



Geographical Study of Crop Combination Regions of Aurangabad District, Maharashtra State, India

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Abstract-

The Crop Combination analysis technique identifies and locates areas sharing significant proportion of crop at higher rank, thus helps to understand the agricultural mosaic, cropping pattern, and crop concentration, cropping variation, crop diversification and operation of a given area. Various environment or mutual interaction supports each other. Crops associated with a particular field or area in one agricultural year are called Crop combinations. An attempt is made here to study the crop combination regions of Aurangabad district. The study reveals that one tahsil has monoculture, four tahsils have two crop combinations and each one tahsil has three, four and five crop combinations in the year 2000-01. In the year 2010-11

Keywords- *crop, crop- combination, crop region, delineating agricultural regions.*

Introduction -

The crops are generally grown in combination and it is rarely that a particular crop occupies a position of total isolation other crop in a given area unit at a given point of time. The first or first two or first three crops occupying the major area of the gross cropped land, are selected on the basis of their areal strength it is called mono crop region, two crop combination, three crop combination region. Crop combination is method of analysis, first developed by J.C. Weaver (1954), for delineating agricultural regions. Weaver's method is also known as least square method of crop combination.

Objectives-

1. To study the changes in crop combination regions of the district.
2. To analyze the various crop combination format in two different period under study.
3. To study the physical as well as social condition of Aurangabad District .

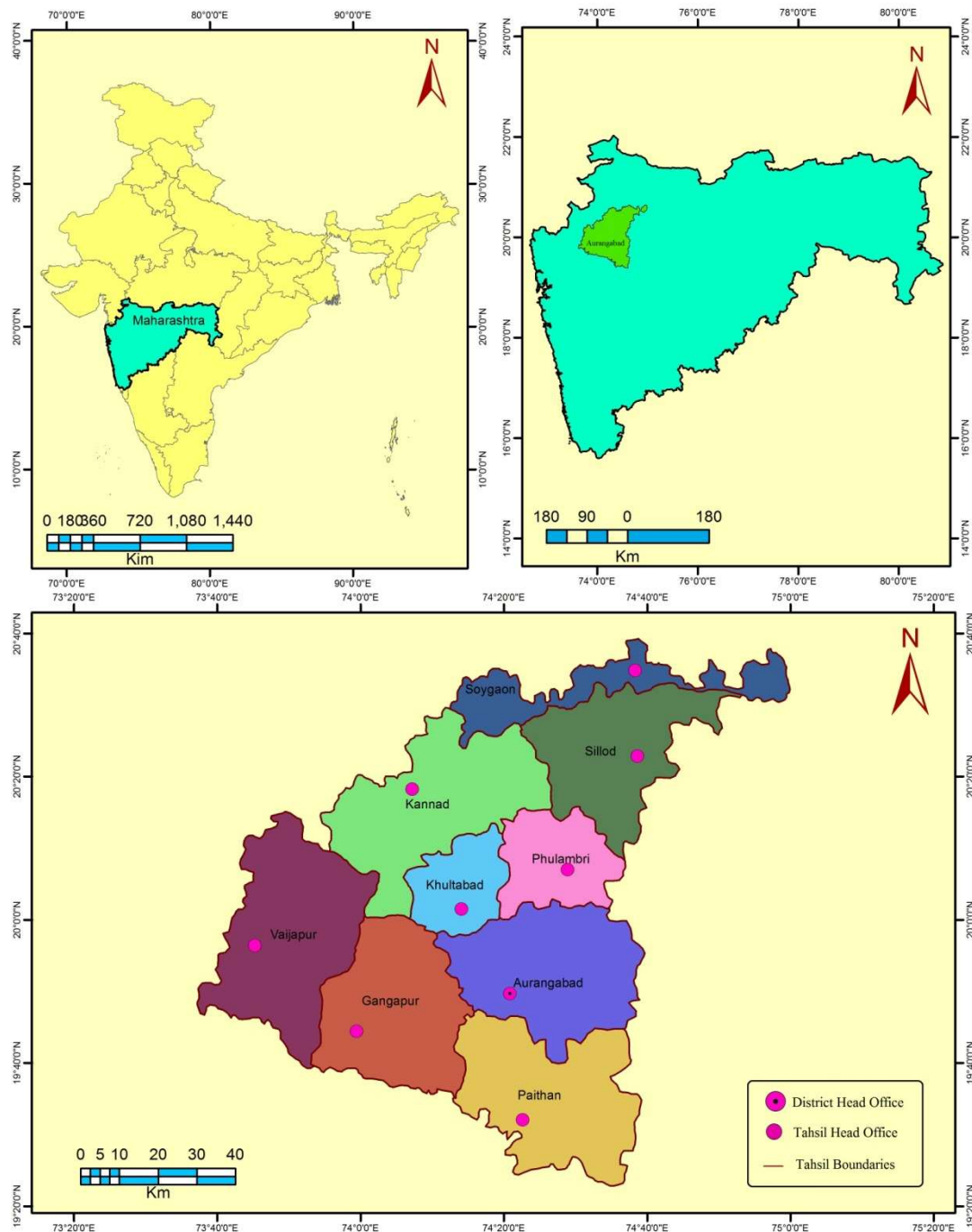
Study Region -

Aurangabad is one of the district of Maharashtra states. District covers an area of 10100sq.km. Out of which 141.1sq.km. is urban area and 9.958sq.km. is rural area. Aurangabad district is approximately situated at the central part of the Maharashtra republic of India and northern direction of marathwada region. Specially district lies between 19°53'47'' North latitude and 75°23'54'' East longitude. District has a great historical as well as cultural heritage. According to 2001 census total population of district is 36,95,928 and population density is 365sq.km. Aurangabad district is divided in nine Tahsil for administration these are- Aurangabad, Kannad, Paithan, Phulambri, Khultabad, Gangapur, Vaijapur, Sillod, Soygaon.



Aurangabad District

Location map





Database and Methodology

The present study is based on the secondary data, for the period 2001-02 and 2010-11 Eight crops are selected for the study. For the present study data has been derived from the socio-economic review of the Aurangabad district. Tahsil is the basic unit for investigation. The crop data has been calculated with the help of weaver's

technique of crop combination. Which is as follows :

$$\text{Standard deviation } (\delta) = \sqrt{\frac{Ed^2}{n}}$$

Standard deviation (δ) =

Where

d- is the sum of the square of individual deviations

n- is the number of crops in a given combination.

The result of the crop combination is presented by the choropleth map

Table 1.1

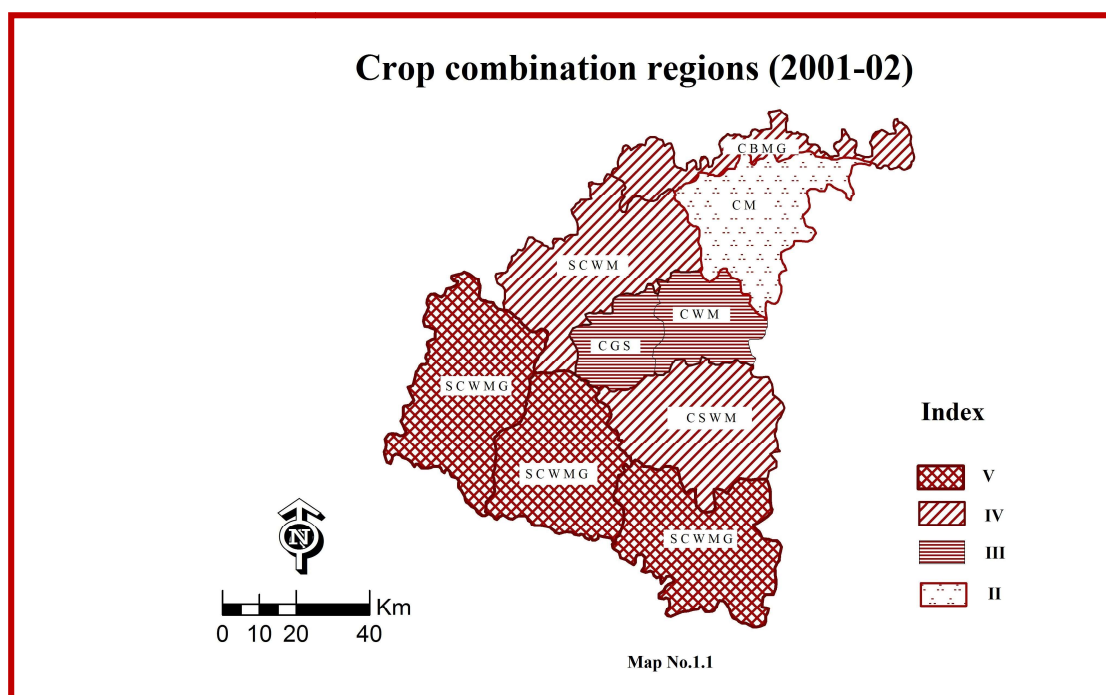
Aurangabad District, Crop combination regions 2001-02

Sr.No.	Tahsil	No of Crops	Crop Combination
01	Aurangabad	04	C S W M
02	Sillod	02	C M
03	Phulambri	03	C W M
04	Khultabad	03	C G S
05	Paithan	05	S C W M G
06	Kannad	04	S C W M
07	Vaijapur	05	S C W M G
08	Gangapur	05	S C W M G
09	Soyegaon	04	C B M G

Source-Data Compile by researcher

Crop combination regions (2001-02)

Above table shows that crop combination region in the year 2001-02 highest five crop combination have seen in three tahsil as follows Paithan, Vaijapur, Gangapur .four crop combination have seen in Aurangabad and Kannad, Soyegaon tahsil .three crop structure have seen in Phulambri and Khultabad Thasil where as two crop combination region have seen in only in Sillod tahsil .In the study region region Physical condition play significant role for determining crop structure.



Sr.No.	Tahsil	No of Crops	Crop Combination
01	Aurangabad	07	C W M S B T J
02	Sillod	05	C M T G W
03	Phulambri	05	C B S M W
04	Khultabad	04	S C W M
05	Paithan	05	S W M T B
06	Kannad	07	C S M W T J G
07	Vaijapur	08	C S M W T J G B
08	Gangapur	08	C S M W T J G B
09	Soyegaon	05	C G S M W

Source-Data Compile by researcher



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