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## **Crop Combination in Solapur District 2011: A Geographical Analysis**

**S.M. Mulani**

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Taluka-Mohol, Dist-Solapur.

### **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 Solapur 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.*

### **KEY WORDS:**

crop combination.

### **INTRODUCTION**

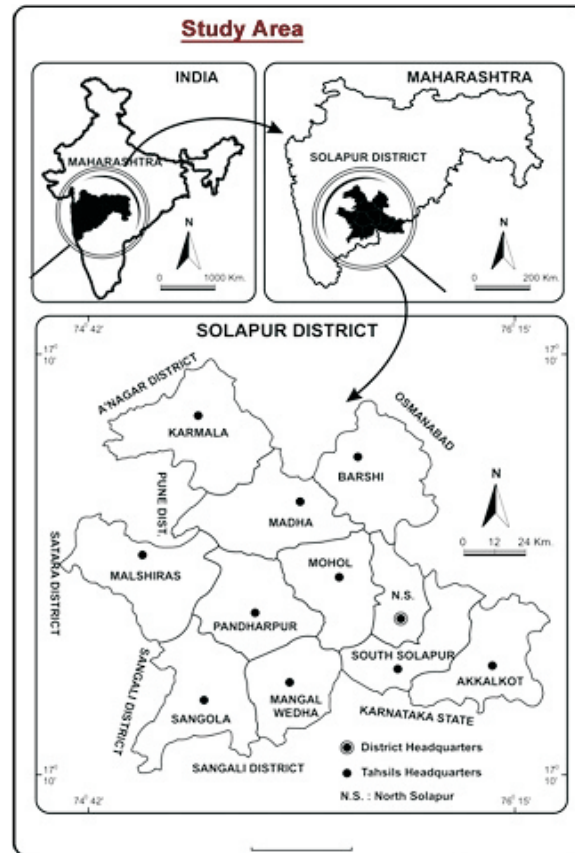
In Indian context, agricultural is a basic activity, which accounts one fourth of the National income and provides employment to 65% of working population, and still Indian agriculture gambles with the monsoon as inadequate water resources irrigate about 40% area. The Indian agricultural is totally depending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

### **STUDY REGION.**

Solapur district is one of the most important district of Maharashtra states both in terms and area and population. It is located between 17010' and 18032' North latitudes and 74042' and 76015' East longitudes, occupying an area of 14895 square kilometre of Southern Maharashtra. Administratively it consists of 11 tahsils (map no. 1) and the region present diversified physiographic with hilly region in the North and South western parts of district. Almost 70 percent geographical area of district is occupied by the plateau, 20 percent occupied by the plain region and remaining hilly region. Solapur district entirely lies in Bhima-Sina river basin. The monsoon climate dominates the region with

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Map No.1



variation in heat and cold. The region receives rainfall mainly from south-west monsoon averaging between 500 millimeters in the west, 700 millimeters in the east. The region belongs to drought prone areas of Maharashtra state, which has experienced frequent drought conditions. The soils vary from shallow gray in the hilly areas of the district through deep medium black alluvial soils of the river plain in the centre.

#### OBJECTIVES:

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

#### RESEARCH METHODOLOGY

The 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 a real 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.

Where

$d$  = deviation

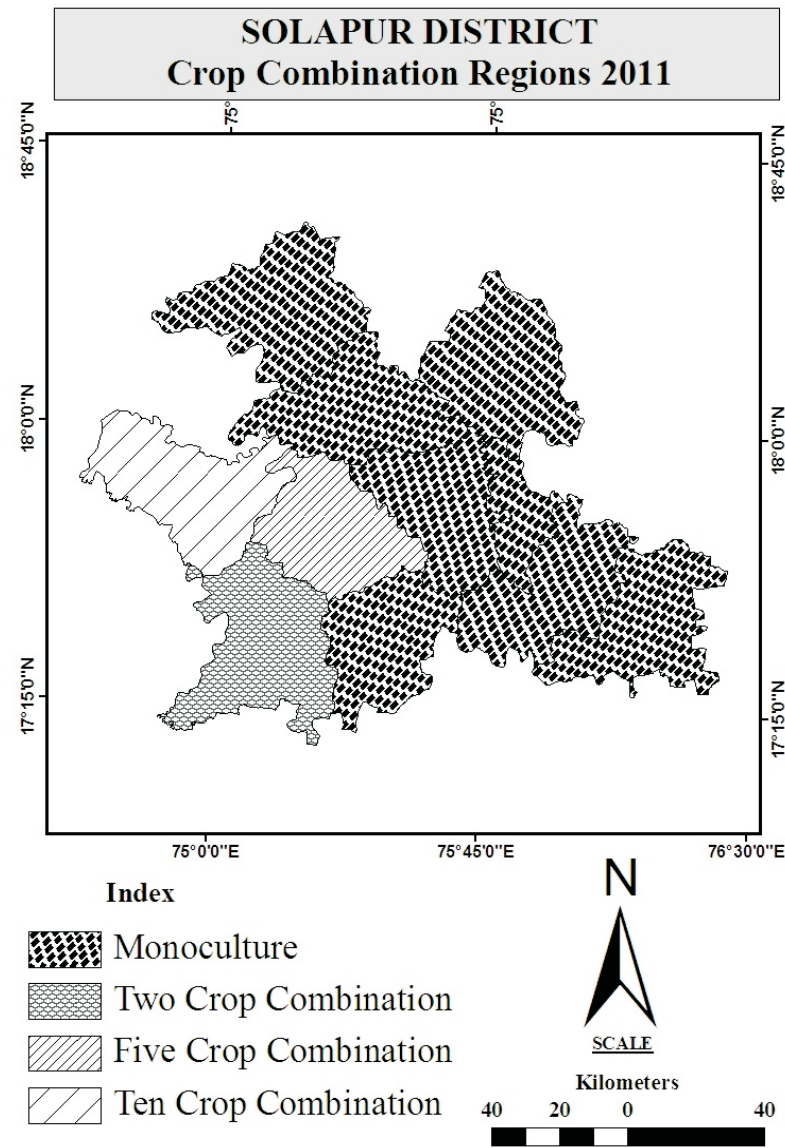
$D_p$  = is the positive differences

$D_n$  = 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 Raffiulla's method are also shown in Table 1 and Map No 2.

Crop Combinations	No. of Taluka	Talukas	Crops Combination
<b>Monoculture</b>	<b>08</b>	North Solapur	Jawar
		Barshi	Jawar
		Akkalkot	Jawar
		South Solapur	Jawar
		Mohol	Jawar
		Mangelwedha	Jawar
		Karmala	Jawar
		Madha	Jawar
<b>2 crop comb.</b>	<b>01</b>	Sangola	Jawar, Maize
<b>5 crop comb.</b>	<b>01</b>	Pandharpur	Ma, Ja, Wh, Fr, Su
<b>10 crop com.</b>	<b>01</b>	Malshiras	Ja, Su, Ba, Wh, Ma, Gro, Tu, Ka, Fr, Ve,



**CROPCOMBINATIONS FOR YEAR 2011****1.Monoculture (One Crop Combination)**

Eight tahsils have the monoculture of Jawar crop covering considerable (above 70 %) cultivated area of the region in the reference year 2011. The irregular rainfall the receptivity of black soil and lack of irrigation facilities have also led to the cultivation of Jawar, which is generally drought resistant crop in North Solapur, Barshi, Mangalwedha, Karmala, South Solapur, Mohol and Madha tahsils of Solapur District.

**2.Two crop Combinations**

In the year 2011, Sangola taluka is marked with two crop combination i.e. Jawar, maize. Sangola taluka lies at the south part of Solapur district, where rainfall occurs 330 mm. Soil is light black to shallow due to Rough nature and dry climate.

**3.Five crop Combinations**

In the year 2011, Pandharpur taluka is marked with Five crop combination i.e. Jawar, maize, Wheat, fruits and Sugarcane. Sangola taluka lies at the south part of Solapur district, where rainfall occurs 330 mm. Soil is light black to shallow, due to dry climate.

**4.Ten crop combination**

There is one taluka that comes under this combination shows ten crop combinations as per the year 2011. Malshiras taluka belong to the northwest and western part of the district, where rainfall is medium (below 442 mm) and soil varies from black to coarse shallow. It has also some area under tube-well and Kolhapur type Bandhara irrigation. These talukas are noted for with Jawar, sugarcane, groundnut, safflower, wheat, maize, gram, bajara and tur and fruits combination.

Jawar is monoculture crop in Solapur District during the investigation but it is in North Solapur, Sangola and Madha in the year 1991, but it remain in North Solapur and Mangalwedha. During the investigation period the crop combination tremendously changed due to adoption of new techniques in agriculture operation in 2001. So farmers tend to cultivate many types of crops which percolate soil fertility. Ten crop combinations are observed in six tahsils of district. It is clearly indicated that the farmers of district are illiterate about the environment condition, soil fertility.

**CONCLUSION**

- 1.Natural, socio-economic and other technological factors affect the cropping Pattern of any area.
- 2.The Solapur 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 percent 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 sugar cane is dominant crop.

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