



CEREAL CROPS CONCENTRATION IN KOLHAPUR DISTRICT: A GEOGRAPHICAL ANALYSIS

Dr. S. B. Gaikwad

Asso. Professor & Head, Deptt. of Geography, Miraj Mahavidyalay Miraj.

A.S. Magdum

Research Students of Department of Geography, Shivaji University, Kolhapur.

ABSTRACT

Crop concentration is the best way to explain which area is well suitable for particular type of crop growth and increase their production. It gives accurate and brief information about area come under particular crop in large quantity and because of that, It helps to increase the land under that particular crop for farmers. Present investigation reveals that the geographical analysis of cereal crops concentration in Kolhapur district. The year 2000-01 and 2010-11 have consider for the study. The entire study constructed on the secondary data. Tehsil have selected as an aerial unit and only cereals have been selected for the present investigation. The Bhatia's location quotient method have used for the calculation of crop concentration and data has been represented by Choropleth maps. The high concentration is observed in southern part of Kolhapur district in both the years. The low land holding capacity, benefit of weekly market centers, unemployment ratio are the basic reasons affected on the concentration of cereals.

Keywords – Crop concentration, Landscape, Land holding capacity, Regionalisation.

INTRODUCTION

Agriculture and It's activities are basic needs of all human beings in India and as well as in the world. The country like India, where population is very large and most of the peoples are depending on agriculture, Kolhapur district of Maharashtra is one of them. For the fulfilment of their basic needs proper planning must be required (More, 1995). The Kolhapur district having variety in natural and cultural landscape. This is dominated by agricultural activities such as eastern tahsils are especially growing the cash crops and southern are still growing the food crops due to topography, climate, pedology and hydrological conditions. Recently it is also emerging as industrial zone. Due to this variation the study of crops regionalisation is essential. It includes crop combination, crop diversification and crop concentration.

Crop concentration means the dissimilarities in the density of any crop in an area at that point of time (Pawar, 1989). In the ideal agro climatic conditions it has the tendency to have the high concentration of particular crops. When the geographical conditions become less conducive the crop density declines. For example, the high concentration of wheat is observed in the regions like U.P and Punjab due to the use of HYV seeds, high irrigation facilities, Literacy among the farmers and low wages of employment (Singh & Dhillon, 1984).

Delineation of crop concentration region helps to make sure about the areas, where the particular crop grows well even with the help of minimum inputs. So it has the great

significance for the agricultural development and planning. For the present study crop concentration of cereals in Kolhapur district have been considered. These are Rice, Wheat, Jowar, Bajra, Maize, Nachani, Rala, Vari, Saava and other cereals.

STUDY AREA

Kolhapur district is located in the eastern slope of western Ghat in south Maharashtra. The district lies between 15° 43’ North to 17° 17’ North latitude and 73° 40’ East to 74° 42’ East longitude. It has occupied 7685 sq km. area of Maharashtra. The Krishna, Panchganga, Warna, Dudhaganga, these are the main rivers which plays vital role in this region. The Kumbhi, Kasari, Bhogavati, Tulsi, these are sub rivers drained the Kolhapur district. There are twelve tahsils in Kolhapur district. Eastern part of the district such as Hatkanangale, Karveer, Kagal, Gadhinglaj and Shirol talukas are physiographically plain region with low rainfall. Shahuwadi, Gaganbavada, Panhala, Bhudargad, Ajara, Chandagad and Radhanagari talukas are lies on the hilly area of western ghat with high rainfall. The average temperature of the district lies between 25°C to 30°C. It helps for growth of variety of food and non-food crops.

OBJECTIVES

- To analyse the concentration of cereals in the region.

METHODOLOGY

For the present study secondary data have been applied which is published in Agricultural Statistical Abstract of Kolhapur district during 2000-01 and 2010-11. Tehsils have selected as an aerial unit. Only cereals have been considered for the present investigation. Bhatia’s Location Quotient Method has been used for the calculation of cereals concentration. Whereas, calculated data depicted by Choropleth maps.

$$\begin{aligned}
 \text{Index of determining} & \quad \text{Area of cereal crops in} & \quad \text{Area of cereal crop in} \\
 \text{Concentration of cereal crops} = & \quad \text{Component areal unit (tehsil)} & \quad \text{entire district} \\
 & \quad \text{-----} & \quad \text{-----} \\
 & \quad \times & \\
 & \quad \text{Area of total food crops in} & \quad \text{Area of total food crops in} \\
 & \quad \text{The component areal unit (tehsil)} & \quad \text{the entire district}
 \end{aligned}$$

Table 1 : Tehsilwise Crop Combination of Cereal Crops

Sr.No.	Tehsil Name	2000-01	2010-11	Change
1	Karveer	0.26	0.20	-0.06
2	Shirol	0.14	0.10	-0.04
3	Hatkanangle	0.16	0.37	+0.21
4	Kagal	0.26	0.15	-0.11
5	Ajra	0.36	0.35	-0.01
6	Gadhinglaj	0.35	0.29	-0.06
7	Chandgad	0.29	0.41	+0.12
8	Panhala	0.39	0.38	-0.01
9	Shahuwadi	0.31	0.47	+0.16
10	Radhanagri	0.33	0.28	-0.05
11	Bhudargad	0.36	0.35	-0.01
12	Gagan Bavda	0.40	0.34	-0.06

Source: Calculated by Authors.

DISCUSSION

For the present study we have make three major categories of cereal crop concentration of Kolhapur district i.e. High, Moderate and Low with index value 0.30, 0.20 to 0.30 and 0.10 to 0.20 respectively.

Base Year: 2000-01

1. High Concentration:

There are seven tehsils which are part of this group such as Ajara, Gadhinglaj, Panhala, Shahuwadi, Radhanagari, Bhudargad and Gaganbavada. In which Gaganbavada (0.41) tehsil has highest cereal crop concentration.

2. Moderate Concentration:

In this category Karveer, Kagal and Chandagad tehsils are come under with index value 0.26, 0.26 and 0.29 per cent respectively.

3. Low Concentration:

There are only two tahsils including in this group such as Hatkangale and Shirol in which Shirol tehsil has lowest cereals concentration due to most of land dedicated to long time land holding crops like Sugarcane (Fig.1.A.).

Reference Year: 2010-11

1. High Concentration:

Ajara, Panhala, Shahuwadi, Bhudargad, Gaganbavada has high cereals concentration but Hatkangale which is in low group, Chandgad in moderate in last decade come under this category .Among these tehsils the Shahuwadi tehsil has highest area under cereal crops in this year.

2. Moderate Concentration:

The Karveer, Gadhinglaj and Radhanagari tehsils are including in this group. While the Gadhinglaj and Radhangari tehsils is in high concentration group in last decade. Land under cereals in these tehsils decreases due to low land holding capacity, benefit of weekly market centers, low production cost and easy work.

3. Low Concentration:

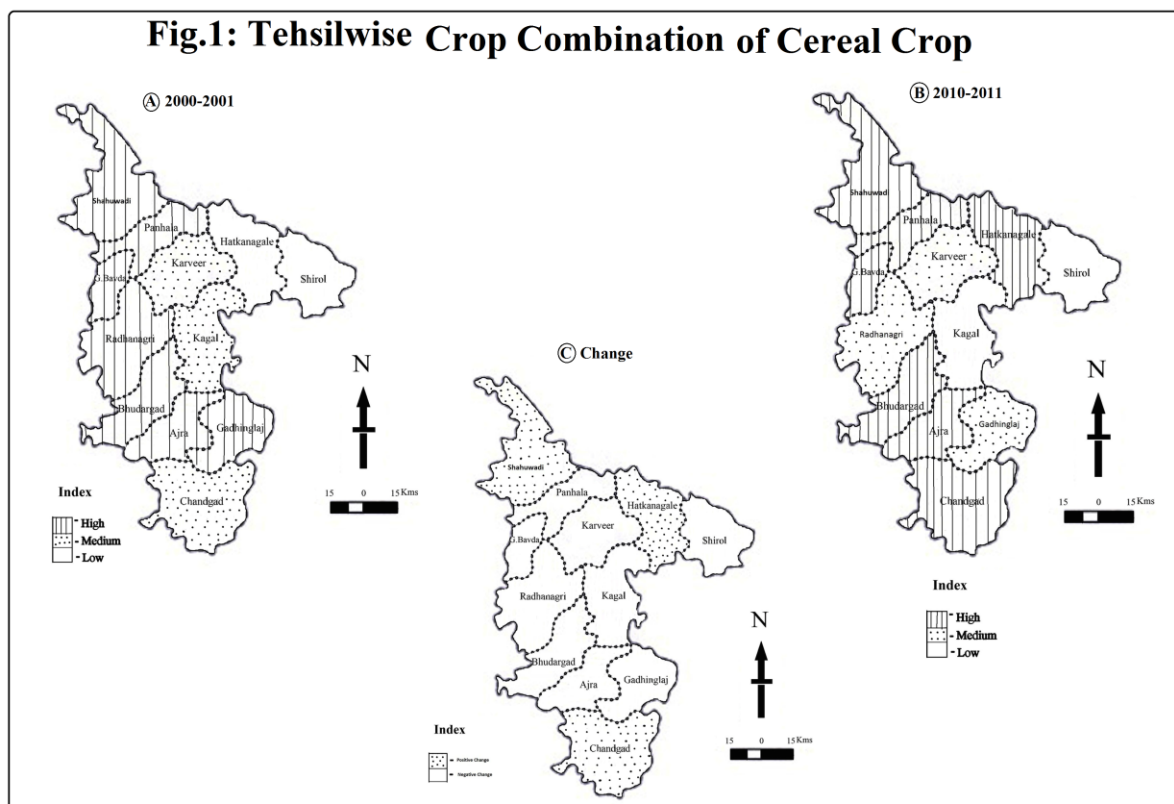
The Shirol tehsil is again including in this group but Kagal tehsil which is in moderate group in last decade also including in this group. Because of increase trend of farmers towards dairy farming and making bakery products.

From above discussion we will come to know that, the Eastern and Southern part of the district including Shahuwadi, Panhala, Gagan bavada, Radhanagari, Bhudargad, Ajara and Chandagad had high cereals concentration due to illiteracy ratio, Low land holding capacity, uneven topography and nearest weekly market centres. While Western part of the district including karveer, has moderate to lowest cereals concentration because of large land holding, used advance technologies to practice other crops such as cash crops and other non-food crops.

CHANGE OF CONCENTRATION

Each and every region has different crop concentration because of factors affecting on that particular region and on particular crops growth. Cereal crops are one of them.

According to table No.1 the study area done on the twelve tehsils but only three tehsils had positive change from the last ten years .i.e. Hatakangale +0.21 due to the heavy flood crops like Sugarcane, fruit crops are started affecting. So farmers choose the growing crops where less investment and period involved for their entire growth etc. Chandagad + 0.12 due to use of HYV seeds and Shahuwadi +0.16 due to nearest weekly market like Kolhapur city. While remaining all tehsils of the district goes under negative change (Fig.1.C.).



CONCLUSION

Only three tehsils have positive change in the year of 2000-01 and 2010-11. Remaining all the tehsils are having negative change or decrease the land under cereals in that particular tehsils. This is because of various factors affect on their entire growth of crops. Such are Climate, Topography, Soci-Economical, Hydrological, and Technological factors.

REFERENCES

1. More, K.S. (1995): Studies in Agricultural Land Use, Himalaya Publishing House, Bombay, p. 43.
2. Pawar, C.T. (1989): Impact of Irrigation – A Regional Perspective, Himalaya Publishing House, Bombay.
3. Singh, Jasbir & Dhillon, S.S. (1984): Agricultural Geography, Tata-McGraw Hill Publishing company, New Delhi, p. 81.
4. Weaver, J.C. (1954): Crop Combination Regions in Middle West, Geographical Review, Vol. XLIV, pp. 175-200.