
	M	S	Med	L	Av.	M	S	Med	L	Av.
Moong	-	-	0.00	0.89	0.86	-	-	0.00	0.89	0.87
Sesamum	-	-	0.00	0.30	0.29	-	-	0.00	0.30	0.29
Guar	-	-	59.09	39.55	40.16	-	-	59.09	39.84	40.45
Wheat	-	-	0.00	1.33	1.29	-	-	0.00	1.34	1.30
Gram	-	-	40.91	42.55	42.50	-	-	40.91	40.98	40.98
Rapeseed	-	-	0.00	11.59	11.22	-	-	0.00	12.67	12.27
Cumin	-	-	0.00	0.49	0.48	-	-	0.00	0.50	0.48
Isabgol	-	-	0.00	3.30	3.20	-	-	0.00	3.48	3.37

Notes and Source: Same as in Table 5.11A.

It can be seen from Table 5.11C and 5.11d that though on an average around 12.15 percent of gross cropped area was under garlic in Baran and Kota districts, the marginal farmers were dominant in terms of high share in area under this crop in 2011-12 (to gross cropped area) as compared to the other land holding size groups. Soybean is the main kharif crops of the sample farmers of Kota and Baran districts followed by garlic, while garlic was

rabi main crop. If we compare cropping pattern in Jaisalmer and Ajmer with Kota and Baran, one can very clearly notice the difference of irrigation in cropping pattern. More number of cash crops such as vegetables and spices are grown in Kota and Baran districts and garlic is one of them.

Table 5.11C: Cropping Pattern of Selected Farmers for Agriculture year (July-June) of Kota district

Crops	Kota district -Percentage Area to Gross Cropped Area									
	2010-11					2011-12				
	M	S	Med	L	Av.	M	S	Med	L	Av.
Paddy	0.00	0.00	9.57	5.34	6.02	0.00	0.00	6.56	3.60	3.97
Maize	0.00	0.00	0.00	0.26	0.21	0.00	0.00	0.00	0.34	0.29
Cotton	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.88	0.00	0.12
Soybean	66.67	0.00	40.18	45.41	44.57	50.00	0.00	40.70	47.86	46.74
Wheat	33.33	50.00	26.20	30.79	30.04	16.67	86.96	24.29	30.85	30.11
Gram	0.00	0.00	0.25	2.31	1.95	0.00	0.00	0.44	2.91	2.56
Rapeseed	0.00	0.00	0.76	2.31	2.04	0.00	0.00	0.00	1.44	1.24
Garlic	0.00	50.00	22.80	10.21	12.32	33.33	13.04	26.04	9.63	11.94
Coriander	0.00	0.00	0.25	2.87	2.42	0.00	0.00	0.66	2.64	2.35
Fenugreek	0.00	0.00	0.00	0.26	0.21	0.00	0.00	0.00	0.48	0.41
Other Vegetables	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.44	0.07	0.12
Fodder (Rizka)	0.00	0.00	0.00	0.26	0.21	0.00	0.00	0.00	0.17	0.15

Notes and Source: Same as in Table 5.11A.

Table 5.11D: Cropping Pattern of Selected Farmers for Agriculture year (July-June) of Baran district

Crops	Baran district -Percentage Area to Gross Cropped Area									
	2010-11					2011-12				
	M	S	Med	L	Av.	M	S	Med	L	Av.
Maize	0.00	0.00	1.92	0.79	0.95	0.00	0.00	1.92	0.76	0.92
Soybean	50.00	50.00	43.30	49.17	48.23	50.00	50.00	43.46	48.48	47.74
Wheat	10.00	16.67	18.77	16.55	16.88	10.00	10.42	16.92	14.11	14.43
Gram	0.00	6.25	1.53	0.95	1.20	0.00	6.25	1.54	0.91	1.16
Rapeseed	0.00	0.00	8.43	15.04	13.40	0.00	0.00	8.46	14.64	13.14
Garlic	40.00	27.08	22.99	10.06	12.90	40.00	33.33	24.23	12.52	15.16
Coriander	0.00	0.00	3.07	7.44	6.45	0.00	0.00	3.46	8.57	7.46

Notes and Source: Same as in Table 5.11A.

5.4.4 Production Cost of the sample farmers:

The production cost (explicit) of gram and garlic Crop (in Rs/ ha) at farmers level in the reference year is presented in Table 5.12A and 5.12B. It can be seen from the table that in case of gram crop cultivation, the highest share of total cost incurred for hiring out the labour followed by land preparation cost of material (such as seed, fertilizers and chemical). The cost of irrigation and hired implements accounted for about 9-10 percent of total cost. The farmers could harvest about 9.95 quintals of gram in one hectare by spending total cost of Rs. 21828/- (i.e. production cost/quintal was Rs. 2194/-). The market price realized by farmer was Rs. 2264/- per quintal, which was more than the cost of production, resulted in marginal profit to the farmer to the tune of Rs. 70/- per quintal or Rs. 694/- per ha.

In case of garlic crop cultivation, cost of labour accounted for as high as 42.7 percent of total cost followed by cost of material (33.5 percent). For cultivation of one hectare of garlic, farmer had to invest on an average Rs. 98331/-, which fetched him production of about 80.23 quintals of garlic. The per quintal production cost for garlic is estimated to be Rs.1226/-, whereas price realized by the farmers was Rs. 1237/- per quintal, resulted in negligible profit of Rs. 11/- per quintal. Thus, price declared by the government under MIS was much higher (Rs. 1700/- per qt) than production and market price, which has helped the farmers ultimately.

Table 5.12A: Production Cost (explicit) of Gram Crop (in Rs./ ha) at farmers level in the current reference year 2010-11

Sr. No.	Detail of cost items	Production Cost- Gram	
		Cost/Return (Rs/ ha)	% to total
i.	Land preparation Cost	6008	27.5
ii.	Cost of Material (Seed, fertilizers, chemicals)	4064	18.6
iii.	Cost of irrigation	1916	8.8
iv.	Cost of labour	7296	33.4
v.	Cost of hired equipments	2080	9.5
vi.	Other cost (if any)	464	2.1
vii.	Average Total Cost (Rs./ha)	21828	100.0
viii.	Average Production (Qtls/ha)	9.95	-
ix.	Average Price* (Rs. /qtls)	2264	-
x.	Average Return (Rs./ha)	22522	-
xi.	Profit/ Loss (Rs./ha)	694	-

Note: *- Weighted Average Price

Source: Field Survey data.

Table 5.12B: Production Cost (explicit) of Garlic Crop (in Rs./ ha) at farmers level in the current reference year 2011-12

Sr. No.	Detail of cost items	Production Cost- Garlic	
		Cost/Return (Rs/ ha)	% to total
i.	Land preparation Cost	9856	10.0
ii.	Cost of Material (Seed, fertilizers, chemicals)	32988	33.5
iii.	Cost of irrigation	13469	13.7
iv.	Cost of labour	42019	42.7
v.	Cost of hired equipments	-	0.0
vi.	Other cost (if any)	-	0.0
vii.	Average Total Cost (Rs./ha)	98331	100.0
viii.	Average Production (Qtls/ha)	80.23	-
ix.	Average Price* (Rs. /qtls)	1237	-
x.	Average Return (Rs./ha)	99229	-
xi.	Profit/ Loss (Rs./ha)	898	-

Note: *- Weighted Average Price

Source: Field Survey data.

5.4.5 Crop Produce Disposal Pattern and Marketing Channel of the sample farmers:

It would be important to know about the crop production use and disposal pattern of the selected crop by the sample farmers. The crop production and its disposal (per farmer as well as per hectare) of the sample farmers are presented in Table 5.13A and 5.13B. It can be seen from the table that in case of gram during both the years, small farmer had sold his total output in the market, whereas in other land holding size, more than 90 percent of total production was sold in market. The price per quintal realized by the small farmer was the highest, followed by large and medium farmer in both years. While in case of garlic production, except small farmer during 2011-12, all other have sold more than 90 percent of produce in the market. Thus, the almost all the production was marketed and very miniscule quantity was kept of home consumption as well as a marketable surplus.

Table 5.13A: Per hectare Crop produced by farmers and its disposal pattern for 2 years (Crops-Gram and Garlic)

Crops	Particulars	Farm Size Category				
		Marginal	Small	Medium	Large	Average
Gram (2010-11)	Total Production (qts)	-	8.00	10.84	9.68	9.78
	Kept for home consumption (qtls) <i>% to total production</i>	-	0.00 <i>0.0</i>	0.64 <i>5.9</i>	0.57 <i>5.9</i>	0.58 <i>5.9</i>
	Marketed (qts) <i>% to total production</i>	-	8.00 <i>100.0</i>	10.19 <i>94.0</i>	9.11 <i>94.1</i>	9.20 <i>94.1</i>
	Price* (Rs./qtl)	-	2753	2323	2255	2264
Gram (2011-12)	Total Production (qts)	-	7.00	12.42	9.85	10.09
	Kept for home consumption (qtls) <i>% to total production</i>	-	0.00 <i>0.0</i>	1.12 <i>9.0</i>	0.61 <i>6.2</i>	0.66 <i>6.5</i>
	Marketed (qts) <i>% to total production</i>	-	7.00 <i>100.0</i>	11.30 <i>91.0</i>	9.24 <i>93.8</i>	9.43 <i>93.5</i>
	Price (Rs./qtl)	-	3600	3480	3601	3593
Garlic (2010-11)	Total Production (qts)	112.5	70.09	76.66	77.65	77.41
	Kept for home consumption (qtls) <i>% to total production</i>	9.375 <i>8.3</i>	0.89 <i>1.3</i>	5.73 <i>7.5</i>	6.17 <i>7.9</i>	5.92 <i>7.6</i>
	Marketed (qts) <i>% to total production</i>	103.125 <i>91.7</i>	69.20 <i>98.7</i>	70.93 <i>92.5</i>	71.47 <i>92.0</i>	71.50 <i>92.4</i>
	Price (Rs./qtl)	8500	7532	7209	7379	7406
Garlic (2011-12)	Total Production (qts)	93.75	70.02	82.52	79.31	80.23
	Kept for home consumption (qtls) <i>% to total production</i>	5.47 <i>5.8</i>	11.07 <i>15.8</i>	2.27 <i>2.8</i>	5.21 <i>6.6</i>	4.55 <i>5.7</i>
	Marketed (qts) <i>% to total production</i>	88.28 <i>94.2</i>	58.93 <i>84.2</i>	80.25 <i>97.2</i>	74.08 <i>93.4</i>	75.56 <i>94.3</i>
	Price* (Rs./qtl)	1304	1169	1260	1225	1237

Note: *- Weighted Average Price

Source: Field Survey data.

Table 5.13B: Per farmer Crop produced and its Disposal pattern for 2 years (Crops-Gram and Garlic)

Crops	Particulars	Farm Size Category				
		Marginal	Small	Medium	Large	Average
Gram (2010-11)	Total Production (qts)	-	16.00	33.00	68.90	61.44
	Kept for home consumption (qtls)	-	0.00	1.96	4.07	3.61
	<i>% to total production</i>		<i>0.0</i>	<i>5.9</i>	<i>5.9</i>	<i>5.9</i>
	Marketed (qts)	-	16.00	31.04	64.83	57.82
	<i>% to total production</i>		<i>100.0</i>	<i>94.0</i>	<i>94.1</i>	<i>94.1</i>
	Price* (Rs./qtl)	-	2753	2323	2255	2264
Gram (2011-12)	Total Production (qts)	-	14.00	37.27	60.52	55.48
	Kept for home consumption (qtls)	-	0.00	3.36	3.76	3.63
	<i>% to total production</i>		<i>0.0</i>	<i>9.0</i>	<i>6.2</i>	<i>6.5</i>
	Marketed (qts)	-	14.00	33.91	56.76	51.86
	<i>% to total production</i>		<i>100.0</i>	<i>91.0</i>	<i>93.8</i>	<i>93.5</i>
	Price (Rs./qtl)	-	3600	3480	3601	3593
Garlic (2010-11)	Total Production (qts)	36	52.33	92.30	115.71	102.08
	Kept for home consumption (qtls)	3	0.67	6.90	9.20	7.80
	<i>% to total production</i>	<i>8.3</i>	<i>1.3</i>	<i>7.5</i>	<i>7.9</i>	<i>7.6</i>
	Marketed (qts)	33	51.67	85.40	106.51	94.28
	<i>% to total production</i>	<i>91.7</i>	<i>98.7</i>	<i>92.5</i>	<i>92.0</i>	<i>92.4</i>
	Price (Rs./qtl)	8500	7532	7209	7379	7406
Garlic (2011-12)	Total Production (qts)	60	65.33	120.15	161.64	139.61
	Kept for home consumption (qtls)	3.5	10.33	3.30	10.61	7.93
	<i>% to total production</i>	<i>5.8</i>	<i>15.8</i>	<i>2.8</i>	<i>6.6</i>	<i>5.7</i>
	Marketed (qts)	56.5	55.00	116.85	151.03	131.68
	<i>% to total production</i>	<i>94.2</i>	<i>84.2</i>	<i>97.2</i>	<i>93.4</i>	<i>94.3</i>
	Price* (Rs./qtl)	1304	1169	1260	1225	1237

Note: *- Weighted Average Price

Source: Field Survey data.

Table 5.14 presented the marketing channels used by the sample farmers towards sale of the selected crops. Out of the total production of gram crop by the sample farmers, about 72 percent of output was sold under PSS scheme, while 25 percent to commission agent and remaining was sold to village trader. Thus, due to price support scheme, farmers have benefited. In case of garlic production sale, on an average only about 46 percent of output was sold under the market intervention scheme, while 41 percent of output was sold to Commission Agents. Thus, in case of MIS, benefits could reach to less number of farmers despite of semi-perishable nature of commodity. The price per quintal for gram crop realized by the farmers through commission agents was the highest than any other channel. This is because of remaining output was sold to commission agent after the sale under PSS.

However, in case of MIS, price per quintal offered by the government and received by the farmers was much higher (Rs. 1700/-) as compared price realized by the farmer from commission agent (Rs. 881/-), village assembler and village trader. Thus, in true sense there was fall in market prices of garlic and thus MIS has provided the support to farmers by procuring the garlic at the very high rate as compared to prevailing market rates.

Table 5.14: Different Marketing Channels for Sample farmers of Gram and Garlic crops

Crop	Marketing channel	%t of output sold	Price received* (Rs./qtl)
Gram	Price Support Scheme	71.74	2100
	Commission Agent	25.17	2817
	Village Assembler	3.09	1560
	Total	100.00	2264
Garlic	Market Intervention Scheme	45.76	1700
	Commission Agent	41.25	881
	Village Assembler/Trader	10.60	806
	Total	100.00	1237

Note: *- Weighted Average Price

Source: Field Survey data.

The channel wise marketing cost of gram crop is presented in Tables 5.15A and 5.15B. It can be seen from the tables that on an average farmer incurred about Rs. 73 per quintal cost in marketing of gram when he sold to commission agent, while under PSS, he incurred less cost of about Rs.45/- per quintal, which may be due to payment of mandi taxes by the procurement agency. While in case of garlic crop, high cost of transportation and packing material and labour cost as well as commission in market put together Rs. 61.30/- marketing cost for farmer when he sold his produce to commission agent, while in case of MIS Rs. 52.5/- per quintal cost was incurred. In view of low marketing cost in case of sale of produce to village trader/assemble and urgent need of money, farmer generally prefers to sell it in village, however, price realized in this channel was very low.

Table 5.15A: Channel-wise Marketing cost of Gram crop at farmers levels (Rs./qtl)

Sr. No.	Cost incurred	Commission Agent/APMC	Village Trader/ Assembler	Channel 3 PSS
i.	Packing, handling, loading charges	23.2	23.2	23.2
ii.	Depreciation of container	0	0	0
iii.	Transportation costs	15.38	0	15.38
iv.	Labour charges for loading/ unloading of produce	6.2	0	6.2
v.	Octroi/marketing tax	0	0	0
vi.	Commission in market	28.17	0	0
vii.	Other expenses if any	0	0	0
	Total Marketing Cost	72.95	23.2	44.78

Table 5.15B: Channel wise Marketing cost of Garlic crop at farmers levels (Rs./qtl)

S. no.	Cost incurred	Commission Agent/ APMC	Village Trader/ Assembler	Channel 3 (MIS)
i	Packing, handling, loading charges	18.18	18.18	18.18
ii	Depreciation of container	0	0	0
iii	Transportation costs	27.82	0	27.82
iv	Labour charges for loading/ unloading of produce	6.5	0	6.5
v	Octroi/marketing tax	0	0	0
vi	Commission in market	8.81	0	0
vii	Other expenses if any	0	0	0
	Total Marketing Cost	61.31	18.18	52.5

5.4.5 Farmers perceptions about PSS and MIS operation

After having discussed about the crop produce disposal pattern and marketing channel of the sample farmers, it would be important to know the farmers perceptions about PSS and MIS operations in gram and garlic crops. It can be seen from the Table 5.16 that about 22 percent farmers in case of gram and 10 percent farmers in case of garlic opined that there was increase in farm income due to PSS and MIS, while about 65 percent and 48 percent farmers respectively mentioned that PSS/MIS covered cost of production of targeted crop. Also significant number of farmers opined the increase in area under these crops which are covered under PSS/MIS.

In case of problems, farmers mentioned that long and lengthy process and not receipt good remunerative price, not got a chance to sell under the scheme, political interference, as well as very less quantity procurement under the scheme are major one. The produce gets rejected at the market level only, at not the field level. The proportion of the rejection would be as per FAQ norms in case of procurement under PSS and MIS. In case of rejection at market level was due to quality norms. Thus, lower price would be offered to the farmer in that case.

Table 5.16: Farmers Perceptions about PSS operation in Gram and MIS operation in Garlic crop

Sr. No.	Particulars	% of sample farmer reporting particular problem	
		Gram crop (PSS)	Garlic Crop (MIS)
<i>i.</i>	<i>Portion of Output rejected by buyers</i>		
	b) By Government agency	3.80	5.68
	c) By Private traders	0.18	1.14
<i>ii.</i>	<i>Rejection stage of produce</i>		
	a) At the level of field b) In the market (some portion)	0.00 Yes	0.00 Yes
<i>iii.</i>	<i>Possible reasons for exclusion of farmers from MIS/PSS</i>		
	a) Farmers not aware of MIS/PSS	0.00	0.00
	b) Farmers not interested in selling through MIS/PSS	0.00	0.00
	c) Long and lengthy process and not got good remunerative Price	48.39	28.30
	d) Not got a chance, political interference	22.58	39.62
	e) They procured very less quantity	29.03	22.64
	f) Sold prior to private Trader	0.00	9.43
<i>iv.</i>	<i>Perception about the results/outputs of MIS/PSS</i>		
	a) MIS/PSS helped in increasing area under targeted crop	43.33	30.00
	b) MIS/PSS covered cost of production of targeted crop	65.00	48.33
	c) Increase in farm income after implementation of MIS/PSS	21.67	10.00

Source: Field Survey Data.

The farmers reporting the severity of problem perceived by sample farmers in marketing of gram and garlic crops are presented in Table 5.16. In case of Gram crop marketing, top ranked problems perceived by farmers are delay in payments, lack of processing units, non-availability of cold storage/ warehousing facility and existing market price of produce is not sufficient. Also the factors which could resist the farmer to sell his produce to PSS/MIS are discrimination on the basis of standard of produce/quality (as purchase are made on FAQ norms), delay in price received and long distance of procurement centre. In case of garlic marketing, the main problems identified are lack of processing units, non-availability of cold storage/ warehousing facility, delay in payments, long distance of regulated market and existing market price of produce is not sufficient.

Thus, in order to give remunerative prices to the farmers and to prevent them from distress sale, these bottlenecks need to be removed. The storage and processing facilities need to be created on priority basis.

Table 5.17: Problems perceived by sample farmers in marketing of Gram and Garlic

Sr. No.	Constraints	% of farmers reporting the severity of problem					
		Gram (PSS)			Garlic (MIS)		
		High	Moderate	Low	High	Moderate	Low
1	Existing market price of produce is not sufficient	65.0	13.3	21.7	73.3	11.7	15.0
2	Packaging material is costly	60.0	13.3	26.7	31.7	28.3	40.0
3	Packages/ container not returned to the growers (as per agreement)	21.7	13.3	65.0	6.7	3.3	90.0
4	Cheating by middlemen:						
	a) in price	0.0	0.0	100.0	0.0	0.0	100.0
	b) Weighing	0.0	0.0	100.0	0.0	0.0	100.0
	c) Other problems in selling produce	0.0	0.0	100.0	0.0	0.0	100.0
5	Non- availability of Transport	15.0	8.3	76.7	1.7	8.3	90.0
6	Non receipt of payment in time	45.0	11.7	43.3	33.3	38.3	28.3
7	MIS/PSS operation are irregular	3.3	16.7	80.0	48.3	6.7	45.0
8	Non-availability of cold storage/ warehousing facility	73.3	13.3	13.3	95.0	0.0	5.0
9	Lack of Processing Units	80.0	5.0	15.0	96.7	0.0	3.3
10	Delay in payments	81.7	1.7	16.7	76.7	6.7	16.7
11	Extent of organized market of targeted produce:						
	a) distance of regulated market	40.0	31.7	28.3	78.3	0.0	21.7
12	Reason for not sell to PSS/MIS						
	a) Long Distance: Low Moderate High (< 5 km), (5-10 km), (>10 km)	68.3	1.7	30.0	78.3	0.0	21.7
	b) Delay in Price received	81.7	1.7	16.7	76.7	6.7	16.7
	c) Discrimination on the basis of standard of produce/quality	88.3	8.3	3.3	55.0	38.3	6.7

5.4.6 Problems and Views of different Stakeholder in Operations of MIS and PSS:

Besides, the problems faced by the farmers in selling the produce under PSS and MSS, the procurement agencies also face the problems in executing the procurement operations.

5.4.6.1 Procurement Agencies (RAJFED and Tilam Sangh):

As mentioned earlier, RAJFED was involved in the procurement of gram (under PSS) during April 2011 to July 2011, while RAJFED and Tilamsangh both procured garlic under MIS during the specified period of one month from June 6, 2012 to July 6, 2012. We interviewed the officers of the same agencies and noted the difficulties faced by them in carrying out the procurement operations with the help of primary cooperative societies. The difficulties/problems/views of interviewed officers are presented below:

- The main problem was the non-availability of adequate storage facility. Because of long distance storage, procurement process gets costlier as well as delay. Thus, most of the time lacks of adequate storage facility hinder/delay the procurement process.
- The unavailability of gunny bags (in time and required quantity) was another major problem faced by these agencies during procurement period (as gunny bags are provided by the Head offices which are prepared for all India level). This happens due to long, delay and defective administrative process. Due to delay in announcement of procurement operation followed by delay in estimation of need of gunny bags and then its supply generally affect the whole procurement process. Thus, till gunny bags are not made available with procurement agencies, no procurement generally takes place. Due to which, there used be delay in procurement of the commodity.
- Sometimes during the year when production is high and procurement process started very late, in such situation every farmer wants to sell his produce under this scheme. In this situation, political interference starts putting pressure on the procurement agencies. The political interference in the process of the procurement also created hurdle in procurement operations, which some time delayed the procurement.
- The time period between announcement of procurement and actual implementation of the procedures generally work unfavorably for the marginal and small farmers. Because due to delay in procurement operations, marginal and small farmers are forced to sell their crop produce to other agency. At the time when government procurement under PSS and MIS is in effect, by the time no marketable surplus left with marginal and small farmers.
- As the time span stipulated by the Government for procurement generally is very short, it becomes difficult the control the large number of farmers at the procurement centre as everyone wants that his produce should be get procured under the scheme.

- Sometime unwarranted violence situation arises during the procurement period due to misunderstanding between farmers and the procurement agency (RAJFEED) officials.
- Delay in necessary instructions by the higher authorities regarding storage, transport as well as final decision on place of selling of crop (which is semi perishable in nature) incurred the losses. These loss accounts are not yet settled by the government agencies.
- Monopolistic kind of situation in the market, especially at the Chhipabarod, Baran procurement centre (because of the Tilam Sangh which is procurement agency in Baran and Bundi district, didn't have any cooperative society at Chhipabarod procurement centre for the purchase of the garlic crop. Therefore one of the commission agents from nearby market was given responsibility of procurement which created situation of having only one procurement agency) creates sometime unnecessary tension at the time of procurement as it was given to the private agent.
- The difficulty was faced by the officers in application of FAQ norms for garlic crop as there was huge supply of the crop for sale.
- The farmers have become a violent because the supply of the crop was more than the demand and that to procurement period announced was short in Kota and Baran district.

5.4.6.2 Govt./Agricultural officials experiences and views about MIS and PSS operation for Gram and Garlic crop

- Most of the agricultural officials mentioned that they are partially involved in MIS and PSS operation. They are only informed about the procurement operations and sometimes are invited (as a member) for the meetings related MIS/PSS in the district.
- Most of the agricultural officials opined that the prices should be given as per quality viz. high price for good quality produce and low price for low quality produce.
- There should be hundred percent procurement of the crop in the selected area.
- No produce should be rejected at the procurement centre. If produce could categorised under the FAQ norms, it should be purchased at lower price.
- Girdavri Report (crop sowing report) should be issued by district official only once with mention about this purpose with proper online computerized system to prevent

the fraud claim/sale arises by farmers. This is very much required because when declared MIS/PSS prices are much higher than prevailing market price, some farmers takes advantage by getting more than one copy/deflated copy (indicating more area under particular crop) of Girdivari report (which is necessity for sale of produce under MIS/PSS).

- The minimum support price should be declared by CACP differently for different agro-climatic conditions of the area.
- Fodder crop should be procured under the PSS operation in Rajasthan to prevent cyclic draught situation.
- Time to time weather information should be provided to the farmers by Agro-metrology Department.
- Procurement information should be made available to the farmers well before the harvest in order to price discrimination by the private traders.

5.4. 7 Efficiency of Central Agencies in operation of MIS and PSS

The information was collected reading implementations of the order given by the government or head office towards procurement of the commodity during specific period of time in order to get idea about the efficiency of central; agencies in operation of MIS and PSS.

Table 5.18: Efficiency of Central Agencies in operation of MIS (Garlic) and PSS (Gram)

Sr. No.	Particulars	Steps	See Table/Box/Annexure for details
1	How the state-level agency is involved: through government notifications / orders / something else...	Through Government Notifications / Orders	Annexure VI, VIII, IX
2	Crops for which MIS/PSS operations have been done?	PSS-Wheat, Rapeseed, Gram MIS- Garlic, Coriander, Onion	Table 5.1
3	In which district/blocks/mandi MIS/PSS were conducted?	PSS- Gram MIS-Garlic	Table 4.6 Table 4.9
4	How financial transaction through banks/ other financial agencies is planned for procurement operation?	Through bank	Annexure VII (Page 179)

5	What is duration of MIS/PSS operation for different crops?	PSS- April 7, 2011 to June 30, 2011 MIS – June 6, 2012 to July 6, 2012	Annexure VI and Annexure IX
6	How quality of crop to be procured is checked? Are crops procured under MIS/PSS is exactly on the MSP price or certain compounding/discounting is done over the MIS/MSP?	FAQ norms prescribed by the Government.	Annexure V
7	What are the costs of procurement of a crop preferably on per quintal basis?	Cost of gunny bags, mandi tax, transport	Gram- Table 5.6A Garlic- Table 5.6B & Table 5.6C
8	In the cost structure item-wise details; like, who bears the cost?	All cost incurred by procurement agency which gets reimbursed from NAFED/FCI/State Govt.	Annexure VI to Annexure XI
9	When and how procured commodities were disposed off? Alternate channels of disposal, like open market (wholesale / pre-agreed firms like Kendriya Bhandar) or processing units, within state or other state. Prices of commodities in each of the above channels?	Under PSS- Deposited in designated Warehouses Under MIS- Sold at the market located outside the State (though tendering- sold by trader who purchased through bidding process)	Gram - Annexure XIV Garlic- Table 3.15A, Table 3.15B and Table 3.19
10	How you fix the disposal price? Cost-markup approach or Market forces or something else as basis for price fixation,	PSS- No disposal by procurement agency, only deposition in Warehouse MIS- Disposal price at market rate (trader through bidding process)	Gram - Annexure XIV Garlic- Table 3.15A, Table 3.15B
11	How much they (Agencies) charge from government for procurement operation?	Gram: 2 % (shared 1% each by RAJFED and Cooperative Society) Garlic: 2.5 % (shared by TS and Cooperative Society)	See Annexure VII Gram-Table 5.6A Garlic- Table 5.6B and Table 5.6C

12	If losses occur; are losses being shared by government or borne independently by them? If shared, do they (Agencies) get its loss reimbursed fully/partly?	Total losses shared by government (reimbursed). Government reimbursed fully the losses to the procurement agency	Garlic- Table 3.15A and Table 3.15 B also Table 3.19
13	An account of losses demanded and received from government separately for commodities over the years?	Still government has not settled the loss account of procurement agencies	Garlic- Table 3.15A and Table 3.15 B also Table 3.19
14	How much time is consumed in getting reimbursement of loss from government?	It takes long time, still NAFED has not settled the loss account of procurement agencies	Garlic- Table 3.15A and Table 3.15 B also Table 3.19
15	Please provide audited balance sheet of receipts and expenditure of MIS/PSS for crops procured?	Provided in Table	Garlic- Table 3.15A and Table 3.15 B also Table 3.19
16	Why loss occurs? Crop-specific reasons for loss, some of the possible reasons can be: Consumers prices are fixed arbitrarily, market is not found for certain commodities; losses in transportation are abnormally high due to inadequate infrastructure, losses due to perishability of crops/ grains.	Loss occurred in MIS operation as procurement was done at higher price than market price. In case of garlic procurement, it was procured at Rs. 1700/- per quintal while market price where garlic was sold (outside state market)/tender price received was much lower (i.e. Rs. 7-8 /- per kg)	Garlic- Table 3.15A and Table 3.15 B also Table 3.19
17	Problems faced during the operation of MIS/PSS.		Table 5.16 and 5.17
18	Possible suggestions to improve efficiency of MIS/PSS operations.	By Stake holder –see Section 5.4.6.1 and 5.4.6.2	See Section 5.4.6.1 and 5.4.6.2

Source: Based on the Personal Interview/Interaction with Stakeholders (NEFED, RAJFED, Tilam Sangh, State Agriculture Officers, Farmers, etc) and Secondary Statistics.

The next chapter presents the summary of the report and policy measures to improve operations of MIS and PSS.

Summary and Conclusions

6.1 Introduction:

Agricultural policies in the past have witnessed a series of iterative changes following the economic reforms during the 1990s that marked a significant departure from the past. Though many of the reform processes were not initiated to directly affect the agriculture sector, it was affected indirectly (Chand, 2004). The mounting buffer stock of food grains has partly been due to the weak purchasing power of the poor in the country. Nevertheless, the problem associated with buffer stock management and degradation of natural resources in some regions has triggered a debate to redefine the agricultural policies (Singh, *et al.*, 2006) in general, agricultural price policy in particular.

In view of the distorted and unregulated market conditions prevailing for agricultural produces in India, support prices are very imperative for farmers to get assured income from their crop cultivation (Acharya, 1997; Sen and Bhatia, 2004). The agricultural price policy is aimed at intervening in agricultural produce markets to influence the level of fluctuations in prices and the price-spread from farm gate to the retail level (GOI 2010). The Minimum Price Support Policy (MSP) linked to procurement has served the country well in the past three decades. However, in recent years it has started encountering problems mainly because of surpluses of several agricultural commodities and excessive built up of stocks with FCI (GOI, 2002). Even deficit states like Bihar, Assam, Eastern U.P. have started generating surpluses of certain cereals. Also, as a result of operation of the pricing Policy, private trade has not been able to play its role particularly in respect of two major cereals, namely wheat and rice that account for over 70 percent of total food grain production in the country. Under the MSP scheme prices of major agricultural commodities are not only exogenously determined but these prices are defended through nodal procurement agencies like FCI.

There is broad recognition that the recent rapid increase in the minimum support prices for rice and wheat was a major contributor to recent problems of mounting buffer stocks (World Bank, 2004). Agricultural price policy has come under serious attack in recent years for recommending higher support prices than warranted by the costs of production (CoP) and supposed distortion of the market, leading to food deprivation. It is

also blamed frequently for the spikes in prices of food items that reached their peaks in 2009 (Dev and Rao, 2010). The Central agency often incurs loss in their operation of PSS and MIS and the amount of expenditure incurred in the above schemes suggest that Union and State Government spend considerable amount of public money in undertaking the above scheme; yet plight of growers of many of the above commodity continues. The market price of many agricultural commodities continues to rule below the Government announced support price of commodity. The wide gap between price received by producer and price paid by consumer of commodity is another important concern of marketing of agriculture commodities in the country. In this backdrop, the Department of Economics and Statistics, Department of Agriculture and Cooperation, Ministry of Agriculture, Government of India had proposed state specific studies to evaluate the PSS and MIS, which were assigned to the AERCs/units located at different states in India. Rajasthan is the second largest gram growing and producing states in India after Madhya Pradesh, accounting for 17.24 percent area and 13.07 percent production of the country in 2011-2012. In case of garlic also, Rajasthan rank first in terms of area under this crop (24.25 percent) and third in production (19.26 percent) during 2011-2012. Thus, having predominance cultivation of these crops and on the basis of procurement of these crops under these schemes during recent past, it would be important to evaluate the PSS and MIS. Therefore, the Agro-Economic Research Centre, Vallabh Vidyanagar was entrusted to conduct the study for the states of Rajasthan covering gram and garlic crop with following specific objectives:

The specific objectives of the study are

- i) To understand coverage of MIS and PSS across crops and regions.
- ii) To ascertain factors that influence coverage of crops across regions in Rajasthan.
- iii) To understand levels and basis of participation of farmers in MIS and PSS of selected crops in Rajasthan.
- iv) To understand problem of different stakeholders in operation of MIS and PSS of selected crops in Rajasthan.
- v) To study the effect of MIS and PSS on the market price of selected commodity in Rajasthan.
- vi) To asses efficiency of Central Agencies in operation of MIS and PSS of selected crops in Rajasthan.
- vii) To suggest policy measures to improve operations of MIS and PSS in Rajasthan.

6.2 Study Framework:

After preliminary investigation about the crop-wise and year-wise procurement under MIS/PSS in the State, two crops (one crop from each scheme i.e. PSS and MIS) were selected. The two selected crops were gram (PSS) and garlic (MIS). For each of the above mentioned crop, two districts were selected on the basis of procurement done by the agencies appointed by the Government. In case of gram, Ajmer and Jaisalmer district were selected, as these districts represent extreme market related infrastructure for the crop. In case of garlic, Kota and Baran district were selected. Total 15 farmers were selected randomly from each village cluster so as to make the sample size 30 in each district. Thus, total 60 farmers in each of the selected crop were selected. As the selection of both the crop was done on the basis of procurement carried out by the nodal agencies in Rajasthan during recent past, therefore reference year differs. In case of gram, the data were collected from the beneficiaries for the agriculture year 2010-11 (Rabi 2011) and sold in April 2011 to June 2011. While in case of garlic, data were collected for the agriculture year 2011-12 (Rabi 2012) and sold in June 2012 and July 2012.

6.3 Procurement Agencies:

A large number of public-sector institutions and cooperative marketing organizations were set up after Independence to improve the market structure, its conduct and performance, and to help growers realize better returns for their produce. Government interventions in purchase of agricultural commodities under minimum price support programme, procurement of food grains, market intervention scheme (MIS), monopoly purchase, open market purchases of commodities through Food Corporation of India (FCI), Cotton Corporation of India (CCI), Jute Corporation of India (JCI), Central Warehouse Corporation (CWC), National Consumer Cooperative Federation of India (NCCF), National Cooperative Marketing Federation (NAFED), Tobacco Board, and state oilseed federations, etc. have attained importance in recent years. With the intervention in the purchase and distribution of foodgrains (especially rice and wheat), government purchase agency (Food Corporation of India) entered as an important market functionary in the trade of cereals. Cooperatives have also assumed importance in the marketing channel with the encouraged to producers. NAFED and State Oilseed Federations act as a nodal agency for purchase of oilseeds at the government announced support price. The quantity of commodities

purchased by these agencies depended on the objective and target fixed for purchase to fulfill the defined objective. Rice and wheat are the two principal commodities where Government's role is most pronounced. Procurement operations for other crops are carried out only when market prices fall below MSP. Whatever stocks which are brought to the purchase centres falling within the specifications fixed by the Govt. of India are purchased at the fixed support price. If the farmers get prices better than the support price from other buyers such as traders / millers etc., the farmers are free to sell their produce to them. FCI and the State Government/its agencies ensure that the farmers are not compelled to sell their produce below support price.

- ***Food Corporation of India:***

The FCI undertakes the functions of procurement including price support operations, storage, movement/transportation, distribution and sale of food grains and in an economical and efficient manner in order to achieve the objectives of the National Food Policy. Initially, the FCI served only four states in the southern part of the country. Slowly, it extended its services throughout the country. Today, the FCI is the unrivalled food marketing agency serving the interest of the farmers and consumers throughout the country. Financially, it is one of the largest public sector undertakings. Thus, FCI has been essential institutional instrument for implementation of food grains pricing policy. It has worked as national nodal agency for providing price support to cereals producing farmers, maintenance of buffer stocks and food grains reserves and distribution of food grains to state agencies under the public distribution system. It is observed that there is significant increase in stock of food grains in the central pool over the period of time. Punjab and Haryana are dominant states where large quantity of rice and wheat were procured. Rajasthan accounts relatively better position in terms of wheat procurement during 2011-12 as compared to earlier years.

FCI is functioning in Rajasthan since 01.01.1966 and activities of procurement, storage, preservation of stocks and distribution have been undertaken successfully. In Rajasthan, at present eight FCI district offices are functioning namely Ajmer, Alwar, Bikaner, Jaipur, Jodhpur, Kota, Sriganganagar and Udaipur having their jurisdiction over 33 Revenue Districts. There are 36 FCI own depot, one CAP and 27 hired covered godowns and CAPs. Besides, godowns of CWC and RSWC are also being utilized for

storage purpose as and when required. The overall capacity having FCI in Rajasthan region as on 31.12.2010 was around 17.57 lakh mt which includes the CAP storage capacity of 3.22 lakh mt. Further, acquiring additional capacity, hiring of godowns from CWC/RSWC and private parties are under progress.

The FCI generally not open procurement centers where the volume of procurement was likely to be uneconomical, i.e. less than 500mt. In such areas, other mechanism involving State agencies/other agencies like NAFED and NBHC operates the Centers. However, FCI will operate such centers to give MSP to farmers where State agencies do not operate. The purchase of wheat was undertaken by the FCI during last five years in Rajasthan. The district-wise/FCI district-wise procurement of wheat by FCI in Rajasthan indicated that procurement of wheat by FCI was mostly concentrated in Sriganganagar, Jaipur, Alwar and Kota districts. The cost of food grains is paid by cheque to the farmers by procurement agencies through bearer cheques up to value of Rs. 50000/- and account payee cheque over Rs. 50000/- of the local/nearest branch of the Bank to avoid delay in payment to the farmers. As per existing practice two staff members at every FCI purchase centre, i.e. Quality Inspector and pay point In-charge are authorized to sign the cheque facility.

- ***National Agricultural Cooperative Marketing Federation of India Ltd:***

National Agricultural Cooperative Marketing Federation of India Ltd. (NAFED) is the nodal agency for procurement of selected oilseeds and pulses under Price Support Scheme of Government of India. NAFED also undertake the purchase of Cotton on Minimum Support Price for Cotton Corporation of India. NAFED commences the procurement from the farmers directly through its State Level Supporters (SLS) cooperative network (RAJFED, Tilam Sangh, KVSS) when the market rates of a particular commodity fall below or touch at MSP. These supports procure stocks from farmers as per prescribed quality/grade specifications through the Primary Cooperative Marketing Societies whereas Oilseeds Growers' Federations shall procure the stocks through their oilseeds growers; cooperative societies/unions. The funds required for procurement under PSS are arranged by NAFED as well as by SLS if required. Payment to the farmer for the stock delivered under this scheme is made through account payee cheque (bearer cheque is also issued up to admissible limit). During 2011-2012,

NAFED registered a business turnover of Rs. 1063.28 crore. Out of this, domestic trade accounted for Rs. 1051.76 crore (about 98.92 percent). Over the period of time, quantity of oilseeds procured by the NAFED under PSS has lower down. It indicates the lowering interest of NAFED as well as less need of procurement in the light of market prices always prevailing above MSP. In case of cotton procurement, since 2006-07, no procurement was made by the NAFED under MSP. During the last Rabi 2012 season, the market prices of Fair Average Quality of gram and masur (lentil) rules above the Minimum Support Prices of Rs. 288/- per quintal declared by the Government of India. Hence, the procurement of Rabi pulses under PSS during Rabi 2012 season was not necessitated. The operations under MIS for the crops such as onion was undertaken by NAFED at the instance of Government of India when prices crash to unremunerative levels detrimental to the farmers' interest and also for maintaining the buffer stock. The NAFED had procured Onion under MIS in Karnataka (1996-97); Maharashtra (1999-2000) and Rajasthan (2004-05). After 2004-05, no procurement of onion was carried out by NAFED under MIS. NAFED had procured total 41952 mt of wheat from 55 procurement centers in Rajasthan during 2007-08. Then after no procurement was carried out by the NAFED in Rajasthan.

- ***Cotton Corporation of India (CCI):***

CCI as a premier organization in public Sector and engaged in marketing of cotton acts as a role model in the procurement of kapas (seed cotton) through open auction, conducted by the APMCs, in the notified market yards. As and when kapas prices of any variety touch the level of MSP, CCI as a Nodal Agency of Government of India, resorts to immediate market intervention and makes purchases of kapas at MSP without any quantitative limits. The MSPs of different varieties are fixed for FAQ grade kapas stipulating minimum quality parameters on staple length and mic value. Since total kapas arrivals in the market yards, do not match the prescribed parameters of FAQ grade, Corporation allows purchases of below FAQ grade kapas also by offering prices in commensurate with quality and within the MSP of the variety concerned. This helps the cotton farmers in selling their kapas produce under MSP operations and avoid distress sales. Depending upon the intensity of these operations, Corporation creates required infrastructure in the form of regular procurement centres as well as satellite centres so that farmers are not compelled to travel long distances for selling their kapas

produce. The state-wise operation of CCI indicates that level of cotton procurement at all India level was significantly high during the year 2008-09 as compared any other year reported. Among the states, Andhra Pradesh which is the third largest state in India in terms of area and production of cotton during 2011-2012, is major procurement hub of CCI. In Rajasthan, cotton procurement operations were carried out at Bhilwara and Sriganagar centers.

- **State Level Procurement Agencies:**

Rajasthan State Cooperative Marketing Federation

Rajasthan State Cooperative Marketing Federation (RAJFED) is apex state level organization of agricultural marketing cooperatives in Rajasthan. During the year 2011-12, RAJFED registered the business of agriculture commodities to the tune of Rs. 3114.88 lakh. Besides this, RAJFED acted as an agent of FCI in procurement of wheat and bajara (worth of Rs. 116.62 lakh), and for NAFED in procurement of gram and urad (worth of Rs. 1395.31 lakh). The district-wise procurement of wheat and gram by RAJFED in Rajasthan during 2006-07 to 2011-12 shows that wheat procurement by RAJFED has been concentrated in the district of Sriganaganagar, part of Kota and Udaipur. During last two years, wheat procurement was very low or negligible. The market rates were higher than MSP, therefore, no procurement was carried out at most of the places. In case of gram, RAJFED had procured about 6332 metric tonnes from total 123 procurement centers in the state during July 2011, total worth of about Rs.1330 lakhs.

The garlic procurement by the RAJFED during 2012-13 was confined to two districts, viz. Kota and Jodhpur and three centres therein. Total 3711.5 mt of garlic was procured by the RAJFED at the price of Rs. 1700/- per quintal. After procurement of garlic from the three procurement centre as mentioned below, RAJFED sold garlic in outside state markets such as Chandigarh, Noida and Delhi. Due to low market price for garlic and high procurement cost plus marketing cost has put this business under loss. The loss incurred by the RAJFED in garlic procurement was Rs. 21.86 lakhs, while State government total loss was to the tune of Rs. 430 lakhs.

- ***Rajasthan State Cooperative Oil Seed Growers Federation Limited (Tilam Sangh):***

Tilam Sangh is the apex organization in Rajasthan State Cooperative Oil Seed Growers Federation Limited (Tilam Sangh), Rajasthan. The procurement of oilseeds, food grains and other commodities by Tilam Sangh under PSS and MIS during 2005-2012 indicates that Tilam Sangh participated in procurement of oilseed crop, i.e. rapeseed mustard during 2002, 2005 to 2007. After that, wheat procurement was done by Tilam Sangh heavily.

During 2012, Tilam Sangh had procured about 2570 million tones of garlic from three procurement center under MIS. The procurement of garlic under MIS was undertaken at the rate of Rs. 1700/- per quintal at Chipabadaud, Zalraparapatan and Keshoraypatan centers. After procurement of garlic from the farmers (on an average total cost procurement was estimated to be Rs. 1817/- per quintal), Tilam Sangh invited quotations towards sale of purchased garlic (with condition to sell produce outside the State). On the basis of highest tender quotation, the produce was sold to the respective party. The price realized by the Tilam Sangh through tender process was around Rs. 7.72 per kg, while procurement cost was Rs. 18.17- per kg. Thus, after deducting total procurement plus incidental charges from sale realization, per kg loss incurred by Tilam Sangh was estimated to be Rs. 10.45/-. The trader who purchased garlic through tender reported that garlic was sold in Madhya Pradesh, Gujarat and south Indian states.

- ***Other Purchase Partners of FCI:***

The other purchase partners of FCI in the state has not been actively participating or purchased negligible quantity of agricultural commodities from the market during last few years such as a) Rajasthan State Warehouse Corporation (RSWC); b) National Bulk Handling Corporation (NBHC) Ltd.; c) National Collateral Management Services Limited (NCMSL).

6.4 Socio-Economic Characteristics:

- **Selected Area**

Rajasthan is the largest state of India constituting 10.4 per cent of total geographical area and 5.67 per cent of total population of India. The state is endowed with diverse soil and weather conditions comprising of several agro climatic situations, warm humid

in south eastern parts to dry cool in western parts of the state. About 65 per cent population (56.5 million) of the state are dependent on agriculture and allied activities for their livelihood. Agriculture in Rajasthan is primarily rainfed covering country's 13.27 per cent of available land. The diversity in climatic conditions of the state creates potentiality to develop certain belts of horticultural crops in the state. The arid state which receives not more than an annual rainfall of 25 cm thrives on agriculture that is done with irrigation systems and painstaking efforts of the poor farmers of Rajasthan. As a major portion of the state is parched and infertile, the risk and instability in agricultural production and productivity are quite high. The agriculture production in the State mainly depends on monsoon and irrigation potential which is low in comparison of the vast land of the State. Rajasthan state shows variation in productivity with a ratio of 1:11 between lowest and highest productivity district. Districts like Barmer, Jaisalmer and Churu located in Thar Desert are among the lowest productivity districts of the country. Extreme climate and soil type are the main factors for low productivity in these districts. One hectare of land was found to be generate crop output of value less than Rs. 5 thousand. However, productivity was more than Rs. 31 thousand in districts Baran and Kota. There exist regional differences in agriculture due to terrain, rainfall, irrigation facilities and technology inputs. In districts like Ganganagar, Hanumangarh, Bharatpur, Dausa, Alwar, Kota and Sawai madhaopur, farmers produce high input based cash crops, whereas southern and western Rajasthan single crop for domestic consumption is the norm. The major rabi crops are barley, wheat, gram, pulses and oil seeds. The kharif crops include bajara, pulses, jowar, maize, groundnuts and paddy in some areas.

The economic indicators of the selected districts show that in terms of human development, Kota ranks second in the state. Though share of agriculture sector in NSDP is relatively higher in Jaisalmer and Ajmer than Kota, the cropping intensity is higher in Kota and Baran as compared to other two selected district as well as state average due to high irrigation intensity. The difference in agricultural development can be easily seen from the yield level in dry districts compared to irrigated districts (Kota and Baran). Also the normal rainfall is also higher in these districts. The per market number of rural pupation fed is highest in Jaisalmer followed by Ajmer indicating low spread of markets in these districts.

- **Selected Crops:**

Gram is major rabi crop grown in Rajasthan, with area of 1.43 million ha and 0.99 million tonnes of production in 2011-12. Rajasthan accounts for 17.24 per cent area and 13.07 percent of production at national level. About 46.5 percent area under Gram was covered with irrigation in 2009-10 as compared to 32.20 percent at national level. However, productivity level of gram in Rajasthan (691 kg/ha) is much lower than national average (912 kg/ha). The top five gram growing districts (during TE 2009-10) are Churu, Hanumangarh, Bikaner, Ganganagar and Jhunjhun. The Jaisalmer district stands at sixth position in terms of area under gram and seventh terms of production during TE 2009-10. However, significant quantity of gram was procured under PSS at the centre located at Ajmer, Jaisalmer, Tonk, Jaipur and Sikar.

Garlic (*Allium sativum*) is one of the important horticultural bulb crops grown and used as a spice or condiment throughout India. Among the Garlic growing states in India, Rajasthan rank second in terms of its share in area (24.25 percent) and third in terms of production (19.26 percent) at national level in 2011-2012. However productivity level is much low in Rajasthan as compared to other competing states. Unawareness of farmers about improved varieties, climate, soil and agro-techniques, diseases and pest damaging the crops and their control measures as well as post-harvest management are though main reasons, inadequate market support is also responsible for limiting the production and productivity indirectly. The districtwise picture in Rajasthan indicates that the districts like Baran, Chittorgarh, Jalawad, Jodhpur are major garlic producing districts in the State. However, most of the procurement of garlic under MIS in Rajasthan was carried out Kota, Jodhpur, Jhalawar, Bundi and Baran districts in June 2012.

- **District-wise details of Study Area:**

- The land use classification of selected districts over three time periods shows that the net sown area has increased by about 5 to 6 percent point in 2010-11 over 1990-91 in Ajmer and Baran districts as well as at State level, while it has marginally increased in Kota district. However, in case of Jaisalmer, where hardly 6 percent of geographical area land was under cultivation, increased by about 13 percent points during corresponding years. While opposite picture could be noticed in case of area sown more than once. Ajmer, Kota and Baran districts could able to bring more area under area sown more than once may be due to availability of irrigation and good

monsoon during the recent past. Because of same, the cropping intensity of these three districts was much higher than Jaisalmer district as well as State as a whole.

- The average land holding in Rajasthan was 3.07 ha in 2010-11, which was fourth highest size of state average holdings (after Punjab, Nagaland, and Arunachal Pradesh), while national average was 1.16 ha. Among the selected districts as well, Jaisalmer had highest size of holding of (10.5 ha), while other three districts has between 2.1-2.7 ha. Though the average land holding of farmers in Rajasthan is relatively between than the holdings of farmers in rest of the country, the inequality in land holding is an important issue. Small and marginal farmers constitute about 50 percent of the total farmers with only about 11 percent of the total land area. The large land owners account for 9.1 percent of the number of landholders and account for about 43 percent of the land area. Among the districts as well, it can be seen that small and marginal farmers constitute about more than 50 percent of the total farmers with only about 11-15 percent of the total land area. Thus, dependence of large number of farmers on small area indicates uneven distribution of land holdings as well as role of agriculture in the welfare of the rural areas.

- The details about the implements, infrastructure and institutions in selected districts indicate that there is significant increase in number of tractors in 2011-12 as compared to 1992-93. Most of the villages are electrified and connected with the roads. Except Jaisalmer districts, the cooperative societies network has widen in other districts as well as at State as a whole. Number of Krishi Vigyan Kendra (KVK) and Krishi Upag mandi (KUMS) are not changed.

- The irrigation is the most important input of agriculture which determines the level of output. It is observed that the percentage of net irrigated area to net sown area was 24.0 percent in 2008-09, which has increased by 10.2 percent points over 1990-91. The well and tube wells are the major sources of irrigation at the State level. Among the selected districts, Kota and Baran districts are highly irrigated having more than 88 percent cultivated land under irrigation. In case of Kota district, canal is the major source of irrigation followed by well and tube wells, while groundwater is major source in case of Baran district. Ajmer district depends on groundwater for

irrigation accounting about 30 percent net sown area under irrigation. Jaisalmer district has hardly 15 percent net sown area under irrigation, which largely depend on canal water. This may be due to soil and climatic conditions of this district.

- The cropping pattern of the selected districts and the State shows that over a period of time, there is slight change in the cropping patterns of the selected districts. Jowar, bajara and moog are the major kharif crops, while gram and wheat are the major rabi crops grown in Ajmer district. Moog has emerged as major kharif pulse crops since 2001 onward. However in case of cash crop such as cotton, share in GCA has declined over the period of time. In case of Jaisalmer district, bajara and guar has been grown as major kharif crop, while gram and rapeseed are major rabi crops. Though bajara accounts for about 17 percent of GCA in 2011-12, its share has declined from as high as 69.27 percent in 1980-1982, while share of guar crop increased to 50.68 percent in 2011-12 from 28.85 percent in 1980-82. Among the rabi crops, share of gram and rapeseed mustard increased after 2001.
 - In case of Kota and Baran districts, major kharif crops grown are soybean, rice, maize, urad and Sesamum, while wheat and gram are major rabi crops. Soybean accounts for more than 32 percent of GCA in case of Kota, while same accounts for about 40 percent in Baran district. Selected crop, i.e. garlic share in GCA in both the selected districts ranges between 2.7 to 3.0 percent in 2011-12. Over the period of time, there is decline in the share of Jowar and Maize crop in both districts, this may be due to shift in acreage from this crop to Soybean crop. Increase in area under wheat and rapeseed in Kota, and only in case of wheat in Baran resulted in decline in area under gram crop. This may be due to increase in level of profit in Wheat as compared to gram cultivation, may to be due to significant increase in MSP.
- ***Village Cluster- wise details***
 - The details about the market and marketed related other infrastructure and institution available in and or near village cluster indicates that the all the selected village cluster were having basic necessary infrastructure and institutions. But none of them have farm produce storage structure indicates immediate investment in this aspect. Due to non-availability of same, farmers are force to sell their produce immediately after harvest when generally prices are low.

6.5 Major Findings:

❖ *Coverage of MIS and PSS:*

The procurement carried out by the procurement agencies in Rajasthan during last ten years shows that under PSS, procurement operations were carried in Rajasthan for the selected crops such as wheat, gram and rapeseed mustard, while garlic crop was procured under MIS.

❖ *Arrival and Prices of Targeted Commodity in Important Mandies:*

The month-wise arrival and prices of gram during the year 2011 and garlic during the period from January 2012 to February 2013 in selected mandies of Rajasthan shows that the highest market price for gram was realized in the month of October and November when arrival was the lowest in the year. At the time of arrival of gram in the market, price per quintal of gram was below declared MSP (Rs. 2085 per quintal in March 2011 and Rs. 1965 per quintal in April 2011 in Kisangadh mandi and Rs. 1970/- per quintal in April 2011 in Kekri mandi). Thus, market prices of gram ruled below declared MSP of Rs. 2100/- during two months and therefore Government had carried out procurement operation during the three month period of April to June 2011.

In case of garlic, data shows that during the high arrival month of April to May, the price was around Rs. 650 per quintal as compared to slack month of January to March, when it was between Rs. 1100/- to 3300/- per quintal. The procurement of garlic under MIS was carried out from June 6, 2012 to July 6, 2012 at the rate of Rs. 1700/- per quintal during June 2012 when prices were very low, which has resulted in huge loss the government.

❖ *Trend in Average Prices of Gram and Garlic in Rajasthan:*

During the period from 1990-91 to 2010-11, average prices of gram in Rajasthan has increased steadily from Rs. 658 per quintal in 1990-91 to Rs. 2150 per quintal in 2010-11, with some exceptions of slight lower down during 1995-96, 2002-2003 and 2003-2004. However, in case of garlic, prices of garlic have been highly fluctuating during the years during 1999-2000 to 2010-11, as low as Rs. 645/- and as high as Rs. 6420/-. As garlic is semi-perishable commodity and thus prices fluctuates heavily which ultimately affect the income of the farmer.

❖ ***Proportion of Procurement to Market Arrival:***

The proportion of procurement to total market arrival (in metric tons) of targeted crop in selected districts shows that ratio of procurement to market arrival at state level is higher in case of garlic than gram, while opposite picture at selected district level.

The price fixed by the government as MSP for gram and MIP for garlic was Rs. 2100/- per quintal and Rs. 1700/- per quintal respectively. All the charges towards procurement including mandi tax, transport, cost of bag was paid by the procurement agency.

❖ **Factors Influencing Coverage of Crops under MIS and PSS**

The information related to the factors influencing the coverage of crops under MIS and PSS was collected and presented. Area under targeted crop has increased in the selected districts during last few years. The productivity of gram is fluctuating during period under consideration in both districts; this may be due to heavy dependence on rainfall and low soil moisture availability.

❖ ***Procurement Costs:***

From the details of the costs incurred in procurement of gram and garlic crop under PSS and MIS in APMC/KUMS as perceived by the nodal agency, it is observed that RAJFED which was nodal agency for procurement of gram incurred about average cost of Rs. 296/- per quintal in addition to MSP rate of Rs. 2100/- per quintal. The Society and RAJFED each adds 1 percent amount of MSP rate as their margin in procurement operations.

In case of garlic crop, procurement operations was carried out by the RAJFED and Tilam Sangh during June 2012, and the procurement cost incurred by both the agencies ranges between Rs. 2120/- to Rs. 2174/- per quintal including the MIS declared rate of Rs. 1700/- per quintal. The administrative expenses were charged by RAJFED/Tilam Sangh at the rate of 2.5 percent of Market Intervention Price (MIS) declared by the government.

❖ ***Input-Output Details of Gram and Garlic:***

Both the crops are grown in *rabi* season. The crops are sown directly on the field in the month of October at the seed rate of 60 kg/ha in case of gram and 250 qtls/ha bulbs of garlic. Pod borer and thrips is the major insect pest on Gram and Garlic respectively. Both the crops generally reach to the harvesting stage in 130-150 days of sowing. The average productivity level at KVK centre recorded is 15-20 quintals/ha in case of Gram and 100-120 qtls/ha in case of garlic. However, information received from other sources slightly differs.

❖ ***MSP and Cost of Production of Gram:***

The relationship between MSP and Cost of Cultivation of gram in Rajasthan by using CACP data for the period from 1992-93 to 2009-10 indicates that the estimated cost of cultivation for Gram at cost A2 has increased by about 265 percent in 2009-10 over base year 1992-1993 (from Rs. 1655/- in 1992-93 to Rs. 6032/- in 2009-10), while per hectare returns over Cost A2 increased by lower rate of 197 percent during corresponding two years. However, MSP rate for gram has been increased significantly by more than 188 percent in 2009-10 over the base year 1992-93, i.e. increased from Rs. 600/- per quintal in 1992-93 to Rs. 1730/- per quintal in 2009-10. Thus, gram cultivation is profitable venture in Rajasthan. However, if you consider the per quintal production cost (at C2) of gram and MSP, one could see that despite significant increase in MSP during last one decade, if prices fall below the MSP, it would not have covered the production cost (at C2).

❖ ***Levels and Basis of Participation of Farmers in MIS and PSS:***

The process of procuring crops under MIS and PSS are carried out by the agencies such as RAJFED and Tilam Sangh after they receive necessary instructions from their head office/state government/central government. The KVSS/cooperative societies the accordingly directed to procure the commodities (after following the necessary steps/procedure such as advertisement, issuing coupon, checking FAQ norms, etc.) from the decided procurement centers.

It has been argued by many scholars that coverage of farmers under MIS as well as PSS is very low. If we compare both schemes (though both are different in nature and objective), it is observed that among selected farmers, total number of farmers who had availed benefited from MIS are relatively more in number than the beneficiaries of PSS scheme. Obvious, the semi-perishable nature of garlic and no scientific storage availability for same pushed the farmers to sale under MIS scheme. However, absolute numbers of farmers who have availed benefit of either scheme are very low.

❖ ***Details about the assets of sample farmers:***

In case of gram growing farmers, only large farmers had taken land on lease. However in case of kota district where garlic crop is grown small and medium farmers also taken land on lease during the year under study. As it was expected, due to having availability of irrigation facilities with Kota and Baran districts, numbers of pump sets, milch animals are relatively higher than other two selected districts for gram crop. Almost 80 percent of households in all selected districts are having concrete house.

❖ ***Institutional Support to the sample farmers:***

The data on institutional support in terms of bank loan received by the farmers were collected in order to know reach of these agencies in rural areas. It can be observed that all the selected farmers has availed the loan facility. Very surprisingly, small and marginal farmers from Baran district has availed loan facility to the tune of Rs. 1.4 to 1.5 lakhs, which is higher than other groups in that district. The purpose of loan was mainly for production followed by construction and purchase of implements.

❖ ***Cropping Pattern of the sample farmers:***

The cropping pattern followed by the sample farmers in selected districts indicates that more than 50 percent cultivated area was under gram in case of small farmers, while corresponding figures were ranges between 24-32 percent in case of medium and large farmers in Ajmer district. Whereas around 40 percent area of GCA of medium and large land holding size farmers was under gram in Jaisalmer district. Though on an average around 12.15 percent of gross cropped area was under garlic in Baran and Kota districts, the marginal farmers were dominant in terms of high share in area under this crop in 2011-12 (to gross cropped area) as compared to the other land holding size

groups. Soybean is the main kharif crops of the sample farmers of Kota and Baran districts followed by garlic, while garlic was rabi main crop. If we compare cropping pattern in Jaisalmer and Ajmer with Kota and Baran, one can very clearly notice the difference of irrigation in cropping pattern. More number of cash crops such as vegetables and spices are grown in Kota and Baran districts and garlic is one of them.

- ***Production Cost of the sample farmers:***

The production cost (explicit) of gram and garlic Crop (in Rs/ ha) at farmers level indicates that in case of gram crop cultivation, the highest share of total cost incurred for hiring out the labour followed by land preparation cost of material (such as seed, fertilizers and chemical). The cost of irrigation and hired implements accounted for about 9-10 percent of total cost. The farmers could harvest about 9.95 quintals of gram in one hectare by spending total cost of Rs. 21828/- (i.e. production cost per quintal is Rs. 2194/-). The market price realized by farmer was Rs. 2264/- per quintal, which was more than the cost of production, resulted in marginal profit to the farmer to the tune of Rs. 70/- per quintal or Rs. 694/- per ha.

In case of garlic crop cultivation, cost of labour accounted for as high as 42.7 percent of total cost followed by cost of material (33.5 percent). For cultivation of one hectare of garlic, farmer had to invest on an average Rs. 98331/-, which fetched him production of about 80.23 quintals of garlic. The per quintal production cost for garlic is estimated to be Rs.1226/-, whereas price realized by the farmers was Rs. 1237/- per quintal, resulted in negligible profit of Rs. 11/- per quintal. Thus, price declared by the government under MIS was much higher (Rs. 1700/- per qt) than production and market price, which has helped the farmers ultimately.

- ❖ ***Crop Produce Disposal Pattern and Marketing Channel:***

It would be important to know about the crop production use and disposal pattern of the selected crop by the sample farmers. The crop production and its disposal (per farmer as well as per hectare) of the sample farmers indicates that in case of gram during both the years, small farmer had sold his total output in the market, whereas in other land holding size, more than 90 percent of total production was sold in market. The price per quintal realized by the small farmer was the highest, followed by large and medium farmer in both years. While in case of garlic production, except small farmer during

2011-12, all other have sold more than 90 percent of produce in the market. Thus, the almost all the production was marketed and very miniscule quantity was kept of home consumption as well as marketable surplus.

Out of the total production of gram crop by the sample farmers, about 72 percent of output was sold under PSS scheme, while 25 percent to commission agent and remaining was sold to village trader. Thus, due to price support scheme, farmers have benefited. In case of garlic production sale, on an average only about 46 percent of output was sold under the market intervention scheme, while 41 percent of output was sold to Commission Agents. Thus, in case of MIS, benefits could reach to less number of farmers despite of semi-perishable nature of commodity. The price per quintal for gram crop realized by the farmers through commission agents was the highest than any other channel. This is because of remaining output was sold to commission agent after the sale under PSS. However, in case of MIS, price per quintal offered by the government and received by the farmers was much higher (Rs. 1700/-) as compared price realized by the farmer from commission agent (Rs. 881/-), village assembler and village trader. Thus, in true sense there was fall in market prices of garlic and thus MIS has provided the support to farmers by procuring the garlic at the very high rate as compared to market rate.

It was observed that on an average farmer incurred about Rs. 73 per quintal cost in marketing of gram when he sold to commission agent, while under PSS, he incurred less cost of about Rs.45/- per quintal, may be due to payment of mandi taxes by the procurement agency. While in case of garlic crop, high cost of transportation and packing material and labour cost as well as commission in market put together Rs. 61.30/- marketing cost for farmer when he sold his produce to commission agent, while in case of MIS Rs. 52.5/- per quintal cost was incurred. In view of low marketing cost in case of sale of produce to village trader/assemble and urgent need of money, farmer generally prefers to sell it in village, however, price realized in this channel was very low.

❖ ***Farmers perceptions about PSS and MIS operation***

From the farmers perceptions about PSS and MIS operations in Gram and Garlic crop, it is observed that about 22 percent farmers in case of gram and 10 percent farmers in case of garlic opined that there was increase in farm income due to PSS and MIS, while about 65 percent and 48 percent farmers respectively mentioned that PSS/MIS covered cost of production of targeted crop. Also significant number of farmers opined the increase in area under these crops which are covered under PSS/MIS.

In case of problems, farmers mentioned that long and lengthy process and not received good remunerative price, not got a chance to sell under the scheme, political interference, as well as very less quantity procurement under the scheme are major one. The produce gets rejected at the market level only, at not the field level. The proportion of the rejection would be as per FAQ norms in case of procurement under PSS and MIS. In case of rejection at market level was due to quality norms. Thus, lower price would be offered to the farmer in that case.

The farmers reported the severity of problem perceived by them in marketing of targeted crop. In case of gram crop marketing, top ranked problems perceived by farmers are delay in payments, lack of processing units, non-availability of cold storage/ warehousing facility and existing market price of produce is not sufficient. The main reasons which could insist the farmer not to sell his produce to PSS/MIS are discrimination on the basis of standard of produce/quality (as purchase are made on FAQ norms), delay in price received and long distance of procurement centre. In case of garlic marketing, the main problems identified are lack of processing units, non-availability of cold storage/ warehousing facility, delay in payments, long distance of regulated market and existing market price of produce is not sufficient. Thus, in order to give remunerative prices to the farmers and to prevent them from distress sale, these bottlenecks need to be removed. The storage and processing facilities need to be created on priority basis.

❖ ***Problems and Views of different Stakeholder in Operations of MIS and PSS:***

Procurement Agencies (RAJFED and Tilam Sangh):

- Non-availability of adequate storage facility.
- The unavailability of gunny bags in time at procurement centre.
- The political interference in the process of the procurement.
- Short period of time span stipulated by the Government for procurement.
- Delay in necessary instructions by the higher authorities regarding storage, transport.
- Monopolistic kind of situation in the market.
- Application of FAQ norms when there is huge supply.

❖ ***Govt./Agricultural officials experiences and views about MIS and PSS operation***

- They are partially involved in MIS and PSS operation.
- Prices should be given as per quality viz. high price for good quality produce and low price for low quality produce.
- There should be hundred percent procurement of the crop in the selected area.
- No produce should be rejected at the procurement centre. If produce could be categorized under the FAQ norms, it should be purchased at lower price.
- Girdavri Report (crop sowing report) should be issued by district official only once with mention about this purpose with proper online computerized system to prevent the fraud claim/sale arising by the rich farmers.
- The minimum support price should be declared by CACP differently for different agro-climatic conditions of the area.
- Fodder crop should be procured under the PSS operation in Rajasthan to prevent cyclic draught situation.
- Time to time weather information should be provided to the farmers by Agro metrology Department.
- Procurement information should be made available to the farmers well before the harvest in order to prevent price discrimination by the private traders.

6.6 Policy measures to improve operations of MIS and PSS:

The study brings out the policy implication as given below:

- The nodal agencies should decide, in consultation with the State Governments, the location and number of purchase centers to be set up much in advance of the marketing season. The information regarding number and location of purchase centers should be given wide publicity through media, radio, television, leaflets, etc.
- Procurement agency should come to purchase as soon as the harvesting is over, not after two weeks of harvest. Also the management of KVSS/ primary cooperative marketing societies needs to be improved.
- The nodal agency should make it sure that they possess the adequate gunny bags at procurement centers in advance by taking into consideration the estimated production of commodity in that region and expected quantum as market arrival.
- Information about the both the scheme and FAQ norms should be made available to the farmers through media, leaflet and any other extension mode. Due to ignorance of FAQ norms of the farmers, unscrupulous elements enter the market and purchase agricultural commodities at much lower price than the MSPs fixed by the Government. In this way, the farmers are exploited. Cases of farmers being turned back on the ground of non-conformity with the FAQ norms are also frequent, leading to hardship and resentment amongst the farmers.
- Due to non-availability of adequate storage facility with the depot, procurement gets delay as well as transportation cost also increases. Therefore, government should make necessary arrangements towards adequate storage facility before announcing the procurement.
- The speedy decisions as well as necessary instructions by the higher authorities regarding storage, transport as well as final decision on place of selling of crop, would help in minimizing the losses.

- *Girdavri* Report (crop sowing report) should be issued by district official only once with mention about the purpose with proper online computerized system to prevent the fraud claim/sale arises by the farmers.
- Adequate trained administrative staff should be placed at the procurement centre in order to avoid any misunderstanding between farmers and the officials.
- The Minimum Support Price (MSP) mechanism should be implemented effectively across the regions. No political interference should be allowed in procurement process.
- The Market Intervention Scheme (MIS) should be strengthened to respond speedily to exigencies especially in the case of sensitive crops in the rainfed areas.
- It was also experienced that there are a number of institutions involved in procurement process having inadequate coordination between them.
- The Market Intervention Scheme (MIS) suffers from limited operations, since it is implemented on the request of the State Government(s) willing to bear 50 per cent of the losses, incurred if any, in its implementation. The implementation of the scheme needs to be made more flexible and easy.
- The agricultural officials should be involved in MIS and PSS operation. The role of the Agriculture Produce Market Committees and State Agriculture Marketing Boards should be transformed from mere regulatory focus to promotion of grading, branding, packaging and development of markets for local produce.
- Announcing a hike in MSP alone will not guarantee any profit for cultivators, unless post-harvesting arrangements such as procurement centres, storage facilities, transport, etc, are established. Except paddy and wheat crops, the procurement facilities for other crops are woefully poor even today, which allows the middlemen to fiddle with the process. Therefore, this needs to be improved at a war footing level.

- As long as the services of nodal agencies are being used for market intervention and procurement, etc., they must be given full support so as to enable them to operate efficiently. Necessary budgetary provisions need to be made by the Government in this regard so that their operations could be carried out smoothly. Likewise, the role of banks in financing the public and cooperative procuring agencies, need to be made more active and participative.
- The Government of India should encourage the state government to initiated market intervention operations well in advance for saving the farmers in distress. The operational efficiency of purchasing agencies needs to be toned up in the context of cost efficient purchases vis-a-vis competitive sales so as to avoid or reduce losses.
- Most of the sample farmers decide crops to be sown without taking into consideration of MSP of particular crop/s as well as they sell crop produce within the village. In view of huge buffer stock of rice and wheat and at the same time shortfalls in the supply of oilseeds and pulses, MSP policy should be used for correcting this imbalance and for achieving the desired crop diversification.
- The political clout of farmer lobbies and their bargaining with the government remain a major influence on conceptualization of remunerative prices, fixing of MSP and adequacy of arrangement for procurement of crop outputs. As a consequence, the economic aspects of price support like providing incentives to farmers and promoting growth did not receive the emphasis they need and a large part of agriculture remained excluded from the benefits of price support measures.

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Visited Offices of the

- National Agricultural Cooperative Marketing, Federation of India Ltd. (NAFED), 3rd Floor, Nehru Sahkar Bhawan, Bhawani Singh Road, Jaipur 302001, Rajasthan
- Rajasthan State Co-operative Marketing Federation Ltd. (RAJFED), 4, Bhawani Singh Road, Jaipur-302 225.
- Managing Director, Tilam Sangh Rajasthan, Bhawani Singh Road, Jaipur-302 225.
- Directorate of Economics and Statistics (DES), Government of Rajasthan, Off.: Yojna Bhawan, Jaipur -302 005.
- Director, Agriculture Marketing Department, Government of Gujarat, Pant Krishi Bhagwan Das Road, Jaipur-302 005.
- The District Statistical Officer, Office of the Ajmer/Jaisalmer/Kota District Collector, Rajasthan.

Instruction for Field Staff for procurement under Price Support Scheme during Rabi Marketing Season 2011-12

1. Only those stocks, which arrive at the procurement centers of Cooperative Marketing Society/ Grower' Society/ State Federation/ Growers' Federation/ State Tribal DCs or in the market yard from the farmers are to be procured. The supporter will be fully responsible for the quality of the stocks purchased as per the prescribed specifications and quality procured. It shall be the responsibility of the Supporter to ensure that stocks procured under the scheme are of prescribed quality parameters directly from the farmers after ensuring proper documentation to verify the genuineness / identity of the farmers. Our field staff will visit procurement centers to see the operational arrangements of weighment packing, movement of stocks, availability of gunny bags, and proper payment to the farmers etc. periodically.
2. while issuing instructions to the field staff on tour for overseeing PSS purchase operations, branch manager shall mention that during their visit to the Society, they will check the purchase records of the society and if it is found that the stocks purchased by the primary societies in proportion to the landholding and average yield fixed by local authorities of concerned area/ State Government is not being complied with, they shall report to the BM immediately, who will enquire into the matter and take suitable necessary action.
3. In order to verify the quality of stocks, SLS shall make proper arrangements for verification of quality at each procurement center. Further, a reputed Surveyor shall be engaged by NAFED at Storage centers / CWC / SWC godowns who shall draw samples from the stocks to be deposited and check the quality. Once the report of surveyor has confirmed the quality, the stocks shall be accepted by NAFED. In case the quality report does not conform to FAQ specification of PSS, the stocks shall not be accepted by NAFED under PSS.
4. the Surveyor's report on entire stocks (lot-wise) will be available with the branch on the basis of Surveyor's report, the branch will be maintain the Godown- wise / Lot – wise moisture content register. As and when the stock of a particular Godown are sold before delivery of stock, the field staff deputed for delivery will test the moisture content of stock in the presence of Godown in charge and record it on the Delivery Order. On return to the Branch, he will record the moisture content at the time of delivery in the moisture content register. When entire stock of particular godown is liquidated, the average moisture content at the time of deposit as well as at the time of delivery and difference thereof will be worked out. In case gain / shortage of the godown is not in accordance with the difference in moisture content so obtained, the godown rent bill of the Warehouse may be settled accordingly.
5. the gunny bags for these procurement will either the arranged by the Statefed / Oilsed / State tribal DCs or supplied by NAFED. Generally, new gunny bags are to be utilized. However, once used sound gunny bags may also be utilized with the approval of Branch Manager. The field staff while visiting different center will invariably take stock of the proper storage, utilization and balance stocks of gunny bags held at respective centers. They will also obtain stock receipt of gunny bags received at the respective centers from the agent.

6. The packing and marka should be as under:-

Packing

Rape seeds / mustard	A- Twill	85 Kg Net
Groundnut Pods	DW/B- Twill	35 Kg Net
Sunflower seed	B- Twill	50 Kg Net
Safflower seed	B- Twill	60 Kg Net
Gram	B- Twill	95 Kg Net
Lentil (Masur)	B- Twill	100 Kg Net

Marka

1. NAFED
2. Rape seeds / mustard, Sunflower, Groundnut, Safflower, Gram, Lentil (Masur)
3. Name of Center.
4. Weight _____ Kg net

7. While visiting the center, the field staff will ascertain whether 100% weighment has been carried out at the time of procurement by the State feds / Oil feds / STDCs / Society and 10% weighment at the time of depositing the stocks with CWC / SWC. To exercise further check, they will also undertake test weighment at the mandi level / at godown and in case any shortage is noticed, the same may be brought to the notice of the procuring supporters / Branch Manager in writing. In the weight check memo signatures of the representative of the procuring supporters may invariably be obtained.

8. The random sampling of the stocks procured / stored will be drawn and its moisture got tested from market committee / Representative of the Directorate of marketing / CWC and their analysis report obtained. If possible, sample may also be got analyzed for other grade specifications. From each center the representative samples of lot wise stock procured / stored shall be sent to Branch office. In case of any quality complaint, the same may be brought to the notice of procuring supporters/ branch office in writing.

9. In case the stocks are stored in state feds / Oil fed / STDs / Society's private hired godown comprehensive insurance policy shall be obtained in favors of NAFED for 110% value against all risks including riots and natural calamities.

10. daily market information with regard to arrival, quality, moisture and prevailing market rates shall be intimated to branch office verbally, e-mail, telegraphically followed by post confirmation copy.

11. daily procurement report indicating quality procured in weight name procurement center and progressive procurement shall be intimated to Branch Office. He will ensure that a daily e-mail fax is got issued from State feds / Oil Feds office / Society followed by post confirmation copy giving procurement details.

12. It should be insured that stitching of bags is firm with at- least 14 cross- stitches on folded mouth with at least 14 cross stitches on folded mouth with at least three ply twine so that the bags do not get opened during transit / Storage.

13. In case the stocks are to be stored in State feds/ Oil feds/ STSs office / Society's / private hired godown, then it may be ensured that either wooden crates are provided below the stock or

polythene covering is provided so as to avoid damages to the stock. The stocks are to be stored / stacked properly and scientifically.

14. While depositing the stocks with CWC/ SWC, deposit cost to be declared, shall include cost of naked grain, cost of gunny bags and all type of market taxes / expenses including procuring supporters service charge, the details of which be worked out accordingly.

15. Instruction with regard to dispatches to other stations / local disposal shall follow separately.

16. While taking the Insurance cover, Warehouse receipts, stocks certification, preparations of procurement bills, etc., it will be ensured that all documents are not prepared in favors of concerned branch of NAFED. These documents will be sent to Branch Office promptly.

17. The guidelines issued by State feds / Oil feds/ STDCs to their Branch Office / procuring supporters may also be referred for further guidance.

18. Each field staff should draw out their visit to the different center allotted in such a way that each center is visited at least once in a week.

19. The field staff will also ensure availability of gunny bags with the respective centers and in case additional stocks are required he will promptly inform the branch manager so that the additional requirement can be met.

20. The field staff will verify whether banners/ wall posters of the scheme have been properly displayed by the societies / market committees / State feds / Oil feds / STDCs. They may also ensure that the scheme is publicized by the market committee thorough Public Address System, wherever existing.

21. According to the arrangement finalized with the State feds/ Oil feds / STDCs, the entire procurement of above commodities would be conducted by them as our supporters. In case the procurement is found to be unsatisfactory at any level, the same may be reported to the procuring supporters in writing with a copy to concerned Branch Manager, who will in turn, take up the matter with the State feds/ Oil feds/ STDCs at the appropriate level.

22. The field staff shall ensure that the stocks procured are moved to the warehouses simultaneously as per the storage plan.

23. The field staff shall attend to the complaints from farmers, if any, promptly. In case of complaints of serious nature, they will report to branch manager telegraphically/ telephonically.

24. In case of storage of stocks in godowns other than CWC/ SWC the insurance policies/ cover notes are to be obtained in the name of NAFED only. The field staff shall ensure that insurance is arranged by the respective societies accordingly and policies sent to concerned NAFED Branch.

25. The touring staff shall return to branch office at least once in a fortnight to report and discuss various aspects of the operation. In the meantime, they will furnish by post daily reports center-wise on the prescribed Inspection Plan Programme.

Specimen of Wall Poster/copy of leaflet/ Newspaper Cutting

NAFED

Procurement of Oilseeds and Pulses by NAFED during Rabi Marketing Season 2011-12
under Price support Scheme.

Attention Farmers

For giving better price to the farmers for their produce NAFED is procuring following Rabi Crops 2010-11 at the support price declared by the Government of India through the State Cooperative Marketing Federation / Oilseeds Growers' Federation/ State Tribal Cooperative Development Corporations at procurement centres opened by Marketing Societies/ Oilseeds Grower's Societies/ Unions.

Sr. No.	Commodity	Minimum Support Price for Marketing Season 2011-12 (Rs. Per quintal for FAQ)
1	Rapeseed/ Mustard	1850
2	Safflower seed	1800
3	Groundnut – in- shell	2300
4	Sunflower seed	2350
5	Gram	2100
6	Masur (Lentil)	2250

Bring good and dried stocks and get better price, for further details please contact nearest Marketing Cooperative/ Oilseeds Societies/ State Tribal DCs/ NAFED branch Office.

Specimen Copy of Girdiwari Report

परिशिष्ट-8

गिरदावरी प्रमाण-पत्र

कमांक..... दिनांक.....

जिला.....

पटवार मण्डल..... तहसील.....

खातेदार/गैरखातेदार/आंवटी का नाम.....

पुत्र.....

गाव/चक.....

रखसरा/मुरब्बा/नंबर व किला नंबर जहाँ बाजरा बोया गया है.....

कुल रकबा जहाँ बाजरा बोया गया है. उक्त में कुल बाजरे की अनुमानित पैदावार.....

हO/ गिरदावर/पटवारी
नाम.....
टेलीफोन/मोबाईल न.....

नोट :- कमांक अंकित कर दो प्रतियों में तैयार किया जावे। एक प्रति कृषक व एक कार्यालय प्रति रखी जावे।

Specimen Copy of Token/Challan

नैनवां क्रय-विक्रय सहकारी समिति लि., देई

खरीफ 2012 जिला बुन्दी (राज.)

बुलाई टोकन

क्रमांक 1001 दिनांक

समर्थन मूल्य क्रय केन्द्र का नाम

1. कृषक का नाम
2. पिठा का नाम
3. कृषक का पूर्ण पता
4. गिरदावरी प्रमाण पत्र नं.
5. खसरा नम्बर/उत्प
बुवाई का रकबा
6. अनुमानित बोरियों की
संख्या
7. बुलने की तिथि

हस्ताक्षर जारीकर्ता

Annexure V

Fair Average Quality Grade Specification of Gram Whole (Desi) prescribe by the Government of India for Price Support Scheme during 2011-12 Marketing Season.

GENERAL CHARACTERISTICS:

- a) Be the dried mature grains. (Cicer Arietinum).
- b) Have uniform size, shape and color.
- c) Be sweet, hard, clean, wholesome and free from moulds, living insects, obnoxious smell, discoloration, admixture of deleterious substances and all other impurities except of the extent indicated in schedule above:
- d) Be in sound merchantable condition.
- e) Conform to PFA Rules.

Schedule showing maximum permissible limits of different refractions:

Sr. No.	Special Characteristics	Maximum permissible limit of different refractions (%by weight per qtl.) for FAQ
1	Foreign matter	1.0
2	Other food grains	3.0
3	Damaged grains	3.0
4	Slightly damaged touched grains	4.0
5	Immature shriveled & broken grains	6.0
6	Weevilled grains	5.0
7	Moisture content	4.0

SUPPORT PRICE: Rs.2100/- PER QTL. FOR FAQ

N.B. Moisture up to 14% is allowed. Stocks having more than 14% moisture are not to be accepted.

Definition:

Foreign matter: includes organic and inorganic matter. The inorganic matter shall include sand, gravel, dirt, pebbles, stones, lumps of earth, clay and mud. The organic matter shall include chaff, straw, weed seed and inedible grains.

Quality criteria for the purchase of Garlic under Market Intervention Scheme 2012-2013 (F.A.Q)

SPECIFICATION	GENERAL CHARACTERISTICS	RATE (Rs.) PER QUINTAL
more than 20mm diameter includes 5 percent small size garlic	1. should have uniform color 2. should be dried properly 3. should be rigorous 4. should be free from rotteness, broken, dust, squalor, sun burn, and spouted	1700.00

Annexure VI

(True Copy)
No.L-15016/8/2010-MPS
Government of India
Ministry of Agriculture
(Department of Agriculture & Cooperation)

Krushi Bhavan, New Delhi.

Dated: 8.10.2010

Subject:- Price policy for Rabi Crop of 2010-11 Season to be marketed in 2011-12-
Fixation of Minimum Support Price (MSP).

The Government of India has fixed the MSPs for the Rabi crops of 2010-11 season of Fair Average Quality (FAQ) as under:-

Commodity	MSP for 2010-11 (Rs. Per quintal)
Gram	2100
Masur (Lentil)	2250
Rapeseed / Mustard	1850
Safflower	1800

As per the decision of Cabinet Committee on Economic Affairs (CCEA), National Consumer Cooperative Federation of India Ltd., (NCCF) and Central Warehousing Corporation (CWC) have also been appointed central agencies, in addition to NAFED for procurement of oilseeds and pulses, under price support scheme of Government of India.

It is, therefore. NAFED, NCCF and CWC are requested to take necessary action for undertaking procurement of oilseeds and pulses under price support scheme of Government of India. The working capital arrangement and losses incurred if any, on account of procurement of oilseeds and pulses under price support scheme shall be reimbursed only to the extent of 15% of the value of such purchases, by their respective administrative Ministries/ Departments.

Sd/-
(Vinit K Verma)
Director (Coop)

1. Secretary, Department of Food & Public Distribution, Krishi Bhavan, New Delhi
2. Secretary, Department of Consumer Affairs, Krishi Bhavan, New Delhi

Copy for information & necessary action to:-

The Managing Director, Central Warehousing Corporation, Siri Institutional Area, Hauz Khas, New Delhi,
Managing Director, NCCF, Deepali, Nehru Place, New Delhi, Managing Director, Nafed, New Delhi.

Annexure VII

Format of Agreement to be entered between NAFED and State-Level Supporters (SLSs) for Price Support Operation during Rabi 2011-12 Marketing Season

This agreement made on this day _____ of _____ 2011 between: The National Agricultural Cooperative Marketing Federation of India Ltd. , having its head office at NAFED house, Siddhartha Enclave (Commercial Complex), Ashram square, New Delhi- 110014, through branch office at _____ represented by Branch Manager, National Agricultural Cooperative Marketing Federation of India Ltd. , hereinafter called the NAFED of the one part and

(Name of Apex Marketing Feds/ OILFEDS/ STATE TDCs/ other SLS), having its Head office at _____ referred to as State Level Supporter [SLS for short] of the second part.

PURPOSE:

WHEREAS

The government of India has a Price Support Scheme [PSS for short] for the purposes of protecting the interests of the farmers, under which it procures the agricultural produce at the Minimum Support Price [MSP for short] in case the prevailing price of it falls below the Minimum Support Price [MSP for short] announce by it for the particular produce.

The Ministry of Agriculture, Government of India has engaged NAFED as the nodal organization for executing its PSS operation. NAFED is required to purchase the agricultural produce from that part of the country where its price falls below the MSP.

NAFED is desirous of appointing State Level Supporter [SLS] in each State of India for assisting it in the procurement and delivery various agricultural produces for proper implementation of the PSS operation.

The _____ (name of the Apex Marketing Federation/ OILFED/ STATE TDCs) has agreed to act as State Level Supporter [SLS] of NAFED in the State of _____ (name of the state) and to purchase and sell _____ (name of the commodity) on the terms and conditions mentioned in this agreement:

Both the parties have agreed to reduce into writing the terms and conditions of their agreement.

Now this agreement witnesses and the parties here to mutually agree as follow:

1. DESCRIPTION OF THE WORK:

1.1 The State Level Supporter [SLS] be required to procure/ purchase at the Minimum Support Price [MSP] _____ (name of the commodity) in the various market/ mandies / centers of the state identified for the purpose from the farmers of the state.

Keeping in view the cap of Government of India to reimburse losses only up to 15% of MSP from Rabi 2011, instead of reimbursement of actual losses in previous years, SLAs/ Branches

are to ensure that the expenses be incurred to the bare minimum so as to ensure that the losses, if any, in the PSS operation are less than 15% of MSP.

1.2 The SLS is required to obtain and maintain documents [in original and described in clause 4.2] necessary to prove that stocks purchased/ procured are procured by the said farmers and sold to it through the Primary Cooperative Marketing Societies/ oilseeds Growers Society/ Tribal Society of the respective areas under the Price Support Scheme.

The SLS is required to ensure timely payment to the farmers against proper receipts.

These must be made available for verification by the representative of NAFED and / or the GOI to enable them to satisfy that the benefit of the PSS has actually reached the farmers for whom it is intended for

1.3 The stocks procured by SLS should conform to the quality/ grade and specifications prescribed by NAFED- as described in Annexure A to this Agreement. They should be packed in the jute gunny bags [of a quality approved by NAFED] of a standard weight of _____kilograms [net] and stitched properly (there may be different commodity specific arrangement). The SLS shall ensure timely payment.

1.4 NAFED agrees to purchase from the SLS all the stocks procured by it at MSP, subject to the quality and packing etc conforming the prescribed standard, at a price which is described in Annexure B to this Agreement

(ii) SLS has agreed to abide by any other term and condition as prescribed/ laid down by NAFED based on any requirement with respect to the MPS operation of various commodities.

2. VOLUME OF WORK:

2.1 No specific quantity is fixed for undertaking procurement under this agreement.

2.2 The SLS can purchase/ procure the _____(name of commodity) as much quantity as available till such time the price of it in the particular mandi for prescribed quality rules/ prevails below the MSP [of Rs. -----] and as per Action Plan prepared by NAFED based on government of India direction/ Policy. However, availability of funds with NAFED/ SLS, processing and storage facilities etc., shall also be taken into account while deciding the quantity and period of procurement by the SLS.

2.3 In case the credit guarantee limit granted by the Government of India gets exhausted, then NAFED will have the right to ask the SLS to stop procurement at any time, without prior intimation as it will be difficult to make the payment to the SLS beyond the limit towards the quantities procured.

3. RELATIONSHIP OF THE SUPPORTER WITH THIRD PARTIES:

All transactions between the SLS and farmers/ third parties shall be carried out as between the two principles without reference in any event to the NAFED. The SLS undertake to make such third parties fully aware of the position aforesaid.

All persons employed, whether directly or indirectly, by the SLS shall be engaged by SLS as in their own employees in all respects.

SLS shall, in its own individual capacity, be responsible to discharge all its statutory and contractual obligations properly and promptly and shall be responsible for any acts or omission committed by its employees/agency.

NAFED will not be liable for any default or acts of omission or commission of the SLS towards third parties or the employees. It will be the responsibility of the SLS to indemnify and any claim made by the Third Party.

4. DUTIES AND RESPONSIBILITY:

4.1 Before undertaking purchases of any commodity under PSS, SLS shall contact the concerned State Government authorities to ascertain the average yield of the _____(name of the concerned crop)_____ district wise. In case the variation in any particular area is beyond +/- 10%, the specific reasons may also be obtained. These details shall be provided by SLS to NAFED at the time of the procurement operations and at the time completion of the operations respectively.

4.2 Before undertaking purchases of any commodity, the SLS will obtain any such document showing the genuineness of the farmer and his landholding and the crop sown/ grown/ raised in the relevant season [Kharif /Rabi] in the form of girdawari, khata- khatoni or any document of the state or Local Government. These land records and document must indicate that the commodity, which is being offered under PSS has been harvested by the farmers from his own/ leased land. It should ensure that there is no overwriting or cutting or erasing etc., so as to avoid any manipulation.

The SLS may contact the concerned State Government authorities to ensure the Genuineness of the documents.

The SLS will maintain proper original copies of these documents of the farmers and preserve them for a period of _____years. These must be made available at later stage for verification by the representatives of NAFED and / or the GOI to enable them to satisfy that the benefit of the PSS has actually reached the farmers for whom it is intended for.

4.3 The SLS shall procure / purchase the commodity directly from the farmer after making it know that it is being procured under the PSS scheme of the GOI and the MSP as per quality / grade specification given in Annexure-A to this Agreement. The SLS will have to properly display the same at the procurement centre.

The SLS undertakes that it will not use the services of middle men referred to as Kacha Arthias or by any other name for the purposes of procurement under this agreement.

4.5 The SLS will be responsible to ensure that stocks procured under the PSS Scheme are of prescribed quality parameters as per Schedule A to this agreement. In order to verify the quality of stocks, SLS shall make proper arrangement for verification of quality at each procurement centre.

NAFED will depute one or more surveyors / inspectors at the storage centres / CWC / SWC warehouses / godowns, who shall draw samples from the stocks brought to be deposited and check the quantity. NAFED will accept the stocks for purchase only after the surveyor has certified the quality of the commodity. In case the quality report does not conform to FAQ specification of PSS, the stock shall not be accepted by NAFED under PSS.

4.6 the bag shall be stenciled indicating name of NAFED, Commodity, Year, SLS and procurement center and stored in the CWC/ SWC's warehouse or dispatched as per NAFED's instructions.

4.7 NAFED may in order to facilitate the SLS in procuring the jute / gunny bags at an economic price as well as standard quality may arrange for supply to the SLS or procure them and

supply them to the SLS. In case they are supplied by NAFED, then, the cost of the bag shall not form a part of the sale price by SLS as per Schedule B

The SLS will arrange safe storage of the gunny bags supplied by NAFED in the CWC/SWC warehouse and will render proper account of the same. No storage charges for storage of gunnies will be paid by NAFED if the stocks are stored in their own godowns / societies' godowns. If the space for storage of gunny bags has to be in the hired CWC / SWC godowns, actual storage charges paid shall be in the a/c of NAFED.

4.8 The SLS [State Level Supporter] will ensure to maintain transparency in accounts at various levels.

4.9 At the time of storage of stocks in the godowns, SLS shall ensure that record of moisture content is clearly mentioned on the WHRs at the time of deposit of the stocks.

4.10 The SLS shall be responsible for quality and quantity and also safety of the stocks from the point of procurement up to the point of final storage in CWC / SWC godowns or up to the dispatching point where the stocks have to be dispatched simultaneously with the procurement.

4.11 In case the stocks are moved to the distance godowns, the SLS must obtain a certificate from local Warehousing Authorities Certifying that there is no storage space available for PSS commodities for storing on daily basis. Transportation Charges for the stocks to be moved from centers should be based on L1 tender rates or rates of Government Agencies. All efforts should be made to economize the expenses to maximum extent and the rates should not exceed the prevailing market rates.

4.12 The SLS shall obtain proper receipts from the warehouse (CWC / SWC) for the stocks stored in the name of NAFED which should invariably indicate quality as FAQ and should also indicate the value of stocks calculated on ex- godown cost basis comprising cost of naked grains, gunny bags and incidentals up to storage point.

4.13 SLS, is also require to assist NAFED in arranging onward dispatches wherever required, at a later stage for which the SLS shall be reimburse the actual expenses incurred on labor and local transportation, if any on behalf of NAFED. They shall be required to provide adequate tarpaulins on the tops of the trucks and also to cover the stocks at procurement centers to protect the same in the event of rain, rough weather etc.

4.14 In case storage space near the procurement centers is not available with SWC / CWC despite best efforts, the SLS may arrange to store the stocks in their own godown or in the godown of the societies subject to these being suitable for storage of the commodity in question, or as a last resort in the suitable private-hired godowns in the vicinity of procuring centers but invariably in consultation with NAFED. The SLS shall arrange hiring of the said godowns by CWC / SWC. However, if CWC/ SWC do not agree to hiring of CWC/ SWC. However, if CWC/ SWC do not agree to hire of such godowns, a certificate of the State Federation / Primary Society duly attested by State federation for the stocks stored with them/ Primary Societies godowns shall be submitted by the supporter to NAFED in lieu of warehouse receipt.

4.15 The SLS shall be required to strictly abide by all the local laws governing the territory and rules and regulation of the local authorities and also follow the act/ rules/ byelaws prescribed by the Market Committee/ marketing Board. The SLS shall be fully responsible for any violation of such act/ rules.

4.16 Penalty if any, relating to default in any payment of statutory charges/ taxes shall be to the account of the SLS.

4.17 The SLS will be responsible for the quality and quantity as per the prescribed specification and variety procured while in their custody until such time stocks are deposited in the godowns of CWC/ SWC in the proximity of the procurement centers directed by NAFED with due verification of quality by independent surveyors approved by NAFED.

5. INTIMATION OF PURCHASE ETC:

The SLS shall send a dairy report over telegram/ fax/ e-mail in the prescribed proform as per Annexure 'C' followed by weekly statement by courier post in the prescribed proform as per Annexure 'D' about the procurement made, to Branch Office/ HO of NAFED.

The report to be send should indicate quantity (in quintal.) actually procured on a particular day based on which NAFED shall draw credit from the bank besides informing the Government of India.

6. MAINTAINANCE OF RECORDS:

The SLS shall keep up to date proper/ correct and separate account/ registers of center-wise, showing the name of the farmer, village, quantity procured and payment made in respect of each transaction.

The SLS shall also maintain such account and registers/ and furnish periodic statement of procurements, issues, stocks etc. as directed by the Branch manager, NAFED concerned [In case of any difficulty/ dispute it will be referred by the SLS to HO, NAFED for resolution], in addition to any other account, registers etc. are to be maintain by them under the existing licensing order for their normal business or under the terms of their license.

The SLS shall also make available for inspection by the representative of NAFED and / or the GOI from to time or whenever required the aforesaid registers and accounts, documents etc. The SLS shall maintain proper account of the funds received, from NAFED and also payment made to the farmers and expenses incurred towards incidentals and other costs.

7. SUPPORTER TO WORK FOR THE NAFED:

As the SLS shall be working for NAFED under the PSS [Price Support Scheme], it will not undertake purchase of the same commodity on their own account or on behalf of anybody else below or at the support price level.

The SLS shall not shift/ dispose off/ or mortgage whole/ part of the stocks purchased under PSS at MSP without specific prior approval, in writing of NAFED.

Officials of NAFED and / or GOI may visit the procurement centers to ensure that the procurement by SLS conforms to the agreement- and the farmers of the area are the actual beneficiaries.

8. ADMINISTRATIVE MARKUP:

The administrative markup in the Bills / Invoice raised by SLS on NAFED referred in Annexure B of the agreement to cover up its administrative expenses and margin if any shall be:

2% of the naked [meaning without the cost of packing, mandi / market levies, taxes and transportation etc] value of the commodity in case the services of the Primary Cooperative Marketing Societies / Oilseeds Growers Society/ Tribal Society are used for procurement; and

1% of the naked naked [meaning without the cost of packing, mandi / market levies, taxes and transportation etc] value of the commodity in case the services of the Primary Cooperative Marketing Societies / Oilseeds Growers Society/ Tribal Society are used for procurement.

9. PAYMENTS:

The SLS shall ensure timely payment to the farmers for the stocks purchased from them under this Agreement.

Payment to the farmers for the stocks procured under this agreement for PSS shall be made through Account Payee cheques indicating number to the farmers for the stocks procured from them after obtaining proper receipt. Bearer cheques may also be issued to the farmers up to the prescribed admissible limit (Rs. 20,000/-).

10. NAFED TO PROVIDE FUNDS TO SLS:

The fund required for procurement under this agreement for PSS [Price Support Scheme] shall be arranged by NAFED against hypothecation of procured stocks with State Bank of India, New Delhi. In addition, the funds may also be arranged from other Scheduled Commercial Banks against hypothecation of procured stocks if the need so arises.

11. INTEREST COVERAGE:

In case the SLS invest funds from its own sources for timely payment to the farmers on account of the procurement under this agreement and other incidental [other than the Administrative markup] covered under Annexure B, NAFED shall consider to reimburse, interest on the amount so invested by the SLS for the number of days at the rate of interest charged by SBI/ other Banks for the scheme or the amount actually paid by concerned SLS, whichever is less.

The SLS is required to produce and submit to NAFED documentary evidence for the rate as well as other relevant aspects relating to it.

12. PURCHASE TAX / VAT:

SLS shall raise bills / invoice for the commodity procured/ purchased by it under this agreement and supplied or delivered at NAFED designated warehouse / godown. The bill / invoice shall reflect all the component of the amount payable by NAFED to it as listed in Annexure. This is to enable the Ministries of Agriculture and Finance, GOI to verify and bear the cost of the PSS operations undertaken at its direction on a "cost plus basis". Purchase/ Sales tax/ VAT (Value Added Tax) per provisions in respective sales Tax/ Value Added Tax AC and Rules of the concerned State shall be charged in the bill or invoice and the SLS shall be liable to discharge such liability to the authority in its own name and capacity. NAFED can issue or obtain various prescribed forms to avail concessional tax if any, or obtain set off of the VAT or first point purchase / sales tax.

13. ACCOUNTING SYSTEM:

The SLS carrying out the Price Support Scheme on behalf of NAFED must maintain separate identifiable account of this operation.

14 AUDIT SYSTEM:

14.1 Apart from verification and certification of claims under Price Support Scheme by the practicing Cost/ Chartered Accountants, all claims are required to be submitted through the Department of Agriculture & Cooperation, Government of India for vetting by Office of the Chief Advisor Cost, Department of Expenditure, Ministry of Finance.

14.2 All the claims and expenses are also subject to spot verification of records by the office of the Chief Advisor Cost, Department of Expenditure, Ministry of Finance, New Delhi and in case

of disallowance of any expenses by the Ministry of Finance the same shall be debited to the concerned SLS/ Society/ Union.

15. INSURANCE:

Insurance of stocks delivered by the SLS to godown other than CWC/ SC, shall be taken in the name of NAFED for 110% value against all risks including burglary, fire with SRCC [Strikes, Riots, Civil Commotion], terrorist strike, and natural calamities [like floods, inundation, storms, typhoon, earth- quick and subsidence] and any other risk indicated by Branch Manager, NAFED. The insurance policy shall be submitted by the supporter to NAFED along warehouse receipt.

16. PUBLICITY:

In addition, the SLS shall take necessary steps to give wide publicity to the Scheme through local media like newspaper, radio, TV etc. besides at mandi-level through public address system, without causing much financial burden.

The SLS may also arrange for printing leaflets at their cost in local language and distribute the same among various concerned supporters besides fixation/ affixing of banners and posters through Primary marketing Societies at mandi / procurement centers etc.

NAFED shall supply some sample of banners, wall posters, and hand bills besides releasing advertisement in the local newspapers.

17. RECOVERY OF DUES:

All sums found due to the NAFED under or by virtues of this agreement shall immediately be paid by the SLS, failing which interest at the bank borrowing rates shall be charged for the periods of late payment from the SLS.

In case SLS retains funds provided by NAFED without utilization for the procurement for more than 10days at a stretch, then NAFED will adjust / recover interest from the SLS on the same basis as it will pay interest to it under clause 11 of this agreement.

18. The SLS understands that the PSS [Price Support Scheme] Operation of (name of the commodity), is an operation being implemented on behalf of the Ministry of Agriculture, Government of India, in Public interest and NAFED has engaged it, through this agreement to implement it in the particular state of its operation. They [SLS] shall ensure that the same is undertaken by them in an efficient and economical manner so that the maximum possible benefit is reaches the farmers and the Public.

The SLS shall maintain all records, accounts, information and documents etc., relating to the operation properly and, as detailed / describe in this agreement and by various communication in this regard by NAFED, which will be made available promptly as and when required by NAFED and / or the Government of India.

It is clearly understood by both the parties that this agreement does not confer the status of an agent of NAFED on the second part but it extend full authority to facilitate and support procurement of the commodities covered subject to the terms and conditions specification herein.

19. PERIOD OF AGREEMENT:

The agreement shall remain in force for a period of one year or such later date as may be decided by NAFED.

However the records and documents etc., shall be preserved for a minimum of _____ years and for further periods when desired by NAFED.

20. FORCE MAJEURE:

i) That, the stock proposed to be purchased by NAFED under PSS, in case by virtue of any order/ decision of the State or Central Government. NAFED is prohibited to purchase the stocks; NAFED shall have the right and authority to stop purchasing of stocks immediately and remove the stocks as also the purchase stocks from the premises and shall not be responsible for any direct or indirect losses that may be sustained by SLS.

ii) During the period that the performance by one of the parties of its obligation under this agreement has been suspended by and event of Force Majeure, the other party may like-wise suspend the performance of all or part of its obligation hereunder, except for payment of any amount already due and payable.

iii) Force Majeure shall include unpredictable, un foreseen, catastrophic and natural calamities or acts of god, beyond the control of both the parties and not brought about at the instant of the party claiming to be affected by such event or which, if anticipated or foreseeable, could not be avoided or provided for and which has caused the non-performance or delay in performance, such as earth quake, flood, land slide, epidemic drought, hail storm, high variation in temperature, fire, war, curfew, riots, existing on or after the effective date of this agreement which prevent totally or partially the fulfillment of the obligation of one or both the parties.

iv) The partly invoking Force Majeure shall provide to the other party confirmation of the existence of facts constituting Force Majeure. Such evidence shall consist of a statement of certificate of Government department or Agency. If such a statement be obtained the party claiming Force Majeure may, as a substitute therefore, make a notaries statement describing in detail the facts claimed to constitute Force Majeure and the reasons, why such a certificate or statement confirming the existence of such facts cannot reasonably be obtained.

21. SETTLEMENT OF DISPUTED:

In case of any dispute and differences whatsoever arising between the parties to the agreement in any manner touching the subject matter of the agreement, the same shall be referred to the Central Registrar for decision in terms of section-84 of the Multi-state Cooperative Society Act 2002 and the venue of the dispute shall be Delhi.

IN WITNESSETH whereof the parties lay their hands at _____ on the date mentioned above.

For and on behalf of
(Supporter/ Apex Federation)

For and on behalf of
NATIONAL AGRICULTURAL
COOPERATIVE MARKETING
FEDERATION OF INDIA LIMITED
(NAFED)

Witness

Witness

1.

1.

2.

2.

RAJFED/NAFED Letter - Gram Procurement under PSS during Rabi 2011 and Rabi 2012

राजस्थान राज्य सहकारी कय विक्रय संघ लि.
4, भवानी सिंह रोड़, जयपुर

क्रमांक : वाणिज्य/2011-12/4729-5029

दिनांक 30.03.2011

उप/सहायक रजिस्ट्रार,

क्षेत्रीय अधिकारी,

सहकारी समितियों,

राजफैड, (समस्त)

-----जिला-----

व्यवस्थापक,

कय विक्रय सहकारी समिति लि.

-----जिला-----।

विषय : रबी वर्ष 2011 में समर्थन मूल्य पर सरसों/चना की खरीद के दिशा निर्देश।

महोदय,

रबी वर्ष 2011 में समर्थन मूल्य पर सरसों/चना की खरीद शाखा प्रबन्धक, नैफेड जयपुर से प्राप्त पत्र क्रमांक जेपी/एमके/पीएसएस/2010-2011/5658 दिनांक 29.03.2011 से प्राप्त निर्देशों की अनुपालना में निम्न दिशा-निर्देशों के अनुरूप दिनांक 07.04.2011 से प्रारम्भ की जानी है:-

1. **समर्थन मूल्य** : रबी वर्ष 2011 के लिए भारत सरकार द्वारा सरसों का समर्थन मूल्य 1850/- रु. तथा चना का 2100 रु प्रति विव. घोषित किया गया है।
2. **कय केन्द्र** : रबी वर्ष 2011 के लिए राजफैड द्वारा सरसों व चना के कय केन्द्रों का चयन किया गया है, जिसकी सूची संलग्न है। (परिशिष्ट-1) समर्थन मूल्य पर सरसों/चना की खरीद एवं तुलाई निर्धारित कय केन्द्र पर ही की जावे। व्यापारियों एवं आढतियों की पिड पर सरसों/चना की खरीद नहीं की जावे।
3. **कय केन्द्र का कार्य क्षेत्र** : क्रय-विक्रय सहकारी समितियों द्वारा अपने क्षेत्र के किसानों की सरसों/चना ही अपने संबंधित कय केन्द्र पर गिरदावरी रिपोर्ट के आधार पर क्रय की जावे।
4. **गुणवत्ता मापदंड** : समर्थन मूल्य पर सरसों/चना की खरीद रबी वर्ष 2011 की फसल से सीधे किसानों से की जानी है अर्थात पुरानी सरसों/चना की समर्थन मूल्य योजनान्तर्गत खरीद नहीं की जावेगी। खरीद में निर्धारित गुणवत्ता मापदंडो (संलग्न) **परिशिष्ट 2 व 3** का पूर्ण सर्तकता से पालन किया जाये।
4.1 सरसों/चना की किस्म के निर्धारण का कार्य समर्थन मूल्य खरीद कार्य में सबसे महत्वपूर्ण कार्य है। अतः सरसों/चना की किस्म के बारे में कोई मतभेद/विवाद हो तो मण्डी स्तर/कय केन्द्रवार स्थानीय स्तर पर एक कमेटी का निर्धारण किया जाता है जो निम्न प्रकार है:-
 1. कृषि विभाग का कृषि पर्यवेक्षक या विभाग का प्रतिनिधि
 2. कृषि उपज मण्डी सुपरवाइजर या मण्डी प्रतिनिधि
 3. संबंधित कय विक्रय सह समिति का व्यवस्थापक/कर्मचारी

उपरोक्त कमेटी विवादित सरसों/चना की किस्म का अवलोकन/परीक्षण कर निर्धारण करेगी कि सरसों/चना कय योग्य है अथवा नहीं तथा उक्तानुसार समिति द्वारा कार्यवाही की जावेगी।

Chanapss2011

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**National Agricultural Cooperative
Marketing Federation of India Ltd.**
Head Off: Sidhartha Enclave, Ashram Chowk,
Ring Road, New Delhi-110 014
Phones: EPABX- 26340019-(8 Lines)
Fax: 26340261
nared-india.com

Ref.No.HO/PSP/Rabi-2012/2011-12/

01.12.2011

The Chief Executive,
State Cooperative Marketing Federations/
Oilseeds Growers' Cooperative Federations.

**Sub: Price Policy for Rabi Crops of 2011-12 season to be marketed
in 2012-13 - fixation of Minimum Support Prices – regarding.**

Sir,

The Government of India, Department of Agriculture & Cooperation, Ministry of Agriculture vide its letter No.L-15016/13/2011-MPS dated 25th November, 2011 have conveyed the fixation of Minimum Support Price (MSP) for Rabi Crops of 2011-12 season to be marketed in 2012-13 for identified Oilseeds and Pulses of Fair Average Quality (FAQ) as under:-

(Rs. per quintal for FAQ)

Name of Commodity	MSP for 2011-12 Marketing Season	MSP for 2012-13 Marketing Season	Increase in MSP over last Seasons' MSP
Gram	2100	2800	700
Masur (Lentil)	2250	2800	550
Rapeseed / Mustard Seed	1850	2500	650
Safflower seed	1800	2500	700

2. NAFED is one of the Central Nodal Agencies for undertaking procurement of identified Oilseeds and Pulses under Price Support Scheme on behalf of Government of India. Purchases would be made through the State designated Agencies. Only Fair Average Quality(FAQ) stock shall be procured directly from the farmers under the Price Support Scheme in accordance with the prescribed quality/grade specifications, which are appended at Annexure-I to IV.

3. You are requested to give wide publicity of the Scheme to create necessary awareness amongst the farmers to avail benefit of the Scheme. Purchases of Oilseeds and Pulses may please be commenced in consultation with concerned Branch

....2/-

m-c
5 DEC 2011

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11/11

(2)

Managers of NAFED as and when the prices for FAQ stock as per the specification, touch/fall below the support price level. NAFED's Branch Managers/Zonal Coordinators have been advised to get in touch with you for working out various operational details and implementation of the Scheme for the benefit of the farmers.

Thanking you,

Yours faithfully,



(Vivek Mewawalla)
Executive Director (Coord.)

Encl: Annexure I to II.

Copy for information and further necessary action forwarded to:-

1. Shri Vinit K. Verma
Director (Cooperation),
Government of India,
Ministry of Agriculture,
Department of Agriculture & Cooperation,
Krishi Bhavan, New Delhi. ... With reference to DAC letter
dated 25.11.2011.
2. Shri S.K. Mukherjee
Adviser,
Ministry of Agriculture,
Department of Agriculture & Cooperation,
Krishi Bhavan, New Delhi.
3. Director,
T.M.O.P.&M.,
Krishi Bhavan, New Delhi.
4. Secretary (Agriculture & Cooperation) ---|
5. Director (Agriculture & Cooperation) | All concerned States.
6. Registrar of Cooperative Societies ---|
7. All Zonal Coordinators /Branch Managers of NAFED.
8. All Divisional Heads in Head Office.
9. PSS to Chairman / M.D.



(Vivek Mewawalla)
Executive Director (Coord.)

No.L-15016/21/2012-MPS
Government of India
Ministry of Agriculture
Department of Agriculture & Cooperation)

Krishi Bhavan, New Delhi
Dated: 1st June, 2012

To

Dr. D. K. Goyal
Principal Secretary to Government of Rajasthan,
Horticulture Department,
5022 Main Building, Secretariat ,
Jaipur.

Fax No. 0141-2227107/5103626

Subject:- Proposal of Government of Rajasthan for procurement of garlic under Market
Intervention Scheme (MIS) in Rajasthan for the crop season 2011-12.

Sir,

I am directed to convey the approval of this Department of procurement of garlic under Market Intervention Scheme (MIS) in Rajasthan for the crop season 2011-12 as per following details:

1. MIS will remain in force from 06.06.2012 till 06.07.2012
2. A maximum quantity of 60,000 MT of garlic may be procured, under the scheme by the State agencies.
3. The Market Intervention Price (MIP) will be Rs. 1700/- per Qtl. For FAQ of garlic with the overhead expenses of Rs. 425/- per Qtl or actual whichever is less. The overhead expenses include purchase tax, Mandi tax, godown charges, packing material, loading/unloading, commission, transportation, grading & packaging/stitching charges.
4. The losses, if any, will be shared on 50:50 basis between the Central Government and Government of Rajasthan. However, the loss is restricted up to the 25% of the procurement cost (maximum limit of loss to be shared between the Central and State Government) including the permissible overheads.
5. The procured quantity of garlic will be disposed of the procuring agencies at the maximum realizable rates to reduce the losses on Government account.
6. Purchase Centre/areas will be decided by the State Government in consultation with the state agencies.
7. The stocks will be purchased from the Cooperative Society, farmers' organizations or direct from the farmers to eliminate the possibility of middlemen taking advantage of the scheme. Further, a mechanism should be developed to ensure that the produce is purchased from genuine farmers, only. All the relevant documents/records should be properly maintained by the procuring agencies.

8. The procured stocks will be disposed of in the open market to ensure maximum realization price. If necessary, this can also be sold to processing units, within the State. The State agencies should also make efforts to export the commodity procured under the scheme after processing.
9. The State procuring agencies will furnish the audited accounts to this Department through the State Government within the period of three months of the completion of the MIS operation.
10. In order to avoid recycling, the stock should not be sold in the same market/ State from where it has been procured during the period of the scheme. However, if the prices are better it can also be sold, locally.
11. The State Government/ State designated agency may furnish weekly records indicating purchases made under the scheme and the ruling market prices to this Department regularly.
12. The State Government will be responsible to arrange the working capital for the State Agencies for procurement of the requisite quality of the commodity under the scheme.

Yours faithfully

(Vinit K. Verma)
Director (Coop)

Copy to:

1. Resident Commissioner, Government of Rajasthan, Rajasthan Bhavan, New Delhi- with a request to pass on the above message to the concerned officers in Jaipur.
2. Additional Secretary & Finance Advisor, Department of Agriculture & Cooperation, Bhawan, New Delhi.
3. Managing Director, NAFED, New Delhi.
4. Chief Advisor (Cost), Cost Accounts Division, Department of Expenditure, 'C' Wing, 2nd Lok Nayak Bhawan, New Delhi-110003. (Fax No. 24698179 & 24615042).
5. Economics & statistical Advisor, Department of Agriculture & cooperation, Krishi bhawan, Delhi.
6. Horticulture Commissioner, Department of Agriculture & cooperation, Krishi Bhawan, New Delhi.

*****.

फोन/Phone : 0141-2740231, 2740439, 2740418, 2744910
फैक्स/Fax : 0141-2740108, 2740457
ग्राम/Gram : राजफैड, जयपुर/RAJFED, JAIPUR
E-mail : raifed@yahoo.com



राजस्थान राज्य सहकारी क्रय-विक्रय संघ लि.
RAJASTHAN STATE CO-OPERATIVE MARKETING FEDERATION LTD.

4, भवानी सिंह रोड,

4, BHAWANI SINGH ROAD,

जयपुर-302 कमांक : वाणिज्य / 2012-13 / 5997-6001

दिनांक 24.12.2012

JAIPUR-302 001

28/12/12

श्रीमान निदेशक महोदय,

उद्यान निदेशालय,

पंत कृषि भवन, जयपुर।


विषय :- बाजार हस्तक्षेप योजनान्तर्गत वर्ष 2012-13 में क्रय कर निस्तारित किये गये लहसुन के लाभ/हानि के अंकक्षित लेखे भिजवाने हेतु।

महोदय,

उपरोक्त विषयान्तर्गत निवेदन है कि राजफैड द्वारा अपने पत्र कमांक 4576 दि.18.09.12 के द्वारा बाजार हस्तक्षेप योजनान्तर्गत वर्ष 2012-13 में क्रय कर निस्तारित किये गये लहसुन के लाभ/हानि के अंकक्षित लेखे भिजवाये जा चुके हैं। लेखों में वर्णित लहसुन की हानि रु 43012923.00 (विवरण संलग्न है) को अनुदान के रूप में प्रदान करने हेतु अपनी अनुशंसा वित्त विभाग को भिजवाने की व्यवस्था करावे तथा भारत सरकार से प्राप्त होने वाली राशि हेतु उचित कार्यवाही करवाने की व्यवस्था करावे।


संलग्न :- उपरोक्तानुसार

भवदीय


प्रबन्ध संचालक

प्रतिलिपि :-

1. संयुक्त सचिव, वित्त (व्यय-IV) विभाग, शासन सचिवालय, जयपुर।
2. प्रबन्ध संचालक तिलम संघ, जयपुर।
3. उप शासन सचिव, सहकारिता, राजस्थान, जयपुर।
4. वित्तीय सलाहकार, सहकारी समितियों, राजस्थान, जयपुर।



प्रबन्ध संचालक

Annexure X

राजस्थान राज्य सहकारी कृषि विक्रय संघ लि० (राजफैड)
क्षेत्रीय कार्यालय कोटा।

वर्ष रबी 2012 में एम.आई.एस योजना के अन्तर्गत किये गये लहसुन विक्रय का हिसाब

क्र.सं.	विक्रय केन्द्र का नाम	खरीद केन्द्र से डिस्पैच मात्रा		विक्रय मात्रा		राशि	बिक्री केन्द्र पर खर्च					विक्रय की शुद्ध राशि
		कट्टा	वजन	कट्टा	वजन (क्विं.)		सर्विस चार्ज @2%	अतिरिक्त सर्विस चार्ज	ट्रक किराया	मजदूरी	कुल खर्च	
1	क्षेत्रीय कार्यालय जयपुर	1100	550.60	1100	542.90	382760.00	7655.00	0.00	32600.00	2680.00	42935.00	339825.00
2	चण्डीगढ़	2880	1438.90	2880	1409.10	1330688.00	26614.00	0.00	240860.00	5760.00	273234.00	1057454.00
3	नीमच	25849	12924.50	25768	12791.93	10000557.00	200011.00	20001.00	829562.00	307932.00	1357506.00	8643051.00
4	दिल्ली	44401	22200.50	44393	22215.45	17938546.00	358772.00	0.00	3237542.00	177572.00	3773886.00	14164660.00
योग		74230	37114.50	74141	36959.38	29652551.00	593052.00	20001.00	4340564.00	493944.00	5447561.00	24204990.00
1. नफैड दिल्ली केन्द्र पर 08 कट्टे शर्टज की राशि किराया से कटौती की											8800.00	
2. नफैड चण्डीगढ़ पर कटौती											3500.00	
योग											24217290.00	
3. राज्य सरकार से प्राप्त अनुदान											40826500.00	
कुल योग											65043790.00	


क्षेत्रीय अधिकारी
 राज. राज्य सहकारी कृषि - विक्रय संघ लि०
 13, साँपस रोड, कोटा - 324 007

Annexure XI

List of the Division, District, KUMS and Sub-Yards

Directorate of Agriculture Marketing, Government of Rajasthan

	Division		District		KUMS Name	Class	Total KUMS		Sub-Yard Name	Total Sub Yards
1	Ajmer	1	Ajmer	1	Ajmer(Grain)	B	6	1	Nasirabad	14
				2	Ajmer(F & V)	C		2	Pisangan	2
								1	Nasirabad	
								2	Pisangan	
								3	Pushkar	
								4	Agragate	4
				3	Beawar	B		-		
				4	Bijaynagar	B		1	Bandanwara	
								2	Gulabpura	
								3	Masuda	3
				5	Kekri	B		1	Kadera	
								2	Sarwad	2
				6	M. Kishangarh	C		1	Harmara	
								2	M.Kishangarh (F&V)	
								3	Roop Nagar	3
		2	Bhilwara	7	Bhilwara	A	4	1	Asind	14
								2	Banera	
								3	Kareda	
								4	Kotri	
								5	Opp. Spin. Mill	
								6	Mandal	
								7	Shahpura	
								8	Shambhugarh	
								9	Bhilwara (F&V)	9
				8	Gangapur	D		1	Raipur	1
				9	Mandal Garh	C		1	Barunda (Basandani)	
								2	Digod	
								3	Kachhola	
								4	Mahuwa	4
				10	Bijoliya	D		-		
		3	Tonk	11	Deoli	B	5	1	Dhar	12
								2	Dooni	
								3	Jahajpur	
								4	Ropa	
								5	Shakkargarh	5
				12	Malpura	B		1	Lawa	
								2	Pachewar	
								3	Todaraisingh	3
				13	Niwai	B		-		
				14	Tonk	B		1	Jhirana	
								2	Peeplu	
								3	Tonk (Chilli & F&V)	3
				15	Uniyara	C		1	Aligarh	1
2	Alwar	4	Alwar	16	Alwar	Sa	4	1	Alwar (F & V)	15
								2	Malakhera	
								3	Narayanpur	
								4	Naugava	
								5	Rajgarh	
								6	Ramgarh	
								7	Onion (Special)	7
				17	Khairthal	Sa		1	Bahadurpur	
								2	Bansur	
								3	Behror	
								4	Kishangarhbas	
								5	Tijara	

							6	Behror (F&V)	6	
			18	Barodamev	C		1	Govind Garh		
							2	Laxmangarh	2	
			19	Kherli	A		1			
	5	Bharatpur	20	Bayana	C	6	1	Roopwas	9	
							2	Bair		
							3	Bhusawar	3	
			21	Bharatpur	A		1	Atalband		
							2	Kumher	2	
			22	Deeg	C		-			
			23	Kama	D		1	Govindganj		
							2	Jurehara	2	
			24	Nadwai	C		-			
			25	Nagar	C		1	Pahari		
							2	Sikri	2	
	6	Dholpur	26	Dholpur	B	1	1	Bari	5	
							2	Baseri		
							3	Maniya		
							4	Rajakhera		
							5	Saramathura	5	
3	Bikaner	7	Bikaner	27	Bikaner (Fv & Wool)	A	5	-	11	
				28	Bikaner (Grain)	Sa	1	Bajju		
							2	Chhattargarh		
							3	Fad Bazar		
							4	Godu		
							5	Napasar		
							6	(Grain) Pugal Road	6	
			29	Khajuwala	C		1	Pugal		
							2	Dantore	2	
			30	Lunakarnsar	B		1	Arjunsar		
							2	465 Rd		
							3	Kalu	3	
			31	Nokha	B		-			
	8	Churu	32	Churu	D	6	-		8	
			33	Ratangarh	C		1	Padihara		
							2	Rajaldesar	2	
			34	Sadulpur	C		1	Sahaba		
							2	Siddhmukh		
							3	Taranagar	3	
			35	Sardar Shahr	C		-			
			36	Sri Dungargarh	D		1	Soodsar	1	
			37	Sujargarh	C		1	Beedasar		
							2	Sandwa	2	
4	Hanuman Garh	9	Hanumangarh	38	Bhadra	D	7	1	Anoop Shahr	9
				39	Goluwala	C		-		1
				40	Hanumangarh	Sa		1	Dabliwas	
							2	Talwara		
							3	Dholipal		
							4	Hanumangarh Town		
							5	Tibbi	5	
			41	Nohar	C		1	Gogameri		
							2	Phepana	2	
			42	Pilibanga	A		1	Jakharawali	1	

				43	Rawatsar	B			-	
				44	Sangria	B			-	
5	Jaipur	10	Dausa	47	Bandikui	B	5	1	Bandikui (F & V)	5
								2	Geejgarh	
								3	Sikrai	
								4	Sikandra	4
				48	Dausa	B			-	
				49	Lalsot	A		1		
				50	Mandawari	C		1		
				51	Mahua Mandawar	B		1	Mahuwa	1
		11	Jaipur	52	Chaksu	C	6	1	Madhorajpura	25
								2	Phagi	2
				53	Chomu	Sa		1	Chomu (F & V)	1
				54	Jaipur (F & V)	Sa		1	Bagru	
								2	Chogan Stadium	
								3	Dudu	
								4	Janta Market	
								5	Narayana	
								6	Bassi (Specific)	
								7	Shahpura (Specific)	
								8	Badharna (F&V)	8
				55	Jaipur (Grain)	Sa		1	Achrol	
								2	Bagru	
								3	Bassi	
								4	Rajdhani Mandi (Kuker Khera)	
								5	Dudu	
								6	Manoharpur	
								7	Narayana	
								8	Sanganer	
								9	Shahpura	
								10	Virat Nagar	10
				56	K. Renwal	C		1	Jobner	
								2	Phulera	
								3	Sambhar	3
				57	Kothputli	C		1	Paota	1
6	Jodhpur	12	Barmer	58	Balotra	C	2	1	Jasol	9
								2	Samdari	
								3	Siwana	3
				59	Barmer	A		1	Bayatu	
								2	Chohatan	
								3	Dhorimanna	
								4	Gudhamalani	
								5	Shiv	
								6	Sindari	6
		13	Jaisalmer	60	Jaisalmer	C	1	1	Mohangarh	4
								2	Pokran	
								3	Ramgarh	
								4	Nachna	4
		14	Jalore	61	Bhinmaal	C	3	1	Ramseen	9
								2	Raniwara	2
				62	Jalore	D		1	Ahore	
								2	Bagara	
								3	Bakra Road	
								4	Sayala	
								5	Siyana	
								6	Vishangarh	
								7	V.D.Songara Chowk	7
				63	Sanchor	D			-	
		15	Jodhpur	64	Bilara	C	5		-	7
				65	Jodhpur (Grain)	Sa		1	Bhagat Ki Kothi	
								2	Mathania	
								3	Osiyan	3

				66	Falodi	C		1	Lohawat	1
				67	Jodhpur (F & V)	A		1	Paota	1
				68	Pipar City	D		1	Kosana	
								2	Asop	2
		16	Pali	69	Jaitaran	C	5	1	Anandpur Kalu	16
								2	Kushalpur	
								3	Neemaj	
								4	Raipur	4
				70	Pali	C		1	Pali (F & V)	1
				71	Rani	C		1	Khinwara	1
				72	Sojat Road	B		1	Marwar Junction	
								2	Marwar Ranawas	
								3	Sojatcity	3
				73	Sumerpur	A		1	Bali	
								2	Jawal	
								3	Kalandri	
								4	Las (Kailash Nagar)	
								5	Shiv Ganj	
								6	Sirohi	
								7	Lunava	7
7	Kota	17	Baran	74	Atru	C	4	-		8
				75	Anta	C				
				76	Baran	Sa		1	Mangrol	
								2	Siswali	
								3	Nahargarh	
								4	Kelwada	4
				77	Chabra	A		1	Chhipa Barod (Grain)	
								2	Chhipa Barod (F&V, Lahsun)	
								3	Harnavada Shahji	
								4	Kawai (Salpura)	4
		18	Bundi	78	Bundi	Sa	3	1	Dei	9
								2	Hindauli	
								3	Talera	
								4	Bada Naya Gaon (Matar Mandi)	
								5	Nainwa	
								6	Karver	6
				79	Keshorai Patan	C		1	Kapren	
								2	Lakheri	2
				80	Sumerganj	D		1	Indragarh	1
		19	Jhalawar	81	Bhawani Mandi	A	4	1	Choumahala	11
								2	Dug	
								3	Pidiwa	
								4	Raipur	
								5	Sunel	5
				82	Iklera	C		1	Manohar Thana	1
				83	Jhalrapatan	B		1	Asnawar	
								2	Bakani	
								3	Jhalawar	
								4	Ratlai	4
				84	Khanpur	C		1	Sarola	1
		20	Karauli	85	Hindoun	B	1	1	Karauli	5
								2	Old Mandi (Hindaun)	
								3	Toda Bhim	
								4	Gudha Chandra Ji	
								5	Naroli	5
		21	Kota	86	Itawa	B	4	1	Khatauli	7
								2	Peepalda	2
				87	Kota	Sa		1	Kaithoon	
								2	Mandana	
								3	Sangod	

								4	Bapawar Kalan	4
				88	Ramganj Mandi	Sa		1	Chechat	1
				89	Kota (F&V)	A		1		
		22	S. Madhopur	90	Gangapur City	A	2	1	Bamanwas	11
								2	Gangapur (F & V)	
								3	Old Dhan Mandi	
								4	Wajirpur	4
				91	S. Madhopur	A		1	Bonli	
								2	Chhan	
								3	Chauth Ka Barwara	
								4	Khandar	
								5	Shiwad	
								6	Guava & F&V	
								7	Malarna Dungar	7
8	Sikar	23	Jhunjhunu	92	Chirawa	D	4	1	Khetri	8
				93	Jhunjhunu	C		1	Bisau	
								2	Mandawa	2
				94	Nawalgarh	C		1	Dundlod (Mukundgarh)	
								2	Gudha Godji	
								3	Udaipurwati	3
				95	Surajgarh	D		1	Pilani	
								2	Singhana	2
		24	Nagaur	96	Deedwana	C	5	1	Chhoti Khatu	15
								2	Khunkhuna	
								3	Ladnu	3
				97	Degana	C		-		
				98	Kuchaman City	B		1	Borawar	
								2	Gachchipura	
								3	Makrana	
								4	Nawa	
								5	Parbatsar	5
				99	Merta City	Sa		1	Ren	
								2	Riyabari	2
				100	Nagaur	A		1	Jayal	
								2	Kuchera	
								3	Mundawa	
								4	Khinvasar	
								5	Nagaur (F&V)	5
		25	Sikar	101	Fatehpur	C	4	1	Laxmangarh	7
								2	Ramgarh	2
				102	Neemkathana	C		-		
				103	Sikar	A		1	Losal	
								2	Palsana	2
				104	Srimadhampur	A		1	Ajeetgarh	
								2	Kanwat	
								3	Reengus	3
9	Sri Ganganagar	26	Sri Ganganagar	105	Anoopgarh	B	15	-		7
				106	Gajsinghpur	B		-		
				107	Gharsana	B		-		
				108	Jaitsar	C		-		
				109	Kesri Singh Pur	B		-		
				110	Padampur	A		1	Ratewala	1
				111	Raisingh Nagar	A		-		
				112	Rawla	C		1	365 Head	1
				113	Ridhmalsar	D		1	Beenz Bayala	1
				114	Sri Ganganagar (G)	Sa		1	Lalgarh Jatan	

							2	Old Dhan Mandi	2
			115	Sri Ganganagar (F&V)	B			-	
			116	Sri Karanpur	B			-	
			117	Sri Vijaynagar	B		1	Ram Singh Pur	
							2	Sukhchain Pura	2
			45	Saulshahar	B	2			
			46	Suratgarh	B				
10	Udaipur	27	Banswara	118	Banswara	D	1	1 Bagidora	5
								2 Barodia	
								3 Ghatol	
								4 Kushalgarh	
								5 Partapuri	5
		28	Chittorgarh	119	Barisadri	C	5	1 Doongla	12
								2 Nikum	2
				120	Begu	C		1 Parsoli	
								2 Rawat Bhata	2
				121	Chittorgarh	C		1 Bassi	
								2 Bhadsoda	
								3 Chittorgarh (F & V)	
								4 Gangrar	4
				122	Kapasan	D		1 Aakola	
								2 Bhopal Sagar	
								3 Railway Station	
								4 Rashmi	4
				123	Nimbahera	B		1 Kanera	
								2 Nimbahera (F & V)	2
		29	Pratapgarh	124	Pratapgarh	B	1	1 Arnod	4
								2 Salamgarh	
								3 Chhotisadri	
								4 Dhariyawad	4
		30	Dungarpur	125	Dungarpur	D	1	1 Aspur	3
								2 Sagwara	
								3 Seemalwara	3
		31	Rajsamand	126	Rajsamand	C	1	1 Amet	4
								2 Bheem	
								3 Deogarh	
								4 Nathdwara	4
		32	Sirohi	127	Abu Road	D	1	1 Abu Parwat	5
								2 Anadara	
								3 Pindwara	
								4 Rewdar	
								5 Swaroop Ganj	5
		33	Udaipur	128	Fateh Nagar	B	3	1 Ballabh Nagar	10
								2 Bhinder	
								3 Kanod	
								4 Khemli	
								5 Kuraj	5
				129	Udaipur (Grain)	A		1 Salumbar	
								2 Falasiya	
								3 Gogunda	
								4 Chawand	
								5 Khairwada	5
				130	Udaipur (F&V)	B			
Total Yards			130					Sub Yards	305

Disrict-wise Purchase Centre of Gram In Rajasthan

SR. NO.	District	Name Of Centres
1	Ajmer	Kishangarh, Beawar, Kekri
2	Jaipur	Kotputali, Chomu, Bassi, Pawta, Chaksu, Sambmer, Shahapura, Sanganer.
3	Dausa	Dausa, Bandikui, Lalsot, Mahuwa, Mandawar
4	Sikar	Sikar, Srimadhapur, Neemkathana, Dataramgarh
5	Jhunjhunu	Jhunjhunu, Surajgarh, Dundlodmandi, Udaipurwati, Chirawa
6	Alwar	Alwar, Khairtal, Khrilganj, Baharod, Rajgarh
7	Bharatpur	Bharatpur, Kaman, Nadbai, Bayana, Nagar.
8	Swaimadhapur	Swaimadhapur, Gangapurcity, Deedwala, Parbatsar.
9	Karoli	Hindoncity, Dodabhim.
10	Nagaur	Nagaur, M.City, Kuchman City, Deedwana, Parbatsar
11	Baran	Baran, Atru, Anta, Chabra, Chipabarod.
12	Kota	Kota, Rajganjmandi
13	Bundi	Bundi, K'patan, Daei
14	Jhalawad	J.Patan, Bhawanimandi, Chomela, Khanpur.
15	Dhoulpur	Daulapur, Bari.
16	Bhilwara	Gulabpura
17	Chittorgarh	Chhittorgarh, Nimbahera, Pratapgarh, Begu, Kapasan, Badisadri.
18	Tonk	Tonk, Uniyara, Devli, Malpura, Tadaraisingh, Newai.
19	Churu	Churu, Sudalpur, Sardarsahar, Sujangarh, Taranagar.
20	Jaisalmer	Mohangarh, Nachana.
21	Banshwara	Banshwara
22	Udaipur	Fatehnagar, Bhinder.
23	Jodhpur	Bilara, Piparcity, Mathnia.
24	Pali	Pali, Rani, Sojatroad, Sumerpur.
25	Bikaner	Bikaner, Khajuwala, Bajju, Dantour, Pungal, Lunkarensar, Chhattargarh, Dungargarh, Nokha.
26	Sriganganagar	Sriganganagar, Suratgarh, Gajsinghpur, Raisinghnagar, Srivijaynagar, Gharsana, Anupgarh, Jaitpur, Ridnalsar, Padampur.
27	Hanumangarh	Hanumangarh Jn., Pilibanga, Goluwala, Rawatsar, Nohar, Bhadra.

**Government of Rajasthan
Agriculture (Gr. I) Department**

F.No 5 () DH/MIS/2011-12/959-969

Dated- 02.06.2012

1. **Managing Director**
RAJFED,
Bhawani Singh Road,
Jaipur

✓ **Managing Director,**
Tilam Sangh,
Jaipur

Subject: Procurement of Garlic under Market Intervention Scheme (MIS) for the crop season 2011-12.

Government of India vide letter No. L 15016/21/2012 - MPS dated 1.06.12 has accorded sanction for procurement of garlic under Market Intervention Scheme (MIS) in Rajasthan for the crop season 2011-12 (Copy enclosed). The scheme will be implemented only in between 6.06.12 to 6.07.12, therefore, you are requested to take immediate necessary action to implement the scheme.


For arrangement of working capital, interest free loan would be provided. For this purpose, request may be sent to Finance Department at your own level.

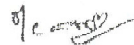
You are also requested to ensure that all the conditions stipulated in the GOI letter dated 1.06.12 are fulfilled. Agencies may start purchasing of garlic on following centers:

S. No.	Agency	District	Centers	Proposed target of Procurement in MT
1	RAJFED	Kota	Kota, Sultanpur	6800
2		Jodhpur	Mathania	500
3	Tilam	Jhalawar	Jhalrapatan	2400
4	Sangh	Bundi	Kesorai Patan	2300
5		Baran	Cheopa Barod	18000
	Total			30000

The facilities available at different Krishi Upaj Mandi Samiti and Ware house may be utilized for the said purpose.

Encl.: As Above


(K.C. Agarwal) 2/6/12
Dy. Secretary to Government



Annexure XIII

राजस्थान सरकार
कृषि विपणन निदेशालय, जयपुर

क्रमांक: निवृत्ति/नियमन/संशोधन मूल्य गेहूँ/08-07/32961

दिनांक: 20/11/09

महोदय,
राजस्थान राज्य सहकारी कय विक्रय संघ लिमिटेड,
4, भवानीसिंह रोड, जयपुर।

विषय- मण्डी फीस, आठत एवं विक्रेता के खर्च की दर उपलब्ध कराने
बामत।

प्रसंग- आपका पत्रांक 1813 दिनांक 11.11.09।

महोदय,

उक्त विषयान्तर्गत प्रासंगिक पत्र के संदर्भ में नियमान्तर्गत मण्डी फीस,
आठत एवं विक्रेता के खर्च की प्रभावी दर निम्नानुसार है-

क्र.सं.	नाम जिन्स	मण्डी शुल्क (प्रति एक सौ रुपये)	आठत (प्रतिशत में)	विक्रेता खर्च
1	गेहूँ	1.60 रुपये	2%	कृषि उपज मण्डी समितियों की उपविधि संख्या-18(2) के अनुसार स्थानीय परिस्थितियों के अनुरूप मण्डी समिति स्तर पर निर्धारित किये जाते हैं, जो प्रत्येक मण्डी में अलग-अलग होते हैं। इसकी जानकारी संबंधित मण्डी समिति से ली जा सकती है।
2	सरसो	1.00 रुपये	2%	
3	चना	1.60 रुपये	2%	
4	ब्राफरा	0.50 रुपये	1%	
5	सिन्धु	0.50 रुपये	1%	
6	ज्वार	0.50 रुपये	1%	
7	सोयाबीन	1.00 रुपये	2%	
8	मूंगफली	1.60 रुपये	2%	
9	इतनाजोत (आठत फसल)	अधिसूचित जिन्स नहीं है।	अधिसूचित जिन्स नहीं है।	

भवदीय

अति.निदेशक
कृषि विपणन



RAJASTHAN STATE WAREHOUSING CORPORATION

(A GOVERNMENT UNDERTAKING)

राजस्थान राज्य भण्डारव्यवस्था निगम

(सरकार का प्रतिष्ठान)

Warehouse Receipt-Negotiable/Non- Negotiable

भण्डार रसीद परक्राम्य
अपरक्राम्य

(124)

Serial No. of Receipt } रसीद की क्रम संख्या } **RSWC/ 909177**

Name & Location of Warehouse } भण्डार गृह का नाम तथा स्थान } **S/W Kishangarh** } GNO/STACK NO. **2A/3**

Warehouseman's Licence No. } भण्डार प्रबंधक का लाइसेंस नंबर } **EXEMPTED** } Valid up to } **N.A.**

Received from (Name and address of the depositor) } से प्राप्त किया (जमाकर्ता का नाम और पता) } **NAFED - JAIPUR**
C/o. K.V.S.S. Through Kishangarh, Ahmedgarh

Goods of the following description (निम्नलिखित वर्णन का माल)

Kind किस्म	Class or Standard Quality and/or Grade श्रेणी या मान्य गुण प्रकार तथा/अथवा मान	No. of Packages or Lots बंदलों या ढेरियों की संख्या	Net quantity in Qtls., Koms. by weight or measure नती या तोली गुं शुद्ध मात्रा विव. किलोग्राम में	Name and/or Licence No. of the Weigher/Classifier/Sampler तोला/श्रेणी कर्ता/नमूना कर्ता का नाम तथा/अथवा लाइसेंस नंबर
Gram	F.A.Q.	330 Bags	313-50-00 313-50-00	Mr. Awadhesh Kumar Singh

Condition of goods - (1) Good (2) Fair (3) Average } वस्तुओं की हालत (1) उत्तम (2) सुंदर (3) साधारण } **Average** } M/c **8.37.**

Private marks of the depositor on the packages if any } यदि हो तो बंदलों पर जमाकर्ता के निजी चिन्ह } **Yes NAFED**

Rate of storage and other charges } संग्रहण करने की दर तथा अन्य शुल्क } **Rs. 4.50/Bag/Month + Insurance**

Indemnified/Insured for Fire/Theft/Riots/Other contingency with } आग/चोरी/दंगों/आदि अन्य आपत्तियों के लिये बीमा } **For Fire Theft and burglary**

If Insured (Name of Insurance Co.) } के साथ यदि बीमा कराया हो (बीमा समवाय का नाम) } **Self Indemnification** } **Insurance for the goods has been taken from**

For the amount of Rs. } रुपये की राशि के लिए किया गया। } **Rs. 689700/-** } **Future Generali India Insurance Company Ltd.**

The goods are accepted for storage from } संग्रहण के लिए माल स्वीकार किया जाता है। } **11-05-2011** } **to 10-08-2011**

Market rate at the time of deposit } जमा के समय मंडी का भाव } **Rs. 2200/- @HS** } **Valuation Rs. 689700/-**

Date } तिथि } **11-05-2011** } **Gulab** } **Signature of the Warehouseman or his Agent**

The goods mentioned below are hereby released from the receipt } for delivery from Warehouse. Any } **Authorised Signatory** } **भण्डार प्रबंधक या उसके अधिकारी के हस्ताक्षर**

unreleased balance of goods is subject to a lien for unpaid charges and advances on the released portion. } निम्नलिखित वस्तु भण्डार गृह से निकालने के लिये एतद्वारा इस रसीद से हटाई जाती है। निकाले गये माल पर ली गई } **किशनगर जिला अजमेर**

तथा वापिस न दी गई अग्रिम राशि तथा बकाया शुल्कों को न छोड़े गये माल से पूरा किया जा सकेगा।

Date तिथि	Quantity Released निकाले गये माल की मात्रा	Signature हस्ताक्षर	Quantity due on Receipt रसीद पर बकाया माल की मात्रा

Agriculture Produce Marketing Committee, Sub Yards, Shree Mohangadh, Jaisalmer.





Comments received from **Prof. Brajesh Jha (Coordinator of the Project)** Agro-Economic Research Unit, Institute of Economic Growth, University Enclave, University of Delhi (North Campus), Delhi- 110 007, on draft report on **‘Evaluation of Price Support and Market Intervention Scheme in Rajasthan’**

Review of Report on ‘Evaluation of Price Support and Market Intervention Scheme in Rajasthan’ (AERC Report 149)

I. Author: S. S. Kalamkar

II. Institutional Affiliation: AERC, Sardar Patel University, Vallabh Vidyanagar, Anand, Gujarat

III. Date of Receipt of Report: May 16, 2013

IV. Date of Dispatch of Comments: June 14, 2013

V. General Comments: The present study on evaluation of MIS in garlic and PSS in gram in the state of Rajasthan started late. Yet it is the first draft report reached to the PI (on May 16, 2013). In fact they (AERC, V.V. Nagar) could not attend the workshop in Shimla (4th of June 2012). The draft report broadly adheres to the content, chapter details, proposed table etc. sent by the undersigned at different points of time. Information is also placed properly in the table-format; but these tables and table headings at times need to be adapted as per information available at the ground level. The comments specific to Methodology, Results are presented below.

VI. Comments on Methodology and Data: The Investigator of study has selected districts on the basis of procurement of commodities under the PSS/MIS scheme. Subsequent selection of villages and farmers also appears to be in accordance with the sampling method suggested in the final Research Proposal (RP) of the study. Investigators of study have also collected information from different procuring agencies like RAJFED, Tilamsangh. Formats for such questions were sent to participating centres (AERCs) during the course of this research.

VII. Comments on Findings / Recommendations:

1. The scheme of PSS and MIS is distinctly different; therefore discussions related to each of these must be separated in the report. On similar context a line ‘As MIS is more beneficial than PSS’ in pp 127 is unwarranted in the existing report.

2. In discussions kindly note that procurement as percent of production (POP) explains many procurement related puzzles. In fact we have found POP a better explanatory variable as compared to procurement as percent of market arrival (POM).

3. Title of many tables continue to use ‘targeted crops’ and ‘selected district’ author may suitably change with the chosen crops like “gram” and “garlic” similarly ‘selected district’ may be replaced with Ajmer, Jaisalmer, etc.

4. At times write-ups are not clear; one of such example is in pp 117 (2nd/ last para).
5. In certain tables (5.9A, 5.10, etc) units of specific variables are not clear.
6. In Table 5.11A and 5.11B cropping pattern of sample farmers of selected (two) districts (Ajmer, Jaisalmer) are pooled together. Many of such districts are agro-ecologically too wide to aggregate as average. Is there any problem in presenting such information separately for a district?
7. The abbreviation 'mt' is used as unit for weight, but the same for Table 4.6 needs a recheck.
8. Results need to be explained adequately from ground level information. Table 5.13A and 5.13 B, for example suggest that small farmers do not keep gram for family consumption.
9. In Table 5.17 percent of farmers reporting severity of problem (high, medium, low) together is 60 percent. What about the remaining 40 percent? How to interpret these figures in table?
10. In illustrating problems of procurement agencies author has mentioned about lack of adequate storage facility, it is understandable. But why gunny bag should be a problem? On similar line kindly illustrate following 'group words' adequately:
 - Political interferences in procurement,
 - Monopolistic situation of procuring agency,
 - Girdawari report (crop sowing report),
 - Partial involvement in MIS/PSS and similar other group words/phrases in the report.
11. Certain problems are evident in Table 5.18; following points may specifically be noted. Responses to 8th and 13th particulars in the 2nd column appear contradictory. Kindly check Table numbers in the third column of point/particular 10. The problem of incorrect table nos. is there at other places in report too (page 128, 2nd para).
12. Several typographical errors may also be attended before finalization of report.

Viii. Overall View on Acceptability of Report:

In the light of the above comments a re-look of report is desired.

Action taken by the authors based on the comments received from the Coordinator of the study.

- All the comments made by the Coordinator of the study have been addressed at the appropriate places in the final report.

S. S. Kalamkar

Agro-Economic Research Centre

For the states of Gujarat and Rajasthan
(Sponsored by Ministry of Agriculture, Govt. of India)

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