

CHAPTER - II

PLACE OF AGRICULTURE IN THE ECONOMY OF
THE DISTRICT

CHAPTER -II

PLACE OF AGRICULTURE IN THE ECONOMY OF THE DISTRICT

The ecological condition of the district of Hooghly i.e. the flat alluvial plain with almost imperceptible slope excepting a very small western most portion occupied by up-land, a large number of big and small rivers providing it with good drainage excepting a few marshes, a congenial climate and fertile alluvial soil have given priority to the agricultural occupation of the people as it is reflected from the percentage of people engaged in agriculture to the total population and also from the acreage covered by cultivation. Otherwise it can be said that agriculture is the mainstay of the district.

Agriculture the most predominant occupation

According to the Census of 1961 amongst every thousand of the working population of Hooghly district 303 persons were cultivators and 197 agricultural labourers (30.3% cultivators and 19.7% agricultural labourers). According to 1971 Census agricultural labourers constituted 30.15% and cultivators 24.83%. Thus 54.98% i.e., almost 55% of total working population was engaged in primary activity, while remaining 45.62% was engaged in occupation other than that of cultivation.¹

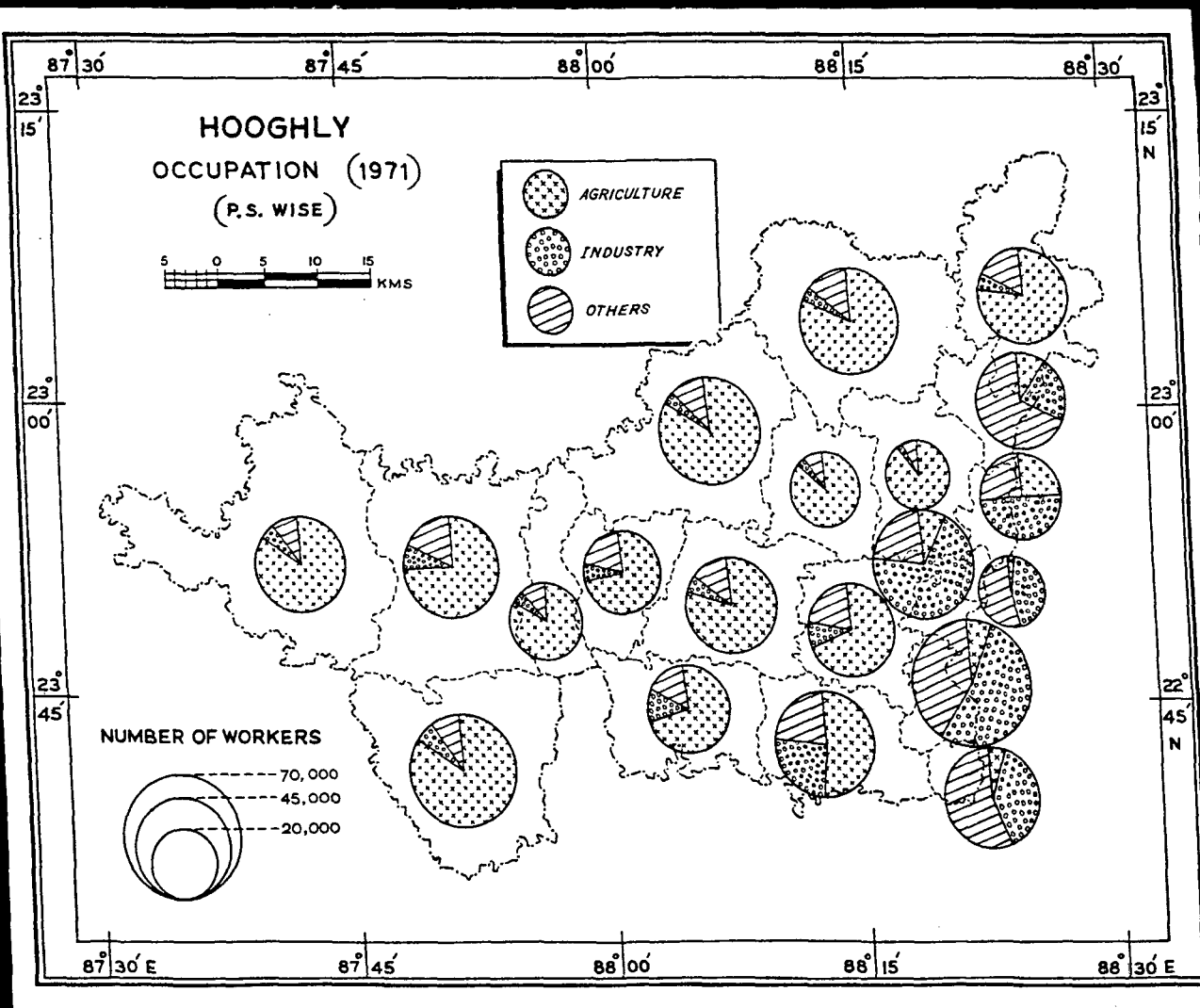


Fig. 3

In spite of the fact that Hooghly is one of the most important industrial district of West Bengal with numerous factories flanking the Bhagirathi it still retains as a whole its basic rural character since no less than 50% of its total working population depends) solely on agriculture. The predominance of primary activity of the people in the district is also reflected from the share of rural population to total population. According to 1971 Census 73.53% of total population constituted the rural population while 26.47% was shared by urban population.

Land use

According to the settlement records of 1930-37 the total area of the district was 773,363.8 acres of which cultivated land consisted of 546,175 acres, current fallows 19,947.6 acres culturable areas other than current fallows 69,510.2 acres and the area not available for cultivation 1,37731 acres. Excluding the area not available for cultivation consisting of homestead sites, roads, rivers and unculturable areas the balance of the area available for cultivation comes to 6,35,632.8 acres. Of this total area available for cultivation 89.1 percent consisting of cultivated and current fallow is usually under plough of which again 3.2 percent is current fallow. Of the

area actually under cultivation the area yielding one crop forms 87.5% and 12.5% of the area yielding a second crop.²

In 1980-81 area not available for cultivation accounted 71.68 thousand hectare i.e. 22.83 percent to total area. 4.5 thousand hectares was occupied by uncultivated land excluding current fallow accounting 1.43 percent to total area. Whereas current fallow accounted 16.74 thousand hectares and cultivated land 220.69 thousand hectares i.e. 5.33 and 70.3 percent respectively. Therefore, area under plough amounted 237.43 thousand hectares i.e 75.63 percent of total area. It is obvious from the above distribution of total area of the district under different uses there is again dominance on agricultural landuse. There has also been a significant increase in percentage of area sown more than once since 1930-37. In 1980-81 53.26 percent of net area sown was used for growing second or third crop and 46.74 percent was used for single crop purpose. During 1930-37 area sown more than once accounted only 12.5 percent of net area sown. The pre-eminence of agricultural activity in the district can also be judged by the increase in intensity of agricultural landuse. As there is no further scope for extension of cultivated land efforts have been directed to use the available cultivated land more than once with the help of existing ecological conditions and available infrastructural facilities.

Crops

This district occupies an important place in the production of certain crops in West Bengal (Fig. 4). It ranks first in the production of potato contributing 36.4 percent of total production of potato in the state during the year 1980-81. In the same year potato was cultivated on 35 thousand hectares contributing 28.54 percent of total acreage occupied by that crop. In the production of rice as a whole (Aus, Aman, Boro) the position of the district is not so prominent as it ranked seventh in this respect in 1980-81 contributing 6.06 percent of total rice production of the state. In terms of acreage covered by rice the district occupies tenth place contributing 4.89 percent of total acreage of the crop in the state. But in the production of Boro or ~~Summer~~ rice the district ranked third contributing 12.99 percent of total Boro rice production in 1980-81. In terms of acreage of summer rice it ranked second in the same year contributing 16.42 percent in 1980-81. In the production of jute and oil seed this district has some importance as it ranked seventh and eighth respectively in 1980-81. This district occupies an important place in the production of orchard crops particularly banana and mango. It is the leading producer of banana in the state. In the production of mango this district occupies second place after Murshidabad. The position of the district in the production of other crops namely pulses, wheat and sugarcane is quite negligible.

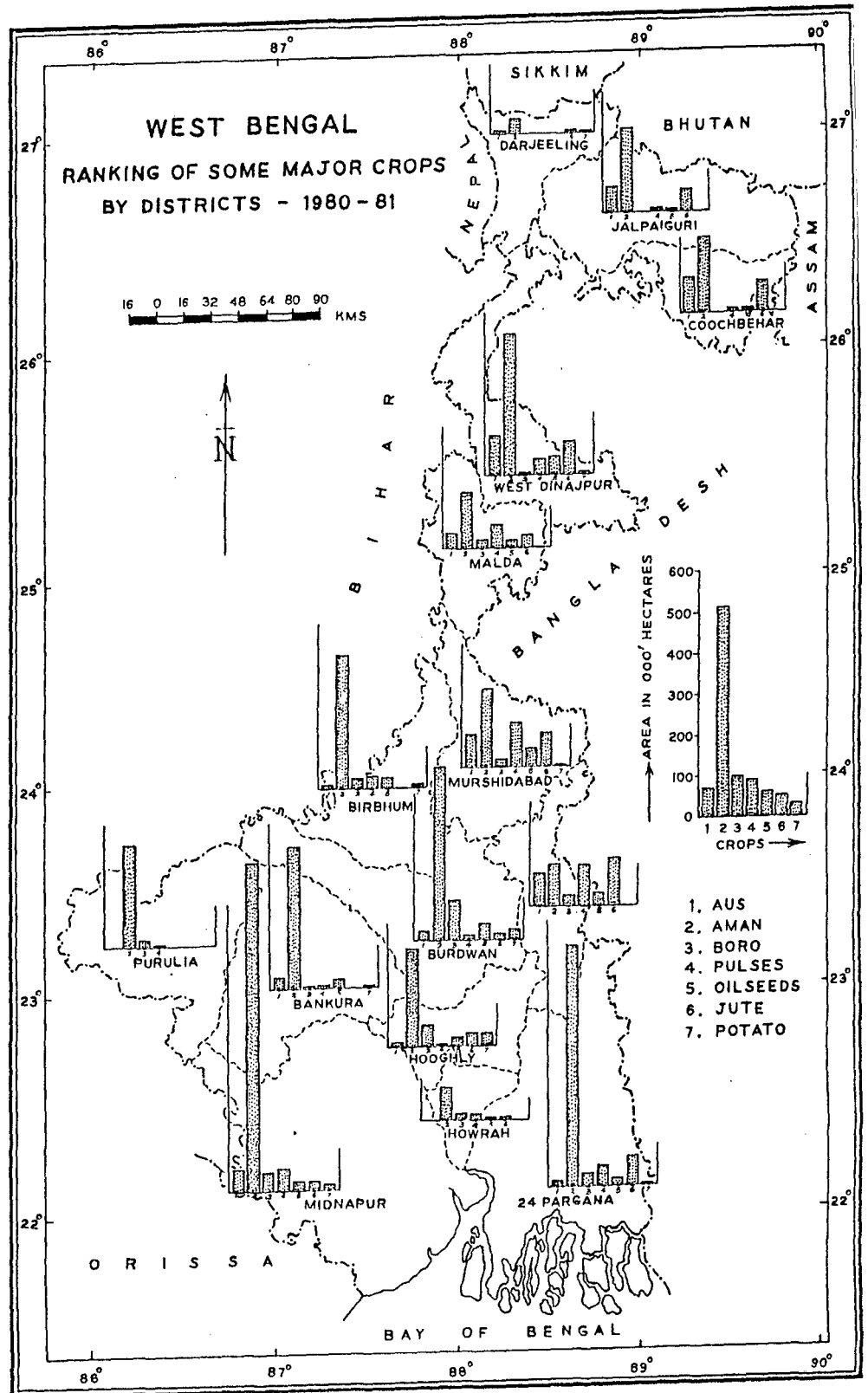


Fig. 4

Table 1. Area in 000' hectares of Principal Crops in West Bengal and Hooghly District in 1980-81.

	Aus	Aman	Boro	Total rice	Wheat	Pulses	Oil seeds	Jute	Sugar cane	Potato
Hooghly	11.9 (1.93)	184.4 (4.37)	56.9 (16.42)	253.2 (4.89)	6.4 (2.26)	8.4 (1.6)	21.5 (6.77)	35.3 (5.78)	0.1 (0.69)	33.0 (25.54)
West Bengal	615.1	4214.6	346.5	5176.2	283.0	524.3	317.4	610.4	14.3	115.6
Position of Hooghly in W.B.	11	11	2	10	12	11	8	8	15	1

N.B. : Figures in the brackets indicate the percentage to total area occupied by respective crops in West Bengal.

Source : Department of Agriculture, Government of West Bengal.

Table 2. Production in 000' tons of Principal crops in West Bengal and Hooghly district in 1980-81.

	Aus	Aman	Boro	Total rice	Wheat	Pulses	Jute	Sugar cane	Potato	Oil seed
Hooghly	20.0 (3.46)	355.3 (5.89)	88.4 (12.99)	463.7 (6.36)	12.1 (2.55)	5.1 (1.67)	363.0 (8.17)	1.1 (1.26)	726.2 (36.4)	5.9 (5.95)
West Bengal	576.4	6024.0	680.3	7280.7	437.2	304.5	4442.7	86.7	1994.6	99.0
Position of Hooghly in W.B.	11	7	3	7	8	12	7		1	8

N.B. : Figures in the brackets indicate the percentage of total production of respective crops in West Bengal.

Source : Department of Agriculture, Government of West Bengal.

Yield of the crops

This district occupies an important place in the yield of several crops as compared with West Bengal's average. Yield rate of the three varieties of rice (Aus, Aman, Boro) is appreciably high in the district. Yield of aus was 1564 kg/hectare as compared with 788 kg/hectare in West Bengal in 1976-77. In case of aman rice it was 1272 kg/hectare as compared with 1106 kg/hectare in West Bengal. Yield rate of Summer rice was also considerably higher i.e. 3250 kg/hectare against the West Bengal's average of 3004 kg/hectare. Yield rate of jute in that year was 1967 kg/hectare against the West Bengal's average of 1418 kg/hectare. Yield rate of potato was significantly high i.e. 17359 kg/hectare as compared with 14410 kg/hectare in West Bengal.

The distribution of workers in agriculture

The district of Hooghly occupying an important place in agriculture, inspite of being an advanced industrial district shows a wide range in the distribution of workers engaged in agricultural activity. Agricultural workers concentrate in the western part which is almost completely rural in character dominated by agricultural economy. In this sector number of agricultural workers varies from 19,430 to 47,824 persons.

HOOGHLY
LORENZ CURVE SHOWING DISTRIBUTION OF
AGRICULTURAL WORKERS (1971)

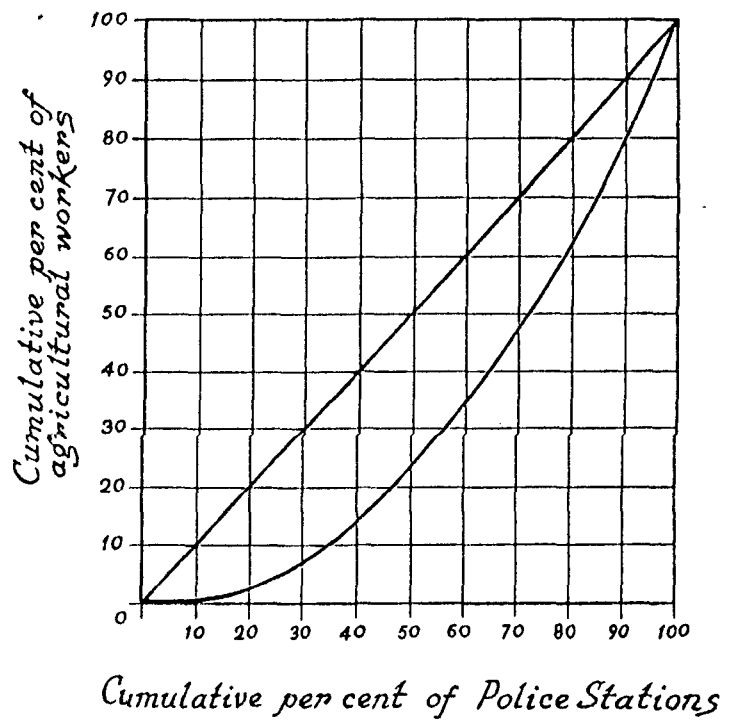


Fig. 5

The highest figure occurs in Khanakul P.S. While the urbanized and industrial eastern part show remarkably low figure of agricultural workers varying from 141 the lowest one in Chandernagore P.S. to 4034 the highest one in Magra P.S. Such regional imbalance in the distribution of workers in agriculture and industry is clearly reflected in the Lorence Curve (Fig. 5). It is seen that the curve is concave upward showing a great departure from the line of equal concentration. It indicates that there is more concentration of agricultural workers in a few police stations. The area between the line of equal concentration and the curve of concentration also indicates such concentration.³

Population density

Men and land are the ultimate elements in life of human society, so that the number of people in proportion to land is a fundamental consideration in population study which again gives some idea about pressure of population on land. The concept of density or the relationship between people and land is usually expressed as a simple arithmetic ratio which divides total population by total area. This common expression of density provides only the most superficial representation of the real pressure of population upon the resource base. Such a simple

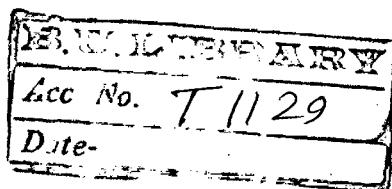
ratio is unsatisfactory because it expresses a quantitative relationship between two elements which in themselves are highly inconstant. The numerator or total population represents men of contrasting cultures and stage of economic development whose demands upon the physical earth stand in great contrast. The denominator of the ratio on the other hand expressing units of area fails to take into consideration the variable capacities of different environments for supporting human life and satisfying human wants.

Physiological density expressed by the ratio $\frac{\text{Population}}{\text{Arable land}}$ is therefore somewhat more refined concept of density since it eliminates from the denominator barren areas and others not suitable for agricultural production. On the other hand it errs in eliminating all productive non-arable land such as forest, natural pasture, scenic land, mining land etc. It likewise errs in continuing to evaluate all arable land as having the same productivity and rating populations as having the same capacity no matter what their cultural background or stage of economic development.⁴

Agricultural density is expressed by the ratio $\frac{\text{Agricultural Population}}{\text{Cultivated area}}$. Obviously it can serve as an index of general population density only in those regions where

agricultural population forms a very large proportion of the total.⁴

The present author has, therefore, examined various types of densities of population - arithmetic, physiological and agricultural in different police stations with a view to getting a clear picture of agricultural situation obtaining in them. It is one of the most populous districts of West Bengal having 2872116 population according to 1971 census with an area of 3145 square kilometre giving rise to the arithmetic density of 913 persons per square kilometre. Arithmetic density varies widely in the district both below and above the district average. Highest arithmetic density occurs in Chandernagore police station having 7756 persons per square kilometre while the lowest one is possessed by Goghat Police Station. In general, highest population pressure exists in the highly industrial and unbanized eastern part of the district consisting of Mogra, Chinsurah, Chandernagore, Bhadreswar, Serampore, Uttarpara Police Station where this density varies from 3307 to 7756 persons per square kilometre. While the western part which is chiefly agricultural and rural in character shows comparatively low arithmetic density ranging from 441 to 963 persons per square kilometre.



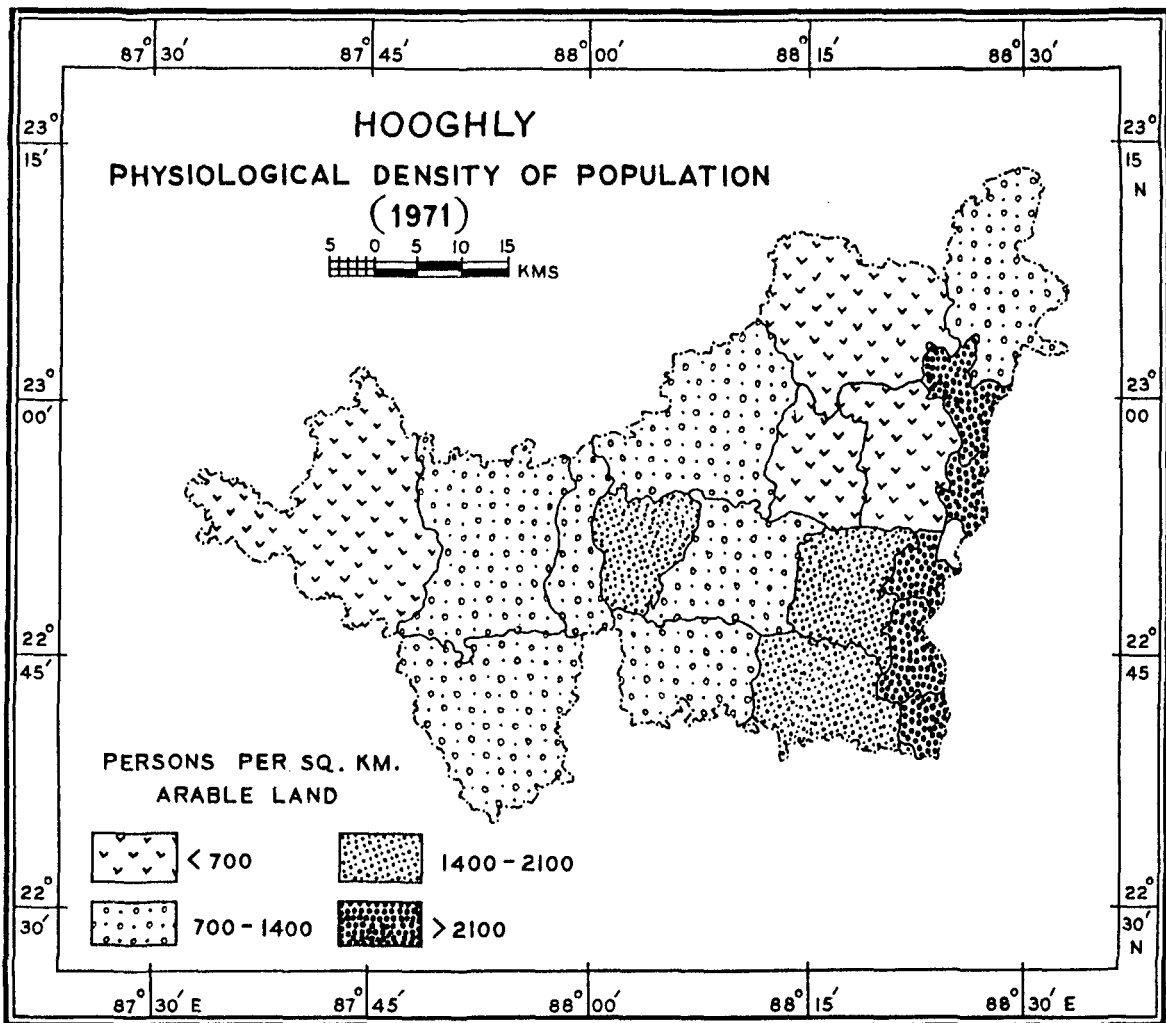


Fig. 6

The physiological density also varies to a great extent in different police stations of the district indicating varied degree of population pressure on cultivated area (Fig.6). It varies from 592 to 24442 persons per square kilometre. Uttarpara Police Station ranks highest in this respect having 24442 persons per square kilometre while lowest value occurs in Polba police station with 592 persons per square kilometre. Generally higher population pressure on cultivable land exists in the highly urbanized and industrial populous police stations namely, Mogra, Chinsurah, Bhadreswar, Serampore and Uttarpara. Excepting this sector comparatively higher physiological density occurs in Tarakeswar, Pursurah, Khanakul, Chanditala, Jangipara and Singur Police Stations indicating somewhat higher population pressure on cultivable land. The remaining police stations i.e., Balagar, Polba, Dadpur possess low physiological density indicating comparatively less population pressure on cultivable land.

Agricultural density gives a more clear picture about the actual agricultural situation in different police stations of the district (Fig.7a). This density varies from 144 to 323 agricultural workers per square kilometre. The highest figure of 323 occurs in Singur while the lowest one occurs in Goghat Police Station. This density is comparatively

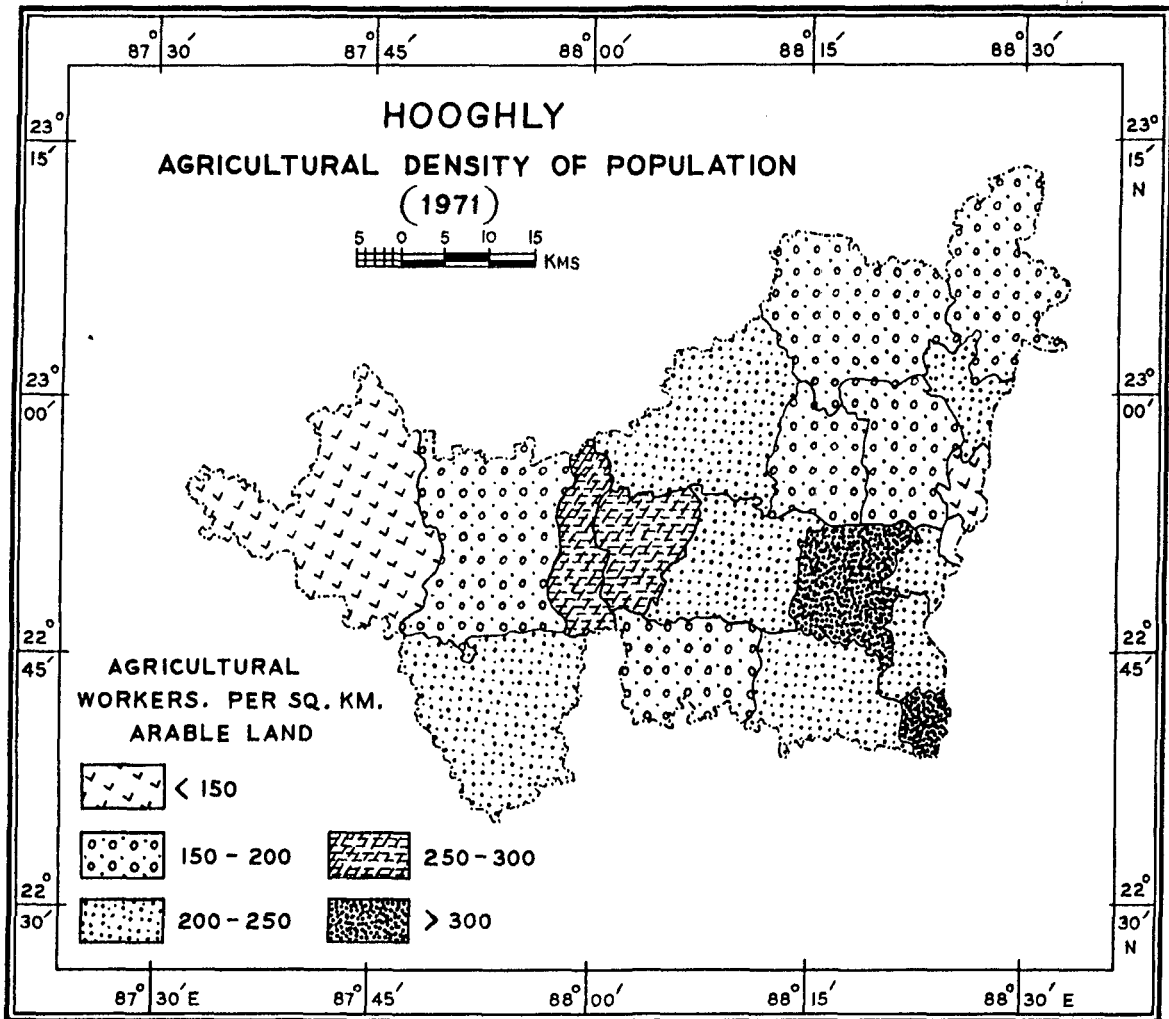


Fig. 7a

low in Goghat, Arambag, Panduah, Balagarah, Chinsurah, Dadpur, Polba and Jangipara police stations where it varies from 144 to 197 agricultural workers per square kilometre indicating that there is greater potentiality of agricultural activities. Whereas in other police stations namely Khanakul, Dhaniakhali, Mogra, Tarakeswar, Haripal, Singur, Bhadreswar, Serampore, Chanditala and Uttarpara Police Stations this density is comparatively high ranging from more than 200 to 323 agricultural workers per square kilometre suggesting less potentiality of agricultural activities.

The analysis of the three types of population densities viz. arithmetic, physiological and agricultural reveals that there is greater pressure of population on land. The arithmetic density is considerably high in all the police stations. The density is highest in the urbanised and industrialized eastern most part consisting of Chinsurah, Mogra, Singur, Bhadreswar, Chandernagore, Chanditala, Serampore and Uttarpara. Physiological and agricultural densities are higher in the remaining police stations which are not so urbanized and industrialized. Agriculture is the mainstay of the people of all these police stations.

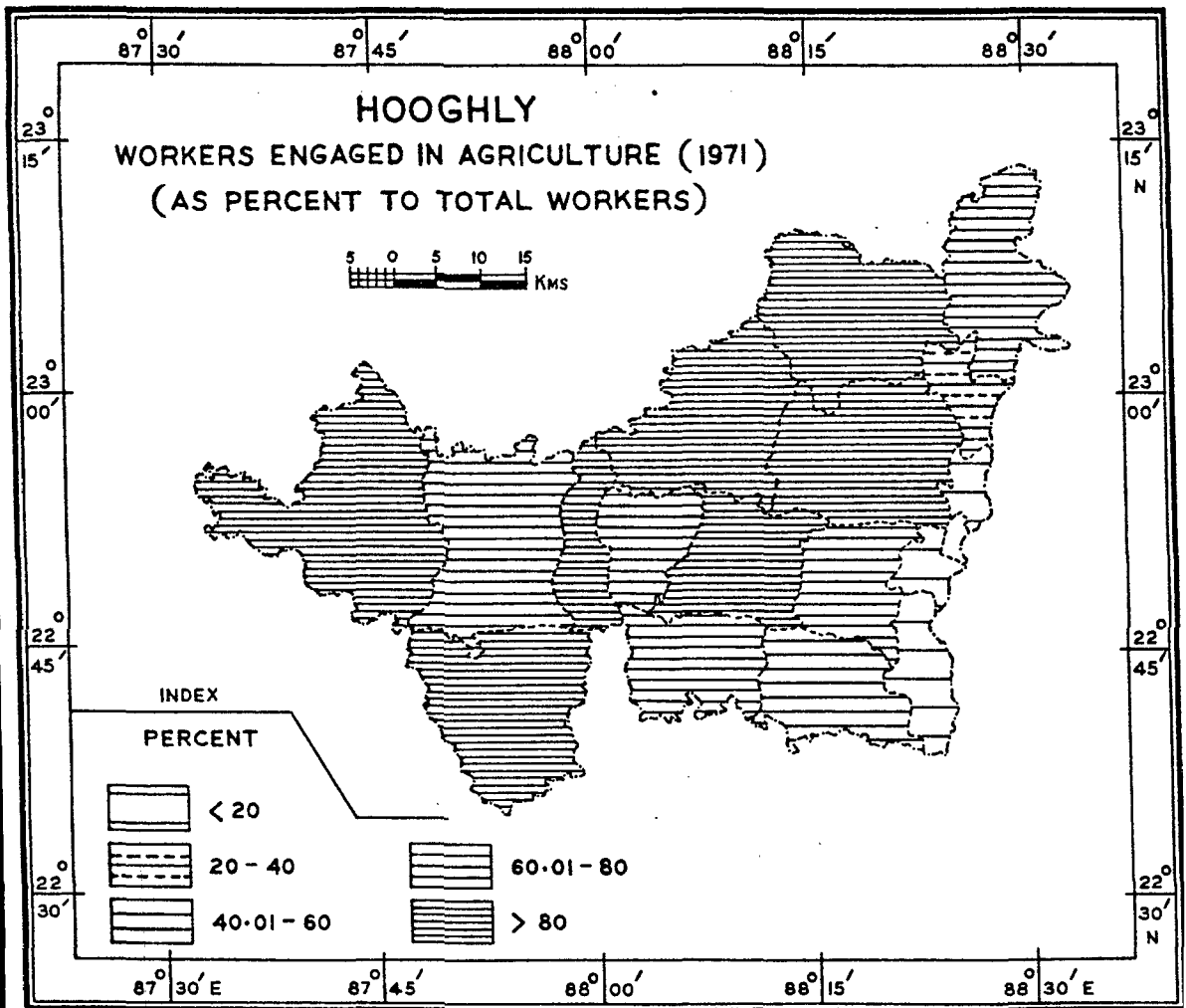


Fig. 7b

Table 3. Arithmetic, Physiological and Agricultural density in the district of Hooghly.

Name of Police Station	Arithmetic Density Persons/sq.km.	Physiological Density Persons/sq.km arable land	Agricultural Density Agricultural Population/sq.km cultivated area
Goghat	441	644	144
Arambagh	583	842	154
Khanakul	799	1078	237
Pursurah	963	1306	271
Dhaniakhali	628	810	206
Panduah	552	698	179
Balagarh	575	778	164
Mogra	1850	3143	243
Chinsurah	3546	7997	108
Polba	490	592	150
Dadpur	513	644	150
Tarakeswar	939	1427	271
Haripal	769	1139	247
Singur	1182	1911	323
Bhadreswar	3307	8076	247
Chandernagore	7756	-	-
Jangipara	732	1029	197
Chanditala	1322	1701	249
Serampore	4239	1329	244
Uttarpara	4972	24442	317

Source : Computed from : District Census Hand Book, Hooghly, 1971.

Remarks

The examination of the statistics relating to the occupation and landuse brings out the fact that agriculture is the mainstay of the people in all the police stations excepting Chandernagore which is totally urban in character and in some parts of Bhadreswar, Chinsurah, Serampore and Uttarpara police stations. Dominance of this activity can also be judged from the position of the district in the production of crops like potato, jute and boro paddy in West Bengal. Agricultural intensity is also considerably high as the continuous increase in the pressure on land brought about by the large increase in population which are revealed at every census can be abated only by more intensive cultivation of existing areas by taking advantage of agricultural research, by the use of chemical manures and by judicious selection of seeds.

References

1. District Census Hand Book, Hooghly, 1961 & 1971.
2. West Bengal District Gazetteers, Hooghly, 1972.
3. Basu, N. (1971). "Occupation Pattern", The Lead Bank Survey Report, Dt. Hooghly, U.C.O. Bank.
4. George, J., Jarold, M. & George A. Population Geography.