

CHAPTER - I

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FARM POPULATION AND LAND SYSTEMS

A. POPULATION

Growth of population

Population pressure on agricultural
land

Farm workers

Ratio of non-farm workers to farm
workers**B. LAND OWNERSHIP AND TENURE****C. SIZE OF LAND-HOLDINGS****D. CONSOLIDATION OF HOLDINGS**

CONCLUSION

REFERENCES

Farming is a product not only of physical factors but also of man made frames. Therefore this chapter deals with the analysis of the farm population and land systems which influence the agricultural land use and production. In the present investigation the term land system refers to the land tenure, size of land holdings and consolidation of holdings. Analysis of these variables is based on the available data and information abstracted from the agricultural records, decennial population records and other reports published by the government.

A. POPULATION :

Out of the total [?]population of district 16.37 lakhs lived in the rural areas and the remaining 6.71 lakhs lived in urban areas. The population of Solapur district is spread over its area of 15,021 sq.km. giving the overall density of 150 persons per sq. km. and the corresponding figure for Maharashtra state is 164. The high density in North Solapur and Barshi talukas is due to urban centres like Solapur city and Barshi town. Karmala, Mangalvedha and Sangelatalukas are having very low density because of the hilly and undulating area.

Growth of population :

The growth of population in district from 1901 to 1971 is shown in Table 1.1. The decadal growth rate between 1951-61 was nearly 22.57 percent which is fairly comparable with the state average growth rate of 23.6 percent. The population of the district

increased to 22.54 lakhs in 1971 from 18.60 lakhs in 1961. The decadal growth rate between 1961-71 was 21.17 percent as against the 27.5 percent observed in the state. The decadal variation in growth rate of population of district is shown in Table 1.1.

Table 1.1 : Growth of population and decadal variation in Solapur district - 1901 to 1971.

Year	Population	Decade variation	Rate of variation
1901	8,84,101	-	-
1911	9,56,207	+ 72,106	+ 8.16
1921	9,09,248	- 46,959	- 4.91
1931	10,69,524	+ 1,60,276	+ 17.63
1941	12,28,085	+ 1,58,561	+ 14.83
1951	15,05,316	+ 2,77,231	+ 22.57
1961	18,60,119	+ 3,54,803	+ 22.57
1971	22,53,840	+ 3,93,721	+ 22.17

SOURCE : District census handbook of Solapur.

Population pressure on agricultural land :

The changing pattern of agricultural land use is largely connected with the village population whose livelihood is dependent on agriculture. It constitutes a much larger proportion of the total population. As such it is now proposed to examine the pressure of

Table 1.2 : Rural population pressure on agriculture land
in Solapur district.

Sr. No.	District/ Taluka	Rural population 1971	Cultivated land hectare 1978	Per capita land in hectare	Relative co-efficient of over- population
1.	North Solapur	88,773	29,768	0.33	1.22
2.	Barshi	2,00,342	50,364	0.25	1.61
3.	Akkalkot	1,62,742	1,05,541	0.65	0.62
4.	South Solapur	1,33,343	6,09,080	0.51	0.79
5.	Mohol	1,42,344	75,962	0.53	0.76
6.	Mangalwedha	92,682	51,643	0.55	0.73
7.	Pandharpur	1,33,975	48,232	0.36	1.12
8.	Sangola	1,44,327	35,691	0.24	1.68
9.	Malshiras	2,26,480	1,44,731	0.63	0.64
10.	Karmala	1,37,442	60,917	0.44	0.92
11.	Madha	1,74,848	88,454	0.50	0.81
Total District		16,37,288	6,79,140	0.41	0.98
					Average region
Maharashtra		3,47,01,024	185,79,100	0.53	0.76
					State Average

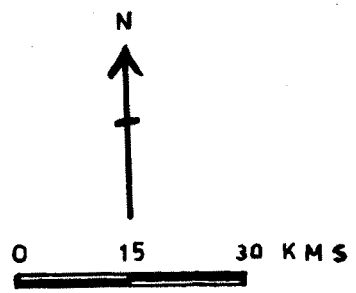
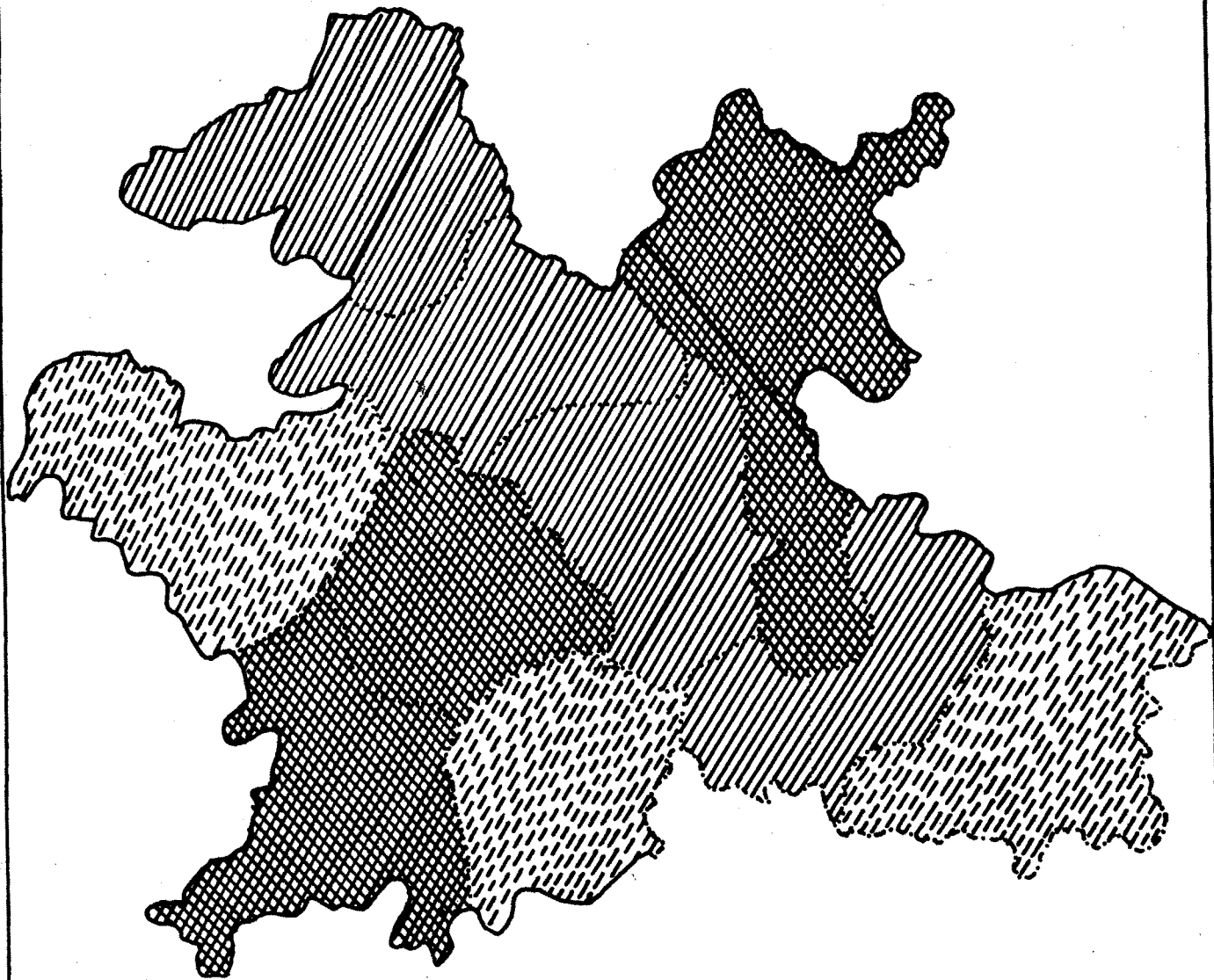
SOURCE : Complied by Author.

rural population on agricultural land. As the measurement of population pressure on agricultural land becomes necessary before any remedial steps can be suggested (Singh, 1971).

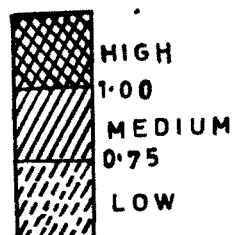
The population pressure can be measured by computing the relative co-efficient by taking into consideration the standard hectareage namely 0.4 hectare suggested by authors of 'Limits of growth' and quoted by Swaminathan (1974). Using this as a criterion the unit 0.4047 of a hectare is divided by per capita land. The quotient thus obtained gives the relative co-efficients of overpopulation. Greater the co-efficient the higher would be the pressure of population on land. A relative co-efficient of 0.50 is considered as more or less marginal and only where the co-efficient exceeds 0.50 that area may be said to be overpopulated (Table 1.2).

The agricultural landuse data of the years 1976-78 average and centred at 1971 census population gave the per capita agricultural land of 0.41 hectare in the region which is less than state average of 0.53 hectare. Therefore the relative co-efficient of over population is 0.98 in the region under study and that of Maharashtra state is 0.76. The relative co-efficient of over population of the talukas and the region average exceeds 0.50 which is taken as more or less marginal. Table 1.2 shows the relative co-efficient of overpopulation of the talukas in the region. With the help of these figures the region can be grouped into three categories viz. high (1 and above), medium (0.75 to 1) and low (0.50 to 0.75) of overpopulation (Fig.1.1).

RELATIVE CO-EFFICIENT OF OVERPOPULATION



RELATIVE CO-EFFICIENT



REGION AVERAGE = 0.98
STATE AVERAGE = 0.76

FIG. 1-1

Farm workers :

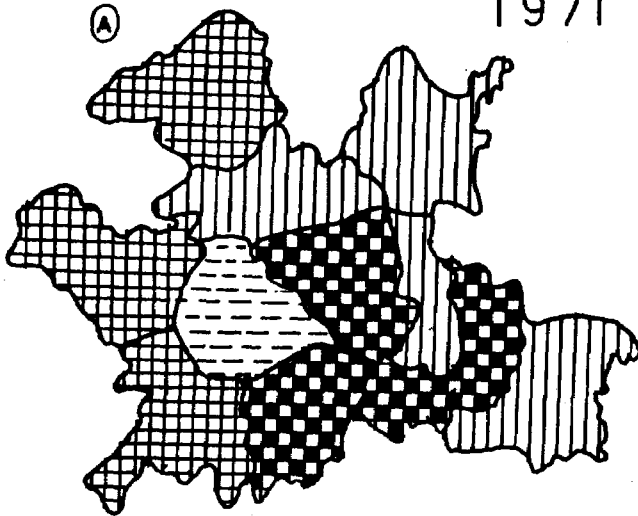
The term farm workers includes both agricultural ~~labours~~ and cultivators. Out of the total working population of the district, 75.29 percent population is engaged in agriculture which is higher than state average of 65 percent. The cultivators share 40.24% and remaining 35.05% are agricultural labourers. The state's figures are 36% and 29% respectively.

The spatial density of farm workers depends on the type, size and structure of farm business (Singh,1975). On the small holdings they are normally close to each other while on large holdings they are widely distributed. In general their concentration is high in Mohol, South Solapur and Mangalwedha talukas (above 85%). Medium in Karmala, Malshiras, Sangola, Akkalkot, North Solapur, Barshi and Madha talukas (75% to 85%). Rest of the talukas are under 75 percent of the total workers.

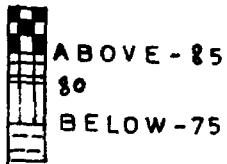
The distribution pattern of farm workers and the cultivators is depicted on maps (Fig.1.2 A & B). Cultivators constitute the significant proportion of the farm workers. The proportion of hired labour in the total work force is small. The regional differences in the agricultural labourers are primarily determined by the kind of crop grown. The high concentration is observed in areas of jawar, tur, bajara, wheat, groundnut and gram. Jawar in particular is the more labour demanding crop in its more production and various types of work. Thus, the high share of agricultural labourers (40 to 45 and over 45 percent of total workers) is noted in Akkalkot, South

FARM WORKERS

1971



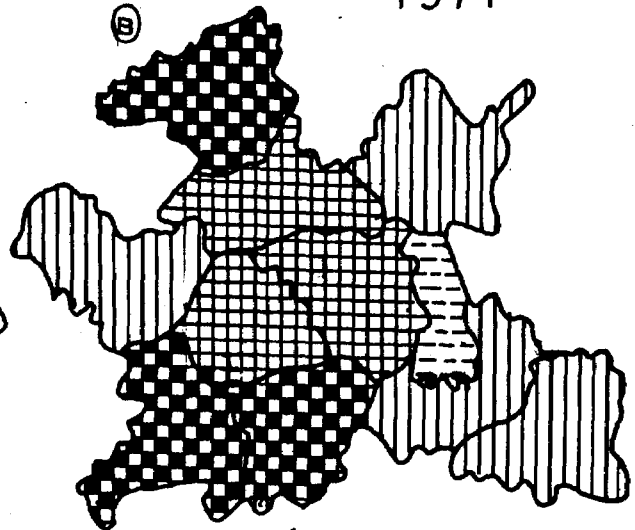
% OF TOTAL WORKERS



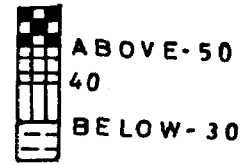
REGION AVERAGE = 75.29%

CULTIVATORS

1971



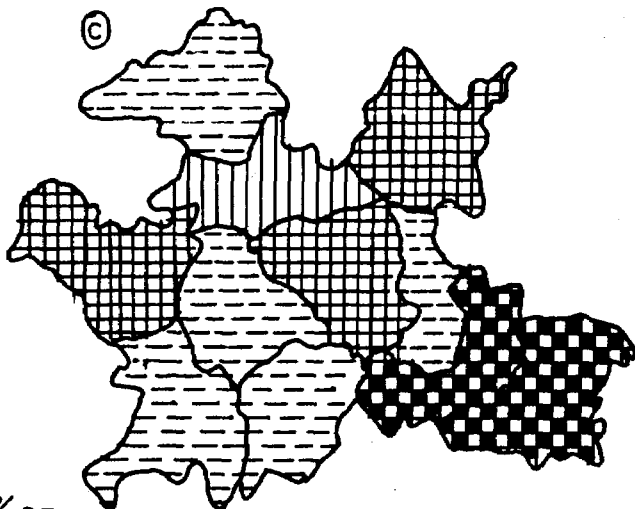
% OF TOTAL WORKERS



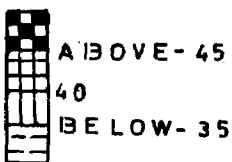
REGION AVERAGE = 40.24%

AGRICULTURAL LABOURERS

1971

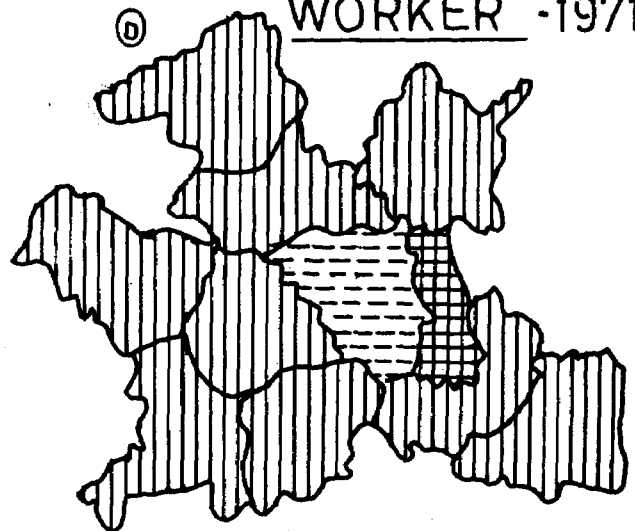


% OF TOTAL WORKERS



REGION AVERAGE = 35.05%

RATIO OF NON FARM WORKER TO FARM WORKER - 1971



RATIO OF NON FARM WORKER TO FARM WORKER



REGION AVERAGE = 1:3%

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FIG. 1.2

Solapur, Barshi, Mohol and Malshiras talukas (Fig.1.2C). This is mainly due to the innovations in agriculture which in turn requiring more labourers.

The rest of the region has low dependance on hired labour, because most of the work is carried out by the family members and very few hired labourer are employed to carry out the various agricultural activities.

Ratio of non-farm workers to farm workers :

The non-farm workers are those who provide services for the farm workers and hence can be considered a part of the occupied ruralities. According to 1971 census out of the total working population 25 percent are non farm workers. The ratio of non farm workers to farm workers in the region comes to 1:3 which is some what higher when compared to Maharashtra state 1:2. Fig. 1.2D shows the distribution of the ratio on non-farm workers to farm workers in the district during 1971.

The areas with predominantly jawar culture have high (1:1 to 1:3 and over 1:3) ratio of non-farm workers to farm workers. These include North Solapur, Madha, Karmala, Barshi, Malshiras, Sangola, Pandharpur, Mangalwedha, South Solapur and Akkalkot talukas. Mohol, the area of jawar farming has low ratio (under 1:1) compared to other talukas.

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B. LAND OWNERSHIP AND TENURE :

The land is a resource, which can not be purchased but property rights are purchased. Such property rights may be possessed by a private citizen, by trustees, by an institution or by departments of government. The utilization of land is not carried out unless the agencies have a legal authority to hold the land. Therefore, these property rights, their nature, scope and duration play a vital role in the agricultural development. The decisions about the use of land, choice of cropping pattern, livestock and adoption of modern techniques in agriculture are taken more effectively by the individual than any institution or Government agency because of its affections as a personal property. Thus, in this section, the nature of property rights of land viz. ownership and tennure are discussed.

The process of confirmation of ownership of land, has gone through many legal changes in the district. Before the implementation of the various land tenure abolition act, about 72% of occupied area belonged to tenure viz. Rayatwar and Inams. But the ownership rights are regulated under the Bombay Tenancy and Agricultural Lands Act in force in 1948. It provided security of tenure on the reasonable rents. Actually, it was implemented on 1st April 1957, which is known as "Tiller's Day". It was an important step towards the removal of absentee landlordism which was one of the disincentives in any programmes of agricultural improvement. Until 31st March 1963, ownership rights have been

conferred upon 6,424 tenants for 64,380 acres, of land in the district. 1,899 tenants had mutually agreed with the landlords on the price to be paid by them in respect of 15,480 acres.

Table 1.3 shows that most of the agricultural land in the district is cultivated by the owners themselves. Area under rented system has largely decreased due to the increasing pressure of population.

Table 1.3 : Number and area of operational holding by tenure in Solapur district 1978.

Sr. No.	Tenure	No.	%	Area in hectare	%
1.	Wholly owned	2,36,784	97.09	12,388	95.54
2.	Wholly rented	3,534	1.45	222	1.71
3.	Partly owned & partly rented	3,561	1.46	357	2.75
Total holdings (All size classes)		2,43,879	100.00	12,967	100.00

SOURCE : Socio-Economic Review & District Statistical Abstract of 1978.

The agricultural holdings in the district are divided into three classes A, B & C. Class A comprises persons who cultivate land by themselves with or without the aid of hired labour. Class B consists of those who do not cultivate land by themselves but

supervise and direct cultivation by farm servants. Class C comprises persons who receive rent from the land but do not participate directly or indirectly in cultivation. Broadly speaking, persons in the A and B classes can be styled cultivations while C class can be described non cultivating owners.

C. SIZE OF LANDHOLDINGS :

Size of agricultural landholdings is an important aspect of agricultural study and it depends upon the quality of soil, nature of terrain, population pressure, climatic conditions, social and economic and technological factors and even historical tradition. It decides the choice of land utilization, crops, mechanisation in agriculture and even the adoption of modern agricultural techniques. small holdings are often intensively cultivated, and produce higher output (Coppock, 1971). The size of farm is a matter of importance to make any development in agriculture. Therefore, it is essential to analyse the land holding size which decides many aspects of agricultural development. In Solapur district, there is general experience of low productivity of agriculture due to the scattered fragments of land. With the increase in population over the past few decades the pressure of population on available land has also increased (Fig.1.1). Consequently the size of holdings is getting smaller and smaller, due to the sub-division and fragmentation of the existing holdings. The laws of inheritance and succession are also partly responsible for the small size of holdings.

Distribution of land holding size shows close relationship with undulating land and pressure of population in the eastern and north-eastern part of the district. In the undulating part of the district, agricultural land is largely available and population pressure is relatively less. Therefore, in the east and north east land holding size is small and in the other undulating area of the district it is large. However, the region is mainly an area of small and medium sized holdings. In 1952-53 the total number of land holdings were 67,656, out of them 5.01 percent holdings were below one acres, 40.70% holdings were 1 to 10 acres, 36.67% holdings were 10 to 30 acres and remaining 17.78% were above 30 acres (Table 1.4).

In 1978, number of holdings were 2,43,947 accounting for 13,05,100 hectares of agricultural land in the district. Therefore, considerable changes have occurred in the land holding size during the period under study. The land holding size is generally increases from east to west. In the east the size is smaller and in the west and north it is larger.

D. CONSOLIDATION OF HOLDINGS :

The provision of the Bombay prevention of fragmentation and consolidation of holdings act 1947, were first applied to the district in 1948 in Karmala taluka. Pandharpur is the last taluka to be taken up for consolidation work where consolidation work started in 1962. The scheme is to arrange mutual exchange of small and scattered fragments of holdings and to make the land holdings as compact as possible. Up to the end of March 1963, 152 villages

Table 1.4 : Number and area of operational holdings by size class in Solapur district (1978).

Size class in hectares	Total holdings			
	No.	%	Area in hectare	%
Below 0.5 hectare	18,060	7.40	4,400	0.34
0.5 - 1.0 hectare	17,652	7.24	12,900	0.99
1.0 - 2.0 "	38,149	15.64	56,500	4.33
2.0 - 3.0 "	32,359	13.26	79,400	6.08
3.0 - 4.0 "	25,226	10.34	87,100	6.68
4.0 - 5.0 "	20,666	8.47	91,500	7.01
5.0 - 10.0 "	55,945	22.93	3,91,400	29.99
10.0 - 20.0 "	29,825	12.23	4,08,300	31.28
20.0 - 30.0 "	4,707	1.93	1,09,100	8.36
30.0 - 40.0 "	904	0.37	30,600	2.34
40.0 - 50.0 "	268	0.11	12,000	0.92
50.0 - Hectare & above	186	0.08	21,900	1.68
Total all size classes	2,43,947	100.00	13,05,100	100.00

SOURCE : Socio-Economic Review and District Statistical Abstract of Solapur District 1976-78.

have been completed covering an area of 382,685 acres. The number of holdings involved is 58,683. The consolidation work in the district is going on smoothly.

The standard areas specified as minimum necessary for profitable cultivation under the prevention of fragmentation and consolidation of holdings is : Dry crop land 2.0 acres and Bagayat land 0.5 acres. All the plot of land, less in area than the standard area are treated as fragments and their transfer except to holders of contingences plot is prohibited.

CONCLUSION :

Majority of working population is engaged in agriculture; of them cultivators are dominant and agricultural labourers are few. Further majority of farmers are owner cultivators and the system of land tenure is individual farming. Since the district is a region of small and medium sized holdings.

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