

REPORT OF AGRICULTURAL CENSUS

1976-77

MAHARASHTRA STATE

PART I & PART II

REPORT OF AGRICULTURAL CENSUS 1976-77

MÄHARASHTRA STATE

PART I & PART II

DEPARTMENT OF AGRICULTURE

PREFACE

Maharashtra State along with other States of the Indian Union, participated in the Sample Agricultural Census of 1976-77, sponsored by the Government of India. Though the next World Agricultural Census is due in 1981, Government of India desired that an interim Sample Census should be carried out to assess the changes in the structure of agricultural holdings, subsequent to the Third World Agricultural Census of 1970-71, due to the vigorous implementation of the Land Ceiling Act during the period 1974-76.

While the number of operational holdings and their size (i.e. area) were obtained by complete enumeration of all the land holdings in the State, information on four more items, namely:—

(i) tenancy and tenure, (ii) land utilisation, (iii) source-wise irrigated area, (iv) area under crops (irrigated and unirrigated),

was collected in respect of each holding in a random sample of 7,693 villages selected for the Sample Agricultural Census. In addition, for the first time, data were also collected on (1) the number of farmers growing each of the crops, (2) number of farmers having irrigation-facilities according to each source, (3) number of wells in use and that fitted with pumps, (4) number of wells not in use.

The Deputy Commissioner (Agricultural Census) was responsible for the Census work. He was assisted by a small Agricultural Census Unit created in the Directorate of Agriculture, at Pune. For the first time, electronic processing of the Census data was also undertaken by Agricultural Census Unit itelf. The technical guidance of the computer experts of the National Institute of Training in Industrial Engineering (NITIE), Powai, Bombay, was fully taken for the development of the computer programme and processing of the data. As a part of the Agricultural Census Unit, one Mechanical Tabulation Cell was created with the Deputy Director (Mechanical Tabulation) as the officer-incharge to attend to the processing of the data under the guidance of the NITIE experts.

The entire burden of the field work involving collection of basic data under the Census was borne by the talathies of the revenue department, under the supervision of Tahsildars, while for the training of the field staff, providing technical guidance and supervision of the field-work, the assistance of various technical agencies in the districts was taken.

The results of the Agricultural Census for the State and districts are presented in this report. The report is divided into two Parts. The first Part contains five chapters. The first three chapters deal with the historical background, organisational arrangements, concepts and definition. Chapter IV deals with the analysis of the Census results and the conclusions drawn therefrom. The last Chapter V deals with the suggestions for the future Censuses. Part II contains the statistical tables giving the summary of the Census data, printed in the form of six tables for the State, regions and each district, according to 13 size classes of holdings.

The Census has shown that in 1976-77 there were 57.64 lakh operational holdings with a total operated area of 211.05 lakh hectares in the State. The average size of holdings was 3.66 hectares. As compared with the results of the Agricultural Census of 1970-71, the number of holdings in the current Census had increased by 8.13 lakh (or 16%) while the operated area was lower by 0.74 lakh hectares (or 0.4%). The average size of holdings in the previous Census was slightly higher being 4.28 hectares. The Census of 1976-77 has clearly brought out the preponderance of small sized holdings (i.e. those of size below 2 hectares or 5 acres), it being to the extent of 47 per cent (as against 43 per cent in the previous Census); but the area under these holdings was hardly 11 per cent of the total operated area in the State (while it was 9 per cent in the last Census). Further, out of 57.57 lakh holdings covered by the Sample Census—i.e. excluding the

institutional holdings and those of Pune City, taluka of Pune district 13.05 lakh (or 22.7%) had irrigation facilities, the net irrigated area being 13.32 lakh hectares (or 7.8 per cent of the net cropped area).

It is of interest to note that 96 per cent of the farmers in the State owned the lands they tilled, while the area of lands taken on lease for cultivation formed hardly 2.8 % of the operated area. Further, about one-eighth (or 28 lakh hectares of the total operated area in the agricultural holdings comprised land not put to cultivation (excluding net sown area and area kept fallow in 1976-77).

The report contains the details of the above and other findings of the Census for the State, regions and districts. I trust that these results for Maharashtra would be of considerable utility not only to the Government departments but also to the Research workers, Economists and others associated with agricultural planning and development. The results of the Census would be of considerable help also in the policy formulation and assessment of the impact of the Agricultural Projects.

The conduct of the Census involving collection of statistical data for each parcel of land covering nearly 6 million land holdings in the State was a colossal task. The talathies who were entrusted with this responsibility did a good job, particularly since they had to attend to this work in addition to their normal duties. The higher revenue officers right from the concerned Secretaries to Government, Commissioners, Collectors, Tahsildars, Block Development Officers, down to the level of Revenue Inspectors gave the necessary support in getting the work done properly. The officers and the staff of the Statistics Division of Agricultural Department, Directorate of Economics and Statistics, rendered assistance to the extent possible in supervising the Census field work. I would like to express my thanks to all these officers and staff.

Shri V. G. Sharma, Deputy Commissioner (Agricultural Census) was responsible for the planning and organisation of the Census and he has also drafted the detailed Report on the Census. Prof. S. K. Singh and Shri A. D. Raut, computer experts of the NITIE, Bombay, took personal interest and strain in the development of the computer programme and in giving guidance in electronic processing of the data. Shri N. P. Joshi as the Deputy Director (Mechanical Tabulation) put in commendable efforts in rendering necessary assistance in the development of the computer programme and in attending to the actual processing of the data on the computer. I would like to place on record the excellent services rendered by all these officers.

I would like to express my gratitude to the officers of the Agricultural Census Division, Government of India for their guidance and help in the conduct of the Census.

N. RAGHUNATHAN, I.A.S.

Agricultural Census Commissioner and Secretary to Government Agriculture and Co-operation Department Mantralaya, Bombay 400 032

Bombay-32 20th May, 1980

CONTENTS

PART I

CHAPTER I

INTRODUCTION

Para No.								PAGE			
1.1	Historical background				• •		• •	1			
1.4	Contents of report		••	••	• •			1			
1.5	Methodology	.:	• •		• •	••		1			
1.6	Scope							2			
1.7	Organisation				• •			2			
1.8	Findings of the Census 1970-	71	• •			• •		2			
1.9	Uses of last Census data	• •		••			• •	3			
1.10	Administrative divisions and	districts				••		4			
1.11	Physical features		• •	••		••		4			
1.12	Crop season			• •	••	••	• •	5			
1.13	Agro-climatic zones	• •	• •			••	• •	5			
1.14			• •		• •	• •	• •	5			
1.15	Contribution of Agriculture t	••		• •	5						
1.16	Land use	• •	• •	•	• •	••		5			
1.18	Forest			••	••	• •	••	7			
1.19	Crop pattern	.:	• •	• •	••	••	• •	8			
1.20	Irrigation	••	. • •	• •	• •	•••	••	9			
CHAPTER II											
		GRICUL1	TURAL CE	NSUS 1976	-77						
2.1	Need for the present Census		• •	• •	••	••	••	10			
2.2	Sanction of the scheme	• •	••	• •	••	• •	••	10			
2.3	Decision on complete Census	3	• •	• •	• •	••	• •	10			
2.4	Technical programme	••	• •	••	••	• •	••	10			
2.5	Scope	••	••	• •	••		••	10			
2.6	Sampling and estimation pro	cedures ad	lopted for th	ie Sample C	Census	• •	••	11			
	Methodology	• •	••	• •	••	• •	• •	11			
2.8	Organisation	••	• •	••	• •	• •	••	11			
2.12	• • • • • • • • • • • • • • • • • • • •			• •		• •	• •	12			
2.14				• •	• •	••	• •	13			
	Schedules prescribed for coll	ecting Cen	sus data	• •	••	••	••	14			
	Printing of Schedules	••		• •	••	• •		15			
2.17	Arrangements for processing	of data	••	••	••	••	••	15			
	Publicity	••	••	••		••	• •	16			
2.19	Training	••		••	· .	••	• •	16			
2.24	Dates of commencement and	l completion	on of the Ce	nsus enume	ration	••	••	17			
			CHAPTER	ш							
	. C	ONCEPT:	S AND DA	TA SOURC	CES						
3.1	Concepts and definitions		• •					18			
3.2	Land not covered by the Cer		••		••	••		21			
3.3	Source of data	• •	••	••				21			
3.4	Criteria adopted for determi	ning an or		olding		• •	••	21			
3.5	Joint holdings	••				••	• •	22			
3.7	Procedure adopted for listin	g of opera	tional holdir	ngs	••	••		22			

_	
w	
71	

PAGE		Vi CONTE	NTS				PAGE
No.							INCE
3.9	Complete and incomplete (or part) hol	ldings	:				23
3.12	Posting the Census data in final Censu		ı	• •	,	••	24
3.13	Units for reporting area statistics		• • • • • • • • • • • • • • • • • • • •	• •	••	••	24
3.14	Field work	••	••	••	••	• •	24
3.15	Supervision of the Census operations	••		••	••	••	25
3.19	Scrutiny of returns		••	••	• •	••	26 26
3.20	the state of the s		••	••	••	••	26 26
3.21			••	••	••	• •	26 27
3.22	Despatch of returns		••	••	• •	* • •	
3.23	Number of villages covered by Census	••	••	• •	• •	• •	27
	Proportion of plural holdings		••	• • •	• •	••	27.
3.24	Proportion of plurar holdings	••	• •	• •	••	• •	28
r.		CHAD	TER IV	• •	•		
• •	•	CHAL	IEXIV				•
	ANATWOIC	OF	CENSUS RE	CIII TC			
	ANALISIS	or c	LINGUS KE	SOLIS			
4.1	Introduction	• • •		• •			29
4.3	Levels for which results are given	• •	••		• •		29
4.4	Contents of the Census tables		••			• •	30
4.6	Limitations	•••			••	• • •	30
4.7.	Coverage of the Sample Agricultural (•••	••	• •	30
4.8	Comparability of the results of the two			••	••		30
4.9	Discussion of results			• •	• •		31
	•	SECT	I NOI	•			
8	Carrage						21
4.10	Coverage	••	. • • •	••	••	. ••	. 31
4.12	An overview	• •	••	••	• • •	• •	32
4.15	Number of crop growers	••			•••	• •	32
4.17	Size distribution of number of holding	s and o	perated area i	n the State	m the two C	ensus	33
•	years.					•	
ϵ .		SECT	vov II				
		, SECI	ION II				
4.22	Districtwise findings	••		• •	• •	• •	34
4.23	Number of operational holdings and a	_		• •	••	• •	34
	Average size of holdings	• ••	• •	• •	••		37
	Joint holdings	••	• •	• •	••		38
	Proportion of smaller holdings (of size		an 2 ha.)	••	• •	• •	38
4.31	Tenure and Tenancy	• •	• ••	• ••	• •	••	38
4.21	Land use		••	• • •	• •	• •	38
4.34	Irrigation		• •	• • •	••		39
4.34			10101			•••	39
4.34 4.39	Irrigated holdings and area irrigated (i	in the S	tate)				40
4.34 4.39 4.40	Irrigated holdings and area irrigated (in Distribution of Irrigation (in districts)				• •	• •	41
4.34 4.39 4.40 4.44				••	••		41
4.34 4.39 4.40 4.44 4.47	Distribution of Irrigation (in districts)				••	••	41
4.34 4.39 4.40 4.44 4.47 4.49	Distribution of Irrigation (in districts) Number of irrigated holdings			••	••	••	
4.34 4.39 4.40 4.44 4.47 4.49 4.50	Distribution of Irrigation (in districts) Number of irrigated holdings Source of Irrigation Additional information				••	••	41
4.34 4.39 4.40 4.44 4.47 4.49 4.50 4.52	Distribution of Irrigation (in districts) Number of irrigated holdings Source of Irrigation Additional information Irrigation by Wells				••	••	41 42
4.34 4.39 4.40 4.44 4.47 4.49 4.50 4.52 4.53	Distribution of Irrigation (in districts) Number of irrigated holdings Source of Irrigation Additional information Irrigation by Wells Estimated number of wells in use					•••	41 42 43
4.34 4.39 4.40 4.44 4.47 4.49 4.50 4.52 4.53 4.54	Distribution of Irrigation (in districts) Number of irrigated holdings Source of Irrigation Additional information Irrigation by Wells Estimated number of wells in use Irrigation by canal						41 42 43 43
4.34 4.39 4.40 4.44 4.47 4.49 4.50 4.52 4.53 4.54 4.55	Distribution of Irrigation (in districts) Number of irrigated holdings Source of Irrigation Additional information Irrigation by Wells Estimated number of wells in use Irrigation by canal Irrigation by tanks						41 42 43 43 44 45
4.34 4.39 4.40 4.44 4.47 4.49 4.50 4.52 4.53 4.54 4.55 4.55	Distribution of Irrigation (in districts) Number of irrigated holdings Source of Irrigation Additional information Irrigation by Wells Estimated number of wells in use Irrigation by canal Irrigation by tanks Irrigation by lift						41 42 43 43 44 45 45
4.34 4.39 4.40 4.44 4.47 4.49 4.50 4.52 4.53 4.54 4.55 4.55 4.55	Distribution of Irrigation (in districts) Number of irrigated holdings Source of Irrigation Additional information Irrigation by Wells Estimated number of wells in use Irrigation by canal Irrigation by tanks Irrigation by lift Cropping pattern						41 42 43 43 44 45 45 46
4.34 4.39 4.40 4.44 4.47 4.49 4.50 4.52 4.53 4.54 4.55 4.55 4.55 4.56	Distribution of Irrigation (in districts) Number of irrigated holdings Source of Irrigation Additional information Irrigation by Wells Estimated number of wells in use Irrigation by canal Irrigation by tanks Irrigation by lift Cropping pattern Cropping pattern in the districts						41 42 43 43 44 45 45 46 47
4.34 4.39 4.40 4.44 4.47 4.49 4.50 4.52 4.53 4.54 4.55 4.55 4.55 4.56 4.57 4.60	Distribution of Irrigation (in districts) Number of irrigated holdings Source of Irrigation Additional information Irrigation by Wells Estimated number of wells in use Irrigation by canal Irrigation by tanks Irrigation by lift Cropping pattern						41 42 43 43 44 45 45 46
1.34 1.39 1.40 1.44 1.47 1.49 1.50 1.52 1.53 1.54 1.55 1.56 1.57	Distribution of Irrigation (in districts) Number of irrigated holdings Source of Irrigation Additional information Irrigation by Wells Estimated number of wells in use Irrigation by canal Irrigation by tanks Irrigation by lift Cropping pattern Cropping pattern in the districts						41 42 43 43 44 45 45 46 47

				Vij	•				D
Para				CONTE	INTS				Pag
No.									
4.73	Proportion of big holdings (of size 10 ha. and above)							• •	50
	Joint holdi		• • • • • • • • • • • • • • • • • • • •		••	••	• •	• •	51
	Tenancy		• •	••			• •		·51
	Land use				••				52
	Irrigation	• •							52
	Irrigation b		• •						53
4.82	Irrigation l	by wells	• •						54
4 83	Irrigation b	by tanks	• •						55
4 84	Area under	r lift irrigation			••				55
4.85	Relative in	portance of d	ifferent sour	ces of irrig	ation		• •		56
4.88	Intensity of	f irrigated cro	pping accord	ling to size	class of ho	ldings			57
4.89	Cropping 1	pattern accord	ing to size c	lass of hole	lings		••		59
4.92	Compariso	n of official st	atistics with	those of C	ensus in res	spect of imp	portance cro	ps	61
4.72	Companio	2 01 0-10-10-0				•		_	
				CHAP	rfR V				
			•	CIMI	1224				
		S	SUGGESTIC	ON FOR	FUTURE (CENSUSE	S,		
			,			•	`		63
	Introductio		• ••	~	• •	• •	••	• •	63
		gislation on A			••	••	••	• •	63
	- 00	s for streamlin	_		••	••	••	••	63
		o-ordination a	t different le	vels	••	••	• •	••	64
5.5	Advance pl	lanning	• •	••	• •	••	••	••	64
5.6	Further an	alysis of censu	s data	••		••	••	••	64
				СНАРТ	ER VI				
			SUM	MARY O	F FINDING	GS			
	. 3								
6.01	·	Summary of	findings	••	••		• •	••	65
6.11	J			C in amulasta	in 1071 o	m.d. 1077	_		67
		Districtwise di Sampling proc					•••	••	68
					_			••	
		Estimation pro		conto and	 definitions	• •	••	• •	69 70
		Explanatory N					hu tha Car	• •	70 73
		Statement givi						isus	72 72
		Map of Maha Madeinle Band						• • • • • • • • • • • • • • • • • • •	73 26
Annex		Multiple Bar					aings by siz	e class	75
A		based on Agri Multiple Bon I					A	i1	77
Annex		Multiple Bar I tural Censuses	_	-	орегатеа бу	size class	dased on A	gricui-	.77
	1	turai Censuses	13/0-/1 9U(u 17/0-//.					
				APPEND	OICES				
Annen	div.T	Contents and	olarification :	of the tabl	96				70
		Contents and t				••	••	••	79 80
	111A-11	radic Buunner	S 1 IO 23						YII.