

**ESTIMATION OF
MARKETABLE SURPLUS & POST HARVEST LOSSES
OF FOODGRAINS IN INDIA**

METHODOLOGY AND PROFILE OF SAMPLE VILLAGES

2002



**GOVERNMENT OF INDIA
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P R E F A C E

The Directorate of Marketing & Inspection (DMI) has been conducting surveys on marketing of agricultural commodities since its inception in the year 1935. The need for precise 'Estimation of Marketable Surplus & Post Harvest Losses of Foodgrains' was being felt in the context of planning for the agricultural development, distribution programmes and pricing policies for agricultural commodities. The information on Marketable Surplus ratios forms the economic database for formulation of economic policies/decisions by various Ministries and Departments.

The available data of Marketable Surplus based on the surveys conducted by the DMI during earlier decades had become obsolete. Therefore, in the year 1972, the Directorate initiated nation wide survey under the Scheme of 'Estimation of Marketable Surplus & Post Harvest Losses' of some of the important cereals, namely, Paddy, Wheat, Jowar, Bajra and Maize. With the passage of time, the Marketable Surplus ratios of this survey also became obsolete. There was persistent demand from the user organisations for revision and up-dating of the data to make it more realistic, as the survey throws up information not only on Marketable Surplus ratios but also on variety of other crucial items like farm retention for family consumption, seed, feed and wastages etc.

In view of this, the Directorate initiated a nation wide survey for Estimation of Marketable Surplus & Post Harvest Losses of selected foodgrains (Paddy, Wheat, Jowar, Bajra, Maize, Ragi, and Barley – amongst cereals and Arhar, Green Gram, Black Gram, Bengal Gram and Lentil – amongst pulses), stretching over a period of three years, i.e., 1996-97, 1997-98 and 1998-99. The survey covered 25 States, 100 districts from these states and 15,000 cultivator households from these districts selected as per multistage stratified random sampling design.

The field surveys were conducted through the Designated State Agencies (DSAs). The survey data provided valuable information on various aspects of Village Profiles and Cultivator Households Profiles like crops grown, farm retention for different purposes, losses at producer's level and sales, etc.

An effort has been made to present the data in respect of the selected villages, covering vital information on village population, geographical area, area under cultivation, sources of irrigation, ratio of area under each crop, distribution of cultivators in different categories, accessibility of the market, condition of the feeder roads and availability of storage capacity etc.

I place on record my sincere thanks to the members of the Technical Committee, especially Dr. A.K. Srivastava, Jt. Director and Dr. H.V.L. Bathla, Head, Sample Survey Division, IASRI, New Delhi who rendered guidance from time to time in the statistical methodology for Estimation of Marketable Surplus & Post Harvest Losses. I also thank the National Informatics Centre (NIC), Western Region (Ministry of Information Technology, Government of India), and the Regional Computer Centre, Calcutta, who provided software support for data analysis and data entry respectively.

The systematic presentation of the findings of such a voluminous survey required sincere and devoted efforts by the officers and staff of the DMI and the DSAs. I place on record deep appreciation of the collaborative efforts made by them.

Dr. P.K. Biswas, Shri R.L. Dandwate and Dr. G. Gopala Rao, then Jt. Agricultural Marketing Advisers initiated this survey. Dr G.R.Bhatia, Additional Agricultural Marketing Adviser has edited this volume for publication.

I also take this opportunity to place on record my sincere thanks to all the selected cultivators without whose enthusiastic support and response during the course of survey, the project would have not been possible.

The Government of India should not be regarded as assuming responsibility for any of the statements, contained in the report

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INTRODUCTION

1.1 THE BACKDROP

1.1.1 The available data on marketable surplus based on surveys conducted by the D.M.I. during earlier decades, and the surveys conducted during 1972-73 became obsolete. There have been persistent demands from the users for revision and updating of the data not only on **marketable surplus ratios** but also on variety of other crucial items like - **farm retention for family consumption, seed, feed and wastages etc.** This information is extensively used by the **Department of Statistics, Ministry of Planning**, in framing estimates of '**net national product**' of agricultural sector, consumption, expenditure, savings, capital formation etc., which are published in "**National Accounts Statistics**". This information is also used in long and short-term supply and demand projections as well as for estimating availability of important commodities for consumption. The Ministry of Commerce and Industry uses the marketable surplus ratios for assigning weights to different agricultural commodities in compilation of "**All India Index Numbers of Wholesale Prices**". The marketable surplus ratios are also very useful for **planning the procurement operations and market development programmes**. Besides, it is of immense help to researchers of various agricultural universities/institutions at national level, **Food & Agriculture Organisation of the United Nations (F.A.O.)** and other international organisations.

1.1.2 To keep the data in tune with the changes in the economy of the country, the matter was discussed in a meeting held on 5th February 1991 under the Chairmanship of the Secretary (RD). In this meeting the importance of the study was reiterated and it was agreed that the D.M.I. is the appropriate agency to carry out the survey. The Expert Committee constituted under the Chairmanship of Economic and Statistical Adviser, Directorate of Economics and Statistics, Government of India, recommended that the D.M.I. may take up a fresh survey in different agro-climatic zones in the country for arriving at reliable ratios of marketable surplus, sales, consumption, seed, feed and wastages.

1.1.3 In this background the **Standing Committee on Schemes approved the Plan Scheme for Estimation of Marketable Surplus & Post Harvest Losses of foodgrains in a meeting held on 10.9.1993**. It was also decided that the Technical Committee constituted for framing of survey schedules and procedures may continue to monitor the implementation and progress of work under the Scheme.

1.2 TECHNICAL COMMITTEE

1.2.1 The composition of the Technical Committee is as follows:

1.	Agricultural Marketing Adviser to the Government of India	-	Chairman
	Director, Indian Agricultural Statistics Research Institute.	-	Member
3.	Agricultural Production Commissioner	-	Member
	Director (Cooperation). Planning Commission	-	Member
5.	Economic and Statistical Adviser	-	Member
6.	Director, National Sample Survey Organisation.	-	Member
7.	Director of Mandies, Uttar Pradesh.	-	Member
8.	Director, Agricultural Marketing, Hyderabad.	-	Member

1.2.2

The first meeting of this Technical Committee reconstituted under the Plan Scheme for Estimation of Marketable Surplus & Post Harvest Losses of foodgrains was held on 14th November 1995 under the Chairmanship of the Agricultural Marketing Adviser to the Government of India. This meeting had detailed deliberations and the outcome was approval of the nomination of State agencies for conducting the field surveys, norms for the grant-in-aid to be provided to these state agencies for conducting the field surveys, sampling procedure, schedules for collection of data, duration, frequency and time table for the survey.

METHODOLOGY AND COVERAGE

2.1 OBJECTIVES

The main objectives of the scheme are:

- a) To revise and update the estimates of marketable surplus of foodgrains;
- b) To compile the latest data of farm retention for consumption, seed, feed, wages and other payments in kind etc., and
- c) To estimate the post harvest losses at the producer's level.

The study aims at providing a reliable estimate of marketable surplus etc., both at the state and national level.

2.2. SCOPE:

2.2.1 The **Technical Committee, comprising eminent experts from various concerned organisations**, recommended that 12 commodities may be taken up, to begin with, for immediate survey for the estimation of marketable surplus and post harvest losses. The commodities are:

Cereals

- 1) Paddy
- 2) Wheat
- 3) Jowar
- 4) Bajra
- 5) Maize
- 6) Barley
- 7) Ragi

Pulses

- 8) Arhar (Red gram)
- 9) Chana (Bengal Gram)
- 10) Moong (Green gram)
- 11) Urad (Black gram)
- 12) Masur (Lentil)

The list of these commodities indicating their botanical nomenclature and names in English and different local languages in different states is given at **Appendix 1**.

2.2.2 The **Technical Committee** also decided that:

- a) All these commodities would be studied simultaneously to give an integrated picture;
- b) These studies would be taken up in all the States simultaneously so as to provide reliable estimates of marketable surplus etc., both at the State and National level; and
- c) Post harvest losses/wastages at the producer's level only would be covered in the present study.

2.3 IMPLEMENTATION

2.3.1 AGENCIES FOR THE FIELD SURVEYS

The Ministry approved this Plan Scheme with clear indication that the survey and field work be conducted through agencies like State Government Departments/State Agricultural Marketing Boards/ Government Undertakings/ Agricultural Universities etc., under the supervision and guidance of Directorate of Marketing & Inspection (DMI) to ensure at various levels the uniformity as well as reliability of data. List of the Designated State Agencies (DSAs) for conducting the survey in different states is given in Appendix 2. In view of this, a **'Brief write up of the scheme' and detailed 'Instructions for collection of data'** were circulated to the DSAs after obtaining their consent to take up the survey. These DSAs in turn appointed their designated officers as **Nodal Officers** for the survey under whom the manpower was deployed to undertake the field survey. The DSAs included the

Director of Agriculture in case of Arunachal Pradesh, Assam, Haryana, Jammu & Kashmir, Kerala, Manipur, Meghalaya, Punjab and Tripura; Director of Marketing/Director of Agricultural Marketing in Andhra Pradesh, Tamil Nadu, Uttar Pradesh and West Bengal; State Marketing Officer in case of Nagaland; State Agricultural Marketing Boards in Bihar, Gujarat, Karnataka, Madhya Pradesh, Maharashtra, Orissa, Rajasthan; Agricultural Marketing Corporation Limited, in Mizoram; Registrar of Cooperative Societies in Goa; Bureau of Economics & Statistics in Sikkim; and Agricultural University in Himachal Pradesh (under overall supervision of the Director of Agriculture, H.P.).

2.3.2 FINANCIAL ASSISTANCE :

The Government of India provided financial assistance in the form of grant-in-aid to the designated state agencies for conducting field survey in the respective states. The grant-in-aid was provided @ Rs. 1.00 lakh per selected district per annum, initially.

This was subsequently reviewed by the Technical Committee and the grant-in-aid was revised @ Rs.1.50 lakhs.

2.3.3 SUPERVISION, GUIDANCE AND COORDINATION

The Directorate of Marketing and Inspection provided supervisory officers, by redeployment from the existing field formations, at identified centres, for supervision, guidance and coordination of the field survey by the field investigators of the Designated State Agencies.

2.4 SAMPLING DESIGN AND SAMPLE SIZE

The Technical Committee recommended multi stage stratified random sampling design for this survey. The selection of districts was done on **aggregate method of production for all crops of foodgrains**. Accordingly, selection of districts was done @ 20% of total number of districts of each state, instead of taking 20% at the National level and allocating them among the states on the basis of their size and production as followed earlier by the DMI, for ensuring reliable estimates of marketable surplus, both at the State and National level. The sampling design consisted of:

- i) In each state 20% of the total number of districts were selected for the survey.
- ii) In each selected district, 15 (Fifteen) villages were selected after grouping into three stratum, based on total area cultivated under foodgrains.
- iii) In each selected village, 10 (Ten) cultivator households were selected after classifying them into three categories viz., **Small, Medium and Large**.

Accordingly, the total number of districts selected on all India basis worked out to 100 (One hundred), the total number of villages to be surveyed worked out to 1500 (100 districts X 15 villages) and 15000 cultivator households (1500 villages X 10 cultivator households), from whom the data were collected in prescribed schedules on quarterly basis over a period of three years of survey.

2.5 METHOD OF SAMPLING

2.5.1 SELECTION OF SAMPLE DISTRICTS:

As stated earlier, in accordance with the procedure of sampling approved by the Technical Committee, in consultation with the Director, IASRI, New Delhi, selection of districts was done on the basis of **aggregate method of production for all crops of foodgrains**. The selection of districts was done @ 20% of the total number of districts of each state, **instead** of taking 20% at the National level and allocating them among the States on the basis of their size of production. This was done to ensure reliable estimates of marketable surplus etc., both at the State and National level. All the districts in each state were classified into three categories, namely '**High**', '**Medium**' and '**Low**' production, based on average annual production of foodgrain crops for three years average viz. 1991-92, 1992-93 & 1993-94.

The data on annual production of foodgrains was obtained from the State Departments. About 20% of the total districts in each state were selected, after clubbing some States and Union Territories, so as to ensure selection of two districts from each category and atleast six districts from each state. Since the number of districts in individual States ranged between 2 in Goa and 63 in U.P., it posed a problem in respect of states having less than 30 districts.

i) States having 30 or more districts:

Bihar (42), Uttar Pradesh (63), Maharashtra (31) and Madhya Pradesh (45).

ii) States having more than 6 but less than 30 districts:

Andhra Pradesh (23), Arunachal Pradesh (11), Assam (23), Gujarat (14), Haryana (16), Himachal Pradesh (12), J & K (14), Karnataka (20), Kerala (14), Manipur (8), Nagaland (7), Orissa (13), Punjab (12), Rajasthan (27), Tamil Nadu (22), and West Bengal (17).

iii) States/Union Territories (U.Ts.) having less than 6 districts :

Goa (2), Meghalaya (5), Mizoram (3), Sikkim (4), Tripura (3), Andaman & Nicobar (2), Pondicherry (4), Daman & Diu (2), Delhi (1), Chandigarh (1), Lakshdweep (1), and Dadra Nagar Haveli (1).

Therefore, clubbing of some states and Union Territories was done to ensure selection of atleast two districts from each category. Accordingly, 100 districts were selected for the survey on All India basis. The details of clubbing* of the states and U.Ts. for selection of sample districts for survey are given in **Appendix 3**, and the list of districts selected for the survey in each state is given in **Appendix 4**, indicating the category as '**H**' for **High**, '**M**' for **Medium** and '**L**' for **Low** category. It may further be added here that while selecting the districts, it was ensured that these selected districts contributed to nearly 20% of aggregate production of foodgrains.

The Technical Committee in the 1st meeting had also suggested that while selecting the districts, different regions/agro-climatic zones in the states be taken into consideration to the extent possible. Incidentally, the list of 100 selected districts covered most of the agro-climatic zones except 'Western Dry Zone' and 'Island zone'. The details of agro-climatic zone-wise selected districts are furnished in **Appendix 5**.

2.5.2 SELECTION OF SAMPLE VILLAGES:

In each selected district 15 (Fifteen) villages were selected after classifying villages into three strata viz., '**High**', '**Medium**', and '**Low**' production. Keeping in view the practical difficulties in obtaining foodgrain production data from individual villages, the Technical Committee recommended that "Total area cultivated under foodgrains" may be taken as basis for classifying the villages. Accordingly, all the villages in the selected districts were arranged in descending order of total gross or net area under foodgrains and then divided into three segments, each accounting for one third of the total cultivated area under foodgrains in the district. The villages in top segment of the list were placed in 'High' production stratum, those in the middle segment in 'Medium' production stratum, and the remaining in 'Low' production stratum. Five villages from each stratum were selected for survey by simple random sampling.

* The data refer to the period 1991-92 & 1992-93. Reorganization, if any thereafter, is not considered for this purpose.

2.5.3 SELECTION OF CULTIVATOR HOUSEHOLDS :

In each selected village **ten** cultivator households were selected. All the cultivator households in the village were listed from the revenue records of the village. The cultivator households were arranged in **descending order of area cultivated under foodgrains** and the list was **divided into three segments**, each accounting for **one third of the total area cultivated under foodgrains** in the village.

The cultivator households in the top segment of the list were placed in '**Large**' category, those in the middle segment '**Medium**' category, and the remaining in '**Small**' category. Four cultivator households from small category and three cultivator households each from medium and large category were selected for survey by simple random sampling.

2.6 SCHEDULES FOR COLLECTION OF DATA

Six schedules were framed and approved by the Technical Committee for collection of data during the field surveys. These were: -

Schedule-I: Village Schedule

The village schedule covered the relevant information such as population, total geographical area, cultivated area, area and production of foodgrain crops, sources of irrigation, marketing facilities, condition of feeder roads, storage facilities etc., in respect of villages selected for the study. This schedule was **filled only once** during the first round of survey.

Schedule II: Household Schedule:

This schedule was meant for listing of all the cultivator households in the selected village alongwith the size of holding in terms of area cultivated under foodgrains and was filled only once during first round of the survey. It was basically to process **selection of cultivator households** as per the procedure prescribed.

Schedule III: Particulars of selected cultivator households:

This schedule covered relevant particulars in respect of the **cultivator households selected** for this study such as crops cultivated i.e. area and production variety-wise, irrigated, unirrigated etc.

Schedule IV: Retention of foodgrains for different purposes:

This was an important schedule for this survey and covered information relating to **retention of foodgrains by the producer for different purposes such as consumption, seed, feed, payments in kind, barter for goods etc.**

Schedule V: Losses of foodgrains at the Producers' level:

This schedule related to **losses** of foodgrains at the operational level, i.e., in **threshing, winnowing, in transport from the field to storage** and **losses during storage** at the producers' level.

Schedule VI – Sale of foodgrains

This schedule covered the **sale of foodgrains** by the producer to various agencies within the village and outside the village. The data and other related information were recorded in Schedules – III to VI during quarterly visits to the selected cultivator households by the field investigators of the Designated State Agencies.

2.7 DURATION, YEAR OF REFERENCE AND FREQUENCY OF SURVEY:

2.7.1 DURATION:

The survey was conducted on continuous basis for a period of three years, i.e., 1996-97, 1997-98 and 1998-99, presuming that all the three years remain normal. In case of any abnormal year, the study was to be extended upto five years, after consideration by the Technical Committee. In view of this, the Technical Committee undertook a review and decided not to extend the survey, as the data of three years was normal to bring out the reports.

2.7.2 YEAR OF REFERENCE:

The year of **reference** was current agricultural year, i.e., **from July to June**. The marketing season for a particular crop depended upon the cropping pattern and harvesting season in particular region.

2.7.3 FREQUENCY OF SURVEY :

Data and other related information for estimation of marketable surplus and post harvest losses for the selected twelve commodities (seven cereals and five pulses) were collected over a period of three consecutive years. There were four rounds of survey every year. Data was collected from each selected household in respect of selected commodities simultaneously during the quarterly rounds of survey, i.e.,

First quarter	-	July to September
Second quarter	-	October to December
Third quarter	-	January to March
Fourth quarter	-	April to June

MANPOWER FOR FIELD SURVEYS, SUPERVISION AND TRAINING.

3.1 MANPOWER FOR FIELD SURVEYS

The DSAs conducted the field survey either through the existing manpower or short-term employment of retired personnel from the DSAs or by employment of unemployed graduates with requisite qualification as field investigators. The DSAs decided the strength of manpower required for the field survey. The field investigators conducted the survey under the administrative control of district level officers and **the Nodal Officer** for the state. The field investigators and the district level officers were imparted training for undertaking this survey as detailed in later paras.

3.2 SUPERVISION

For supervision, guidance and coordination of the survey, the D.M.I. officers from the Regional Offices and Sub-offices were redeployed. In case of most of the states, the D.M.I. have the establishments at State Headquarters except Himachal Pradesh and North East States (excluding Assam). In case of Himachal Pradesh the survey was supervised by the Sub-office at Jammu and for North East states, it was supervised by the Regional Office at Calcutta.

3.3 TRAINING MATERIAL

A **brief write up of the scheme** was supplied to the DSAs with a request to get it translated into local languages for the convenience of the field investigators wherever necessary. Similarly, detailed **Instructions and guidelines for collection and recording of data** in the prescribed schedules during the quarterly visit to the selected cultivator households were also provided to the DSAs. However, the DSAs were requested to ensure that the information and data collected during the survey were to be recorded in the English version of the schedules supplied by the Directorate to facilitate compilation of data at the scheme headquarters.

3.4 TRAINING OF SUPERVISORY OFFICERS AND FIELD INVESTIGATORS

The Market Research & Planning Cell (MRPC) of the D.M.I. organised training programmes in two rounds, for its supervisory officers at Nagpur. These officers were identified from the Regional Offices and Sub-offices of DMI for the purpose of redeployment under the scheme. These officers in turn imparted training to the field investigators of the DSAs.

SCRUTINY OF SCHEDULES AND ANALYSIS OF DATA

4.1 SCRUTINY OF SCHEDULES

The field investigators after recording information and data in the schedules during each quarterly visit to the selected cultivator households furnished filled in schedules to the Nodal Officer of the DSA, who after checking and verifying that the relevant information and data have been properly recorded, forwarded the schedules to the supervisory officers of the D.M.I. at the state headquarters, redeployed for the purpose. The D.M.I. supervisory officers undertook further scrutiny and verification and thereafter forwarded the schedules to the Market Research and Planning Cell (MRPC) at the B.H.O. of the DMI at Nagpur. The supervisory officers at the Branch Head Office undertook further scrutiny and verification to ensure that the information was correctly recorded and there was no gap. In case of discrepancies or deficiencies, the feed back was reported to the redeployed officers of the D.M.I. at the state headquarters for rectification by the field investigators of the DSAs.

4.2 DATA ENTRY AND ANALYSIS :

4.2.1 DATA ENTRY

In accordance with the decision of the Technical Committee, the data entry part was done by the D.M.I. in association with National Informatics Centre (NIC), Ministry of Information Technology, Western Region, Pune. The NIC developed data entry module, which was demonstrated to the experts of the Indian Agricultural Statistics Research Institute (IASRI), New Delhi in the light of the schedule and the tabulation plan approved. However, it was observed that with limited manpower it would not be possible to finish the data entry job of such a large volume and scrutiny thereof in time. In view of this, in consultation with the N.I.C., the data entry of Schedules III to VI was assigned to the Regional Computer Centre, an organisation under NIC, Ministry of Information Technology, Government of India, U.G.C. and Government of West Bengal, Calcutta.

4.2.2 COMPUTER ANALYSIS OF THE DATA

The NIC, W.R., Pune was entrusted the task of development of application software for analysis and obtaining output reports of the data entered, after consolidation. The Directorate provided the tabulation plan and methodology for preparation of the output reports, in consultation with the IASRI, New Delhi, who provided methodology for estimation for the purpose of analysis of data to obtain the estimates. The experts from the I.A.S.R.I., New Delhi visited B.H.O. of the Directorate to see the management of survey schedules received, data entry arrangements and arrangements for data analysis done by the Directorate, at various stages of the survey. The output results generated by the computer were checked by obtaining results manually for some of the states. The results so obtained were shown to the experts of the I.A.S.R.I. for confirmation of the step by step procedure followed for estimation.

CONCEPT OF MARKETABLE SURPLUS AND MARKETED SURPLUS:

5.1 MARKETABLE SURPLUS

In this survey, the term “MARKETABLE SURPLUS” has been used to denote the quantity which is a real surplus under varying conditions after the consumption and other requirements of the farmers are met.

5.2 MARKETED SURPLUS

In this publication, the term “MARKETED SURPLUS” denotes the actual quantum of sales by the producers.

5.2 FACTORS INFLUENCING MARKETABLE SURPLUS :-

The quantum of marketable surplus is influenced by the factors operating both in the pre-production and post-production stages.

5.2.1 PRE-PRODUCTION FACTORS :

The factors operating in the pre-production stages are those which determine the level of production i.e., physical area under the crop, investment of resources including inputs, productivity of the crop, expectations of monetary returns from the sale of crop etc.

5.3.2 POST PRODUCTION FACTORS :

The post production factors influencing marketable surplus are physical demand for human and animal consumption on the farm, local customs and practices regarding cash and kind payments, socio-economic conditions of the producers, price policies and price realisation etc.

5.3.3 INFRASTRUCTURAL AND OTHER FACILITIES :

These influence production and marketable surplus and other entities in turn get reinforced or weakened by infrastructural and other facilities existing in the economy in general, and rural economy in particular. Some of these are: -

i) Availability of Irrigation facilities:-

It is very well known that irrigation facility influences the productivity coupled with other inputs.

ii) Connectivity by roads:

This is the most important facility for villages, particularly if these are connected by pucca all weather roads. Absence of this connectivity becomes a handicap and a blockade in exchange between rural and urban sector. This influences the difficulties and cost of transportation, compelling sales in villages, restriction of flow of supplies to and demand from urban trade centres and increased uneconomic elements in price spread between the producers and the consumers. These drawbacks in turn lead to some of the basic pit-falls of the agricultural sector such as cropping pattern, less responsive forces of market, subsistence farming rather than market oriented farming.

iii) **Distance of a village from the market(s):**

The distance between the village and a market is one of the determinants of the type of crops to be produced and marketed in different areas. As the distance from the village to the market increases, the village goes beyond market influence and the result is subsistence farming in such villages. A longer distance with good road and quick means of transport is fairly less serious draw back than short distance without proper roads and proper means of transport.

iv) **Services of regulated market(s):**

Regulated markets provide services for fair participation on the part of the buyers and sellers by eliminating imperfections and also by eliminating malpractices. Since the regulation of market is for the benefit of the farmers or producers, it has positive impact on production and the marketable surplus, in general.

v) **Storage facilities in village(s):**

Proper storage facilities are essentially a basic need to save the produce from the physical losses caused by improper sanitation and hygiene. Improper sanitation and hygiene is instrumental for deterioration of quality due to infection of fungus and moulds and physical losses due to infection of insects and pests like rodents. Proper storage is necessary to retain the farm surplus at the producers' level for disposal at a later stage of the season when supply and demand are better placed and to recall the surplus matching with the demand of the entire season. Thus this factor also contributes to the production pattern and the marketable surplus.

5.4 **COMPUTATION OF MARKETABLE SURPLUS**

5.4.1 **Marketable Surplus**

It is computed by the formula $A - B = MS$

Where MS is Marketable Surplus, A - stands for gross production of the given crop in the year of reference **and B - stands** for the following items in the same year :

- i) Consumption by the farm family,
- ii) Consumption by permanent labour engaged on the farm,
- iii) Consumption by the temporary labour occasionally employed on the farm,
- iv) Quantity retained for seed,
- v) Quantity retained as feed for farm animals,
- vi) Quantity retained for barter,
- vii) Payments in kind :
 - a) to permanent labour,
 - b) to temporary labour,
 - c) for machinery and equipment,
 - d) for customary payments,
 - e) to land owners as rent,
 - f) to land owners as share of produce,

- g) for re-payment of loan,
 - h) land revenue,
 - i) irrigation charges and
 - j) Others.
- viii) Physical losses :
- a) In threshing and winnowing
 - b) In transport from threshing floor to storage, and
 - c) In storage at producer's level.

Item (i) to (vii) have been taken as they were recorded in the schedules for the quantity adjusted against production, to arrive at the quantity of marketable surplus. Best efforts were made to avoid double counting in case of physical losses mentioned at item (viii).

5.4.2 CONSUMPTION BY THE FARM FAMILY

The term “Consumption by the farm family” of the cultivator households has two distinct connotations in so far as its impact on marketable surplus is concerned. In one case, it refers to the quantity actually retained for consumption by the family irrespective of the actual total requirements for the purpose. **Another connotation refers to the quantity that ought to be retained by the farm family for its consumption or the quantity required for consumption.**

In case of marginal and small farmers the quantity actually retained is usually less than the quantity actually required for consumption owing to the compulsions or constraints of the size of holding and production. They are, therefore, required to buy back quantities by which they fall short of their consumption requirements. They may make up the deficit with the help of borrowings, wages or gifts etc. In any case they buy back some quantities from the total stocks, which move out of the farm. **The term family consumption, in case of such farmers, therefore, denotes the quantity that ought to be retained by a farm family for its consumption requirements for the whole year. The use of the term “Surplus” would thus be justified only if the quantity actually required for consumption, rather than the quantity actually retained for consumption is taken into account for arriving at the quantity of marketable surplus actually available for non farm consumption.** In case the quantity actually retained for consumption (and not the quantity actually required for consumption) is taken into account, the quantity of marketable surplus gets unduly inflated, because the quantity sold will not include the buy backs by the producers. **Hence, instead of quantity retained for family consumption, the quantity required for consumption is taken into consideration for calculation of marketable surplus.** The quantity required for family consumption has been calculated by adding the “Quantity retained for family consumption + Quantity purchased for family consumption + Total receipts in kind for family consumption”.

The marketable surplus will thus be according to the formula :

$$A - B = MS$$

Where A stands for *production*, and B includes all the items mentioned earlier except that “quantity required for consumption” has been treated to include the quantity required for “*family consumption*” as explained above and MS stands for “*marketable surplus*”. This quantity is actually available for non-farm consumption and is, therefore, true Marketable Surplus.

PROFILE OF SAMPLE VILLAGES

6.1 AVERAGE POPULATION OF SAMPLE VILLAGES

The statewise distribution of sample villages according to size of population is presented in **Annexure 1**. A summary for all the selected villages is given below in **Table No. 1.1**

TABLE No. 1.1

DISTRIBUTION OF SAMPLE VILLAGES ACCORDING TO AVERAGE POPULATION

S.No.	Average population	Number of sample villages	Percentage to total
1.	Below 100	11	0.73
2.	101-300	104	6.93
3.	301-500	118	7.87
	(a) Class 1	233	15.53
4.	501-1000	262	17.47
5.	1001-1500	188	12.53
6.	1501-2000	131	8.73
	(b) Class 2	581	38.73
7.	2001-2500	121	8.07
8.	2501 and above	565	37.67
	(c) Class 3	686	45.74
	Total (a+b+c)	1500	100.00

It is observed from the analysis of population of sample villages furnished above that 45.74% villages had population more than 2000 per village, followed by 38.73% in the class 501 to 2000 and 15.53% in the class below 500.

6.1.2 It is also seen from Annexure 1 that average population of sample villages varied from lowest of 577 in Arunachal Pradesh to highest of 25,048 in Kerala. The distribution of states on the basis of average population of sample villages may be viewed in **Table No. 1.2** below

TABLE No. 1.2

DISTRIBUTION OF STATES ON THE BASIS OF AVERAGE POPULATION OF SAMPLE VILLAGES.

Less than 1000	1001-2000	2001-5000	5001-10,000	10,001 and above
Arunachal Pr. (577)	Orissa (1440)	Uttar Pradesh (2065)	Tamil Nadu (5735)	Kerala (25048)
Meghalaya (732)	J & K (1620)	Nagaland (2255)	Tripura (7507)	-
Himachal Pr. (886)	-	Bihar (2348)		-
Assam (954)	-	Rajasthan (2497)	-	-
Sikkim (956)	-	Madhya Pr. (2584)		-

-	-	Punjab (2679)		-
-	-	Haryana (2876)		-
-	-	Karnataka (3024)	-	
-	-	Manipur (3061)	-	-
-	-	Maharashtra (3592)	-	-
-	-	West Bengal (4298)	-	-
-	-	Gujarat (4349)	-	-
-	-	Mizoram (4532)	-	-
-	-	Andhra Pr. (4569)	-	-
-	-	Goa (4944)	-	-

6.2 GEOGRAPHICAL AREA AND CULTIVATED AREA OF SAMPLE VILLAGES :

The statewise distribution of sample villages covered under the study according to geographical area and area under cultivation is given in **Annexure 2**. The distribution of the sample villages at all India level is furnished in **Table No. 2.1** below.

TABLE No. 2.1

DISTRIBUTION OF SAMPLE VILLAGES ACCORDING TO GEOGRAPHICAL AREA AND AREA UNDER CULTIVATION (ON ALL INDIA BASIS)

S.No .	Category (Area, in hectares)	Number of sample villages in terms of	
		Total geographical area (%)	Total area under cultivation (%)
1.	Below 500 hectares	766(51.07)	1010(67.33)
2.	500-1500	481 (32.06)	349(23.27)
Class I Total		1247(83.13)	1359 (90.60)
3.	1500-3000	169 (11.27)	98 (6.53)
4.	3000-5000	53 (3.53)	39 (2.60)
Class II total		222 (14.80)	137 (9.13)
5	Above 5000	31.07(2.07)	4(0.27)
Class III total		31 (2.07)	4 (0.27)
Grand Total		1500 (100.00)	1500 (100.00)

(Figures in parenthesis indicate percentage to total)

It is observed from the details furnished above that 83.13% of the sample villages had geographical area below 1500 hectares. Similarly, the area under cultivation was less than 1500 hectares in case of 90.60% of the sample villages. The percentage of sample villages with geographical area or area under

cultivation above 5,000 hectares was very small. The sample villages with geographical area of above 5000 hectares were seen in the states like Andhra Pradesh, Gujarat, Karnataka, Kerala, Madhya Pradesh, Maharashtra, Nagaland, Punjab, Rajasthan and Tripura. However, villages with cultivated area above 5,000 hectares were only one each in the states of Karnataka, Maharashtra, Nagaland and Rajasthan.

6.3 DISTRIBUTION OF SAMPLE VILLAGES ACCORDING TO PERCENTAGE OF TOTAL CULTIVATED AREA TO TOTAL GEOGRAPHICAL AREA.

The percentage of total cultivated area to total geographical area is an important indicator of the status of agri-economy of a village. The statewise details are furnished in Annexure 2, as stated earlier. The all India distribution of sample villages according to total cultivated area expressed as percentage to total geographical area is given below in Table No. 2.2.

TABLE No. 2.2

DISTRIBUTION OF SAMPLE VILLAGES ACCORDING TO PERCENTAGE OF TOTAL CULTIVATED AREA TO TOTAL GEOGRAPHICAL AREA.

S.No.	Category (Percentage of total cultivated area to total geographical area)	Number of villages (%)
1.	Below 30	168 (11.20)
2.	>30-50	177 (11.80)
Class I total		345 (23.00)
3.	>50-70	308 (20.53)
4.	>70-90	566 (37.73)
Class II total		874 (58.26)
5.	Above 90	281 (18.74)
Class III Total		281 (18.74)
Grand Total		1500 (100.00)

(Figures in parenthesis indicate percentage to total)

It is observed that 58.26% of the sample villages covered under the study had cultivated area in the class 50 to 90%. 23% of the villages had cultivated area below 50%. Similarly, 18.74% of the sample villages had cultivated area above 90%.

The statewise distribution of sample villages according to total cultivated area expressed as percentage of total geographical area is furnished in Table No. 2.3.

TABLE No. 2.3

STATE WISE DISTRIBUTION OF SAMPLE VILLAGES ACCORDING TO TOTAL CULTIVATED AREA EXPRESSED AS PERCENTAGE OF TOTAL GEOGRAPHICAL AREA

S.No.	State	Total No of sample villages	No. of villages with total cultivated area expressed as percentage of total geographical area.									
			Up to 30%	%	>30-50%	%	>50-70 %	%	>70-90%	%	Above 90%	%
1.	2	3	4	5	6	7	8	9	10	11	12	13
1.	Andhra Pradesh	75	11	14.67	12	16.00	14	18.67	25	33.33	13	17.33
2.	Arunachal Pradesh	30	3	10.00	6	20.00	6	20.00	10	33.33	5	16.67
3.	Assam	75	3	4.00	4	5.33	28	37.33	34	45.33	6	8.00
4.	Bihar	165	8	4.85	19	11.52	39	23.64	77	46.67	22	13.33
5.	Goa	15	4	26.67	2	13.33	3	20.00	4	26.67	2	13.33
6.	Gujarat	60	1	1.67	3	5.00	8	13.33	33	55.00	15	25.00
7.	Haryana	45	0	0.00	0	0.00	2	4.44	25	55.56	18	40.00
8.	Himachal Pradesh	45	9	20.00	17	37.77	13	28.89	3	6.67	3	6.67
9.	J & K	45	16	35.56	13	28.89	10	22.22	4	8.89	2	4.44
10.	Karnataka	60	7	11.67	5	8.33	7	11.67	20	33.33	21	35.00
11.	Kerala	45	2	4.44	1	2.22	7	15.56	24	53.33	11	24.45
12.	Madhya Pradesh	135	5	3.70	8	5.93	24	17.78	69	51.11	29	21.48
13.	Maharashtra	90	16	17.78	2	2.22	12	13.33	31	34.45	29	32.22
14.	Manipur	15	0	0.00	5	33.33	5	33.33	5	33.33	0	0.00
15.	Meghalaya	15	2	13.33	0	0.00	3	20.00	6	40.00	4	26.67
16.	Mizoram	15	11	73.33	1	6.67	2	13.33	1	6.67	0	0.00
17.	Nagaland	15	5	33.33	4	26.67	1	6.67	4	26.67	1	6.67
18.	Orissa	90	20	22.22	18	20.00	21	23.33	25	27.78	6	6.67
19.	Punjab	45	0	0.00	1	2.22	5	11.11	16	35.56	23	51.11
20.	Rajasthan	90	9	10.00	9	10.00	28	31.11	35	38.89	9	10.00
21.	Sikkim	15	3	20.00	2	13.33	2	13.33	5	33.34	3	20.00
22.	Tamil Nadu.	75	7	9.33	13	17.33	30	40.00	22	29.33	3	4.00
23.	Tripura	15	12	80.00	2	13.33	0	0.00	1	6.67	0	0.00
24.	Uttar Pradesh.	180	10	5.56	17	9.44	41	22.78	73	40.56	39	21.67
25.	West Bengal	45	4	8.89	13	28.89	7	15.56	14	31.11	7	15.56
All India Total		1500	168	11.20	177	11.80	318	21.20	566	37.73	271	18.07

6.4 DISTRIBUTION OF SAMPLE VILLAGES ACCORDING TO AVERAGE GEOGRAPHICAL AREA, AVERAGE CULTIVATED AREA AND PERCENTAGE SHARE OF CULTIVATED AREA TO GEOGRAPHICAL AREA.

The statewide details of average geographical area, average cultivated area and percentage share of cultivated area to geographical area in sample villages in the country (minimum/maximum/average) are furnished in **Annexure 3** and a summary is given in **Table no. 3.1** below:

TABLE No. 3.1
STATE WISE DISTRIBUTION OF SAMPLE VILLAGES IN TERMS OF AVERAGE AREA UNDER CULTIVATION.

S. No.	Average cultivated Area in terms of percentage of average geographical area	State
1.	More than 80%	Haryana & Punjab
2.	>70-80%	Assam, Bihar, Gujarat, M.P., Kerla, Karnataka, Meghalaya, U.P. etc.
3.	>60-70%	A. P., Ar. Pr., Maharashtra, W. B. Manipur, Rajasthan, Sikkim and T.N.
4.	>50-60%	Goa and Orissa
5.	Upto 50%	H.P., J & K., Mizoram, Nagaland and Tripura.

It is observed that the states of Haryana and Punjab had on an average more than 80% of geographical area as cultivated area in the sample villages, whereas the States of Himachal Pradesh, Jammu & Kashmir, Mizoram, Nagaland and Tripura had average cultivated area less than 50% of the average geographical area of sample villages. These states are characterised by a mix of hilly terrain and therefore the land available for cultivation is less when compared with other states.

6.5 DISTRIBUTION OF SAMPLE VILLAGES ACCORDING TO AVAILABILITY OF IRRIGATION FACILITIES.

From **Annexure 4** it is observed that out of 1500 sample villages 1322 sample villages had irrigation facilities, whereas 178 villages did not have any irrigation facility. In terms of percentage, 88.13% of villages were reported to have irrigation facility whereas 11.87% of villages did not have irrigation facility. The sample villages from most of the states had reported irrigation facility, the percentage varying from 51.11% to almost 100%. However, sample villages from Manipur did not have any irrigation facility

6.5.1 DISTRIBUTION OF SAMPLE VILLAGES ACCORDING TO SOURCE OF IRRIGATION

The distribution of sample villages according to sources of irrigation is furnished in Table No. 4.1

TABLE No. 4.1

DISTRIBUTION OF SAMPLE VILLAGES ACCORDING TO SOURCES OF IRRIGATION

S.No.	Source	No. of sample villages	% of total villages
1.	Tanks	282	18.80
2.	Canals	534	35.60
3.	Open wells	546	36.40
4.	Tube wells	620	41.33
5.	Others	296	19.73

(Note : Each source has been treated independently).

The distribution of sample villages according to source of irrigation shows that out 1,500 sample villages, 620 villages (41.33%) had **tubewells**, 546 villages (36.40%) had **open wells**, 534 villages (35.60%) had **canals**, 282 villages (18.80%) had **tanks** whereas 296 villages (19.73%) had **other** sources of irrigation. Statewise analysis of availability of different sources of irrigation is discussed hereunder:

- 6.5.2 **TUBEWELLS** : The state-wise distribution of villages having **tubewells** as source of irrigation is furnished in Table No. 4.2

TABLE No. 4.2

STATE WISE DISTRIBUTION OF VILLAGES WITH TUBEWELLS AS SOURCE OF IRRIGATION (EXPRESSED IN TERMS OF % TO TOTAL)

S.No.	Less than 20%	20% to 40%	More than 40%
1.	Orissa (17.78)	Tripura (40.00)	Haryana (86.67)
2.	Maharashtra (14.44)	M.P. (37.04)	Punjab (82.22)
3.	Nagaland (13.33)	T.N. (36.00)	U.P. (72.78)
4.	J & K (11.11)	Kerala (33.33)	Bihar (67.27)
5.	H.P.(6.67)	Gujarat (31.67)	W.B. (60.00)
6.	Meghalaya (6.67)	Assam (29.33)	A.P. (52.00)
7.		Rajasthan (28.89)	Karnataka (51.67)

(Figures in parenthesis show % to total of sample villages)

It is observed that the states like Haryana, Punjab, U.P., Bihar, West Bengal, Andhra Pradesh and Karnataka had tubewells as prominent source of irrigation. In other states tubewells were not very common and in the states of Arunachal Pradesh, Goa, Manipur, Mizoram and Sikkim tubewells as source of irrigation had not been reported.

- 6.5.3 **OPEN WELLS**: **Open wells** are another important source of irrigation after tubewells. The statewise distribution of sample villages with openwells as source of irrigation is furnished hereunder in Table 4.3.

TABLE NO. 4.3

STATE WISE DISTRIBUTION OF VILLAGES WITH OPEN WELLS AS SOURCE OF IRRIGATION (EXPRESSED IN TERMS OF % TO TOTAL)

S.No.	Less than 20%	20-60%	More than 60%
1.	Nagaland (6.67)	Orissa (54.44)	Gujarat (83.33)
2.	Uttar Pradesh (4.44)	Andhra Pradesh (48.00)	Madhya Pradesh (82.22)
3.	West Bengal (4.44)	Rajasthan (43.33)	Kerala (73.33)
4.	Assam (2.67)	Bihar (40.00)	Maharashtra (68.89)
5.		Karnataka (38.33)	Tamil Nadu (68.00)
6.		Jammu & Kashmir (22.22)	
7.		Tripura (20.00)	

(Figures in parenthesis show % to total sample villages)

In states of Gujarat, M.P., Kerala, Maharashtra, Tamil Nadu, Orissa, Andhra Pradesh, Rajasthan, Bihar, Karnataka, etc. open wells were important source of irrigation. In states like Nagaland, U.P., W.B. and Assam because of the network of tributaries of rivers and tanks, open wells seemed to play a minor role in irrigation. In states of Arunachal Pradesh, Goa, Haryana, Himachal Pradesh, Manipur, Meghalaya, Mizoram, Punjab and Sikkim open wells had not been reported as source of irrigation.

- 6.5.4 **CANALS:** Canals are an important source of irrigation. The canals may be conventional one developed over a period of time for diverting waters of brooks, rivers or rivulets or may be man made, for distribution of waters from reservoirs constructed specifically for harnessing river water. The statewide distribution of sample villages with canals as source of irrigation is given below in Table No. 4.4

TABLE No. 4.4

STATE WISE DISTRIBUTION OF SAMPLE VILLAGES WITH CANALS AS SOURCE OF IRRIGATION (EXPRESSED IN TERMS OF % TO TOTAL)

S.No.	Less than 20%	20 to 40%	Above 40%
1.	Arunachal Pradesh(16.67)	Sikkim (40.00)	Mizoram (93.33)
2.	Karnataka(13.33)	Meghalaya (40.00)	Nagaland (93.33)
3.	Maharashtra. 12.22)	J & K (37.78)	Kerala (66.67)
4.	Assam (12.00)	Haryana (37.78)	Tripura (66.67)
5.		West Bengal (35.56)	U.P. (62.78)
6.		A. P.(29.33)	Punjab ((60.00)
7.		Rajasthan (28.89)	Orissa ((54.44)
8.		Bihar (26.06)	Gujarat (48.33)
9.		Goa (20.00)	Tamil Nadu (42.67)
		M.P. (20.00)	

(Figures in parenthesis show % to total sample villages)

In states of Mizoram and Nagaland almost 93.33% of villages from the sample had the facility of Canal irrigation followed by Kerala, Tripura, Uttar Pradesh and Punjab where this facility varied from 60% to 66.67%. In other states canal irrigation varied from 12% to 54.44% except Himachal Pradesh and Manipur where canal irrigation had not been reported.

- 6.5.5 **TANKS :** Tanks are another important conventional source of irrigation and distribution of the sample villages having availability of this source of irrigation is given below in Table No. 4.5

TABLE No. 4.5

STATE WISE DISTRIBUTION OF VILLAGES WITH TANKS AS SOURCE OF IRRIGATION (EXPRESSED IN TERMS OF % TO TOTAL)

S.No.	Less than 20%	20-60%	Above 60%
1.	Bihar (18.18)	T. Nadu (53.33)	W.B. (68.89)
2.	Rajasthan (15.56)	A.P. (52.00)	Tripura (66.67)
3.	Maharashtra (12.22)	Orissa (27.78)	Kerala (60.00)
4.	Assam(10.67)		Goa (60.00)
5.	Gujarat (10.00)		
6.	Karnataka (10.00)		
7.	M.P.(8.15)		
8.	H.P. (6.67)		

9.	J & K (6.67)		
10.	U.P. (5.00)		

(Figures in parenthesis indicate % to total sample villages)

Use of tanks as a major source of irrigation was reported in sample villages of West Bengal, Tripura, Kerala, Goa, Tamil Nadu and Andhra Pradesh. In other states also tanks had been reported as source of irrigation except the states of Arunachal Pradesh, Haryana, Manipur, Meghalaya, Mizoram, Nagaland, Punjab and Sikkim.

- 6.5.6 **OTHERS:** In addition to the major sources of irrigation discussed above, there were various other sources tapped for the purpose of irrigation. The statewise distribution of sample villages having these sources of irrigation is given below in Table No. 4.6.

TABLE No. 4.6
STATE WISE DISTRIBUTION OF SAMPLE VILLAGES WITH OTHER SOURCE OF
IRRIGATION (EXPRESSED IN TERMS OF % TO TOTAL)

S.No.	Less than 20%	20-40%	Above 40%
1.	Punjab (17.78)	H.P. (40.00)	Tripura (93.33)
2.	U.P. (16.11)	Assam (32.00)	Arunachal Pradesh(53.33)
3.	Rajasthan (12.22)	Kerala (28.89)	Meghalaya (46.67)
4.	Maharashtra (11.11)	J & K (26.67)	Orissa (46.67)
5.	Bihar (10.30)	M.P. (25.19)	W.B. (46.67)
6.	Karnataka (10.00)	Nagaland (20.00)	
7.	Andhra Pradesh (8.00)	Sikkim (20.00)	
8.	Gujarat (3.33)		

(Figures in parenthesis indicate % of total sample villages)

It is observed that in states like Tripura, Arunachal Pradesh, Meghalaya, Orissa, West Bengal, Himachal Pradesh, Assam, Kerala, Jammu & Kashmir, Madhya Pradesh, etc. other sources of irrigation were reported.

- 6.5.7 **DISTRIBUTION OF VILLAGES ACCORDING TO THE AVERAGE AREA SOWN UNDER FOODGRAIN CROPS (1993-94 & 1994-95).**

The statewise details of average area sown under foodgrain crops during the years 1993-94 and 1994-95 in the sample villages are furnished in **Annexure 5**. The percentage of average area sown under foodgrains during 1993-94 and 1994-95 (irrigated and unirrigated) is given below in Table No. 5.1.

TABLE No. 5.1
PERCENTAGE OF IRRIGATED AREA TO AVERAGE AREA SOWN IN SAMPLE
VILLAGES IN VARIOUS STATES (1993-94)

S.No.	Category	States
1.	More than 90%	Haryana, Punjab
2.	70% to 80%	Uttar Pradesh, Andhra Pradesh, Tamil Nadu
3.	60% to 70%	Bihar
4.	50% to 60%	Kerala, Nagaland

5.	Less than 50%	Other states
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It is observed that more than 90% of area sown in sample villages in Haryana and Punjab was irrigated. In states like Uttar Pradesh, Andhra Pradesh, Tamil Nadu and Bihar the percentage of average area sown under foodgrain crops varied from 60% to 90%. In many of the other states the sources of irrigation seemed to have not been harnessed as a result of which the percentage of average area sown under foodgrain crops was less than 50%.

6.6 COMMODITY-WISE DISTRIBUTION OF SAMPLE VILLAGES

6.6.1 This survey covered 7 cereals, namely, Paddy, Jowar, Bajra, Maize, Ragi, Wheat, Barley and 5 Pulses, namely, Red Gram (Arhar or Tur), Green Gram (Moong), Black Gram (Urad), Bengal Gram (Chana) and Lentil (Masur). The state-wise distribution of sample villages growing these crops (during 1993-94 and 1994-95) is furnished in Annexure 6. The data is summarised in Table No. 6.1 given below.

TABLE NO. 6.1
DISTRIBUTION OF VILLAGES ACCORDING TO THE CROP GROWN IN THE SAMPLE
VILLAGES
(1993-94 & 1994-95)

S.No.	Crops grown	No. of villages	% to total villages
CEREALS			
1.	Paddy	1209	80.60
2.	Jowar	460	30.67
3.	Bajra	313	20.87
4.	Maize	776	51.73
5.	Ragi	279	18.60
6.	Wheat	1065	71.00
7.	Barley	310	20.67
PULSES			
8.	Red Gram(Arhar or Tur)	616	41.07
9.	Green Gram (Moong)	478	31.87
10.	Black Gram (Urad)	566	37.73
11.	Bengal Gram (Chana)	695	46.33
12.	Lentil (Masur)	410	27.33
Total		1500	

It is observed that Paddy was a major cereal crop grown and cultivation was reported from 1209 villages or say 80.60% of the sample villages. The next important crop reported was wheat (from 1065 villages) followed by Maize (from 776 villages), Jowar (from 460 villages), Barley (from 310 villages) and Bajra (from 313 villages). Ragi was reported only from 279 villages. Amongst Pulses, the cultivation of Bengal Gram was reported from 695 villages followed by Red Gram (from 616 villages), Black Gram (from 566 villages), Green Gram (from 478 villages) and Lentil (from 410 villages).

6.6.2 **COMMODITY WISE DISTRIBUTION OF STATES PRODUCING SELECTED FOODGRAINS COVERED UNDER THE SURVEY :**

The statewide average area under cultivation and average area cultivated under selected crops and percentage of area under each crop to the cultivated area are furnished in **Annexure 7** and summary thereof is furnished in the **Table No. 7.1 below**

TABLE NO. 7.1
COMMODITYWISE SHARE OF DIFFERENT SELECTED CROPS UNDER THE SURVEY :

S.No.	Crop	Name of States
		<u>I. CEREALS</u>
1.	Paddy	Kerala & Meghalaya (100.00), Tripura (96.99), Arunachal Pradesh (91.81), Manipur (91.51), West Bengal (90.41), Orissa (88.85), Assam (87.87), Nagaland (87.46), Goa (84.70), Mizoram (84.23), Andhra Pradesh (76.64), Tamil Nadu (67.64), Punjab (40.16), Karnataka (34.98), Madhya Pradesh (23.58), Haryana (29.27) & Jammu and Kashmir (23.13) etc.
2.	Wheat	Haryana (62.70), Punjab (53.99), U.P. (53.66), MP (51.79), HP (49.39), J & K (49.39), Bihar (36.66), Rajasthan (28.64), Sikkim (15.25) and Gujarat (10.22) etc.
3.	Jowar	Maharashtra (57.92), Karnataka (41.24), Tamil Nadu (25.97), Gujarat (18.96), AP (17.25), MP (14.19), Rajasthan (8.26) and UP (3.51) etc.
4.	Bajra	Rajasthan (45.71), Gujarat (39.49), Maharashtra (17.42), Haryana (5.14), Karnataka (4.81), J&K (2.95) and UP (2.51).
5.	Maize	Sikkim (55.72), HP (40.20), J&K (23.41), Mizoram (15.77), Gujarat (14.50), Rajasthan (13.27), Nagaland (9.44), Madhya Pradesh (7.75), Arunachal Pradesh (7.30), Bihar (7.04), Uttar Pradesh (6.58), Orissa (5.16), A. P. (4.61), T. Nadu (3.68).
6.	Ragi	Sikkim (16.02), Karnataka (9.28), Orissa (4.45), Tamil Nadu (2.12) and Bihar (1.36) etc.
7.	Barley	Rajasthan (3.58), UP (2.03), Madhya Pradesh (1.07) and Bihar (1.01), etc.
<u>II. PULSES</u>		
8.	Red Gram (Tur or Arhar)	Maharashtra (10.61), Karnataka (6.23), Andhra Pradesh (4.52), Gujarat (4.18), Uttar Pradesh (4.13), Madhya Pradesh (2.39), Orissa (2.35), Nagaland (2.18), Tamil Nadu (1.48), Assam (1.15), Bihar (1.04), Tripura (0.67), Arunachal Pradesh (0.44), Punjab (0.21), Jammu & Kashmir (0.12) and Haryana (0.01).
9.	Green Gram (Moong)	Orissa (9.16), Andhra Pradesh (8.70), Bihar (6.39), Rajasthan (5.71), Gujarat (5.64), Maharashtra (4.79), Karnataka (2.19), Tripura (1.96), Madhya Pradesh (1.45), Arunachal Pradesh (1.30), Tamil Nadu (1.02), Punjab (0.98), Assam (0.84), Uttar Pradesh (0.84), J & K (0.64), West Bengal (0.23), Haryana (0.22), Himachal Pradesh (0.19) and Nagaland (0.03).
10.	Black Gram (Urad)	Andhra Pradesh (7.22), Orissa (5.50), Madhya Pradesh (5.28), Maharashtra (4.26), Gujarat (3.86), Assam (3.83), J & K (2.87), Tripura (2.10), Tamil Nadu (1.71), Uttar Pradesh (1.33), Rajasthan (1.24), Bihar (1.14), Himachal Pradesh (1.11), Arunachal Pradesh (0.92), Karnataka (0.71), West Bengal (0.51), Haryana (0.22) and Punjab (0.02).
11.	Bengal Gram (Chana)	Madhya Pradesh (26.98), Karnataka (7.76), Uttar Pradesh (6.45), Rajasthan (5.93), Haryana (5.66), Maharashtra (4.81), Gujarat (2.90), Bihar (3.57), Tamil Nadu (1.19), J & K (1.13), Orissa (0.93), West Bengal (0.48), Andhra Pradesh (0.38), Himachal Pradesh (0.21) and Punjab (0.14).
12.	Lentil (Masoor)	Madhya Pradesh (5.17), Bihar (4.35), Uttar Pradesh (3.29), Assam (2.92), Himachal Pradesh (1.15), Rajasthan (0.58), West Bengal (0.53), Haryana (0.13), Punjab (0.13), Arunachal Pradesh (0.11) and Maharashtra (0.01)

(Figures in parenthesis show % of sample villages in the state to total sample villages)

A reference to Annexure 7 and the details furnished in Table 7.1 revealed that the area under cultivation under crops like Barley or Ragi amongst cereals and Lentil or Bengal Gram amongst the pulses was almost Nil in a few states. In other states the selected crops under the study were grown on varying scales. In Kerala and Meghalaya the foodgrain crop grown was only Paddy. In Haryana, Punjab, Uttar Pradesh and Madhya Pradesh more than 50% of the area under cultivation was under Wheat. In Maharashtra it is observed that 57.92% of average area under cultivation was under Jowar followed by Karnataka (41.24 %) and Tamil Nadu (25.97 %). Amongst pulses major area under cultivation was seen under Red Gram, Green Gram, Black Gram, and Bengal Gram. Cultivation of Lentil was reported only from States like Assam, Bihar, West Bengal and Uttar Pradesh etc.

6.7 DISTRIBUTION OF AVERAGE NUMBER OF CULTIVATORS IN SAMPLE VILLAGES – IN SMALL, MEDIUM & LARGE CATEGORY.

The statewise distribution of average number of cultivators in sample villages in Small, Medium and Large category and its percentage to the total number are furnished in **Annexure 8**. A summary of the same is given below in Table No 8.1.

TABLE No. 8.1

AVERAGE NUMBER OF CULTIVATORS IN SMALL, MEDIUM AND LARGE CATEGORY IN THE SAMPLE VILLAGES.

Category of cultivators	Average number per sample village	Percentage
Small	219	70
Medium	66	21
Large	29	9
Total	314	100

It is observed from the details furnished above, that large chunk i.e. 70% of the cultivators were in **small** category, 21% in **Medium** category and only 9% in **Large** category.

6.8 ACCESSIBILITY OF SAMPLE VILLAGES TO MARKETS.

6.8.1 DISTRIBUTION OF SAMPLE VILLAGES ON THE BASIS OF DISTANCE TO THE NEAREST MARKET.

The distance of a village from the market or accessibility of the village to the market, although a relative term, is an important consideration in marketing of agricultural produce by the villager. A distance of 50 Km. between a village and a market with a good pucca road with quick means of transport is a far less serious drawback than a 15-km. distance without proper roads and means of proper transport. This parameter promotes the agri-economy of the village or gives setback to it depending upon the nature of surface communication available. In the present survey while studying sample villages selected, this aspect was looked into. The statewise distribution of sample villages on the basis of distance to the nearest market is furnished in **Annexure 9**. A summary of the same is presented in Table **No. 9.1** below

Table No. 9.1

DISTRIBUTION OF SAMPLE VILLAGES ON THE BASIS OF DISTANCE TO THE NEAREST MARKET

S.No.	Distance from the nearest market	No. of villages	Percentage to total
1.	Less than 5 Km.	553	36.87
2.	5-10km.	351	23.40
	(Class I)	904	60.27
3.	>10-15Km.	280	18.67
4.	>15-20km.	137	9.13
	(Class II)	417	27.80
5.	>20-25kms	75	5.00
6.	More than 25kms.	104	6.93
	(Class III)	179	11.93
	Total	1500	100.00

From the details furnished in the table it is observed that nearly 60.27 % of the sample villages were at a distance of upto 10 kms, from the nearest market. Nearly 27.80% villages were at a distance of >10-20 kms., whereas 11.93% of villages were at a distance of more than 20 kms. It is revealing that out of 1500 sample villages selected for the survey, 553 villages or 36.87% of villages were at a distance of less than 5kms. to the nearest market. This is more or less in conformity with earlier surveys of 1972-73 with some improvement.

6.8.2 Statewise distribution of sample villages on the basis of average distance from the market was also very revealing. These details are furnished in **Table No. 9.2** given hereunder:

Table No. 9.2

STATEWISE DISTRIBUTION OF SAMPLE VILLAGES ON THE BASIS OF AVERAGE DISTANCE FROM THE NEAREST MARKET.

S.No	Average distance from the nearest market				
	Less than 5 Kms.	5-10 Kms	10-15 Kms.	15-20 Kms.	20-25 Kms. & above
1.	Tripura (3.27)	W.B. (5.67)	Goa (10.20)	Karnataka (16.04)	Mizoram (21.93)
2.	J & K (3.98)	Kerala (5.71)	A.P. (11.11)	---	Rajasthan (20.14)
3.	Assam (4.19)	Bihar (5.96)	Nagaland (12.40)	----	----
4.	Orissa (4.57)	Punjab (6.77)	Ar. Pr. (12.50)	----	---
5.	Meghalaya (4.83)	Manipur (6.80)	Sikkim (12.67)	----	----
6.	--	U.P. (7.54)	M.P. (12.74)		

7.	--	Haryana (8.81)	Maharashtra (13.17)	----	----
8.	--	Tamilnadu (9.97)	Gujarat (14.50)	----	----

From the figures furnished in Table 9.2 it is observed that the accessibility of the nearest market was less than 5 kms. in states like Tripura, Jammu & Kashmir, Assam, Orissa and Meghalaya. The accessibility varied between 5-10kms. in states like West Bengal, Kerala, Bihar, Punjab, Manipur, Uttar Pradesh, Haryana and Tamil Nadu. As against this, the accessibility varied between 10-15 kms. in Goa, Andhra Pradesh, Madhya Pradesh, Maharashtra, Arunachal Pradesh, Nagaland, Sikkim, and Gujarat. In the remaining States, i.e., Karnataka, Mizoram and Rajasthan, it was in the range of 15-25Kms. Although the accessibility of the village to the nearest market is an indicator for better marketing in relative terms, this has to be qualified in terms of nature of surface transport and communication available and the connectivity with pucca road or kutch road.

6.8.3 DISTRIBUTION OF SAMPLE VILLAGES ACCORDING TO THE CONDITION OF FEEDER ROADS CONNECTING VILLAGES WITH THE NEAREST MARKETS.

6.8.3.1 Statewise distribution of sample villages as per the condition of the feeder roads vis-a-vis connectivity as observed during the survey is furnished in **Annexure 10, Table No. 10.1** given below presents the over all view for the country as a whole.

Table No. 10.1

DISTRIBUTION OF SAMPLE VILLAGES AS PER CONDITON OF THE FEEDER ROAD.

Sl.No.	Nature of Connectivity	Number of sample villages (%)
1.	Connected by Pucca Road	840 (56.00)
2.	Connected by Kachha Road	140 (9.33)
3.	Connected by partly kaccha and partly pucca roads	520 (34.67)
	Total	1500 (100.00)

It is observed that around 56 % of the villages had the connectivity of pucca road with the nearest market, whereas 34.67 % of the villages had the connectivity of partly kutch and partly pucca roads. Kutch roads connected 140 (9.33%) villages.

6.8.3.2 The statewise situation of connectivity is further analysed in Table No. 10.2 given below:

TABLE No. 10.2**PERCENTAGE OF SAMPLE VILLAGES CONNECTED BY PUCCA FEEDER ROADS.**

S.No	State	Percentage of Sample villages connected by		
		Pucca Road	Kutchia Road	Partly Kutchia/ Pucca Road
1.	Assam	12.00	37.33	50.67
2.	West Bengal	15.56	17.78	66.67
3.	Manipur	20.00	6.67	73.33
4.	Tripura	20.00	20.00	60.00
5.	Jammu & Kashmir	22.22	11.11	66.67
6.	Bihar	29.70	23.63	46.67
7.	Meghalaya	40.00	26.67	33.33
8.	Orissa	48.89	7.78	43.33
9.	Karnataka	50.00	3.33	46.67
10.	Sikkim	53.33	40.00	6.67
11.	Madhya Pradesh	56.30	8.89	34.81
12.	Uttar Pradesh	57.78	7.22	35.00
13.	Arunachal Pradesh	60.00	20.00	20.00
14.	Nagaland	60.00	6.67	33.33
15.	Kerala	64.44	0.00	35.56
16.	Andhra Pradesh	70.67	5.33	24.00
17.	Mizoram	73.33	0.00	26.67
18.	Maharashtra	85.56	0.00	14.44
19.	Rajasthan	83.33	0.00	16.67
20.	Gujarat	85.00	1.67	13.33
21.	Tamil Nadu	89.33	0.00	10.67
22.	Haryana	95.56	0.00	4.44
23.	Punjab	95.56	0.00	4.44
24.	Goa	100.00	0.00	0.00
25.	Himachal Pradesh	0.00	0.00	100.00

6.8.3.3 It may be seen from the details furnished in **Table No. 10.2** that hardly 12% to 20 % of sample villages were connected by pucca roads in States like Assam, West Bengal, Manipur and Tripura. In states like Jammu & Kashmir, Bihar, Meghalaya, Orissa, and Karnataka, 22% to 50% of the sample villages were connected by pucca roads. In remaining states like Sikkim, Madhya Pradesh, Uttar Pradesh, Arunachal Pradesh and Nagaland, 50%-60 % of villages were connected by pucca roads. In states like Kerala, Andhra Pradesh, Mizoram, Tamil Nadu, Rajasthan, Gujarat, Maharashtra, Haryana and Punjab, the picture was very encouraging. In Goa, almost 100% of the villages, and in Haryana and Punjab 95.56% of the villages were connected by Pucca roads. It is startling to note that the state like Mizoram in North-East had 73.33% villages connected by pucca roads.

6.8.3.4 From the details furnished in **Table No. 9.2** and the details furnished in **Table No. 10.2**, it is clear that the average distance of the sample villages from the nearest market vis-a-vis connectivity by pucca road in States like Andhra Pradesh, Nagaland, Arunachal Pradesh, Sikkim, Madhya Pradesh, Maharashtra, Gujarat, Karnataka, Mizoram and Rajasthan where the average distance of sample villages from the nearest market was 10-25km. and the roads were pucca, were comfortably placed. In the remaining states although the average distance was less than 20km., the percentage of

sample villages connected by pucca roads was not very comfortable except in states like Punjab and Haryana.

In case of similar survey of paddy conducted during the year 1972-73, the connectivity by pucca roads was only 32%. In case of survey on wheat in 1973-74, it was observed that only 36.1% of villages were connected by pucca roads.

6.9 DISTRIBUTION OF SAMPLE VILLAGES ACCORDING TO THE TYPE OF NEAREST MARKET

6.9.1 As stated earlier availability of a market or services of regulated market influence the production and marketable surplus of agricultural commodities. During this survey, this aspect was studied. The statewide status of the sample villages served by primary market/secondary market or regulated market/unregulated market is furnished in Annexure 11. The overall summary is presented in Table No. 11.1 given below.

TABLE No. 11.1

DISTRIBUTION OF SAMPLE VILLAGES ACCORDING TO THE TYPE OF NEAREST MARKET.

S.No.	Category of Market	Number of sample villages (%)
1.	Primary markets	1255(83.67)
2.	Secondary markets	196 (13.07)
3.	No formal market	49 (3.26)
4.	Regulated markets	1031(68.73)
5.	Unregulated markets	421(28.07)
6.	No formal market	48(3.20)
Total		1500 (100.00)

It is observed that either primary market or secondary market served almost 96.74% of the villages. It is also observed that regulated markets served 68.73% of the villages, which reflected the progress of regulation. During earlier survey of Paddy in 1972-73, it was reported that only 30% villages were located within the jurisdiction of regulated markets, while the rest 70% were not covered by regulated markets. In case of similar survey of wheat it was observed that only 56.1% villages were located within the jurisdiction of regulated market while rest 43.9% were not having this benefit of services of regulated market.

6.9.1.1 The present study, gives a reflection that the State Authorities had taken steps to bring more markets under the purview of regulation. Statewise distribution of sample villages served by the markets regulated is furnished in Annexure 11 and overall summary is given in Table No. 11.2. below.

TABLE No. 11.2

STATE-WISE DISTRIBUTION OF SAMPLE VILLAGES SERVED BY MARKETS REGULATED

S.No.	Percentage of villages served by regulated markets	States
1.	Above 80 %	Maharashtra, Bihar, Haryana, Karnataka, Rajasthan, Uttar Pradesh, Gujarat, Madhya Pradesh and Andhra Pradesh.
2.	50 – 80 %	Orissa, Punjab, Tamil Nadu.
3.	Less than 50 %	Assam, Goa, Tripura, West Bengal, Arunachal

		Pradesh, Sikkim, Mizoram, Jammu and Kashmir.
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Note: In Himachal Pradesh, no established market for foodgrains serving the sample villages had been reported by the investigators, although the State Government had enacted the legislation for regulation of markets.

6.10 DISTRIBUTION OF SAMPLE VILLAGES ACCORDING TO THE STORAGE CAPACITY AVAILABLE.

6.10.1 STORAGE CAPACITY IN THE VILLAGES :

Storage facility is an important component in an efficient marketing system. This aspect was considered while studying the village profile. The distribution of sample villages according to the availability of storage capacity in the village is furnished in Annexure 12 and summarised in the Table No. 12.1 given below.

TABLE NO. 12.1
STORAGE CAPACITY AVAILABLE IN THE SAMPLE VILLAGES

S. No.	Storage capacity (In quintals)	No. of villages	% to total of sample villages
1.	Below 200	1109	73.9
2.	200-500	70	4.7
3.	500-1000	75	5.0
4.	1000-1500	73	4.9
5.	1500-2000	22	1.4
6.	2000-2500	18	1.2
7.	2500-3000	19	1.2
8.	3000-3500	19	1.3
9.	3500-4000	7	0.5
10.	4000-4500	11	0.7
11.	4500-5000	13	0.9
12.	More than 5000	64	4.3
Total sample villages		1500	100

From the details furnished in the Table No. 12.1, it is observed that about 73.9% of the villages had storage capacity below 200 quintals. It is also observed that storage capacity was available on varying scales in the class 200 quintals to 5000 quintals in case of small percentage of villages. Surprisingly storage capacity of more than 5000 quintals was reported from only 64 villages or 4.3% of total sample villages.

6.10.2 INSTITUTIONAL STORAGE AVAILABLE IN THE SAMPLE VILLAGES :

Ever since the planned efforts were made for development of agricultural marketing, institutional storage also received attention. The distribution of sample villages according to availability of institutional storage capacity in the village is furnished in Annexure 13 and summary is given in the Table No. 13.1 below.

TABLE No. 13.1

INSTITUTIONAL STORAGE AVAILABLE IN THE SAMPLE VILLAGE

S. No	Institution	No. of villages	States
1.	Co-operative	72	Andhra Pradesh, Assam, Gujarat, Haryana, Karnataka, Kerala, Madhya Pradesh, Maharashtra, Manipur, Orissa, Rajasthan, Tamil Nadu, Uttar Pradesh, etc.
2.	Regulated Market	Nil	
3.	Central Warehousing Corporation	Nil	
4.	State Warehousing Corporation	11	Gujarat, Haryana, Kerala, Madhya Pradesh, Maharashtra, Tamil Nadu, etc.
5.	Rural Godowns	6	Assam, Madhya Pradesh, Maharashtra
6.	Other	27	Karnataka, Kerala, Maharashtra, Orissa, Sikkim and Uttar Pradesh, etc.

It is observed that the institutional storage was reported from 72 villages in the cooperative sector, particularly from the States of Andhra Pradesh, Assam, Gujarat, Haryana, Karnataka, Kerala, Madhya Pradesh, Maharashtra, Manipur, Orissa, Rajasthan, Tamil Nadu and Uttar Pradesh. Amongst all the states the cooperative sector had made a dent in Maharashtra by creating storage capacity in villages. Storage facility from State Warehousing Corporation, godowns constructed under National Grid of Rural Godowns and godowns of other agencies were reported from various states. However, conspicuous absence of godown facility from Regulated Markets or Central Warehousing Corporation was noticed in the sample villages.

6.10.3 STORAGE CAPACITY WITHIN A RADIUS OF 10 KMS. OF SAMPLE VILLAGES:

During this study the storage capacity available within a radius of 10 kms. was also studied. The details are furnished in **Annexure 14**. Summary of the details is furnished in Table No. 14.1 as follows.

TABLE No. 14.1

STORAGE CAPACITY AVAILABLE WITHIN A RADIUS OF 10 KMS. OF SAMPLE VILLAGES

S.No.	Storage capacity in quintals	No. of sample villages	% to total of sample villages
1.	Below 200	1174	78.2
2.	200-500	25	1.7
3.	500-1000	21	1.4
4.	1000-1500	31	2.1
5.	1500-2000	12	0.8
6.	2000-2500	16	1.1
7.	2500-3000	7	0.5
8.	3000-3500	5	0.3
9.	3500-4000	1	0.1
10.	4000-4500	15	1.0
11.	4500-5000	0	0
12.	Above 5000	193	12.8
Total No. of sample villages		1500	100

It is observed that sizeable storage capacity was available within a radius of 10 kms., which included institutional and other storage capacity. Out of 1500 villages, 1174 villages had storage capacity below 200 quintals. Remaining villages also had storage capacity ranging from 200 quintals to 4500 quintals. However, percentage of such sample villages to the total was meagre. Incidentally, 193 sample villages (12.8%) had reported storage capacity above 5000 quintals.

6.10.4 INSTITUTIONAL STORAGE AVAILABLE WITHIN A RADIUS OF 10 KMS. OF SAMPLE VILLAGES :

The statewise distribution of sample villages according to the availability of institutional storage facilities outside the village but within a radius of 10 kms. is furnished in Annexure 15. A brief account of the same is furnished in Table No. 15.1.

TABLE No. 15.1

INSTITUTIONAL STORAGE FACILITY IN THE RADIUS OF 10 KMS.

S. No.	Institution	No. of villages	States
1.	Co-operative societies	135 (35.3%)	Maharashtra, T.N., U.P., Manipur, Assam, Karnataka, M.P., Orissa, Rajasthan, W.B., etc.
2.	Regulated Markets	118 (30.9%)	A.P., T.N., U.P., Orissa, Maharashtra, Karnataka, M.P., Haryana, Goa, HP.
3.	Central Warehousing corporation	22 (5.8%)	AP, Haryana, MP, Orissa, T.N., U.P.
4.	State Warehousing Corporation	86 (22.5%)	A.P., Assam, Gujarat, Haryana, Karnataka, Kerala, Maharashtra, M.P., Orissa, Rajasthan, T.N., U.P.
5.	Rural Godowns	8 (2.1%)	Goa, Maharashtra, Orissa, T.N., U.P.
6.	Others	13 (3.4%)	A.P., Bihar, Gujarat, Haryana, Karnataka, Maharashtra, Orissa, U.P.
Total		382 (100.00)	

It is observed that out of 1500 sample villages, 382 villages or 25.5% villages had institutional storage facility within a radius of 10 kms. As stated earlier, it was the cooperative sector, which played a vital role in making available storage capacity in the villages. It was again the co-operative sector, which had a major role to play in a radius of 10 kms. Institutional storage facility of regulated markets, Central Warehousing Corporation, State Warehousing Corporation, etc., also contributed in this effort.

6.10.5 AVERAGE INSTITUTIONAL STORAGE CAPACITY PER SAMPLE VILLAGE :

The details of average available institutional storage capacity per sample village (in the village and outside the village within a radius of 10 kms.) are furnished in Annexure No. 16, and summary thereof is given in Table No.16.1

TABLE No. 16.1

**AVERAGE INSTITUTIONAL STORAGE
CAPACITY AVAILABLE PER SAMPLE VILLAGE
(in the village & outside the village within a radius of 10 kms.)**

S.No.	Category	States
1	>25,000 Qtls.	Andhra Pradesh (45,249), Haryana (1,07,464), Punjab (27,845)
2	>10,000-25000 Qtls.	Karnataka (12,726)
3	>5,000-10,000 Qtls.	Assam (1,143), Gujarat (9,620), Maharashtra (9,332), Orissa (5,042), Tamil Nadu (9,617), Uttar Pradesh (9,107)
4	Below 5,000 Qtls.	Goa (2,000), Assam (1143), Arunachal Pradesh (80), Bihar (351), Himachal Pradesh (187), Jammu & Kashmir (11), Kerala (3,384), Madhya Pradesh (4,789), Manipur (94), Nagaland (314), Rajasthan (123), Sikkim (143), Tripura (7), West Bengal (2,710)

Note : No storage capacity has been reported from the sample villages in Meghalaya and Mizoram.

It is observed that average institutional storage capacity available in the sample village and outside the village within a radius of 10 kms. had been developed in states like Haryana, Andhra Pradesh, Punjab, followed by other states like Karnataka, Gujarat, Tamil Nadu, Maharashtra, Uttar Pradesh, etc. However, the picture was not very encouraging in states of Bihar, Himachal Pradesh, Rajasthan, N.E. States.

6.10.6 COST OF STORAGE :

It may be stated here that the producers store their produce at farm level in the conventional storage structures or in their houses for which they do not pay any charges. However, when the produce is placed in institutional storage, the storage costs are incurred. The average cost of storage reported from various states is furnished in Annexure 17. It was observed that the lowest cost of Rs. 0.50 per quintal per month was reported from the sample villages of Sikkim, whereas, the highest of Rs. 7.50 per quintal per month was reported from sample villages of Bihar.

6.11 AVERAGE POPULATION OF CULTIVATOR HOUSEHOLDS IN THE SAMPLE VILLAGES

The statewide distribution of sample villages according to total number of cultivator households in the villages is furnished in Annexure 18 and summary thereof is presented in Table No. 18.1 below.

TABLE No. 18.1
AVERAGE POPULATION OF CULTIVATOR HOUSEHOLDS

S.No.	Category	State (Average)
1.	>2000	Goa (2067)
2.	>500 – 2000	Kerala (718)
3.	>400 – 500	Maharashtra (468), A.P. (491) Tripura (437)
4.	>300 – 400	Gujarat (335) West Bengal (326) Madhya Pradesh (313)
5.	>200 – 300	Haryana (240) Rajasthan (203) Nagaland (239) Tamil Nadu (241)
6.	>100 - 200	Assam (126) Bihar (140) Himachal Pradesh (124) J & K (182) Karnataka (182) Manipur (196) Meghalaya (101) Mizoram (137) Orissa (154) Punjab (191) Sikkim (108) West Bengal (137) Uttar Pradesh (197)
7.	Less than 100	Arunachal Pradesh (87)

The average population of the cultivator households per village was reported to be highest, i.e., 2067, in Goa followed by Kerala where it was reported as 718. In Arunachal Pradesh the average population of cultivator households per village was less than 100, whereas in states like Andhra Pradesh, Maharashtra and Tripura the range was between 400 to 500.

6.12 NUMBER OF FAMILY MEMBERS PER SAMPLE HOUSEHOLD

The details of the family members were also studied in respect of the selected cultivators during the survey. The purpose of the study was to cross check the quantity of retention with that of family size, and to study the consumption preferences and assess total need of the cultivator under study.

The analysis of the data revealed that on all India basis the total number of members per family was highest in large category (average 6.45 members per family) followed by medium category (6.38) and the lowest in small category (5.85). The more number of members per family in case of large category may, probably be due to the joint family structure.

Amongst the 25 states, Nagaland was found to be having largest family size (average 12.03 members per family), followed by Haryana (8.2) and Rajasthan (7.62). The smallest family (average) had been reported from Sikkim (average 5.03 members per family) followed by Gujarat (5.07) and Kerala (5.04).

The data regarding average family members per households are given in Annexure 19.1, Table No. 19 below presents a summary of the same.

Table No. 19.1

Average No. of family members	Name of the State
5.00 to 5.50	Gujarat, Kerala, Sikkim
5.51 to 6.00	Andhra Pradesh, Tamil Nadu, Meghalaya, Maharashtra
6.01 to 6.50	Arunachal Pradesh, Assam, Goa, Punjab, West Bengal, Tripura, Karnataka.
6.51 to 7.00	Jammu & Kashmir, Mizoram, Orissa
7.01 to 7.50	Bihar, Madhya Pradesh, Uttar Pradesh
7.51 and above	Haryana, Nagaland, Rajasthan

APPENDIX – 1

LIST OF FOODGRAINS SELECTED FOR THE SURVEY ON ESTIMATION OF MARKETABLE SURPLUS AND POST-HARVEST LOSSES WITH THE ENGLISH NAME, BOTANICAL NAME AND NAMES IN DIFFERENT LOCAL LANGUAGES.

Sl.No.	English Name	Botanical Name	Assamese	Bengali	Oriya	Telugu
(1)	(2)	(3)	(4)	(5)	(6)	(7)
1.	Paddy	<u>Oryza sativa L.</u>	Dhan	Dhan	Dhano	Vadlu, Biyyamu
2.	Wheat	<u>Triticum sativum L.</u> <u>Triticum aestivum L.</u>	Gaum Ghehu	Gam	Gaham	Godumalu
3.	Jowar Greatmillet Sorghum	<u>Andropogon sorghum</u> Brot. <u>Sorghum vulgare Pars.</u>	-	Jowar	Juara	Jonna
4.	<u>Bajara.</u> Bulrushmillet. Spikedmillet. Pearlmillet	Pennisetum typhoides S. & H. <u>Pennisetum typhoideum L.</u>	-	Bajra	Bajra	Sajja
5.	Maize.	<u>Zeamays L.</u>	Gomdhan	Bhutta	Macca	Mokkajonna
6.	Barley.	<u>Hordeum vulgare L.</u>	Jadhan	Jobs	Jaba Barlhi Or Jabadhana	Barley
7.	Ragi. Finger millet.	<u>Eleusine coracana G.</u>	-	Marwa	Mandia	Ragi, Chodi
8.	Tur. Pigeon pea	<u>Cajanus cajan M.</u> <u>Cajanus indicus</u>	Arahar	Arahar	Warad	Kandulu
9.	Urid	<u>Phaseolus mungo</u>	Matimah Black gram	Mashkalai	Biri	Minumulu
10.	Mung.	<u>Phaseolus aureus</u>	Magum Green gram	Sonamug	Mung	Pachapesalu
11.	Bengal Gram.	<u>Cicer arietinum L.</u>	Butmah	Chola	Boot	Sanagalu
12.	Masoor.	<u>Lens esculenta.</u>	Masurmah Lentil	Musuri	Masur	Chirusenaga

SOURCE - Hand book of Agriculture I.C.A.R., New Delhi.

LIST OF DESIGNATED STATE AGENCIES

S l . N o .	STATE	NAME OF THE DESIGNATED STATE AGENCIES
(1)	(2)	(3)
1	A.P.	The Director of Marketing, Govt. of Andhra Pradesh, <u>Hyderabad</u>
2	Aru.Pr.	The Director of Agriculture, Arunachal Pradesh, <u>Naharlagun – 791 101</u>
3	Assam	The Director of Agriculture, Government of Assam, Khanapara, <u>Guwahati – 781 022</u>
4	Bihar	The Bihar State Agricultural Marketing Board, Pant Bhawan, Bailey Road, <u>Patna – 800 001</u>
5	Goa	The Registrar of Cooperative Societies, Government of Goa, Panji.
6	Gujarat	The Managing Director, The Gujarat State Agricultural Marketing Board, Sector 17/22 G.H.V. Road, <u>Gandhi Nagar – 382 022</u>
7	Haryana	The Director of Agriculture, Government of Haryana, Sector-17, <u>Chandigarh – 160 017</u>
8	H. P.	The Department of Agricultural Economics, Himachal Pradesh Krishi Viswa Vidyalaya, (Himachal Pradesh), <u>Palampur-176 062</u>
9	J. & K.	The Director of Agriculture, Jammu & Kashmir, <u>Jammu.</u>
10	Karnataka	The Karnataka State Agricultural Marketing Board, No. 16, 11 th Rajbhawan Road, <u>Banglore – 560 00</u>
11	Kerala	The Director of Agriculture, Kerala, <u>Thiruvananthapuram</u>
1	M. P.	The Commissioner / Secretary, Madhya Pradesh State

2 .		Agricultural Marketing Board, 26, Kisan Bhawan, Arora Hills, Jail Road, <u>Bhopal</u>
1 3 .	Maharashtra	The Managing Director, Maharashtra State Agricultural Marketing Board, <u>Pune</u>
1 4 .	Manipur	The Director of Agriculture, Manipur (Agril. Marketing Unit), <u>Imphal</u>
1 5 .	Meghalaya	The Director of Agriculture, Govt. of Meghalaya, Additional Secretariat Building, <u>Shillong – 793 001</u>
1 6 .	Orissa	The Orissa State Agril. Marketing Board, Plot No. 120-A, Shahid Nagar, <u>Bhubaneswar – 751 001</u>
1 7 .	Punjab	The Director of Marketing, State Marketing Department, SCO No. 148 –149, Sector 34 – A, <u>Chandigarh</u>
1 8 .	Rajasthan	The Secretary, Rajasthan State Agricultural Marketing Board, <u>Jaipur</u>
1 9 .	Sikkim	Bureau of Economics and Statistics, Planning & Development Department, Tibet Road, <u>Gangtok – 737 101</u>
2 0 .	Tamil Nadu	The Director of Agricultural Marketing, Govt. of Tamil Nadu, Dr. Jaylalita Maligai, Thirumangalam, Madras – 600 040
2 1 .	Tripura	The Director of Agriculture, Tripura, <u>Agartala</u>
2 2 .	Uttar Pradesh	The Director of Agricultural Marketing Uttar Pradesh, 23-C, Gokhale Marg, <u>Lucknow</u>
2 3 .	West Bengal	The Director of Agricultural Marketing, Govt. West Bengal, P-16 India Exchange Place Extension, <u>Calcutta – 700 073</u>
2 4 .	Nagaland	State Marketing Officer(Nagaland), Agriland Building, <u>Kohima-717001</u>
2 5 .	Mizoram	Mizoram Agril. Marketing corporation Ltd., <u>Aizwal-796 001(Mizoram)</u>

APPENDIX – 3

**CLUBBING OF THE STATES AND U.T.'S FOR SELECTION OF
SAMPLES DISTRICTS AND THE NUMBER OF DISTRICTS PROPOSED
FOR STUDY.**

Sl. No	Name of State / U. T.	Total No. of Districts in the State / UT	Total districts in the unit	No. of districts for Study proposed
(1)	(2)	(3)	(4)	(5)
I.	i) Jammu & Kashmir ii) Himachal Pradesh	14 12	26	6
II.	i) Punjab ii) Haryana iii) Chandigarh	14 16 1	31	6
III.	i) Uttar Pradesh ii) Delhi	63 1	64	12
IV.	i) Gujarat ii) Maharashtra iii) Diu & Daman iv) Dadra & Nagar Haveli v) Goa	19 31 2 1 2	55	11
V.	i) Andhra Pradesh ii) Tamil Nadu iii) Pondichery	23 23 4	50	10
VI.	i) Karnataka ii) Kerala iii) Lakshadweep	20 14 1	35	7
VI I.	i) Orissa ii) Bengal iii) Sikkim iv) Andaman & Nicobar	27 17 4 2	50	10
VI II.	i) Assam ii) Meghalaya	23 5	28	6
IX	i) Arunachal Pradesh ii) Nagaland iii) Manipur iv) Mizoram v) Tripura	11 7 8 3 3	32	6
X	i) Rajasthan	30	30	6
XI	i) Madhya Pradesh	45	45	9

XI I	i) Bihar	55	55	11
All India - Total		501	501	100

APPENDIX - 4

STATEWISE LIST OF DISTRICTS SELECTED FOR ESTIMATION
OF MARKETABLE SURPLUS AND POST – HARVEST LOSSES
OF FOODGRAINS.

Sl. No.	Name of the State	Total number of Distt. in the State	No. of Distts. for study	Name of District	Cate - gory
(1)	(2)	(3)	(4)	(5)	(6)
1.	Jammu & Kashmir	14	3	1. Jammu 2. Udhampur 3. Kathua	H M L
2.	Himachal Pradesh	12	3	1. Kangra 2. Hamirpur 3. Bilaspur	H M L
3.	Punjab	14	3	1. Sangrur 2. Faridkot 3. Hoshiarpur	H M L
4.	Haryana	16	3	1. Hissar 2. Kurukshetra. 3. Ambala	H M L
5.	Uttar Pradesh	63	12	1. Bulandsahar 2. Allahabad 3. Hardoi 4. Azamgarh 5. Jaunpur 6. Etah 7. Nainital 8. Gorakhpur 9. Saharanpur 10. Banda 11. Lucknow 12. Tehri Garwal	H H H H M M M M L L L L
6.	Maharashtra	31	6	1. Akola 2. Ahmednagar 3. Bhandara 4. Aurangabad 5. Ratnagiri 6. Osmanabad	H H M M L L
7.	Gujarat	19	4	1. Panchmahal 2. Banaskangtha 3. Surat 4. Rajkot	H M M L

Sl. No.	Name of the State	Total number of Distt. in the State	No. of Distts. for study	Name of District	Cat e-gor y
(1)	(2)	(3)	(4)	(5)	(6)
8.	Goa	2	1	1. North Goa	-
9.	Andhra Pradesh	23	5	1. Krishna 2. Nellore 3. Warangal 4. Mahaboobnagar 5. Adilabad	H M L L L
10.	Tamil Nadu	23	5	1. Tanjavur 2. Chengalpathi 3. Madurai 4. Dharampuri 5. Coimbtore	H M M L L
11.	Karnataka	20	4	1. Raichur 2. Dharwad 3. Tumkur 4. Dakshin Kannada	H M L L
12.	Kerala	14	3	1. Palakkad 2. Ernakulam 3. Thiruvanantha-Puram	H M L
13.	Orissa	30	6	1. Koraput 2. Sambalpur 3. Cuttack 4. Bolangir 5. Mayurbhanj 6. Phulbani	H L H M H L
14.	West Bengal	17	3	1. Burdwan 2. Murshidabad 3. Jalpaiguri	H M L
15.	Sikkim	4	1	1. West Sikkim	H
16.	Assam	23	5	1. Nagaon 2. Kamrup 3. Karbianglong 4. Goalpara 5. Lakhimpur	H M M L L

1 7.	Meghalaya	7	1	1. West Garo Hill	H
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Sl No.	Name of the State	Total number of Distt. in the State	No. of Distts. for study	Name of District	Cate - gory
(1)	(2)	(3)	(4)	(5)	(6)
1 8.	Arunachal Pradesh	11	2	1. Pasighat 2. Ziro	H M
1 9.	Nagaland	7	1	1. Kohima	H
2 0.	Manipur	8	1	1. Imphal	H
2 1.	Mizoram	3	1	1. Aizawal East	H
2 2.	Tripura	3	1	1. West Tripura	H
2 3.	Rajasthan	30	6	1. Ganganagar 2. Jaipur 3. Udaipur 4. Bhilawara 5. Jodhpur 6. Kota	H H M M L L
2 4.	Madhya Pradesh	45	9	1. Raipur 2. Guna 3. Mandsaur 4. Chindwada 5. Bhind 6. Vidisha 7. Dhar 8. Satana 9. Khandwa	H H H M M M L L L
2 5.	Bihar	55	11	1. Rohtas 2. Bhojpur 3. Patna 4. Samastipur 5. Gaya 6. Purnea 7. Madhopura	H H H M M M M

				8. Dharbhanga	L
				9. Ranchi	L
				10. Dumka	L
				11. Hazaribagh	L

H – High Production Category

M – Medium Production Category

L - Low Production Category

Total number of districts - 100 Selected for survey

APPENDIX – 5

**DISTRIBUTION OF 100 DISTRICTS SELECTED UNDER MSPHL
SURVEY ACCORDING TO AGRO-CLIMATIC REGIONS OF
PLANNING COMMISSION.**

Sl No.	Planning Commission Region	State	Selected Districts falling under Region
1.	2.	3.	4.
1.	West Himalayan Region	1. Himachal Pradesh	1. Kangra
			2. Hamirpur
			3. Bilaspur
		2. Jammu & Kashmir	1. Jammu
			2. Udhampur
			3. Kathua
		3. Uttar Pradesh	1. Nainital
			2. Tehrigarhwal
2.	Eastern Himalayan Region	1. Arunachal Pradesh	1. Pasighat
			2. Ziro
		2. Assam	1. Kamrup
			2. Karbianglong
			3. Gopara
			4. Nagaon
			5. Lakhimpur
		3. West Bengal	1. Jalpaiguri
		4. Manipur	1. Imphal
		5. Meghalaya	1. West Garo Hills
		6. Mizoram	1. Aizwal
3.	Lower Gangetic Plain Region	1. West Bengal	1. Murshidabad
			2. Burdwan
4.	Middle Gangetic Plain Region	1. Bihar	1. Darbhanga
			2. Samastipur
			3. Purnia
			4. Madhepura
			5. Rohtas
			6. Bhojpur
			7. Patna
			8. Gaya

		2. Uttar Pradesh	1. Gorakhpur
			2. Banda
			3. Etah
			4. Jaunpur
			5. Ajaigarh
			6. Hardoi

: 2 :

Sl No.	Planning Commission Region	State	Selected Districts falling under Region
1.	2.	3.	4.
5.	Upper Gangetic Plain Region	1. Uttar Pradesh	1. Bulandshahar
			2. Allahabad
			3. Saharanpur
			4. Lucknow
6.	Trans Gangetic Plain Region	1. Punjab	1. Faridkot
			2. Sangrur
			3. Hoshiarpur
		2. Haryana	1. Ambala
			2. Kurukshetra.
			3. Hissar
7.	Eastern Plateau & Hills Region	1. Bihar	1. Sri Ganganagar
			1. Dumka
			2. Hazaribag
			3. Ranchi
		2. Maharashtra	1. Bhandara
		3. Madhya Pradesh	1. Raipur
		4. Orissa	1. Koraput
			2. Sambalpur
			3. Cuttack
			4. Bolangir
8.	Central Plateau & Hills Region	1. Madhya Pradesh	5. Marjurbhanj
			6. Phulbani
			1. Satna
			2. Vidisha
			3. Bhind
			4. Guna
			5. Chhindwada
		2. Rajasthan	6. Raipur
			1. Udaipur

			2. Jaipur
			3. Bhilwara
			4. Jodhpur
			5. Kota

: 3 :

Sl No.	Planning Commission Region	State	Selected Districts falling under Region
1.	2.	3.	4.
9.	Western Plateau & Hill Region	1. Maharashtra	1. Akola 2. Ahmednagar 3. Osmanabad 4. Aurangabad
		2. Madhya Pradesh	1. Khandwa 2. Mandsaur 3. Dhar
10.	Southern Plateau & Hills Region	1. Andhra Pradesh	1. Mehaboob Nagar
			2. Warangal
			3. Adilabad
		2. Karnataka	1. Raichur
			2. Dharwar
			3. Tumkur
11.	East Coast Plain & Hills Region	1. Andhra Pradesh	1. Dharamapuri
			2. Coimbatore
		2. Tamil Nadu	1. Krishna
			2. Nellore
12.	West Coast Plains & Ghats Region	2. Tamil Nadu	1. Chengalpatter MGR
			2. Thanjavur
			3. Madurai
		1. Goa	1. Goa
		2. Maharashtra	1. Ratnagiri
		3. Karnataka	1. Dakshin Kannada
		4. Kerala	1. Trivandrum
			2. Ernakulam
			3. Palakkad
	Gujarat Plains & Hills	1. Gujarat	1. Surat

1 3.	Region	1. Gujarat	1. Surat 2. Panchamahar 3. Banaskatha 4. Rajkot
1 4.	Western Dry Region	Nil	Nil
1 5.	Island Region	Nil	Nil

ANNEXURE 1
DISTRIBUTION OF SAMPLE VILLAGES ACCORDING TO SIZE OF POPULATION

S.No.	State	Total No. of sample villages	Number of villages with the population								
			Below 100	101- 300	301- 500	501- 1000	1001- 1500	1501- 2000	2001- 2500	Above 2500	Average
1	2	3	4	5	6	7	8	9	10	11	12
1	Andhra Pradesh	75	0	0	1	1	8	4	8	53	4569
2	Arunachal Pradesh	30	2	11	4	8	4	0	1	0	577
3	Assam	75	1	12	12	25	13	5	1	6	954
4	Bihar	165	2	14	22	25	22	12	15	53	2348
5	Goa	15	0	0	0	1	1	1	1	11	4944
6	Gujarat	60	0	0	2	5	5	7	4	37	4349
7	Haryana	45	0	0	2	9	3	8	5	18	2876
8	H.P.	45	1	9	6	15	6	3	3	2	886
9	J.% K.	45	0	2	4	11	6	11	4	7	1620
10	Karnataka	60	1	3	3	11	3	6	6	27	3024
11	Kerala	45	0	0	0	0	0	0	0	45	25048
12	M.P.	135	2	10	13	29	23	9	10	39	2584
13	Maharashtra	90	0	0	5	15	14	9	10	37	3592
14	Manipur	15	0	2	1	2	1	0	2	7	3061
15	Meghalaya	15	0	6	4	3	1	0	0	1	732
16	Mizoram	15	0	1	0	2	1	0	2	9	4532
17	Nagaland	15	0	1	0	3	3	2	2	4	2255
18	Orissa	90	0	9	12	19	18	11	7	14	1440
19	Punjab	45	0	2	1	7	7	5	3	20	2679
20	Rajasthan	90	2	9	7	17	10	9	5	31	2497
21	Sikkim	15	0	2	2	5	4	2	0	0	956
22	Tamil Nadu	75	0	2	1	6	3	2	3	58	5735
23	Tripura	15	0	0	0	1	0	0	2	12	7507
24	Uttar Pradesh	180	0	9	15	40	27	19	22	48	2065
25	West Bengal	45	0	0	1	2	5	6	5	26	4298
All India		1500	11	104	118	262	188	131	121	565	3422

ANNEXURE 2

DISTRIBUTION OF SAMPLE VILLAGES ACCORDING TO GEOGRAPHICAL AREA & AREA UNDER CULTIVATION (Hectares)

S. No.	State	Number of sample villages	Number of sample villages with the										Total cultivated area as % of total geographical area				
			Total geographical area					Total cultivated area									
			Below 500	500-1500	1500-3000	3000-5000	Above 5000	Below 500	500-1500	1500-3000	3000-5000	Above 5000	<30 %	30-50%	50-70%	70-90%	>90%
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
1	Andhra Pradesh	75	8	32	24	4	7	25	37	7	6	0	11	12	14	25	13
2	Arunachal Pradesh	30	23	7	0	0	0	28	2	0	0	0	3	6	6	10	5
3	Assam	75	68	7	0	0	0	74	1	0	0	0	3	4	28	34	6
4	Bihar	165	126	35	4	0	0	142	23	0	0	0	8	19	39	77	22
5	Goa	15	2	9	4	0	0	9	3	3	0	0	4	2	3	4	2
6	Gujarat	60	12	32	10	5	1	20	26	9	0	0	1	3	8	33	15
7	Haryana	45	18	20	3	4	0	23	15	4	5	0	0	0	2	25	18
8	Himachal Pradesh	45	44	1	0	0	0	45	0	0	3	0	9	17	13	3	3
9	J. & K.	45	24	18	3	0	0	41	4	0	0	0	16	13	10	4	2
10	Karnataka	60	12	25	16	6	1	20	26	9	4	1	7	5	7	20	21
11	Kerala	45	0	4	25	12	4	2	13	22	8	0	2	1	7	24	11
12	Madhya Pradesh	135	49	65	18	2	1	71	52	11	1	0	5	8	24	69	29
13	Maharashtra	90	31	33	18	5	3	44	25	17	3	1	16	2	12	31	29
14	Manipur	15	11	3	1	0	0	13	2	0	0	0	0	5	5	5	0
15	Meghalaya	15	15	0	0	0	0	15	0	0	0	0	2	0	3	6	4
16	Mizoram	15	9	5	1	0	0	15	0	0	0	0	11	1	2	1	0
17	Nagaland	15	2	4	3	2	4	7	6	1	1	1	5	4	1	4	1
18	Orissa	90	56	30	4	0	0	80	10	0	0	0	20	18	21	25	6
19	Punjab	45	17	20	6	1	1	19	20	6	0	0	0	1	5	16	23
20	Rajasthan	90	35	32	10	5	8	52	25	6	6	1	9	9	28	35	9
21	Sikkim	15	12	3	0	0	0	14	1	0	0	0	3	2	2	5	3
22	Tamil Nadu	75	20	38	12	5	0	38	35	1	1	0	7	13	30	22	3
23	Tripura	15	3	9	1	1	1	14	1	0	0	0	12	2	0	1	0
24	Uttar Pradesh	180	147	30	3	0	0	165	12	3	0	0	10	17	41	73	39
25	West Bengal	45	22	19	3	1	0	34	10	0	1	0	4	13	7	14	7
	All India	1500	766	481	169	53	31	1010	349	98	39	4	168	177	318	566	271

Annexure 3**PROFILE OF SAMPLE VILLAGES : GEOGRAPHICAL AREA, CULTIVATED AREA AND
PERCENTAGE SHARE THEREOF**

S. No.	State	Total no. of samp. vills.	Geographical Area in hectares			Cultivated Area in hectares			% share of cultivated area to geographical Area		
			Min- Imum	Max- imum	Average	Mini- mum	Max- imum	Average	Lowest	Highest	Average
1	2		4	5	6	7	8	9	10	11	12
1	Andhra Pradesh	75	210.09	8625	1865.26	135.3	4635	1074.57	9.46	96.95	62.61
2	Arunachal Pradesh	30	35	620	304.87	30	609.9	203.7	25.52	98.37	65.5
3	Assam	75	34	746	246.64	25.8	609	182	17.51	97.95	74.08
4	Bihar	165	27.52	2068	379.22	22.4	1196.8	255.47	8.98	96.96	70.98
5	Goa	15	133.14	2153.4	1095.42	75.6	1854.72	650.66	9.63	94.66	53.91
6	Gujarat	60	98	5080.1	1326.54	88	4691.33	1074.73	26.63	97.57	78.92
7	Haryana	45	90	4555	992.14	72	4189	877.49	63.36	94.26	86.92
8	H.P.	45	17.59	574.42	157.61	8.94	181.6	67.41	6.64	92.14	48.66
9	J.% K.	45	47.8	1917	640.64	31.6	726	222.96	6.54	99	42.03
10	Karnataka	60	94	5815	1470.25	64	5610	1038.24	6.83	134.12	72.92
11	Kerala	45	1044	8353	2808.87	300	4755	2042.83	3.59	98.68	76.4
12	M.P.	135	84	8020	915.09	30	3084.51	665.4	7.41	99.53	76.7
13	Maharashtra	90	80	6641	1241.89	7.27	5971	941.33	0.5	98.68	69.69
14	Manipur	15	65.8	2094.74	500.3	58	849	270.67	34.94	88.15	62.94
15	Meghalaya	15	28	237	113.03	22	231	78.28	19.3	97.47	73.02
16	Mizoram	15	128.8	1692	541.16	25	425	152.45	12.53	82.71	31.07
17	Nagaland	15	350	7700	2910	70	6000	1007.71	1.17	92.31	46.9
18	Orissa	90	43	2783	510.58	12.2	1115.2	242.13	4.87	95.34	55.03
19	Punjab	45	107	7075	961.85	82	2682	768.96	36.47	97.61	85.05
20	Rajasthan	90	95	9456	1390.08	28	5565	829.9	14.33	106.17	66.47
21	Sikkim	15	35	641.76	238.4	17.65	531.89	119.59	7.51	95.39	61.16
22	Tamil Nadu	75	71.27	4343	1118.65	51.34	3143	601.03	20.55	93.06	60.62
23	Tripura	15	304.46	5418.96	1406.09	81.25	622.57	236.08	3.73	88.79	25.15
24	Uttar Pradesh	180	14	2168	330.76	8.77	1896	238.46	8.14	111.16	72.43
25	West Bengal	45	83	3341.6	647.88	42	3246.7	412.01	14.75	97.43	64.14

Annexure 4

S. No.	State	Tot. No. of sample Villages	Sample villages				No. of Sample villages according to source of irrigation									
			Without irrigation		With irrigation		Tanks		Canals		Open wells		Tube wells		Others	
			No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
1	Andhra Pradesh	75	5	6.67	70	93.33	39	52	22	29.33	36	48	39	52	6	8
2	Arunachal Pradesh	30	9	30	21	70	0	0	5	16.67	0	0	0	0	16	53.33
3	Assam	75	35	46.67	40	53.33	8	10.67	9	12	2	2.67	22	29.33	24	32
4	Bihar	165	1	0.61	164	99.39	30	18.18	43	26.06	66	40	111	67.27	17	10.3
5	Goa	15	5	33.33	10	66.67	9	60	3	20	0	0	0	0	0	0
6	Gujarat	60	3	5	57	95	6	10	29	48.33	50	83.33	19	31.67	2	3.33
7	Haryana	45	0	0	45	100	0	0	17	37.78	0	0	39	86.67	0	0
8	Himachal Pradesh	45	22	48.89	23	51.11	3	6.67	0	0	0	0	3	6.67	18	40
9	J.% K.	45	13	28.89	32	71.11	3	6.67	17	37.78	10	22.22	5	11.11	12	26.67
10	Karnataka	60	16	26.67	44	73.33	6	10	8	13.33	23	38.33	31	51.67	6	10
11	Kerala	45	4	8.89	41	91.11	27	60	30	66.67	33	73.33	15	33.33	13	28.89
12	Madhya Pradesh	135	4	2.96	131	97.04	11	8.15	27	20	111	82.22	50	37.04	34	25.19
13	Maharashtra	90	19	21.11	71	78.89	11	12.22	11	12.22	62	68.89	13	14.44	10	11.11
14	Manipur	15	15	100	0	0	0	0	0	0	0	0	0	0	0	0
15	Meghalaya	15	5	33.33	10	66.67	0	0	6	40	0	0	1	6.67	7	46.67
16	Mizoram	15	1	6.67	14	93.33	0	0	14	93.33	0	0	0	0	0	0
17	Nagaland	15	0	0	15	100	0	0	14	93.33	1	6.67	2	13.33	3	20
18	Orissa	90	8	8.89	82	91.11	25	27.78	49	54.44	49	54.44	16	17.78	42	46.67
19	Punjab	45	1	2.22	44	97.78	0	0	27	60	0	0	37	82.22	8	17.78
20	Rajasthan	90	2	2.22	88	97.78	14	15.56	26	28.89	39	43.33	26	28.89	11	12.22
21	Sikkim	15	6	40	9	60	0	0	6	40	0	0	0	0	3	20
22	Tamil Nadu	75	0	0	75	100	40	53.33	32	42.67	51	68	27	36	0	0
23	Tripura	15	1	6.67	14	93.33	10	66.67	10	66.67	3	20	6	40	14	93.33
24	Uttar Pradesh	180	1	0.56	179	99.44	9	5	113	62.78	8	4.44	131	72.78	29	16.11
25	West Bengal	45	2	4.44	43	95.56	31	68.89	16	35.56	2	4.44	27	60	21	46.67
	ALL India	1500	178	11.87	132	88.13	282	18.8	534	35.6	546	36.4	620	41.33	296	19.73

AVERAGE AREA SOWN UNDER FOODGRAIN CROPS DURING 1993-94 & 1994-95

S. No.	State	Area sown during 1993-94					Area sown during 1994-95				
		Irrigated area		Unirrigated area		Total area	Irrigated area		Unirrigated area		Total area
		Hect.	%	Hect.	%		Hect.	%	Hect.	%	
1	2	3	4	5	6	7	8	9	10	11	12
1	Andhra Pradesh	495.36	71.32	199.23	28.68	694.59	455.43	69.19	202.79	30.81	658.22
2	Arunachal Pradesh	69.64	35.09	128.81	64.91	198.45	68.11	33.34	136.2	66.66	204.32
3	Assam	22.66	14.29	135.91	85.71	158.57	24.98	14.59	146.17	85.41	171.15
4	Bihar	187.28	61.8	115.77	38.2	303.05	201.90	64.06	113.27	35.94	315.17
5	Goa	32.21	19.71	131.21	80.29	163.42	32.21	19.71	131.21	80.29	163.42
6	Gujarat	156.08	29.48	373.45	70.52	529.53	178.10	31.96	379.21	68.04	557.3
7	Haryana	836.64	92.03	72.44	7.97	909.08	824.83	92.02	71.53	7.98	896.36
8	Himachal Pradesh	28.63	25.88	82.02	74.12	110.65	27.96	25.93	79.87	74.07	107.83
9	J. & K.	63.67	18.29	284.47	81.71	348.14	66.08	18.62	288.75	81.38	354.83
10	Karnataka	149.83	29.11	364.92	70.89	514.75	126.85	22.01	449.56	77.99	576.41
11	Kerala	634.18	59.08	439.18	40.92	1073.36	629.27	60.59	409.3	39.41	1038.56
12	Madhya Pradesh	180.23	37.64	298.64	62.36	478.87	196.87	38.99	308.08	61.01	504.95
13	Maharashtra	73.04	12.03	534.15	87.97	607.19	78.74	12.98	527.67	87.02	606.41
14	Manipur	0	0	282.67	100	282.67	0.00	0	282.67	100	282.67
15	Meghalaya	5.87	8.46	63.47	91.54	69.33	12.80	18.34	57	81.66	69.8
16	Mizoram	68.27	46.5	78.54	53.5	146.82	69.46	49.23	71.64	50.77	141.09
17	Nagaland	249.13	50.07	248.47	49.93	497.6	171.97	52.55	155.3	47.45	327.27
18	Orissa	86.57	36.99	147.48	63.01	234.05	86.83	38.55	138.43	61.45	225.26
19	Punjab	1050.81	97.21	30.20	2.79	1081.01	1055.43	97.63	25.62	2.37	1081.05
20	Rajasthan	151.4	30.97	337.46	69.03	488.86	169.92	30.99	378.47	69.01	548.39
21	Sikkim	15.86	13.15	104.74	86.85	120.59	15.86	13.61	100.65	86.39	116.51
22	TamilNadu	241.71	71.42	96.71	28.58	338.42	43.79	69.48	107.10	30.52	350.89
23	Tripura	141.59	39.67	215.32	60.33	356.91	144.82	40.42	213.51	59.58	358.33
24	Uttar Pradesh	197.29	78.29	54.71	21.71	252.00	201.19	80.30	49.36	19.70	250.55
25	West Bengal	238.77	47.78	260.96	52.22	499.73	242.64	48.01	262.73	51.99	505.37
	All India	5376.71	51.41	5080.91	48.59	10457.62	5326.01	51.15	5086.10	48.85	10412.12

ANNEXURE 6**DISTRIBUTION OF SAMPLE VILLAGES ACCORDING TO THE CROPS****GROWN IN THE VILLAGES****(Based on data for 1993-94 & 1994-95)**

S. No.	State	No. of Sample Villages	NUMBER OF SAMPLE VILLAGES GROWING THE CROP											
			Paddy	Jowar	Bajra	Maize	Ragi	Wheat	Barley	Red Gram	Green Gram	Black Gram	Bengal Gram (Chana)	Lentil (Masur)
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
01	Andhra Pradesh	75	73	35	11	34	18	25	0	43	12	20	25	0
02	Arunachal Pradesh	30	30	0	0	17	0	18	0	4	17	8	0	5
03	Assam	75	74	0	0	27	0	51	0	32	6	61	0	37
04	Bihar	165	158	8	8	108	55	151	44	76	63	21	91	93
05	Goa	15	15	0	0	0	0	0	0	0	0	0	0	0
06	Gujarat	60	30	47	38	20	14	40	0	32	25	37	37	0
07	Haryana	45	39	15	21	26	0	45	18	6	10	11	21	32
08	Himachal Pradesh	45	32	0	2	45	16	45	19	1	4	16	24	10
09	J. & K.	45	41	0	17	38	0	45	0	0	15	36	36	0
10	Karnataka	60	35	39	13	13	28	30	0	34	17	5	35	0
11	Kerala	45	45	0	0	0	0	0	0	0	0	0	0	0
12	Madhya Pradesh	135	76	95	21	79	32	125	45	93	79	81	81	65
13	Maharashtra	90	50	65	46	27	21	72	0	59	45	44	44	12
14	Manipur	15	15	0	0	12	0	0	0	0	0	0	0	0
15	Meghalaya	15	15	0	0	0	0	0	0	0	0	0	0	0
16	Mizoram	15	15	0	0	15	0	0	0	0	0	0	0	0
17	Nagaland	15	15	0	0	14	0	0	0	0	0	0	0	0
18	Orissa	90	90	21	0	74	39	47	0	65	40	33	74	0
19	Punjab	45	43	0	18	21	0	45	27	16	23	5	27	20
20	Rajasthan	90	10	33	40	51	0	88	71	6	25	31	38	28
21	Sikkim	15	9	0	0	15	0	9	0	0	0	0	0	0
22	Tamil Nadu	75	73	38	18	10	21	0	0	30	18	35	22	0
23	Tripura	15	15	0	0	12	0	13	0	2	9	10	0	0
24	Uttar Pradesh	180	166	63	60	113	35	177	86	108	70	98	81	78
25	West Bengal	45	45	1	0	5	0	39	0	9	0	14	23	30
All India		1500	1209	460	313	776	279	1065	310	616	478	566	695	410

Annexure7

Average area Cultivated under selected crops (Hectares)

S. No.	State	Total No. of Sample villages	Av. area Cultivated	Average Area Cultivated under Selected Cereals (Hectares)															
				CEREALS															
				Paddy		Jowar		Bajra	Maize		Ragi		Wheat		Barley				
Area	%	Area	%	Area	%	Area	%	Area	%	Area	%	Area	%						
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18		
1	Andhra Pradesh	75	544.79	417.52	76.64	93.97	17.25	4.86	0.89	25.13	4.61	1.62	0.30	1.69	0.31	0.00	0.00		
2	Arunachal Pradesh	30	198.80	182.51	91.81	0.00	0.00	0.00	0.00	14.52	7.30	0.00	0.00	1.03	0.52	0.00	0.00		
3	Assam	75	145.86	128.16	87.87	0.00	0.00	0.00	0.00	1.28	0.88	0.00	0.00	10.31	7.07	0.00	0.00		
4	Bihar	165	270.22	142.63	52.78	3.05	1.13	0.07	0.03	19.01	7.04	3.69	1.37	99.06	36.66	2.73	1.01		
5	Goa	15	163.42	138.42	84.70	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
6	Gujarat	60	471.74	75.00	15.90	89.46	18.96	186.00	39.43	68.41	14.50	0.35	0.07	48.19	10.22	0.00	0.00		
7	Haryana	45	841.15	246.19	29.27	9.56	1.14	43.20	5.14	7.44	0.88	0.00	0.00	527.40	62.70	7.27	0.86		
8	Himachal Pradesh	45	106.15	10.61	10.00	0.00	0.00	0.00	0.00	42.67	40.20	1.22	1.15	52.43	49.39	0.38	0.36		
9	J. & K.	45	337.52	78.06	23.13	0.00	0.00	9.96	2.95	79.02	23.41	0.00	0.00	166.70	49.39	0.00	0.00		
10	Karnataka	60	492.72	172.35	34.98	203.22	41.24	23.70	4.81	4.55	0.92	45.74	9.28	36.02	7.31	0.00	0.00		
11	Kerala	45	998.56	998.56	100.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
12	Madhya Pradesh	135	357.42	84.28	23.58	50.73	14.19	5.64	1.58	27.71	7.75	0.25	0.07	185.10	51.79	3.82	1.07		
13	Maharashtra	90	474.03	60.25	12.71	274.58	57.92	82.60	17.43	12.29	2.59	0.42	0.09	43.47	9.17	0.00	0.00		
14	Manipur	15	282.67	258.67	91.51	0.00	0.00	0.00	0.00	12.00	4.25	0.00	0.00	12.00	4.25	0.00	0.00		
15	Meghalaya	15	69.80	69.80	100.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
16	Mizoram	15	141.09	118.85	84.24	0.00	0.00	0.00	0.00	22.25	15.77	0.00	0.00	0.00	0.00	0.00	0.00		
17	Nagaland	15	318.20	278.29	87.46	0.00	0.00	0.00	0.00	30.05	9.44	0.00	0.00	6.47	2.03	0.00	0.00		
18	Orissa	90	190.49	169.25	88.85	0.83	0.44	0.00	0.00	9.82	5.16	8.47	4.45	1.20	0.63	0.00	0.00		
19	Punjab	45	1065.79	427.99	40.16	0.00	0.00	8.82	0.83	30.42	2.85	0.00	0.00	575.44	53.99	13.73	1.29		
20	Rajasthan	90	483.29	2.69	0.56	39.90	8.26	2.21	0.46	64.13	13.27	0.00	0.00	138.40	28.64	17.32	3.58		
21	Sikkim	15	116.51	15.15	13.00	0.00	0.00	0.00	0.00	64.92	55.72	0.00	0.00	17.77	15.25	0.00	0.00		
23	Tamil Nadu	75	323.54	218.84	67.64	84.03	25.97	2.54	0.79	11.92	3.68	6.87	2.12	0.04	0.01	0.00	0.00		
24	Tripura	15	339.51	329.29	96.99	0.00	0.00	0.00	0.00	3.42	1.01	0.00	0.00	6.80	2.00	0.00	0.00		
25	Uttar Pradesh	180	215.97	67.75	31.37	7.58	3.51	5.42	2.51	14.22	6.58	1.34	0.62	115.90	53.66	4.38	2.03		
25	West Bengal	45	495.86	448.31	90.41	0.09	0.02	0.00	0.00	6.69	1.35	0.00	0.00	40.80	8.23	0.00	0.00		
	All India	1500	377.80	175.48	46.45	45.63	12.08	16.87	4.47	22.90	6.06	3.43	0.91	97.75	25.87	2.85	0.75		

Annexure 7 continued

S.No.	State	No of sample villages	Average Cultivated Area	Red gram		Green gram		Black gram		Bengal Gram		Lentil	
				Area	%	Area	%	Area	%	Area	%	Area	%
1	2	3	4	5	6	7	8	9	10	11	12	13	14
	1 Andhra Pradesh	75	544.79	24.65	4.52	47.37	8.70	39.34	7.22	2.08	0.38	0.00	0.00
	2 Arunachal Pradesh	30	198.80	0.88	0.44	2.59	1.30	1.83	0.92	0.00	0.00	0.22	0.11
	3 Assam	75	145.86	1.68	1.15	1.23	0.84	5.58	3.83	0.00	0.00	4.26	2.92
	4 Bihar	165	270.22	2.81	1.04	17.28	6.39	3.08	1.14	9.64	3.57	11.76	4.35
	5 Goa	15	163.42	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	6 Gujarat	60	471.74	19.70	4.18	26.60	5.64	18.19	3.86	18.41	3.90	0.00	0.00
	7 Haryana	45	841.15	0.76	0.09	1.84	0.22	1.84	0.22	47.59	5.66	1.12	0.13
	8 Himachal Pradesh	45	106.15	0.00	0.00	0.20	0.19	1.18	1.11	0.22	0.21	1.22	1.15
	9 J. & K.	45	337.52	0.41	0.12	2.16	0.64	9.68	2.87	3.83	1.13	0.00	0.00
	10 Karnataka	60	492.72	30.68	6.23	10.81	2.19	3.48	0.71	38.23	7.76	0.00	0.00
	11 Kerala	45	998.56	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	12 Madhya Pradesh	135	357.42	8.55	2.39	5.18	1.45	18.88	5.28	96.44	26.98	18.48	5.17
	13 Maharashtra	90	474.03	50.28	10.61	22.69	4.79	20.20	4.26	22.82	4.81	0.04	0.01
	14 Manipur	15	282.67	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	15 Meghalaya	15	69.80	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	16 Mizoram	15	141.09	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	17 Nagaland	15	318.20	6.93	2.18	0.08	0.03	0.00	0.00	0.00	0.00	0.00	0.00
	18 Orissa	90	190.49	4.47	2.35	17.45	9.16	10.48	5.50	1.78	0.93	0.00	0.00
	19 Punjab	45	1065.79	2.25	0.21	10.09	0.95	0.20	0.02	1.50	0.14	1.39	0.13
	20 Rajasthan	90	483.29	0.02	0.00	27.61	5.71	6.00	1.24	28.64	5.93	2.82	0.58
	21 Sikkim	15	116.51	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	22 Tamil Nadu	75	323.54	4.78	1.48	3.29	1.02	5.53	1.71	3.85	1.19	0.00	0.00
	23 Tripura	15	339.51	2.27	0.67	6.66	1.96	7.13	2.10	0.00	0.00	0.00	0.00
	24 Uttar Pradesh	180	215.97	8.91	4.13	1.82	0.84	2.88	1.33	13.92	6.45	7.10	3.29
	25 West Bengal	45	495.86	0.00	0.00	1.14	0.23	2.53	0.51	2.37	0.48	2.61	0.53
	All India	1500	377.80	9.22	2.44	11.32	3.00	8.54	2.26	18.83	4.98	4.39	1.16

**STATEWISE-CATEGORYWISE DISTRIBUTION OF AVERAGE NUMBER OF SAMPLE
CULTIVATORS PER VILLAGE**

S.No.	State	No. of samples villages	Av. No. of cultivators	Categorywise Average number of cultivators per village					
				Small	%	Medium	%	Large	%
1	2	3	4	5	6	7	8	9	10
1	Andhra Pradesh	75	491	339	69	108	22	44	9
2	Arunachal Pradesh	30	87	53	61	22	25	12	14
3	Assam	75	126	81	64	30	23	15	12
4	Bihar	165	140	94	67	31	22	15	10
5	Goa	15	2067	1699	82	296	14	72	3
6	Gujarat	60	208	159	47	32	10	17	5
7	Haryana	45	241	159	66	56	23	26	11
8	Himachal Pradesh	45	121	83	67	26	21	12	10
9	J. & K.	45	176	108	61	43	25	25	14
10	Karnataka	60	182	112	62	47	26	23	12
11	Kerala	45	718	433	60	192	27	93	13
12	Madhya Pradesh	135	313	221	71	65	21	27	8
13	Maharashtra	90	448	292	62	107	23	49	11
14	Manipur	15	196	103	53	57	29	36	19
15	Meghalaya	15	101	78	77	16	16	7	7
16	Mizoram	15	136	78	57	37	27	21	16
17	Nagaland	15	239	132	55	66	28	41	17
18	Orissa	90	154	94	61	40	26	20	13
19	Punjab	45	190	120	63	47	25	23	12
20	Rajasthan	90	203	136	67	44	22	23	11
21	Sikkim	15	108	84	77	17	16	7	7
22	Tamil Nadu	75	241	158	66	57	24	26	11
23	Tripura	15	437	295	67	95	22	47	11
24	Uttar Pradesh	180	195	141	71	37	19	17	9
25	West Bengal	45	326	215	66	75	23	36	11
	All India	1500	314	219	70	66	21	29	9

Annexure 9**DISTRIBUTION OF SAMPLE VILLAGES ON THE BASIS OF DISTANCE TO THE NEAREST****MARKET**

S.No.	State	Total number of sample villages	Number of sample villages at a distance of						Av. Dist.of nearest market (Km.)
			Less than 5kms	5-10 kms	10-15 kms	15-20 kms	20-25 kms	More than 25 kms	
1	2	3	4	5	6	7	8	9	10
1	Andhra Pradesh	75	14	16	19	15	6	5	11.11
2	Arunachal Pradesh	30	10	5	6	3	3	3	12.5
3	Assam	75	52	18	5	0	0	0	4.19
4	Bihar	165	82	44	26	8	2	3	5.96
5	Goa	15	2	5	6	1	0	1	10.2
6	Gujarat	60	18	6	13	5	7	11	14.5
7	Haryana	45	11	14	13	3	3	1	8.81
8	Himachal Pradesh	45	45	0	0	0	0	0	0
9	J. % K.	45	30	7	2	4	2	0	3.98
10	Karnataka	60	5	9	14	13	9	10	16.04
11	Kerala	45	21	14	8	1	0	1	5.71
12	Madhya Pradesh	135	21	34	31	26	10	13	12.74
13	Maharashtra	90	19	29	13	10	5	14	13.17
14	Manipur	15	5	8	1	1	0	0	6.8
15	Meghalaya	15	7	6	2	0	0	0	4.83
16	Mizoram	15	6	2	0	0	2	5	21.93
17	Nagaland	15	5	2	2	2	2	2	12.4
18	Orissa	90	54	22	11	3	0	0	4.57
19	Punjab	45	18	15	8	4	0	0	6.77
20	Rajasthan	90	6	8	21	11	15	29	20.14
21	Sikkim	15	4	2	5	0	1	3	12.67
22	Tamil Nadu	75	12	22	26	10	4	1	9.97
23	Tripura	15	11	2	2	0	0	0	3.27
24	Uttar Pradesh	180	72	44	42	17	3	2	7.54
25	West Bengal	45	23	17	4	0	1	0	5.67
	All India	1500	553	351	280	137	75	104	9.36

Annexure – 10

DISTRIBUTION OF SAMPLE VILLAGES AS PER THE CONDITION OF THE FEEDER ROAD

S.No.	State	Total number of sample villages	Number of sample villages connected to The nearest market by					
			Pucca road		Kutcha road		Partly kutcha/pucca	
			Number of villages	%	Number of villages	%	Number of villages	%
1	2	3	4	5	6	7	8	9
1	Andhra Pradesh	75	53	70.67	4	5.33	18	24
2	Arunachal Pradesh	30	18	60	6	20	6	20
3	Assam	75	9	12	28	37.33	38	50.67
4	Bihar	165	49	29.7	39	23.64	77	46.67
5	Goa	15	15	100	0	0	0	0
6	Gujarat	60	51	85	1	1.67	8	13.33
7	Haryana	45	43	95.56	0	0	2	4.44
8	Himachal Pradesh	45	0	0	0	0	45	100
9	Jammu and Kashmir	45	10	22.22	5	11.11	30	66.67
10	Karnataka	60	30	50	2	3.33	28	46.67
11	Kerala	45	29	64.44	0	0	16	35.56
12	Madhya Pradesh	135	76	56.3	12	8.89	47	34.81
13	Maharashtra	90	77	85.56	0	0	13	14.44
14	Manipur	15	3	20	1	6.67	11	73.33
15	Meghalaya	15	6	40	4	26.67	5	33.33
16	Mizoram	15	11	73.33	0	0	4	26.67
17	Nagaland	15	9	60	1	6.67	5	33.33
18	Orissa	90	44	48.89	7	7.78	39	43.33
19	Punjab	45	43	95.56	0	0	2	4.44
20	Rajasthan	90	75	83.33	0	0	15	16.67
21	Sikkim	15	8	53.33	6	40	1	6.67
22	Tamil Nadu	75	67	89.33	0	0	8	10.67
23	Tripura	15	3	20	3	20	9	60
24	Uttar Pradesh	180	104	57.78	13	7.22	63	35
25	West Bengal	45	7	15.56	8	17.78	30	66.67
	All India	1500	840	56.00	140	9.33	520	34.67

Annexure 11

DISTRIBUTION OF SAMPLE VILLAGES ACCORDING TO THE TYPE OF THE NEAREST MARKET

S. No.	State	Total number of sample villages	Number Of sample villages served by							
			Primary market		Secondary Market		Regulated Market		Unregulated Market	
			Number of villages	Percent to col.3	Number of villages	Percent to col.3	Number of villages	Percent to col.3	Number of villages	Percent to col.3
1	2	3	4	5	6	7	8	9	10	11
1	Andhra Pradesh	75	72	96	3	4	71	94.67	4	5.33
2	Arunachal Pradesh	30	30	100	0	0	3	10	27	90
3	Assam	75	66	88	9	12	1	1.33	73	97.33
4	Bihar	165	161	97.58	4	2.42	164	99.39	1	0.61
5	Goa	15	14	93.33	0	0	7	46.67	8	53.33
6	Gujarat	60	43	71.67	15	25	53	88.33	7	11.67
7	Haryana	45	41	91.11	4	8.89	43	95.56	1	2.22
8	Himachal Pradesh	45	0	0	0	0	0	0	0	0
9	J. & K.	45	30	66.67	15	33.33	1	2.22	44	97.78
10	Karnataka	60	59	98.33	1	1.67	58	96.67	2	3.33
11	Kerala	45	33	73.33	12	26.67	0	0	45	100
12	Madhya Pradesh	135	134	99.26	1	0.74	121	89.63	13	9.63
13	Maharashtra	90	79	87.78	11	12.22	90	100	0	0
14	Manipur	15	15	100	0	0	0	0	15	100
15	Meghalaya	15	15	100	0	0	0	0	15	100
16	Mizoram	15	10	66.67	5	33.33	3	20	12	80
17	Nagaland	15	9	60	6	40	0	0	15	100
18	Orissa	90	83	92.22	7	7.78	61	67.78	29	32.22
19	Punjab	45	25	55.56	20	44.44	31	68.89	14	31.11
20	Rajasthan	90	56	62.22	33	36.67	86	95.56	4	4.44
21	Sikkim	15	14	93.33	1	6.67	6	40	9	60
22	Tamil Nadu	75	66	88	9	12	56	74.67	19	25.33
23	Tripura	15	15	100	0	0	3	20	12	80
24	Uttar Pradesh	180	152	84.44	28	15.56	166	92.22	14	7.78
25	West Bengal	45	33	73.33	12	26.67	7	15.56	38	84.44
	All India	1500	1255	83.67	196	13.07	1031	68.73	421	28.07

Annexure 12**DISTRIBUTION OF SAMPLE VILLAGES ACCORDING TO TOTAL STORAGE CAPACITY****AVAILABLE IN THE VILLAGE**

S.No.	State	Total no. of sample villages	Number of sample villages having total storage capacity (Qtls.)											
			Below 200	200- 500	500- 1000	1000- 1500	1500- 2000	2000 - 2500	2500- 3000	3000- 3500	3500- 4000	4000- 4500	4500 - 5000	More than 5000
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
1	Andhra Pradesh	75	55	5	3	3	0	1	1	2	0	1	0	4
2	Arunachal Pradesh	30	13	5	5	3	2	0	0	1	0	0	0	1
3	Assam	75	17	10	9	15	2	4	4	2	2	2	4	4
4	Bihar	165	90	21	16	10	8	4	2	2	0	2	0	10
5	Goa	15	15	0	0	0	0	0	0	0	0	0	0	0
6	Gujarat	60	58	1	0	0	0	0	0	0	0	0	0	1
7	Haryana	45	44	0	0	0	0	0	0	0	0	0	0	1
8	Himachal Pradesh	45	21	10	10	3	0	1	0	0	0	0	0	0
9	J. & K.	45	45	0	0	0	0	0	0	0	0	0	0	0
10	Karnataka	60	53	0	2	2	1	0	0	1	0	1	0	0
11	Kerala	45	11	6	5	5	5	1	2	0	0	0	4	6
12	Madhya Pradesh	135	128	1	0	3	0	1	0	1	0	0	0	1
13	Maharashtra	90	54	0	9	16	0	1	1	1	0	0	3	5
14	Manipur	15	15	0	0	0	0	0	0	0	0	0	0	0
15	Meghalaya	15	15	0	0	0	0	0	0	0	0	0	0	0
16	Mizoram	15	15	0	0	0	0	0	0	0	0	0	0	0
17	Nagaland	15	5	1	1	0	0	0	1	1	0	0	0	6
18	Orissa	90	72	4	2	2	0	2	4	1	0	0	0	3
19	Punjab	45	45	0	0	0	0	0	0	0	0	0	0	0
20	Rajasthan	90	88	1	0	0	0	0	1	0	0	0	0	0
21	Sikkim	15	11	1	2	1	0	0	0	0	0	0	0	0
22	TamilNadu	75	64	1	4	0	1	0	0	0	1	0	0	4
23	Tripura	15	15	0	0	0	0	0	0	0	0	0	0	0
24	Uttar Pradesh	180	152	0	0	8	0	0	2	3	1	1	2	11
25	West Bengal	45	8	3	7	2	3	3	1	4	3	4	0	7
	All India	1500	1109	70	75	73	22	18	19	19	7	11	13	64

DISTRIBUTION OF SAMPLE VILLAGES ACCORDING TO AVAILABILITY OF INSTITUTIONAL**STORAGE FACILITIES IN THE VILLAGE**

.Sl. No.	State	Total No. of sample villages	Co-Op.		R. M.		C.W.C.		S.W.C		R.G.		Others	
			Number of villages	%	Number of villages	%	Number of villages	%	Number of villages	%	Number of villages	%	Number of villages	%
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
1	Andhra Pradesh	75	2	2.67	0	0	0	0	0	0	0	0	0	0
2	Arunachal Pradesh	30	0	0	0	0	0	0	0	0	0	0	0	0
3	Assam	75	2	2.67	0	0	0	0	0	0	2	2.67	0	0
4	Bihar	165	0	0	0	0	0	0	0	0	0	0	0	0
5	Goa	15	0	0	0	0	0	0	0	0	0	0	0	0
6	Gujarat	60	1	1.67	0	0	0	0	1	1.67	0	0	0	0
7	Haryana	45	1	2.22	0	0	0	0	1	2.22	0	0	0	0
8	Himachal Pradesh	45	0	0	0	0	0	0	0	0	0	0	0	0
9	J. & K.	45	0	0	0	0	0	0	0	0	0	0	0	0
10	Karnataka	60	7	11.7	0	0	0	0	0	0	0	0	2	3.3
11	Kerala	45	1	2.22	0	0	0	0	3	6.67	0	0	5	11
12	Madhya Pradesh	135	4	2.96	0	0	0	0	3	2.22	1	0.74	0	0
13	Maharashtra	90	29	32.2	0	0	0	0	1	1.11	3	3.33	3	3.3
14	Manipur	15	1	6.67	0	0	0	0	0	0	0	0	0	0
15	Meghalaya	15	0	0	0	0	0	0	0	0	0	0	0	0
16	Mizoram	15	0	0	0	0	0	0	0	0	0	0	0	0
17	Nagaland	15	0	0	0	0	0	0	0	0	0	0	0	0
18	Orissa	90	6	6.67	0	0	0	0	0	0	0	0	1	1.1
19	Punjab	45	0	0	0	0	0	0	0	0	0	0	0	0
20	Rajasthan	90	2	2.22	0	0	0	0	0	0	0	0	0	0
21	Sikkim	15	0	0	0	0	0	0	0	0	0	0	1	6.7
22	TamilNadu	75	9	12	0	0	0	0	2	2.67	0	0	0	0
23	Tripura	15	0	0	0	0	0	0	0	0	0	0	0	0
24	Uttar Pradesh	180	7	3.89	0	0	0	0	0	0	0	0	15	8.3
25	West Bengal	45	0	0	0	0	0	0	0	0	0	0	0	0
	All India	1500	72	4.8	0	0	0	0	11	0.76	6	0.4	27	1.8

Annexure 14

DISTRIBUTION OF SAMPLE VILLAGES ACCORDING TO TOTAL STORAGE CAPACITY AVAILABLE OUTSIDE THE VILLAGE BUT WITHIN A RADIUS OF 10 KMS

(STORAGE CAPACITY IN QUINTALS)

S. NO.	State	Number of sample villages	Number of Sample Villages Having Storage Facilities within a radius of 10 kms											
			Below 200	200 - 500	500- 1000	1000- 1500	1500- 2000	2000 - 2500	2500 - 3000	3000 - 3500	3500 - 4000	4000 - 4500	4500 - 5000	Above 5000
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
1	Andhra Pradesh	75	38	4	1	1	1	2	0	0	0	2	0	26
2	Arunachal Pradesh	30	30	0	0	0	0	0	0	0	0	0	0	0
3	Assam	75	63	3	1	0	2	2	0	2	0	0	0	2
4	Bihar	165	162	0	0	1	0	2	0	0	0	0	0	0
5	Goa	15	12	0	0	0	0	0	0	0	0	0	0	3
6	Gujarat	60	59	0	0	0	0	0	0	0	0	0	0	1
7	Haryana	45	12	0	0	0	0	0	0	0	0	0	0	33
8	Himachal Pradesh	45	45	0	0	0	0	0	0	0	0	0	0	0
9	J. & K.	45	44	1	0	0	0	0	0	0	0	0	0	0
10	Karnataka	60	43	1	3	5	3	2	0	0	0	0	0	3
11	Kerala	45	39	0	0	1	2	0	0	0	0	1	0	2
12	Madhya Pradesh	135	113	1	0	4	0	1	0	0	0	1	0	15
13	Maharashtra	90	39	5	1	12	0	3	3	1	0	1	0	25
14	Manipur	15	15	0	0	0	0	0	0	0	0	0	0	0
15	Meghalaya	15	15	0	0	0	0	0	0	0	0	0	0	0
16	Mizoram	15	15	0	0	0	0	0	0	0	0	0	0	0
17	Nagaland	15	15	0	0	0	0	0	0	0	0	0	0	0
18	Orissa	90	63	4	6	0	1	3	2	1	0	3	0	7
19	Punjab	45	39	0	0	0	0	0	0	0	0	0	0	6
20	Rajasthan	90	84	1	3	0	0	1	1	0	0	0	0	0
21	Sikkim	15	13	0	2	0	0	0	0	0	0	0	0	0
22	TamilNadu	75	35	3	4	6	1	0	0	0	1	2	0	23
23	Tripura	15	15	0	0	0	0	0	0	0	0	0	0	0
24	Uttar Pradesh	180	143	0	0	0	1	0	0	1	0	4	0	31
25	West Bengal	45	23	2	0	1	1	0	1	0	0	1	0	16
	All India	1500	1174	25	21	31	12	16	7	5	1	15	0	193

Annexure 15

DISTRIBUTION OF SAMPLE VILLAGES ACCORDING TO AVAILABILITY OF INSTITUTIONAL STORAGE FACILITIES OUTSIDE THE VILLAGE BUT WITHIN A RADIUS OF 10KMS.

S. No.	State	Total No. of sample villages	Co-Op.		R. M .		C.W.C.		S.W.C.		R.G.		Other s	
			No. of villages	%	No. of villages	%	No. of villages	%	No.of villages	%	No. of villages	%	No.of village	%
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
1	Andhra Pradesh	75	2	2.67	30	40.00	1	1.33	5	6.67	0	0	1	1.33
2	Arunachal Pradesh	30	0	0	0	0	0	0	0	0	0	0	0	0
3	Assam	75	10	13.33	0	0	0	0	1	1.33	0	0	0	0
4	Bihar	165	1	0.61	0	0	0	0	0	0	0	0	2	1.21
5	Goa	15	0	0	3	20.00	0	0	0	0	3	20.00	0	0
6	Gujarat	60	1	1.67	0	0	0	0	1	1.67	0	0	1	1.67
7	Haryana	45	3	6.67	1	2.22	5	11.11	30	66.67	0	0	2	4.44
8	Himachal Pradesh	45	0	0	1	2.22	0	0	0	0	0	0	0	0
9	J. & K.	45	1	2.22	0	0	0	0	0	0	0	0	0	0
10	Karnataka	60	9	15.00	9	15.00	0	0	5	8.83	0	0	1	1.67
11	Kerala	45	1	2.22	0	0.00	0	0.00	3	6.67	0	0.00	0	0.00
12	Madhya Pradesh	135	9	6.67	3	2.22	2	1.48	12	8.89	0	0.00	0	0.00
13	Maharashtra	90	37	41.44	11	12.22	0	0.00	11	12.22	1	1.11	4	4.44
14	Manipur	15	13	86.67	0	0	0	0	0	0	0	0	0	0
15	Meghalaya	15	0	0	0	0	0	0	0	0	0	0	0	0
16	Mizoram	15	0	0	0	0	0	0	0	0	0	0	0	0
17	Nagaland	15	0	0	0	0	0	0	0	0	0	0	0	0
18	Orissa	90	9	10.00	15	16.67	3	3.33	2	2.22	1	1.11	1	1.11
19	Punjab	45	0	0	0	0	0	0	0	0	0	0	0	0
20	Rajasthan	90	4	4.44	2	2.22	0	0.00	1	1.11	0	0	0	0
21	Sikkim	15	0	0	0	0	0	0	0	0	0	0	1	6.7
22	Tamil Nadu	75	17	22.67	22	29.33	5	6.67	4	5.33	2	2.67	0	00
23	Tripura	15	1	6.67	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00
24	Uttar Pradesh	180	15	8.33	19	10.56	4	2.22	9	5.00	1	0.56	1	0.56
25	West Bengal	45	2	4.44	2	4.44	0	0	0	0	0	0	0	0
	All India	1500	135	9.00	118	7.87	22	1.47	86	5.73	8	0.53	13	0.87

Annexure 16

AVERAGE INSTITUTIONAL STORAGE CAPACITY AVAILABLE PER SAMPLE VILLAGE

S.No.	State	AVERAGE INSTITUTIONAL STORAGE CAPACITY IN QUINTALS		
		IN THE VILLAGE	OUTSIDE THE VILLAGE	Total
1	Andhra Pradesh	920	44329	45249
2	Arunachal Pradesh	80	-	80
3	Assam	169	974	1143
4	Bihar	321	30	351
5	Goa	-	2000	2000
6	Gujarat	253	9367	9620
7	Haryana	578	106886	107464
8	Himachal Pradesh	187	0	187
9	J. & K.	-	11	11
10	Karnataka	175	12551	12726
11	Kerala	2423	961	3384
12	Madhya Pradesh	203	4586	4789
13	Maharashtra	1849	7483	9332
14	Manipur	7	87	94
15	Meghalaya	0	-	-
16	Mizoram	-	-	-
17	Nagaland	314	-	314
18	Orissa	706	4336	5042
19	Punjab	-	27845	27845
20	Rajasthan	32	91	123
21	Sikkim	93	508	601
22	TamilNadu	1131	486	1617
22	Tripura	-	7	7
24	Uttar Pradesh	293	8814	9107
25	West Bengal	596	2114	2710
	All India	10330	233466	243796

ANNEXURE 17**AVERAGE COST OF STORAGE IN SELECTED SAMPLE VILLAGES
IN SOME OF THE STATES****AVERAGE COST OF STORAGE (Rs/Qtl/Month)***

S.NO.	STATE	IN THE VILLAGE	OUTSIDE THE VILLAGE
1	2	3	4
1	Andhra pradesh	---	1.50-1.70
2	Assam	---	1.01
3	Bihar	7.50	7.50
4	Gujatar	1.00	1.00
5	Haryana	1.70	1.70
5	Karnataka	5.00	1.25-5.00
7	Kerala	2.50	1.50
8	Madhaya Pradesh	1.90	2.75
9	Maharashtra	2.10	2.15
10	Orissa	1.00	0.80-1.00
11	Punjab	-	1.45-1.80
12	Rajasthan	-	2.10
13	Sikkim	0.50	0.50
14	Tamil Nadu	0.70	1.50-3.50
15	Uttar Pradesh	3.30	1.90-3.30

*Rounded

Annexure 18

**DISTRIBUTION OF SAMPLE VILLAGES ACCORDING TO TOTAL NUMBER OF CULTIVATOR
HOUSEHOLD IN THE VILLAGES**

S. No.	State	Total No. of Sample Villages	NUMBER OF SAMPLE VILLAGES HAVING TOTAL CULTIVATOR HOUSEHOLDS							
			Below-50	50-100	101-200	201-300	301-400	401-500	>500	Average
1	2	3	4	5	6	7	8	9	10	11
1	Andhra Pradesh	75	0	2	17	9	12	5	30	490.83
2	Arunachal Pradesh	30	9	11	8	2	0	0	0	86.6
3	Assam	75	17	20	26	7	3	2	0	125.8
4	Bihar	165	29	47	56	22	4	5	2	140.28
5	Goa	15	0	0	2	0	0	1	12	2066.6
6	Gujarat	60	5	6	15	4	9	6	15	335.37
7	Haryana	45	6	13	11	5	3	1	6	240.49
8	Himachal Pradesh	45	8	16	11	7	3	0	0	123.56
9	J.% K.	45	3	8	19	11	3	0	1	176.18
10	Karnataka	60	10	14	15	10	6	3	2	181.7
11	Kerala	45	1	1	3	7	1	4	28	717.91
12	Madhya Pradesh	135	5	15	33	31	16	15	20	313.41
13	Maharashtra	90	1	13	21	11	13	7	24	467.81
14	Manipur	15	1	2	6	2	3	1	0	196.47
15	Meghalaya	15	5	7	1	1	0	1	0	101.33
16	Mizoram	15	2	4	8	0	1	0	0	136.87
17	Nagaland	15	1	1	5	3	3	1	1	238.87
18	Orissa	90	15	21	31	16	2	3	2	153.78
19	Punjab	45	5	12	13	7	3	2	3	190.6
20	Rajasthan	90	15	21	18	17	5	5	9	203.36
21	Sikkim	15	1	7	6	1	0	0	0	108.13
22	Tamil Nadu	75	6	13	21	11	10	6	8	241.37
23	Tripura	15	0	0	1	5	3	0	6	437.13
24	Uttar Pradesh	180	18	33	70	31	15	2	11	197.13
25	West Bengal	45	1	4	10	7	12	4	7	326.40
	All India	1500	164	291	427	227	130	74	187	258.42

ANNEXURE 19

AVERAGE MEMBERS PER FAMILY HOUSEHOLD

SL No	Name Of State	Small Category			Medium Category			Large Category			All Categories		
		Below 12 years	Above 12 years	Total Members per Family	Below 12 years	Above 12 years	Total Members per Family	Below 12 years	Above 12 years	Total Members per Family	Below 12 years	Above 12 years	Total Members per Family
1	2	3	4	5	6	7	8	9	10	11	12	13	14
01	Andhra Pradesh	0.70	4.29	4.99	0.84	4.90	5.74	0.76	5.00	5.76	0.77	4.73	5.50
02	Arunachal Pradesh	1.12	4.87	5.99	1.06	5.27	6.33	0.99	5.60	6.59	1.06	5.25	6.31
03	Assam	1.64	3.97	5.61	1.36	4.95	6.31	1.32	5.61	6.93	1.44	4.84	6.28
04	Bihar	1.62	4.74	6.36	1.78	5.38	7.16	1.73	6.10	7.83	1.71	5.41	7.12
05	Goa	0.80	4.98	5.78	0.53	6.04	6.57	0.82	5.71	6.53	0.72	5.58	6.30
06	Gujarat	0.61	4.27	4.88	0.48	4.61	5.09	0.54	4.70	5.24	0.54	4.53	5.07
07	Haryana	1.45	5.06	6.51	1.69	6.33	8.02	2.35	7.71	10.06	1.83	6.37	8.20
08	Himachal Pradesh	0.59	1.93	2.52	0.66	2.40	3.06	0.90	2.56	3.46	0.72	2.30	3.02
09	J. & K.	1.41	4.74	6.15	1.35	5.78	7.13	1.43	5.81	7.24	1.40	5.44	6.84
10	Karnataka	1.01	4.93	5.94	1.17	5.09	6.26	1.33	6.24	7.57	1.17	5.42	6.59
11	Kerala	0.46	4.43	4.89	0.42	4.61	5.03	0.54	4.66	5.20	0.47	4.57	5.04
12	Madhya Pradesh	1.36	4.71	6.07	1.39	5.70	7.09	1.56	6.63	8.19	1.44	5.68	7.12
13	Maharashtra	1.00	4.30	5.30	0.99	4.48	5.47	1.04	5.11	6.15	1.01	4.63	5.64
14	Manipur	1.25	4.80	6.05	1.69	4.78	6.47	1.44	5.78	7.22	1.46	5.12	6.58
15	Meghalaya	1.30	4.13	5.43	1.22	4.51	5.73	1.18	5.00	6.18	1.23	4.55	5.78
16	Mizoram	1.43	5.27	6.70	1.22	5.69	6.91	0.78	6.76	7.54	1.14	5.91	7.05
17	Nagaland	1.88	8.67	10.55	1.20	10.00	11.20	1.91	12.45	14.36	1.66	10.37	12.03
18	Orissa	1.39	4.76	6.15	1.42	5.33	6.75	1.59	6.00	7.59	1.47	5.36	6.83
19	Punjab	0.89	4.68	5.57	1.07	4.84	5.91	1.19	5.80	6.99	1.05	5.11	6.16
20	Rajasthan	1.51	5.63	7.14	1.39	6.34	7.73	1.69	6.30	7.99	1.53	6.09	7.62
21	Sikkim	0.83	4.15	4.98	0.69	4.33	5.02	0.71	4.40	5.11	0.74	4.29	5.03
22	TamilNadu	0.67	4.51	5.18	0.80	4.57	5.37	0.94	5.01	5.95	0.80	4.70	5.50
23	Tripura	1.08	4.40	5.48	1.11	5.11	6.22	1.42	5.96	7.38	1.20	5.16	6.36
24	Uttar Pradesh	1.57	5.17	6.74	1.56	5.69	7.25	1.60	6.12	7.72	1.58	5.66	7.24
25	West Bengal	0.92	4.48	5.40	1.14	5.36	6.50	1.08	6.26	7.34	1.05	5.37	6.42
	All India	1.14	4.71	5.85	1.13	5.28	6.41	1.23	5.89	7.12	1.17	5.30	6.45

Plate 1

Distribution Of Sample Villages According To Size Of Population

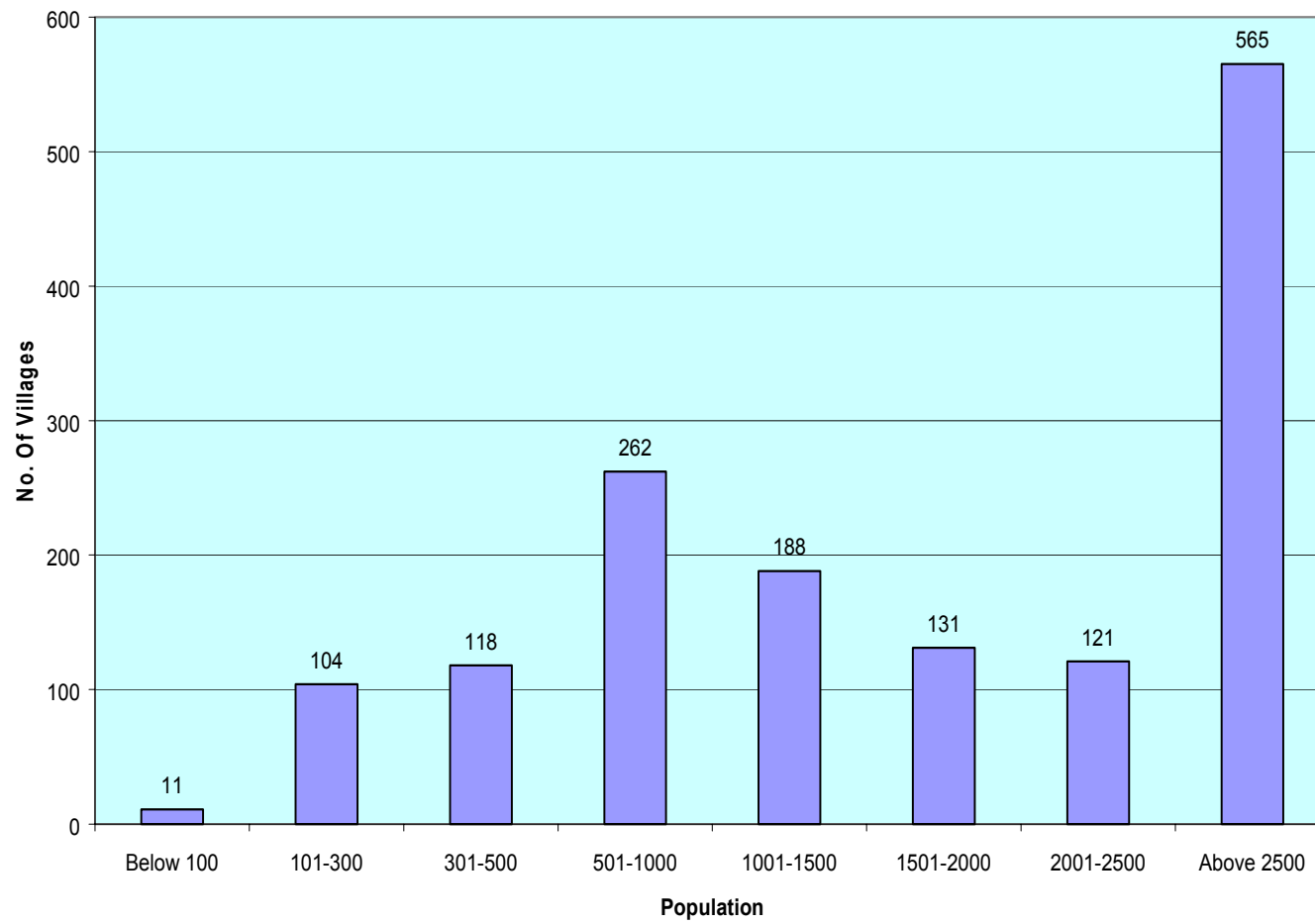


Plate 2

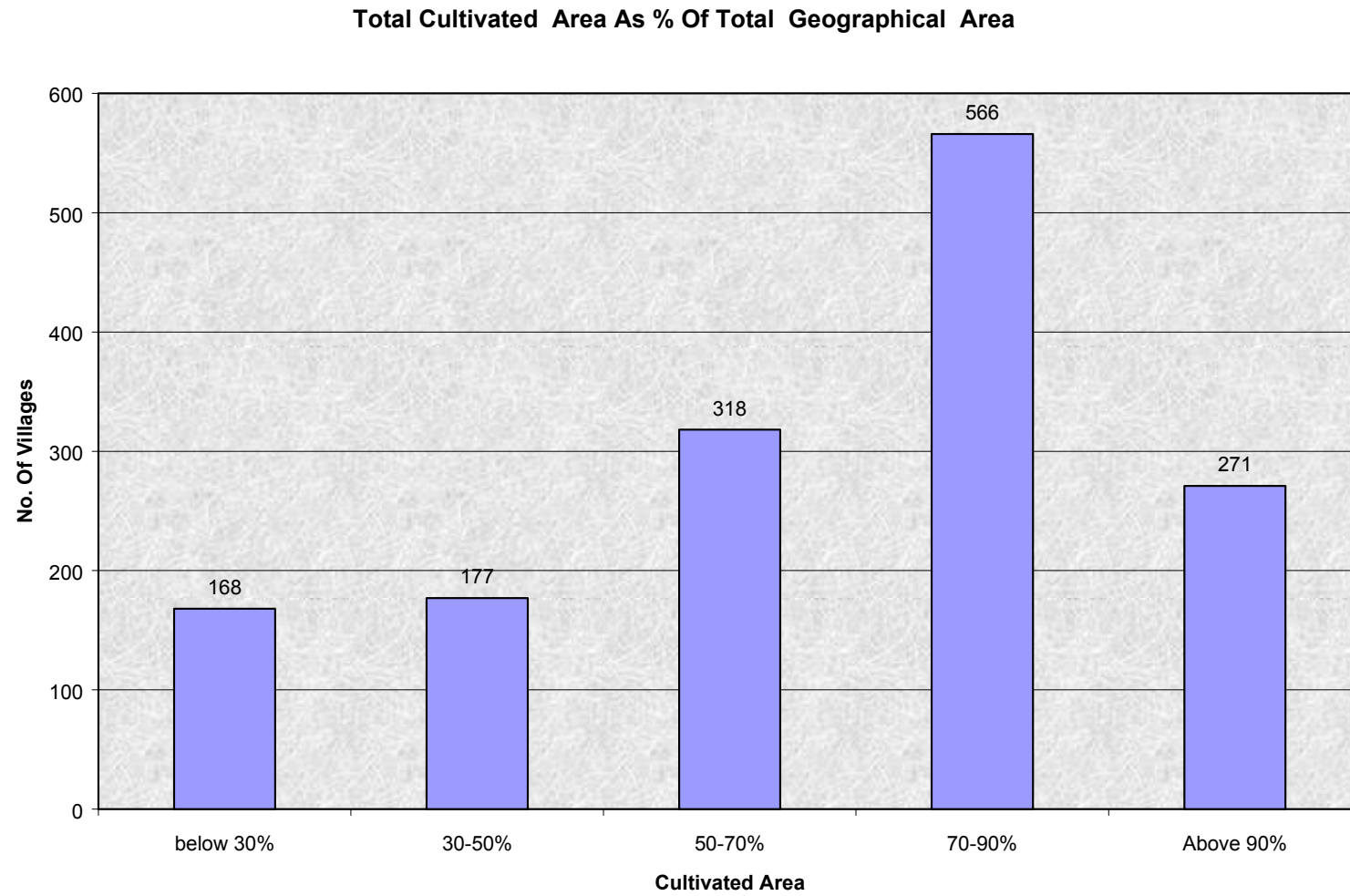


Plate 3

Average Area Sown Under Foodgrain Crops During 1993-94 and 1994-95

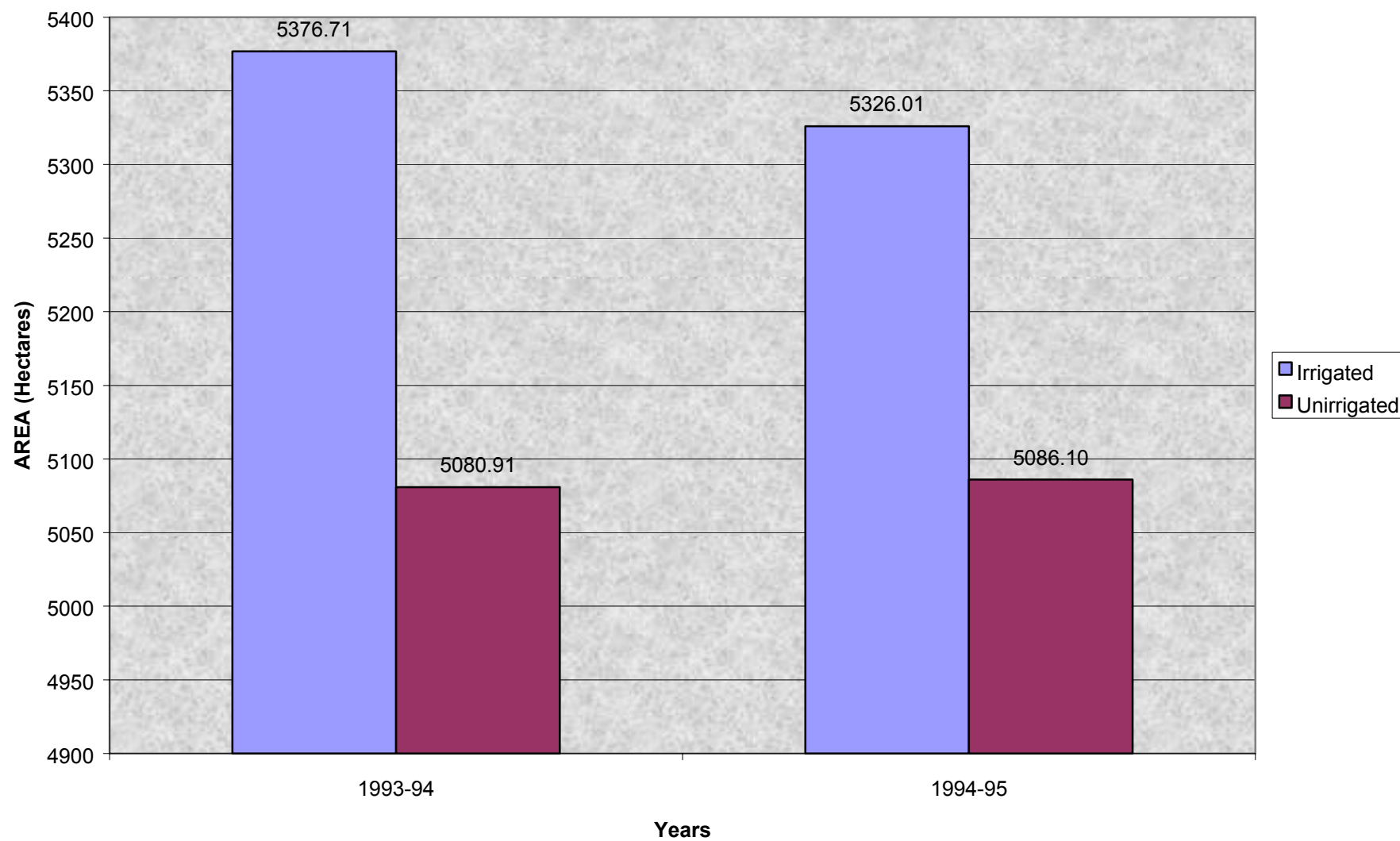
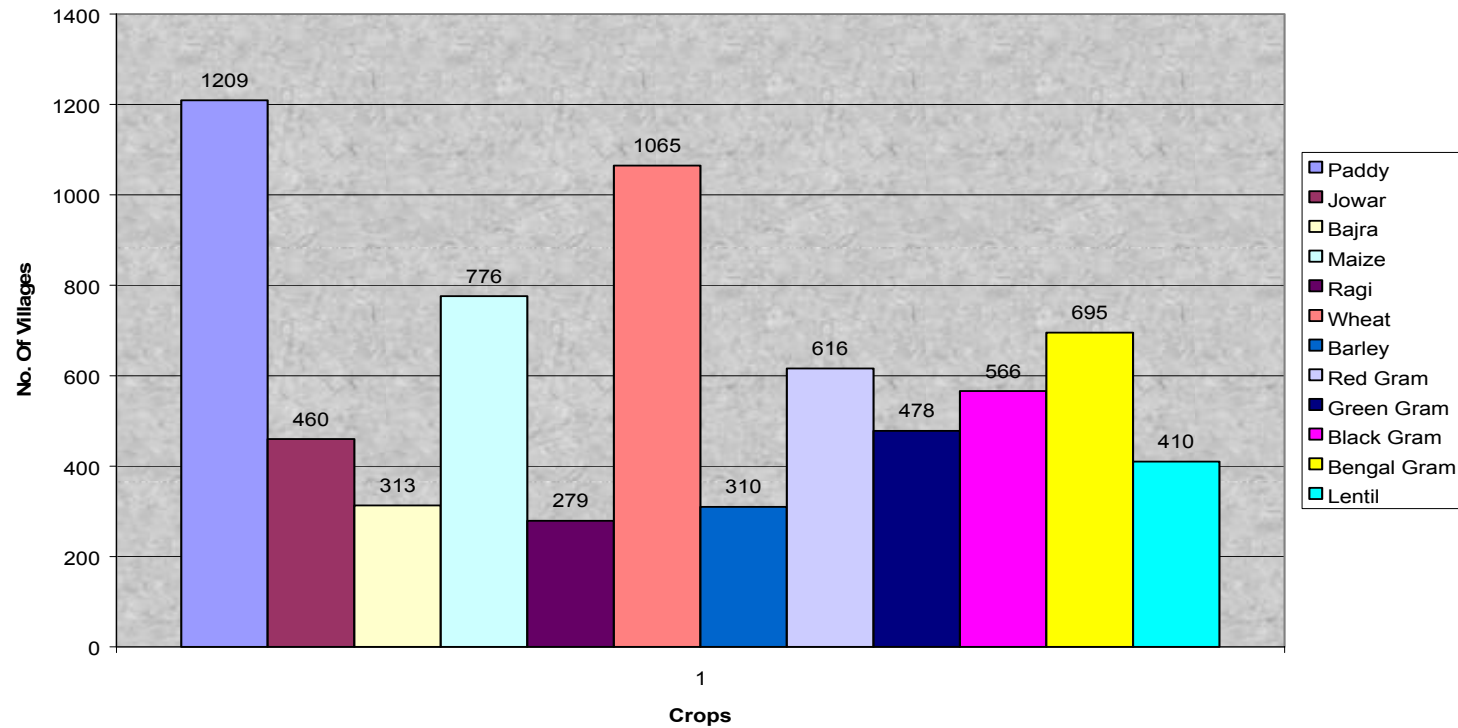


Plate 4

**Distribution Of Sample Villages According To The Crops Grown In The Villages.
Based On Average Data For 1993-94 and 1994-95**



Distribution Of Average No. Of Sample Cultivators Per Village

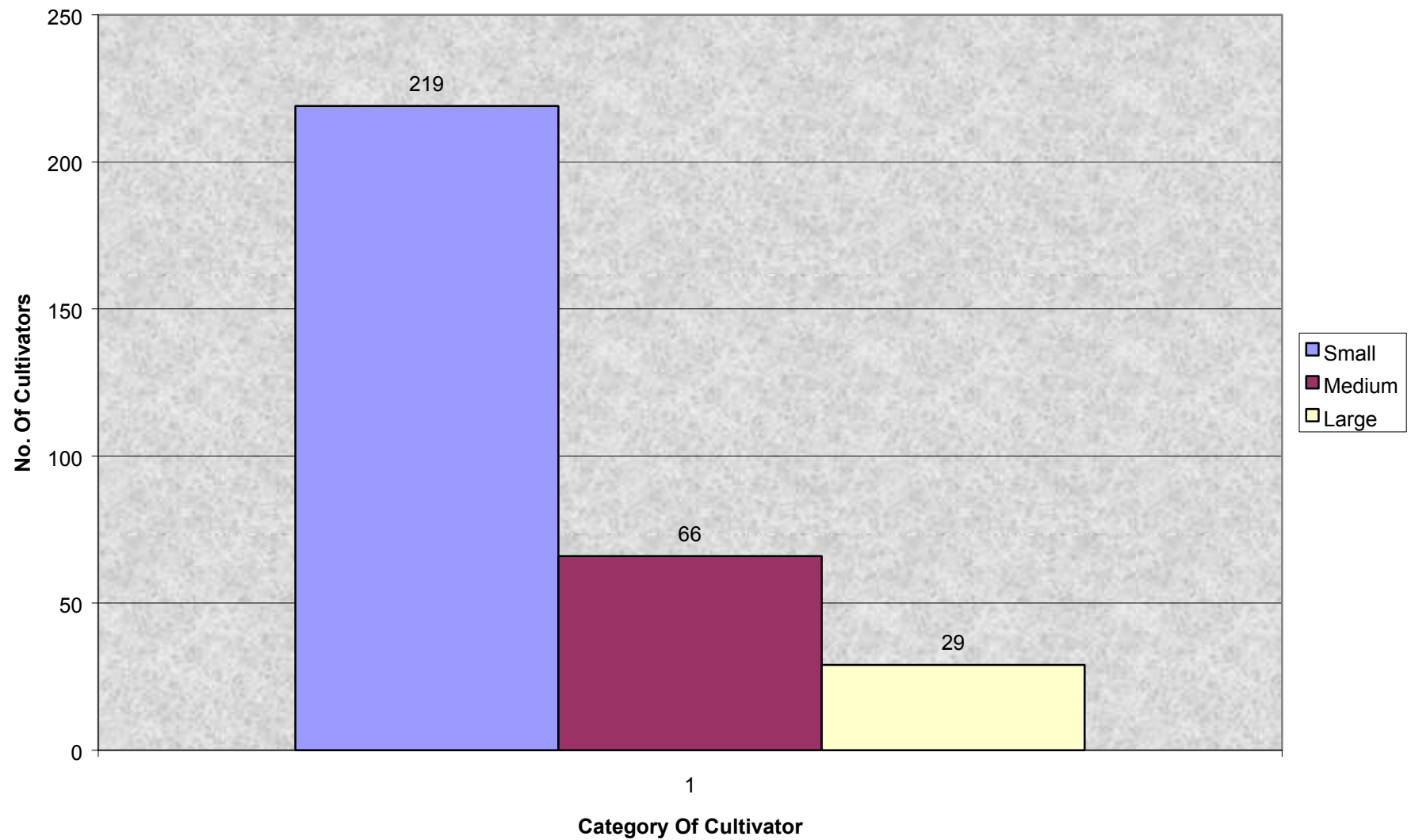
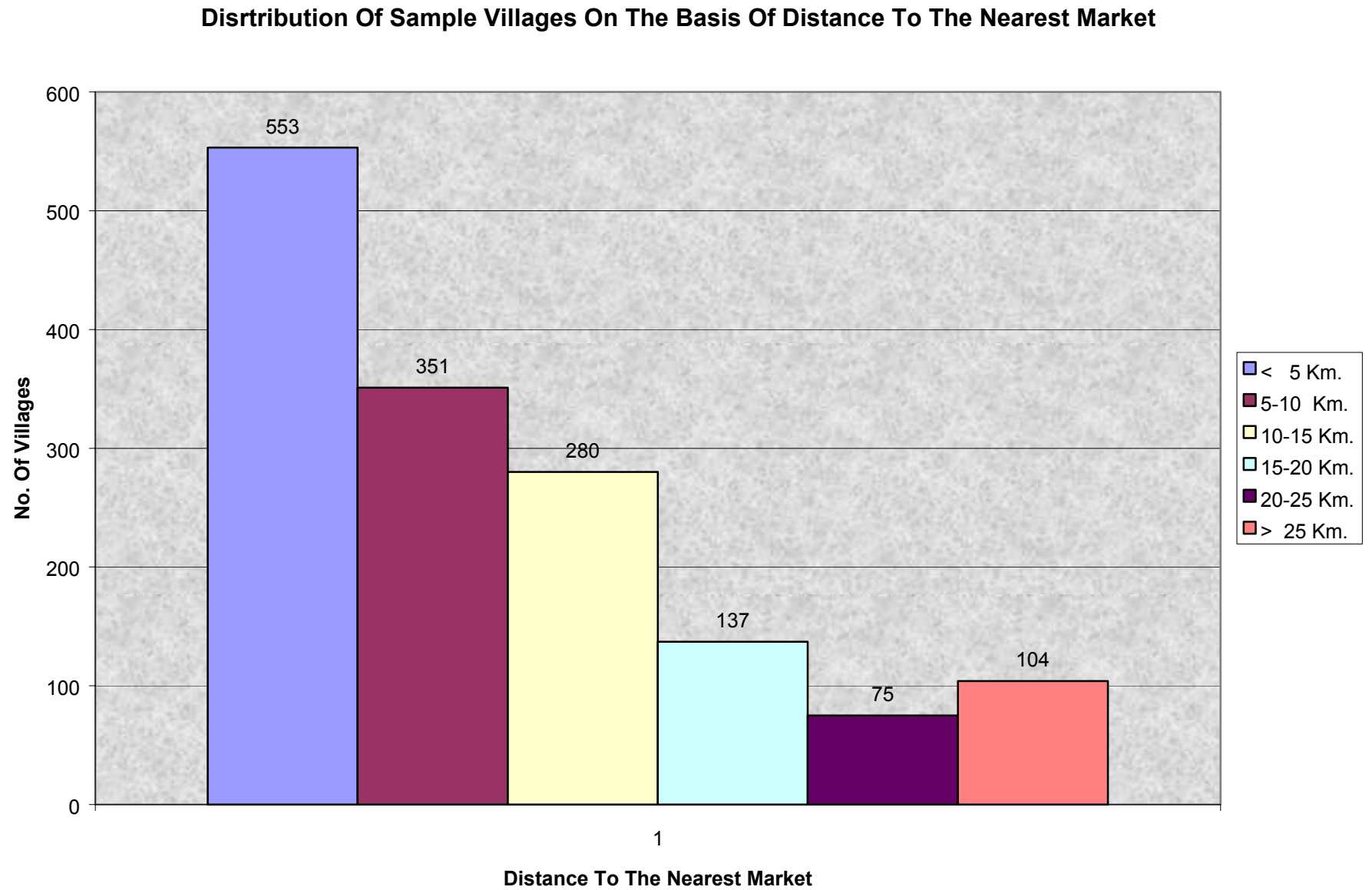
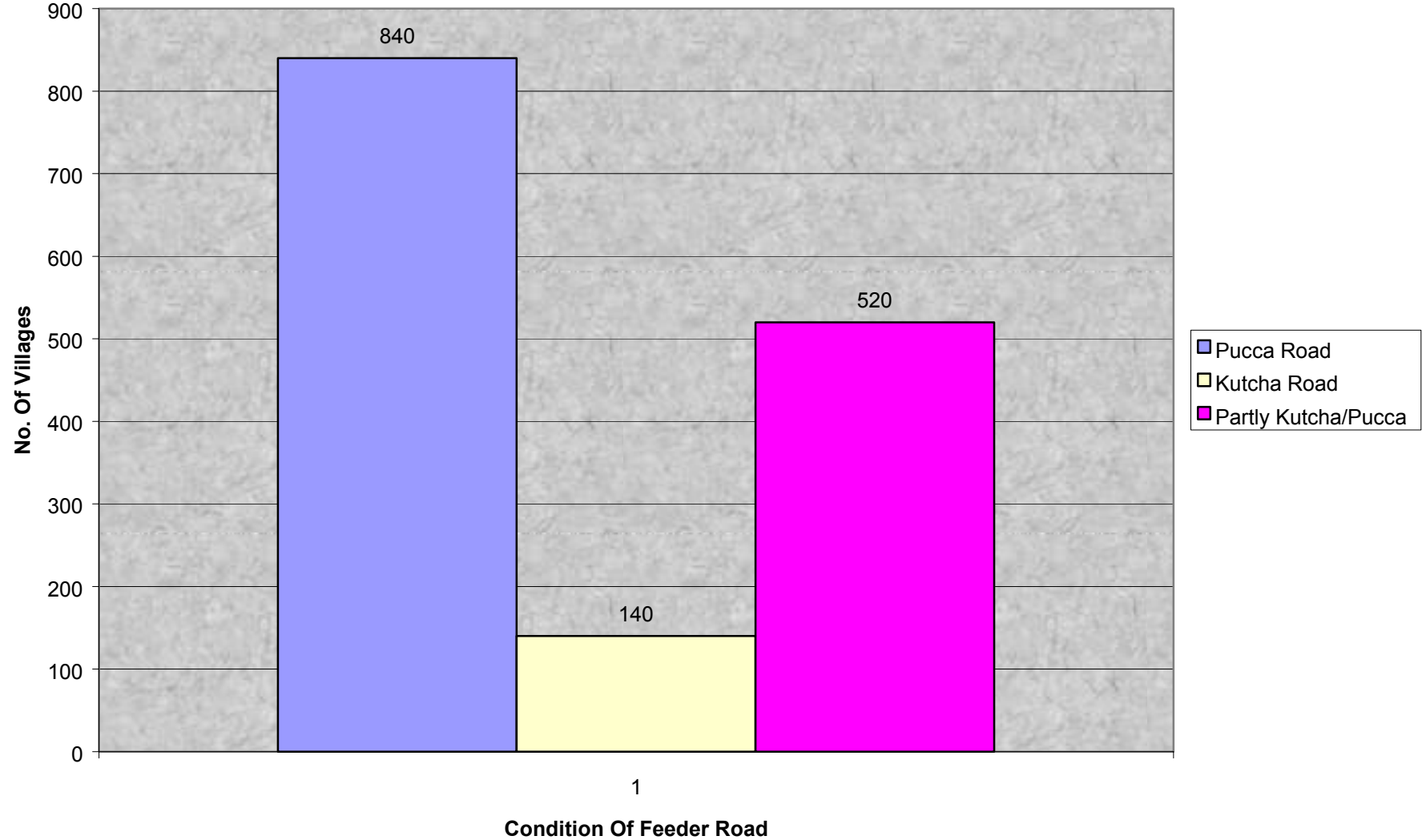


Plate 6



Distribution Of Sample Villages As Per The Condition Of The Feeder Road



Distribution Of Sample Villages According To The Type Of The Nearest Market

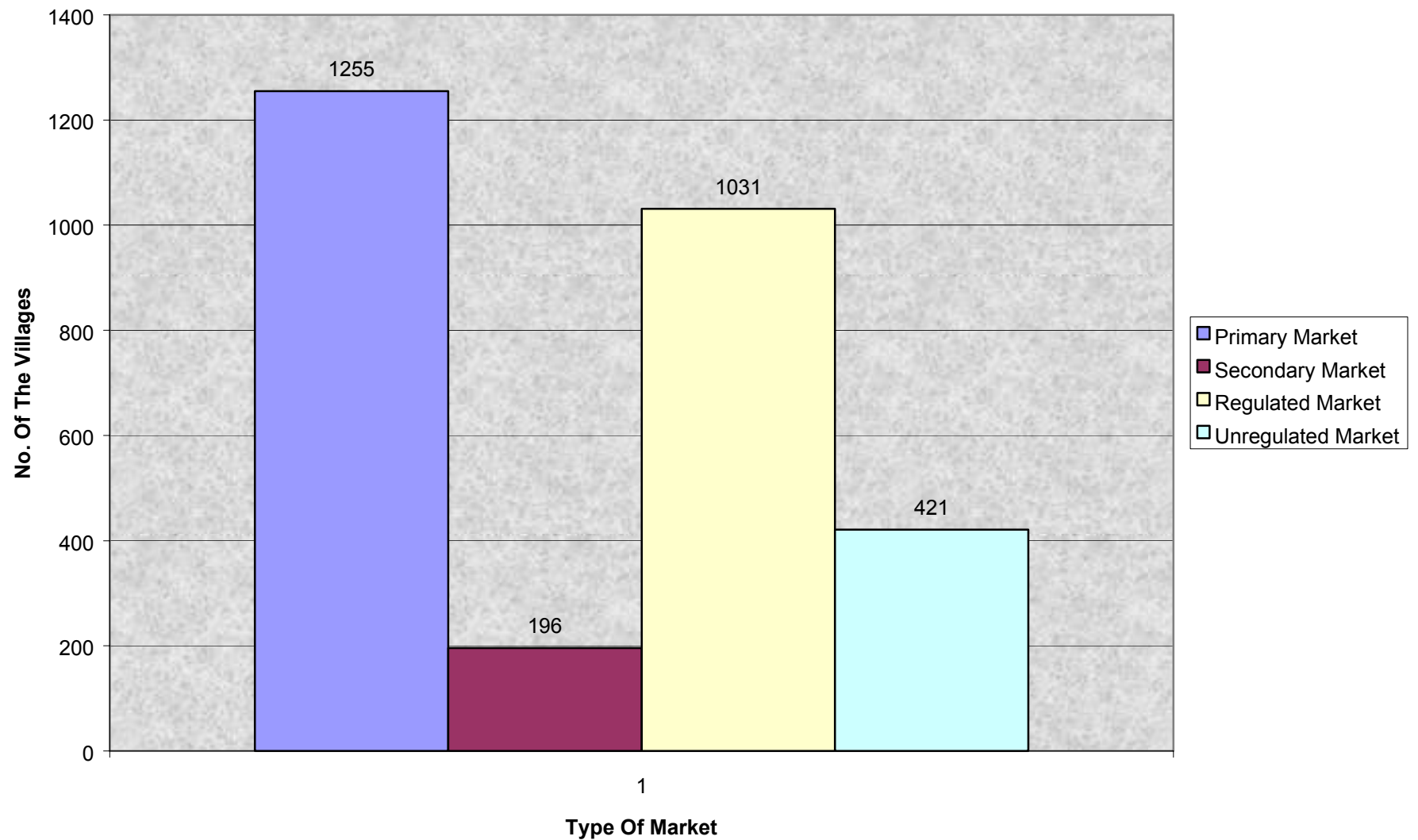
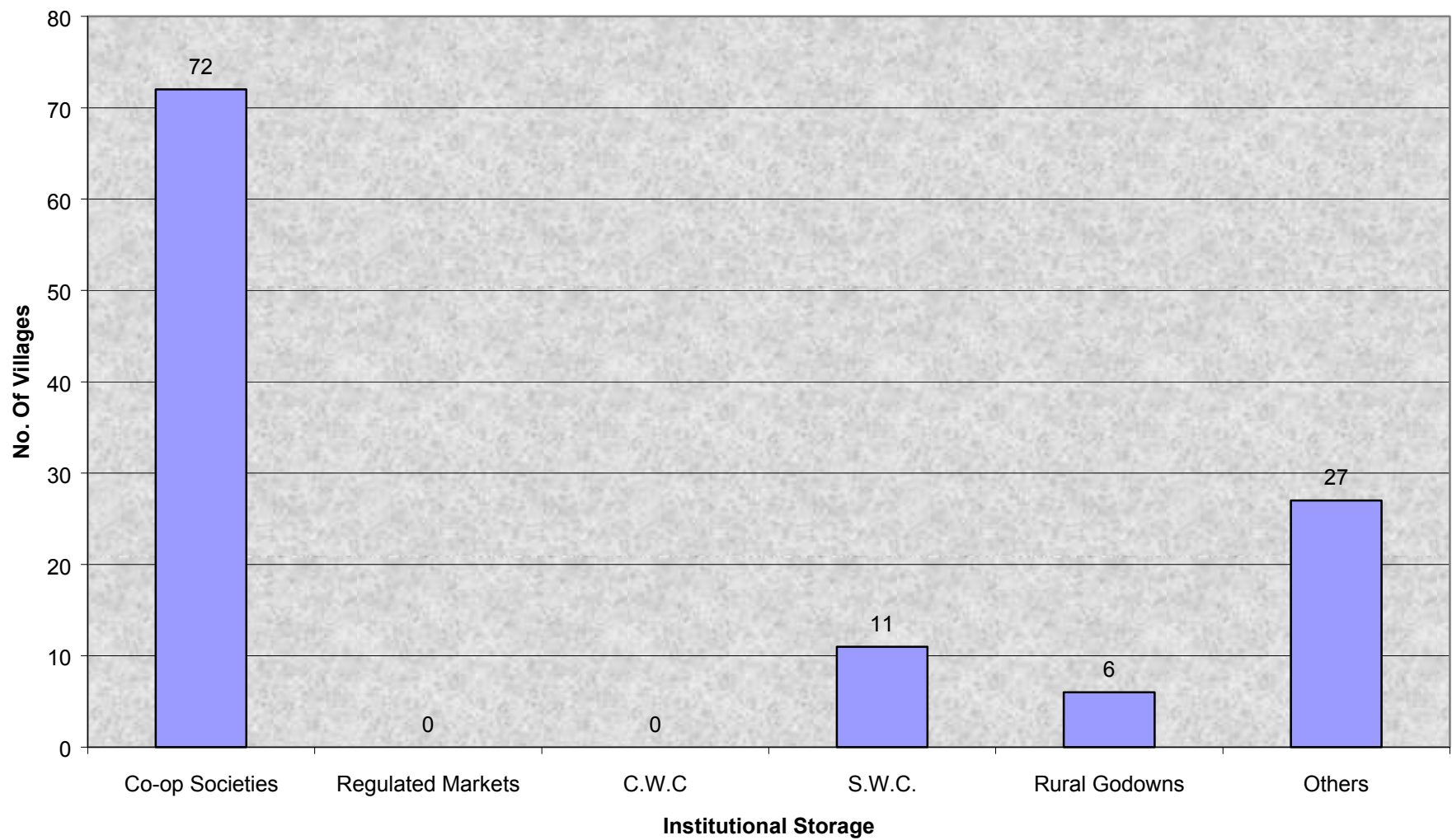
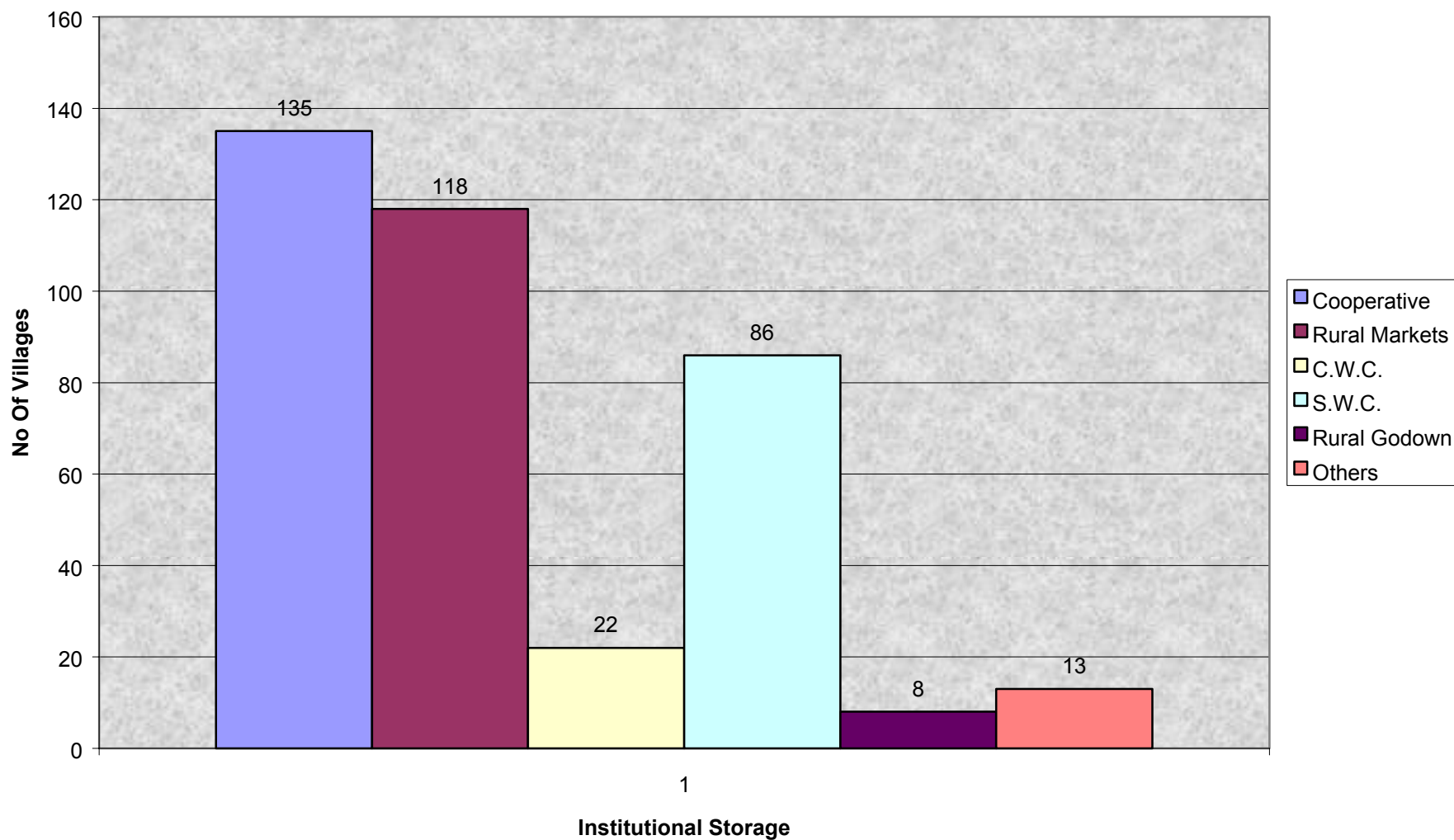


Plate 9

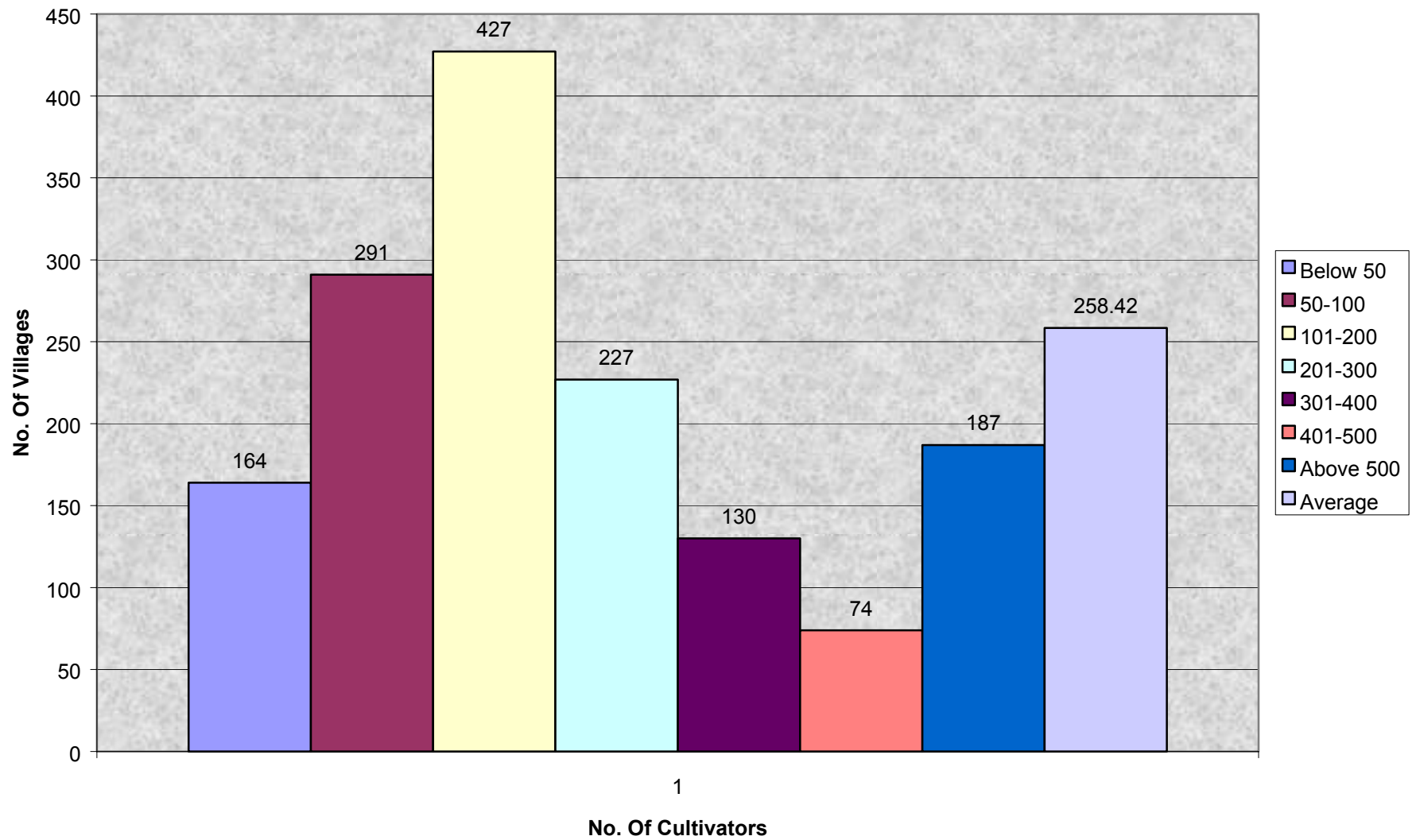
Distribution Of Sample Villages According To Availability Of Institutional Storage Facilities In The Village



**Distribution Of Sample villages According To Availability Of Institutional Storage Facilities
Outside The Village But Within a Radius Of 10 Kms.**



Distributiton Of Sample Villages According To Total No. Of Cultivators In The Villages



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