



A Study of Various Densities in Akola District

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Introduction:

For studying the pressure of population on Agricultural land various densities such as crude, physiological, agricultural and caloric densities are computed. If the density population is very high there would be abnormal pressure on land and if the land area is not sufficiently productive over population will result.

A region having higher man land ratio, at early stage of development will have unemployment problems. A higher density will indicate a lower standard of living and less mobility of labour. A high density of population will also imply greater economic activities and an obvious urge for an improved standard of living greater struggle for existence and continuous competition.

Study of Various Densities:

Study of various densities has been revealed in the table 1.

Table 1.

**Statement Showing different type of Densities in Akola District.
(Density per Square K.M.)**

Sr No	Name of Tahsil	1982-83			
		Crude Density	Physiology Density	Agricultura Density	Cloric Density
1	Akola	402	486	130	417
2	Barshitakli	109	171	77	309
3	Akot	192	228	141	263
4	Telhara	204	228	85	432
5	Murtizapur	163	206	151	369
6	Karanja	150	180	59	220
7.	Mangrulpir	134	182	158	364
8	Manora	127	192	81	377
9	Washim	168	208	237	189
10	Malegaon	109	212	87	311
11	Risod	144	172	71	257
12	Balapur	184	209	132	327
13	Patur	119	205	100	295
	District Total.	169	221	166	317



Sr. No.	Name of Tahsil	1996-97			
		Crude Density	Crude Density	Crude Density	Crude Density
1	Akola	506	506	506	506
2	Barshitakli	130	130	130	130
3	Akot	226	226	226	226
4	Telhara	233	233	233	233
5	Murtizapur	199	199	199	199
6	Karanja	183	183	183	183
7.	Mangrulpir	162	162	162	162
8	Manora	137	137	137	137
9	Washim	223	223	223	223
10	Malegaon	128	128	128	128
11	Risod	178	178	178	178
12	Balapur	211	211	211	211
13	Patur	176	176	176	176
	District Total.	207	207	207	207

Source:- Socio-Economics Abstract of Akola District 1982-83 and 1996-97.

I - Crude Density :-

Crude density shows general condition of population pressure on land. Crude density is a simple arithmetic ratio which is computed by dividing total population by total geographical area. The crude density of population in Akola district was 169 persons per square K.M. in 1982 while it was 207 persons per square K.M. in 1997. Below 150 crude density per square K.M. was observed in Barshitakli, Patur, Manora, Mangrulpir, Risod and Malegaon Tahsil. While 150 to 200 persons per Square K.M. was found in Akot, Washim, Murtizapur, Karanja and Balapur Tahsil. During the year 1982 the highest crude density was found in Akola Tahsil (402) and Telhara Tahsil (204) during the year 1982

Crude density was increased in every Tahsil during the period of investigation. Due to the increase in population in entire district. The crude density of population increased in every Tahsil. Below 200 persons per Square K.M. was occurred in Barshi Takli, Patur, Manora, Mangrulpir, Murtizapur, Karanja Risod, and Malegaon Tahsils. Where as 200 to 300 persons per Square K.M. were observed in Akot, Telhara, Washim and Balapur Tahsil during the year 1991. Above 500 crude density per Square K.M. was found in Akola Tahsil (506) during the year 1997.

II. Physiological Density:-

Physiological density, or man soil density is calculated by dividing total population by total net shown area through its gives rather a more concrete picture. It again fails to convey the picture of population pressure. Physiological density is calculated by the following formula.

$$\text{Physiological Density} = \frac{\text{Total Population.}}{\text{Total net shown area.}} \times 100$$

(100 Hectare = 1 Sq.K.M.)

Where 100 is used as hectares to convert total physiological density in to Square K.M. in 1982. The physiological density in Akola District was 221 persons per Square K.M. and it was 258 persons per Square K.M. in 1997. Below 200 physiological density was noticed in Manora Tahsil, while 200 to 250 physiological density per sq.K.M. was found in Barshitakli.

Patur, Telhara, Washim, Malegaon, Murtizapur, Karanja, Risod, Balapur, Tahsils in 1997 above 500 physiological density per Square K.M. was observed in Akola Tahsil in 1997. Physiological density is increased in every Tahsils. In 1982 Physiological density was observed below 200 persons per Square K.M. is Barshitakli, Manora, Mangrulpir, Karanja, Risod, Tahsils while 200 to 250 persons physiological density per Square K.M. is observed in Patur, Akot, Talhara, Washim, Murtizapur, Malegaon and Balapur Tahsil and highest physiological density per Square K.M. is observed in Akola Tahsil in 1982 (486). The population pressure on net sown area is increased in every Tahsil. It shows that in all Tahsils there is heavy burden on soil.

III Agricultural Density :-

In order to assess the agricultural development in the study region, the study of agricultural density pattern is necessary. Agricultural density has been worked out by using the following formula.

$$\text{Agricultural Density} = \frac{\text{Total Agricultural Population}}{\text{(Agricultural labours + cultivators)}} \times 100$$

(persons per Square K.M.)

Where 100 is used as hectares to convert total agricultural density per Square K.M. In the areas where the agricultural density is more the people try to increase the production by adopting new techniques and putting more in puts into land and thus the transformation of agriculture become a necessity. Once the process of transformation beings and prosperity shown signs it attracts more rural population and more transformation take place.

Agricultural density is a better approach to analyse land use in agricultural countries where heavy reliance is placed on farming. The cultivated area takes no accurate of area sown more than once, but does include fallow land. During 1982 the highest agricultural density 237 persons per Square K.M. were found in Washim Tahsil. While the lowest agricultural density 77 persons per Square K.M. were noticed in Barshitakli Tahsil. The highest agricultural density 109 was recorded in Mangrulpir Tahsil whereas the lowest agricultural density 69 persons per Square K.M. were occurred in Karanja Tahsil during the period 1997.

IV Caloric Density :-

Man and food crop ratio Caloric density of population is calculated by dividing total rural population by total food cropped area. Table indicates that below 300 caloric density was recorded in Patur, Akot, Washim, Karanja, Risod Tahsils. Whereas 300 to 400 caloric density was observed in Barshitakli, Manora, Mangrulpir, Murtizaapur, Malegaon and Balapur Tahsils in 1982.



High caloric density was observed (417) persons per Square K.M. in Akola Tahsil and 431 persons per Square K.M. in Telhara Tahsils.

While moderate agricultural density 400 to 450 persons per Square K.M. were observed in Telhara, Murtizapur, Balapur Tahsils in 1997. Highest caloric density was observed in Akola Tahsils (517) persons per Square K.M. in 1997. Low density below 400 persons per Square K.M. was occurred in Akot, Washim, Manora, Mangrulpir, Karanja, Risod, Malegaon Tahsil in 1997.

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