



**GROSS CROPPED AND DISTRIBUTION, SIZE OF RURAL
SETTLEMENTS: A CASE STUDY OF NASHIK DISTRICT IN
MAHARASHTRA**

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INTRODUCTION:

Gross cropped area (GCA) is the total area sown more than once in a particular year. On the other hand, the net sown area is the area sown with crops but it is counted only once. Gross cropped area also known as the total cropped area. The table no.1 shows tehsilwise the gross cropped area and number of rural settlements.

The percentage of gross cropped area is Maximum where irrigation facilities are more developed than other parts of the study region. Niphad, Sinnar, Nashik and Yeola tehsils have possessed the maximum percentage of gross cropped in the study region. On the other hand, hilly and tribal tehsils have limited gross cropped area i.e. below 50 percent. The remaining tehsils have a moderate proportion of gross cropped area ranges from 60 to 100 percent. These areas particularly belong to the drought-prone region.

Table No. 1

Nashik District Tehsils, Gross Cropped Area Percentage

Sr. No.	Tehsil	Gross Cropped Area Percentage	Rural Settlements
1	Surgana	42.15	190
2	Kalwan	80.84	152
3	Deola	97.32	50
4	Satana	87.24	170
5	Malegaon	80.19	143
6	Nandgaon	65.99	100
7	Chandwad	95.40	111
8	Dindori	95.20	158
9	Peth	46.25	145
10	Tryambkeshwar	46.61	125
11	Nashik	100.67	73
12	Igatpuri	66.48	117
13	Sinnar	106.83	130
14	Niphad	141.67	134
15	Yevla	106.51	124
	Nashik District	87.75	1922

Source: Compiled by Researcher

The table indicates the percentage of gross cropped area in the tehsils ranging from 42.15 percent for Surgana tehsil to 141.67 percent for Niphad tehsil. Hilly tehsils, on the whole, observed less gross cropped area while the rest of the tehsils displayed no particular trend.

For a clear understanding of the gross cropped area in the study region, the choropleth map has been prepared. For the analysis of the gross cropped area, four classes have been formed.

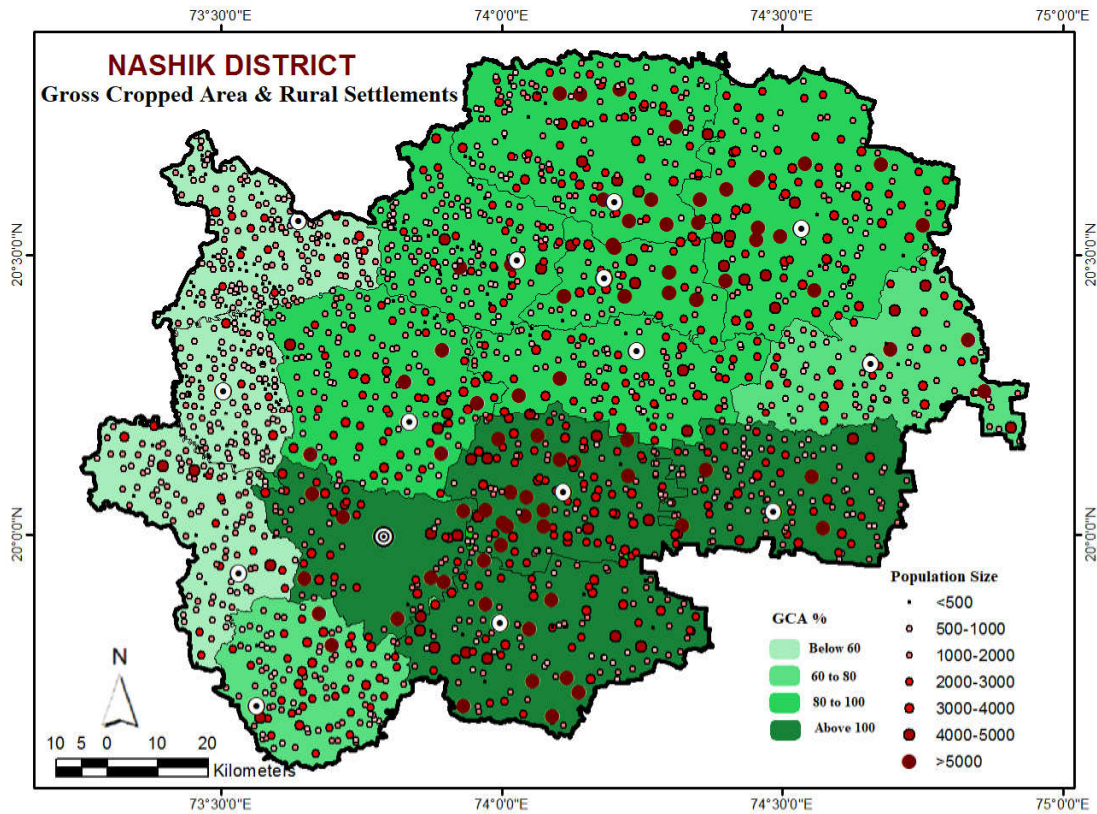


Fig. No. 1

Table No. 2

Gross Cropped Area Groups and Number of Rural Settlements

Sr. No.	Gross Cropped Area in Percentage	Tehsil	Area Covered Sq. Km.	% Area Percentage	No. of Rural Settlements	Rural Settlements Percentage
01	Below 60	Surgana, Peth, Tryambkeshwar	1002.46	08.62	460	23.93
02	60 to 80	Nandgaon, Igatpuri	1200.77	10.33	217	11.29
03	80 to 100	Kalwan, Deola, Satana, Malegaon, Chandwad, Dindori	5356.80	46.08	784	40.79
04	Above 100	Nashik, Sinnar, Niphad, Yevla	4065.25	34.97	461	23.99
		Total	11625.28	100.00	1922	100.00

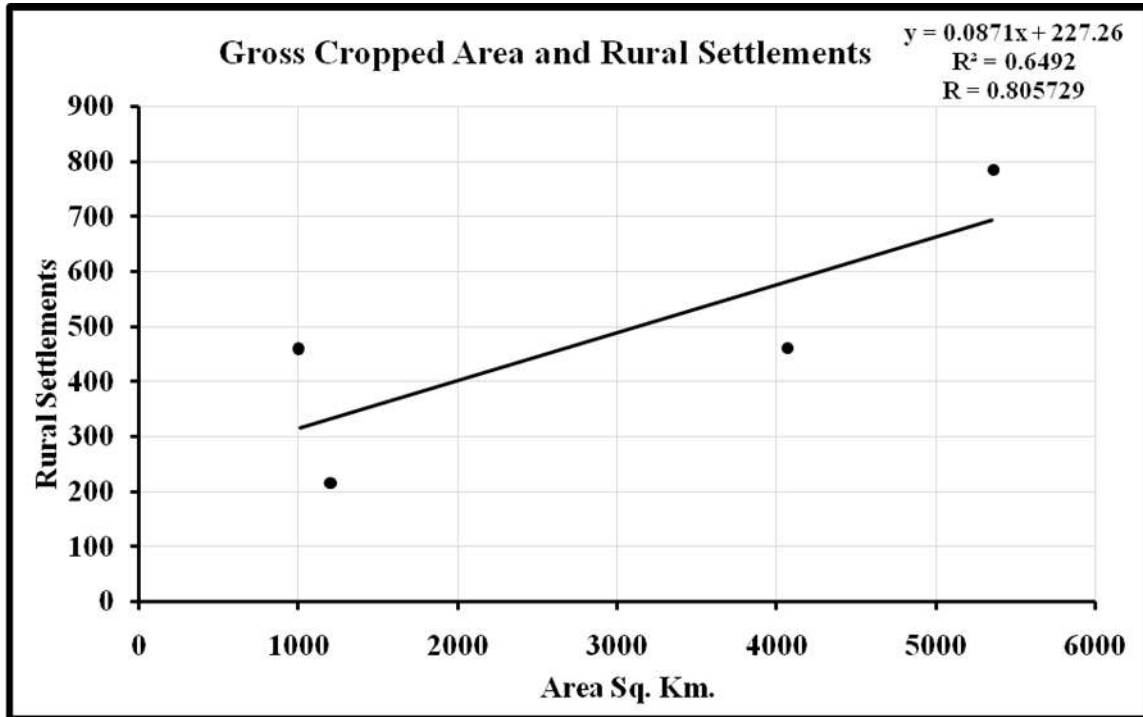
Source: Compiled by the Researcher

As indicated in Table 2 the first group of the gross cropped area, which is below 60 percent occupies about 1002.46 sq. km. area to the total cropped area of the study region. Surgana, Peth and Tryambkeshwar tehsils belong to this group. These tehsils are hilly and tribal, situated nearly one-fourth rural settlements of the total. In the second group of GCA, only two tehsils namely, Nandgaon and Igatpuri are included and they have only just more than one-tenth (i.e. 11.29 percent) rural settlements are developed. Kalwan, Deola, Satana, Malegaon, Chandwad and Dindori tehsils have possessed 80 to 100 percent GCA and they have the maximum number of rural settlements. i. e. 784 which accounts for two-fifths of the study region. On the other hand, the tehsils namely, Nashik, Sinnar, Yevla, and Niphad have occupied the largest gross-cropped area i. e. more than 100 percent. Because these tehsils are well irrigated, highly agricultural potential and accessible, attract population concentration leads to one-fourth rural settlements that are compact and large to very large in the study region.

The scatter diagram 1 exhibits that there is a positive relationship between the gross cropped area and the number of rural settlements in the study region. Pearson's Product-Moment Coefficient of correlation between these two variables represents the strongly high positive relationship, where 'r' stands for 0.8057. The regression of Y upon X has been determined as $y = 0.0871x + 227.26$ which indicates the change of the number of rural settlements following the gross cropped area in the study region.

For the generalization of the result, the Student's 't' test of significance of the correlation is applied.

The calculated value of 't' is 1.92 while the corresponding table values for 2 d.f. for 5% and 1% levels of significance are 4.30 and 9.92, respectively. Therefore, the calculated value for 't' is less than these table values, and hence, the null hypothesis that there is no significant correlation between the gross cropped area and the number of rural settlements is accepted. It means the gross cropped area is only the contributory factor in the distribution of rural settlements of the study region.



Graph No. 1

Table 3 reveals the classification of rural settlements according to their population size in respective groups of gross cropped area in the study region. The quantitative data regarding rural settlements is depicted in graph 2. From the graph, it can be concluded that areas which occupied limited GCA i. e. below 60 percent, have 460 rural settlements in which tiny and small size settlements are mainly found. In the second group (i. e. 60 to 80 percent), the least number of rural settlements are developed i. e. 217, accounting for only 11.29 percent. These settlements are predominantly small and medium-sized settlements. Tehsils belong to 80 to 100 percent gross cropped area are characterized by drought-prone areas coupled with irrigation facilities. In these tehsils, the maximum number of rural settlements i.e. 784, situated i. e. about 40.79 percent of the study region.

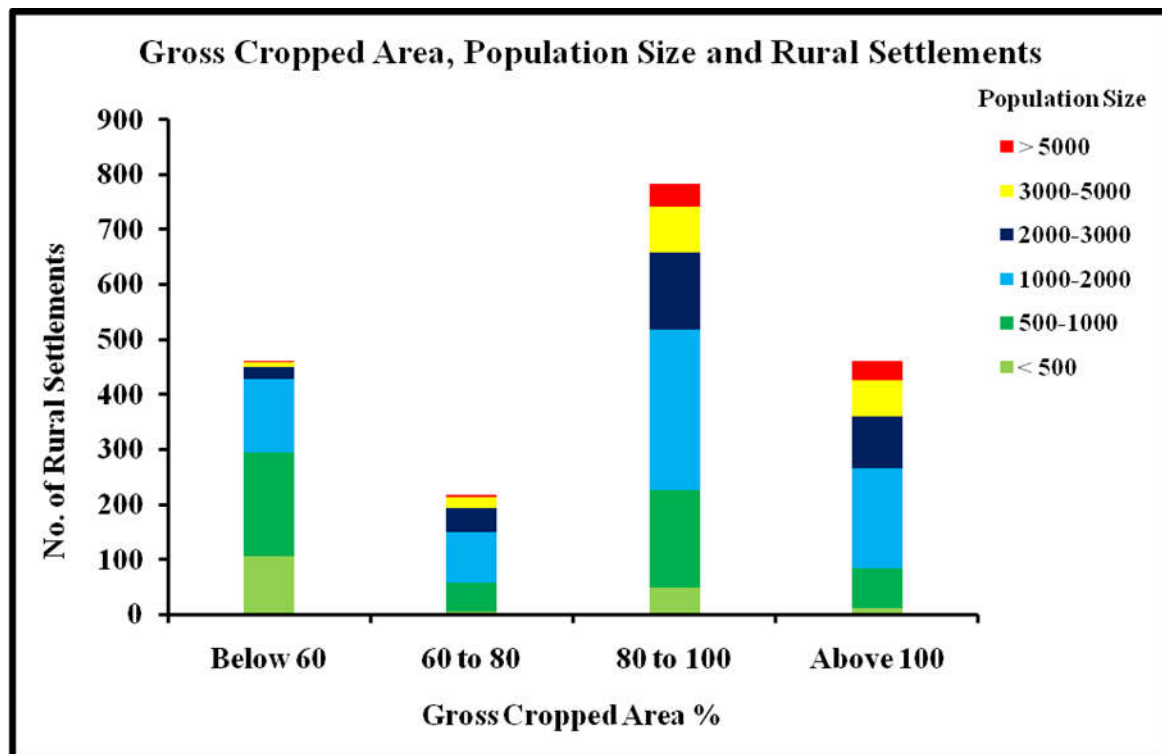
Nashik, Sinnar, Yevla, and Niphad tehsils belong to last category i. e. more than 100 percent GCA. These tehsils occupied fertile and well-irrigated land and hence intensive cultivation is possible. Onion and Grapes are cultivated on a commercial basis. These tehsils are agriculturally and economically

developed and attract large population concentration leads to the development of large size settlements.

Table No. 3
Gross Cropped Area and No. of Rural Settlements

Sr. No.	Area Under Gross Crop Percent	< 500	500-1000	1000-2000	2000-3000	3000-5000	> 5000	Total
1	Below 60	105	190	133	22	09	01	460
2	60 to 80	05	51	93	44	20	04	217
3	80 to 100	49	178	290	142	83	42	784
4	Above 100	11	73	182	94	66	35	461
	Total	170	492	698	302	178	82	1922

Source: Compiled by the Researcher



Graph No. 3

CONCLUSION:

Finally, it is observed that regions which have below 80 percent gross cropped area, suitable for small size settlements because these regions are relatively less developed and some deagglomerating factors like the maximum area under subsistence farming, rough terrain, semi-permanent groundwater table are operated leading to fragmented, semi-compact and small to medium size rural settlements. Whereas regions that have more than 80 percent GCA, favourable for medium, large, and very large size settlements. These parts occupied about 65 percent rural settlements, as these parts are fertile, well-irrigated, intensively cultivated, and agriculturally highly developed. And hence, due to the high income of farmers, the settlements are huddled together with infrastructurally well developed.

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