

Crop Combination in Sangli District (Maharashtra): A Geographical Analysis

Dr. D. G. Gatade: Head And Associate Professor ,Dept Of Geography, -A.S.C.College Ramanandnager ,Sangli.

Shri. N. S. Pol: Dept Of Geography,P.V.P.College Kavathe Mahankal,Sangli.

Abstract

Agriculture being a basic activity plays a vital role in Indian economy, but still it gambles with the monsoon, causes high fluctuations in production. Inadequate rainfall of monsoon and frequent drought conditions hampered the development of agriculture, particularly, in drought prone area of Maharashtra.

In this paper the Sangli district, which falls, in drought prone area of Maharashtra is selected for study. The major objective of this paper is to find out and analyze the crop combination region. Rafiulha's technique, which is known as 'Maximum positive deviation method, has used to identify the crop combinations. In the eastern part of study area, where generally the rain feed crops are the major crops, cropping pattern is one crop to three-crop combination.

Introduction

In Indian context, agricultural is a basic activity, which accounts one fourth of the National income and provides employment to 65% of working population, and still Indian agriculture gambles with the monsoon as inadequate water resources irrigate about 40% area. The Indian agricultural is totally depending upon the southwest monsoon, which is uncertain, causes high fluctuations in the agricultural production.

Though the state of Maharashtra is known as a most urbanized & having remarkable development in industrial sector, yet the agricultural activity remains fundamental one. However inadequate rainfall of monsoon and frequent drought conditions hampered the development of agriculture, particularly in the drought prone areas of Maharashtra.

The Sangli district falls in rain shadow zone of the Maharashtra, where agricultural as well as animal life is mostly affected by the frequent occurrence of the droughts. Agriculture is the main economic activity of this region.

The Study Region.

Sangli district is one of the southern most districts of Maharashtra state. It is situated between 16⁰45' and 17⁰33' north latitude and the 73⁰41' and 75⁰41' east longitude. It is bounded by Solapur and Satara districts in the north, Bijapur district in the east, Belgaum district in the south and The Ratnagiri district to the West {Fig. 1}. Total area of the district is 8572 Sq. km. The district headquarter is Sangli. 731 villages and 8 towns are in the district. 629200 hectares of area is under agriculture in Sangli district and support population of 2581835 in 2001. Administratively the Sangli district is divided into ten tehsils namely Miraj, Walva, Palus, Shirala, KavatheMahankal, Khanapur, Kadegaon, Tasgaon, Jath and Atpadi.

Objectives:

Main objective of the paper is to find out and analyse the crop combination of study region.

Research Methodology

The primary and secondary data have been collected from different sources. The primary data is collected through interview technique and discussions method Secondary data is collected from published and unpublished reports of Government and Non-Government Organizations. The tehsil is considered as areal unit of investigation. Percentage of area under various crops in both *Kharif* and *Rubbi* seasons is considered. Agricultural land use information on cadastral map, land record and field notes are also used for the study.

To understand the crop combination of the study area, following Raffiulla's method has been used.

$$d = \sqrt{\frac{\sum Dp^2 + \sum Dn^2}{N^2}}$$

Where

d = deviation

Dp = is the positive differences

Dn = is the negative differences from the median value of the theoretical curve value

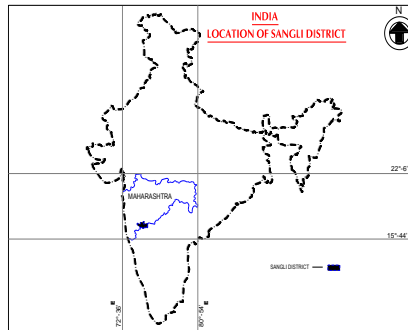
n = No. of crops or functions.

Information and results are presented through Tables and appropriate diagrams. obtained results by using the Rafiulla's method are also shown in Table 1 and Fig. 2.

Analysis:

Soyabean is a dominant kharif crop. Soyabean is cash crop and important oil seeds. In this area due to good quality of soil, development of irrigation facilities, and sufficient annual rainfall farmers chosen and grown the soyabean crop. In the remaining part of Sangli district (in Jath, Atpadi, Kavathe Mahankal, Khanapur and some part of Tasgaon and Kadegaon tehsils), due to low and inadequate rainfall ,poor quality of soil and very low irrigation facilities total agriculture is dependent on south west monsoon and hence farmers grow the rain feed and traditional crops like Kharif Jowar, Rabbi Jowar, Bajara, Maize, Fodder, Tur, Gram and other pulses .

A) Mono Crop Region: Miraj, Walva, Palus, Shirala, Kavathe Mahankal and Khanapur tehsils have one crop region. Middle and western part of the study region has soyabean crop is dominant particularly Miraj (21%) Walva (37%) palus (28%) and shirala (24%) land under soyabean crop. In dry zone part of the study region particularly Kavathe Mahankal (37%) land under Rabbi Jowar and Khanapur (22%) land under Bajara crop, because farmer has cultivated mainly rain feed and traditional crop particularly Rabbi Jowar and Bajara. B) Two crop region:



Location of Sangli District.

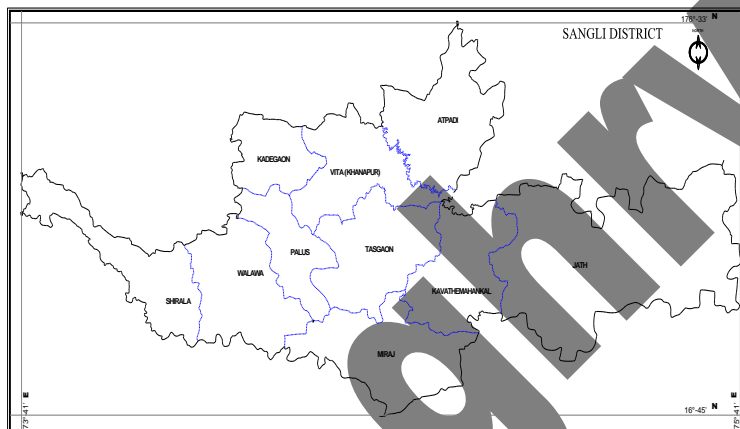


Fig. 1

In this study region two tehsil (Kadegaon and Tasgaon)have two-crop combination region. In Kadegaon tahsil Kharif Jowar(46%), and soyabean(21%) are the important crops.. Tasgaon tehsil has Kharif Jowar (60%), soyabean(11%) crops.

C) Three crop region:

The Jath and Atpadi tehsil have identified as three crop combination region. In Jath Rabbi Jowar (62%), bajara(25%), and Wheat (4%) are important crops.In Atpadi tahsil Bajara (48%) Rabbi Jowar(39%) Other pulses(4%) are dominant rain feed crops.

After the application of Rafiulhas maximum positive deviation method for understanding cropping pattern of the region it comes to know that six tehsil of the study area identified for one crop or monoculture region, two tehsil identified two crop combinations and two tehsil has three crop combination region(Table 1& Fig.2)

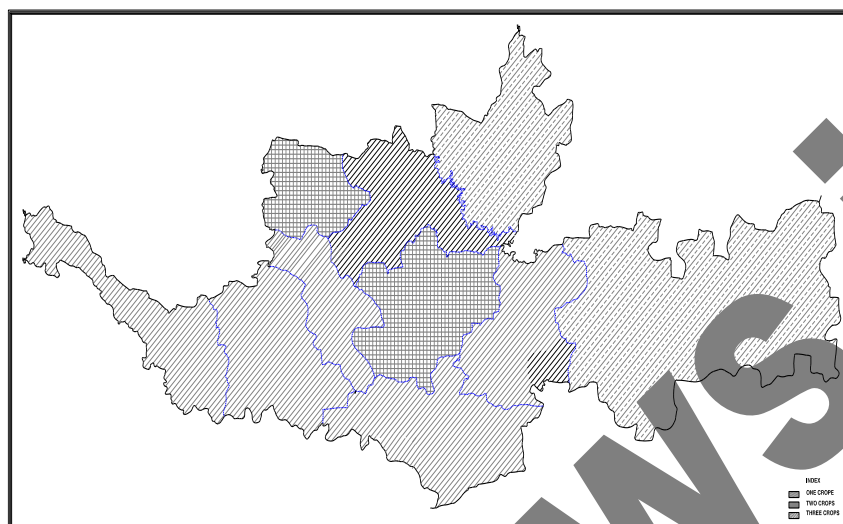


Fig. 2

Table 1

The Crop Combination in Sangli District

Sr No.	Name of Tehsil	No of crop combination.	Crops
1	Miraj	Monoculture	S
2	Walva	Monoculture	S
3	Palus	Monoculture	S
4	Shirala	Monoculture	S
5	Kavathe Mahankal	Monoculture	R
6	Khanapur	Monoculture	B
7	Kadegaon	Two Crop	SK
8	Tasgaon	Two Crop	SK
9	Jath	Three Crop	RBW
10	Atpadi	Three Crop	BRP.

Abbreviations – S= Soybean, B = Bajara, R = Rabi Jowar, K = Kharif Jowar,
P= Other Pulses, W= Wheat

Conclusions:

1. Natural, socio-economic and other technological factors affect the cropping Pattern of any area.
2. The Sangli district falls in drought prone area which affects the cropping pattern in resulting the one crop to three crop combination.
3. Generally, the rain fed crops are the major crops in eastern dry zone of study area i.e. Kharif Jowar, Rubbi Jowar.Bajara, and other pulses.
4. The cropping pattern of this area hampered frequently through the frequent drought conditions.
5. High pe rcent of the cultivated land is under irrigation by means of wells, tube wells, tank irrigation and canal. Specifically middle and western part of the study area and soyabean or sugar cane is dominant crop.

References:

1. Arora R. C. (1976) Development of Agriculture and Allied Sector, S. Chand and Co., New Delhi
2. Arunachalam B.[1967] Maharashtra-A Study in Physical and Regional Setting and Resource Development, A R Seth Publication,Bombay
3. Bhatia S.S. (1965) Pattern of Crop Concentration and Diversification in India, Economic Geography, Vol. 41, No. 1.
4. B.B. Tripathi & C.B. Mamoria [1989] – Agricultural Problems of India.
5. Census of India (2001) District Census Hand Book, Sangli, Bombay.
6. Govt. of Maharashtra (1984) Report of Fact-Finding Committee for Survey of Scarcity Area of Maharashtra State
7. Govt. of Maharashtra (2001) Report of Fact Finding Committee for Survey of Scarcity Area of Maharashtra State, vol – I.
8. Government of Maharashtra (1969) Maharashtra State Gazetteer, Sangli District.
9. Pol N.S. (2008) Agricultural Problems and Prospects in Drought Prone Area : A Case Study of Kavathe-Mahankal, Dist. Sangli.Unpublished M. Phil Dissertation
10. Pawar C.T. (1989) Impact of Irrigation: A Regional Perspective ,Himaiaya Publishing House, Bombay.
11. Singh, Jasbir (1974) An agricultural Atlas of India. A Geographical Analysis, Kurukshetra ,Vishal Publication, Kurukshetra.
12. Singh, Jasbir & S.S. Dhillon (1984) Agricultural Geography, Tata Mcgraw Hill Publishing Co. Ltd., New Delhi, 2nd Edition.

13. Singh R. L. (1975) New Perspective in Agricultural Geography, National Geography, Vol. II.
14. Government of Maharashtra (2005-2006) Socio- Economic Review and District Statistical Abstract of Sangli.

www.ighrws.in