



## Geographical Analysis of Crop Intensity In Yavatmal District

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### Abstract:

*The study of land efficiency and utility is very important in the planning of agricultural land remedies. The physical, financial activity and land of humans depends on the land, and their economic development is actually affected by the characteristics of this indirect land. To study agriculture, it is important to remove the index of the area of cultivation under various crops in the study area. As a result, the population is currently growing rapidly as the demand for food has to be met. For this, the land should be used under the right crop.*

*Crop intensity, also known as cropping intensity, refers to the number of crops grown on the same piece of land within a single agricultural year. It indicates how intensively land is used for agriculture; essentially measuring how many times a farmer cultivates the land in a year.*

*Present paper reveals the analysis of crop intensity in Yavatmal district.*

**Keywords :** Crop Intensity, Agriculture, Land

### Introduction

The severity of the crop in Yavatmal district helps to increase the diversity of crops. The crop intensity is related to the number of crops taken in the same region and the nutritional ability to the soil. The intensity of crop is the emphasis on taking more crops in an agricultural year. If the crop intensity index is low, it is suggested that only one or two crops are grown in a year. So if the index is high, it is suggested that more than one crop is grown in a year.

### Objectives of the Study

The main objective of the present study is as follows,

The main purpose of the research is to study the chronological and tehsil -based comparative study of crop intensity in Yavatmal district.

### Data Source and Methodology

Present investigation is based on the secondary source of data. Required data is collected from District Agriculture Office, Yavatmal and Seasonal Crop Report of the District. In the present study, the crop intensity formula suggested by Dr. Chavan (1966) has been used to indicate crop intensity in Yavatmal district.

### Formula

$$CI = \frac{TCA}{NSA} \times 100$$

CI – Intensity of Crop

TCA- Total Cultivated Area

NSA – Net Sown Area

The analysis is based on the year 1991 to 2021. Calculated values are shown in the table and their distribution is shown in the map of the district.

### Study Area

Study area i.e. Yavatmal district geographically located in 19° 26' N to 20° 42' N latitude and 77° 18' E to 79° 9' E longitude. Total geographical area of the district is 13584 sq.km.

Yavatmal district is located in the south part of Vidarbha region of Maharashtra state. The district having total 16 tahsil and 2772348 total population according to the 2011 census.

### Crop Intensity

The intensity of the crop is related to agriculture properly and useful. In the area where the severity of the crop is high, the maximum of the soil is used for the maximum double crop.

### Crop Intensity (1991)

The severity of the crop is related to the agricultural land. In the areas where the irrigation area is high, the crop is widely cultivated in certain areas. It also increases the severity of the crop. In Yavatmal district, the crop intensity index in Maregaon, Mahagaon and Pusad tehsils is found more than 100. The lowest crop intensity is found in Umarkhed tehsil.

### Crop Intensity (2001)

In the comparison sector of the year 1991, the crop intensity in the field of study is seen in 2001 in 2001. In 2001, the intensity of the highest crop in Yavatmal district was 177 in Kelpur tehsil. The lowest intensity is found in Ralegaon tehsil 79. The intensity of the crop in Babulgaon, Kalamb, Yavatmal, Darvha, Digras, Pusad, Umarkhed, Mahagaon, Arni tehsil is between 89 and 101.

Tehsil wise and Year wise crop intensity index is shown in table no. 1

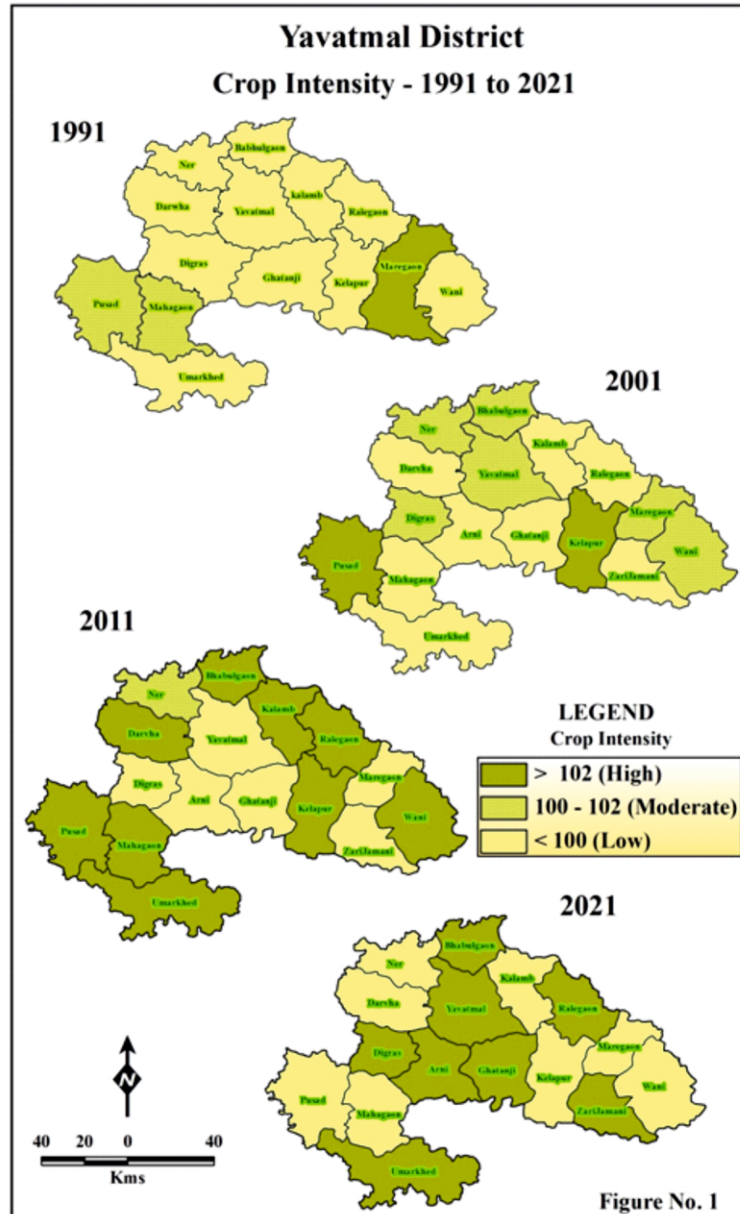
**Table No. 1 Yavatmal District – Crop Intensity (1991 to 2021)**

Tehsils	1991	2001	2011	2021
Ner	98	100	102	75
Babulgaon	94	100	104	113
Kalamb	94	99	148	89
Yavatmal	98	101	95.9	108
Darwaha	98	89	175	95
Digras	95	100	51.2	103
Pusad	100	103	157	95
Umarkhed	93	91	112	107
Mahagaon	102	91	185	99
Arni	-	82	83.4	107
Ghatanji	96	93	94.3	107
Kelapur	97	177	119	96
Ralegaon	95	79	134	108
Maregaon	104	101	91.2	98
ZariJamani	-	98	96.4	103
Wani	95	101	112	95
<b>Total</b>	<b>97</b>	<b>149</b>	<b>184</b>	<b>99</b>

Source – Calculated by Author

### Crop Intensity (2011)

Having studied the severity of the crop of 2011 this year, it appears that the crop intensity index has increased by 87 in 2011 compared to 1991 in Yavatmal district. The highest intensity in the field of study is 185 in Mahagaon tehsil. After that, Darva 175, Pusad 157, Kalamb 148 is found. The lowest intensity is found in Ghatanji 100 and Kelpur 100. In Yavatmal, Digras, Arni, Ghatji, Maregaon and Zarijamani tehsils, less than 100 are found. However, due to the uncertainty of the rains in other tehsils, the farmers have planted certain crops and many problems were created in agriculture in the study sector.



### **Crop Intensity (2021)**

In 2021, the average crop intensity in the district was 99. This year, the highest crop intensity was 113 in Babhulgaon tehsil. It is found more than the average in Yavatmal, Ghatanji, Ralegaon, Digras, Umarkhed Arni and Zaizmani tehsils, while it is found less in other tehsils.

### **Conclusions and Suggestions**

After studying the crop intensity in Yavatmal district, it is observed that the crop intensity index of the district has decreased in 2021 compared to 1991. This means that earlier the district used to produce more crops in a year, but now only two to three crops are produced in a year.

Irregular rainfall and soil erosion are the main reasons for this. It is necessary to increase production without reducing soil fertility. Agricultural technology is still not fully developed in Yavatmal district, and the southern tehsil of this district has a majority tribal population. Agriculture that used to produce more is now producing less. It is necessary to maintain a proper gap between the productions of two crops. It is also possible to increase soil fertility by using more organic farming. For agricultural development in the district, it is necessary to take measures keeping in mind the changes in crop intensity.

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