

The Pattern of Crop Combination in Amravati District (Maharashtra State)

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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, crop concentration, cropping variation, crop diversification and operation of a given area thus aiding to draw a rough sketch of agricultural topology and provide agricultural regionalization (Chakraborty Ananya, 2012). The present paper reveals the study of crop combination in Amravati distinct in the year 2001-2002 and 2011-2012 also find the change in their pattern.

Keywords: Crop combination, agriculture, change, agricultural planning, tahsilwise

Introduction

The investigation for cultivation of a geographical area, which selects various agricultural elements and studies it collectively, is the combination analysis (Singh et al. 2004). Crop combination is a technique used to establish the boundaries of agricultural region based on statistical comparison of acreages (Siddhartha et al. 2003). It provides spatial predominance of combination crops paving the emergence of crop regions. It minimizes the chances of oversimplified generalization (Mohammaad 1978).

In the present paper the tahsilwise crop combination has been studied and the change has calculated during 2001-2002 to 2011-2012.

Objectives

The main objective of the present paper is to study the tashilwise crop combination pattern and the change occurred during the decade.

Study Region

The study region is situated in between $20^{\circ} 33' N$ to $21^{\circ} 47' N$ latitude and $76^{\circ} 43' E$ to $78^{\circ} 24' E$ longitude in the Maharashtra state. The district covered total 12210 Sq.Km. area with total population is 2888445 according to 2011 census, out of them 1480768 are male and 1407677 are the female. The district consist total fourteen tahsils.

Madhya Pradesh is located on north side, Nagpur district and Wardha district on east, Yavatmal district towards south and Akola district towards west of the study region.

Data Source & Research Methodology

The data source of present research is based on the secondary source of data. The data of crops and its area was collected from the District Agricultural Office, Amravati District. The Weaver's method of crop combination has been applied for the tahsilwise analysis of crop combinations. The results are shown in the table and in the map of study region.

Crop Combination (2001-2002 and 2011-2012)

Table no 1 shows the tahsilwise pattern of crop combination of the year 2001-2002 and 2011-2012.

Table No 1
Tahsilwise Crop Combination in Amravati District

Name of Tahsils	Weaver's Method			
	2001-2002	Total No. of Crops	2011-2012	Total No. of Crops
Amravati	C,J,S	03	S,C,J,T,M, G,Vf	07
Bhatkuli	C,J,W,T,M,G,S,Os,Gn	09	C,M,G,T,J, S	06
Nandgaon Khandeshwar	C,J,S	03	S,C,J,T,M,Vf,Op,G,W	09
Achalpur	C,J,S	03	S,C,T,J, Vf,M	06
Chandur Bazar	C,J,T,W,M, Vf,Gn,Op,Ts	09	C,S,T,M,Vf, J, Op, G, Os,W	10
Morshi	C,J,T,Vf,Gn,W,M,G,B	09	C,S,J,T, Vf	05
Warud	C, J, Vf, Gn, W,T, R	08	S,C,Vf,J,T	05
Chandur Railway	C,J	02	C,J,T,S,M,Vf, Os,G,W	09
Tiwsa	C,J	02	C,T,S,Vf, J,M,G,Gn, W,Os,Op	11
Daryapur	C,J,W,G,T, M,S,Os	08	C,M,G,J,T,S,Vf, Op, Os	09
Anjangaon Surji	C,J	02	C,J,T,S,M	05
Dharani	J, C, Oc, R, G,Op, T, Os	08	S,C,R,G,T, J,Os,M,W, Op,Oc, Vf	12
Chikhaldara	J,Oc,R,Cr,TS, Op, T,Os,W,G,C,M,Gn,S	14	S,J,C,T,G,M,R,Op, Os, Vf, W,Ts,Gn,Oc	14
Dhamangaon Railway	C, J, T, S, M	5	C, J, T, S, M, G	06

Source:- Calculated by Author

Indicators: R – Rice, Cr – Corn, C – Cotton, Oc – Other Cereals, W – Wheat,

G – Gram, Gn – Groundnut, Op – Other pulses, J – Jawar, T – Tur, S – Soyabean,

M–Mung, Os – Other Oil Seeds B – Bajara, Ts – Total Spice, Vf – Vegetable & Fruits

In the study region the maximum crop combinations are found in Chikhaldara tahsil. This tahsil having 14 crops combination in both years 2001-2001 and 2011-2012 respectively. This tahsil has maximum height and dense forest, therefore the percentage of agricultural land is very low also

maximum population in the tahsil is tribal. Therefore the agricultural population tries to various crops in less land hence the crop combination increases but it is not good for the fertility of soil. In the year 2001-2001 the first preference crop in tahsil was Jawar and cereals but in the year 2011-2012 it found the first preference to Soyabean and then Jawar.

Dharani tahsil also found second maximum no of crop combinations, it was 8 in 2001-2002 and 12 in 2011-2012. The four crop combinations are increases during this period. In this tahsil also Jawar was the first preference in 2001-2002 and Soyabean in 2011-2012 and Jawar was the six no in 2011-2012.

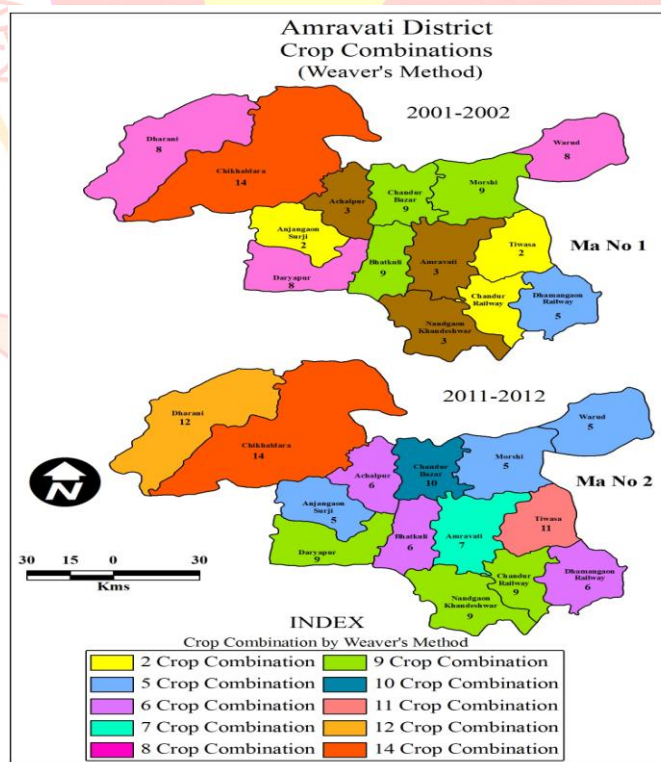
In the region Daryapur tahsil had 8 crop combinations in 2001-2002 and 9 in 2011-2012. The first preference found same Cotton in both years. Warud tahsil also had 8 crop combinations in 2001-2002 and 5 in 2011-2012. Cotton was the first crop in previous decade and Soyabean has in current decade.

In the year 2001-2002 Bhatkuli, Chandur Bazar and Morshi tahsil had 9 crop combinations in 2001-2002 (Map No 1), Cotton was the first crop in these tahsils. In the year 2011-2012 Bhatkuli has 6, Chandur Bazar 10 and Morshi has 5 crop combinations (Map No 2) also the Cotton is the first crop in all these tahsils. It is constant in both decades.

Dhamangaon Railway has 5 crop combinations in 2001-2002 and 6 in 2011-2012, Cotton is the first crop in both years.

Amravati, Nandgaon Khandeshwar, Achalpur tahsil has 3 crop combinations in 2001-2002 and in 2011-2012 Amravati has 7 Nandgaon Khandeshwar 9, Achalpur 6 crop combinations. Cotton was the first in previous year and Soyabean is the first in 2011-2012.

Chandur Railway, Anjangaon Surji and Tiwasa tahsil has 2 crop combinations in 2001-2002 and Cotton was the first crop. In 2011-2012 Chandur Railway has 9, Tiwasa 11 and Anjangaon surji has 5 crop combinations. The crop combination increased in this period, this year also Cotton is the first crop in these tahsils.



Conclusions and Suggestions

The tahsilwise pattern of crop combinations in the district is found uneven in both years. Melghat region (Dharani and Chikhaldara tahsil) found the highest crop combinations and increases the number of crops in 2001-2002 to 2011-2012. The agriculture techniques till not developed in this region, this region is hilly and dense forest. Therefore the tribal population tries to more production of more crops in low agricultural land but it is decreases he fertility of soil. Therefore the agricultural development in this region is very low in the entire district.

The percentage of Soyabean crop is increases in the study region. Cotton and Soyabean is the main crop in the district and it Soyabean's cultivation increases from last decades.

The production of Vegetables and fruits is highest in Morshi and Warud tahsil, this region is famous for the orange production. But the pattern of more crop combinations decreases the production of oranges from last few years. It is necessary to spread the awareness about agriculture, the importance of step by step waste land for the growth of soil fertility.

It is also necessary to help the tribal population in the cultivation of agricultural crops also explain them the loss of maximum crop combinations pattern and benefits of less crop combination patterns. The agricultural development is necessary but without harm to nature and natural vegetations. The sustainable development helps to reform the cropping pattern and the growth of agricultural productions in he district.

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