

# Sarvekshana

## सर्वेक्षण

JOURNAL OF  
THE NATIONAL SAMPLE SURVEY  
ORGANISATION



5-41

J-41  
13 12  
T

Vol. VIII, No. 2  
October 1984

V. VIII, No. 2  
oct. 1984

Department Of Statistics  
Ministry Of Planning  
GOVERNMENT OF INDIA



# SARVEKSHANA

*With the compliments of*  
**CHIEF EXECUTIVE OFFICER**  
**NATIONAL SAMPLE SURVEY ORGANISATION**  
*Department of Statistics, Ministry of Planning*  
*Sardar Patel Bhawan, Parliament Street, New Delhi-110001, India*



सत्यमेव जयते

Vol. VIII, No. 2

October 1984

Department of Statistics  
Ministry of Planning  
GOVERNMENT OF INDIA



**EDITORIAL ADVISORY BOARD**

1. Prof. B. S. Minhas
2. Prof. V. M. Dandekar
3. Dr. K. L. Krishna
4. Prof. P. Visaria
5. Prof. S. D. Tendulkar
6. Shri M. G. Sardana
7. Shri T. R. Puri
8. Shri S. Ray
9. Shri S. Ramanatha Iyer
10. Shri Sudhir Bhattacharya

Vol. VIII, No. 2

October 1984

*Price : Inland Rs. 25.00*

*Foreign £ 2.91 or 9 \$*

*Annual Subscription*

*Price : Inland Rs. 100.00*

*Foreign : £ 11.66 or 36 \$*

Department of Statistics  
Ministry of Planning  
GOVERNMENT OF INDIA



## CONTENTS

Sarvekshana  
Vol. VIII, No. 2 :  
(Issue No. 23)

October 1984

### PART I : ARTICLES/NOTES

- |  |    |
|--|----|
| 1. Distribution of Assets in Rural India by S/Shri G.A. Kulkarni,<br>B.S. Gill and Shambhu Dayal .. .. | 1  |
| 2. A note on use of irrigation on household holdings .. ..   | 10 |

### PART II : SURVEY RESULTS

- |   |       |
|---|-------|
| 3. Some selected important results* of the Survey on use of Irrigation on<br>household holdings NSS 31st Round (July 1976→June 1977) .. | S-1   |
| Hindi section .. .. .   | fig-1 |

\*Results given for the States :

1. Andhra Pradesh
2. Assam
3. Bihar
4. Karnataka
5. Madhya Pradesh
6. Maharashtra
7. Manipur
8. Orissa
9. Tripura and
10. West Bengal.







PART I

ARTICLES NOTES

The Distribution of Assets in Rural India is a study of rural assets, machinery, air-farm, bullock, equipment, etc. (including, agricultural holdings and also other assets) during 1971-72. The study was conducted in 13 states. The assets were classified into 13 major classes and sub-classes. The study was conducted in 13 states. The assets were classified into 13 major classes and sub-classes. The study was conducted in 13 states. The assets were classified into 13 major classes and sub-classes.

1. INTRODUCTION

The National Sample Survey (1971-72) during the 19th round (1971-72) collected information on all types of major assets, viz. cattle, buffalo, other livestock, agricultural machinery, non-farm business equipment and transport equipment according to 13 size classes of operational holdings in different states. The information was collected regarding the number of units held by different types of assets. The data were used to study the distribution of assets in rural India. The data were used to study the distribution of assets in rural India. The data were used to study the distribution of assets in rural India.

Assets are classified into 13 major classes and sub-classes. The study was conducted in 13 states. The assets were classified into 13 major classes and sub-classes. The study was conducted in 13 states. The assets were classified into 13 major classes and sub-classes. The study was conducted in 13 states. The assets were classified into 13 major classes and sub-classes.

An attempt has been made in this paper to study the distribution of assets in rural India. The study was conducted in 13 states. The assets were classified into 13 major classes and sub-classes. The study was conducted in 13 states. The assets were classified into 13 major classes and sub-classes. The study was conducted in 13 states. The assets were classified into 13 major classes and sub-classes.

TABLE 1. AVERAGE SIZE OF OWNERSHIP AND OPERATIONAL HOLDERS AND THEIR OWNERS SIZE CLASSIS OF HOLDINGS-STATEWISE

Assets	Average Size (No. of Units)			
	Ownership holder	Operational holding	Operational holding	Operational holding
Cattle	2.20	1.25	1.25	1.25
Buffalo	1.24	1.25	1.25	1.25
Other livestock	1.25	1.25	1.25	1.25
Agricultural machinery	1.25	1.25	1.25	1.25
Non-farm business equipment	1.25	1.25	1.25	1.25
Transport equipment	1.25	1.25	1.25	1.25
Total	1.25	1.25	1.25	1.25



# DISTRIBUTION OF ASSETS IN RURAL INDIA—G.A. KULKARNI, B.S. GILL AND SAMBHU DAYAL, ECONOMIC ANALYSIS DIVISION, NSSO, NEW DELHI

## SUMMARY

*The distribution of values of six types of major assets viz. cattle, buffalo, other livestock, agricultural machinery, non-farm business equipment and transport equipment according to size classes of operational holdings and also over states during 1971-72 for rural India has been studied. It has been found that concentration ratios as also coefficients of variation for these assets were less than those for operational holdings. The assets were also highly correlated with the size of holdings. It was also found that the mechanisation had not spread much and non-farm business activities were also negligible till 1971-72. The classification of states according to assets and operated area per household has also been made and various measures suggested to be adopted depending upon the availability of assets and operated area.*

### 1. INTRODUCTION

The National Sample Survey (NSS) during the 26th round (1971-72) collected information on six types of major assets, viz. cattle, buffalo, other livestock, agricultural machinery, non-farm business equipment and transport equipment according to 15 size classes of operational holdings in different states. The information was collected regarding the number as well as values of different items of assets. The results have been published in NSS Report No. 215 and Sarvekshana (1982) Vol. V, Nos. 3 and 4.

Assets constitute a very important factor in the production process. The productive assets are a source of income to the owners who can either themselves use them or supply them to the others on rent. In agriculture, particularly, assets are important in both of these ways. The productivity in agriculture is also dependent on the types of assets in use. A study of the quantum of these assets by type along with their distribution would, therefore, be interesting and useful for policy purposes.

An attempt has been made, in this paper, to study the distribution of these six types of assets according to size class of operational holdings and also over the states on the basis of information collected during the survey. This study has been confined to rural India only. Effort has also been made to identify the inequalities in the distribution of these assets as also of the land holdings. Some policy issues emerging out of these studies have also been indicated. It may be mentioned that values of assets such as land and buildings, though important, have not been considered in this study.

### 2. DISTRIBUTION OF OWNERSHIP AND OPERATIONAL HOLDINGS

Before studying the distribution of assets, it is necessary to examine the distribution of ownership and operational holdings which would have linkage with assets. Average sizes of ownership and operational holdings and their coefficients of variation (CV) over size-classes of holdings, State-wise and all India, are given in Table 1.

TABLE 1 : AVERAGE SIZE OF OWNERSHIP AND OPERATIONAL HOLDINGS AND THEIR CV'S OVER SIZE-CLASSES OF HOLDINGS—STATE-WISE

Sl. No.	State/U.T.	Average Size (0.00 Hect.)		C. V.	
		Ownership holding	Operational holding	Ownership holding	Operational holding
1	2	3	4	5	6
1.	Andhra Pradesh	2.20	2.30	1.54	1.59
2.	Assam	1.24	1.28	0.98	0.89
3.	Bihar	1.25	1.25	1.47	1.17
4.	Gujarat	3.45	3.67	1.10	0.94
5.	Haryana	3.20	3.87	1.17	0.98
6.	Himachal Pradesh	1.41	1.49	1.29	0.99
7.	Jammu & Kashmir	1.16	1.21	0.77	0.77
8.	Karnataka	3.02	3.19	1.21	1.27
9.	Kerala	0.58	0.51	1.65	1.77



1	2	3	4	5	6
10.	Madhya Pradesh	3.56	3.47	0.64	1.20
11.	Maharashtra	3.74	3.84	1.18	1.19
12.	Manipur	0.94	1.13	1.08	0.63
13.	Meghalaya	1.18	1.09	1.07	0.88
14.	Orissa	1.31	1.38	1.29	1.21
15.	Punjab	2.87	4.05	1.24	0.89
16.	Rajasthan	5.06	4.17	1.14	1.47
17.	Tamil Nadu	1.34	1.32	1.49	1.08
18.	Tripura	1.03	0.93	1.06	1.00
19.	Uttar Pradesh	1.43	1.55	1.32	1.06
20.	West Bengal	1.01	1.12	1.23	1.05
21.	Delhi	2.29	2.52	1.01	0.82
22.	Goa	0.45	0.67	1.19	0.77
23.	Pondicherry	0.83	1.00	0.34	0.73
	ALL INDIA	2.16	2.20	1.45	1.39

It can be seen that, at the all-India level, the difference between the sizes of operational and ownership holdings is only 0.04 hectare which is negligible. However, in States/UTs of Haryana, Manipur, Punjab, West Bengal, Goa, Pondicherry and Delhi, the differences between the operational and ownership holdings are substantially large, the former being greater than the latter. This shows that in these States the institutional bottlenecks created by small sizes of ownership holdings were effectively removed by getting at an actual size of operation which was substantially larger than the former. In other States farmers were not successful in removing the hurdle of small sizes of ownership holdings by switching over to much larger sizes of holdings under actual operation. In States like Kerala, Rajasthan and Tripura the sizes of ownership holdings are larger than those of operational holdings which shows that through the process of leasing out, the number of operational holdings has increased thus reducing the sizes of operational holdings. Coefficients of variation of both ownership holdings and operational holdings were found to be large in all States/UT's, all-India figures being 1.45 and 1.39 respectively.

The concentration ratio (CR) is computed as :

$$CR = 1 - \frac{\sum_{i=1}^m p_i (Q_i + Q_{i-1})}{\sum_{i=1}^m p_i (Q_i + Q_{i-1})}$$

where  $p_j$  = proportion of persons for the  $j$ -th class of holdings.

$q_j$  = proportion of area operated/owned of assets owned by persons in the  $j$ -th class of holdings.

$$Q_j = \sum_{j=1}^m q_j$$

and  $m$  = total number of size classes of holdings.

CR's were worked out for the ownership and operational holdings at the all India level. They were respectively 0.63 and 0.60. Although the CR for the operational holding was less than that for the ownership holding, yet the difference was small. The process of leasing could, therefore, reduce only marginally the inequality in the distribution of holdings at the all India level.

### 3. THE VALUE OF ASSETS ACCORDING TO LAND HOLDING CLASSES—ALL INDIA

The total value of six types of assets at the all-India level during 1971-72 was estimated as Rs. 7,521 crores. The percentage share of value of each of the six assets and also that of total assets by size-class of household operational holdings are presented in Table 2. The table also presents additional information on distribution of population and operated area by size classes of household operational holdings,



TABLE 2 : DISTRIBUTION OF VALUE OF ASSETS, POPULATION AND OPERATED AREA BY SIZE CLASSES OF OPERATIONAL HOLDINGS—1971-72.

Sl. No.	Size class of operational holding	Percentage shares of value of owned					Total Assets group	Percentage of human population	Percentage of operated area	
		Cattle	Buffaloes	Other livestock	Agricul. machinery	Non-farm business equipment				Transport equipment
1	2	3	4	5	6	7	8	9	10	11
1.	Landless/Operating no land	3	9	14	2	34	7	6	21	—
2.	0.00—0.20	1	1	3	1	6	1	1	7	1
3.	0.21—0.40	3	2	3	1	5	2	3	6	1
4.	0.41—0.50	2	3	3	1	4	1	2	4	1
5.	0.51—1.00	11	9	10	6	6	8	9	14	6
6.	1.01—2.02	20	20	16	14	6	17	19	18	15
7.	2.03—3.03	16	14	12	13	3	15	14	10	13
8.	3.04—4.04	9	9	5	9	4	10	9	5	9
9.	4.05—5.05	8	8	6	9	3	8	8	4	9
10.	5.06—6.07	5	5	4	7	6	6	5	2	6
11.	6.08—8.09	7	7	6	10	5	6	7	3	9
12.	8.10—10.12	4	4	6	7	4	7	5	2	7
13.	10.13—12.14	3	2	2	5	2	3	3	1	5
14.	12.15—20.24	5	5	5	10	5	5	6	2	10
15.	20.25 & above	3	2	5	5	7	4	3	1	8
16.	All sizes	100 (3364)	100 (1562)	100 (471)	100 (1328)	100 (163)	100 (633)	100 (7521)	100	100 (1257)

NOTE : 1. Figures within brackets against Sl. No. 16 under columns 3—9 indicate values of assets in Rs. crores and under column 11 indicate operated area in lakh hectares.

2. Value of the assets in each class of operational holding can be obtained by multiplying the value figure given in brackets in the last row with percentage figure in that class.

It would be seen (Column 9) that the maximum share of total assets was against the class sizes from 1.01 to 3.03 of operated area. The distribution appears to be quite irregular. Even when each asset is considered separately the maximum share of each asset (excepting the non-farm equipment) is found to be in the same size classes from 1.01 to 3.03 hec. of operated area. In case of non-farm equipment, however, the maximum share of this asset is with the landless household class.

It can be seen that 21% of the rural population was landless class possessing 6% of the assets. The

households with operational holdings equal to or below 0.50 hec, which formed 38% of the population accounted for only 12 per cent of rural assets. The households with operational holdings of more than 8.10 hec. who have six per cent population held 17 per cent of assets. This is bound to be so because of agricultural machinery required for big operational holdings.

The overall position and the distribution of assets are given in Table 3.

TABLE 3 : THE VALUE OF EACH TYPE OF ASSET WITH CV's &amp; CR's OVER SIZE CLASSES OF OPERATIONAL HOLDINGS—1971-72

Sl. No.	Type of asset	Value (Rs. lakhs)	Percentage of combined assets	CV	CR
1	2	3	4	5	6
1.	Cattle	33,64,20	45	0.78	0.43
2.	Buffalo	15,62,14	21	0.75	0.35
3.	Other livestock	4,70,82	6	0.61	0.27
4.	Agricultural machinery	13,27,48	18	0.63	0.63
5.	Non-farm business equipment	1,63,20	2	0.99	0.24
6.	Transport equipment	6,33,28	8	0.69	0.44
COMBINED		75,21,12	100	0.68	0.42



It would be seen that the main asset of the rural community in India, consisting mainly of agricultural workers, is cattle accounting for 45% of their assets. This was followed by buffaloes whose share was 21% while the share of other livestock was 6%. The agricultural machinery constituted 18% of the assets while transport equipment and the non-farm business equipment were 8 and 2 per cent respectively. The agricultural machinery had thus only a modest share in the total assets. It was also observed from NSS reports that about 50% of households were having wooden ploughs and only 8% were having iron ploughs. The percentage of households possessing pumps (electric, diesel and others) was only 3.6. Further, the number of wooden ploughs, iron ploughs, harrows, seed drills and tractors per 100 households was 70, 9, 37, 13 and 0.1 respectively. These findings reveal that the mechanisation had not gone ahead as much as expected. The insignificant share of non-farm business equipment such as looms, different types of mills, instruments, motors, and other equipment indicate that the rural community has practically totally dependent on agriculture, a very small fraction of it being engaged in non-agricultural activities.

The CV of the values of assets over different classes was 0.68 which shows that the assets were widely

dispersed. Of all the six types of assets, the maximum dispersion is found in case of non-farm business equipment.

The overall inequality in the distribution was indicated by the concentration ratio of 0.42. The maximum concentration ratio was observed in case of agricultural machinery which is 0.63 and the minimum of 0.24 in the case of non-farm business equipment.

A comparison of CR for the operational holdings and that for assets shows that while it is 0.60 for the former, it is 0.42 for the latter. If we exclude the landless class, we find that the CR for the operational holdings is 0.52 and for the assets, it is 0.36. The CV over different size classes of operational holdings (1.39) is also much higher as compared to that of total assets (0.68).

#### 4. DISTRIBUTION OF AVERAGE VALUES OF ASSETS

The values of assets per operational holding and per hectare of operated area alongwith average size of operational holding were calculated. Their distribution according to size classes of operational holdings is given in Table 4.

TABLE 4 : DISTRIBUTION OF ASSETS ACCORDING TO SIZE CLASSES OF OPERATIONAL HOLDINGS—1971-72

S.I. No.	Size class of operationa holding	No. of operational holdings (lakhs)	Average size of operational holding (hec. 0.00)	Value of assets per operationa holding (Rs.)	Value of assets per hec. of operated area (Rs.)
1	2	3	4	5	6
1.	00.00—00.20	67	0.09	153	1760
2.	00.21—00.40	54	0.28	344	1209
3.	00.41—00.50	32	0.44	461	1055
4.	00.51—01.00	108	0.75	654	869
5.	01.01—02.02	128	1.46	1079	736
6.	02.03—03.03	67	2.47	1589	632
7.	03.04—04.04	34	3.49	1970	567
8.	04.05—05.05	24	4.50	2588	575
9.	05.06—06.07	13	5.52	2900	532
10.	06.08—08.09	17	6.95	3225	466
11.	08.10—10.12	10	8.98	3953	439
12.	10.13—12.14	5	10.99	4244	386
13.	12.15—20.24	9	14.95	5066	339
14.	20.25 & above	3	29.61	7772	268
15.	All Sizes	571	2.20	1320	597



It can be seen from column 3 of Table 4 and column 9 of Table 2 that the maximum number of operational holdings and the maximum share of value of total as well as individual assets are found in the size class of 1.01 to 2.02 hec. of operational holdings. This makes the average value of assets per operational holding in this class as Rs. 1079/- which is much higher than the average value obtaining in the lowest size class. This shows that this size class is the most commonly found size class of operational holding. Further, from Tables 2 and 4 it is found that in smaller size classes, although the absolute value of assets and

the operated area are small, the value of assets per hectare of operated area is high (Col. 6 of Table 4).

The correlation coefficient between the value of assets per operational holding and the average size per operational holding is 0.97. Thus the values of assets are highly correlated with the size of holdings.

The average values of assets according to six types of assets and their coefficients of variation over size classes of operational holdings and also over States are given in Table 5.

TABLE 5 : THE AVERAGE VALUES OF ASSETS AND THEIR DISTRIBUTION—ASSETWISE—ALL INDIA RURAL

Type of asset	Per household			Per hectare of operated area		
	Average value	CV over size classes of holdings	CV over States	Average value	CV over size classes of holdings	CV over States
1	2	3	4	5	6	7
1. Cattle	429	0.97	0.41	267	0.60	0.33
2. Buffalo	199	0.70	0.82	124	0.62	0.77
3. Other livestock	60	1.16	1.19	38	1.02	0.75
4. Agricultural machinery	110	1.05	0.84	105	0.13	0.96
5. Non farm business equipment	21	1.68	0.74	13	1.34	1.35
6. Transport equipment	81	1.00	1.04	50	0.48	0.73
COMBINED	960	0.88	0.51	597	0.56	0.43

It may be seen from Tables 5 and 3 that the coefficient of variation of average value of assets per household over different size classes of holdings was large and also more than that of total assets for all the types of assets (except for buffalo). This indicates that there was a wide divergence in the distribution of assets per household over different size classes of holdings.

Average value of assets per hectare of operated area is only Rs. 597, which is very low. The CV of this estimate over size classes of operational holdings is 0.56 and over states is 0.43. Such wide variation in average value of assets indicates that there might be regions where the average value would be far below the average of Rs. 597.

##### 5. DISTRIBUTION OF ASSETS WITHIN STATES

State-wise average values of assets per household and per hec. of area operated, alongwith concentration ratios of distribution of assets over different size classes of operational holdings and average operated area per household, are given in the annexure. It can be seen that the minimum value of assets per

household was Rs. 340/- for the State of Kerala and the maximum was Rs. 2495/- for the state of Punjab. As regards the assets per hec. of operated area, the minimum value was Rs. 354/- for Orissa and the maximum value was Rs. 3210/- for Goa. There is seen to be wide variation in the average values of assets. From Table 5 it can be seen that CV's over States of average values of assets per household and per hec. of operated area were 0.51 and 0.43 respectively. The maximum CV was 1.19 in case of other livestock for the average per household and 1.35 in case of non-farm business equipment for the average per operated area.

There was a wide variation in the inequalities in the distribution of assets. the highest CR was 0.56 in case of Kerala and the lowest CR was 0.12 in case of Manipur. In the States of Himachal Pradesh, Jammu & Kashmir and Rajasthan, CR's were 0.13, 0.16 and 0.20 respectively which could not be considered as large. For Andhra Pradesh, Punjab, Tamil Nadu and Pondichery, CR's were 0.49, 0.46, 0.50 and 0.48 respectively which were fairly large.

The average area operated per household for each State is given in column 1 of the annexure. The



average at the all India level was 1.60 hectares. The maximum average area operated per household was 2.88 hec. in Madhya Pradesh and the minimum average area was 0.35 hec. in Goa. Here also, wide variation over states was observed, the coefficient of variation being 0.65.

## 6. CLASSIFICATION OF STATES ACCORDING TO ASSETS, OPERATED AREA AND CONCENTRATION RATIOS

Classifications of States on the basis of average assets and operated area per household and concentration ratios are given in Tables 6 and 7.

TABLE 6 : CLASSIFICATION OF STATES ACCORDING TO ASSETS AND OPERATED AREA PER HOUSEHOLD

Operated area per household	Assets per household (Rs.)			
	340—1000	1000—1500	1500—2000	2000—2500
1	2	3	4	5
Upto 1.00	Assam, Bihar, Kerala, Meghalaya, Tamil Nadu, West Bengal, Pondicherry	Goa	—	—
1.00—2.00	Andhra Pradesh, Manipur, Orissa, All India	Uttar Pradesh	Himachal Pradesh, Jammu & Kashmir	Haryana, Punjab, Delhi
2.00—3.00	Karnataka	Madhya Pradesh, Maharashtra	Gujarat	—
above 3.00	—	—	—	Rajasthan

TABLE 7 : CLASSIFICATION OF STATES ACCORDING TO ASSETS PER HOUSEHOLD AND CONCENTRATION RATIOS

Concentration Ratio	Assets per households (Rs.)			
	340—1000	1000—1500	1500—2000	2000—2500
1	2	3	4	5
<0.35	Assam, Manipur	Madhya Pradesh	J. & K., Himachal Pradesh	Rajasthan
0.35—0.40	Karnataka, Orissa	Maharashtra, Uttar Pradesh, Goa	—	Haryana
0.40—0.45	Bihar, West Bengal, All India	—	Gujarat	Delhi
0.45 & above	Andhra Pradesh, Tamil Nadu, Kerala, Pondicherry	—	—	Punjab

It can be observed from Table 6 that there are 8 States/UTs where the operated area and assets per household are low. These will thus be the poorest States as regards agriculture since most of these assets have bearing on agriculture. In Goa also per household operated area is low although assets are slightly higher. There may not be much scope for improve-

ment unless the operated area per household is increased which may not be normally possible. In these States/UTs the scope is to be provided for non-agricultural occupations. It may also be noted from Table 7 that in 5 out of these 8 States, viz. Bihar, West Bengal, Kerala, Tamil Nadu and Pondichery, the inequality in the distribution of assets is also large



indicating thereby that a large number of households not only possess less of operated area but also meagre assets.

Andhra Pradesh, Manipur, Orissa and Karnataka are the States where the operated area per household is not small but assets per household are meagre. There is a need in these States to provide assistance to households to increase the assets so that they can improve the agriculture as also their conditions. Out of these four States, Andhra Pradesh is the State where inequality in the distribution of assets is large (CR=0.49). The inequality in the distribution of agricultural machinery and cattle is very high, CR being 0.64 and 0.56 respectively. In this State, there might thus be a section of rural population almost without assets and need urgent assistance.

Haryana, Punjab, Delhi and Rajasthan are the States/UT's where assets per household are the maximum and the operated area per household is also not small. In these States, the agriculturists in general have improved lot through agriculture. However, although in respect of Punjab the average assets per household is the highest in the country, the inequality in the distribution of assets is also high (CR=0.46). This indicates that the households belonging to the lowest stratum in Punjab also need assistance as they are worst off compared to other households in the State. Further, it may be noted that among the rural households of Punjab, the agricultural implements owned by the lowest stratum of the State are much less compared to the households belonging to higher strata as reflected by the concentration ratio at 0.71 which is next to the highest in the country.

Remaining 6 States fall in the intermediate category. Since the average operated area is not small, a further increase in assets may improve agriculture.

#### 7. REMARKS

The small difference between ownership and operational holdings in regard to size, CV and CR in several cases shown that the process of leasing had not reduced substantially the size, variability and inequality in the distribution of holdings.

The lower values of concentration ratios in the case of assets than in the case of operational holdings

show that even the population possessing less operated area had acquired comparatively more assets. This is a good augury so far as households belonging to small sized operational holding are concerned.

Since the lower size classes already possessed relatively more assets per hect. of operated area, there is a need for transfer of more of operated area to these classes rather than providing them facilities for possessing assets alone.

Although the inequality in the distribution of assets was, comparatively speaking, not large, yet the average value of assets per hectare of operated area was only Rs. 597/- which is meagre. The CV's of this value over size classes of operational holding and over States were large. It would be necessary to supplement the assets, particularly of the weaker section, by providing credit facilities or subsidy in the interest of increasing agricultural productivity.

It has been observed that the mechanisation in agriculture had not spread much, since the share of the agricultural machinery in the total assets was only 18%. There appear to be need for more mechanisation of agriculture to increase labour and agricultural productivity without however drastically affecting the displacement of labour engaged in it.

The negligible share of non-farm business equipment in total assets calls for massive efforts towards diversification of the activities of rural population so that over-dependence on agriculture is reduced, and displaced labour due to increased mechanisation could be absorbed in these non-agricultural pursuits.

In a good number of States, both the assets and operated area per household were small. In these States, non-agricultural activities need to be encouraged.

#### ACKNOWLEDGEMENT

The authors are grateful to the referee for his valuable comments. The authors also appreciate the assistance of Shri G. K. Sharma of Economic Analysis Division of N. S. S. O. in the preparation of this paper.



## ANNEXURE:— AVERAGE VALUES OF ASSETS AND THEIR DISTRIBUTION

x : Average assets per household (Rs.)

y : Average assets per ha. of op. area (Rs.)

State/UT (average operated area per household in ha.)		Six asset groups combined	Cattle	Buffalo	Other live-stocks	Agricultural machinery	Non-firm business equipment	Transport equipment
1	2	3	4	5	6	7	8	9
1. A. P. (1-46)	—	709	340	122	50	105	23	69
	x	—	—	—	—	—	—	—
	y	485	233	84	34	72	15	47
2. Assam (0-94)	—	662	470	54	35	27	24	52
	x	—	—	—	—	—	—	—
	y	704	499	57	37	29	26	56
3. Bihar	—	561	308	135	20	65	10	23
	x	—	—	—	—	—	—	—
	y	569	313	137	20	66	9	24
4. Gujarat (2-35)	—	1689	616	362	70	467	30	144
	x	—	—	—	—	—	—	—
	y	718	262	154	29	199	13	61
5. Haryana (1-98)	—	2196	574	707	154	597	20	144
	x	—	—	—	—	—	—	—
	y	1110	290	357	78	302	0-24	0-10
6. H. P. (1-39)	—	1796	812	474	316	116	66	12
	x	—	—	—	—	—	—	—
	y	1293	585	340	228	84	47	9
7. J & K (1-12)	—	1694	905	430	237	75	33	14
	x	—	—	—	—	—	—	—
	y	1505	804	383	211	66	29	12
8. Karnataka (2-24)	—	831	419	123	64	145	12	68
	x	—	—	—	—	—	—	—
	y	371	187	55	28	65	—	0-48
9. Kerala (0-45)	—	340	90	22	25	64	78	61
	x	—	—	—	—	—	—	—
	y	756	199	49	56	142	173	137
10. M. P. (2-88)	—	1278	717	296	49	115	9	92
	x	—	—	—	—	—	—	—
	y	444	240	103	17	40	3	32
	CR	0-31	0-32	0-44	0-12	0-37	—	0-36



1	2	3	4	5	6	7	8	9
11. Maharashtra (2·62)	x	1075	516	132	67	196	36	128
	y	410	197	50	26	75	14	48
	CR	0·38	0·52	0·39	0·22	0·63	0·39	0·37
12. Manipur (1·04)	x	704	337	83	66	32	25	161
	y	701	335	83	66	32	25	160
	CR	0·12	0·28	0·29	0·01	0·16	—	—
13. Meghalaya (0·99)	x	625	248	42	237	29	1	138
	y	700	250	42	239	29	1	139
	CR	—	0·12	0·40	0·07	0·01	0·08	—
14. Orissa (1·03)	x	364	241	40	15	26	8	34
	y	354	234	39	15	26	8	32
	CR	0·39	0·39	0·53	0·28	0·39	0·48	0·35
15. Punjab (1·64)	x	2495	576	818	102	766	31	202
	y	1517	350	498	61	466	19	123
	CR	0·46	0·48	0·28	0·17	0·71	—	0·47
16. Rajasthan (4·44)	x	2010	816	426	372	250	20	126
	y	452	184	96	84	56	4	28
	CR	0·20	0·26	0·08	0·34	0·29	—	0·34
17. Tamil Nadu (0·77)	x	568	197	38	40	199	19	75
	y	739	255	50	52	259	25	98
	CR	0·50	0·49	0·60	0·38	0·65	—	0·39
18. U.P. (1·17)	x	1098	460	296	37	198	17	90
	y	938	393	253	32	169	14	77
	CR	0·38	0·37	0·27	0·15	0·60	—	0·48
19. W. Bengal (0·77)	x	468	277	41	23	65	17	45
	y	605	359	53	29	83	23	58
	CR	0·43	0·36	0·73	0·31	0·58	0·34	0·49
20. Delhi (1·28)	x	2260	496	586	36	909	13	220
	y	1761	386	458	28	709	9	171
	CR	0·42	0·42	0·14	—	0·63	—	0·69
21. Goa (0·35)	x	1128	138	112	18	127	53	680
	y	3210	393	318	51	360	152	1936
	CR	0·38	0·34	0·73	0·05	0·38	—	0·39
22. Pondicherry (0·44)	x	583	156	9	10	356	16	0·36
	y	1335	358	22	22	817	36	80
	CR	0·48	0·53	0·56	0·07	0·54	—	0·18
All India	x	960	429	199	60	170	21	81
	y	597	267	124	38	105	13	50
	CR	0·42	0·43	0·35	0·27	0·63	0·24	0·44



# A NOTE ON USE OF IRRIGATION ON HOUSEHOLD HOLDINGS : NSS 31ST ROUND (JULY 1976—JUNE 1977)

## 1. INTRODUCTION

1.1 A survey on the use of irrigation in rural areas was carried out by the National Sample Survey Organisation (NSSO) in the thirtyfirst round of the NSS from July 1976 to June 1977. In this survey particulars of irrigation in household holdings were collected by household enquiry from a sample of household Holdings. Information on crops grown and use of fertilisers, manures and pesticides in the household holdings were also collected. The reference period for the survey was the agricultural year July 1975—June 1976.

1.2 The survey covered the whole rural India except the States of Sikkim, Nagaland and Meghalaya and Union Territories of Chandigarh, Arunachal Pradesh, Andaman & Nicobar Islands, Mizoram, Lakshadweep and Dadra & Nagar Haveli. Two tehsils of district Surguja & four tehsils of district Bastar of Madhya Pradesh, three tehsils of district Chandrapur & one tehsil of district Amravati of Maharashtra and Ladakh district of Jammu & Kashmir were also not covered.

1.3 All the States and Union Territories included in the geographical coverage of the survey participated in the survey at least on a full matching basis by canvassing a sample of equal size following identical concepts and definitions.

1.4 For the purpose of the survey there was a general sample of villages distributed all over the country. Also, there was an additional special sample of villages from the command areas of (i) major irrigation projects commissioned after 1947 and (ii) medium irrigation projects commissioned after 1964. In the central sample, the number of villages planned to be surveyed was 8304 for the general sample and 2054 for the special sample from the command areas of major and medium projects.

1.5 For the general sample the design was stratified two stages with district (or portion of district) as stratum, village as first stage unit and household as second stage unit of sampling. The list of 1971 census villages was used as sampling frame for the

general sample. In each sample village a fixed number of households was initially selected circular systematically after arranging all the households in the village in a specified order.

1.6 The sample households selected in each sample were divided into three mutually exclusive categories: category 1 consisted of households which cultivated at least some plot of land during 1975-76 with irrigation, category 2 consisted of the households which cultivated land during 1975-76 wholly without irrigation and category 3 consisted of residual households which did not cultivate any land during the period. Such households, which cultivated usually using irrigation were however included in category 1 and not in category 2 even if they cultivated land during 1975-76 wholly without irrigation. For the sample households of category 1, that is the households which cultivated land during 1975-76 with (or usually using) irrigation, particulars of irrigation, crops grown, use of fertiliser, manure and pesticides etc. were collected in schedule 22.1. For the sample households of category 2, that is the sample households which cultivated land without irrigation during 1975-76, particulars of unirrigated household holdings were collected in schedule 22.2. For the households of category 3, no schedule was canvassed.

1.7 This report is based on data collected in schedule 22.1 in the general sample of villages in the central sample in ten States, namely, Andhra Pradesh, Assam, Bihar, Karnataka, Madhya Pradesh, Maharashtra, Manipur, Orissa, Tripura and West Bengal. It presents information on area possessed, net area sown, net area irrigated, gross area irrigated, area irrigated by different types of irrigation, area under various irrigated & unirrigated crops, use of fertiliser, manure and pesticides, expenditure on irrigation etc. relating to households usually using irrigation. Estimates of total area possessed, area possessed with irrigation facility, net area sown, net area irrigated by type of irrigation, gross crop area, gross area irrigated by type of irrigation etc. for such households for the ten States are presented in TABLE A.



## 2. CONCEPTS AND DEFINITIONS

2.1 Some of the important concepts and definitions adopted in the survey are given below.

2.2 **Household** : A household was defined as a group of persons normally living together and taking food from a common kitchen. Thus a household was considered as constituted by normally resident members including temporary stay aways but excluding temporary visitors.

2.3 **Household holding** : A holding was defined as constituted by all land possessed by the household. Land possessed was taken as the sum of land owned but not leased out and land taken on lease. In case of joint ownership or joint leasing in by the sample household with other households, only the sample household's share of such land was taken as the part of the household holding.

2.4 **Land owned** : A plot of land was considered to be owned by the household if the right of permanent heritable possession with or without right to transfer title was vested in a member or members of the household. Land owned included also land held directly from Government under a grant, lease or assignment. Land owned by a household might be leased out to another household without losing ownership right.

2.5 **Irrigation** : Irrigation was considered to denote the practice of purposely providing land with water by artificial means for crop production.

2.6 **Types of irrigation** : Irrigation was broadly grouped into two categories namely flow irrigation and lift irrigation. When irrigation did not involve any use of power for lifting of water, it was considered under the flow type. Flow irrigation covered irrigation by canal, diversion scheme, tank and others not involving any lifting of water. Irrigation from wells, tube-wells, rivers, tanks and other sources using some lift arrangement constituted lift irrigation.

2.7 **Net area irrigated** : When a plot of land was irrigated more than once in the same or different seasons of an agricultural year, it's area was considered only once for obtaining net area irrigated. In case the plot was having irrigation facility from more than one source of flow and/or lift irrigation, the major source was treated as the type of irrigation for the plot. For deciding the major source, the gross area irrigated was taken as the base.

2.8 **Net area sown** : When a plot of land was sown more than once in the same or different seasons of

an agricultural year, it's area was considered only once for obtaining net area sown.

2.9 **Gross crop area** : When a plot of land was cropped more than once in an agricultural year, the area of the land was counted as many times as it was cropped in obtaining the gross cropped area for the plot.

2.10 **Irrigable land** : Land belonging to a household was broadly classified into two groups—land having irrigation facilities and land not having any irrigation facility. Land having irrigation facilities was considered as irrigable irrespective of whether it was irrigated or not in 1975-76.

2.11 **Value of agricultural/irrigation equipments** : The value of agricultural/irrigation equipments owned by the household was evaluated at the price prevailing in the local market for the item in its present condition. For items owned jointly along with other households only the share of value of the household has been presented in TABLE 14. Similar procedure was followed for value of draught animals owned by the households.

## 3. SAMPLE DESIGN AND ESTIMATION PROCEDURE

3.1 For the household survey on irrigation in the 31st round, there was a general sample of villages distributed all over the country. Also, there was an additional special sample of villages from the command areas of (i) major irrigation projects commissioned after 1947 and (ii) medium irrigation projects commissioned after 1964. The sample design and estimation procedure for the survey carried out in the general sample of villages is discussed in the following paragraphs.

3.2 **Sample design and sample size** : The design was a stratified two-stage with district (or portion of district) as stratum, village as the first stage unit and household as the second stage unit. In the central sample, the number of villages planned to be surveyed was 8304.

3.3 **Stratification** : There were 63 regions all over India coming under the geographical coverage of the present irrigation survey. These regions were formed during 1965 in such a way that they did not cut across the State/Union Territories. Also excepting a few regions in some States, none of the regions cut across district boundaries. Each district, contained within a region with 1971 district census rural



population less than 1.5 million, formed one basic stratum by itself. Districts with more than 1.5 million 1971 census rural population were divided into two or more basic strata by grouping contiguous tehsils (or sub-divisions in the States of Bihar, Orissa and West Bengal) on consideration of homogeneity, density of rural population, crop pattern etc. so that the rural population of each basic stratum, so formed, was less than 1.5 million.

**3.4 Determination of sample size :** The sample size of the general sample in each State/Union Territory was decided taking into consideration available strength of the field staff in the State/Union Territory, resources required for special samples from the command areas of irrigation projects and other subjects of enquiry of the round.

**3.5 Allocation of sample size :** Total number of sample villages for a State was first allocated to different regions roughly in proportion to the total irrigated area in them. The regional allocation was then distributed among the constituent strata in proportion to population.

**3.6 Selection of village :** Within each stratum, allotted number of villages was selected with probability proportional to 1971 population and with replacement. The list of 1971 census villages was used as the sampling frame.

**3.7 Revenue village :** Unit of selection was the census village. But in cases where census village did not coincide with revenue village or census village could not be uniquely identified, the revenue village corresponding to the selected census village was surveyed.

**3.8 Hamlet group :** Sample villages with large population were divided into a number of hamlet groups having nearly equal population content. One of such hamlet groups was selected at random and the survey was confined to the selected hamlet group only.

**3.9 Selection of a household :** From each sample village, a fixed number of households determined at the regional level was initially selected circular systematically after arranging the households in a specified order viz. households which did not

cultivate any land during 1975-76 were followed by households which cultivated land during 1975-76 without irrigation, the latter, again, being followed by households which cultivated land during 1975-76 with irrigation. The sample households selected from each sample village were divided into three mutually exclusive categories. Category 1 consisted of households which had cultivated land during the agricultural year 1975-76 with irrigation (or which usually used irrigation), category 2 consisted of remaining households which had cultivated land during 1975-76 without irrigation and category 3 consisted of households which had not cultivated any land during 1975-76. For the households of category 1, particulars of irrigation etc. were collected in schedule 22.1, for the households of category 2, particulars of unirrigated household holding were collected in schedule 22.2 and for the households belonging to category 3, no schedule was canvassed.

**3.10 Estimation procedure :** The following notations are used in the formulae for obtaining various estimates :—

- $r$  : subscript for  $r$ -th region of a State/Union Territory.
- $s$  : subscript for  $s$ -th stratum
- $i$  : subscript for  $i$ -th surveyed village/hamlet group.
- $j$  : subscript for  $j$ -th sample household
- $f$  : adjustment factor for the survey of revenue village.
- $p$  : village population
- $m$  : number of surveyed villages
- $h$  : number of sample households initially selected.
- $P$  : total rural population (used for selection)
- $D$  : number of hamlet groups actually formed
- $y$  : value of the characteristic
- $Y$  : total value of the characteristic in the population.







TABLE A : ESTIMATES OF NUMBER OF HOUSEHOLDS USUALLY USING IRRIGATION, AREA POSSESSED, NET AREA SOWN, NET AREA IRRIGATED AND AREA UNDER CROP BY STATES

state	number of households usually using irrigation (00)	area possessed		net area sown	net area irrigated			net area irrigated by flow from		
		total	irrigable		total	by flow	by lift	canal	tank	others
	1	2	3	4	5	6	7	8	9	10
1. Andhra Pradesh	33966	73948	30155	61435	27422	19710	7712	9846	7864	2000
2. Assam	385	801	419	683	405	376	29	347	3	26
3. Bihar	35744	48529	25184	45858	23344	8886	14458	6590	1016	1280
4. Karnataka	11836	38148	12385	34246	9583	5805	3778	2828	2335	642
5. Madhya Pradesh	16896	62523	18931	56689	14336	7177	7159	5941	912	324
6. Maharashtra	16411	69584	23001	58936	14588	4182	10406	3047	672	463
7. Manipur	313	394	316	377	315	283	32	118	—	165
8. Orissa	12363	19934	7466	18702	7135	5383	1752	3565	530	1288
9. Tripura	412	521	176	420	137	84	53	18	—	66
10. West Bengal	23319	28691	10941	26439	10131	5326	4805	4826	377	123

net area irrigated by lift from			net area irrigated by lift using		net area irrigated by lift by ownership of lifting equipment			gross area under crop	gross area irrigated		
well & tube well	river	others	electricity & diesel	others	private-joint	private-single	others		total	by flow	by lift
11	12	13	14	15	16	17	18	19	20	21	22
6368	164	1180	4670	3042	2278	5133	301	74783	34302	23947	10355
15	4	10	2	27	—	27	2	910	522	475	47
11366	1080	2012	10459	3999	1117	12680	661	72571	33334	12541	20793
3301	395	82	2882	896	651	2986	141	38059	6885	4817	11702
6087	778	294	3847	3312	1617	5468	74	71013	15723	8195	7528
9299	997	110	8120	2286	2302	7665	—	68600	17904	5430	12474
—	9	23	30	2	—	2	30	408	322	285	37
525	579	648	380	1372	68	1567	117	23675	9064	7099	1965
4	9	40	13	40	—	44	9	643	238	145	93
1645	757	2403	2326	2479	231	3938	636	36069	12902	6257	6645

Note : Figures in columns 2—22 are in 00 hectares.



## PART II

### **SOME SELECTED IMPORTANT RESULTS OF THE SURVEY ON USE OF IRRIGATION IN HOUSEHOLD HOLDINGS**

*National Sample Survey :  
31st Round (July 1976—June 1977)*



LIST OF TABLES

Table 0 :	. . . . .	Number of sample villages allotted and number surveyed, number of households surveyed for schedule 22-1, estimated number of total households and estimated number of cultivating households (i) usually using irrigation and (ii) usually not using irrigation.
Table 1 :	. . . . .	Estimates of number of households usually using irrigation, area possessed, net area sown, area cropped more than once and gross cropped area separately for irrigable land and land without irrigation facility by size class of holding.
Table 2 :	. . . . .	Estimates of number of households reporting area irrigated in 1975-76 and net area irrigated by size class of holding and type of irrigation.
Table 3 :	. . . . .	Estimates of number of households reporting lift irrigation and net area irrigated by lift by size class of holding and by source of power.
Table 4 :	. . . . .	Estimates of net area irrigated by type of irrigation and ownership of the source of water for irrigation.
Table 5 :	. . . . .	Estimates of net area irrigated by ownership of lifting equipment and by source of power.
Table 6 :	. . . . .	Estimates of area sown having irrigation facility but not irrigated by size class of holding and reason for not irrigating.
Table 7 :	. . . . .	Estimates of number of parcels of irrigable land possessed, total area of the plots, net area irrigated, net area not irrigated and net area sown by size class of parcels.
Table 8 :	. . . . .	Estimates of area (i) under crop, (ii) applied with fertiliser, (iii) applied with manure, (iv) affected by pests & diseases, (v) sprayed with pesticides, (vi) of crops finally damaged and value of (i) fertiliser used, (ii) manure used and (iii) pesticides sprayed separately for irrigated and unirrigated crops.
Table 9 :	. . . . .	Estimates of area under crop, area applied with fertiliser and manure and area affected by pests and diseases for irrigated and unirrigated crops by crop/crop group separately for ordinary and improved variety of seed.
Table 10 :	. . . . .	Estimates of area under crop applied with fertiliser having nutrients N only, NP only, NPK only and others separately for irrigated and unirrigated crops by crop/crop group.
Table 11 :	. . . . .	Estimates of area under irrigated crops by crop/crop group and type of irrigation.
Table 12 :	. . . . .	Estimates of area under irrigated crops by crop/crop group and number of times irrigated.
Table 13 :	. . . . .	Estimates of area under irrigated crop with subsidiary irrigation and without subsidiary irrigation by crop/crop group.
Table 14 :	. . . . .	Estimates of value of agricultural implements, irrigation equipments and draught animals (adult cattles and buffaloes—3 years or more) owned by households by size class of household holding.
Table 15 :	. . . . .	Estimates of number of households reporting pump sets and number of pump sets possessed by size class of household holding.
Table 16 :	. . . . .	Estimates of number of pump sets possessed by source of power and by horse-power.
Table 17 :	. . . . .	Estimates of number of pump sets and household, share of value of owned equipments by type of possession and source of power.
Table 18 :	. . . . .	Estimates of number of pump sets reporting area irrigated by source of power and source of water separately by possession type.
Table 19 :	. . . . .	Estimates of expenses for irrigation on other than capital account by items of expenditure.

Tables 1 to 19 relate to households usually using irrigation.



TABLE 0 : NUMBER OF SAMPLE VILLAGES ALLOTTED AND NUMBER SURVEYED, NUMBER OF HOUSEHOLDS SURVEYED FOR SCHEDULE 22.1, ESTIMATED NUMBER OF TOTAL HOUSEHOLDS AND ESTIMATED NUMBER OF CULTIVATING HOUSEHOLDS USUALLY USING IRRIGATION AND NUMBER USUALLY NOT USING IRRIGATION.

GENERAL SAMPLE		ANDHRA PRADESH
item		number
(0)		(1)
1. number of sample villages allotted for survey		672
2. number of sample villages actually surveyed		672
3. number of sample households surveyed for schedule 22.1		8697
4. estimated number of total households (000) a		8100
5. estimated number of cultivating households (000)		4742
(i) usually using irrigation		3397
(ii) usually not using irrigation b		1345

a. from listing schedule—Draft Report No. 291, Part-I.

b. from manual tabulation on schedule 22.2—Draft Report No. 289.



TABLE 1 : ESTIMATES OF NUMBER OF HOUSEHOLDS USUALLY USING IRRIGATION AND AREA POSSESSED, NET AREA SOWN, AREA CROPPED MORE THAN ONCE AND GROSS CROPPED AREA SEPARATELY FOR IRRIGABLE LAND AND LAND WITHOUT IRRIGATION FACILITY BY SIZE CLASS OF HOLDING

ANDHRA PRADESH

GENERAL SAMPLE size class of holding (hectare)	no. of households (00) with irrigable land	irrigable area (hectares 00)		total	area of land without irrigation facility (hectares 00)			gross cropped area, more than once	net area sown	area cropped more than once	gross cropped area		
		owned	leased		owned	leased	total						
(0)	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
less than 0.5	9743	1816	505	2321	2260	852	3260	1149	75	1224	904	95	1003
0.5-1.0	6462	2831	459	3290	3206	1210	4609	1858	98	1956	1635	176	1821
1.0-2.0	7525	5092	999	6091	5694	1976	7945	5082	215	5297	4455	246	4743
2.0-4.0	5821	5785	1112	6897	6584	2465	9606	8152	439	8591	7015	241	7447
4.0-10.0	3381	6298	539	6837	6544	2307	8962	12630	564	13194	9739	224	10012
10.0 & above	1034	4461	258	4719	4511	1562	6190	13183	348	13531	8888	165	9185
all	33966	26283	3872	30155	28799	10372	40572	42054	1739	43793	32636	1147	34211

TABLE 2 : ESTIMATES OF NUMBER OF HOUSEHOLDS REPORTING AREA IRRIGATED AND NET AREA IRRIGATED BY SIZE CLASS OF HOLDING AND TYPE OF IRRIGATION

ANDHRA PRADESH

GENERAL SAMPLE size class of holding (hectare)	canal	diversion scheme	flow			lift			others	all	flow & lift combined	
			tank	others	all	tube well	river	tank				
(0)	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
less than 0.5	2634	176	4437	480	7592	1598	237	100	349	299	2554	9615
0.5-1.0	1772	120	2875	386	4926	1542	120	60	241	234	2157	6384
1.0-2.0	1827	151	3428	407	5534	2307	180	60	196	245	2912	7281
2.0-4.0	1284	123	2540	334	4042	2216	113	40	137	199	2635	5590
4.0-10.0	753	87	1348	169	2200	1638	72	40	32	39	1798	3296
10.0 & above	256	83	306	33	632	537	32	8	4	32	601	980
all	8526	740	14934	1809	24926	9838	754	323	959	1048	12657	33146
less than 0.5	677	45	873	97	1692	333	49	14	71	60	527	2219
0.5-1.0	1123	56	1067	129	2375	498	65	26	89	105	783	3158
1.0-2.0	1727	120	1816	160	3823	1072	141	23	145	136	1517	5340
2.0-4.0	2334	97	1812	215	4488	1420	119	37	171	135	1882	6370
4.0-10.0	2426	146	1586	192	4350	1473	145	41	77	42	1778	6128
10.0 & above	1529	719	710	24	2982	894	159	23	3	146	1225	4207
all	9846	1183	7864	817	19710	5690	678	164	556	624	7712	27422



TABLE 3 : ESTIMATES OF NUMBER OF HOUSEHOLDS REPORTING LIFT IRRIGATION AND NET AREA IRRIGATED BY LIFT BY SIZE CLASS OF HOUSEHOLD HOLDING AND BY SOURCE OF POWER.

GENERAL SAMPLE

size class of holding (hectare)	no. of household (00) reporting lift irrigation using				net area irrigated (hectares 00) by lift using							
	electricity	diesel	wind-mill	animal	human	all	electricity	diesel	wind-mill	animal	human	all
(0)	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
less than 0.5	.	317	8	935	806	2554	135	70	1	190	131	527
0.5-1.0	617	231	—	906	517	2157	258	93	—	259	173	783
1.0-2.0	798	507	3	1262	471	2912	498	277	1	500	241	1517
2.0-4.0	727	609	—	1086	372	2635	641	413	—	556	272	1882
4.0-10.0	533	578	4	718	86	1798	686	544	1	428	119	1778
10.0 & above	270	266	—	143	8	601	515	540	—	165	5	1225
all	3523	2508	15	5050	2260	12657	2733	1937	3	2098	941	7712

ANDHRA PRADESH

TABLE 4 : ESTIMATES OF NET AREA IRRIGATED BY TYPE OF IRRIGATION AND OWNERSHIP OF THE SOURCE OF WATER FOR IRRIGATION

GENERAL SAMPLE

ownership of source of water for irrigation	net area irrigated (hectares 00) by type of irrigation							flow lift				
	canal	diversion scheme	tank	others	all	well	tube-well	river	tank	others	all	flow and lift combined
(0)	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
government	9777	1025	7656	752	19210	24	19	159	555	528	1285	20495
co-operative	5	35	—	—	40	1	10	—	—	35	46	86
private-joint	36	123	165	16	340	2518	106	3	—	13	2640	2980
private-single	28	—	43	49	120	3147	543	2	1	48	3741	3861
all	9846	1183	7864	817	19710	5690	678	164	556	624	7712	27422

ANDHRA PRADESH



TABLE 5 : ESTIMATES OF NET AREA IRRIGATED BY OWNERSHIP OF LIFTING EQUIPMENT AND BY SOURCE OF POWER  
GENERAL SAMPLE

ANDHRA PRADESH

ownership of lifting equipment	net area irrigated (hectares 00) by source of power					
	electricity	diesel	windmill	animal drawn	human drawn	all
(0)	(1)	(2)	(3)	(4)	(5)	(6)
government	202	15	—	21	3	241
co-operative	29	31	—	—	—	60
private joint	1019	553	1	627	78	2278
private-single	1483	1338	2	1450	860	5133
all	2733	1937	3	2098	941	7712

TABLE 6 : ESTIMATES OF AREA SOWN HAVING IRRIGATION FACILITY BUT NOT IRRIGATED BY SIZE CLASS OF HOLDING AND REASON FOR NOT IRRIGATION

GENERAL SAMPLE

ANDHRA PRADESH

size class of holding (hectare)	area (hectares 00) by reason for not irrigating			
	adequate rainfall	non-availability of water	other reasons	all reasons
(0)	(1)	(2)	(3)	(4)
less than 0.5	7	26	51	84
0.5—1.0	16	39	11	66
1.0—2.0	56	118	35	209
2.0—4.0	51	139	114	304
4.0—10.0	84	236	104	424
10.0 & above	75	121	94	290
all	289	679	409	1377



TABLE 7 : ESTIMATES OF NUMBER OF PARCELS OF IRRIGABLE LAND POSSESSED, TOTAL AREA OF THE PLOTS, NET AREA IRRIGATED, NET AREA NOT IRRIGATED AND NET AREA SOWN BY SIZE CLASS OF PARCELS

GENERAL SAMPLE		ANDHRA PRADESH				
size class of parcels (hectares)	number of parcels (00)	area (hectares 00)				
		total irrigable land	net area irrigated	net area not irrigated	net area sown	
(0)	(1)	(2)	(3)	(4)	(5)	
less than 0.05	5518	152	147	1	148	
0.05—0.10	6110	431	409	5	414	
0.10—0.20	11034	1435	1380	50	1430	
0.20—0.30	11359	2480	2399	52	2451	
0.30—0.40	4194	1358	1350	22	1372	
0.40—0.50	9511	3889	3730	101	3831	
0.50—1.00	9961	6967	6424	236	6660	
1.00—2.00	4985	6479	5867	335	6202	
2.00 & above	2125	6964	5716	575	6291	
all	64797	30155	27422	1377	28799	

Parcel: A plot or contiguously located plots having a common source of irrigation facility possessed by the household was treated as a parcel.

TABLE 8 : ESTIMATES OF AREA (I) UNDER CROP, (II) APPLIED WITH FERTILISER, (III) APPLIED WITH MANURE (IV) AFFECTED BY PESTS AND DISEASES, (V) SPRAYED WITH PESTICIDES, (VI) OF CROPS FINALLY DAMAGED AND VALUE OF (I) FERTILISER USED, (II) MANURE USED (III) PESTICIDES SPRAYED SEPARATELY FOR IRRIGATED AND UNIRRIGATED CROPS BY CROP/CROP GROUP

GENERAL SAMPLE		ANDHRA PRADESH							
crop /crop group	area (hectares 00)						value (Rs. 000) of		
	under crop	applied with fertiliser	applied with manure	affected by pests & diseases	sprayed with pesticides	of crops finally damaged	fertiliser used	manure used	pesticides sprayed
(0)	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
irrigated crops									
paddy	26908	23416	19691	11563	9549	1438	817004	164258	77646
jowar	423	231	220	75	75	11	7523	5359	760
bajra	439	225	331	120	79	17	7075	10685	1011
maize	547	429	372	58	54	8	14396	10279	263
ragi	759	427	535	192	101	21	9790	16285	935
all cereals	29366	24884	21317	12054	9892	1514	859645	211244	80921
all pulses	114	11	33	11	10	5	221	558	26
all oilseeds	2138	1598	984	1189	903	86	42334	18671	10078
sugarcane	852	801	654	162	135	28	60152	20354	1444
all other crops	1832	1276	1192	642	594	121	73749	46288	18513
all crops	34302	28570	24180	14058	11534	1754	1036101	297115	110982
unirrigated crops									
paddy	990	541	649	174	46	7	9972	8699	338
jowar	11362	639	4234	1464	148	102	9346	37770	599
bajra	2331	106	1023	406	16	8	1859	14264	77
maize	1000	651	631	51	35	21	11841	9590	190
ragi	1095	131	643	36	4	—	2313	7355	16
all cereals	20599	2144	8643	2355	264	146	37949	95466	1400
all pulses	6040	320	991	891	527	179	3632	11718	4824
all oilseeds	8789	1403	4991	3234	678	327	23055	68834	3839
sugarcane	27	22	21	5	1	—	635	1194	11
all other crops	5026	1489	1630	1167	873	162	50256	25547	13927
all crops	40481	5378	16276	7652	2343	814	115527	202759	24001



TABLE 9 : ESTIMATES OF AREA UNDER CROP, AREA APPLIED WITH FERTILISER AND MANURE AND AREA AFFECTED BY PESTS AND DISEASES FOR IRRIGATED AND UNIRRIGATED CROPS BY CROP/CROP GROUP SEPARATELY FOR ORDINARY AND IMPROVED VARIETY OF SEEDS.

GENERAL SAMPLE					ANDHRA PRADESH			
crops/crop group	irrigated crop area (hectares 00)				unirrigated crop area (hectares 00)			
	total	applied with fertiliser	applied with manure	affected by pests & diseases	total	applied with fertiliser	applied with manure	affected by pests & diseases
(0)	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
ordinary variety								
paddy . . . . .	16793	13988	13182	6659	784	360	512	137
jowar . . . . .	285	118	155	25	11299	617	4213	1448
bajra . . . . .	336	142	251	69	2275	94	993	395
maize . . . . .	474	361	311	41	981	633	621	51
ragi . . . . .	749	423	533	191	1094	131	643	35
all cereals . . . . .	18927	15188	14600	7031	20227	1911	8443	2288
all pulses . . . . .	112	11	31	11	5898	178	991	749
all oilseeds . . . . .	2133	1597	980	1189	8711	1379	4954	3220
sugarcane . . . . .	794	750	603	145	27	22	21	5
all other crops . . . . .	1727	1190	1128	600	4740	1263	1474	944
all crops . . . . .	23693	18736	17342	8976	39603	4753	15883	7206
improved variety								
paddy . . . . .	10115	9428	6509	4904	206	181	137	37
jowar . . . . .	138	113	65	50	63	22	21	16
bajra . . . . .	103	83	80	51	56	12	30	11
maize . . . . .	73	68	61	17	19	18	10	—
ragi . . . . .	10	4	2	1	1	—	—	1
all cereals . . . . .	10439	9696	6717	5023	372	233	200	67
all pulses . . . . .	2	—	2	—	142	142	—	142
all oilseeds . . . . .	5	1	4	—	78	24	37	14
sugarcane . . . . .	58	51	51	17	—	—	—	—
all other crops . . . . .	105	86	64	42	286	226	156	223
oil crops . . . . .	10609	9834	6838	5082	878	625	393	446

TABLE 10 : ESTIMATES OF AREA UNDER CROP APPLIED WITH FERTILISERS HAVING NUTRIENTS N ONLY, NP ONLY, NPK ONLY AND OTHERS SEPARATELY FOR IRRIGATED AND UNIRRIGATED CROPS BY CROP/CROP GROUP

GENERAL SAMPLE					ANDHRA PRADESH					
crop/crop group	irrigated crop area (hectares 00) applied with fertilisers having nutrients					unirrigated crop area (hectares 00) applied with fertilisers having nutrients				
	N only	NP only	NPK only	others	total	N only	NP only	NPK only	others	total
(0)	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
paddy . . . . .	10330	4996	7484	606	23416	336	97	77	31	541
jowar . . . . .	46	31	154	—	231	316	196	106	21	639
bajra . . . . .	100	60	65	—	225	27	34	34	11	106
maize . . . . .	270	14	144	1	429	580	17	54	—	651
ragi . . . . .	299	50	65	13	427	95	19	17	—	131
all cereals . . . . .	11122	5179	7961	622	24884	1385	381	302	76	2144
all pulses . . . . .	9	—	2	—	11	68	203	49	—	320
all oil seeds . . . . .	226	778	567	27	1598	160	969	251	23	1403
sugar cane . . . . .	567	75	131	28	801	12	10	—	—	22
all other crops . . . . .	513	293	390	80	1276	412	579	339	159	1489
all crops . . . . .	12437	6325	9051	757	28570	2037	2142	941	258	5378

'N' only means nitrogenous fertilisers like ammonium sulphate, ammonium sulphate nitrate, calcium ammonium nitrate, ammonium chloride and urea.

'NP' only means nitrogenous phosphate fertilisers like ammonium phosphate, ammonium phosphate sulphate, diammonium phosphate, urea ammonium phosphate and ammonium nitrate phosphate. It also includes phosphate fertilisers like single super phosphate, triple super phosphate and palfos in combination with nitrogenous fertilisers containing 'N' only.

'NPK' means nitrogenous phosphate potash fertilisers like nitrophosphate and NPK complex fertilisers. It also includes potash fertilisers like sulphate of potash in combination with 'NP' fertilisers noted under 'NP' above.



TABLE 11 : ESTIMATES OF AREA UNDER IRRIGATED CROPS BY CROP/CROPGROUP AND TYPE OF IRRIGATION  
GENERAL SAMPLE ANDHRA PRADESH

crop/crop group	area (hectares 00) under irrigated crop by type of irrigation											
	flow					lift						flow and lift combined
	canal	diversion scheme	tank	others	total	well	tube-well	river	tank	others	total	
(0)	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
paddy . . . . .	10255	469	9555	775	21054	4353	225	136	546	594	5854	26908
jowar . . . . .	65	104	41	2	212	202	7	1	—	1	211	423
bazra . . . . .	40	20	22	1	83	336	7	2	—	11	356	439
maize . . . . .	25	—	8	—	33	497	12	1	2	2	514	547
ragi . . . . .	—	—	70	12	82	651	3	3	13	7	677	759
all cereals . . . . .	10438	599	9709	809	21555	6218	254	143	565	631	7811	29366
all pulses . . . . .	28	—	40	1	69	37	3	—	3	2	45	114
all oil seeds . . . . .	999	462	64	15	1540	498	43	5	—	52	598	2138
sugarcane . . . . .	179	40	86	22	327	356	129	2	12	26	525	852
all other crops . . . . .	217	84	117	38	456	877	402	24	1	72	1376	1832
all crops . . . . .	11861	1185	10016	885	23947	7986	831	174	581	783	10355	34302

TABLE 12 : ESTIMATES OF AREA UNDER IRRIGATED CROPS BY CROP/CROP GROUP AND NUMBER OF TIMES IRRIGATED

GENERAL SAMPLE

ANDHRA PRADESH

crop/crop group	crop area (hectares 00) irrigated				
	once	twice	thrice	more than thrice	total
	(1)	(2)	(3)	(4)	(5)
paddy . . . . .	65	34	166	26643	26908
jowar . . . . .	5	16	52	350	423
bajra . . . . .	11	10	26	392	439
maize . . . . .	5	12	8	522	547
ragi . . . . .	6	10	23	720	759
all cereals . . . . .	97	103	282	28884	29366
all pulses . . . . .	12	27	8	67	114
all oilseeds . . . . .	42	152	114	1830	2138
sugarcane . . . . .	8	1	6	837	852
all other crops . . . . .	68	130	55	1579	1832
all crops . . . . .	227	413	465	33197	34302



TABLE 13 : ESTIMATES OF AREA UNDER IRRIGATED CROPS WITH SUBSIDIARY IRRIGATION AND WITHOUT SUBSIDIARY IRRIGATION BY CROP/CROP GROUP

GENERAL SAMPLE	ANDHRA PRADESH			
	crop/crop group	area (hectares 00) under irrigated crop		
		with subsidiary irrigation	without subsidiary irrigation	total
(0)	(1)	(2)	(3)	
paddy	2554	24354	26908	
jowar	10	413	423	
bajra	5	434	439	
maize	12	535	547	
ragi	58	701	759	
all cereals	2653	26713	29366	
all pulses	8	106	114	
all oilseeds	23	2115	2138	
sugarcane	182	670	852	
all other crops	68	1764	1832	
all crops	2934	31368	34302	

TABLE 14 : ESTIMATES OF VALUE OF AGRICULTURAL IMPLEMENTS, IRRIGATION EQUIPMENTS AND DRAUGHT ANIMALS (ADULTS CATTLES AND BUFFALOES 03 YEARS OR MORE) OWNED BY HOUSEHOLDS BY SIZE CLASS OF HOUSEHOLD HOLDING

GENERAL SAMPLE	ANDHRA PRADESH						
	items of assets	value (Rs. 000) of agricultural implements, irrigation equipments and cattles and buffaloes by size class of holding (hectare)					
		less than 0.5	0.5-1.0	1.0-2.0	2.0-4.0	4.0-10.0	10.0 & above
(0)	(1)	(2)	(3)	(4)	(5)	(6)	(7)
<b>agricultural implements</b>							
1. tractor	—	16237	—	16080	59503	178253	270073
2. power tiller	—	—	—	5558	360	939	6857
3. sprayer	10	—	774	743	5673	7167	14367
4. duster	109	—	60	—	1351	1211	2731
5. thresher	—	—	—	—	—	—	—
6. cane crusher	—	7135	1439	1545	5767	857	16743
7. oil crusher	232	—	1396	—	1396	—	3024
8. all	351	23372	3669	23926	74050	188427	313795
<b>irrigation equipments</b>							
1. electric pumps	18483	60615	102905	148432	166247	98365	595047
2. diesel pumps	13504	29704	1857	111527	159345	110761	496698
3. windmill	—	—	402	—	—	—	402
4. moat	8570	10360	18101	24085	13240	2768	77124
5. persian wheel	5608	9354	17407	10268	5857	1588	50082
6. others (animal-driven)	140	1118	323	566	670	167	2984
7. counterpoise	1111	740	697	1058	480	77	4163
8. manual pumps	219	708	885	1154	373	201	3540
9. others	929	808	1337	1933	1259	747	7013
10. all	48564	113407	213914	299023	347471	214674	1237053
<b>adult cattles and buffaloes</b>							
1. cattles	102078	196824	450656	584970	595108	406833	2336469
2. buffaloes	33850	40113	53680	47200	40947	22192	237982
3. all	135928	236937	504336	632170	636055	429025	2574451
total	184843	373716	721919	955119	1057576	832126	4125299



TABLE 15 : ESTIMATES OF NUMBER OF HOUSEHOLDS REPORTING PUMPSETS AND NUMBER OF PUMPSETS POSSESSED BY SIZE CLASS OF HOUSEHOLD HOLDING

GENERAL SAMPLE	ANDHRA PRADESH	
size class of holding (hectare)	no. of households reporting pumpsets (00)	no. of pumpsets* (00)
(0)	(1)	(2)
less than 0.5	388	412
0.5-1.0	611	674
1.0-2.0	1123	1243
2.0-4.0	1242	1491
4.0-10.0	1147	1145
10.0 & above	565	759
all	5076	6024

\*In this and subsequent tables on number of pumpsets, the number includes those possessed jointly as well as on rent. In the case of jointly possessed, instead of the household share of the number possessed, the total number possessed jointly has been counted as possessed by the sample household.

Hence the estimated number of pumpsets is inflated to some extent.

TABLE 16 : ESTIMATES OF NUMBER OF PUMPSETS POSSESSED BY SOURCE OF POWER AND BY HORSE POWER.

GENERAL SAMPLE	ANDHRA PRADESH			
horse power	no. of pumpsets* (00) having source of power			
	electricity	diesel	both electricity and diesel	total
(0)	(1)	(2)	(3)	(4)
less than 1.0	124	126	—	205
1.0-2.0	4	—	—	4
2.0-3.0	36	22	—	58
3.0-4.0	1267	270	—	1537
4.0-5.0	—	7	—	7
5.0 & above	2085	2083	—	4168
all	3516	2508	—	6024

\*see footnote on table 15

TABLE 17 : ESTIMATES OF NUMBER OF PUMPSETS AND HOUSEHOLD'S SHARE OF VALUE OF OWNED EQUIPMENTS BY TYPE OF POSSESSION AND SOURCE OF POWER.

GENERAL SAMPLE	ANDHRA PRADESH							
source of power	possession type							
	owned singly		owned jointly		rented	total		
	no. of pumpsets (00)	hh's share of value of owned equipments (Rs. 000)	no. of pumpsets (00)	hh's share of value of owned equipments (Rs. 000)	no. of pumpsets (00)	hh's share of value of owned equipments (Rs. 000)	no. of pumpsets (00)	hh's share of value of owned equipments (Rs. 000)
(0)	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
electricity	1205	347279	2132	196593	179	1333	3516	545205
diesel	1114	342390	1149	129120	245	—	2508	471510
both electricity & diesel	—	—	—	—	—	—	—	—
all	2319	689669	3281	325713	424	1333	6024	1016715

\*see footnote on table 15



TABLE 18 : ESTIMATES OF NUMBER OF PUMPSETS\* REPORTING AREA IRRIGATED BY SOURCE OF POWER AND SOURCE OF WATER SEPARATELY BY POSSESSION TYPE.

GENERAL SAMPLE		ANDHRA PRADESH				
source of power (0)	no. of pumpsets (00) reporting area irrigated by source of water					
	well (1)	tubewell (2)	rivers and streams (3)	others (4)	total (5)	
<b>owned singly</b>						
1. electricity . . . . .	1050	109	12	20	1191	
2. diesel . . . . .	848	113	64	74	1099	
3. both electricity & diesel . . . . .	—	—	—	—	—	
4. all . . . . .	1898	222	76	94	2290	
<b>owned jointly</b>						
1. electricity . . . . .	1893	143	56	40	2132	
2. diesel . . . . .	1055	48	12	27	1142	
3. both electricity & diesel . . . . .	—	—	—	—	—	
4. all . . . . .	2948	191	68	67	3274	
<b>rented</b>						
1. electricity . . . . .	97	55	12	12	176	
2. diesel . . . . .	159	24	4	44	231	
3. both electricity & diesel . . . . .	—	—	—	—	—	
4. all . . . . .	256	79	16	56	x407	
<b>total</b>						
1. electricity . . . . .	3040	307	80	72	3499	
2. diesel . . . . .	2062	185	80	145	2472	
3. both electricity & diesel . . . . .	—	—	—	—	—	
4. all . . . . .	5102	492	160	217	5971	

\*see footnote on table (15)

TABLE 19 : ESTIMATES OF EXPENSES FOR IRRIGATION ON OTHER THAN CAPITAL ACCOUNT BY ITEMS OF EXPENDITURE.

GENERAL SAMPLE		ANDHRA PRADESH
items of expenditure (0)	amount (Rs. 000)	
	(1)	
1. repair and maintenance expenses of bunds and field channels.	129980	
2. water charges . . . . .	141949	
3. other expenses on independently owned lift irrigation . . . . .	252351	
4. share of expenses on joint arrangements . . . . .	93802	
5. receipt from sale of water . . . . .	(—)4256	
6. total	613826	



TABLE 0 : NUMBER OF SAMPLE VILLAGES ALLOTTED AND NUMBER SURVEYED, NUMBER OF SAMPLE HOUSEHOLDS SURVEYED FOR SCHEDULE 22-1, ESTIMATED NUMBER OF TOTAL HOUSEHOLDS AND ESTIMATED NUMBER OF CULTIVATING HOUSEHOLDS USUALLY USING IRRIGATION AND NUMBER USUALLY NOT USING IRRIGATION.

GENERAL SAMPLE	ASSAM
item	number
(0)	(1)
1. number of sample villages allotted for survey.	456
2. number of sample villages actually surveyed.	456
3. number of sample households surveyed for Scheduled 22-1	176
4. estimated number of total households (000)	2458
5. estimated number of cultivating households (000)	1962
(i) usually using irrigation	38
(ii) usually not using irrigation	1924

a from listing schedule Draft Report No. 291, Part-1

b from manual tabulation on Schedule 22-2. Draft Report No. 289.

TABLE 1 : ESTIMATES OF NUMBER OF HOUSEHOLDS USUALLY USING IRRIGATION AND AREA POSSESSED, NET AREA SOWN, AREA CROPPED MORE THAN ONCE AND GROSS CROPPED AREA SEPARATELY FOR IRRIGABLE LAND AND LAND WITHOUT IRRIGATION FACILITY BY SIZE CLASS OF HOLDING

GENERAL SAMPLE		ASSAM											
size class of holding (hectare)	no. of house- holds (00) with irri- gable land	irrigable area (hectares 00)					area of land without irrigation facility (hectares 00)						
		area possessed					area possessed						
		owned	leased- in	total	net area sown	cropped more than once	owned	leased in	total	net area sown	cropped more than once	gross cropped area	
(0)	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
less than 0.5	37	2	5	7	7	4	11	5	—	5	2	—	2
0.5—1.0	70	8	26	34	34	12	46	21	3	24	17	6	23
1.0—2.0	149	21	93	114	110	40	150	88	15	103	70	8	88
2.0—4.0	88	24	102	126	123	49	172	108	18	126	91	23	114
4.0—10.0	39	11	12	123	122	61	183	105	4	109	79	14	93
10.0 & above	2	—	15	15	15	—	15	15	—	15	13	—	13
all	385	66	353	419	411	166	577	342	40	382	272	61	333



TABLE 2 : ESTIMATES OF NUMBER OF HOUSEHOLDS REPORTING AREA IRRIGATED AND NET AREA IRRIGATED BY SIZE CLASS OF HOLDING AND TYPE OF IRRIGATION.

GENERAL SAMPLE													ASSAM
size class of holding (hectare)	flow					lift					flow & lift combined		
	canal	divers-scheme	tank	others	all	well	tubewell	river	tank	others		all	
(0)	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	
number of households (00) reporting area irrigated													
less than 0.5	15	7	—	2	24	—	—	2	4	4	10	34	
0.5—1.0	41	4	7	—	52	—	—	9	7	2	18	70	
1.0—2.0	107	13	2	4	126	—	—	7	7	9	22	148	
2.0—4.0	68	11	—	7	85	—	—	—	—	4	4	88	
4.0—10.0	35	2	—	2	39	—	—	—	—	—	—	39	
10.0 & above	—	—	—	—	—	—	2	—	—	—	2	2	
all	266	37	9	15	326	—	2	18	18	19	56	381	
net area irrigated (hectares 00)													
less than 0.5	3	1	—	—	4	—	—	—	1	1	2	6	
0.5—1.0	27	1	3	—	31	—	—	2	1	3	3	34	
1.0—2.0	94	5	—	4	103	—	—	2	1	4	7	110	
2.0—4.0	103	7	—	6	116	—	—	—	—	2	2	118	
4.0—10.0	120	1	—	1	122	—	—	—	—	—	—	122	
10.0 & above	—	—	—	—	—	—	15	—	—	—	15	15	
all	347	15	3	11	376	—	15	4	3	7	29	405	

TABLE 3 : ESTIMATES OF NUMBER OF HOUSEHOLDS REPORTING LIFT IRRIGATION AND NET AREA IRRIGATED BY LIFT BY SIZE CLASS OF HOLDING AND BY SOURCE OF POWER.

GENERAL SAMPLE													ASSAM
size class of holding (hectare)	no of households (00) reporting lift irrigation using						net area irrigated (hectares 00) by lift using						
	electricity	diesel	wind-mill	animal	human	all	electricity	diesel	wind-mill	animal	human	all	
(0)	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	
less than 0.5	2	—	—	—	8	10	—	—	—	—	2	2	
.5—1.0	2	—	—	—	16	18	1	—	—	—	2	3	
1.0—2.0	—	2	—	—	20	22	—	1	—	—	6	7	
2.0—4.0	—	—	—	—	4	4	—	—	—	—	2	2	
4.0—10.0	—	—	—	—	—	—	—	—	—	—	—	—	
10.0 & above	—	—	—	—	2	2	—	—	—	—	15	15	
all	4	2	—	—	50	56	1	1	—	—	27	29	



TABLE 4 : ESTIMATES OF NET AREA IRRIGATED BY TYPE OF IRRIGATION AND OWNERSHIP OF THE SOURCE OF WATER FOR IRRIGATION.

GENERAL SAMPLE		ASSAM										
		net area irrigated (hectares 00) by type of irrigation										
ownership of source of water for irrigation	flow					lift					flow & lift	
	canal	diversion scheme	tank	others	all	well	tube well	river	tank	others	all lift	combined
(0)	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
government	155	—	—	1	156	—	—	1	—	—	1	157
co-operative	7	10	—	—	17	—	—	—	—	—	—	17
private joint	103	5	2	1	111	—	—	—	—	—	—	11
private single	1	—	1	9	11	—	15	3	3	6	27	38
not recorded	81	—	—	—	81	—	—	—	—	1	1	82
all	347	15	3	11	376	15	15	4	3	7	29	405

TABLE 5 : ESTIMATES OF NET AREA IRRIGATED BY OWNERSHIP OF LIFTING EQUIPMENT AND BY SOURCE OF POWER.

GENERAL SAMPLE		ASSAM					
		net area irrigated (hectares 00) by source or power.					
ownership of lifting equipment	electricity	diesel	windmill	animal Drawn	human Drawn	all	
	(1)	(2)	(3)	(4)	(5)	(6)	
government	1	—	—	—	—	1	
co-operative	—	—	—	—	—	—	
private joint	—	—	—	—	—	—	
private single	—	—	—	—	27	27	
not recorded	—	1	—	—	—	1	
all	1	1	—	—	27	29	



TABLE 6 : ESTIMATES OF AREA SOWN HAVING IRRIGATION FACILITY BUT NOT IRRIGATED BY SIZE CLASS OF HOLDING AND REASON FOR NOT IRRIGATING

GENERAL SAMPLE size class of holding (hectare)	ASSAM area (hectares 00) by reason for not irrigating			
	adequate rainfall	non-availabi- lity of water	other reasons	all reasons
(0)	(1)	(2)	(3)	(4)
less than 0.5	—	1	—	1
0.5—1.0	—	—	—	—
1.0—2.0	—	—	1	1
2.0—4.0	—	—	4	4
4.0—10.0	—	—	—	—
10.0 & above all	—	1	5	6

TABLE 7 : ESTIMATES OF NUMBER OF PARCELS OF IRRIGABLE LAND POSSESSED, TOTAL AREA OF THE PLOTS, NET AREA IRRIGATED, NET AREA NOT IRRIGATED AND NET AREA SOWN BY SIZE CLASS OF PARCELS.

GENERAL SAMPLE size class of parcel (hectare)	ASSAM area (hectares 00)				
	number of parcels (00)	irrigable land	net area irrigated	net area not irrigated	net area sown
(0)	(1)	(2)	(3)	(4)	(5)
less than 0.05	9	—	—	—	—
0.05—0.10	4	—	—	—	—
0.10—0.20	88	12	12	—	12
0.20—0.30	134	34	33	1	34
0.30—0.40	13	5	4	—	4
0.40—0.50	99	41	40	—	40
0.50—1.00	219	148	144	3	147
1.00—2.00	77	99	92	2	94
2.00 & above	26	80	80	—	80
all	669	419	405	6	411

PARCEL : A plot or contiguously located plots having a common source of irrigation facility possessed by the household was treated as parcel.



TABLE 8 : ESTIMATES OF AREA (I) UNDER CROP, (II) APPLIED WITH FERTILISERS (III) APPLIED WITH MANURE, (IV) AFFECTED BY PESTS & DISEASES (V) SPRAYED WITH PESTICIDES AND (VI) OF CROPS FINALLY DAMAGED AND VALUE OF (I) FERTILISER USED, (II) MANURE USED AND (III) PESTICIDES SPRAYED SEPARATELY FOR IRRIGATED AND UNIRRIGATED CROPS BY CROP/CROP GROUP.

GENERAL SAMPLE

ASSAM

crop/crop Group	area (hectare 00)					Value (Rs. 000) by			
	under crop	applied with fertiliser	applied with manure	affected by pests & diseases	sprayed with pesticides	of crops finally damaged	fertiliser used	manure used	pesticides sprayed
(0)	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
<b>irrigated crops.</b>									
Paddy . . . . .	520	9	—	9	1	1	21	—	4
all cereals . . . . .	522	9	—	9	1	1	21	—	4
all pulses . . . . .	—	—	—	—	—	—	—	—	—
all oil seeds . . . . .	—	—	—	—	—	—	—	—	—
all other crops . . . . .	—	—	—	—	—	—	—	—	—
all crops . . . . .	522	9	—	9	1	1	21	—	4
<b>unirrigated crops</b>									
paddy . . . . .	354	1	8	4	—	—	8	21	—
all cereals . . . . .	356	1	8	4	—	—	8	21	—
all pulses . . . . .	5	—	—	—	—	—	—	—	—
all oil seeds . . . . .	3	—	—	—	—	—	—	—	—
all other crops . . . . .	24	1	—	—	—	—	4	—	—
all crops . . . . .	388	2	8	4	—	—	12	21	—

TABLE 9 : ESTIMATES OF AREA UNDER CROP, AREA APPLIED WITH FERTILISER, AREA APPLIED WITH MANURE AND AREA AFFECTED BY PESTS & DISEASES FOR IRRIGATED AND UNIRRIGATED CROPS BY CROP/CROP GROUP SEPARATELY FOR ORDINARY AND IMPROVED VARIETIES OF SEEDS

GENERAL SAMPLE

crop/crop group	irrigated crop area (hectares 00)					unirrigated crop area (hectares 00)			
	under crop	applied with fertiliser	applied with manure	affected by pests & diseases	sprayed with pesticides	under crop	applied with fertiliser	applied with manure	affected by pests & diseases
(0)	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
<b>ordinary Variety</b>									
paddy . . . . .	511	—	—	9	351	1	8	4	—
all cereals . . . . .	513	—	—	9	351	1	8	4	—
all pulses . . . . .	—	—	—	—	2	—	—	—	—
all oilseeds . . . . .	—	—	—	—	—	—	—	—	—
all other crops . . . . .	—	—	—	—	25	1	—	—	—
all crops . . . . .	513	—	—	9	376	2	8	4	—
<b>improved variety</b>									
paddy . . . . .	9	9	—	—	3	—	—	—	—
all cereals . . . . .	9	9	—	—	5	—	—	—	—
all pulses . . . . .	—	—	—	—	3	—	—	—	—
all oilseeds . . . . .	—	—	—	—	3	—	—	—	—
all other crops . . . . .	—	—	—	—	1	—	—	—	—
all crops . . . . .	9	9	—	—	12	—	—	—	—



TABLE 10 : ESTIMATES OF AREA UNDER CROP APPLIED WITH FERTILISER HAVING NUTRIENTS N ONLY, N P ONLY, NPK ONLY AND OTHERS SEPARATELY FOR IRRIGATED AND UNIRRIGATED CROPS BY CROP /CROP GROUP

crop/crop group	irrigated area (hectares 00) applied with fertilisers having nutrients					unirrigated area (hectares 00) applied with fertilisers having nutrients					
	N only	N P only	N P K only	others	total	N only	N P only	N P K only	others	total	
	(0)	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
paddy . . . . .	9	—	—	—	9	1	—	—	—	—	1
all cereals . . . . .	9	—	—	—	9	1	—	—	—	—	1
all pulses . . . . .	—	—	—	—	—	—	—	—	—	—	—
all oilseeds . . . . .	—	—	—	—	—	—	—	—	—	—	—
all other crops . . . . .	—	—	—	—	—	—	1	—	—	—	1
all crops . . . . .	9	—	—	—	9	1	1	—	—	—	2

- 'N' only means nitrogenous fertilisers like ammonium sulphate, ammonium sulphate nitrate, calcium ammonium nitrate, ammonium chloride and urea.
- 'NP' only means nitrogenous phosphate fertilisers like ammonium phosphate, ammonium phosphate sulphate, diammonium phosphate, urea ammonium phosphate and ammonium nitrate phosphate. It also includes phosphate fertilisers like single super phosphate, triple super phosphate and palfos in combination with heterogenous fertilisers containing 'N' only
- 'NPK' means nitrogenous phosphatic potash fertilisers like nitrophosphate and NPK complex fertiliser. It also includes potash fertilisers like sulphate of potash in combination with 'NP' fertilisers noted under 'NP' above.

TABLE 11 : ESTIMATED OF AREA UNDER IRRIGATED CROPS BY CROP/CROP GROUP AND TYPE OF IRRIGATION

crop/ crop Groups	area under irrigated crops (hectares 00) by type of irrigation											
	flow					lift						flow lift combined
	canal	diversion scheme	tank	others	total	well	tube well	river	tank	others	total	
(0)	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
paddy . . . . .	439	18	3	13	473	—	20	8	6	13	47	520
all cereals . . . . .	441	18	3	13	475	—	20	8	6	13	47	522
all pulses . . . . .	—	—	—	—	—	—	—	—	—	—	—	—
all oilseeds . . . . .	—	—	—	—	—	—	—	—	—	—	—	—
all other crops . . . . .	—	—	—	—	—	—	—	—	—	—	—	—
all crops . . . . .	441	18	3	13	475	—	20	8	6	13	47	522



TABLE 12 : ESTIMATES OF AREA UNDER IRRIGATED CROPS BY CROP/CROP GROUP AND NUMBER OF TIMES IRRIGATED.

GENERAL SAMPLE

ASSAM

Crop/crop group	crop area (hectares 00) irrigated					total
	once	twice	thrice	more than thrice		
	(1)	(2)	(3)	(4)		
(0)	(1)	(2)	(3)	(4)	(5)	
paddy . . . . .	67	240	54	159	520	
all cereals . . . . .	67	242	54	159	522	
all pulses . . . . .	—	—	—	—	—	
all oilseeds . . . . .	—	—	—	—	—	
all other crops . . . . .	—	—	—	—	—	
all crops . . . . .	67	242	54	159	522	

TABLE 13 : ESTIMATES OF AREA UNDER IRRIGATED CROPS WITH SUBSIDIARY IRRIGATION AND WITHOUT SUBSIDIARY IRRIGATION BY CROP/CROP GROUP

GENERAL SAMPLE

ASSAM

crop/crop group	area (hectares 00) under irrigated crops			total
	with subsidiary irrigation	without subsidiary irrigation		
	(1)	(2)	(3)	
(0)	(1)	(2)	(3)	
paddy . . . . .	2	518	520	
all cereals . . . . .	2	520	522	
all pulses . . . . .	—	—	—	
all oilseeds . . . . .	—	—	—	
all other crops . . . . .	—	—	—	
all crops . . . . .	2	520	522	



TABLE 14 : ESTIMATES OF VALUE OF AGRICULTURAL IMPLEMENTS, IRRIGATION EQUIPMENTS AND DRAUGHT ANIMALS (ADULT CATTLES AND BUFFALOES-3 YEARS OR MORE) OWNED BY HOUSEHOLDS BY SIZE CLASS OF HOLDING.

GENERAL SAMPLE		ASSAM						
		value(Rs. 000) of agricultural implements, irrigation equipments and adult cattles and buffaloes by size class of holding (hectare)						
items of asset		less than 0.5	0.5 - 1.0	1.0 - 2.0	2.0 - 4.0	4.0 - 10.0	10.0 & above	all
(0)		(1)	(2)	(3)	(4)	(5)	(6)	(7)
<b>agricultural implements:</b>								
1. tractor		—	—	—	—	—	—	—
2. power tiller		—	—	—	—	—	—	—
3. sprayer		—	—	—	—	—	—	—
4. duster		—	—	—	—	—	—	—
5. thresher		—	—	—	—	—	—	—
6. canne crusher		—	—	—	—	—	20	22
7. oil crusher		—	—	—	—	—	—	—
8. all		—	—	—	—	—	22	22
<b>irrigation equipments</b>								
1. electric pump		—	—	—	—	—	—	—
2. diesel pump		—	—	—	—	—	—	—
3. wind mill		—	—	—	—	—	—	—
4. moat		—	—	—	—	—	—	—
5. persian wheel		—	—	—	—	—	—	—
6. other (animal drawn)		4	15	16	10	—	—	—
7. counterpoise		—	—	—	—	—	—	45
8. manual pumps		—	—	—	—	—	—	—
9. others		11	29	33	26	—	—	—
10. all		15	44	49	36	—	394	493
<b>adult cattles &amp; buffaloes</b>								
1. cattles		117	1705	2834	2294	933	—	7887
2. buffaloes		—	—	—	183	92	—	275
3. all		117	1709	2834	2477	1025	—	8162
total		132	1753	2883	2513	1047	394	8722

TABLE 15 : ESTIMATES OF NUMBER OF HOUSEHOLDS REPORTING PUMP-SETS AND NUMBER OF PUMP-SETS POSSESSED BY SIZE CLASS OF HOUSEHOLD HOLDING.

GENERAL SAMPLE		ASSAM	
size class of holding (hactare)	(0)	no. of households reporting pump-sets	no. of pump-sets*
		(00)	(00)
		(1)	(2)
less than 0.5		—	—
0.5 — 1.0		—	—
1.0 — 2.0		—	—
2.0 — 4.0		2	2
4.0 — 10.0		—	—
10.0 & above		—	—
all		2	2

\*In this and subsequent tables on number of pumpsets, the number includes those possessed jointly as well as on rent. In the case of jointly possessed, instead of the household share of the number possessed, the total number possessed jointly has been counted as possessed by the sample household. Hence the estimated number of pumpsets is inflated to some extent.



TABLE 16 : ESTIMATES OF NUMBER OF PUMPSETS POSSESSED BY SOURCE OF POWER AND HORSE POWER  
GENERAL SAMPLE ASSAM

horse-power	no of pumpsets* (00)* having source of power				
	electricity	diesel	both electricity & diesel	total	
(0)	(1)	(2)	(3)	(4)	
less than 1.0	—	—	—	—	—
1.0 — 2.0	—	—	—	—	—
2.0 — 3.0	—	—	—	—	—
3.0 — 4.0	—	—	—	—	—
4.0 — 5.0	—	—	—	—	—
5.0 & above	—	—	—	—	—
not recorded	—	2	—	—	2
all	—	2	—	—	2

\*See foot note on table 15

TABLE 17 : ESTIMATES OF NUMBER OF PUMPSETS\* AND HOUSEHOLD'S SHARE OF VALUE OF OWNED EQUIPMENTS BY TYPE OF POSSESSION AND SOURCE OF POWER

GENERAL SAMPLE

ASSAM

source of power	Possession type							
	owned signly		owned jointly		rented		total	
	no. of pumpsets	h.h's. share of value of owned equipments (Rs- 000)	no. of pumpsets	h.h's. share of value of owned equipments (Rs. 000)	no. of pumpsets	h.h's. share of value of owned equipments (Rs. 000)	no. of pumpsets	h.h's. share of value of owned equipments (Rs. 000)
(0)	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
electricity	—	—	—	—	—	—	—	—
diesel	—	—	—	—	2	—	2	—
both electricity & diesel	—	—	—	—	—	—	—	—
all	—	—	—	—	2	—	2	—

\*see foot note on table 15



TABLE 18 : ESTIMATES OF NUMBER OF PUMPSETS\* REPORTING AREA IRRIGATED BY SOURCE OF POWER AND SOURCE OF WATER SEPARATELY BY POSSESSION TYPE.

GENERAL SAMPLE		ASSAM				
source of power	no. of pumpsets (00) reporting area irrigated by source of water					
	openwell	tubewell	rivers and streams	others	total	
(0)	(1)	(2)	(3)	(4)	(5)	
<b>owned singly</b>						
1. electricity	—	—	—	—	—	
2. diesel	—	—	—	—	—	
3. both electricity & diesel	—	—	—	—	—	
4. all	—	—	—	—	—	
<b>owned jointly</b>						
1. electricity	—	—	—	—	—	
2. diesel	—	—	—	—	—	
3. both electricity & diesel	—	—	—	—	—	
4. all	—	—	—	—	—	
<b>rented</b>						
1. electricity	—	—	—	—	—	
2. diesel	—	—	2	—	2	
3. both electricity & diesel	—	—	—	—	—	
4. all	—	—	2	—	2	
<b>total</b>						
1. electricity	—	—	—	—	—	
2. diesel	—	—	2	—	2	
3. both electricity & diesel	—	—	—	—	—	
4. all	—	—	2	—	2	

\*see foot note on table 15

TABLE 19 : ESTIMATES OF EXPENSES FOR IRRIGATION ON OTHER THAN CAPITAL ACCOUNT BY ITEMS OF EXPENDITURE

GENERAL SAMPLE		ASSAM
items of expenditure		amount
(0)	(1)	(Rs. 000)
1. repair and maintenance expenditure of bunds and field channels		936
2. water charges		—
3. other expenses on independently owned lift irrigation		1910
4. share of expenses on joint arrangements		9
5. receipt from sale of water		—
6. total		2288



TABLE 0 : NUMBER OF SAMPLE VILLAGES ALLOTTED AND NUMBER SURVEYED, NUMBER OF HOUSEHOLDS SURVEYED FOR SCHEDULE 22.1, ESTIMATED NUMBER OF TOTAL HOUSEHOLDS AND ESTIMATED NUMBER OF CULTIVATING HOUSEHOLDS USUALLY USING IRRIGATION AND NUMBER USUALLY NOT USING IRRIGATION

GENERAL SAMPLE		BIHAR
Item		Number
(0)		(1)
1. number of sample villages allocated for survey		712
2. number of sample villages actually surveyed		712
3. number of sample households surveyed for schedule 22.1		7819
4. estimated number of total households (000)a		N.A.
5. estimated number of cultivating households (000)		7353
(i) usually using irrigation		3574
(ii) usually not using irrigationb		377

a from listing schedule -draft report no. 291, part-I

b from manual tabulation on schedule 22.2 draft report no. 289.

TABLE 1 : ESTIMATES OF NUMBER OF HOUSEHOLDS USUALLY USING IRRIGATION AND AREA POSSESSED, NET AREA SOWN, AREA CROPPED MORE THAN ONCE AND GROSS CROPPED AREA SEPARATELY FOR IRRIGABLE LAND AND LAND WITHOUT IRRIGATION FACILITY BY SIZE CLASS OF HOLDING

## GENERAL SAMPLE

BIHAR

size class of holding (hectare)	no. of households (00) with irrigable land	irrigable area (hectares 00)						area of land without irrigation facility (hectares 00)					
		area possessed			area possessed			area possessed			area possessed		
		owned	leased in	total	net area sown	cropped more than once	gross cropped area	owned	leased in	total	net area sown	cropped more than once	gross cropped area
(0)	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
less than 0.5	12595	1864	472	2336	2192	2076	4277	723	115	838	611	229	859
0.5 — 1.0	7884	3059	409	3468	3430	2734	2734	2020	280	2300	2013	583	2608
1.0 — 2.0	7900	5467	511	5978	5961	4633	10742	4569	405	4974	4573	1218	5793
2.0 — 4.0	5119	6570	402	6972	6937	5720	12843	6315	588	6903	6260	1880	8141
4.0 — 10.0	1975	4848	91	4939	4926	3965	8978	5901	185	6086	5556	1476	7034
10.0 & above	271	1461	30	1491	1430	993	2459	2162	82	2244	1969	583	2552
all	35744	23269	1915	25184	24876	20121	45584	21690	1655	23345	20982	5969	26987



TABLE 2 : ESTIMATES OF NUMBER OF HOUSEHOLDS REPORTING AREA IRRIGATED AND NET AREA IRRIGATED BY SIZE CLASS OF HOLDING AND TYPE OF IRRIGATION

GENERAL SAMPLE

BIHAR

size class of holding (hectare)	flow						lift					flow and lift combin- ed
	canal	diversion		others	total	well	tube- well	river	tank	others	total	
		scheme	tank									
(0)	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
number of households (00) reporting area irrigated												
less than 0.5	2491	286	326	173	3232	3692	4167	565	804	724	9451	12359
0.5 — 1.0	1639	219	377	177	2311	2301	2749	373	568	480	5928	7826
1.0 — 2.0	1707	269	428	146	2460	2215	2798	521	590	451	5921	7829
2.0 — 4.0	1214	140	285	97	1656	1109	2097	400	366	377	3777	5064
4.0 — 10.0	496	88	77	41	670	382	911	200	124	133	1509	1955
10.0 & above	50	34	23	14	112	71	141	13	9	18	230	271
all	7597	1036	1516	648	10441	9770	12863	2072	2461	2183	26816	35304
net area irrigated (hectares 00)												
less than 0.5	498	42	64	26	630	456	716	88	107	91	1458	2088
0.5 — 1.0	813	85	116	76	1090	566	1152	134	192	126	2170	3260
1.0 — 2.0	1582	198	271	95	2146	690	2026	270	291	193	3470	5616
2.0 — 4.0	1998	218	303	92	2611	449	2554	315	240	346	3904	6515
4.0 — 10.0	1488	169	160	81	1898	216	1852	222	157	198	2645	4543
10.0 & above	211	139	102	59	511	106	583	51	22	49	811	1322
all	6590	851	1016	429	8886	2483	8883	1080	1009	1003	14458	23344

TABLE 3 : ESTIMATES OF NUMBER OF HOUSEHOLDS REPORTING LIFT IRRIGATION AND NET AREA IRRIGATED BY LIFT BY SIZE CLASS OF HOUSEHOLD HOLDING AND BY SOURCE OF POWER

GENERAL SAMPLE

BIHAR

size class of holding (hectare)	no. of households(00) reporting lift irrigation using						net area irrigated (hectares 00) by lift using					
	electri- city	diesel	wind- mill	animal	human	all	electri- city	diesel	wind- mill	animal	human	all
(0)	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
less than 0.5	2119	1932	9	201	5383	9451	391	357	1	39	670	1458
0.5 — 1.0	1262	1500	—	280	3185	5928	666	645	—	118	741	2170
1.0 — 2.0	1242	1636	5	314	3094	5921	1141	1175	3	167	984	3470
2.0 — 4.0	832	1485	—	171	1558	3777	1362	1677	—	112	753	3904
4.0 — 10.0	370	700	—	32	518	1509	983	1326	—	24	312	2645
10.0 & above	50	123	—	4	86	230	245	491	—	10	65	381
all	5875	7376	14	1002	13824	26816	4788	5671	4	470	3525	14458



TABLE 4 : ESTIMATES OF NET AREA IRRIGATED BY TYPE OF IRRIGATION AND OWNERSHIP OF THE SOURCE OF WATER FOR IRRIGATION.

## GENERAL SAMPLE

BIHAR

ownership of source of water for irrigation	net area irrigated (hectares 00) by type of irrigation										flow & lift combined	
	flow					lift						
	canal	diversion scheme	tank	others	all	well	tube-well	river	tank	others		all
(0)	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
government	6543	712	817	252	8324	30	554	878	398	265	2125	10449
co-operative	1	10	—	—	11	2	—	—	—	1	3	14
private-joint	—	97	114	32	243	320	534	27	126	52	1059	1302
private-single	46	32	85	145	308	2131	7795	175	485	685	11271	11579
all	6590	851	1016	429	8886	2483	8883	1080	1009	1003	14458	23344

TABLE 5 : ESTIMATES OF NET AREA IRRIGATED BY OWNERSHIP OF LIFTING EQUIPMENT AND BY SOURCE OF POWER

## GENERAL SAMPLE

BIHAR

ownership of lifting equipment	net area irrigated (hectares 00) by source of power					
	electricity	diesel	wind-mill	animal drawn	human drawn	all
	(1)	(2)	(3)	(4)	(5)	(6)
government	545	25	—	—	73	643
co-operative	—	2	—	—	16	18
private-joint	301	378	—	94	344	1117
private-single	3942	5266	4	376	3092	12680
all	4788	5671	4	470	3525	14458



TABLE 6 : ESTIMATES OF AREA SOWN HAVING IRRIGATION FACILITY BUT NOT IRRIGATED BY SIZE CLASS OF HOLDING AND REASON FOR NOT IRRIGATION

## GENERAL SAMPLE

BIHAR

size class of holding (hectare)	area (hectares 00) by reason for not irrigating			
	adequate rainfall	non-availability of water	other reasons	all reasons
(0)	(1)	(2)	(3)	(4)
less than 0.5	13	45	46	104
0.5 — 1.0	21	95	54	170
1.0 — 2.0	33	175	137	345
2.0 — 4.0	36	208	178	422
4.0 — 10.0	61	99	223	383
10.0 & above	—	73	35	108
all	164	695	673	1532

TABLE 7 : ESTIMATES OF NUMBER OF PARCELS OF IRRIGABLE LAND POSSESSED, TOTAL AREA OF THE PLOTS, NET AREA IRRIGATED, NET AREA NOT IRRIGATED AND NET AREA SOWN BY SIZE CLASS OF PARCELS

## GENERAL SAMPLE

BIHAR

size class of parcels (hectare)	number of parcels (00)	area (hectares 00)			
		total irrigable land	net area irrigated	net area not irrigated	net area sown
(0)	(1)	(2)	(3)	(4)	(5)
less than 0.05	10081	278	248	23	271
0.05—0.10	13613	966	874	86	960
0.10—0.20	15620	2199	1986	204	2190
0.20—0.30	10462	2433	2282	142	2424
0.30—0.40	5051	1688	1568	101	1669
0.40—0.50	7844	3305	3120	171	3291
0.50—1.00	9441	6522	6029	446	6475
1.00—2.00	3953	5098	4738	299	5037
2.00 & above	1001	2695	2499	60	2559
all	77066	25184	23344	1532	24876



TABLE 8 : ESTIMATES OF AREA (I) UNDER CROP, (II) APPLIED WITH FERTILISER, (III) APPLIED WITH MANURE, (IV) AFFECTED BY PESTS AND DISEASES, (V) SPRAYED WITH PESTICIDES AND (VI) OF CROPS FINALLY DAMAGED AND VALUE OF (I) FERTILISER USED, (II) MANURE USED AND (III) PESTICIDES SPRAYED SEPARATELY FOR IRRIGATED AND UNIRRIGATED CROPS BY CROP/ CROP GROUP

GENERAL SAMPLE

BIHAR

crop /crop group	area (hectares 00)					value (Rs. 000) of			
	under crop	applied with ferti- liser	applied with man- ure	affected by pests & diseases	sprayed with pesti- cides	of crops finally damaged	ferti- liser used	manure used	pesti- cides sprayed
(0)	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
<b>irrigated crops</b>									
paddy	16120	11783	7587	832	469	102	111582	43399	2549
maize	1522	1032	622	139	85	12	20794	5455	489
wheat	13958	11139	3770	367	159	10	198437	27153	749
all cereals	32216	24281	12198	1379	736	124	336566	78165	3946
all pulses	322	47	38	—	—	—	465	255	—
all oilseeds	65	27	20	1	—	—	334	171	9
all other crops	731	395	334	33	29	1	9448	5890	363
all crops	33334	24750	12590	1413	765	125	346813	84481	4318
<b>unirrigated crops</b>									
paddy	15760	2976	1296	592	117	53	34997	37303	338
maize	4237	875	1988	274	22	22	76531	21513	110
wheat	3209	807	670	16	4	—	9836	3697	31
all cereals	25157	4708	4621	918	143	75	121861	66939	480
all pulses	10569	196	640	18	3	3	666	2905	19
all oilseeds	871	6	67	2	—	—	20	395	4
all other crops	2640	267	394	17	4	—	3967	4270	388
all crops	39237	5177	5722	955	150	78	126514	74509	891

TABLE 9 : ESTIMATES OF AREA UNDER CROP, AREA APPLIED WITH FERTILISER AND MANURE AND AREA AFFECTED BY PESTS AND DISEASES FOR IRRIGATED AND UNIRRIGATED CROPS BY CROP/ CROP GROUP SEPARATELY FOR ORDINARY AND IMPROVED VARIETY OF SEEDS

GENERAL SAMPLE

BIHAR

crop/ crop group	irrigated crop area (hectares 00)				unirrigated crop area (hectares 00)			
	total	applied with fertiliser	applied with manure	affected by pests & diseases	total	applied with fertiliser	applied with manure	affected by pests & diseases
(0)	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
<b>ordinary variety</b>								
paddy	13105	9013	5973	437	15127	2539	935	574
maize	835	449	305	35	3635	481	1606	180
wheat	7242	5313	1570	92	2514	412	453	10
all cereals	21575	14912	7971	564	23213	3473	3661	800
all pulses	321	47	38	—	10557	195	640	18
all oilseeds	65	27	20	1	871	6	67	2
all other crops	686	375	311	24	2430	219	347	12
all crops	22647	15361	8340	589	37071	3893	4715	832
<b>improved variety</b>								
paddy	3015	2770	1614	395	633	437	361	18
maize	687	583	317	104	602	394	382	94
wheat	6716	5826	2200	275	695	395	217	6
all cereals	10641	9369	4227	815	1944	1235	960	118
all pulses	1	—	—	—	12	1	—	—
all oilseeds	—	—	—	—	—	—	—	—
all other crops	45	20	23	9	210	48	47	5
all crops	10687	9389	4250	824	2166	1284	1007	123



TABLE 10 : ESTIMATES OF AREA UNDER CROP APPLIED WITH FERTILISER HAVING NUTRIENTS N ONLY, NP ONLY, NPK ONLY AND OTHERS SEPARATELY FOR IRRIGATED AND UNIRRIGATED CROPS BY CROP/ CROP GROUP

GENERAL SAMPLE											BIHAR
crop/ crop group	irrigated crop area (hectares 00) applied with fertilisers having nutrients					unirrigated crop area (hectares 00) applied with fertilisers having nutrients					
	N only	NP only	NPK only	others	total	N only	NP only	NPK only	others	total	
(0)	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	
paddy . . . . .	10778	461	196	348	11783	2739	165	22	50	2976	
maize . . . . .	874	71	54	33	1032	820	24	14	17	875	
wheat . . . . .	8946	799	594	800	11139	489	38	43	237	807	
all cereals . . . . .	20855	1354	865	1207	24281	4052	229	85	342	4708	
all pulses . . . . .	31	6	3	7	47	86	30	75	5	196	
all oilseeds . . . . .	25	—	2	—	27	6	—	—	—	6	
all other crops . . . . .	312	31	41	11	395	98	31	45	93	267	
all crops . . . . .	21223	1391	911	1225	24750	4242	290	205	440	5177	

'N' only means nitrogenous fertilisers like ammonium sulphate, ammonium sulphate nitrate, calcium ammonium nitrate, ammonium chloride and urea.

'NP' only means nitrogenous phosphate fertilisers like ammonium phosphate, ammonium phosphate sulphate, diammonium phosphate, urea ammonium phosphate and ammonium nitrate phosphate. It also includes phosphate fertilisers like single super phosphate, triple super phosphate and palfos in combination with nitrogenous fertilisers containing 'N' only.

'NPK' means nitrogenous phosphatic potash fertilisers like nitrophosphate and NPK complex fertilisers. It also includes potash fertilisers like sulphate of potash in combination with 'NP' fertilisers noted under 'NP' above.

TABLE 11 : ESTIMATES OF AREA UNDER IRRIGATED CROPS BY CROP AND CROP GROUP AND TYPE OF IRRIGATION

GENERAL SAMPLE													BIHAR
crop/ crop group	area under irrigated crops (hectares 00) by type of irrigation												
	flow					lift					flow & lift combined		
	canal	diversion scheme	tank	others	total	well	tubewell	river	tank	others		total	
(0)	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	
paddy . . . . .	6321	880	1002	368	8571	548	5271	415	733	582	7549	16120	
maize . . . . .	88	22	1	51	162	195	1003	68	16	78	1360	1522	
wheat . . . . .	3240	159	28	101	3528	1854	6893	731	372	580	10430	13958	
all cereals . . . . .	9723	1072	1039	556	12390	2734	13417	1284	1138	1253	19826	32216	
all pulses . . . . .	48	25	7	1	81	55	128	3	17	38	241	322	
all oilseeds . . . . .	11	—	1	1	13	20	27	1	2	2	52	65	
all other crops . . . . .	54	2	—	1	57	317	295	21	13	28	674	731	
all crops . . . . .	9836	1099	1047	559	12541	3126	13867	1309	1170	1321	20793	33334	



TABLE 12 : ESTIMATES OF AREA UNDER IRRIGATED CROPS BY CROP/CROP GROUP AND NUMBER OF TIMES IRRIGATED

GENERAL SAMPLE

BIHAR

crop/ crop group	crop area (hectares 00) irrigated				total
	once	twice	thrice	more than thrice	
(0)	(1)	(2)	(3)	(4)	(5)
paddy . . . . .	1934	2818	2948	8420	16120
maize . . . . .	355	380	297	490	1522
wheat . . . . .	777	3068	6769	3344	13958
all cereals . . . . .	3199	6457	10153	12407	32216
all pulses . . . . .	104	60	26	132	322
all oilseeds . . . . .	12	16	19	18	65
all other crops . . . . .	105	73	86	467	731
all crops . . . . .	3420	6606	10284	13024	33334

TABLE 13 : ESTIMATES OF AREA UNDER IRRIGATED CROPS WITH SUBSIDIARY IRRIGATION AND WITHOUT SUBSIDIARY IRRIGATION BY CROP/ CROP GROUP

GENERAL SAMPLE

BIHAR

crop/crop group	area (hectares 00) under irrigated crops		
	with subsidiary irrigation	without subsidiary irrigation	total
(0)	(1)	(2)	(3)
paddy . . . . .	370	15750	16120
maize . . . . .	29	1493	1522
wheat . . . . .	144	13814	13958
all cereals . . . . .	549	31667	32216
all pulses . . . . .	11	311	322
all oilseed <sup>e</sup> . . . . .	2	63	65
all other crops . . . . .	4	727	731
all crops . . . . .	566	32768	33334



TABLE 14 : ESTIMATES OF VALUE OF\* AGRICULTURAL IMPLEMENTS, IRRIGATION EQUIPMENTS AND DRAUGHT ANIMALS (ADULT CATTLES AND BUFFALOES—3 YEARS OR MORE) OWNED BY SIZE CLASS OF HOUSEHOLD HOLDING

GENERAL SAMPLE

BIHAR

items of asset (0)	value (Rs.000) of agricultural implements, irrigation equipments and cattles and buffaloes by size class of holding (hectare)						
	less than 0.5 (1)	0.5 - 1.0 (2)	1.0-2.0 (3)	2.0-4.0 (4)	4.0 - 10.0 (5)	10.0 & above (6)	all (7)
<b>agricultural implements</b>							
1. tractor . . . . .	4113	—	32496	30829	31844	150603	249885
2. power tiller . . . . .	—	—	758	—	457	—	1215
3. sprayer . . . . .	40	—	50	56	176	312	634
4. duster . . . . .	—	30	161	228	—	—	419
5. thresher . . . . .	—	731	1863	5404	2164	722	10884
6. cane crusher . . . . .	—	580	721	758	551	406	3016
7. oil crusher . . . . .	—	—	50	—	—	—	50
8. all . . . . .	4153	1341	36099	37275	35192	152043	266103
<b>irrigation equipments</b>							
1. electric pumps . . . . .	10456	26489	81792	117851	100284	26780	363652
2. diesel pumps . . . . .	1769	27946	67235	164810	144426	43236	449422
3. wind mill . . . . .	—	—	—	—	—	—	—
4. moat . . . . .	667	2573	2710	1489	471	—	7910
5. persion wheel . . . . .	—	1316	3015	2374	1120	223	8048
6. others (animal drawn) . . . . .	205	984	1082	4749	1059	11	8090
7. counter poise . . . . .	3975	5218	6286	2800	729	304	19312
8. manual pumps . . . . .	2865	2339	1667	525	69	—	7465
9. others . . . . .	4203	4761	9352	6353	3467	107	28243
10. all . . . . .	24140	71626	173139	300951	251625	70661	892142
<b>adult cattle and buaffloes</b>							
1. cattle . . . . .	26779	427613	509639	481137	286479	70475	1802122
2. buffaloes . . . . .	14223	35788	49227	57991	36627	8330	202186
3. all . . . . .	41002	463401	558866	539128	323106	78805	2004308
total . . . . .	69295	536368	768104	877354	609923	301509	3162553

TABLE 15 : ESTIMATES OF NUMBER OF HOUSEHOLDS REPORTING PUMPSETS AND NUMBER OF PUMPSETS POSSESSED BY SIZE CLASS OF HOUSEHOLD HOLDING.

GENERAL SAMPLE

BIHAR

size class of holding (hectare) (0)	no. of households reporting pumpsets (00) (1)	no. of pumpsets* possessed (00) (2)
less than 0.5 . . . . .	395	430
0.5—1.0 . . . . .	507	564
1.0—2.0 . . . . .	856	901
2.0—4.0 . . . . .	1113	1238
4.0—10.0 . . . . .	726	832
10.0 & above . . . . .	146	177
all . . . . .	3743	4142

\*In this and subsequent tables on number of pumpsets, the number includes those possessed jointly as well as on rent. In the case of jointly possessed, instead of the household share of the number possessed the total number possessed jointly has been counted as possessed by the sample household. Hence, the estimated number of pumpsets is inflated to some extent.



TABLE 16 : ESTIMATES OF NUMBER OF PUMPSETS POSSESSED BY SOURCE OF POWER AND BY HORSE POWER  
GENERAL SAMPLE

horse power	no. of pumpsets* (00) having source of power			
	electricity	diesel	both electricity and diesel	total
	(1)	(2)	(3)	(4)
below 1.0	420	554	410	1384
1.0 — 2.0	4	—	—	4
2.0 — 3.0	24	9	4	37
3.0 — 4.0	930	23	4	957
4.0 — 5.0	—	—	5	5
5.0 & above	442	1303	10	1755
all	1820	1889	433	4142

\*See foot-note on Table 15.

TABLE 17 : ESTIMATES OF NUMBER OF PUMPSETS\* AND HOUSEHOLD'S SHARE OF VALUE OF OWNED EQUIPMENTS BY TYPE OF POSSESSION AND SOURCE OF POWER

GENERAL SAMPLE

BIHAR

source of power	owned singly		owned jointly		rented		total	
	no. of pumpsets (00)	hh's share of value of owned equipments (Rs.000)	no. of pumpsets (00)	hh's share of value of owned equipments	no. of pumpsets (00)	hh's share of value of owned equipments (Rs.000)	no. of pumpsets (00)	hh's share of value of owned equipments (Rs.000)
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
electricity	921	269509	576	75495	323	1	1820	345005
diesel	1024	390845	310	42317	555	2468	1889	435630
both electricity & diesel	14	5750	5	1	414	1	433	5752
all	1959	666104	891	117813	1292	2470	4142	786387

\*See foot note on table 15.



TABLE 18 : ESTIMATES OF NUMBER OF PUMPSETS\* REPORTING AREA IRRIGATED BY SOURCE OF POWER AND SOURCE OF WATER SEPARATELY BY POSSESSION TYPE

## GENERAL SAMPLE

BIHAR

source of power	number of pumpsets (00) reporting area irrigated by source of water				
	well	tubewell	rivers & streams	others	total
(0)	(1)	(2)	(3)	(4)	(5)
<b>owned singly</b>					
1. electricity . . . . .	119	721	—	40	880
2. diesel . . . . .	121	618	107	122	968
3. electricity & diesel . . . . .	5	4	—	—	9
4. all . . . . .	245	1343	107	162	1857
<b>owned jointly</b>					
1. electricity . . . . .	99	393	9	14	515
2. diesel . . . . .	69	182	23	23	297
3. electricity & diesel . . . . .	—	—	—	—	—
4. all . . . . .	168	575	32	37	812
<b>rented</b>					
1. electricity . . . . .	4	255	—	9	268
2. diesel . . . . .	32	283	61	138	514
3. electricity & diesel . . . . .	—	82	—	14	96
4. all . . . . .	36	620	61	161	878
<b>total</b>					
1. electricity . . . . .	222	1369	9	63	1663
2. diesel . . . . .	222	1083	191	283	1779
3. electricity & diesel . . . . .	5	86	—	14	105
4. all . . . . .	449	2538	200	360	3547

\*see footnote on Table 15.

TABLE 19 : ESTIMATES OF EXPENSES FOR IRRIGATION ON OTHER THAN CAPITAL ACCOUNT BY ITEMS OF EXPENDITURE.

## GENERAL SAMPLE

BIHAR

items of expenditure	amount (Rs. 000)
(0)	(1)
1. repair and maintenance expenses of bunds and field channels . . . . .	49201
2. water charges . . . . .	169561
3. other expenses on independently owned lift irrigation . . . . .	176216
4. share of expenses on joint arrangements . . . . .	7793
5. receipt from sale of water . . . . .	(—) 34513
6. total . . . . .	368258



TABLE 0 : NUMBER OF SAMPLE VILLAGES ALLOTTED AND NUMBER SURVEYED, NUMBER OF HOUSEHOLDS SURVEYED FOR SCHEDULE 22-1, ESTIMATED NUMBER OF TOTAL HOUSEHOLDS AND ESTIMATED NUMBER OF CULTIVATING HOUSEHOLDS USUALLY USING IRRIGATION AND NUMBER USUALLY NOT USING IRRIGATION.

## GENERAL SAMPLE

## KARNATAKA

item	number
(0)	(1)
1. number of sample villages allotted for survey	312
2. number of sample villages actually surveyed	312
3. number of sample households surveyed for schedule 22.1	3221
4. estimated number of total households (000a)—	N.A.
5. estimated number of cultivating households (000)	2911
(i) usually using irrigation	1184
usually not using irrigation —	1727

a—from listing schedule—Draft Report No.291, Part I

b— from manual tabulation on schedule 22-2—Draft Report No. 289.

TABLE 1 : ESTIMATES OF NUMBER OF HOUSEHOLDS USUALLY USING IRRIGATION AND AREA POSSESSED, NET AREA SOWN, AREA CROPPED MORE THAN ONCE AND GROSS CROPPED AREA SEPARATELY FOR IRRIGABLE LAND AND LAND WITHOUT IRRIGATION FACILITY BY SIZE CLASS OF HOLDING

## GENERAL SAMPLE

## KARNATAKA

size class of holding (hectare)	irrigable area (hectares 00)							area of land without irrigation facility (hectares 00)					
	no. of households (00) with irrigable land	area possessed			net area sown	area cropped more than once	gross cropped area	area possessed			net area sown	area cropped more than once	gross cropped area
		owned	leased in	total				owned	leased in	total			
(0)	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
less than 0.5	1393	235	55	290	277	69	349	120	21	141	115	7	123
0.5 — 1.0	1897	707	125	832	818	212	1044	494	103	597	534	36	577
1.0 — 2.0	2876	1618	377	1995	1925	492	2419	1843	379	2222	1910	133	2067
2.0 — 4.0	3000	2831	340	3171	2999	661	3718	4676	488	5164	4515	129	4699
4.0 — 10.0	1957	3519	267	3786	3324	856	4430	7625	615	8240	7179	258	7509
10.0 & above	713	2274	37	2311	2141	459	2625	9006	393	9399	8309	69	8499
all	11836	11184	1201	12385	11684	2749	14585	23764	1999	25763	22562	632	23474



TABLE 2 : ESTIMATED OF NUMBER OF HOUSEHOLDS REPORTING AREA IRRIGATED AND NET AREA IRRIGATED BY SIZE CLASS OF HOLDING AND TYPE OF IRRIGATION

## GENERAL SAMPLE

## KARNATAKA

size class of holding (hactare)	flow					lift						flow & lift combined
	canal	diver- sion scheme	tank	others	all	well	tube- well	river	tank	others	all	
(0)	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
number of households (00) reporting area irrigated												
less than 0.5	442	36	293	8	774	461	—	100	—	25	585	1335
0.5 — 1.0	510	72	607	12	1167	553	—	87	15	33	684	1787
1.0 — 2.0	679	244	1041	59	2012	796	—	131	13	73	982	2792
2.0 — 4.0	629	223	1166	29	2006	1096	—	74	13	53	1210	2924
4.0 — 10.0	338	94	617	11	1037	968	4	104	11	26	1087	1906
10.0 & above	106	14	127	4	246	464	—	30	—	7	501	679
all	2704	683	3851	123	7242	4338	4	526	52	217	5049	11423
net area irrigated (hectares 00)												
less than 0.5	110	9	51	3	173	69	—	14	—	2	85	258
0.5 — 1.0	278	27	215	3	523	190	—	25	6	5	226	749
1.0 — 2.0	587	153	449	44	1233	404	—	67	11	11	493	1726
2.0 — 4.0	799	203	707	33	1742	768	—	70	10	14	862	2604
4.0 — 10.0	657	112	704	21	1494	1061	10	172	11	8	1262	2756
10.0 & above	397	12	209	22	640	799	—	47	—	4	850	1490
all	2828	516	2335	126	5805	3291	10	395	38	44	3778	9583

TABLE 3 : ESTIMATES OF NUMBER OF HOUSEHOLDS REPORTING LIFT IRRIGATION AND NET AREA IRRIGATED BY LIFT BY SIZE CLASS OF HOUSEHOLD HOLDING AND BY SOURCE OF POWER

## GENERAL SAMPLE

## KARNATAKA

size class of holding (hectare)	no. of households (00) reporting lift irrigation using						net area irrigated (hectares 00) by lift using					
	electri- city	diesel	wind- mill	animal	human	all	electri- city	diesel	wind- mill	animal	human	all
(0)	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
less than 0.5	141	57	—	63	331	585	28	13	—	14	30	85
0.5 — 1.0	243	59	—	144	245	684	109	20	—	50	47	226
1.0 — 2.0	404	111	—	200	277	982	240	67	—	117	69	493
2.0 — 4.0	658	116	—	294	157	1210	501	123	—	192	46	862
4.0 — 10.0	631	173	—	225	86	1087	781	224	—	222	35	1262
10.0 & above	294	130	—	90	—	501	543	233	—	74	—	850
all	2371	646	—	1016	1096	5049	2202	680	—	669	227	3778



TABLE 4 : ESTIMATES OF NET AREA IRRIGATED BY TYPE OF IRRIGATION AND OWNERSHIP OF THE SOURCE OF WATER FOR IRRIGATION

GENERAL SAMPLE

KARNATAKA

ownership of source of water for irrigation	net area irrigated (hectares 00) by type of irrigation											
	flow					lift						flow and lift combined
	canal	diversion scheme	tank	others	all	well	tube-well	river	tank	others	all	
(0)	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
government	2823	283	2304	76	5486	12	—	346	4	27	389	5875
co-operative	—	15	—	—	15	—	—	—	—	—	—	15
private-joint	2	85	11	—	98	684	—	—	8	2	694	792
private-single	3	133	20	50	206	2595	10	49	26	15	2695	2901
all	2838	516	2335	126	5805	3291	10	395	38	44	3778	9583

TABLE 5 : ESTIMATES OF NET AREA IRRIGATED BY OWNERSHIP OF LIFTING EQUIPMENT, AND BY SOURCE OF POWER

GENERAL SAMPLE

KARNATAKA

ownership of lifting equipment	net area irrigated (hectares 00) by source of power					
	electricity	diesel	windmill	animal drawn	human drawn	all
	(1)	(2)	(3)	(4)	(5)	(6)
government	127	7	—	6	—	140
co-operative	—	—	—	—	1	1
private-joint	439	121	—	86	5	2986
private-single	1636	552	—	577	221	615
all	2202	680	—	669	227	3778



TABLE 6 : ESTIMATES OF AREA SOWN HAVING IRRIGATION FACILITY BUT NOT IRRIGATED BY SIZE CLASS OF HOLDING AND REASON FOR NOT IRRIGATING

## GENERAL SAMPLE

KARNATAKA

size class of holding (hectare)	area (hectares 00) by reason for not irrigation			
	adequate rainfall	non-availability of water	other reasons	all reasons
(0)	(1)	(2)	(3)	(4)
less than 0.5	9	3	7	19
0.5 — 1.0	21	29	19	69
1.0 — 2.0	37	101	61	199
2.0 — 4.0	87	248	60	395
4.0 — 10.0	88	532	148	768
10.0 & above	51	504	96	651
all	293	1417	391	2101

TABLE 7 : ESTIMATES OF NUMBER OF PARCELS OF IRRIGABLE LAND POSSESSED, TOTAL AREA OF THE PLOTS, NET AREA IRRIGATED, NET AREA NOT IRRIGATED AND NET AREA SOWN BY SIZE CLASS OF PARCELS

## GENERAL SAMPLE

KARNATAKA

size class of parcels (hectare)	area (hectares 00)				
	number of parcels (00)	total irrigable land	net area irrigated	net area not irrigated	net area sown
(0)	(1)	(2)	(3)	(4)	(5)
less than 0.05	852	25	14	9	23
0.05 — 0.10	1271	90	80	4	84
0.10 — 0.20	2460	321	271	40	311
0.20 — 0.30	2545	550	499	23	522
0.30 — 0.40	1442	460	431	17	448
0.40 — 0.50	2664	1096	1006	81	1087
0.50 — 1.00	3730	2670	2399	251	2650
1.00 — 2.00	2379	3158	2784	277	3061
2.00 & above	1091	4015	2099	1399	3498
all classes	18434	12385	9583	2101	11684



TABLE 8 : ESTIMATES OF AREA (I) UNDER CROP (II) APPLIED WITH FERTILISER, (III) APPLIED WITH MANURE, (IV) AFFECTED BY PESTS & DISEASES, (V) SPRAYED WITH PESTICIDES, (VI) OF CROPS FINALLY DAMAGED AND VALUE OF (I) FERTILISER USED, (II) MANURE USED AND (III) PESTICIDES SPRAYED SEPARATELY FOR IRRIGATED AND UNIRRIGATED CROPS BY CROP/CROP GROUP

## GENERAL SAMPLE

## KARNATAKA

crop/ crop group	area (hectares 00)					value (Rs. 000) of			
	under crop	applied with fertiliser	applied with manure	affected by pests & diseases	sprayed with pesticides	of crop finally damaged	fertiliser used	manure used	pesticides sprayed
(0)	(1)	(2)	(3)	(4)	(5)	(6)	7	8	(9)
<b>irrigated crops</b>									
paddy	5271	4136	4259	1755	1474	90	156970	101105	10379
jowar	1183	666	715	198	141	7	14856	15809	969
bajra	614	425	378	212	44	8	8497	6390	258
ragi	627	393	450	155	81	6	11878	10968	431
all cereals	8726	6356	6398	2498	1778	114	213790	147859	12406
all pulses	323	55	191	7	1	—	1080	1041	11
all oilseeds	477	293	276	150	112	3	8324	5639	1330
sugarcane	803	728	667	118	65	—	85100	27269	579
cotton	210	129	155	55	63	3	7741	3388	4213
all other crops	1163	596	857	203	143	28	19151	40976	3962
all crops	11702	8157	8544	3031	2162	148	335186	226192	22501
<b>unirrigated crops</b>									
paddy	2082	808	1804	821	337	79	10873	41076	1718
jowar	6056	679	1994	584	117	84	8718	18738	478
bajra	2508	41	545	669	38	15	596	4065	227
ragi	4578	1171	3948	480	82	43	17439	62200	307
all cereals	16974	2934	8876	2676	582	221	40094	132604	2751
all pulses	3589	116	1117	491	293	170	1078	11870	1188
all oilseeds	2896	229	1200	324	38	15	2644	13934	164
sugarcane	9	1	3	—	—	—	384	71	—
cotton	1478	50	450	237	18	12	788	3896	124
all other crops	1411	339	692	277	176	24	10524	15981	4487
all crops	26357	3669	12338	4005	1107	442	55512	178356	8714

TABLE 9 : ESTIMATES OF AREA UNDER CROP APPLIED WITH FERTILIZER AND MANURE AND AREA AFFECTED BY PESTS AND DISEASES FOR IRRIGATED AND UNIRRIGATED CROPS BY CROP/CROP GROUP SEPARATELY FOR ORDINARY AND IMPROVED VARIETY OF SEEDS

## GENERAL SAMPLE

## KARNATAKA

crop/ crop group	irrigated crop area (hectares 00)				unirrigated crop area (hectares 00)			
	Total	applied with fertiliser	applied with manure	affected by pests & diseases	Total	applied with fertiliser	applied with manure	affected by pests & diseases
(0)	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
<b>ordinary variety</b>								
paddy	4359	3228	3607	1313	1984	784	1709	755
jowar	821	391	464	116	5649	423	1755	484
bajra	206	105	113	62	2446	532	538	653
ragi	582	348	410	118	4409	1026	3815	472
all cereals	6614	4491	4968	1720	16155	2409	8366	2485
all pulses	316	48	189	47	3432	116	1113	487
all oilseeds	445	271	264	135	2896	229	1200	324
sugarcane	744	678	619	119	9	1	—	—
cotton	104	41	80	17	1478	50	450	237
all other crops	1148	590	844	192	1179	298	589	252
all crops	9371	6119	6964	2190	25149	3103	11718	3785
<b>improved variety</b>								
paddy	912	908	652	442	98	60	95	66
jowar	362	275	251	82	407	256	239	100
bajra	408	320	265	150	62	9	7	16
ragi	45	45	40	35	169	145	133	8
all cereals	2112	1865	1430	778	819	525	510	191
all pulses	7	7	2	—	157	—	4	4
all oilseeds	32	22	12	15	—	—	—	—
sugarcane	59	50	48	1	—	—	—	—
cotton	106	88	75	38	—	—	—	—
all other crops	15	6	13	9	232	41	106	25
all crops	2331	2038	1580	841	1208	566	620	220



TABLE 10 : ESTIMATES OF AREA UNDER CROP APPLIED WITH FERTILISER HAVING NUTRIENTS N ONLY, NP ONLY, NPK ONLY AND OTHERS SEPARATELY FOR IRRIGATED AND UNIRRIGATED CROPS BY CROP/CROP GROUP

## GENERAL SAMPLE

## KARNATAKA

crop/ crop group	irrigated crop area (hectares 00) applied with fertilisers having nutrients					unirrigated crop area (hectares 00) applied with fertiliser having nutrients				
	N only	NP only	NPK only	others	total	N only	NP only	NPK only	others	total
(0)	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
paddy	1469	364	2251	52	4136	422	52	306	28	808
jowar	400	53	201	12	666	191	125	238	35	679
bajra	286	37	102	—	425	14	—	27	—	41
ragi	122	27	214	30	393	293	220	610	48	1171
all cereals	2700	567	2970	119	6356	964	436	1402	132	2934
all pulses	38	—	17	—	55	32	17	58	9	116
all oilseeds	97	51	139	6	293	30	53	145	1	229
sugarcane	314	43	334	37	728	—	—	—	1	1
cotton	51	4	74	—	129	18	5	27	—	50
all other/crops	294	45	206	51	596	54	100	173	12	339
all crops	3494	710	3740	213	8157	1098	611	1805	155	3669

TABLE 11 : ESTIMATES OF AREA UNDER IRRIGATED CROPS BY CROP / CROP GROUP AND TYPE OF IRRIGATION

## GENERAL SAMPLE

## KARNATAKA

crop / crop group	area (hectares 00) under irrigated crop by type of irrigation											
	flow					lift					flow & lift combined	
	canal	diversion scheme	tank	others	total	well	tube-well	river	tank	others		total
(0)	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
paddy	1847	417	2047	111	4422	723	6	67	38	15	849	5271
jowar	274	28	89	5	396	674	4	108	—	1	787	1183
bajra	278	1	16	—	295	319	—	—	—	—	319	614
ragi	109	3	91	—	203	370	—	48	2	4	424	627
all cereals	2750	501	2272	124	5647	2723	10	286	40	20	3079	8726
all pulses	173	1	5	93	272	43	—	8	—	—	51	323
all oilseeds	201	21	77	2	301	134	—	39	—	3	176	477
sugarcane	301	12	37	1	351	331	—	117	—	4	452	803
cotton	80	—	11	—	91	108	—	11	—	—	119	210
all other crops	94	18	87	24	223	859	—	55	7	19	940	1163
all crops	3599	553	2489	244	6885	4198	10	516	47	46	4817	11702



TABLE 12 : ESTIMATES OF AREA UNDER IRRIGATED CROP BY CROPS/CROP GROUP AND NUMBER OF TIMES IRRIGATED

GENERAL SAMPLE

KARNATAKA

crop/ crop group	crop area (hectares 00) irrigated				total
	once	twice	thrice	more than thrice	
(0)	(1)	(2)	(3)	(4)	(5)
paddy	136	166	127	4842	5271
jowar	162	137	154	730	1183
bajra	88	92	68	366	614
ragi	5	32	27	563	627
all cereals	410	471	463	7382	8726
all pulses	8	228	5	82	323
all oilseeds	9	26	27	415	477
sugarcane	13	8	34	748	803
cotton	22	16	6	166	210
all other crops	8	4	21	1130	1163
all crops	470	753	556	9923	11702

TABLE 13 : ESTIMATES OF AREA UNDER IRRIGATED CROPS WITH SUBSIDIARY IRRIGATION AND WITHOUT SUBSIDIARY IRRIGATION BY CROP/CROP GROUP

GENERAL SAMPLE

KARNATAKA

crop/ crop group	area (hectares 00) under irrigated crop		
	with subsidiary irrigation	without subsidiary irrigation	total
(0)	(1)	(2)	(3)
paddy	263	5008	5271
jowar	28	1155	1183
bazra	1	613	614
ragi	49	578	627
all cereals	368	8358	8726
all pulses	66	257	323
all oilseeds	4	473	477
sugarcane	35	768	803
cotton	9	201	210
all other crops	35	1128	1163
all crops	517	11185	11702



TABLE 14 : ESTIMATES OF VALUE OF AGRICULTURAL IMPLEMENTS, IRRIGATION EQUIPMENTS AND DRAUGHT ANIMALS (ADULT CATTLES AND BUFFALOES—3 YEARS OR MORE) OWNED BY HOUSEHOLDS BY SIZE CLASS OF HOUSEHOLD HOLDING.

## GENERAL SAMPLE

KARNATAKA

items of assets	value (Rs. 000) of agricultural implements, irrigation equipments, and cattles and buffaloes by size class of holding (hectare)						
	less than 0.5	0.5—1.0	1.0—2.0	2.0—4.0	4.0—10.0	10.0 & above	all
(0)	(1)	(2)	(3)	(4)	(5)	(6)	(7)
<b>agricultural implements</b>							
1. tractor	—	—	—	1263	69965	141349	212577
2. power tiller	—	—	—	—	3129	19771	22900
3. sprayer	1	273	55	597	3339	3321	7586
4. duster	—	—	—	13	103	595	711
5. thresher	225	523	1026	1074	342	130	3320
6. cane crusher	—	—	76	1705	4932	2067	8780
7. oil crusher	—	—	—	—	1516	—	1516
8. all	226	796	1157	4652	83326	167233	257390
<b>irrigation equipments</b>							
1. electric pumps	12111	34365	70544	176652	221329	110841	625842
2. die el pumps	6141	9430	16689	39972	65175	49930	187337
3. windmill	—	—	—	—	—	—	—
4. moat	735	1914	3720	5467	3816	1438	17090
5. persian wheel	245	1003	3119	4986	2057	—	11410
6. others (animal driven)	11	—	152	189	5685	—	6037
7. counter poise	180	532	1466	682	469	1061	4390
8. manual pumps	14	8	36	77	11	—	146
9. others	827	933	1430	1142	490	37	4859
10. all	20264	48185	97156	229167	299032	163307	857111
<b>adult cattle and buffaloes</b>							
1. cattles	21098	66484	167460	268973	268500	162182	954697
2. buffaloes	43475	124869	293863	541477	682295	506218	2192197
3. all	64573	191353	461323	810450	950795	668400	3146894
total	85063	240334	559636	1044269	1333153	998940	4261395

TABLE 15 : ESTIMATES OF NUMBER OF HOUSEHOLDS REPORTING PUMPSETS AND NUMBER OF PUMPSETS POSSESSED BY SIZE CLASS OF HOUSEHOLD HOLDING

## GENERAL SAMPLE

KARNATAKA

size class of holding (hectare)	no. of house- number of pumpsets*	
	holds reporting pumpsets (00)	(00)
(1)	(2)	(3)
less than 0.5	161	161
0.5 — 1.0	236	239
1.0 — 2.0	450	457
2.0 — 4.0	761	807
4.0 — 10.0	626	702
10.0 & above	441	509
all	2675	2875

\*In this and subsequent tables on number of pumpsets, the number includes those possessed jointly as well as on rent. In the case of jointly possessed pumpsets instead of the household share of the number possessed, the total number possessed jointly has been counted as possessed by the sample household hence the estimated number of pumpsets is inflated to some extent.



TABLE 16 : ESTIMATES OF NUMBER OF PUMPSETS POSSESSED BY SOURCE OF POWER AND BY HORSE POWER

GENERAL SAMPLE

KARNATAKA

horse power	no. of pumpsets* (00) having source of power				total
	electricity	diesel	both electricity & diesel		
	(1)	(2)	(3)	(4)	
less than 1.0	25	38	109	172	
1.0-2.0	16	13	—	29	
2.0-3.0	94	73	—	167	
3.0-4.0	865	89	27	981	
4.0-5.0	8	—	—	8	
5.0 & above	1062	453	3	1518	
all	2070	666	139	2875	

\*see footnote on Table 15.

TABLE 17 : ESTIMATES OF NUMBER OF PUMPSETS\* AND HOUSEHOLDS SHARE OF VALUE OF OWNED EQUIPMENTS BY TYPE OF POSSESSION AND SOURCE OF POWER.

GENERAL SAMPLE

KARNATAKA

source of power	possession type							
	owned singly		owned jointly		rented		total	
	no. of pumpsets	hh's share of value of owned equipments	no. of pumpsets	hh's share of value of owned equipments	no. of pumpsets	hh's share of value of owned equipments	no. of pumpsets	hh's share of value of owned equipments
	(00)	(Rs. 000)	(00)	(Rs. 000)	(00)	(Rs. 000)	(00)	(Rs. 000)
(0)	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
electricity	1495	481826	505	77109	70	157	2070	559092
diesel	426	147853	131	18457	109	374	666	166684
both electricity diesel	121	8135	8	2274	10	785	139	11197
all	2042	637817	644	97840	189	1316	2875	736973

\*see footnote on table 15.



TABLE 18 : ESTIMATES OF NUMBER OF PUMPSETS\* REPORTING AREA IRRIGATED BY SOURCE OF POWER AND SOURCE OF WATER SEPARATELY BY POSSESSION TYPE

GENERAL SAMPLE		KARNATAKA				
source of power	no. of pumpsets (00) reporting area irrigated by source of water					
	well	tubewell	rivers and streams	others	total	
(0)	(1)	(2)	(3)	(4)	(5)	
<b>owned singly</b>						
1. electricity	1319	22	36	55	1432	
2. diesel	363	—	44	6	413	
3. both electricity & diesel	30	—	—	—	30	
4. all	1712	22	80	61	1875	
<b>owned jointly</b>						
1. electricity	467	—	11	12	490	
2. diesel	105	—	26	—	131	
3. both electricity & diesel	8	—	—	—	8	
4. all	580	—	37	12	629	
<b>rented</b>						
1. electricity	42	—	22	3	67	
2. diesel	68	—	18	9	95	
3. both electricity & diesel	3	—	—	—	3	
4. all	113	—	40	12	165	
<b>all</b>						
1. electricity	1828	22	69	70	1989	
2. diesel	536	—	88	15	639	
3. both electricity & diesel	41	—	—	—	41	
4. all	2405	22	157	85	2669	

\*see footnote on Table 15

TABLE 19 : ESTIMATES OF EXPENSES FOR IRRIGATION ON OTHER THAN CAPITAL ACCOUNT BY ITEMS OF EXPENDITURE

GENERAL SAMPLE		KARNATAKA
items of expenditure	amount (Rs. 000)	
(0)	(1)	
1. repair and maintenance expenses of hunds and field channels	106748	
2. water charges	44920	
3. other expenses on independently owned lift irrigation	171899	
4. share of expenses on joint arrangements	20895	
5. receipt from sale of water	(—)1479	
6. total	342983	



TABLE 0 : NUMBER OF SAMPLE VILLAGES ALLOTTED AND NUMBER SURVEYED, NUMBER OF HOUSEHOLDS SURVEYED FOR SCHEDULE 22.1, ESTIMATED NUMBER OF TOTAL HOUSEHOLDS AND ESTIMATED NUMBER OF CULTIVATING HOUSEHOLDS USUALLY USING IRRIGATION AND NUMBER USUALLY NOT USING IRRIGATION.

GENERAL SAMPLE		MADHYA PRADESH
item (0)	number (1)	
1. number of sample villages allotted for survey	640	
2. number of sample villages actually surveyed	640	
3. number of sample households surveyed for Schedule 22.1	4691	
4. estimated number of total households (000) (*)	6957	
5. estimated number of cultivating households (**)	5439	
(i) usually using irrigation	1690	
(ii) usually not using irrigation (b)	3749	

(\*) from listing schedule—Draft Report No. 291, Part—I.

(\*\*) from manual tabulation on schedule 22.2—Draft Report No. 289.

TABLE 1 : ESTIMATES OF NUMBER OF HOUSEHOLDS USUALLY USING IRRIGATION AND AREA POSSESSED NET AREA SOWN, AREA CROPPED MORE THAN ONCE AND GROSS CROPPED AREA SEPARATELY FOR IRRIGABLE LAND AND LAND WITHOUT IRRIGATION FACILITY BY SIZE CLASS OF HOLDING

GENERAL SAMPLE MADHYA PRADESH

size class of holding (hectare)	no. of households (00) with irrigable land	irrigable land (hectares 00)			land without irrigation facility (hectares 00)			net area sown	area cropped more than once (hectares 00)	gross cropped area	net area sown	area cropped more than once	gross cropped area
		area possessed		total	area possessed		total						
		owned	leased in		owned	leased in							
(0)	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
less than 0.5	1294	329	9	338	330	226	577	70	7	77	58	16	76
0.5 — 1.0	2179	1059	35	1094	1079	671	1755	507	14	521	465	110	576
1.0 — 2.0	3830	2785	105	2890	2838	1587	4425	2626	60	2686	2478	512	2991
2.0 — 4.0	4590	4849	139	4988	4858	2391	7251	8028	147	8175	7492	1141	8633
4.0 — 10.0	3869	5910	206	6116	5908	2730	8601	17009	277	17286	15344	2047	17392
10.0 & above	1134	3477	28	3505	3410	1418	4815	14622	225	14847	12429	1492	13921
all	16896	18409	522	18931	18423	9023	27424	42862	730	43592	38266	5318	43589



TABLE 2 : ESTIMATES OF NUMBER OF HOUSEHOLDS REPORTING AREA IRRIGATED AND NET AREA IRRIGATED BY SIZE CLASS OF HOLDING AND TYPE OF IRRIGATION

GENERAL SAMPLE

MADHYA PRADESH

size class of holding (hectare)	flow					lift					flow and lift com- bined	
	canal	diver- sion scheme	tank	others	all	well	tube- well	river	tank	others		all
(0)	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
number of households (00) reporting area irrigated												
less than 0.5	599	57	157	7	818	311	18	45	7	4	386	1181
0.5 — 1.0	899	58	145	32	1128	755	15	83	7	47	895	1973
1.0 — 2.0	1135	93	284	81	1553	1864	43	195	22	68	2160	3563
2.0 — 4.0	1052	64	302	72	1461	2590	65	304	28	120	3064	4352
4.0 — 10.0	607	52	207	54	900	2464	61	368	30	140	2989	3714
10.0 & above	127	7	94	18	238	721	12	136	15	53	900	1102
all	4419	331	1189	264	6098	8705	214	1131	109	432	10394	15885
net area irrigated (hectares 00)												
less than 0.5	165	12	33	1	211	60	4	8	1	—	73	284
0.5 — 1.0	439	22	65	12	592	292	5	27	2	7	333	925
1.0 — 2.0	1065	54	181	37	1337	853	31	42	3	16	945	2282
2.0 — 4.0	1708	36	215	36	1995	1522	65	141	7	50	1785	3780
4.0 — 10.0	1677	31	214	48	1970	2027	88	336	4	93	2548	4518
10.0 & above	833	4	204	31	1072	1100	40	224	20	91	1475	2547
all	5941	159	912	165	7177	5854	233	778	37	257	7159	14336

TABLE 3 : ESTIMATES OF NUMBER OF HOUSEHOLDS REPORTING LIFT IRRIGATION AND NET AREA IRRIGATED BY LIFT BY SIZE CLASS OF HOUSEHOLD HOLDING AND BY SOURCE OF POWER

GENERAL SAMPLE

MADHYA PRADESH

size class of holding (hectare)	no. of households (00) reporting lift irrigation using						net area irrigated (hectares 00) by lift using					
	electri- city	diesel	wind- mill	animal	human	all	electri- city	diesel	wind- mill	animal	human	all
(0)	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
less than 0.5	41	30	3	198	114	386	11	6	1	49	6	73
0.5 — 1.0	87	127	4	526	156	895	34	48	1	241	9	333
1.0 — 2.0	242	258	3	1253	427	2160	150	140	1	628	26	945
2.0 — 4.0	448	413	—	1760	522	3064	357	272	—	1111	45	1785
4.0 — 10.0	623	693	—	1350	452	2989	803	742	—	954	49	2548
10.0 & above	269	390	—	206	65	900	637	647	—	179	12	1475
all	1710	1911	10	5293	1736	10394	1992	1855	3	3162	147	7159



TABLE 4 : ESTIMATES OF NET AREA IRRIGATED BY TYPE OF IRRIGATION AND OWNERSHIP OF THE SOURCE OF WATER FOR IRRIGATION

GENERAL SAMPLE

MADHYA PRADESH

ownership of source of water for irrigation	net area irrigated (hectares 00) by type of irrigation											
	flow					lift						
	canal	diver- sion scheme	tank	others	all	well	tube - well	river	tank	others	all	flow & lift com- bined
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
government . . .	5915	121	556	121	6713	59	54	751	12	207	1083	7796
co-operative . . .	—	—	6	—	6	—	—	—	—	—	—	6
private-joint . . .	—	14	192	7	213	1909	61	5	12	20	2007	2220
private-single . . .	1	24	158	37	220	3875	118	22	13	30	4058	4278
not recorded . . .	25	—	—	—	25	11	—	—	—	—	11	36
all . . . . .	5941	159	912	165	7177	5854	233	778	37	257	7159	14336

TABLE 5 : ESTIMATES OF NET AREA IRRIGATED BY OWNERSHIP OF LIFTING EQUIPMENT AND BY SOURCE OF POWER

GENERAL SAMPLE

MADHYA PRADESH

ownership of lifting equipment	net area irrigated (hectares 00) by source of power					
	electricity	diesel	windmill	animal drawn	human drawn	all
	(1)	(2)	(3)	(4)	(5)	(6)
government . . .	54	15	—	—	—	69
co-operative . . .	—	—	—	—	—	—
private-joint . . .	567	327	3	704	16	1617
private-single . . .	1371	1510	—	2456	131	5468
not recorded . . .	—	3	—	2	—	5
all . . . . .	1992	1855	3	3162	147	7159



TABLE 6 : ESTIMATES OF AREA SOWN HAVING IRRIGATION FACILITY BUT NOT IRRIGATED BY SIZE CLASS OF HOLDING AND REASON FOR NOT IRRIGATION

GENERAL SAMPLE

MADHYA PRADESH

size class of holding hectare	area (hectares 00) by reason for not irrigating			
	adequate rainfall	non- availability of water	other reasons	all reasons
(0)	(1)	(2)	(3)	(4)
less than 0.5	20	11	17	48
0.5 — 1.0	86	34	39	159
1.0 — 2.0	197	201	156	554
2.0 — 4.0	354	368	372	1094
4.0 — 10.0	331	581	465	1377
10.0 & above	252	331	272	855
all	1240	1526	1321	4087

TABLE 7 : ESTIMATES OF NUMBER OF PARCELS OF IRRIGABLE LAND POSSESSED, TOTAL AREA OF THE PLOTS, NET AREA IRRIGATED, NET AREA NOT IRRIGATED AND NET AREA SOWN BY SIZE CLASS OF PARCELS.

GENERAL SAMPLE

MADHYA PRADESH

size class of parcels (hectare)	number of Parcels (00)	area (hectares 00)			
		total irrigable land	net area irrigated	net area not irrigated	net area sown
(0)	(1)	(2)	(3)	(4)	(5)
less than 0.05	2124	53	47	5	52
0.05 — 0.10	1948	138	115	20	135
0.10 — 0.20	4591	619	519	94	613
0.20 — 0.30	5511	1220	1025	180	1205
0.30 — 0.40	2667	871	727	129	856
0.40 — 0.50	4855	2014	1728	268	1996
0.50 — 1.00	7100	4902	3932	887	4819
1.00 — 2.00	3407	4478	3401	944	4345
2.00 & above	1409	4636	2842	1560	4402
all	33612	18931	14336	4087	18423

Parcel : A plot or contiguously located plots having a common source of irrigation facility possessed by the household was treated as a parcel.



TABLE 8 : ESTIMATES OF AREA (I) UNDER CROP (II), APPLIED WITH FERTILISER, (III) APPLIED WITH MANURE (IV) AFFECTED BY PESTS & DISEASES, (V) SPRAYED WITH PESTICIDES, (VI) OF CROPS FINALLY DAMAGED AND VALUE OF (I) FERTILISER USED, (II) MANURE USED AND (III) PESTICIDES SPRAYED SEPARATELY FOR IRRIGATED AND UNIRRIGATED CROPS BY CROP/ CROP GROUP

GENERAL SAMPLE							MADHYA PRADESH			
crop/ crop group	area (hectares 00)						value (Rs. 000)			
	under crop	applied with fertiliser	applied with manure	affected by pests & diseases	sprayed with pesticides	of crop finally damaged	fertiliser used	manure used	pesticides sprayed	
(0)	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	
<b>irrigated crops</b>										
paddy	5511	2465	3680	3025	887	612	34340	27317	7167	
jowar	16	5	2	—	—	—	109	7	1	
wheat	6940	4020	1295	338	176	84	129099	25625	1281	
all cereals	12842	6547	5105	3370	1063	696	166028	55522	8464	
all pulses	1050	204	176	59	22	15	3656	2648	115	
all oilseeds	279	171	84	15	8	—	3350	1006	148	
sugarcane	421	196	181	26	14	6	6654	7869	136	
cotton	222	105	94	40	41	10	2622	2720	1890	
all other crops	909	381	385	79	31	2	12282	20093	626	
all crops	15723	7604	6025	3589	1179	729	194592	89858	11379	
<b>unirrigated crops</b>										
paddy	10743	2429	5999	3860	1563	961	29748	49462	9134	
jowar	9580	241	956	625	40	3	3167	10294	512	
wheat	7222	447	897	114	20	3	4625	5025	121	
all cereals	33657	3414	9245	4922	1642	967	43135	94467	9893	
all pulses	12275	443	1294	642	91	55	4533	13031	349	
all oilseeds	5342	531	594	125	14	6	7845	6959	94	
sugarcane	23	4	—	—	—	—	55	2	—	
cotton	2529	347	648	133	71	3	4288	8503	1071	
all other crops	1464	35	91	9	4	3	741	1650	44	
all crops	55290	4774	11872	5831	1822	1034	60597	124612	11451	

TABLE 9 : ESTIMATES OF AREA UNDER CROP, AREA APPLIED WITH FERTILISER AND MANURE AND AREA AFFECTED BY PESTS AND DISEASES FOR IRRIGATED AND UNIRRIGATED CROPS BY CROP/CROP GROUP SEPARATELY FOR ORDINARY AND IMPROVED VARIETY OF SEEDS

GENERAL SAMPLE					MADHYA PRADESH			
crop/ crop group	irrigated crop area (hectares 00)				unirrigated crop area (hectares 00)			
	total	applied with fertiliser	applied with manure	affected by pests & diseases	total	applied with fertiliser	applied with manure	affected by pests & diseases
(0)	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
<b>ordinary variety</b>								
paddy	4867	2276	3534	2881	10645	2360	5910	3785
jowar	13	2	2	—	9451	193	943	605
wheat	3445	1365	617	226	6765	417	886	104
all cereals	8647	3682	4265	3114	32909	3229	9110	4797
all pulses	1034	200	168	58	12141	438	1294	638
all oilseeds	225	119	80	3	5094	415	590	90
sugarcane	416	195	177	26	23	4	—	—
cotton	158	58	65	26	2382	328	558	126
all other crops	901	375	379	79	1463	35	91	9
all crops	11381	4629	5134	3306	54012	4449	11643	5660
<b>improved variety</b>								
paddy	644	189	146	144	98	69	89	75
jowar	3	3	—	—	129	48	13	20
wheat	3495	2655	678	112	457	30	11	10
all cereals	4195	2863	840	256	748	185	135	125
all pulses	16	4	8	1	134	5	—	4
all oilseeds	54	52	4	12	248	116	4	35
sugarcane	5	1	4	—	—	—	—	—
cotton	64	47	29	14	147	19	90	7
all other crops	8	6	6	—	1	—	—	—
all crops	4342	2973	891	283	1278	325	229	171



TABLE 10 : ESTIMATES OF AREA UNDER CROP APPLIED WITH FERTILISER HAVING NUTRIENTS ONLY, NP ONLY, NPK ONLY AND OTHERS SEPARATELY FOR IRRIGATED AND UNIRRIGATED CROPS BY CROP/CROP GROUP

GENERAL SAMPLE MADHYA PRADESH

crop/ crop group	irrigated crop area (hectares 00) applied with fertilisers having nutrients					unirrigated crop area (hectares 00) applied with fertilisers having nutrients				
	N only	NP only	NPK only	others	total	N only	NP only	NPK only	others	total
(0)	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
paddy	1930	382	2	151	2465	1542	565	3	319	2429
jowar	3	2	—	—	5	131	38	11	61	241
wheat	2326	1102	118	474	4020	69	82	21	275	447
all cereals	4285	1509	120	633	6547	1954	721	42	697	3414
all pulses	105	31	6	62	204	146	60	6	231	443
all oilseeds	119	51	—	1	171	102	81	34	314	531
sugarcane	139	33	13	11	196	4	—	—	—	4
cotton	72	13	6	14	105	240	100	1	6	347
all other crops	270	65	5	41	381	16	10	—	9	35
all crops	4990	1702	150	762	7604	2462	972	83	1257	4774

'N' only means nitrogenous fertilisers like ammonium sulphate, ammonium sulphate nitrate, calcium ammonium nitrate, ammonium chloride and urea.

'NP' only means nitrogenous phosphate fertilisers like ammonium phosphate, ammonium phosphate sulphate, diammonium phosphate, urea ammonium phosphate and ammonium nitrate phosphate, it also includes phosphate fertilisers like single super phosphate triple super phosphate and palfos in combination with nitrogenous fertilisers containing 'N' only.

'NPK' means nitrogenous phosphatic potash fertilisers like nitrophosphate and NPK complex fertilisers. It also includes potash fertiliser like sulphate of potash in combination with 'NP' fertilisers noted under 'NP' above.

TABLE 11 : ESTIMATES OF AREA UNDER IRRIGATED CROPS BY CROP/CROP GROUP AND TYPE OF IRRIGATION

GENERAL SAMPLE MADHYA PRADESH

crop / crop group	area (hactares 00) under irrigated crop by type of irrigation											flow and lift combined
	flow					lift					total	
	canal	diversion scheme	tank	others	total	well	tube-well	river	tank	others		
(0)	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
paddy	4390	105	648	103	5246	130	16	86	5	28	265	5511
jowar	—	—	1	—	1	11	—	4	—	—	15	16
wheat	1933	80	195	52	2260	3743	178	535	31	193	4680	6940
all cereals	6363	187	850	160	7560	4177	200	633	36	236	5282	12842
all pulses	186	5	68	2	361	569	8	98	—	14	689	1050
all oilseeds	184	1	8	—	193	55	22	8	—	1	86	279
sugar cane	21	—	3	1	25	339	13	39	4	1	396	421
cotton	23	8	—	—	31	167	—	24	—	—	191	222
all other crops	11	3	8	3	25	840	4	30	5	5	884	909
all crops	6888	204	937	166	8195	6147	247	832	45	257	7528	15723



TABLE 12 : ESTIMATES OF AREA UNDER IRRIGATED CROPS BY CROP/ CROP GROUP AND NUMBER OF TIMES IRRIGATED.

GENERAL SAMPLE

MADHYA PRADESH

crop/ crop group	crop area (hectares 00) irrigated				total
	once	twice	thrice	more than thrice	
(0)	(1)	(2)	(3)	(4)	(5)
paddy . . . . .	3219	766	454	1072	5511
jowar . . . . .	9	—	—	7	16
wheat . . . . .	757	1418	1451	3314	6940
all cereals . . . . .	4054	2256	1972	4560	12842
all pulses . . . . .	491	237	128	194	1050
all oilseeds . . . . .	151	64	9	55	279
sugar cane . . . . .	2	5	32	382	421
cotton . . . . .	37	101	26	58	222
all other crops . . . . .	16	27	64	802	909
all crops . . . . .	4751	2690	2231	6051	15723

TABLE 13 : ESTIMATES OF AREA UNDER IRRIGATED CROPS WITH SUBSIDIARY IRRIGATION AND WITHOUT SUBSIDIARY IRRIGATION BY CROP/ CROP GROUP

GENERAL SAMPLE

MADHYA PRADESH

crop/ crop group	area (hectares 00) under irrigated crop		
	with subsidiary irrigation	without subsi- diary irrigation	total
(0)	(1)	(2)	(3)
paddy . . . . .	29	5482	5511
jowar . . . . .	—	16	16
wheat . . . . .	53	6887	6940
all cereals . . . . .	83	12759	12842
all pulses . . . . .	1	1049	1050
all oilseeds . . . . .	—	279	279
sugarcane . . . . .	—	421	421
cotton . . . . .	13	209	222
all other crops . . . . .	—	909	909
all crops . . . . .	97	15626	15723



TABLE 14 : ESTIMATES OF VALUE OF AGRICULTURAL IMPLEMENTS, IRRIGATION EQUIPMENTS AND DRAUGHT ANIMALS (ADULT CATTLES AND BUFFALOES - 3 YEARS OR MORE) OWNED BY HOUSEHOLDS BY SIZE CLASS OF HOUSEHOLD HOLDING

GENERAL SAMPLE

MADHYA PRADESH

items of assets	value (Rs. 000) of agricultural implements irrigation, equipments and adult cattles and buffaloes by size class of holding (hectare)							all
	less than 0.5	0.5 - 1.0	1.0 - 2.0	2.0 - 4.0	4.0 - 10.0	10.0 & above		
(0)	(1)	(2)	(3)	(4)	(5)	(6)	(7)	
<b>agricultural implements</b>								
1. tractor . . . . .	—	—	—	—	33381	181442	214823	
2. power tiller . . . . .	—	—	—	—	414	3226	3640	
3. sprayer . . . . .	—	—	257	733	1176	3886	6052	
4. duster . . . . .	—	—	—	—	206	309	515	
5. thresher . . . . .	—	—	—	396	2891	8738	12025	
6. cane crusher . . . . .	—	178	87	296	1336	1529	3426	
7. oil crusher . . . . .	—	—	—	143	—	—	143	
8. all . . . . .	—	178	344	1568	39404	199130	240624	
<b>irrigation equipments</b>								
1. electric pumps . . . . .	711	7709	29611	77543	175037	125512	416123	
2. diesel pumps . . . . .	989	3930	23872	59777	159523	160615	408706	
3. wind - mill . . . . .	—	—	—	—	—	54	54	
4. moat . . . . .	1374	3882	9984	18145	19203	3863	56451	
5. persian wheel . . . . .	2373	11188	23453	32184	24472	4298	97968	
6. others (animal driven) . . . . .	185	372	953	1157	1439	235	4341	
7. counter poise . . . . .	104	86	514	891	771	140	2506	
8. mamual pumps . . . . .	—	18	—	—	1052	—	1070	
9. others . . . . .	35	159	720	666	793	1281	3654	
10. all . . . . .	5771	27344	89107	190363	382290	295998	990873	
<b>adult cattle and buffaloes</b>								
1. cattle . . . . .	23574	89403	250507	476375	644587	367144	1851590	
2. buffaloes . . . . .	540	6679	27044	50727	63133	61178	209301	
3. all . . . . .	24114	96082	277551	527102	707720	428322	2060891	
total . . . . .	29885	123604	367002	719033	1129414	923450	3292388	

TABLE 15 : ESTIMATES OF NUMBER OF HOUSEHOLDS REPORTING PUMPSETS AND NUMBER OF PUMPSETS POSSESSED BY SIZE CLASS OF HOUSEHOLD HOLDING

GENERAL SAMPLE

MADHYA PRADESH

size class of holding (hectare)	no. of house-holds reporting pumpsets (00)	no. of pumpsets *(00)
(0)	(1)	(2)
less than 0.5	49	49
0.5-1.0	165	172
1.0-2.0	386	390
2.0-4.0	723	731
4.0-10.0	1248	1335
10.0 & above	662	757
all	3233	3434

\*In this and subsequent tables on number of pumpsets, the number includes those possessed jointly as well as on rent. In the case of jointly possessed, instead of the household share of the number possessed, the total number possessed jointly has been counted as possessed by the sample household. Hence the estimated number of pumpsets is inflated to some extent.



TABLE 16 : ESTIMATES OF NUMBER OF PUMPSETS POSSESSED BY SOURCE OF POWER AND BY HORSE-POWER

GENERAL SAMPLE

MADHYA PRADESH

horse power	no. of pumpsets (00)* having source of power				total
	electricity	diesel	both electricity and diesel		
(0)	(1)	(2)	(3)	(4)	
less than 1.0	11	16	—	27	
1.0 — 2.0	3	3	—	6	
2.0 — 3.0	32	—	—	32	
3.0 — 4.0	846	72	—	918	
4.0 — 5.0	—	3	—	3	
5.0 and above	601	1421	—	2022	
not recorded	34	392	—	426	
all	1527	1957	—	3434	

\*see footnote on Table 15

TABLE 17 : ESTIMATES OF NUMBER OF PUMPSETS\* AND HOUSEHOLDS SHARE OF VALUE OF OWNED EQUIPMENTS BY TYPE OF POSSESSION AND SOURCE OF POWER

GENERAL SAMPLE

MADHYA PRADESH

source of power	possession type							
	owned singly		owned jointly		rented		total	
	no. of pumpsets	hh's share of value of owned equipments (Rs. 000)	no. of pumpsets	hh's share of value of owned equipments (Rs. 000)	no. of pumpsets	hh's share of value of owned equipments Rs. (000)	no. of pumpsets	hh's share of value of owned equipments Rs. (000)
(0)	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
electricity	795	289595	673	93529	59	—	1527	383124
diesel	805	327577	328	58516	774	—	1907	386093
both electricity and diesel	—	—	—	—	—	—	—	—
all	1600	617172	1001	152045	833	—	3434	769217

\*see footnote on table 15



TABLE 18 : ESTIMATES OF NUMBER OF PUMPSETS\* REPORTING AREA IRRIGATED BY SOURCE OF POWER AND SOURCE OF WATER SEPARATELY BY POSSESSION TYPE.

GENERAL SAMPLE

MADHYA PRADESH

source of power	no. of pumpsets (00) reporting area irrigated by source of water				total
	well	tube well	rivers and streams	others	
(0)	(1)	(2)	(3)	(4)	(5)
<b>owned singly</b>					
1. electricity . . . . .	661	36	67	27	791
2. diesel . . . . .	574	3	141	82	800
3. both electricity & diesel	—	—	—	—	—
4. all . . . . .	1235	39	208	109	1591
<b>owned jointly</b>					
1. electricity . . . . .	603	18	39	11	671
2. diesel . . . . .	229	—	64	35	328
3. both electricity & diesel . . . . .	—	—	—	—	—
4. all . . . . .	832	18	103	46	999
<b>rented</b>					
1. electricity . . . . .	36	—	19	4	59
2. diesel . . . . .	243	3	357	171	774
3. both electricity & diesel . . . . .	—	—	—	—	—
4. all . . . . .	279	3	376	175	833
<b>total</b>					
1. electricity . . . . .	1300	54	125	42	1521
2. diesel . . . . .	1046	6	562	288	1902
3. both electricity & diesel . . . . .	—	—	—	—	—
4. all . . . . .	2346	60	687	330	3423

\*see footnote on table 15

TABLE 19 : ESTIMATES OF EXPENSES FOR IRRIGATION ON OTHER THAN CAPITAL ACCOUNT BY ITEMS OF EXPENDITURE

GENERAL SAMPLE

MADHYA PRADESH

items of expenditure	amount (Rs. 000)
(0)	(1)
1. repair and maintenance expenses of bunds and field channels . . . . .	23110
2. water charges . . . . .	39402
3. other expenses on independently owned lift irrigation . . . . .	136829
4. share of expenses on joint arrangements . . . . .	12748
5. receipt from sale of water . . . . .	(—) 4138
6. total . . . . .	207951



TABLE 0 : NUMBER OF SAMPLE VILLAGES ALLOTTED AND NUMBER SURVEYED, NUMBER OF HOUSEHOLDS SURVEYED FOR SCHEDULE 22-1, ESTIMATED NUMBER OF TOTAL HOUSEHOLDS AND ESTIMATED NUMBER OF CULTIVATING HOUSEHOLDS USUALLY USING IRRIGATION AND NUMBER USUALLY NOT USING IRRIGATION

## GENERAL SAMPLE

## MAHARASHTRA

item	number
(0)	(1)
1. number of sample villages allotted for survey	528
2. number of sample villages actually surveyed	528
3. number of sample households surveyed for schedule 22-1	4547
4. estimated number of total households (000) <sup>a</sup> —/	6870
5. estimated number of cultivating households (000) <sup>a</sup>	4409
(i) usually using irrigation	1641
(ii) usually not using irrigation <sup>b</sup> —/	2768

a from listing schedule - Draft report No. 291. Part - I

b from manual tabulation on schedule 22-2 - Draft Report No. 289

TABLE 1 : ESTIMATES OF NUMBER OF HOUSEHOLDS USUALLY USING IRRIGATION AND AREA POSSESSED, NET AREA SOWN, AREA CROPPED MORE THAN ONCE AND GROSS CROPPED AREA SEPARATELY FOR IRRIGABLE LAND AND LAND WITHOUT IRRIGATION FACILITY BY SIZE CLASS OF HOLDING

## GENERAL SAMPLE

## MAHARASHTRA

size class of holding (hectare)	no of households (00) with irrigable land	irrigable land (hectares 00)					area of land without irrigation facility (hectares 00)						
		area possessed			net area sown	area cropped more than once	area possessed			net area sown	area cropped more than once	gross cropped area	
owned	leased	total	owned	leased			total	owned	leased				total
(0)	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
less than 0.5	1906	354	18	372	360	131	493	166	2	168	115	4	120
0.5 — 1.0	1835	861	20	881	845	361	1241	432	15	447	358	14	377
1.0 — 2.0	2914	2090	54	2144	2044	825	2956	1935	66	2001	1602	90	1710
2.0 — 4.0	3881	4808	118	4926	4550	1645	6386	6091	148	6239	5156	188	5396
4.0 — 10.0	4238	8691	86	8777	7773	2522	10603	17109	397	17506	14206	495	14839
10.0 & above	1637	5806	95	5901	5535	1779	7576	19617	605	20222	16392	346	16903
all	16411	22610	391	23001	21107	7263	29255	45350	1233	46583	37829	1137	39345



TABLE 2 : ESTIMATES OF NUMBER OF HOUSEHOLDS REPORTING AREA IRRIGATED AND NET AREA IRRIGATED BY SIZE CLASS OF HOLDING AND TYPE OF IRRIGATION

## GENERAL SAMPLE

## MAHARASHTRA

sizes class of holding (hectare)	flow					lift					flow & lift combi- ned	
	canal	diver- sion scheme	tank	others	all	well	tubewell	river	tank	others		all
	(0)	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)		(10)
number of households (00) reporting area irrigated												
less than 0.5	173	87	103	68	431	890	—	493	—	16	1394	1798
0.5 — 1.0	290	110	129	41	570	900	—	365	—	4	1254	1762
1.0 — 2.0	400	154	175	60	789	1688	—	387	—	15	2035	2748
2.0 — 4.0	656	200	162	64	1077	2560	—	246	—	20	2770	3646
4.0 — 10.0	613	135	148	89	980	3239	—	143	8	43	3374	4099
10.0 & above	190	45	54	35	324	1329	—	42	—	18	1383	1598
all	2322	731	771	357	4171	10606	—	1676	8	116	12210	15651
net area irrigated (hectares 00)												
less than 0.5	43	6	22	15	86	117	—	89	—	4	210	296
0.5 — 1.0	154	21	68	14	257	303	—	154	—	1	458	715
1.0 — 2.0	301	21	138	51	511	872	—	235	—	10	1117	1628
2.0 — 4.0	721	61	126	51	959	1907	—	252	—	15	2174	3133
4.0 — 10.0	1068	43	227	97	1435	3520	—	182	7	56	3765	5200
10.0 & above	760	37	91	46	934	2580	—	85	—	17	2682	3616
all	3047	189	672	274	4182	9299	—	997	7	103	10406	14588

TABLE 3 : ESTIMATES OF NUMBER OF HOUSEHOLDS REPORTING LIFT IRRIGATION AND NET AREA IRRIGATED BY LIFT BY SIZE CLASS OF HOUSEHOLD HOLDING AND BY SOURCE OF POWER

## GENERAL SAMPLE

## MAHARASHTRA

size class of holding (hectare)	no. of households (00) reporting lift irrigation using						net area irrigated (hectares 00) by lift using					
	electri- city	diesel	wind- mill	animal	human	all	electri- city	diesel	wind- mill	animal	human	all
	(0)	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
less than 0.5	605	262	—	207	361	1394	121	38	—	34	17	210
0.5 — 1.0	566	291	—	279	130	1254	257	95	—	93	13	458
1.0 — 2.0	832	553	—	567	63	2035	545	265	—	302	5	1117
2.0 — 4.0	1071	751	—	1025	47	2770	1032	550	—	569	23	2174
4.0 — 10.0	1192	983	—	1329	16	3374	1733	1074	—	946	12	3765
10.0 & above	614	567	—	314	7	1383	1433	977	—	271	1	2682
all	4880	3407	—	3821	624	12210	5121	2999	—	2215	71	10406



TABLE 4 : ESTIMATES OF NET AREA IRRIGATED BY TYPE OF IRRIGATION AND OWNERSHIP OF THE SOURCE OF WATER FOR IRRIGATION.

## GENERAL SAMPLE

MAHARASHTRA

ownership of source of water for irrigation	net area irrigated (hectares 00) by type of irrigation											
	flow					lift					flow lift	
	canal	diversion scheme	tank	others	all	well	tube well	river	tank	others	all	combi- ned
(0)	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
government	3040	115	529	58	3742	30	—	866	7	67	970	4712
co-operative	—	9	—	—	9	7	—	87	—	1	95	104
private-joint	—	59	89	64	212	3528	—	15	—	11	3554	3766
private-single	—	6	54	152	212	5698	—	29	—	24	5751	596
not recorded	7	—	—	—	7	36	—	—	—	—	36	43
all	3047	189	672	274	4182	9299	—	997	7	103	10406	14588

TABLE 5 : ESTIMATES OF NET AREA IRRIGATED BY OWNERSHIP OF LIFTING EQUIPMENT AND SOURCE OF POWER.

## GENERAL SAMPLE

MAHARASHTRA

ownership of lifting equipment	net area irrigated (hectares 00) by source of power					
	electricity	diesel	wind-mill	animal drawn	human drawn	all
	(1)	(2)	(3)	(4)	(5)	(6)
government	27	9	—	5	—	41
co-operative	381	15	—	2	—	398
private-joint	1382	721	—	197	2	2302
private-single	3331	2254	—	2011	69	7665
all	5121	2999	—	2215	71	10406



TABLE 6 : ESTIMATES OF AREA SOWN HAVING IRRIGATION FACILITY BUT NOT IRRIGATED BY SIZE CLASS OF HOLDING AND REASON FOR NOT IRRIGATION.

GENERAL SAMPLE

MAHARASHTRA

size class of holding (hectare)	area (hectares 00) by reason for not irrigating			
	adequate rainfall	non-availability of water	other reasons	all reasons
(0)	(1)	(2)	(3)	(4)
less than 0.5	32	14	18	64
0.5—1.0	65	34	31	130
1.0—2.0	106	181	129	416
2.0—4.0	329	655	433	1417
4.0—10.0	379	1398	796	2573
10.0 & above	434	919	566	1919
all	1301	3201	1973	6519

TABLE 7 : ESTIMATES OF NUMBER OF PARCELS OF IRRIGABLE LAND POSSESSED, TOTAL AREA OF THE PLOTS, NET AREA IRRIGATED, NET AREA NOT IRRIGATED AND NET AREA SOWN BY SIZE CLASS OF PARCELS.

GENERAL SAMPLE

MAHARASHTRA

size class of parcels (hectares)	number of parcels (00)	area (hectares 00)			
		total irrigable land	net area irrigated	net area not irrigated	net area sown
(0)	(1)	(2)	(3)	(4)	(5)
less than 0.5	1194	31	28	—	28
0.5—0.10	1170	87	67	6	73
0.10—0.20	2363	305	274	20	294
0.20—0.30	2648	671	506	111	617
0.30—0.40	1338	431	370	43	413
0.40—0.50	3075	1353	1101	138	1239
0.50—1.00	5051	3581	2816	571	3387
1.00—2.00	4014	5429	3810	1211	5021
2.00 & above	3172	11113	5616	4419	10035
all	24025	23001	14588	6519	21107

Parcels : A plot or contiguously located plots having a common source of irrigation facility possessed by the household was treated as a parcel.



TABLE 8 : ESTIMATES OF AREA (I) UNDER CROP, (II) APPLIED WITH FERTILISER, (III) APPLIED WITH MANURE, (IV) AFFECTED BY PESTS AND DISEASES, (V) SPRAYED WITH PESTICIDES, AND (VI) OF CROPS FINALLY DAMAGED AND VALUE OF (I) FERTILISER USED (II) MANURE USED AND (III) PESTICIDES SPRAYED SEPARATELY FOR IRRIGATED AND UNIRRIGATED CROPS BY CROP/CROP GROUP

GENERAL SAMPLE		MAHARASHTRA								
crop/crop group	area (hectares 00)					value (Rs. 000) of				
	under crop	applied with fertiliser	applied with manure	affected by pests & diseases	sprayed with pesticides	of crop finally damaged	fertiliser used	manure used	pesticides sprayed	
(0)	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	
<b>irrigated crops</b>										
paddy	1844	1108	1267	404	122	19	37284	27279	1405	
jowar	4060	1301	1266	1266	267	101	31129	23726	2925	
bajra	718	199	357	341	64	23	4905	9981	466	
wheat	5099	3795	920	604	323	77	130319	23374	3082	
all cereals	12016	6554	3945	2655	790	231	208384	89268	7979	
all pulses	567	78	51	52	16	7	2001	1046	119	
all oil seeds	406	135	208	40	3	—	3258	8011	23	
sugarcane	2874	2638	1459	264	89	45	312707	80013	1798	
cotton	394	305	178	155	185	43	12234	5592	7226	
all other crops	1647	1015	735	293	248	68	67903	50092	7691	
all crops	17904	10725	6576	3459	1331	394	606487	234022	24836	
<b>unirrigated crops</b>										
paddy	2492	1223	1527	331	118	2	33789	27321	1288	
jowar	18278	2295	3074	3824	880	239	47235	44050	6337	
bajra	9095	564	1891	3497	136	50	12286	44889	533	
wheat	1152	271	180	68	5	—	3850	1516	22	
all cereals	31622	4513	6790	7741	1151	292	101108	120016	8215	
all pulses	8460	295	960	818	137	65	4846	15564	798	
all oilseeds	5291	642	973	407	62	22	11309	21487	253	
sugarcane	20	4	7	—	—	—	427	157	—	
cotton	4617	1366	1604	1076	880	302	21591	15879	10262	
all other crops	686	215	182	99	31	18	7074	5243	587	
all crops	50696	7035	10516	10141	2261	699	146355	178346	20115	

TABLE 9 : ESTIMATES OF AREA UNDER CROP, AREA APPLIED WITH FERTILIZER AND MANURE AND AREA AFFECTED BY PESTS AND DISEASES FOR IRRIGATED AND UNIRRIGATED CROPS BY CROP/CROP GROUP SEPARATELY FOR ORDINARY AND IMPROVED VARIETY OF SEEDS

GENERAL SAMPLE		MAHARASHTRA							
crop/crop group	irrigated crop area (hectares 00)				unirrigated crop area (hectare 00)				
	total	applied with fertiliser	applied with manure	affected by pests & diseases	total	applied with fertiliser	applied with manure	affected by pests & diseases	
(0)	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	
<b>ordinary variety</b>									
paddy	1666	947	1179	354	2252	1005	1424	261	
Jowar	3460	830	1025	1087	15459	786	2148	3333	
bajra	659	161	328	315	8566	374	1741	3220	
wheat	2249	1340	500	333	1021	244	172	60	
all cereals	8294	3406	3161	2123	27888	2557	5594	6886	
all pulses	567	78	51	52	8448	295	960	818	
all oil seeds	394	131	201	40	4773	446	829	352	
sugar cane	1731	1526	961	188	17	4	7	—	
cotton	145	106	69	44	3241	557	1066	496	
all other crops	1560	938	699	266	671	210	182	94	
all crops	12691	6185	5142	2713	45038	4069	8638	8646	
<b>improved variety</b>									
paddy	178	161	88	50	240	218	103	70	
jowar	600	471	241	179	2819	1509	926	491	
bajra	59	38	29	26	529	190	150	277	
wheat	2860	2455	420	271	131	27	8	8	
all cereals	3722	3148	784	532	3734	1956	1196	855	
all pulses	—	—	—	—	12	—	—	—	
all oil seeds	12	4	7	—	518	196	144	55	
sugar cane	1143	1112	498	76	3	—	—	—	
cotton	249	199	109	111	1376	809	538	580	
all other crops	87	77	36	27	15	5	—	5	
all crops	5213	4540	1434	746	5658	2966	1878	1495	



TABLE 10 : ESTIMATES OF AREA UNDER CROP APPLIED WITH FERTILISER HAVING NUTRIENTS N ONLY, NP ONLY, NPK ONLY AND OTHERS SEPARATELY FOR IRRIGATED AND UNIRRIGATED CROPS BY CROP/CROP GROUP

GENERAL SAMPLE

MAHARASHTRA

crop/crop group	irrigated crop area (hectares 00) applied with fertilisers having nutrients					unirrigated crop area (hectares 00) applied with fertilisers having nutrients				
	N only	NP only	NPK only	others	total	N only	NP only	NPK only	others	total
(0)	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
paddy	558	42	483	25	1108	565	63	514	81	1223
jowar	647	63	495	96	1301	1057	139	1011	88	2295
bajra	107	2	70	20	199	344	15	111	94	564
wheat	1743	267	1590	195	3795	66	3	128	74	271
all cereals	3173	375	2667	339	6554	2085	231	1859	338	4513
all pulses	35	4	33	6	78	142	26	105	22	295
all oil seeds	54	2	43	36	135	159	86	157	240	642
sugar cane	672	136	976	854	2638	4	—	—	—	4
cotton	96	17	174	18	305	316	86	896	68	1366
all other crops	469	55	341	150	1015	74	40	68	33	215
all crops	4499	589	4234	1403	10725	2780	469	3085	701	7035

'N' only means nitrogenous fertilisers like ammonium sulphate, ammonium sulphate nitrate, calcium ammonium nitrate, ammonium chloride and urea.

'NP' only means nitrogenous phosphate fertilisers like ammonium phosphate, ammonium phosphate sulphate, diammonium phosphate urea ammonium phosphate and ammonium nitrate phosphate. It also includes phosphate fertilisers like single super phosphate, triple super phosphate and palfos in combination with nitrogenous fertilisers containing 'N' only.

'NPK' means nitrogenous phosphatic potash fertilisers like nitrophosphate and NPK complex fertilisers. It also includes potash fertilisers like sulphate of potash in combination 'NP' fertilisers noted under 'NP' above.

TABLE 11 : ESTIMATES OF AREA UNDER IRRIGATED CROPS BY CROP/CROP GROUP AND TYPE OF IRRIGATION

GENERAL SAMPLE

MAHARASHTRA

crop/crop group	area (hectares 00) under irrigated crop by type of irrigation											flow & lift combined
	flow					lift					total	
	canal	diversion scheme	tank	others	total	well	tube well	river	tank	others		
(0)	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
paddy	429	78	504	190	1201	456	—	152	—	35	643	1844
jowar	1307	48	73	25	1453	2445	—	147	1	14	2607	4060
bajra	142	15	3	—	160	526	—	20	—	12	558	718
wheat	1134	73	136	40	1383	218	—	217	2	38	3716	5099
all cereals	3043	214	722	255	4234	7104	—	574	5	99	7782	12016
all pulses	143	26	4	4	177	368	—	13	3	6	390	567
all oil seeds	162	3	39	2	206	195	—	5	—	—	200	406
sugar cane	603	4	39	7	653	1411	—	808	—	2	2221	2874
cotton	78	—	1	—	79	290	—	7	—	18	315	394
all other crops	40	10	10	21	81	1535	—	27	—	4	1566	1647
all crops	4069	1257	815	289	5430	10903	—	1434	8	129	12474	17904



TABLE 12 : ESTIMATES OF AREA UNDER IRRIGATED CROPS BY CROP/CROP GROUP AND NUMBER OF TIMES IRRIGATED

GENERAL SAMPLE		MAHARASHTRA				
crop/crop group	crop area (hectares 00)			irrigated		
	once	twice	thrice	more than thrice	total	
(o)	(1)	(2)	(3)	(4)	(5)	
paddy	612	389	237	606	1844	
jowar	558	1164	1110	1228	4060	
bajra	224	188	184	122	718	
wheat	202	286	549	4062	5099	
all cereals	1613	2053	2128	6222	12016	
all pulses	135	180	140	112	567	
all oilseeds	32	44	51	279	406	
sugarcane	—	8	2	2864	2874	
cotton	47	50	29	268	394	
all other crops	32	53	55	1507	1647	
all crops	1859	2388	2405	11252	17904	

TABLE 13 : ESTIMATES OF AREA UNDER IRRIGATED CROPS WITH SUBSIDIARY IRRIGATION AND WITHOUT SUBSIDIARY IRRIGATION BY CROP/CROP GROUP

GENERAL SAMPLE		MAHARASHTRA		
crop/crop group	area (hectares 00) under irrigated crop			
	with subsidiary irrigation	without subsidiary irrigation	total	
(0)	(1)	(2)	(3)	
paddy	15	1829	1844	
jowar	80	3980	4060	
bajra	4	714	718	
wheat	89	5010	5099	
all cereals	195	11821	12016	
all pulses	5	562	567	
all oilseeds	26	380	406	
sugarcane	114	2760	2874	
cotton	13	381	394	
all other crops	20	1627	1647	
all crops	373	17531	17904	



TABLE 14 : ESTIMATES OF VALUE OF AGRICULTURAL IMPLEMENTS, IRRIGATION EQUIPMENTS AND DRAUGHT ANIMALS (ADULT CATTLES AND BUFFALOES—3 YEARS OR MORE) OWNED BY HOUSEHOLDS BY SIZECLASS OF HOUSEHOLD HOLDING

GENERAL SAMPLE		MAHARASHTRA						
items of assets	value (Rs. 000) of agricultural implements, irrigation equipments, adult cattles and buffaloes by size class of holding (hectare)							
	less than 0.5	0.5—1.0	1.0—2.0	2.0—4.0	4.0—10.0	10.0 & above	all	
(0)	(1)	(2)	(3)	(4)	(5)	(6)	(7)	
<b>agriculture implements</b>								
1. tractor	—	—	—	8213	29167	98421	135801	
2. power tiller	—	—	—	59	6195	—	6254	
3. sprayer	57	158	89	1655	5836	9015	16810	
4. duster	—	—	—	94	1452	591	2137	
5. thresher	—	—	—	—	850	6379	7229	
6. cane crusher	—	—	—	2184	6770	7368	16322	
7. oil crusher	—	—	—	—	—	—	—	
8. all	57	158	89	12205	50270	121774	184553	
<b>irrigation equipments</b>								
1. electric pumps	16628	34962	95828	195851	318927	231078	893274	
2. diesel pumps	7222	13254	46310	97361	178782	166183	509112	
3. wind—mill	—	—	295	—	—	—	295	
4. moat	1516	2553	6952	13599	17620	5162	47402	
5. persian wheel	1198	780	958	552	80	—	3568	
6. others (animal driven)	384	1611	1783	5735	1803	245	11561	
7. counter poise	1257	902	285	166	8	—	2618	
8. manual pumps	—	—	—	—	—	—	—	
9. others	186	31	49	100	127	26	519	
10. all	28391	54093	152460	313364	517347	402694	1468349	
<b>adult cattles and buffaloes</b>								
1. cattle	29313	70298	186314	387960	652378	495424	1821687	
2. buffaloes	1931	1397	2169	7269	4915	5231	22912	
3. all	31244	71695	188483	395229	657293	500655	1844599	
total	59692	125946	341032	720798	1224910	1025123	3497501	

TABLE 15 : ESTIMATES OF NUMBER OF HOUSEHOLDS REPORTING PUMPSETS AND NUMBER OF PUMPSETS POSSESSED BY SIZE CLASS OF HOUSEHOLD HOLDING

GENERAL SAMPLE		MAHARASHTRA	
size class of holding (hectare)	no. of households reporting pumpsets		no. of pumpsets* (000)
	(1)	(2)	
less than 0.5		407	435
0.5—1.0		577	595
1.0—2.0		1156	1243
2.0—4.0		1643	1768
4.0—10.0		2057	2270
10.0 & above		1137	1416
all		6977	7727

\*In this and subsequent tables on number of pumpsets, the number includes those possessed jointly as well as next. In the case of jointly possessed, instead of the households share of the number possessed, the total number possessed jointly has been counted as possessed by the sample household. Hence the estimated number of pumpsets is inflated to some extent.



TABLE 16 : ESTIMATES OF NUMBER OF PUMPSETS POSSESSED BY SOURCE OF POWER AND BY HORSE-POWER

GENERAL SAMPLE						MAHARASHTRA
horse power	no. of pumpsets* (00)		having source of power		total	
	electricity	diesel	both electricity and diesel	not recorded		
(0)	(1)	(2)	(3)	(4)	(5)	
less than 1.0	—	8	—	4	12	
1.0—2.0	4	4	—	—	8	
2.0—3.0	76	19	—	—	95	
3.0—4.0	2397	180	8	4	2589	
4.0—5.0	4	8	—	—	12	
5.0 & above	1773	2254	7	37	4071	
not recorded	276	569	—	95	940	
all	4530	3042	15	140	7727	

\*see footnote in Table 15

TABLE 17 : ESTIMATES OF NUMBER OF PUMPSETS\* AND HOUSEHOLD'S SHARE OF VALUE OF OWNED EQUIPMENTS BY TYPE OF POSSESSION AND SOURCE OF POWER

GENERAL SAMPLE

MAHARASHTRA

source of power	possession type									
	owned singly		owned jointly		rented		not recorded		total	
	no. of pumpsets (00)	hh's share of value of owned equipments (Rs. 000)	no. of pumpsets (00)	hh's share of value of owned equipments (Rs. 000)	no. of pumpsets (00)	hh's share of value of owned equipments (Rs. 000)	no. of pumpsets (00)	hh's share of value of owned equipments (Rs. 000)	no. of pumpsets (00)	hh's share of value of owned equipments
(0)	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
electricity	2111	660925	2074	227251	341	1224	4	—	4530	889400
diesel	1350	416901	967	109151	721	—	4	—	3042	526052
electricity and diesel	8	2783	7	938	—	—	—	—	15	3721
not recorded	27	4446	22	1351	80	—	11	461	140	6258
all	3496	1085055	3070	338691	1142	1224	19	461	7727	1425431

\*see footnote in Table 15



TABLE 18 : ESTIMATES OF NUMBER OF PUMPSETS\* REPORTING AREA IRRIGATED BY SOURCE OF POWER AND SOURCE OF WATER SEPARATELY BY POSSESSION TYPE

GENERAL SAMPLE		MAHARASHTRA				
source of power (0)	no. of pumpsets (00) reporting area irrigated by source of water					total (6)
	well (1)	tube-well (2)	rivers and streams (3)	others (4)	not recorded (5)	
<b>owned singly</b>						
1. electricity	1978	4	57	4	24	2067
2. diesel	1155	—	110	21	8	1294
3. electricity & diesel	8	—	—	—	—	8
4. recorded	23	—	4	—	—	27
5. all	3164	4	171	25	32	3396
<b>owned jointly</b>						
1. electricity	1806	4	206	—	4	2020
2. diesel	802	—	122	—	—	924
3. electricity & diesel	7	—	—	—	—	7
4. not recorded	15	—	—	—	—	15
5. all	2630	4	328	—	4	2966
<b>rented</b>						
1. electricity	158	—	163	3	4	328
2. diesel	558	—	142	3	4	707
3. electricity & diesel	—	—	—	—	—	—
4. not recorded	7	—	4	4	—	15
5. all	723	—	309	10	8	1050
<b>not recorded</b>						
1. electricity	4	—	—	—	—	4
2. diesel	4	—	—	—	—	4
3. electricity & diesel	—	—	—	—	—	—
4. not recorded	—	—	—	—	4	4
5. all	8	—	—	—	4	12
<b>total</b>						
1. electricity	3946	8	426	7	32	4419
2. diesel	2519	—	374	24	12	2929
3. electricity & diesel	15	—	—	—	—	15
4. not recorded	45	—	8	4	4	61
5. all	6525	8	808	35	48	7424

\*see foot note in Table 15

TABLE 19 : ESTIMATES OF EXPENSES FOR IRRIGATION ON OTHER THAN CAPITAL ACCOUNT BY ITEMS BY EXPENDITURE

GENERAL SAMPLE		MAHARASHTRA	
items of expenditure (0)	amount (Rs. 000)		(1)
	1. repair and maintenance expenses on bunds and field channnels		
2. water charges			66557
3. other expenses on independently owned lift irrigation			429795
4. share of expenses on joint arrangements			83769
5. receipt from sale of water			(—) 2689
6. total			623271



TABLE 0 : NUMBER OF SAMPLE VILLAGES ALLOTTED AND NUMBER SURVEYED, NUMBER OF HOUSEHOLDS SURVEYED FOR SCHEDULE 22.1, ESTIMATED NUMBER OF TOTAL HOUSEHOLDS AND ESTIMATED NUMBER OF CULTIVATING HOUSEHOLDS USUALLY USING IRRIGATION AND NUMBER OF USUALLY NOT USING IRRIGATION

GENERAL SAMPLE		MANIPUR
item	(0)	number (1)
1. number of sample villages allotted for survey		120
2. number of sample villages actually surveyed		120
3. number of sample households surveyed for schedule 22.1		373
4. estimated number of total households (000)*		176
5. estimated number of cultivating households (000)		148
(i) usually using irrigation		31
(ii) usually not using irrigation**		117

\* from listing schedule—Draft Report No. 291, Part—I

\*\* from manual tabulation on schedule 22.2—Draft Report No. 289

TABLE 1 : ESTIMATES OF NUMBER OF HOUSEHOLDS USUALLY USING IRRIGATION AND AREA POSSESSED, NET AREA SOWN, AREA CROPPED MORE THAN ONCE AND GROSS CROPPED AREA SEPARATELY FOR IRRIGABLE LAND AND LAND WITHOUT IRRIGATION FACILITY BY SIZE CLASS OF HOLDING.

GENERAL SAMPLE		MANIPUR											
size class of holding (hectare)	no. of house- holds (00) with irri- gable land	irrigable area (hectares 00)						area of land without irrigation facility (hectares 00)					
		area possessed			net area sown	area cropped more than once	gross cropped area	area possessed			net area sown	area cropped more than once	gross crop- ped area
		owned	leased in	total				owned	leased- in	total			
(0)	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
less than 0.5	20	6	—	6	6	—	6	1	—	1	—	—	—
0.5—1.0	79	43	6	49	48	5	53	7	2	9	6	1	7
1.0—2.0	174	176	11	187	187	14	201	38	5	43	34	1	35
2.0—4.0	37	63	5	68	68	6	74	18	1	19	16	1	17
4.0—10.0	3	5	1	6	6	3	9	4	2	6	6	—	6
10.0 & above	—	—	—	—	—	—	—	—	—	—	—	—	—
all	313	293	23	316	315	28	343	68	10	78	62	3	65



TABLE 2 : ESTIMATES OF NUMBER OF HOUSEHOLDS REPORTING AREA IRRIGATED AND NET AREA IRRIGATED BY SIZE CLASS OF HOLDING AND TYPE OF IRRIGATION.

GENERAL SAMPLE												MANIPUR	
size class of holding (hectare)	flow					lift					flow & lift combined		
	canal	diver- sion scheme	tank	others	all	well	tube- well	river	tank	others		all	
(0)	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	
<b>number of households (00) reporting area irrigated</b>													
less than 0.5	9	9	—	2	19	—	—	—	—	1	1	20	
0.5—1.0	32	26	—	8	65	—	—	3	—	11	14	79	
1.0—2.0	66	61	—	30	154	—	—	6	—	15	21	174	
2.0—4.0	13	20	—	2	34	—	—	2	—	1	3	37	
4.0—10.0	2	—	—	—	2	—	—	1	—	—	1	3	
10.0 & above	—	—	—	—	—	—	—	—	—	—	—	—	
all	122	116	—	42	274	—	—	12	—	28	40	31	
<b>irrigated (hectares 00)</b>													
less than 0.5	2	2	—	1	5	—	—	—	—	1	—	6	
0.5—1.0	19	15	—	5	40	—	—	1	—	7	8	48	
1.0—2.0	71	60	—	37	168	—	—	4	—	15	19	187	
2.0—4.0	22	40	—	4	66	—	—	2	—	—	3	68	
4.0—10.0	4	—	—	—	4	—	—	2	—	—	2	6	
10.0 & above	—	—	—	—	—	—	—	—	—	—	—	—	
all	118	117	—	48	283	—	—	9	—	23	32	315	

TABLE 3 : ESTIMATES OF NUMBER OF HOUSEHOLDS REPORTING LIFT IRRIGATION AND NET AREA IRRIGATED BY LIFT BY SIZE CLASS OF HOUSEHOLD HOLDING AND BY SOURCE OF POWER.

GENERAL SAMPLE												MANIPUR	
size class of holding (hectare)	no. of households (00) reporting lift irrigation using						net area irrigated (hectares 00) by lift using						
	elec- tricity	diesel	wind- mill	animal	human	all	elec- tricity	diesel	wind- mill	animal	human	all	
(0)	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	
less than 0.5	—	1	—	—	—	1	—	1	—	—	—	1	
0.5—1.0	—	14	—	—	—	14	—	8	—	—	—	8	
1.0—2.0	—	19	—	—	2	21	—	17	—	—	2	19	
2.0—4.0	—	3	—	—	—	3	—	2	—	—	—	2	
4.0—10.0	—	1	—	—	—	1	—	2	—	—	—	2	
10.0 & above	—	—	—	—	—	—	—	—	—	—	—	—	
all	—	38	—	—	2	40	—	30	—	—	2	32	



TABLE 4 : ESTIMATES OF NET AREA IRRIGATED BY TYPE OF IRRIGATION AND OWNERSHIP OF THE SOURCE OF WATER FOR IRRIGATION.

GENERAL SAMPLE													MANIPUR
ownership of source of water for irrigation	net area irrigated (hectares 00) by type of irrigation												
	flow					lift						flow	
	canal	diversion scheme	tank	others	all	well	tube-well	river	tank	others	all	& lift combined	
(0)	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	
government . . . . .	44	21	—	—	65	—	—	9	—	—	9	74	
co-operative . . . . .	11	—	—	1	12	—	—	—	—	—	—	12	
private—joint . . . . .	54	77	—	33	164	—	—	—	—	22	22	186	
private—single . . . . .	9	18	—	10	37	—	—	—	—	1	1	38	
not recorded . . . . .	—	1	—	4	5	—	—	—	—	—	—	5	
all . . . . .	118	117	—	48	283	—	—	9	—	23	32	315	

TABLE 5 : ESTIMATES OF NET AREA IRRIGATED BY OWNERSHIP OF LIFTING EQUIPMENT AND BY SOURCE OF POWER.

GENERAL SAMPLE													MANIPUR
ownership of lifting equipment	net area irrigated (hectares 00) by source of power												
	electricity	diesel	wind-mill	animal drawn	human drawn	all							
	(1)	(2)	(3)	(4)	(5)	(6)							
(0)	(1)	(2)	(3)	(4)	(5)	(6)							
government . . . . .	—	6	—	—	—	6							
co-operative . . . . .	—	—	—	—	—	—							
private-joint . . . . .	—	—	—	—	—	—							
private-single . . . . .	—	—	—	—	2	2							
not recorded . . . . .	—	24	—	—	—	24							
all . . . . .	—	30	—	—	2	32							



TABLE 6 : ESTIMATES OF AREA SOWN HAVING IRRIGATION FACILITY BUT NOT IRRIGATED BY SIZE CLASS OF HOLDING AND REASON FOR NOT IRRIGATION.

GENERAL SAMPLE	MANIPUR			
size class of holding (hectare)	area (hectares 00) by reason for not irrigating			
	adequate rainfall	non-availability of water	other reasons	all reasons
(0)	(1)	(2)	(3)	(4)
less than 0.5	—	—	—	—
0.5—1.0	—	—	—	—
1.0—2.0	—	—	—	—
2.0—4.0	—	—	—	—
4.0—10.0	—	—	—	—
10.0 & above	—	—	—	—
all	—	—	—	—

TABLE 7 : ESTIMATES OF NUMBER OF PARCELS OF IRRIGABLE LAND POSSESSED, TOTAL AREA OF THE PLOTS, NET AREA IRRIGATED, NET AREA NOT IRRIGATED AND NET AREA SOWN BY SIZE CLASS OF PARCELS.

GENERAL SAMPLE	MANIPUR				
size class of parcels (hectare)	number of parcels (00)	area (hectares 00)			net area sown
		total irrigable land	net area irrigated	net area not irrigated	
(0)	(1)	(2)	(3)	(4)	(5)
less than 0.05	—	—	—	—	—
0.05—0.10	1	—	—	—	—
0.10—0.20	8	1	1	—	1
0.20—0.30	68	17	17	—	17
0.30—0.40	20	7	7	—	7
0.40—0.50	102	42	42	—	42
0.50—1.00	170	103	102	—	102
1.00—2.00	88	102	102	—	102
2.00 & above	20	44	44	—	44
all	477	316	315	—	315

Parcel : A plot or contiguously located plots having a common source of irrigation facility possessed by the sample household was treated as a parcel.



TABLE 8 : ESTIMATES OF AREA (I) UNDER CROP, (II) APPLIED WITH FERTILISER, (III) APPLIED WITH MANURE, (IV) AFFECTED BY PESTS & DISEASES, (V) SPRAYED WITH PESTICIDES AND (VI) OF CROPS FINALLY DAMAGED AND VALUE OF (I) FERTILISER USED, (II) MANURE USED AND (III) PESTICIDES SPRAYED SEPARATELY FOR IRRIGATED AND UNIRRIGATED CROPS BY CROP/CROP GROUP.

GENERAL SAMPLE							MANIPUR		
crop/crop group	area (hectares 00)					value (Rs. 000) of			
	under crop	applied with fertiliser	applied with manure	affected by pests & diseases	sprayed with pesticides	of crops finally damaged	fertiliser used	manure used	pesticides sprayed
(0)	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
<b>irrigated crops</b>									
paddy	320	69	45	27	6	—	668	142	6
all cereals	321	69	45	27	6	—	668	142	6
all pulses	1	—	1	—	—	—	—	7	—
all oilseeds	—	—	—	—	—	—	—	—	—
all other crops	—	—	—	—	—	—	—	—	—
all crops	322	69	46	27	6	—	668	149	9
<b>unirrigated crops</b>									
paddy	70	20	2	4	2	—	220	16	14
all cereals	80	20	2	4	2	—	220	16	14
all pulses	1	—	—	—	—	—	—	1	—
all oilseeds	—	—	—	—	—	—	—	—	—
all other crops	5	—	1	—	—	—	—	15	—
all crops	86	20	3	4	2	—	220	32	14

TABLE 9 : ESTIMATES OF AREA UNDER CROP, AREA APPLIED WITH FERTILISER, AREA APPLIED WITH MANURE AND AREA AFFECTED BY PESTS & DISEASES FOR IRRIGATED AND UNIRRIGATED CROPS BY CROP/CROP GROUP SEPARATELY FOR ORDINARY AND IMPROVED VARIETIES OF SEEDS.

GENERAL SAMPLE					MANIPUR			
crop/crop group	irrigated crop area (hectares 00)				unirrigated crop area (hectares 00)			
	total	applied with fertiliser	applied with manure	affected by pests & diseases	total	applied with fertiliser	applied with manure	affected by pests & diseases
(0)	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
<b>ordinary variety</b>								
paddy	257	37	34	27	66	17	1	3
all cereals	257	37	34	27	76	17	1	3
all pulses	—	—	—	—	1	—	—	—
all oilseeds	—	—	—	—	—	—	—	—
all other crops	—	—	—	—	4	—	1	—
all crops	257	37	34	27	81	17	2	3
<b>improved variety</b>								
paddy	63	32	11	—	4	3	1	1
all cereals	64	32	11	—	4	3	1	1
all pulses	1	—	1	—	—	—	—	—
all oilseeds	—	—	—	—	—	—	—	—
all other crops	—	—	—	—	1	—	—	—
all crops	65	32	12	—	5	3	1	1



TABLE 10.: ESTIMATES OF AREA UNDER CROP APPLIED WITH FERTILISER HAVING NUTRIENTS N ONLY NP ONLY, NPK ONLY AND OTHERS SEPARATELY FOR IRRIGATED AND UNIRRIGATED CROPS BY CROP/CROP GROUP.

GENERAL SAMPLE						MANIPUR				
crop/crop group	irrigated crop area (hectares 00) applied with fertilisers having nutrients					unirrigated crop area (hectares 00) applied with fertilisers having nutrients				
	N only	NP only	NPK only	others	total	N only	NP only	NPK only	others	total
(0)	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
paddy	55	10	—	4	69	14	5	—	1	20
all cereals	55	10	—	4	69	14	5	—	1	20
all pulses	—	—	—	—	—	—	—	—	—	—
all oilseeds	—	—	—	—	—	—	—	—	—	—
all other crop	—	—	—	—	—	—	—	—	—	—
all crops	55	10	—	4	69	14	5	—	1	20

'N' only means nitrogenous fertilisers like ammonium sulphate, ammonium sulphate nitrate, calcium ammonium nitrate, ammonium chloride and urea.

'NP' only means nitrogenous phosphate fertilisers like ammonium phosphate, ammonium phosphate sulphate, diammonium phosphate, urea ammonium phosphate and ammonium nitrate phosphate. It also includes phosphate fertilisers like single super phosphate, triple super phosphate and palfos in combination with nitrogenous fertilisers containing 'N' only.

'NPK' means nitrogenous phosphatic potash fertilisers like nitrophosphate and NPK complex fertilisers. It also includes potash fertilisers like sulphate of potash in combination with 'NP' fertilisers noted under 'NP' above.

TABLE 11 : ESTIMATES OF AREA UNDER IRRIGATED CROPS BY CROP/CROP GROUP AND TYPE OF IRRIGATION.

GENERAL SAMPLE						MANIPUR						
crop/crop group	area (hectare 00)					under irrigated crop by type of irrigation						
	flow					lift						
	canal	diver- sion scheme	tank	others	total	well	tube- well	river	tank	others	total	flow & lift com- bined
(0)	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
paddy	117	118	—	48	283	—	—	13	—	24	37	320
all cereals	118	118	—	48	284	—	—	13	—	24	37	321
all pulses	1	—	—	—	1	—	—	—	—	—	—	1
all oilseeds	—	—	—	—	—	—	—	—	—	—	—	—
all other crops	—	—	—	—	—	—	—	—	—	—	—	—
all crops	119	118	—	48	285	—	—	13	—	24	37	322



TABLE 12 : ESTIMATES OF AREA UNDER IRRIGATED CROPS BY CROP/CROP GROUP AND NUMBER OF TIMES IRRIGATED.

GENERAL SAMPLE		MANIPUR				
crop/crop group	(0)	crop area (hectares 00) irrigated				total
		once	twice	thrice	more than thrice	
	(1)	(2)	(3)	(4)	(5)	
paddy	101	26	53	140	320	
all cereals	101	26	53	141	321	
all pulses	1	—	—	—	1	
all oilseeds	—	—	—	—	—	
all other crops	—	—	—	—	—	
all crops	102	26	53	141	322	

TABLE 13 : ESTIMATES OF AREA UNDER IRRIGATED CROPS WITH SUBSIDIARY IRRIGATION AND WITHOUT SUBSIDIARY IRRIGATION BY CROP/CROP GROUP.

GENERAL SAMPLE		MANIPUR		
crop/crop group	(0)	area (hectares 00) under irrigated crops		total
		with subsidiary irrigation	without subsidiary irrigation	
	(1)	(2)	(3)	
paddy	56	264	320	
all cereals	56	265	321	
all pulses	—	1	1	
all oilseeds	—	—	—	
all other crops	—	—	—	
all crops	56	266	322	



TABLE 14 : ESTIMATES OF VALUE OF AGRICULTURAL IMPLEMENTS, IRRIGATION EQUIPMENTS AND DRAUGHT ANIMALS (ADULT CATTLE AND BUFFALOES—3 YEARS OR MORE) OWNED BY HOUSEHOLDS BY SIZE CLASS OF HOUSEHOLD HOLDING.

GENERAL SAMPLE		MANIPUR						
		value (Rs. 000) of agricultural implements, irrigation equipments and adult cattle and buffaloes by size class of holding (hectare)						
items of asset		less than 0.5	0.5—1.0	1.0—2.0	2.0—4.0	4.0—10.0	10.0 & above	all
(0)		(1)	(2)	(3)	(4)	(5)	(6)	(7)
<i>agricultural implements</i>								
1. tractor		—	—	—	—	—	—	—
2. power tiller		—	—	—	—	—	—	—
3. sprayer		—	—	—	—	—	—	—
4. duster		2	10	24	10	—	—	46
5. thresher		1	10	25	12	—	—	48
6. cane crusher		1	—	—	—	—	—	1
7. oil crusher		—	—	—	—	—	—	—
8. all		4	20	49	22	—	—	95
<i>irrigation equipments</i>								
1. electric pumps		—	—	—	—	—	—	—
2. diesel pumps		—	—	—	—	—	—	—
3. wind-mill		—	—	—	—	—	—	—
4. moat		—	—	—	—	—	—	—
5. persian wheel		—	—	—	—	—	—	—
6. others (animal driven)		—	—	6	—	—	—	6
7. counterpoise		—	—	—	—	—	—	—
8. manual pumps		6	6	—	—	—	—	12
9. others		12	38	103	22	2	—	177
10. all		18	44	109	22	2	—	195
<i>adult cattles and buffaloes</i>								
1. cattle		1359	4597	12833	5398	468	—	24655
2. buffaloes		—	779	6124	880	—	—	7783
3. all		1359	5376	18957	6278	468	—	32438
total		1381	5440	19115	6322	470	—	32728

TABLE 15 : ESTIMATES OF NUMBER OF HOUSEHOLDS REPORTING PUMPSETS AND NUMBER OF PUMPSETS POSSESSED BY SIZE OF CLASS OF HOUSEHOLD HOLDING.

GENERAL SAMPLE		MANIPUR	
size class of holding (hectare)	no. of households reporting pumpsets (00)	no. of pump sets* (00)	
(0)	(1)	(2)	(3)
less than 0.5	—	—	
0.5—1.0	3	3	
1.0—2.0	4	4	
2.0—4.0	2	2	
4.0—10.0	1	1	
10.0 & above	—	—	
all	10	10	

\*In this and subsequent tables on number of pumpsets, the number includes those possessed jointly as well as on rent. In the case of jointly possessed, instead of the household share of the number possessed the total number possessed jointly has been counted as possessed by the sample household. Hence the estimated number of pumpsets is inflated to some extent.



TABLE 16 : ESTIMATES OF NUMBER OF PUMPSETS POSSESSED BY SOURCE OF POWER AND BY HORSE-POWER.

GENERAL SAMPLE

MANIPUR

horse-power	number of pumpsets* (00) having source of power				total
	electricity	diesel	both electricity & diesel		
(0)	(1)	(2)	(3)	(4)	
less than 1.0	—	1	—	1	
1.0—2.0	—	—	—	—	
2.0—3.0	—	—	—	—	
3.0—4.0	—	—	—	—	
4.0—5.0	—	—	—	—	
5.0 & above	—	4	—	4	
not recorded	—	5	—	5	
all	—	10	—	10	

\*see foot note on table (15).

TABLE 17 : ESTIMATES OF NUMBER OF PUMPSETS\* AND HOUSEHOLD'S SHARE OF VALUE OF OWNED EQUIPMENTS BY TYPE OF POSSESSION AND SOURCE OF POWER.

GENERAL SAMPLE

MANIPUR

source of power	possession type							
	owned singly		owned jointly		rented		Total	
	no. of pumpsets (00)	h. h.'s share of value of owned equipments (Rs. 000)	no. of pumpsets (00)	h. h.'s share of value of owned equipments (Rs. 000)	no. of pumpsets (00)	h. h.'s share of value of owned equipments (Rs. 000)	no. of pumpsets (00)	h. h.'s share of value of owned equipments (Rs. 000)
(0)	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
electricity	—	—	—	—	—	—	—	—
diesel	—	—	—	—	10	—	10	—
both electricity & diesel	—	—	—	—	—	—	—	—
all	—	—	—	—	10	—	10	—

\*see foot note on table



TABLE 18 : ESTIMATES OF NUMBER OF PUMPSETS\* REPORTING AREA IRRIGATED BY SOURCE OF POWER AND SOURCE OF WATER SEPARATELY BY POSSESSION TYPE.

GENERAL SAMPLE

MANIPUR

source of power (0)	no. of pumpsets (00) reporting area irrigated by source of water				total (5)
	well (1)	tubewell (2)	rivers & streams (3)	others (4)	
<b>owned singly</b>					
1. electricity	—	—	—	—	—
2. diesel	—	—	—	—	—
3. both electricity & diesel	—	—	—	—	—
4. all	—	—	—	—	—
<b>owned jointly</b>					
1. electricity	—	—	—	—	—
2. diesel	—	—	—	—	—
3. both electricity & diesel	—	—	—	—	—
4. all	—	—	—	—	—
<b>rented</b>					
1. electricity	—	—	—	—	—
2. diesel	—	—	8	—	8
3. both electricity & diesel	—	—	—	—	—
4. all	—	—	8	—	8
<b>not recorded</b>					
1. electricity	—	—	—	—	—
2. diesel	—	—	1	—	1
3. both electricity & diesel	—	—	—	—	—
4. all	—	—	1	—	1
<b>total</b>					
1. electricity	—	—	9	—	9
2. diesel	—	—	—	—	—
3. both electricity & diesel	—	—	—	—	—
4. all	—	—	9	—	9

\*see foot note on table 15

TABLE 19 : ESTIMATES OF EXPENSES FOR IRRIGATION ON OTHER THAN CAPITAL ACCOUNT BY ITEMS OF EXPENDITURE

GENERAL SAMPLE

MANIPUR

items of expenditure (0)	amount (Rs. 000) (1)
1. repair and maintenance expenditure on bunds and field channels	1632
2. Water charges	10
3. other expenses on independently owned lift irrigated	938
4. share of expenses on joint arrangements	107
5. receipt from sale of water	—
6. total	2687



TOTAL 0 : NUMBER OF SAMPLE VILLAGES ALLOTTED AND NUMBER SURVEYED, NUMBER OF HOUSEHOLDS SURVEYED FOR SCHEDULE 22-1, ESTIMATED NUMBER OF TOTAL HOUSEHOLDS AND ESTIMATED NUMBER OF CULTIVATING HOUSEHOLDS USUALLY USING IRRIGATION AND NUMBER USUALLY NOT USING IRRIGATION

## GENERAL SAMPLE

ORISSA

Item	Number
(1)	(2)
1. number of sample villages allotted for survey	304
2. number of sample villages actually surveyed	304
3. number of sample households surveyed for schedule 22-1	3116
4. estimated number of total households a (000)	4332
5. estimated number of cultivating households(000)	3215
(i) usually using irrigation	1236
(ii) usually not using irrigation	1979

a from listing schedule—Draft Report No. 291, Part-I.

b from manual tabulation on schedule 22-2—Draft Report No. 289.

TABLE 1 : ESTIMATES OF NUMBER OF HOUSEHOLDS USUALLY USING IRRIGATION AND AREA POSSESSED, NET AREA SOWN, AREA CROPPED MORE THAN ONCE AND GROSS CROPPED AREA SEPARATELY FOR IRRIGABLE LAND AND LAND WITHOUT IRRIGATION FACILITY BY SIZE CLASS OF HOLDING

## GENERAL SAMPLE

ORISSA

size class of holding (hectare)	no. of households (00) with irrigable land	irrigable area (hectares)				land without irrigation facility							
		area possessed owned	leased-in	total	net area sown	area cropped more than once	gross cropped area	area possessed owned	leased	total	net area sown	area cropped more than once	gross cropped area
(0)	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
less than 0.5	3066	500	83	583	583	313	902	294	15	309	236	45	301
0.5—1.0	2904	1024	149	1173	1161	599	1775	882	99	981	884	169	1114
1.0—2.0	3461	1965	266	2231	2215	971	3239	2382	263	2645	2453	279	2923
2.0—4.0	1981	1734	189	1923	1896	698	2634	3183	3 02	3485	3267	282	3795
4.0—10.0	816	1015	88	1103	1094	427	1524	3365	103	3468	3232	157	3615
10.0 & above	135	453	—	453	452	77	532	1580	—	1580	1229	5	1321
all	12363	6691	775	7466	7401	3085	10606	11686	782	12468	11301	937	13069



TABLE 2 : ESTIMATES OF NUMBER OF HOUSEHOLDS REPORTING AREA IRRIGATED AND NET AREA IRRIGATED BY SIZE CLASS OF HOLDING AND TYPE OF IRRIGATION.

GENERAL SAMPLE												ORISSA
size class of holding (hectare)	flow					lift					flow and lift combined	
	canal	diversion scheme	tank	others	all	well	tube-well	river	tank	others		all
(0)	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
	number of households (00) reporting area irrigated											
less than 0.5	1550	315	142	135	2111	443	41	245	259	155	1111	3063
0.5 — 1.0	1319	349	216	107	1966	564	34	226	266	172	1231	2895
1.0 — 2.0	1323	350	259	233	2115	871	45	410	314	196	1752	3457
2.0 — 4.0	505	175	173	121	969	696	37	221	198	128	1223	1969
4.0 — 10.0	158	65	57	42	318	298	15	136	91	39	551	816
10.0 & above	13	18	13	—	44	71	—	5	38	—	113	135
all	4868	1272	860	638	7523	2943	172	1243	1196	690	5981	12335
	net area irrigated (hectares 00)											
less than 0.5	350	68	27	20	465	36	4	34	16	22	112	577
0.5 — 1.0	663	163	69	38	933	52	7	55	35	56	205	1138
1.0 — 2.0	1206	302	150	120	1778	136	21	102	66	88	413	2191
2.0 — 4.0	864	254	178	113	1409	150	10	102	105	77	444	1853
4.0 — 10.0	404	130	78	32	644	92	9	158	57	25	341	985
10.0 & above	78	48	28	—	154	8	—	128	101	—	237	391
all	3565	965	530	323	5383	474	51	579	380	268	1752	7135

TABLE 3 : ESTIMATES OF NUMBER OF HOUSEHOLDS REPORTING LIFT IRRIGATION AND NET AREA IRRIGATED BY LIFT BY SIZE CLASS OF HOUSEHOLD HOLDING AND BY SOURCE OF POWER.

GENERAL SAMPLE												ORISSA
size class of holding (hectare)	no. of households (00) reporting list irrigation using						net area irrigated (hectares 00) by list using					
	electricity	diesel	wind mill	animal	human	all	electricity	diesel	wind mill	animal	human	all
(0)	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
less than 0.5	103	—	—	4	1019	1111	18	—	—	—	94	112
0.5 — 1.0	90	7	—	4	1148	1231	27	4	—	—	174	205
1.0 — 2.0	125	52	4	4	1621	1752	43	19	—	—	351	413
2.0 — 4.0	89	69	—	13	714	1223	27	39	—	1	377	444
4.0 — 10.0	26	53	—	—	503	551	9	47	—	—	285	341
10.0 & above	—	18	—	—	96	113	—	147	—	—	90	237
all	433	199	4	25	5101	5981	124	256	—	1	137	1752



TABLE 4 : ESTIMATES OF NET AREA IRRIGATED BY TYPE OF IRRIGATION AND OWNERSHIP OF THE SOURCE OF WATER FOR IRRIGATION

GENERAL SAMPLE													ORISSA
ownership of source of water for irrigation	net area irrigated (hectares 00) by type of irrigation											flow & lift combined	
	flow					lift							
	canal	diversion scheme	tank	others	all	well	tube well	river	tank	others			all
(0)	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	
government	3468	745	433	158	4804	4	—	399	104	112	661	5465	
co- operative	—	—	—	—	—	1	—	4	7	—	12	12	
private -joint	—	25	23	160	206	34	3	7	50	2	96	302	
private -single	44	195	74	1	314	435	6	165	216	154	976	1290	
not recorded	53	2	—	4	59	—	—	4	3	—	7	66	
all	3565	965	530	323	5383	474	51	579	380	268	1752	7135	

TABLE 5 : ESTIMATES OF NET AREA IRRIGATED BY OWNERSHIP OF LIFTING EQUIPMENT AND BY SOURCE OF POWER

GENERAL SAMPLE							ORISSA
ownership of lifting equipment	net area irrigated (hectares 00) by source of power						all
	electricity	diesel	windmill	animal drawn	human drawn		
	(1)	(2)	(3)	(4)	(5)	(6)	
government	103	—	—	—	0.5	108	
co- operative	8	1	—	—	—	9	
private- joint	4	16	—	—	48	68	
private- single	9	239	—	1	1318	1567	
all	124	256	—	1	1371	1752	



TABLE 6 : ESTIMATES OF AREA SOWN HAVING IRRIGATION FACILITY BUT NOT IRRIGATED BY SIZE CLASS OF HOLDING AND REASON FOR NOT IRRIGATION.

ORISSA

GENERAL SAMPLE

size class of holding (hectare)	area (hectares 00) by reason for not irrigating			
	adequate rainfall	non-availability of water	other reason	all reasons
(0)	(1)	(2)	(3)	(4)
less than 0.5	3	1	2	6
0.5-1.0	6	4	13	23
1.0-2.0	7	7	10	24
2.0-4.0	12	5	26	43
4.0-10.0	44	19	46	109
10.0 & above	—	52	9	61
all	72	88	106	266

TABLE 7 : ESTIMATES OF NUMBER OF PARCELS OF IRRIGABLE LAND POSSESSED, TOTAL AREA OF THE PLOTS NET AREA IRRIGATED, NET AREA NOT IRRIGATED AND NET AREA SOWN BY SIZE CLASS OF PARCELS

ORISSA

GENERAL SAMPLE

size class of parcels (hectares)	area (hectares 00)				
	number of parcels (00)	total irrigable land	net area irrigated	net area not irrigated	net area sown
(0)	(1)	(2)	(3)	(4)	(5)
less than 0.05	4466	115	113	1	114
0.05-0.10	4992	357	347	9	356
0.10-0.20	5381	738	712	25	737
0.20-0.30	4175	962	938	20	958
0.30-0.40	1298	424	410	13	423
0.40-0.50	2654	1101	1077	17	1094
0.50-1.00	2735	1879	1817	53	1870
1.00-2.00	941	1219	1152	50	1202
2.00 & above	195	671	569	78	647
all	26837	7466	7135	266	7401

Parcel : A plot or contiguously located plots having a common source of irrigation facility possessed by the sample household was treated as a parcel.



TABLE 8 : ESTIMATES OF AREA (I) UNDER CROP, (II) APPLIED WITH FERTILISER, (III) APPLIED WITH MANURE (IV) AFFECTED BY PESTS & DISEASES, (V) SPRAYED WITH PESTICIDES AND (VI) OF CROPS FINALLY DAMAGED AND VALUE OF (I) FERTILISER USED, (II) MANURE USED AND (III) PESTICIDES SPRAYED SEPARATELY FOR IRRIGATED AND UNIRRIGATED CROPS BY CROP/CROP GROUP.

GENERAL SAMPLE										ORISSA
crop/crop group	area (hectares 00)					value (Rs. 000) of				
	under crop	applied with fertiliser	applied with manure	affected by pests & disease	sprayed with pesticide	of crop finally damaged	fertiliser used	manure used	pesticides sprayed	
(0)	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	
<i>irrigated crops</i>										
paddy	7951	3417	6082	2873	1551	62	87253	55444	11820	
maize	5	—	4	—	—	—	76	76	—	
ragi	65	30	49	3	1	—	407	391	9	
wheat	120	108	66	24	30	2	3574	1210	280	
all cereals	8166	3578	6207	2905	1584	64	92019	57182	12124	
all pulses	322	10	126	36	5	—	354	594	67	
all oilseeds	40	9	22	13	6	—	152	192	44	
sugarcane	119	55	94	21	11	2	2555	2373	97	
all other crops	417	212	321	54	53	3	8968	12823	868	
all crops	9064	3864	6770	3029	1659	69	104048	73164	13200	
<i>unirrigated crops</i>										
paddy	10257	976	7422	2390	465	54	10266	51754	807	
maize	122	—	16	2	1	—	—	129	—	
ragi	248	30	115	—	—	—	262	991	—	
wheat	3	—	—	—	—	—	49	—	—	
all cereals	11100	1006	7617	2434	467	57	10583	53189	808	
all pulses	2925	74	448	269	51	—	487	1700	72	
all oilseeds	362	38	145	10	1	—	573	949	8	
sugarcane	2	—	—	—	—	—	23	4	—	
all other crops	222	7	53	9	2	—	517	891	12	
all crops	14611	1125	8263	2722	521	57	12183	56733	900	

TABLE 9 : ESTIMATES OF AREA UNDER CROP, AREA APPLIED WITH FERTILISER AND MANURE AND AREA AFFECTED BY PESTS AND DISEASES FOR IRRIGATED AND UNIRRIGATED CROPS BY CROP/CROP GROUP SEPARATELY FOR ORDINARY AND IMPROVED VARIETY OF SEEDS.

GENERAL SAMPLE										ORISSA
crop/crop group	irrigated crop area (hectares 00)				unirrigated crop area (hectares 00)					
	total	applied with fertiliser	applied with manure	affected by pest & disease	total	applied with Fertiliser	applied with manure	affected by pests diseases		
(0)	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)		
<i>ordinary variety</i>										
paddy	6291	1994	5272	1537	10157	931	7373	2352		
maize	5	—	4	—	122	—	16	2		
ragi	65	30	49	3	248	30	115	—		
wheat	102	91	49	20	3	—	—	—		
all cereals	6477	2117	5378	1561	11034	961	7568	2396		
all pulses	320	8	124	34	2925	74	448	269		
all oilseeds	36	6	21	9	359	38	144	8		
sugarcane	113	51	88	15	2	—	—	—		
all other crops	393	188	298	41	222	7	53	9		
all crops	7339	2370	5909	1660	14542	1080	8213	2682		
<i>improved variety</i>										
paddy	1660	1423	810	1336	66	45	49	38		
maize	—	—	—	—	—	—	—	—		
ragi	—	—	—	—	—	—	—	—		
wheat	18	17	17	4	—	—	—	—		
all cereals	1689	1461	829	1344	66	45	49	38		
all pulses	2	2	2	2	—	—	—	—		
all oilseeds	4	3	1	4	3	—	1	2		
sugarcane	6	4	6	6	—	—	—	—		
all other crops	24	24	23	13	—	—	—	—		
all crops	1725	1494	861	1369	69	45	50	40		



TABLE 10 : ESTIMATES OF AREA UNDER CROP APPLIED WITH FERTILISER HAVING NUTRIENTS N ONLY, NP ONLY, NPK ONLY AND OTHERS SEPARATELY FOR IRRIGATED AND UNIRRIGATED CROPS BY CROP/CROP GROUP.

GENERAL SAMPLE

ORISSA

crop/crop group	irrigated crop area (hectares 00) applied with fertilisers having nutrients					unirrigated crop area (hectares 00) applied with fertiliser having nutrients				
	N only	NP only	NPK only	others	total	N only	NP only	NPK only	others	total
(0)	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
paddy . . . . .	1876	84	373	1084	3417	535	101	15	325	976
maize . . . . .	—	—	—	—	—	—	—	—	—	—
ragi . . . . .	30	—	—	—	30	29	—	—	1	30
wheat . . . . .	19	23	1	65	108	—	—	—	—	—
all cereals . . . . .	1927	108	374	1169	3578	564	101	15	326	1006
all pulses . . . . .	8	—	—	2	10	3	—	—	71	74
all oilseeds . . . . .	5	—	1	3	9	20	3	1	14	38
sugarcane . . . . .	30	4	3	18	55	—	—	—	—	—
all other crops . . . . .	154	3	10	45	212	5	—	2	—	7
all crops . . . . .	2124	115	388	1237	3864	592	104	18	411	115

'N' only means nitrogenous fertilisers like ammonium sulphate, ammonium sulphate nitrate, calcium ammonium nitrate, ammonium chloride and urea.

'NP' only means nitrogenous phosphate fertilisers like ammonium phosphate, ammonium phosphate sulphate, diammonium phosphate, urea ammonium phosphate and ammonium nitrate phosphate. It also includes phosphate fertilisers like single super phosphate, triple super phosphate and palfos in combination with nitrogenous fertilisers containing 'N' only.

'NPK' means nitrogenous phosphatic potash fertilisers like nitrophosphate and NPK complex fertilisers. It also includes potash fertiliser like sulphate of potash in combination with 'NP' fertilisers noted under 'NP' above.

TABLE 11 : ESTIMATES OF AREA UNDER IRRIGATED CROPS BY CROP AND CROP GROUP AND TYPE OF IRRIGATION.

GENERAL SAMPLE

ORISSA

crop/crop group	area (hectares 00) under irrigated crop by type of irrigation											
	flow					lift					flow and lift combined	
	canal	diversion scheme	tank	others	total	well	tube well	rivers	tank	others	total	
(0)	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
paddy . . . . .	4751	1025	537	348	6661	209	32	492	321	236	1290	7951
maize . . . . .	—	1	—	—	1	4	—	—	—	—	4	5
ragi . . . . .	10	—	4	4	18	23	3	15	2	4	47	65
wheat . . . . .	4	4	1	8	17	23	3	144	22	11	103	120
all cereals . . . . .	4786	1030	544	360	6720	259	38	553	345	251	1446	8166
all pulses . . . . .	270	6	8	4	288	11	—	4	11	8	34	322
all oil seeds . . . . .	24	1	2	—	27	—	—	6	4	3	13	40
sugarcane . . . . .	15	—	—	—	15	83	1	10	6	4	104	119
all other crop . . . . .	44	4	1	—	49	179	17	61	68	43	368	417
all crops . . . . .	5139	1041	555	364	7099	532	56	634	434	309	1965	9064



TABLE 12 : ESTIMATES OF AREA UNDER IRRIGATED CROPS BY CROP/CROP GROUP AND NUMBER OF TIMES IRRIGATED

GENERAL SAMPLE ORISSA

crop/crop group	crop area (hectares 00) irrigated				
	once	twice	thrice	more than thrice	total
(0)	(1)	(2)	(3)	(4)	(5)
paddy	250	455	596	6650	7951
maize	—	—	—	5	5
ragi	4	11	14	36	65
wheat	2	2	31	85	120
all cereals	256	468	643	6799	8166
all pulses	164	15	3	140	322
all oilseeds	10	7	3	20	40
sugarcane	2	3	—	114	119
all other crops	21	13	14	369	417
all crops	453	506	663	7442	9064

TABLE 13 : ESTIMATES OF AREA UNDER IRRIGATED CROPS WITH SUBSIDIARY IRRIGATION AND WITHOUT SUBSIDIARY IRRIGATION BY CROP/CROP GROUP

GENERAL SAMPLE ORISSA

crop/crop group	area (hectares 00) under irrigated crops		
	with subsidiary irrigation	without subsidiary irrigation	total
(0)	(1)	(2)	(3)
paddy	73	7878	7951
maize	—	5	5
ragi	1	64	65
wheat	3	117	120
all cereals	77	8089	8166
all pulses	—	322	322
all oil seeds	—	40	44
sugarcane	—	119	119
all other crops	2	415	417
all crops	79	8985	9064



TABLE 14 : ESTIMATES OF VALUE OF AGRICULTURAL IMPLEMENTS, IRRIGATION EQUIPMENTS AND DRAUGHT ANIMALS (ADULT CATTLES AND BUFFALOES—3 YEARS OR MORE) OWNED BY HOUSEHOLDS BY SIZE CLASS OF HOUSEHOLD HOLDING

GENERAL SAMPLE		ORISSA						
items of asset	value (Rs. 000) of agricultural implements, irrigation equipments, cattles and buffaloes by size class of holding (hectare)							
	less than 0.5	0.5-1.0	1.0-2.0	2.0-4.0	4.0-10.0	10.0 & above	all	
(0)	(1)	(2)	(3)	(4)	(5)	(6)	(7)	
<b>agricultural implements</b>								
1. tractor	—	—	—	—	—	25713	25713	
2. power tiller	—	14	—	—	71	627	712	
3. sprayer	41	49	181	863	775	—	1909	
4. duster	2	—	—	—	141	—	143	
5. thresher	—	—	174	64	76	51	365	
6. cane crusher	—	—	253	316	876	438	1883	
7. oil crusher	—	—	13	57	57	—	127	
8. all	43	63	621	1300	1996	26829	30852	
<b>Irrigation equipments</b>								
1. electric pumps	—	—	2238	3046	1132	—	6416	
2. diesel pumps	—	—	373	7823	15431	5083	28710	
3. wind-mill	—	—	—	—	—	—	—	
4. moat	—	—	—	—	—	—	—	
5. persian wheel	—	—	—	—	—	—	—	
6. others (animal driven)	25	11	—	9	—	—	45	
7. counter poise	1639	2546	4379	3815	1655	549	14583	
8. manual pumps	45	6	2	3	39	—	95	
9. others	591	622	1589	1417	860	48	5127	
10. all	2300	3185	8581	16113	19117	5680	54976	
<b>adult cattles and buffaloes</b>								
1. cattles	42487	107292	204278	176242	103134	30038	663471	
2. buffaloes	2615	10955	15367	30287	30543	14083	103850	
3. all	45102	118247	219645	206529	133677	44121	767321	
total	47445	121495	228847	223942	154790	76630	853149	

TABLE 15 : ESTIMATES OF NUMBER OF HOUSEHOLDS REPORTING PUMPSETS AND NUMBER OF PUMP SETS POSSESSED BY SIZE CLASS OF HOUSEHOLD HOLDING

GENERAL SAMPLE		ORISSA	
size class of holdings (hectare)	(0)	no. of households reporting pumpsets (00)	no. of pumpsets * (00)
		(1)	(2)
less than 0.5		4	4
0.5-1.0		4	4
1.0-2.0		49	52
2.0-4.0		56	60
4.0-10.0		41	42
10.0 & above		18	18
all		172	180

\*In this and subsequent tables on number of pumpsets, the number includes those possessed jointly as well as on rent. In the case of jointly possessed, instead of the household share of the number possessed, the total number possessed jointly has been counted as possessed by the sample household. Hence the estimated number of pumpsets is inflated to some extent.



TABLE 16 : ESTIMATES OF NUMBER OF PUMPSETS POSSESSED BY SOURCE OF POWER AND BY HORSE-POWER  
GENERAL SAMPLE ORISSA

horse power	no. of pumpsets* (00) having source of power			
	electricity	diesel	both electricity and diesel	total
(0)	(1)	(2)	(3)	(4)
less than 1.0 . . . . .	—	—	—	—
1.0—2.0 . . . . .	—	—	—	—
2.0—3.0 . . . . .	4	—	—	4
3.0—4.0 . . . . .	8	8	—	16
4.0—5.0 . . . . .	—	4	—	4
5.0 & above . . . . .	7	107	—	114
not recorded . . . . .	8	34	—	42
all . . . . .	27	153	—	180

\*see footnote on table 15.

TABLE 17 : ESTIMATES OF NUMBER OF PUMPSETS\* AND HOUSEHOLD'S SHARE OF VALUE OF OWNED EQUIPMENTS BY TYPE OF POSSESSION AND SOURCE OF POWER.

GENERAL SAMPLE ORISSA

source of power	owned singly		owned jointly		rented		total	
	no. of pumpset (00)	hh's share of value of owned equipments (Rs. 000)	no. of pumpset (00)	hh's share of value of owned equipments (Rs. 000)	no. of pumpset (00)	hh's share of value of owned equipments (Rs. 000)	no. of pumpset (00)	hh's share of value of owned equipments (Rs. 000)
(0)	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
electricity . . . . .	11	48737	8	28710	8	27	27	73
diesel . . . . .	47	231543	37	77831	69	153	153	13943
both electricity & diesel . . . . .	—	—	—	—	—	—	—	—
total . . . . .	58	280280	45	106541	77	180	180	14016

\*see footnote on table 15



TABLE 18 : ESTIMATES OF NUMBER OF PUMPSETS\* REPORTING AREA IRRIGATED BY SOURCE OF POWER AND SOURCE OF WATER SEPARATELY BY POSSESSION TYPE

GENERAL SAMPLE

ORISSA

source of power (0)	no. of pumpsets (00) reporting area irrigated by source of water					total (6)
	well (1)	tube well (2)	rivers and streams (3)	others (4)	not recorded (5)	
<b>owned singly</b>						
1. electricity	—	4	4	—	4	12
2. diesel	4	—	29	4	8	45
3. both electricity & diesel	—	—	—	—	—	—
4. all	4	4	33	4	12	57
<b>owned jointly</b>						
1. electricity	8	—	—	—	—	8
2. diesel	20	—	8	9	—	37
3. both electricity & diesel	—	—	—	—	—	—
4. all	28	—	8	9	—	45
<b>rented</b>						
1. electricity	—	—	4	—	—	4
2. diesel	4	—	15	39	7	65
3. both electricity & diesel	—	—	—	—	—	—
4. all	4	—	19	39	7	69
<b>total</b>						
1. electricity	8	4	8	—	4	24
2. diesel	28	—	52	52	15	147
3. both electricity & diesel	—	—	—	—	—	—
4. all	36	4	60	52	19	171

\*see foot note on table 15.

TABLE 19 : ESTIMATES OF EXPENSES FOR IRRIGATION ON OTHER THAN CAPITAL ACCOUNT BY ITEMS BY EXPENDITURE

GENERAL SAMPLE

ORISSA

items of expenditur (0)	amount (Rs. 000) (1)
1. repair and maintenance expenses on bunds and field channeli	28787
2. water charges	17414
3. other expenses on indepenently owned lift irrigation	15179
4. share of expenses on joint arrangements	21
5. receipt from sale of water	(—)1554
6. total	59847



TABLE 20 : NUMBER IN SAMPLE VILLAGES ALLOTTED AND NUMBER SURVEYED, NUMBER OF HOUSEHOLDS SURVEYED FOR SCHEDULE 22-1, ESTIMATED NUMBER OF TOTAL HOUSEHOLDS AND ESTIMATED NUMBER OF CULTIVATING HOUSEHOLDS USUALLY USING IRRIGATION AND NUMBER USUALLY NOT USING IRRIGATION

GENERAL SAMPLE		TRIPURA											
item		number											
(0)		(1)											
1.	number of sample villages allotted for survey												120
2.	number of sample villages actually surveyed												111
3.	number of sample households surveyed for schedule 22-1												266
4.	estimated number of total households (000) a												320
5.	estimated number of cultivating households (000)												205
	(i) usually using irrigation												41
	(ii) usually not using irrigation b												164

a from listing schedule—Draft report No. 291, Part-I.

b from manual tabulation on schedule 22-2—Draft Report No. 289.

ESTIMATES OF NUMBER OF HOUSEHOLDS USUALLY USING IRRIGATION AND AREA POSSESSED, NET AREA SOWN, AREA CROPPED MORE THAN ONCE AND GROSS CROPPED AREA SEPARATELY FOR IRRIGABLE LAND AND LAND WITHOUT IRRIGATION FACILITY BY SIZE CLASS OF HOLDING													
GENERAL SAMPLE												TRIPURA	
size class of holding (hectare)	no. of households (00)	irrigable area (hectares 00)					area of land without irrigation facility (hectares 00)						
		area possessed		net area sown	area cropped more than once	gross cropped area	area possessed			net area sown	area cropped more than once	gross cropped area	
		owned	leased in				owned	leased in	total				
(0)	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
less than 0.5	90	9	2	11	10	8	18	8	2	10	5	4	9
0.5-1.0	111	25	8	33	32	25	57	46	4	50	41	25	66
1.0-2.0	128	48	4	52	51	34	86	117	12	129	102	44	146
2.0-4.0	75	48	5	53	47	31	78	133	8	141	103	38	141
4.0-10.0	8	27	—	27	20	11	32	14	1	15	9	1	10
10.0 & above	—	—	—	—	—	—	—	—	—	—	—	—	—
<b>all</b>	<b>412</b>	<b>157</b>	<b>19</b>	<b>176</b>	<b>160</b>	<b>109</b>	<b>271</b>	<b>318</b>	<b>27</b>	<b>345</b>	<b>260</b>	<b>112</b>	<b>372</b>



TABLE 2 : ESTIMATES OF NUMBER OF HOUSEHOLDS REPORTING AREA IRRIGATED AND NET AREA IRRIGATED BY SIZE CLASS OF HOLDING AND TYPE OF IRRIGATION

GENERAL SAMPLE

TRIPURA

size class of holding (hectare)	flow					lift					flow & lift combined	
	canal	diversion scheme	tank	others	all	well	tubewell	river	tank	others		all
(0)	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
number of households (00) reporting area irrigated												
less than 0.5	11	5	—	11	26	21	6	11	14	20	68	90
0.5—1.0	9	23	—	15	47	6	2	9	33	27	66	111
1.0—2.0	12	30	2	18	62	12	6	17	15	27	75	128
2.0—4.0	5	18	2	5	29	8	—	9	17	18	48	75
4.0—10.0	2	2	—	—	3	—	—	—	5	—	5	8
10.0 & above	—	—	—	—	—	—	—	—	—	—	—	—
all	39	78	4	49	167	47	14	46	84	92	262	412
net area irrigated (hectares 00)												
less than 0.5	1	2	—	2	5	1	—	1	1	2	5	10
0.5—1.0	2	11	—	5	18	—	—	2	5	4	11	29
1.0—2.0	5	16	—	10	31	1	1	4	2	8	16	47
2.0—4.0	3	15	—	3	21	1	—	2	4	11	18	39
4.0—10.0	7	2	—	—	9	—	—	—	3	—	3	12
10.0 & above	—	—	—	—	—	—	—	—	—	—	—	—
all	18	46	—	20	84	3	1	9	15	25	53	137

TABLE 3 : ESTIMATES OF NUMBER OF HOUSEHOLDS REPORTING LIFT IRRIGATION AND NET AREA IRRIGABLE BY LIFT BY SIZE CLASS OF HOUSEHOLD HOLDING AND BY SOURCE OF POWER

GENERAL SAMPLE

TRIPURA

size class of holding (hectare)	no. of households (00) reporting lift irrigation using					net area irrigated (hectares 00) by lift using						
	electricity	diesel	wind will	animal	human	electricity	diesel	wind mill	animal	human		
(0)	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
less than 0.5	5	6	—	2	59	68	—	1	—	—	4	5
0.5—1.0	3	8	2	—	59	66	1	1	—	—	9	11
1.0—2.0	3	12	—	2	59	75	2	3	—	—	11	16
2.0—4.0	5	5	—	—	44	48	4	1	—	—	13	18
4.0—10.0	—	—	—	—	5	5	—	—	—	—	3	3
10.0 & above	—	—	—	—	—	—	—	—	—	—	—	—
all	16	31	2	4	226	262	7	6	—	—	40	53



TABLE 4 : ESTIMATES OF NET AREA IRRIGATED BY TYPE OF IRRIGATION AND OWNERSHIP OF THE SOURCE OF WATER FOR IRRIGATION

GENERAL SAMPLE												TRIPURA
ownership of source of water for irrigation	net area irrigated (hectares 00) by type of irrigation											
	flow					lift					flow & lift combined	
	canal	diversion scheme	tank	others	all	well	tubewell	river	tank	others		all
(0)	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
government	5	12	—	5	22	—	1	6	—	8	15	37
co-operative	—	—	—	—	—	—	—	—	—	—	—	—
private—joint	6	11	—	3	20	—	—	—	1	—	1	21
private—single	7	23	—	12	42	3	—	3	14	17	37	79
all	18	46	—	20	84	3	1	9	15	25	53	137

TABLE 5 : ESTIMATES OF NET AREA IRRIGATED BY OWNERSHIP OF LIFTING EQUIPMENTS AND BY SOURCE OF POWER

GENERAL SAMPLE							TRIPURA
ownership of lifting equipment	net area irrigated (hectares 00) by source of power						
	electricity	diesel	wind mill	animal drawn	human drawn	all	
	(1)	(2)	(3)	(4)	(5)	(6)	
government	7	2	—	—	—	9	
co-operative	—	—	—	—	—	—	
private—joint	—	—	—	—	—	—	
private—single	—	4	—	—	40	44	
all	7	6	—	—	40	53	



TABLE 6 : ESTIMATES OF AREA SOWN HAVING IRRIGATION FACILITY BUT NOT IRRIGATED BY SIZE CLASS OF HOLDING AND REASON FOR NOT IRRIGATION

GENERAL SAMPLE		TRIPURA				
size class of holding (hectares)	area (hectares 00) by reason for not irrigating					
	adequate rainfall	non-availability of water	other reasons	all reasons		
(0)	(1)	(2)	(3)	(4)		
less than 0.5	—	—	—	—		
0.5—1.0	—	1	—	1		
1.0—2.0	1	1	2	4		
2.0—4.0	3	3	1	7		
4.0—10.0	—	10	1	11		
10.0 & above	—	—	—	—		
all	4	15	4	23		

TABLE 7 : ESTIMATES OF NUMBER OF PARCELS OF IRRIGABLE LAND POSSESSED, TOTAL AREA OF THE PLOTS, NET AREA IRRIGATED, NET AREA NOT IRRIGATED AND NET AREA SOWN BY SIZE CLASS OF PARCELS.

GENERAL SAMPLE		TRIPURA			
size class of parcels (hectare)	area (hectares 00)				
	number of parcels (00)	total irrigable land	net area irrigated	net area not irrigated	net area sown
(0)	(1)	(2)	(3)	(4)	(5)
less than 0.05	137	4	4	—	4
0.05—0.10	105	8	7	—	7
0.10—0.20	164	24	23	—	23
0.20—0.30	78	18	17	1	18
0.30—0.40	60	19	17	2	19
0.40—0.50	57	24	22	1	23
0.50—1.00	41	33	22	5	27
1.00—2.00	20	25	18	5	23
2.00 & above	5	21	7	9	16
all	667	176	137	23	160

Parcel : A plot or contiguously located plots having a common source of irrigation facility possessed by the household was treated as a parcel.



TABLE 8 : ESTIMATES OF AREA (I) UNDER CROP, (II) APPLIED WITH FERTILISER, (III) APPLIED WITH MANURE (IV) AFFECTED BY PESTS AND DISEASES, (V) SPRAYED WITH PESTICIDES AND (VI) OF CROPS FINALLY DAMAGED AND VALUE OF (I) FERTILISER USED, (II) MANURE USED AND (III) PESTICIDES SPRAYED SEPARATELY FOR IRRIGATED AND UNIRRIGATED CROPS BY CROP/CROP-GROUP.

GENERAL SAMPLE

TRIPURA

crop/crop-group	area (hectares 00)					value (Rs. 000 ) of			
	under crop	applied with ferti- ser	applied with manure	affected by pests diseases	sprayed with pesticides	of crops finally damaged	fertiliser used	manure used	pesticides sprayed
(0)	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
<b>irrigated crops</b>									
paddy	212	62	140	78	73	—	513	744	136
all cereals	216	64	142	78	74	—	582	775	142
all pulses	—	—	—	—	—	—	3	3	—
all oilseeds	—	—	—	—	—	—	2	4	—
all other crops	22	7	15	3	3	—	456	397	36
all crops	238	71	157	81	77	—	1043	1179	178
<b>unirrigated crops</b>									
paddy	339	27	138	35	31	—	163	713	77
all cereals	339	27	138	35	31	—	178	713	77
all pulses	2	—	—	—	—	—	—	3	—
all oilseeds	—	—	—	—	—	—	—	2	—
all other crops	64	1	9	6	2	—	56	108	11
all crops	405	28	147	41	33	—	234	826	88

TABLE 9 : ESTIMATES OF AREA UNDER CROP, AREA APPLIED WITH FERTILISER AND MANURE AND AREA AFFECTED BY PESTS AND DISEASES FOR IRRIGATED AND UNIRRIGATED CROPS BY CROP/CROP GROUP SEPARATELY FOR ORDINARY AND IMPROVED VARIETY OF SEEDS.

GENERAL SAMPLE

TRIPURA

crop/crop group	irrigated crop area (hectares 00)				unirrigated crop area (hectares 00)			
	total	applied with fertiliser	applied with manure	affected by pests & diseases	total	applied with fertiliser	applied with manure	affected by pests diseases
(0)	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
<b>ordinary variety</b>								
paddy	155	19	104	41	315	16	126	27
all cereals	156	19	105	41	315	16	126	7
all pulses	—	—	—	—	2	—	—	—
all oilseeds	—	—	—	—	—	—	—	—
all other crops	20	5	13	2	64	1	9	6
all crops	176	24	118	43	381	17	135	33
<b>improved variety</b>								
paddy	57	43	36	37	24	11	12	8
all cereals	60	45	37	37	24	11	12	8
all pulses	—	—	—	—	—	—	—	—
all oilseeds	—	—	—	—	—	—	—	—
all other crops	2	2	2	1	—	—	—	—
all crops	62	47	39	38	24	11	12	8



TABLE 10 : ESTIMATES OF AREA UNDER CROP APPLIED WITH FERTILISER HAVING NUTRIENTS N ONLY, NP ONLY, NPK ONLY AND OTHERS SEPARATELY FOR IRRIGATED AND UNIRRIGATED CROPS BY CROP/CROP GROUP.

GENERAL SAMPLE

TRIPURA

crop/crop group	irrigated crop area (hectares 00) applied with fertilisers having nutrients					unirrigated crop area (hectares 00) applied with fertilisers having nutrients				
	N only	NP only	NPK only	others	total	N only	NP only	NPK only	others	total
(0)	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
paddy . . . . .	43	10	4	5	62	19	4	1	3	27
all cereals . . . . .	45	10	4	5	64	19	4	1	3	27
all pulses . . . . .	—	—	—	—	—	—	—	—	—	—
all oilseeds . . . . .	—	—	—	—	—	—	—	—	—	—
all other crops . . . . .	5	1	—	1	7	1	—	—	—	1
all crops . . . . .	50	11	4	6	71	20	4	1	3	28

'N' only means nitrogenous fertilisers like ammonium sulphate, ammonium sulphate nitrate, calcium ammonium nitrate, ammonium chloride and urea.

'NP' only means nitrogenous phosphate fertilisers like ammonium phosphate, ammonium phosphate sulphate, diammonium phosphate, urea ammonium phosphate and ammonium nitrate phosphate. It also includes phosphate fertilisers like single super phosphate, triple super phosphate and palfos in combination with nitrogenous fertilisers containing 'N' only.

'NPK' means nitrogenous phosphatic potash fertilisers like nitrophosphate and NPK complex fertilisers. It also includes potash fertilisers like sulphate of potash in combination with 'NP' fertilisers noted under 'NP' above.

TABLE 11 : ESTIMATES OF AREA UNDER IRRIGATED CROPS BY CROP/CROP GROUP AND TYPE OF IRRIGATION

GENERAL SAMPLE

TRIPURA

crop/crop group	area under irrigated crops (hectares 00) by type of irrigation											
	flow					lift					flow & lift combined	
	canal	diversion scheme	tank	others	total	well	tube-well	river	tank	others		total
(0)	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
paddy . . . . .	34	82	1	25	142	1	2	9	14	44	70	212
all cereals . . . . .	35	82	1	25	143	2	3	10	14	44	73	216
all pulses . . . . .	—	—	—	—	—	—	—	—	—	—	—	—
all oil seeds . . . . .	—	—	—	—	—	—	—	—	—	—	—	—
all other crops . . . . .	—	—	—	2	2	4	—	6	6	4	20	22
all crops . . . . .	35	82	1	27	145	6	3	16	20	48	93	238



TABLE 12 : ESTIMATES OF AREA UNDER IRRIGATED CROPS BY CROP/CROP GROUP AND NUMBER OF TIMES IRRIGATED.

GENERAL SAMPLE		TRIPURA				
crop/crop group	crop area (hectares 00) irrigated					
	once	twice	thrice	more than thrice	total	
(0)	(1)	(2)	(3)	(4)	(5)	
paddy	53	38	22	99	212	
all cereals	54	40	22	100	216	
all pulses	—	—	—	—	—	
all oilseeds	—	—	—	—	—	
all other crops	1	3	6	12	22	
all crops	55	43	28	112	238	

TABLE 13 : ESTIMATES OF AREA UNDER IRRIGATED CROPS WITH SUBSIDIARY IRRIGATION AND WITHOUT SUBSIDIARY IRRIGATION BY CROP/CROP GROUP.

GENERAL SAMPLE		TRIPURA		
crop/crop group	area under irrigated crops (hectares 00)			
	with subsidiary irrigation	without subsidiary irrigation	total	
(0)	(1)	(2)	(3)	
paddy	—	212	212	
all cereals	—	216	216	
all pulses	—	—	—	
all oilseeds	—	—	—	
all other crops	—	22	22	
all crops	—	238	238	



TABLE 14 : ESTIMATES OF VALUE OF AGRICULTURAL IMPLEMENTS, IRRIGATION EQUIPMENTS AND DRAUGHT ANIMALS (ADULT CATTLES AND BUFFALOES—3 YEARS OR MORE) OWNED BY HOUSEHOLDS BY SIZE CLASS OF HOUSEHOLD HOLDING.

GENERAL SAMPLE / TRIPURA

items of asset	value (Rs. 000) of agricultural implements, irrigation equipments and adult cattles & buffaloes by size class of holding (hectare)						
	less than 0.5	0.5—1.0	1.0—2.0	2.0—4.0	4.0—10.0	10.0 & above	all
(0)	(1)	(2)	(3)	(4)	(5)	(6)	(7)
<b>agricultural implements</b>							
1. tractor	—	—	—	22	—	—	22
2. power tiller	—	17	25	—	—	—	42
3. sprayer	—	—	—	—	—	—	—
4. duster	—	—	—	—	—	—	—
5. thresher	—	—	—	—	—	—	—
6. cane crusher	—	—	—	—	—	—	—
7. oil crusher	—	—	—	—	—	—	—
8. all	—	17	25	22	—	—	64
<b>irrigation equipments</b>							
1. electric pumps	—	—	150	600	—	—	750
2. diesel pumps	—	—	—	—	—	—	—
3. wind mill	—	—	—	—	—	—	—
4. moat	—	—	—	—	—	—	—
5. persian wheel	—	—	—	—	—	—	—
6. others (animal-diven)	—	—	—	—	—	—	—
7. counterpoise	—	—	—	—	—	—	—
8. manual pumps	31	77	54	113	12	—	287
9. others	—	—	—	—	—	—	—
10. all	31	77	204	713	12	—	1037
<b>adult cattle and buffaloes</b>							
1. cattle	857	3130	5591	5108	1080	—	15766
2. buffaloes	—	555	195	765	—	—	1515
3. all	857	3685	5786	5873	1080	—	17281
total	888	3779	6015	6608	1092	—	18382

TABLE 15 : ESTIMATES OF NUMBER OF HOUSEHOLDS REPORTING PUMPSETS AND NUMBER OF PUMPSETS POSSESSED BY SIZE CLASS OF HOUSEHOLD HOLDING.

GENERAL SAMPLE / TRIPURA

size c (hec)	na. of households reporting pumpsets* (00)	na. of pumpsets* (00)
	(1)	(2)
(0)		
less than 0.5	5	5
0.5—1.0	6	6
1.0—2.0	12	12
2.0—4.0	5	5
4.0—10.0	—	—
10.0 & above	—	—
all	28	28

\*In this and subsequent tables on number of pump sets, the number includes those possessed jointly as well as on rent. In the case of jointly possessed, instead of the household share of number possessed, the total number possessed jointly has been counted as possessed by the sample household. Hence, the estimated number of pump sets is inflated to some extent.



TABLE 16 : ESTIMATES OF NUMBER OF PUMPSETS POSSESSED BY SOURCE OF POWER AND HORSE-POWER

GENERAL SAMPLE		TRIPURA				
horse power	no. of pumpsets* (00) having source of power					
	electricity	diesel	both electricity & diesel	not recorded	total	
	(1)	(2)	(3)	(4)	(5)	
less than 1.0	—	—	—	—	—	
1.0-2.0	—	—	—	—	—	
2.0-3.0	—	—	—	—	—	
3.0-4.0	—	8	—	—	8	
4.0-5.0	—	—	—	—	—	
5.0 & above	—	6	—	—	6	
not recorded	—	12	—	2	14	
all	—	26	—	2	28	

\*see foot-note on table (15)

TABLE 17 : ESTIMATES OF NUMBER OF PUMPSETS\* AND HOUSEHOLD'S SHARE OF VALUE OF OWNED EQUIPMENTS BY TYPE OF POSSESSION AND SOURCE OF POWER

GENERAL SAMPLE		TRIPURA								
source of power	possession type									
	owned singly		owned jointly		rented		not recorded		total	
	no. of pump sets (00)	hh's share of value of owned equipments (Rs. 000)	no. of pump sets (00)	hh's share of value of owned equipments (Rs. 000)	no. of pump sets (00)	hh's share of value of owned equipments (Rs. 000)	no. of pump sets (00)	hh's share of value of owned equipments (Rs. 000)	no. of pump sets (00)	hh's share of value of owned equipment (Rs. 000)
(0)	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
electricity	—	—	—	—	—	—	—	—	—	—
diesel	4	675	—	—	20	—	2	—	26	675
both electricity & diesel	—	—	—	—	—	—	—	—	—	—
not recorded	—	—	—	—	—	—	2	—	2	—
all	4	675	—	—	20	—	4	—	28	675

\*see footnote on table 15



TABLE 18 : ESTIMATES OF NUMBER OF PUMPSETS\* REPORTING AREA IRRIGATED BY SOURCE OF POWER AND SOURCE OF WATER SEPARATELY BY POSSESSION TYPE

GENERAL SAMPLE							TRIPURA
source of power	no. of pumpsets (00) reporting area irrigated by source of water						
	well	tube-well	rivers & streams	others	not recorded	total	
(0)	(1)	(2)	(3)	(4)	(5)	(6)	
<b>owned singly</b>							
1. electricity	—	—	2	—	2	4	
2. diesel	—	—	—	—	—	—	
3. both electricity & diesel	—	—	—	—	—	—	
4. not recorded	—	—	—	—	—	—	
5. all	—	—	2	—	2	4	
<b>owned jointly</b>							
1. electricity	—	—	—	—	—	—	
2. diesel	—	—	—	—	—	—	
3. both electricity & diesel	—	—	—	—	—	—	
4. not recorded	—	—	—	—	—	—	
all	—	—	—	—	—	—	
<b>rented</b>							
1. electricity	—	—	12	6	—	20	
2. diesel	—	2	—	—	—	—	
3. both electricity & diesel	—	—	—	—	—	—	
4. not recorded	—	—	—	—	—	—	
5. all	—	2	12	6	—	20	
<b>not recorded</b>							
1. electricity	—	—	—	—	—	—	
2. diesel	—	—	—	—	2	2	
3. both electricity & diesel	—	—	—	—	—	—	
4. not recorded	2	—	—	—	—	2	
5. all	2	—	—	—	2	4	
<b>all</b>							
1. electricity	—	—	14	6	—	26	
2. diesel	2	—	—	—	4	—	
3. both electricity & diesel	—	—	—	—	—	—	
4. not recorded	—	2	—	—	—	2	
5. all	2	2	14	6	4	28	

\*see foot-note on table 15

TABLE 19 : ESTIMATES OF EXPENSES FOR IRRIGATION ON OTHER THAN CAPITAL ACCOUNT BY ITEMS OF EXPENDITURE

GENERAL SAMPLE		TRIPURA
items of expenditure	amount (Rs. 000)	
(0)	(1)	
1. repair and maintenance expenses on bunds and field channel	51	
2. water charges	4	
3. other expenses on independently owned lift irrigation	181	
4. share of expenses on joint arrangements	4	
5. receipt from sale of water	(—)15	
6. total	225	



TABLE 0 : NUMBER OF SAMPLE VILLAGES ALLOTTED AND NUMBER SURVEYED, NUMBER OF HOUSEHOLDS SURVEYED FOR SCHEDULE 22-1, ESTIMATED NUMBER OF TOTAL HOUSEHOLDS AND ESTIMATED NUMBER OF CULTIVATING HOUSEHOLDS USUALLY USING IRRIGATION AND NUMBER USUALLY NOT USING IRRIGATION

GENERAL SAMPLE		WEST BENGAL
item		number
(0)		(1)
1. number of sample villages allotted for survey		488
2. number of sample villages actually surveyed		488
3. number of sample households surveyed for schedule 22-1		5549
4. estimated number of total households (000) <sup>a</sup>		6943
5. estimated number of cultivating households (000)		4611
(i) usually using irrigation		2332
(ii) usually not using irrigation <sup>b</sup>		2279

<sup>a</sup>from listing schedule—Draft Report No. 291, Part-I

<sup>b</sup>from manual tabulation on schedule 22-2—Draft Report No. 289

TABLE 1 : ESTIMATES OF NUMBER OF HOUSEHOLDS USUALLY USING IRRIGATION AND AREA POSSESSED, NET AREA SOWN, AREA CROPPED MORE THAN ONCE AND GROSS CROPPED AREA SEPARATELY FOR IRRIGABLE LAND AND LAND WITHOUT IRRIGATION FACILITY BY SIZE CLASS OF HOLDING

GENERAL SAMPLE WEST BENGAL

size class of holding (hectare)	no. of households with irrigable land	irrigable area (hectares 00)					land without irrigation facility						
		area possessed			net area sown	area cropped more than once	area possessed			net area sown	area cropped more than once	gross cropped area	
		owned	leased in	total <sup>1</sup>			owned	leased in	total				
(0)	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
less than 0.5	6657	802	93	895	893	454	1428	759	73	832	609	115	749
0.5—1.0	5600	1524	230	1754	1726	798	2665	2043	339	2382	2082	474	2630
1.0—2.0	6766	3174	335	3509	3506	1438	5240	5170	770	5940	5275	1323	6795
2.0—4.0	3546	3198	270	3468	3452	1262	5039	5423	500	5923	5264	1311	6762
4.0—10.0	738	1170	113	1283	1267	504	1855	2394	160	2554	2256	455	2783
10.0 & above	12	32	—	32	31	—	31	119	—	119	78	12	92
all	23319	9900	1041	10941	10875	4456	16258	15908	1842	17750	15564	3690	19811



TABLE 2: ESTIMATES OF NUMBER OF HOUSEHOLDS REPORTING AREA IRRIGATED AND NET AREA IRRIGATED BY SIZE CLASS OF HOLDING AND TYPE OF IRRIGATION

GENERAL SAMPLE WEST BENGAL

size class of holding (hectare)	flow					lift					flow and lift combined	
	canal	diversion scheme	tank	others	all	well	tube-well	river	tank	others		all
(0)	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
number of households (00) reporting area irrigated												
less than 0.5	1314	29	90	61	1482	256	766	517	3601	604	5453	6564
0.5-1.0	1242	45	181	57	1493	413	968	428	2651	506	4609	5510
1.0-2.0	1692	8	255	49	1960	641	1163	648	3006	575	5534	6724
2.0-4.0	891	4	161	32	1071	310	752	502	1595	263	3040	3513
4.0-10.00	155	12	33	16	200	87	193	97	357	58	660	730
10.00 & above	4	—	—	—	4	—	—	—	4	—	4	8
all	5298	98	720	215	6210	1707	3842	2192	11214	2006	19300	23049
net area irrigated (hectares 00)												
less than 0.5	299	3	17	10	329	21	103	69	258	69	520	849
0.5-1.00	644	8	53	23	728	47	234	106	368	99	854	1582
1.00-2.00	1704	3	130	16	1853	105	416	214	577	195	1507	3360
2.00-4.00	1617	2	124	29	1772	72	468	303	517	109	1469	3241
4.00-10.00	536	13	53	16	618	18	161	65	166	45	455	1073
10.00 & above	26	—	—	—	26	—	—	—	—	—	—	26
all	4826	29	377	94	5326	263	1382	757	1886	517	4805	10131

TABLE 3: ESTIMATES OF NUMBER OF HOUSEHOLDS REPORTING LIFT IRRIGATION AND NET AREA IRRIGATED BY LIFT BY SIZE CLASS OF HOUSEHOLD HOLDING AND BY SOURCE OF POWER

GENERAL SAMPLE WEST BENGAL

size class of holding (hectare)	no. of households (00) reporting lift irrigation using						net area irrigated (hectares 00) by lift using					
	electricity	diesel	wind-mill	animal	human	all	electricity	diesel	wind-mill	animal	human	all
(0)	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
below 0.5	331	927	—	4	4420	5453	46	124	—	—	350	520
0.5-1.0	330	1260	8	4	3301	4609	88	295	—	—	471	854
1.0-2.0	420	1437	4	4	4053	5534	161	508	—	—	838	1507
2.0-4.0	327	1024	4	8	1966	3040	181	634	5	9	640	1469
4.0-10.0	65	281	—	—	396	660	40	249	—	—	166	455
0.0 & above	—	—	—	—	4	4	—	—	—	—	—	—
all	1473	4929	16	20	14140	19300	516	1810	5	9	2465	4805



TABLE 4 : ESTIMATES OF NET AREA IRRIGATED BY TYPE OF IRRIGATION AND OWNERSHIP OF THE SOURCE OF WATER FOR IRRIGATION

GENERAL SAMPLE

WEST BENGAL

ownership of source of water for irrigation	net area irrigated (hectares 00) by type of irrigation											
	flow					lift						
	canal	diversion scheme	tanks	others	all-	well	tube-well	river	tank	others	all-	flow and lift combined
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
government	4779	27	48	72	4926	7	457	593	109	251	1417	6343
co-operative	—	—	—	1	1	—	2	—	2	—	4	5
private joint	27	2	295	3	327	43	39	9	778	27	896	1223
private single	20	—	34	18	72	213	884	155	997	239	2488	2560
all	4826	29	377	94	5326	263	1382	757	1886	517	4805	10131

TABLE 5 : ESTIMATES OF NET AREA IRRIGATED BY OWNERSHIP OF LIFTING EQUIPMENT AND BY SOURCE OF POWER

GENERAL SAMPLE

WEST BENGAL

ownership of lifting equipment	net area irrigated (hectares 00) by source of power					
	electricity	diesel	windmill	animal drown	human drown	all
(0)	(1)	(2)	(3)	(4)	(5)	(6)
government	464	140	—	—	26	630
co-operative	—	4	—	—	2	6
private joint	—	98	—	—	133	231
private single	52	1568	5	9	2304	3938
all	516	1810	5	9	2465	4805



TABLE 6 : ESTIMATES OF AREA SOWN HAVING IRRIGATION FACILITY BUT NOT IRRIGATED BY SIZE CLASS OF HOUSEHOLD HOLDING AND REASON FOR NOT IRRIGATION

GENERAL SAMPLE

WEST BENGAL

size class of holding (hectare)	area (hectares 00) by reason for not irrigating			
	adequate rainfall	non-avail- ability of water	other reasons	all reasons
(0)	(1)	(2)	(3)	(4)
less than 0.5	21	7	16	44
0.5-1.0	61	23	60	144
1.0-2.0	59	35	52	146
2.0-4.0	54	68	89	211
4.0-10.0	68	75	51	194
10.0 & above	—	—	5	5
all	263	208	273	744

TABLE 7 : ESTIMATES OF NUMBER OF PARCELS OF IRRIGABLE LAND POSSESSED, TOTAL AREA OF PLOTS, NET AREA IRRIGATED, NET AREA NOT IRRIGATED AND NET AREA SOWN BY SIZE CLASS OF PARCELS

GENERAL SAMPLE

WEST BENGAL

size class of parcels (hectare)	number of parcels (00)	area (hectares 00)			
		total irri- gable land	net area irrigated	net area not irri- gated	net area sown
(0)	(1)	(2)	(3)	(4)	(5)
less than 0.05	10591	269	261	7	268
0.05-0.10	12020	851	815	32	847
0.10-0.20	12489	1728	1641	79	1720
0.20-0.30	7764	1833	1709	115	1824
0.30-0.40	2427	816	761	51	812
0.40-0.50	3418	1447	1337	102	1439
0.50-1.00	3387	2325	2092	221	2313
1.00-2.00	974	1280	1180	91	1271
2.00 & above	127	392	335	46	381
all	53197	10941	10131	744	10875

Parcel : A plot or contiguously located plots having a common source of irrigation facility possessed by the household was treated as a parcel.



TABLE 8 : ESTIMATES OF AREA (I) UNDER CROP (II) APPLIED WITH FERTILISER, (III) APPLIED WITH MANURE, (IV) AFFECTED BY PESTS AND DISEASES, (V) SPRAYED WITH PESTICIDES AND (VI) OF CROPS FINALLY DAMAGED AND VALUE OF (I) FERTILISER USED, (II) MANURE USED AND (III) PESTICIDES SPRAYED SEPARATELY FOR IRRIGATED AND UNIRRIGATED CROPS BY CROP/CROP GROUP

GENERAL SAMPLE							WEST BENGAL			
crop/crop group	area (hectares 00)						value (Rs. 000) of			
	under crop	applied with fertiliser	applied with manure	affected by pests and diseases	sprayed with pesticides	of crops finally damaged	fertiliser used	manure used	pesticides sprayed	
(0)	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	
<b>irrigated crops</b>										
paddy	9320	6116	8208	1809	1627	76	129204	140020	19124	
wheat	1576	1400	829	171	166	1	46923	14816	1218	
all cereals	10922	7538	9048	1990	1805	77	177045	155169	20483	
all pulses	97	41	33	17	1	—	251	297	5	
all oil seeds	96	26	21	2	3	—	574	581	30	
jute	277	211	219	85	118	6	3919	2714	1154	
all other crops	1510	1025	1197	266	315	13	64600	58747	6343	
all crops	12902	8841	10518	2360	2242	96	246389	217508	28015	
<b>unirrigated crops</b>										
paddy	17645	4079	11158	1677	1000	88	52701	133060	6163	
wheat	43	20	13	1	1	—	1227	204	12	
all cereals	17995	4110	11278	1685	1005	88	54032	134987	6189	
all pulses	2562	31	133	43	13	2	332	1282	69	
all oil seeds	337	10	40	7	3	—	131	464	22	
jute	1642	550	1093	262	509	13	10033	15117	4329	
all other crops	631	111	220	34	35	—	5880	7353	676	
all crops	23167	4812	12764	2031	1565	103	70408	159203	11285	

TABLE 9 : ESTIMATES OF AREA UNDER CROP, AREA APPLIED WITH FERTILISER AND MANURE AND AREA AFFECTED BY PESTS AND DISEASES FOR IRRIGATED AND UNIRRIGATED CROPS BY CROP/CROP GROUP SEPARATELY FOR ORDINARY AND IMPROVED VARIETY OF SEEDS

GENERAL SAMPLE					WEST BENGAL				
crop/crop group	irrigated crop area (hectares 00)				unirrigated crop area (hectares 00)				
	total	applied with fertilizer	applied with manure	affected by pests & diseases	under crop	applied with fertilizer	applied with manure	affected by pests & diseases	
(0)	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	
<b>ordinary variety</b>									
paddy	7491	4287	6831	831	17457	3935	11038	1584	
wheat	528	430	278	46	34	14	11	1	
all cereals	8032	4836	7113	879	17798	3960	11156	1592	
all pulses	95	39	33	17	2560	31	131	43	
all oilseeds	95	25	21	2	337	10	40	7	
jute	187	134	151	46	1214	309	756	178	
all other crops	1236	779	963	144	629	110	218	34	
all crops	9645	5813	8281	1088	22538	4420	12301	1854	
<b>improved variety</b>									
paddy	1829	1719	1377	978	188	144	120	93	
wheat	1048	970	551	125	9	6	2	—	
all cereals	2890	2702	1935	1111	197	150	122	93	
all pulses	2	2	—	—	2	—	2	—	
all oilseeds	1	1	—	—	—	—	—	—	
jute	90	77	68	39	428	241	337	84	
all other crops	274	246	234	122	2	1	2	—	
all crops	3257	3028	2237	1272	629	392	463	177	



TABLE 10 : ESTIMATES OF AREA UNDER CROP APPLIED WITH FERTILISERS HAVING NUTRIENTS N ONLY, NP ONLY, NPK ONLY AND OTHERS SEPARATELY FOR IRRIGATED AND UNIRRIGATED CROPS BY CROP/CROP GROUP

GENERAL SAMPLE

WEST BENGAL

crop/crop group	irrigated crop area (hectares 00) applied with fertilisers having nutrients					unirrigated crop area (hectares 00) applied with fertilisers having nutrients				
	N only	NP only	NPK only	others	total	N only	NP only	NPK only	others	total
(0)	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
paddy	3789	398	291	1638	6116	2821	179	134	945	4079
wheat	428	53	99	820	1400	7	—	—	13	20
all cereals	4229	453	390	2466	7538	2833	179	135	963	4110
all pulses	37	—	—	4	41	17	3	4	7	31
all oilseeds	17	3	2	4	26	4	1	2	3	10
jute	89	6	3	113	211	355	7	26	162	550
all other crops	438	62	112	413	1025	37	11	44	19	111
all crops	4810	524	507	3000	8841	3246	201	211	1154	4812

'N' only means nitrogenous fertilisers like ammonium sulphate, ammonium sulphate nitrate, calcium ammonium nitrate, ammonium chloride and urea.

'NP' only means nitrogenous phosphate fertilisers like ammonium phosphate, ammonium phosphate sulphate, diammonium phosphate, urea ammonium phosphate and ammonium nitrate phosphate. It also includes phosphate fertilisers like single super phosphate, triple super phosphate and palfos in combination with nitrogenous fertilisers containing 'N' only.

'NPK' means nitrogenous phosphatic potash fertilisers like nitrophosphate and NPK complex fertilisers. It also includes potash fertiliser like sulphate of potash in combination with 'NP' fertilisers noted under 'NP' above.

TABLE 11 : ESTIMATES OF AREA UNDER IRRIGATED CROPS BY CROP/CROP GROUP AND TYPE OF IRRIGATION

GENERAL SAMPLE

WEST BENGAL

crop/crop group	area (hectares 00) under irrigated crop by type of irrigation											
	flow					lift						flow and lift combined
	canal	diversion scheme	tank	others	total	well	tube well	rivers	tank	others	total	
(0)	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
paddy	5523	35	420	106	6084	88	916	559	1274	399	3236	9320
wheat	59	2	9	—	70	79	639	190	482	116	1506	1576
all cereals	5587	37	430	106	6160	168	1565	750	1764	515	4762	10922
all pulses	5	—	—	—	5	1	10	3	37	39	92	97
all oil seeds	—	—	—	—	—	—	14	6	62	14	96	96
Jute	10	—	—	—	10	1	93	90	63	20	267	277
all other crops	63	3	16	—	82	168	214	236	705	105	1428	1510
all crops	5665	40	446	106	6257	338	1896	1085	2633	693	6645	12902



TABLE 12 : ESTIMATES OF AREA UNDER IRRIGATED CROPS BY CROP/ CROP GROUP AND NUMBER OF TIMES IRRIGATED

GENERAL SAMPLE		WEST BENGAL				
crop/ crop group	(0)	crop area (hectares 00) by no. of times irrigated				total
		once	twice	thrice	more than thrice	
	(1)	(2)	(3)	(4)	(5)	
1. paddy		1366	1036	1493	5425	9320
2. wheat		18	168	514	876	1576
3. all cereals		1387	1208	2014	6313	10922
4. all pulses		27	48	11	11	97
5. all oilseeds		36	38	7	15	96
6. jute		169	57	23	28	277
7. all other crops		82	182	183	1063	1510
8. all crops		1701	1533	2238	7430	12902

TABLE 13 : ESTIMATES OF AREA UNDER IRRIGATED CROPS WITH SUBSIDIARY IRRIGATION AND WITHOUT SUBSIDIARY IRRIGATION BY CROP / CROP GROUP

GENERAL SAMPLE		WEST BENGAL		
crop/ crop group	(0)	area (hectares 00) under irrigated crops		
		with subsidiary irrigation	without subsidiary irrigation	total
	(1)	(2)	(3)	
1. paddy		465	8855	9320
2. wheat		52	1524	1576
3. all cereals		517	10405	10922
4. all pulses		—	97	97
5. all oil seeds		—	96	96
6. jute		6	271	277
7. all other crops		59	1451	1510
8. all crops		582	12320	12902



TABLE 14 : ESTIMATES OF VALUE OF AGRICULTURAL IMPLEMENTS, IRRIGATION EQUIPMENT AND DRAUGHT ANIMALS (ADULT CATTLES AND BUFFALOES —3 YEARS OR MORE) OWNED BY HOUSEHOLD BY SIZE CLASS OF HOUSEHOLD HOLDING

GENERAL SAMPLE		WEST BENGAL						
value (Rs.000) of agricultural implements, irrigation equipments, cattles and buffaloes by size class of holding								
items of asset	less than 0.5	0.5 — 1.0	1.0 — 2.0	2.0 — 4.0	4.0 — 10.0	10.0 & above	all	
(0)	(1)	(2)	(3)	(4)	(5)	(6)	(7)	
<b>agricultural implements</b>								
1. tractor	—	—	7430	7430	17336	—	32196	
2. power tiller	—	28	—	7587	487	—	8102	
3. sprayer	188	398	2422	3151	1134	—	7293	
4. duster	—	—	83	—	175	—	258	
5. thresher	—	—	221	453	—	—	674	
6. cane crusher	—	—	—	31	—	—	31	
7. oil crusher	—	—	—	—	—	—	—	
8. all	188	426	10156	18652	19132	—	48554	
<b>irrigation equipments</b>								
1. electric pump	—	3547	6657	9980	—	—	20184	
2. diesel pump	8652	39483	86237	146636	71200	1391	353599	
3. windmill	—	—	—	—	—	—	—	
4. moat	—	—	—	118	—	—	118	
5. persion wheel	—	11	—	—	—	—	11	
6. others (animal drawn)	62	—	164	941	—	—	1167	
7. counter poise	4058	9805	15301	11381	3958	—	44503	
8. manual pump	1728	918	3862	1646	520	—	8674	
9. others	3007	3366	6185	4060	1177	—	17795	
10. all	17507	57130	118406	174762	76855	1391	446051	
<b>cattle and buffaloes</b>								
1. cattle	103405	248230	463009	346160	109331	1353	1271488	
2. buffalo	4266	12450	36257	99439	37277	491	190180	
3. all	107671	260680	499266	445599	146608	1844	1461668	
4. total	125366	318236	627828	639013	942595	3235	1956273	

TABLE 15 : ESTIMATES OF NUMBER OF HOUSEHOLDS REPORTING PUMPSETS AND NUMBER OF PUMPSETS POSSESSED BY SIZE CLASS OF HOUSEHOLD HOLDING

GENERAL SAMPLE		WEST BENGAL	
size class of holding (hectare)	no. of households reporting pumpsets (00)	no. of pumpsets* (00)	
(0)	(1)	(2)	
less than 0.5	207	207	
0.5— 1.0	449	453	
1.0— 2.0	666	676	
2.0— 4.0	651	668	
4.0—10.0	209	213	
10.0 & above	—	—	
all	2182	2217	

\*In this and subsequent tables on number of pumpsets, the number includes those possessed jointly as well as on rent. In the case of jointly possessed, instead of the household share of the number possessed, the total number possessed jointly has been counted as possessed by the sample household. Hence the estimated number of pumpsets is inflated to some extent.



TABLE 16 : ESTIMATES OF NUMBER OF PUMPSETS POSSESSED BY SOURCE OF POWER AND HORSE POWER  
GENERAL SAMPLE WEST BENGAL

horse power	no. of pumpsets (00)* having source of power				total
	electricity	diesel	both electricity and diesel	not recorded	
(0)	(1)	(2)	(3)	(4)	(5)
less than 1.0	—	16	—	—	16
1.0— 2.0	—	4	—	4	8
2.0— 3.0	—	40	—	—	40
3.0— 4.0	—	97	—	—	97
4.0— 5.0	—	33	—	—	33
5.0 & above	37	1163	—	8	1208
not recorded	35	712	4	64	815
all	72	2065	4	76	2217

\*see footnote on Table 15.

TABLE 17 : ESTIMATES OF NUMBER OF PUMPSETS POSSESSED\* AND HOUSEHOLD SHARE OF VALUE OF OWNED EQUIPMENTS BY TYPE OF POSSESSION AND SOURCE OF POWER

GENERAL SAMPLE

WEST BENGAL

source of power	possession type									
	owned singly		owned jointly		rented		not recorded		total	
	no. of pumpsets (00)	h.h.'s share of value of owned equipments (Rs. 000)	no. of pumpsets (00)	h.h.'s share of value of owned equipments (Rs. 000)	no. of pumpsets (00)	h.h.'s share of value of owned equipments (Rs. 000)	no. of pumpsets (00)	h.h.'s share of value of owned equipments (Rs. 000)	no. of pumpsets (00)	h.h.'s share of value of owned equipments (Rs. 000)
(0)	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
electricity	28	15850	—	—	40	—	4	—	72	15850
diesel	803	306879	188	28292	1066	—	8	1648	2065	336819
electricity & diesel	—	—	—	—	4	—	—	—	4	—
not recorded	32	2171	—	—	12	—	32	24	76	2195
total	863	324900	188	28292	1122	—	44	1672	2217	354864

\*see footnote on table 15.



TABLE 18 : ESTIMATES OF NUMBER OF PUMPSETS\* REPORTING AREA IRRIGATED BY SOURCE OF POWER AND SOURCE OF WATER SEPARATELY BY POSSESSION TYPE

GENERAL SAMPLE		WEST BENGAL				
source of power	no. of pumpsets (00) reporting area irrigated by source of water					total
	well	tubewell	rivers & streams	others	not recorded	
(0)	(1)	(2)	(3)	(4)	(5)	(6)
<b>owned singly</b>						
1. electricity	—	28	—	—	—	82
2. diesel	18	359	89	264	16	746
3. electricity & diesel	—	—	—	—	—	—
5. not recorded	—	20	4	—	—	24
5. all	18	407	93	264	16	79
<b>owned jointly</b>						
1. electricity	—	—	—	—	—	—
2. diesel	4	81	66	20	—	171
3. electricity & diesel	—	—	—	—	—	—
4. not recorded	—	—	—	—	—	—
5. all	4	81	66	20	—	171
<b>rented</b>						
1. electricity	4	36	—	—	—	40
2. diesel	4	401	294	219	8	926
3. electricity & diesel	—	—	—	—	—	—
4. not recorded	—	4	4	—	—	8
5. all	8	441	298	219	8	974
<b>not recorded</b>						
1. electricity	—	4	—	—	—	4
2. diesel	—	—	—	—	—	—
3. electricity & diesel	—	—	—	—	—	—
4. not recorded	—	—	—	—	12	12
5. all	—	4	—	—	12	16
<b>total</b>						
1. electricity	4	68	—	—	—	72
2. diesel	26	841	449	503	24	1843
3. electricity & diesel	—	—	—	—	—	—
4. not recorded	—	24	8	—	12	44
5. all	30	933	457	503	36	1959

\*see footnote on table 15

TABLE 19 : ESTIMATES OF EXPENSES FOR IRRIGATION ON OTHER THAN CAPITAL ACCOUNT BY ITEMS OF EXPENDITURE

GENERAL SAMPLE		WEST BENGAL	
items of expenditure	amount		
	(0)	(Rs. 000)	
(0)	(1)	(2)	
1. repair and maintenance expenses of bunds and field channels		36439	
2. water charges		54879	
3. other expenses on independently owned lift irrigation		135684	
4. share of expenses on joint arrangements		2826	
5. receipt from sale of water		(-14179)	
total		215649	



सर्वेक्षण

राष्ट्रीय प्रतिदर्श

सर्वेक्षण

संगठन संबंधी

पत्रिका

अक्तूबर 1984

सांख्यिकी विभाग  
योजना मंत्रालय  
भारत सरकार



अक्टूबर, 1984  
(निर्गम संख्या-23)  
विषय सूची

भाग I : निबन्ध/टिप्पणियाँ

पृष्ठ संख्या  
5

1. पारिवारिक जोतों से संबंधित सिंचाई के उपयोग के टिप्पणियाँ

भाग-II : सर्वेक्षण के परिणाम

2. पारिवारिक जोतों से संबंधित सिंचाई के उपयोग विषयक सर्वेक्षण के कुछ चुने हुए परिणाम-31 वां दौर, जुलाई, 1976 से जून, 1977

---

प्रस्तुत परिणामों का संबंध निम्नलिखित राज्यों से है :—

1. आन्ध्र प्रदेश, 2. असम 3. बिहार 4. कर्नाटक 5. मध्य प्रदेश 6. महाराष्ट्र 7. मणिपुर 8. उड़ीसा व त्रिपुरा और 10. पश्चिम बंगाल ।



## पारिवारिक जोतों से संबंधित सिंचाई के उपयोग के टिप्पणियां

### प्रस्तावना एवं संक्षिप्त सारांश

1.1 राष्ट्रीय प्रतिदर्श सर्वेक्षण संगठन ने रा० प्र० सर्वे० के 31वें दौर में जुलाई, 1976 से जून, 1977 के दौरान ग्रामीण क्षेत्रों में सिंचाई उपयोग से संबंधित एक सर्वेक्षण संचालित किया। इस सर्वेक्षण में पारिवारिक जोतों में सिंचाई संबंधी विवरण प्रतिदर्श पारिवारिक जोतों के बारे में पूछताछ द्वारा एकत्र किए गए हैं। पारिवारिक जोतों में उगायी गई फसलों तथा उर्वरक का प्रयोग खाद तथा कीटनाशक दवाओं से संबंधित सूचना भी एकत्र की गयी है। सर्वेक्षण की संदर्भ अवधि कृषि वर्ष जुलाई, 1975 से जून, 1976 रही।

1.2 सिक्किम, नागालैंड और मेघालय राज्य तथा संघ शासित क्षेत्र चण्डीगढ़, अरुणाचल प्रदेश, अण्डमान व निकोबार द्वीप समूह, मिजोरम लक्षद्वीप एवं दादरा व नगर हवेली को छोड़कर भारत के समस्त ग्रामीण क्षेत्र सर्वेक्षण में सम्मिलित थे। मध्य प्रदेश के सरगुजा जिले की दो तहसीलें और बस्तर जिले की चार तहसीलें, महाराष्ट्र के चांद पुर जिले की तीन तहसीलें और अमरावती जिले की एक तहसील और जम्मू व कश्मीर के लद्दाख जिले को भी सर्वेक्षण में शामिल नहीं किया गया।

1.3 सर्वेक्षण के भौगोलिक व्याप्ति में सम्मिलित सभी राज्यों एवं संघ शासित क्षेत्रों ने समान संकल्पनाओं तथा परिभाषाओं का अनुसरण करते हुए तथा समान आकार के प्रतिदर्श के बारे में पूछताछ करके आंकड़े भरते हुए कम से कम पूर्ण समता के आधार पर उक्त सर्वेक्षण में भाग लिया।

1.4 सर्वेक्षण के उद्देश्य की प्राप्ति के लिए समूचे देश में गांवों का एक सामान्य प्रतिदर्श वितरित किया गया। (i) 1947 के पश्चात प्रवर्तित प्रमुख सिंचाई परियोजनाएं और (ii) 1964 के पश्चात प्रवर्तित मध्यम कोटि की सिंचाई परियोजनाएं के समनुदशन क्षेत्र के गांवों के अतिरिक्त विशेष प्रतिदर्श गांवों को भी सम्मिलित किया गया है। केन्द्रीय प्रतिदर्श में सर्वेक्षण किए जाने वाले योजनागत गांवों की सामान्य संख्या 8304 थी और समनुदशन क्षेत्रों की प्रमुख और मध्यम कोटि की परियोजनाओं से विशेष प्रतिदर्श गांवों की संख्या 2504 रही।

1.5 सामान्य प्रतिदर्श के लिए अभिकल्प को दो चरणों में स्तरीकृत किया गया जिसमें जिले (या जिले के किसी भाग) को स्तर माना गया तथा गांवों को प्रतिचयन की प्रथम चरण की इकाई और परिवारों को—द्वितीय चरण की इकाई माना गया। सामान्य प्रतिदर्श के लिए 1971 की जनगणना में सूचीबद्ध गांवों को प्रतिचयन ढांचे के रूप में प्रयोग में लाया गया है आरम्भ में प्रत्येक प्रतिदर्श गांव में से एक निश्चित संख्या में परिवारों को वृत्ताकार क्रम से चुना गया तत्पश्चात गांव के सभी परिवारों को विशिष्ट क्रम में व्यवस्थित किया गया।

1.6 प्रत्येक प्रतिदर्श गांव में चुने गए प्रतिदर्श परिवारों को तीन पारस्परिक प्रवर्गों में बांटा गया था : प्रवर्ग 1 में वे परिवार शामिल थे जो वर्ष 1975-76 के दौरान कम से कम कुछ भू-भाग पर खेती-बाड़ी और सिंचाई करते थे, प्रवर्ग 2 में वे परिवार सम्मिलित थे जो वर्ष 1975-76 के दौरान पूर्ण रूप से खेती बाड़ी करते थे और सिंचाई नहीं, और प्रवर्ग 3 में वे परिवार सम्मिलित थे जो गांव में रहते थे पर उक्त अवधि में खेती-बाड़ी नहीं करते थे। हालांकि ऐसे परिवार जो सामान्यतः खेती-बाड़ी के साथ सिंचाई करते हैं प्रवर्ग-1 में सम्मिलित किए गए हैं, न कि प्रवर्ग 2 में, किन्तु, वे बिना सिंचाई के पूर्ण रूप से खेती बाड़ी करते हैं। प्रवर्ग 1 के प्रतिदर्श परिवारों से संबंधित परिवार वे हैं जिन्होंने वर्ष 1975-76 के दौरान सिंचाई के साथ-साथ फसल उगाई, सिंचाई की गई फसलें, उर्वरकों खाद और कीटनाशक दवाओं का प्रयोग आदि के विवरण अनुसूची 2.1 में एकत्र किए गए हैं। प्रतिदर्श के प्रवर्ग 2 के परिवार वे हैं जिन्होंने वर्ष 1975-76 के दौरान बिना सिंचाई के फसल उगाई, असिंचित पारिवारिक जोत संबंधी विवरण अनुसूची 2.2 में एकत्र किए गए हैं। प्रवर्ग 3 के परिवारों से संबंधित कोई अनुसूची नहीं भरी गई।

1.7 यह रिपोर्ट दस राज्यों अर्थात् आन्ध्र प्रदेश, मध्य प्रदेश, महाराष्ट्र, मणिपुर, उड़ीसा, असम, बिहार, कर्नाटक, त्रिपुरा और पश्चिम बंगाल में केन्द्रीय प्रतिदर्श के सामान्य प्रतिदर्श के गांवों के अनुसूची 2.1 में संगृहीत आंकड़ों पर आधारित है। उसमें जायदाद का क्षेत्रफल शुद्ध बोया गया क्षेत्रफल शुद्ध सिंचित क्षेत्रफल, सिंचाई के विभिन्न साधनों द्वारा सिंचित क्षेत्रफल, सिंचित और असिंचित विभिन्न फसलों का क्षेत्रफल उर्वरकों खाद और कीटनाशक दवाओं का प्रयोग सिंचाई पर व्यय आदि से संबंधित सूचना उन परिवारों से संबंधित है जो प्रायः सिंचाई करते हैं, दर्शायी गई है। पांच राज्यों के इस प्रकार के परिवारों की कुल जायदाद का क्षेत्रफल, सिंचाई सुविधाओं से युक्त जायदाद का क्षेत्रफल, सकल फसल का क्षेत्रफल, सिंचाई के साधनों के अनुसार सकल सिंचाई क्षेत्रफल आदि के अनुमान संक्षिप्त रूप में नीचे दर्शाए गए हैं।



## संकल्पनाएं एवं परिभाषाएं

2.1 सर्वेक्षण में अपनायी गयी कुछ महत्वपूर्ण संकल्पनाएं एवं परिभाषाएं निम्नलिखित हैं।

2.2 परिवार : व्यक्तियों का वह समूह सामान्यतः एक साथ रहते हैं और एक ही रसोई में खाना पकाते हैं, परिवार कहलाता है। इस प्रकार परिवार को अस्थायी निवासियों सहित किन्तु अस्थायी आगन्तुकों की छोड़कर सामान्यतः निवासी सदस्यों द्वारा गठित इकाई के रूप में माना गया है।

2.3 परिवारिक जोत भूमि: किसी परिवार की सभी भूमि संबंधी जायदाद को जोत माना गया है। भूमि संबंधी जायदाद स्वामित्व की भूमि को माना गया है न कि पट्टे की या पट्टे पर ली गई भूमि को। यदि किसी प्रतिदर्श परिवार का किसी अन्य परिवार से साझा पट्टा लिया हुआ है उस दशा में केवल प्रतिदर्श परिवार के हिस्से की भूमि को परिवार की जोत भूमि का हिस्सा माना गया है।

2.4 स्वामित्व-गत भूमि : यदि किसी परिवार को उत्तराधिकार के अधिकार के अन्तर्गत स्थायी जायदाद मिलती है या बिना अधिकार परिवार के किसी सदस्य अथवा सदस्यों के नाम अन्तरित होती है तो उस भू-भाग को परिवार के स्वामित्व वाली भूमि में, सरकार से अनुदान पट्टे या आवंटन के अन्तर्गत सीधे ही प्राप्त भूमि भी सम्मिलित है। स्वामित्व का अधिकार खोये बिना यदि कोई परिवार अपनी भूमि पट्टे पर भी देता है तो उसे भी स्वामित्व वाली भूमि माना गया है।

2.5 सिंचाई : फसल उत्पादन के लिए कृत्रिम साधनों द्वारा भूमि सींचने के व्यवहार को सिंचाई माना गया है।

2.6 सिंचाई के प्रकार : सिंचाई को विस्तृत रूप से दो प्रवर्गों में समूहित किया गया है अर्थात् प्रवाह सिंचाई और लिफ्ट सिंचाई। जहां सिंचाई के लिए पानी खींचने में विद्युत शक्ति का प्रयोग नहीं किया जाता उसे प्रवाह प्रकार की सिंचाई माना गया है। प्रवाह सिंचाई में नहरों, नहरों को मोड़ने की स्कीम, तालाब और अन्य, जिसमें पानी खींचना सम्मिलित नहीं है, द्वारा सिंचाई सम्मिलित है। कुओं, नल कुपों, नदियों, तालाबों तथा अन्य साधनों, जिसमें पानी खींचने की कुछ व्यवस्था होती है, उससे की जाने वाली सिंचाई लिफ्ट सिंचाई कहलाती है।

2.7 शुद्ध सिंचित क्षेत्र : जब कोई भूखण्ड कृषि वर्ष के उसी मौसम में या विभिन्न मौसमों में एक से अधिक बार सींचा गया हो उस दशा में शुद्ध सिंचित क्षेत्र प्राप्त करने के लिए उसके क्षेत्रफल को केवल एक बार सींचा माना गया है। यदि उक्त भूखण्ड को प्रवाह और/अथवा लिफ्ट सिंचाई में से एक से अधिक साधनों की सुविधा प्राप्त है तो उस दशा में सिंचाई प्रमुख साधन को उक्त भूखण्ड के लिए सिंचाई का प्रकार माना गया है। प्रमुख साधन का निर्णय करने के लिए सींचे गए सकल क्षेत्र को आधार माना गया है।

2.8. शुद्ध बोया गया क्षेत्र :—यदि कोई भूखण्ड कृषि वर्ष के उसी मौसम में या विभिन्न मौसमों में एक से अधिक बार बोया गया हो उस दशा में शुद्ध बोया गया क्षेत्र प्राप्त करने के लिए उसके क्षेत्रफल के बारे में केवल एक बार विचार किया गया है :

2.9. सकल फसल गत क्षेत्र:—जब किसी भू-खंड में किसी कृषि वर्ष के दौरान एक से अधिक फसल उगाई गई है तो उस दशा में भूखंड के लिए सकल फसल गत क्षेत्र प्राप्त करने के लिए उस भूमि का क्षेत्रफल उतनी बार गिना जायेगा जितनी बार उसमें फसल उगाई गई है।

2.10. सिंचाई योग्य भूमि:—एक परिवार के अधिकार गत भूमि को दो समूहों में वर्गीकृत किया गया है वह भूमि जिसमें सिंचाई की सुविधाएं प्राप्त हैं तथा वह भी जो इन सुविधाओं से रहित है। जिस भूमि के लिए सिंचाई की सुविधाएं उपलब्ध हैं उसे सिंचाई के योग्य भूमि माना गया है जिसे 1975-76 के दौरान सींचा गया है या न सींचा गया हो।

2.11. कृषि/सिंचाई सम्बन्धी उपस्करों का मूल्य :—परिवार द्वारा स्वामित्व में लाये गये कृषि/सिंचाई उपस्कर का मूल्य उक्त मद की वर्तमान दशा में स्थानीय बाजार में प्रचलित मूल्य के आधार पर निर्धारित किया गया है। अन्य परिवारों के साथ संयुक्त रूप से स्वामित्वगत मदों के लिए परिवार के मूल्य के केवल शेयर की सारणी 14 में प्रस्तुत किया गया है। परिवारों द्वारा स्वामित्व में लाये गये बोझा ढोने वाले पशुओं का मूल्य निर्धारित करने के लिए उसी प्रकार की कार्यविधि अपनाई गई है।



### 3. प्रतिदर्श अभिकल्प तथा आकलन कार्य-विधि

3.1. 31 वे दौर सिंचाई के बारे में पारिवारिक सर्वेक्षण के लिए गांवों का एक सामान्य प्रतिदर्श निर्धारित किया गया था जिन्हें पूरे देश में विभाजित किया गया था। (i) 1947 के बाद प्रवर्तित प्रमुख सिंचाई परियोजनाओं और (ii) 1964 के बाद प्रवर्तित मध्यम कोटि की परियोजनाओं से लिए गये गांवों को अतिरिक्त विशेष प्रतिदर्श भी निर्धारित किया गया था। गांवों के सामान्य प्रतिदर्श के संचालित सर्वेक्षण के लिए प्रतिदर्श अभिकल्प एवं आकलन कार्य-विधि के बारे में निम्नलिखित पैरा ग्राफों में विचार विमर्श किया गया है।

3.2. प्रतिदर्श अभिकल्प एवं प्रतिदर्श आकार:—जिले (अथवा जिले के भाग) को संस्तर, गांव को प्रथम चरण की इकाई और परिवार को द्वितीय चरण की इकाई मान कर अभिकल्प को दो चरणों में स्तरीकृत किया गया। केन्द्रीय प्रतिदर्श में जिन गांवों के सर्वेक्षण की योजना बनाई गई उनकी संख्या 8304 थी।

3.3. स्तरीकरण:—वर्तमान सिंचाई सर्वेक्षण की भौगोलिक व्याप्ति के अधीन सारे भारत के 63 क्षेत्र समाश्रित थे ये क्षेत्र 1965 के दौरान इस प्रकार से गठित किये गये कि उसमें राज्यों/संघ शासित क्षेत्रों की भूमि एक दूसरे को पार नहीं करती है। कुछ राज्यों में स्थित कुछ क्षेत्रों को छोड़कर कोई भी क्षेत्र जिला की सीमाओं को नहीं काटता है। किसी क्षेत्र में स्थित प्रत्येक जिला जिसकी ग्रामीण आबादी 1971 की जिला जनगणना के अनुसार 15 लाख से कम थी उसको स्वतः आधारभूत स्तर माना गया। 1971 की जनगणना के अनुसार जिन जिलों की आबादी 15 लाख से अधिक थी उन्हें ग्रामीण जनसंख्या के समांगता, धनत्व, फसल प्रतिमान आदि के विचार से सीमा मिलने वाली तहसीलों (बिहार उड़ीसा और पश्चिम बंगाल में परगनों) को एक में मिलाते हुए दो या उससे अधिक आधारभूत संस्तरों में विभाजित किया गया है जिससे आधारभूत संस्तरों में से प्रत्येक की ग्रामीण जनसंख्या 15 लाख से कम हो सके।

3.4. प्रतिदर्श आकार का निर्धारण:—प्रत्येक राज्य/संघ राज्य क्षेत्र में सामान्य प्रतिदर्श के प्रतिदर्श आकार का निर्णय राज्य/संघ शासित क्षेत्र में क्षेत्र कर्मचारियों की उपलब्ध संख्या सिंचाई परियोजनाओं के समनुदेशन क्षेत्रों से प्राप्त विशेष प्रतिदर्शों के लिए अपेक्षित संसाधनों और दौर के पूछताछ के अन्य विषयों को ध्यान में रखते हुए किया गया।

3.5. प्रतिदर्श आकार का नियतन:—प्रत्येक राज्य के लिये प्रतिदर्श गांवों को कुल संख्या उनमें कुल सिंचित क्षेत्र के अनुपात से स्थूल रूप से पहले विभिन्न क्षेत्र में नियत की गई: उसके उपरान्त क्षेत्रीय नियतन उनकी जनसंख्या की अनुपात में संघटक स्तरों के बीच विभाजित किया गया।

3.6. गांवों का चयन:—प्रत्येक स्तर के भीतर गांवों की नियत की गई संख्या का चयन 1971 की जनसंख्या के सभाव्य अनुपात तथा प्रतिस्थापन के साथ किया गया। 1971 की जनगणना वाले गांवों की सूची को प्रतिचयन ढांचे के रूप में काम में लाया गया।

3.7. राजस्व गांव:—बड़ी जनसंख्या वाले प्रतिदर्श गांवों को अनेक खेड़ा समूहों में विभाजित किया गया जिनकी आबादी लगभग बराबर थी। इस प्रकार के खेड़ा समूहों का चयन यादृच्छिक आधार पर किया गया और सर्वेक्षण चुने गये खेड़ा समूहों तक ही सीमित था।

3.8. खेड़ा समूह:—बड़ी आबादी वाले प्रतिदर्श गांवों को अनेक खेड़ा समूहों में विभाजित किया गया जिनकी जनसंख्या प्रायः बराबर है। इस प्रकार के खेड़ा समूहों से एक का चयन यादृच्छिक आधार पर किया गया और सर्वेक्षण केवल चुने गये खेड़ा समूह तक ही सीमित था।

3.9. परिवार का चयन:—प्रत्येक प्रतिदर्श गांव के क्षेत्रीय स्तर पर निर्धारित परिवारों की एक निश्चित संख्या परिवारों को विशेष क्रम में समंजित करने के उपरान्त प्रारम्भिक रूप से चुने गये वृत्ताकार सुव्यवस्थित तौर पर चुना गया अर्थात् वे परिवार जिन्होंने 1975-76 के दौरान किसी भूमि में खेती नहीं की, इसके बाद वे परिवार आते हैं जिन्होंने 1975-76 के दौरान बिना सिंचाई किये भूमि में खेती की, उसके बाद वे परिवार आते हैं जिन्होंने 1975-76 के दौरान सिंचाई के साथ भूमि में खेती की। प्रत्येक प्रतिदर्श गांव से चुने गये प्रतिदर्श परिवारों को परस्पर पृथक प्रवर्गों में विभाजित किया गया। प्रवर्ग 1 में वे परिवार सम्मिलित थे जिन्होंने 1975-76 के कृषि वर्ष के दौरान सिंचाई के साथ भूमि में खेती की (अथवा जिन्होंने सामान्य रूप से सिंचाई का प्रयोग किया) प्रवर्ग 2 में शेष वे परिवार आते हैं जिन्होंने बिना सिंचाई किये 1975-76 के दौरान खेती की और 3 प्रवर्ग में वे परिवार आते हैं जिन्होंने 1975-76 के दौरान खेती नहीं की। प्रवर्ग 1 के परिवारों के लिये सिंचाई आदि के ब्यौरे अनुसूची 22.1 में संगृहीत किये गये हैं प्रवर्ग 2 के परिवारों के लिये बिना सिंचाई के ब्यौरे परिवारों की जोत भूमि के ब्यौरे अनुसूची 22.2 में संगृहीत किये गये हैं और प्रवर्ग 3 से सम्बद्ध परिवारों की सूची नहीं भरी गई।



3.10. आकलन कार्यविधि:—विभिन्न अनुमानों को प्राप्त करने के लिए सूत्रों में निम्नलिखित संकेत पद्धति प्रयोग में लाई गई है:—

r: किसी राज्य/संघ राज्य क्षेत्र के 4 वे क्षेत्र के लिए पादाक्षर

s:s वे संस्तर के लिए पादाक्षर

i:i वे सर्वेक्षित गांव/खेड़ा समूह के लिए पादाक्षर

j:j वें प्रतिदर्श परिवार के लिए पादाक्षर

f: राजस्व गांव के सर्वेक्षण के लिए समायोजन घटक

p: गांव की आबादी

m: सर्वेक्षित गांवों की संख्या

h: प्रारंभिक रूप से चुने गये प्रतिदर्श परिवारों की संख्या।

P: (चयन के लिए प्रयुक्त) कुल ग्रामीण जनसंख्या

D: वास्तविक रूप में गठित खेड़ा समूहों की संख्या।

y: विशेषताओं का मूल्य

r: जनसंख्या में निहित विशेषताओं का कुल मूल्य

राज्य के जोड़ों के अनुमान: राज्य/संघ राज्य क्षेत्र के लिए अनुमान संघटक प्रदेशों के अनुमानों के जोड़ के रूप में प्राप्त किया गया है। विशेषता सूचक y के प्रादेशिक जोड़  $y_r$  का अनुमान  $\hat{y}_r = mr \sum_{s,i,j} y_{rsij}$

द्वारा दर्शाये गये हैं जहां  $\sum_j$  अनुसूची 22.1 के लिए सर्वेक्षित पारिवारों तक प्रस्तारित होती है, और

$$Mr = \frac{\hat{H}_r}{\sum_s \sum_{h_{rsi}} \hat{H}_{rsi}} \text{ जहां } \hat{H} \text{ के क्षेत्र में प्रादेश में कुल ग्रामीण परिवारों का अनुमान है, जिसे}$$

$$\hat{H}_r = \sum_{i=1}^{mrs} (Prs/mrs) \sum_{i=1}^{mrs} \frac{Dr_{si} H_{rsi}}{f_{rsi} Pr_{si}}$$

सूत्र द्वारा दर्शाया गया है जहां  $H_{rsi}$  प्रतिदर्श खेड़ा समूह/गांव में कुल परिवार दर्शाता है। राज्य स्तर अनुमान  $\hat{y}_s$  को  $\hat{y}_s = \sum_r \hat{y}_r$  के रूप में प्राप्त किया गया है जहां संकलन समस्त प्रदेशों पर प्रास्तारित है।

अनुपातों के अनुमान:—  $\hat{y}_s$  और  $\hat{x}_s$  को क्रमशः y और x नामक दो विशेषताओं का राज्य/संघ राज्य क्षेत्र स्तर पर समाहारों के अनुमान मान लिया जाय।

नामक सूत्र  $R_s = \frac{Y_s}{X_s}$  की दो विशेषताओं के समाहारों के अनुपात को  $y_s$  और  $x_s$

के अनुमानों के अनुपात द्वारा अनुमानित किया गया है और उसे  $\hat{R}_s = \hat{y}_s / \hat{x}_s$  द्वारा दर्शाया गया है।



ERRATA

SARVEKSHANA, VOL. VIII, NO. 2—OCTOBER 1984 (ISSUE NO. 23)

Sl. No.	Page No.	Table No.	State	Col. No.	Line/row	For	Read
1	2	3	4	5	6	7	8
1.	2	—	—	—	Last on left hand side	CR = m $1 - \sum_{j=1}^m p_j (Q_j + Q_j - 1)$	CR = m $1 - \sum_{j=1}^m p_j (Q_j + Q_j - 1)$
2.	2	—	—	—	23	$Q_j = \sum_{j=1}^m q_j$	$Q_j = \sum_{j=1}^m q_j$
3.	Page No. is to be read as 3						
4.	3	2	—	11	10	blank	9
5.	4	4	—	2	heading	operationa holding	Operational holding
6.	5	5	—	2	4	110	170
7.	7	—	—	—	5 (from bottom)	shown than	show that
8.	8	Annexure	—	8	14	0.24	10
9.	8	Do.	—	9	14	0.10	73
10.	9	Do.	—	3	7	625	695
11.	9	Do.	—	2	16	x	×
12.	9	Do.	—	9	34	0.36	36
13.	10	—	—	—	10	Holdings	holdings
14.	13	—	—	—	Last line on left hand side	m $\sum_{i=1}^m$	Mrs $\Sigma$
15.	13	—	—	—	7th line from top	Hr	$\Delta$ Hr
16.	S-6	1	Andhra Pradesh	3	heading	leased	leased-in
17.	S-6	1	Do.	9	heading	leased	leased-in
18.	S-7	4	Do.	—	State name	ANDHRA PRADESH	ANDHRA PRADESH
19.	S-12	14	Do.	3	10	185	1857
20.	S-14	18	Do.	5	12	$\times 407$	407
21.	S-15	1	Do.	heading area of land without irrigation facility (hactares 00) is to be shifted on right hand side.			
22.	S-15	1	Assam	0	4	estimated number of total households (000)	estimated number of total households (000) <sup>a</sup>
23.	S-15	1	Do.	0	5(ii)	usually not using irrigation	usually not using irrigation <sup>b</sup>
24.	S-16	3	Do.	0	2	.5 - 1.0	0.5 - 1.0
25.	S-17	4	Do.	6	6	15	—
26.	S-17	4	Do.	11	heading	all lift	all
27.	S-17	4	Do.	12	3	11	111
28.	S-17	5	Do.	4	heading	animal Drawn	animal drawn
29.	S-17	5	Do.	5	Do.	human Drawn	human drawn
30.	S-19	8	Do.	heading for cols. 7 to 9		Value	value
31.	S-19	8	Do.	0	1	Paddy	paddy
32.	S-19	8	Do.	9	12	blank	—
33.	S-19	9	Do.	delete 'under crop' for irrigated crop area (hectares (00)			
34.	S-19	9	Do.	1	heading	applied with fertilizer	under crop
35.	S-19	9	Do.	2	Do.	applied with manurs	applied with fertiliser
36.	S-19	9	Do.	3	Do.	affected by pests & diseases	applied with manures
37.	S-19	9	Do.	4	Do.	aprayed with pesticides	affected by pests & diseases
38.	S-19	9	Do.			ordinary Variety	ordinary variety
39.	S-19	9	Do.	5	5	25	23
40.	S-20	11	Do.	Table	heading	ESTIMATES OF AREA—	ESTIMATES OF AREA—



1	2	3	4	5	6	7	8
41.	S-20	11	Assam	0	heading	crop/crop Groups	crop/crop group
42.	S-20	11	Do.	12	Do.	flow lift combined	flow & lift combined
43.	S-21	12	Do.	0	Do.	Crop/crop group	crop/crop group
44.	S-21	12	Do.	1	4		—
45.	S-22	14	Do.	0	21	adult cattls & buffaloes	adult cattles & buffaloes
46.	S-22	14	Do.	5	3 (Sprayer)	—	22
47.	S-22	14	Do.	5	8 (all)	—	22
48.	S-22	14	Do.	1	9 (electric pump)	blank	—
49.	S-22	14	Do.	2	Do.	blank	—
50.	S-22	14	Do.	3	Do.	blank	—
51.	S-22	14	Do.	4	Do.	blank	—
52.	S-22	14	Do.	5	Do.	blank	—
53.	S-22	14	Do.	6	Do.	blank	—
54.	S-22	14	Do.	7	Do.	blank	—
55.	S-22	14	Do.	6	5 (thresher)	20	—
56.	S-22	14	Do.	6	8 (all)	22	—
57.	S-22	14	Do.	7	3 (sprayer)	—	22
58.	S-22	14	Do.	7	5 (thresher)	22	—
59.	S-22	14	Do.	2	19 (cattles)	1705	1709
60.	S-23	16	Do.	heading for cols. 1 to 4		no. of pumpsets* (00)*	no. of pumpsets* (00)
61.	S-23	17	Do.	7	heading	no. of pumpsets	no. of pumpsets (00)
62.	S-24	19	Do.	1	1	936	369
63.	S-25	0	Bihar	1	heading	Number	number
64.	S-25	0	Do.	0	1	number of sample villages allocated for survey	number of sample villages allotted for survey
65.	S-25	0	Do.	0	4	estimated number of total households (000)a	estimated number of total households (000) <sup>a</sup>
66.	S-25	0	Do.	0	5(ii)	usually not using irrigation <sup>b</sup>	usually not using irrigation <sup>b</sup>
67.	S-25	0	Do.	1	4	N. A.	9612
68.	S-25	0	Do.	1	5	7353	7323
69.	S-25	1	Do.	6	heading	cropped more than once	area cropped more than once
70.	S-26	2	Do.	5	Do.	total	all
71.	S-26	2	Do.	11	Do.	total	all
72.	S-32	14	Do.	Table heading		ESTIMATES OF VALUE OF*	ESTIMATES OF VALUE OF
73.	S-33	16	Do.	0	1	below 1·0	less than 1·0
74.	S-33	17	Do.	4	heading	hh's share of value of owned equip- ments	hh's share of value of owned equipments (Rs. 000)
75.	S-35	0	Karnataka	0	4	estimated number of total households (000a)	estimated number of total households (000) <sup>a</sup>
76.	S-35	0	Do.	0	5	usually not using irrigation —	(ii) usually not using irrigation <sup>b</sup>
77.	S-35	0	Do.	1	4	N.A.	4215 <sup>2</sup>
78.	S-35	0	Do.	1	5	2911	2899
79.	S-35	0	Do.	1	7	1727	1715
80.	S-36	2	Do.	Table heading		ESTIMATED OF NUMBER	ESTIMATES OF NUMBER
81.	S-38	7	Do.	0	last line	all classes	all
82.	S-39	9	Do.	1	heading	Total	total
83.	S-39	9	Do.	5	Do.	Totalj	total



1	2	3	4	5	6	7	8
84.	S-39	9	Karnataka	4	6 (all puses)	47	7
85.	S-45	—	Madhya Pradesh	Page No.		S 45	S-45
86.	S-45	0	Do.	0	4	estimated number of total households (000) (*)	estimated number of total households (000) <sup>a</sup>
87.	S-45	0	Do.	0	5	estimated number of cultivating households (**)	estimated number of cultivating households (000) <sup>b</sup>
88.	S-45	0	Do.	at the bottom		(*)	a
89.	S-45	0	Do.	Do.		(**)	b
90.	S-46	2	Do.	1	9	439	493
91.	S-47	4	Do.	Column Nos. will be (0), (1) (2), (3), (4), (5), (6), (7), (8), (9), (10), (11) & (12)			
92.	S-47	4	Do.	0	5	not recorded	not recorded
93.	S-48	7	Do.	1	heading	number of Parcels (00)	number of parcels (00).
94.	S-50	10	Do.	Table heading		ESTIMATES OF AREA UNDER CROP APPLIED WITH FERTILISER HAVING NUTRIENTS ONLY	ESTIMATES OF ARE A UNDER CROP APPLIED WITH FERTILISER HAVING NUTRIENTS N ONLY
95.	S-53	16	Do.	2	8 (all)	1957	1907
96.	S-53	17	Do.	6	heading	Rs. (000)	(Rs. 000)
97.	S-53	17	Do.	8	Do.	Rs. (000)	(Rs. 000)
98.	S-57	4	Maharashtra	12	Do.	flow lift combined	flow & lift combined
99.	S-62	15	Do.	3	Do.	no. of pumpsets* (000)	no. of pumpsets*(00)
100.	S-62	—	Do.	at the bottom note		as well as next	as well as rent
101.	S-66	2	Manipur	2nd para sub-heading		irrigated (hectares 00)	net area irrigated (hectares 00)
102.	S-66	2	Do.	11	8 (2nd para) (less than 0.5)	—	1
103.	S-66	2	Do.	11	11 (2nd para) (2.0-4.0)	3	2
104.	S-69	8	Do.	9	6 (1st para) (all crops)	9	6
105.	S-70	11	Do.	heading for cols. 1 to 12		area (hectare 00)	area (hectares 00)
106.	S-72	14	Do.	Heading 2nd line		CATTLE	CATTLES
107.	S-72	14	Do.	Heading 2nd line		JOWNED	OWNED
108.	S-73	16	Do.	Footnote		see foot note on table (15)	see foot note on table 15
109.	S-73	17	Do.	sub-heading for columns 7 & 8		Total	total
110.	S-73	17	Do.	Footnote		*see foot note on table	*see foot note on table 15
111.	S-75	0	Orissa	Under Item		Item	item
112.	S-75	0	Do.	Under Number		(1) Number	(0) number
113.	S-75	0	Do.	1	4	households a (000)	households <sup>a</sup> (000)
114.	S-75	0	Do.	1	5(ii)	not using irrigation	not using irrigation <sup>b</sup>
115.	S-75	1	Do.	heading for columns 2-7		area (hectares)	area (hectares 00)
116.	S-75	1	Do.	heading for columns 8-13		land without irrigation facility	area of land without irrigation facility (hectares 00)
117.	S-75	1	Do.	sub heading col. 9		leased	leased-in
118.	S-76	3	Do.	heading for columns 1-6		no. of hnuseholds (00) reporting list irrigation using	no. of households (00) reporting lift irrigation using
119.	S-76	3	Do.	heading for columns 7-12		by list using	by lift using
120.	S-76	3	Do.	8 sub-heading		diesal	diesel



1	2	3	4	5	6	7	8
121.	S-76	3	Orissa	11	7 (all)	137	1371
122.	S-79	9	Do.	heading		GENERAL	GENERAL
123.	S-79	9	Do.	4	heading	dis-s ease	diseases
124.	S-79	9	Do.	6	Do.	with Fertiliser	with fertiliser
125.	S-79	9	Do.	7	Do.	Applied	applied
126.	S-80	11	Do.	8	4	144	44
127.	S-81	13	Do.	0	5	all creals	all cereals
128.	S-82	15	Do.	Table heading		PUMP SETS	PUMPSETS
129.	S-83	17	Do.	Heading for columns 3, 5 and 7		no. of pumpset (00)	no. of pumpsets (00)
130.	S-84	19	Do.	Heading for column 0		items of expenditur	items of expenditure
131.	S-84	19	Do.	0	1	field channeli	field channels
132.	S-85	0	Tripura		Table Number	20	0
133.	S-85	0	Do.		footnote a	Draft report	Draft Report
134.	S-86	3	Do.	Heading for column 5		—	human
135.	S-86	3	Do.	Headings for columns 6 & 12		blank	all
136.	S-94	18	Do.	sub-heading		last para all	total
137.	S-94	18	Do.	1	4 (last para)	—	2
138.	S-94	18	Do.	1	5 (last para)	2	4
139.	S-94	18	Do.	2	4 (last para)	2	—
140.	S-94	18	Do.	2	5 (last para)	2	—
141.	S-95	1	West Bengal	Heading for column 1		households with	households (00) with
142.	S-95	1	Do.	Heading for columns 8 to 13		land without irri- gation facility	area of land with- out irrigation faci- lity (hectares 00)
143.	S-97	5	Do.	Heading for column 4		animal drown	animai drawn
144.	S-97	5	Do.	Heading for column 5		human drown	human drawn
145.	S-101	12	Do.	Heading for columns 1-5		crop area (hectares 00) by no. of times irrigated	crop area (hectares 00) irrigated
146.	S-102	14	Do.	0	3rd para sub-heading	cattle	cattles
147.	S-102	14	Do.	0	3rd para 1	cattle	cattles
148.	S-102	14	Do.	0	3rd para 2	buffalo	buffaloes
149.	S-102	14	Do.	5	3rd para 4	942595	242595
150.	S-103	16	Do.	footnote		Table 15	table 15

## Hindi Section

In Hindi Section the page numbers may be read as द्वि-1 to द्वि-8 instead of 1 to 8.

1	2	3	4	5	6	7	8
151.	8	—	—	—	3	4वे	४वे
152.	8	—	—	—	11	p :	P :
153.	8	—	—	—	14	r :	Y :
154.	8	—	—	—	16	$\Delta$ $yr = Mr \sum \sum Yrsij$ s ij	$\Delta$ $yr = Mr \sum \sum Yrsij$ s ij
155.	8	—	—	—	18	$\Delta$ जहाँ H	$\Delta$ जहाँ Hr
156.	8	—	—	—	19	$\Delta$ $Hr = \sum (Prs/mrs)$ $\sum_{i=1}^{Mrs} \frac{Drssi}{frsi prsi}$	$\Delta$ $Hr = \sum (Prs/mrs)$ $\sum_{i=1}^{Smrs} \frac{Drssi}{frsi Prsi}$
157.	8	—	—	—	20	H rsi	H rsi
158.	8	—	—	—	20	$\Delta$ ys	$\Delta$ Ys
159.	8	—	—	—	21	$\Delta$ $ys = \sum yr$	$\Delta$ $Ys = \sum Yr$
160.	8	—	—	—	22	$\Delta$ ys और xs	$\Delta$ Ys और Xs
161.	8	—	—	—	24	$\Delta$ $Rs = \frac{ys}{xs}$	$\Delta$ $Rs = \frac{Ys}{Xs}$
162.	8	—	—	—	25	$\Delta$ $Rs = ys/xs$	$\Delta$ $Rs = Ys/Xs$