

Geographical Analysis of Cotton and Its Proportion Under Total Crops and Cash Crops (2000 to 2020)

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Abstract

Cotton is India's most important fiber and cash crop and plays a major role in the country's industrial and agricultural economy. Cotton supplies the basic raw material to the textile industry. Cotton in India provides direct livelihood to 6 million farmers and around 40 to 50 million people are employed in the cotton trade and its processing. Yavatmal district has long been known as a cotton producing region. But with the passage of time there have been changes in the area of cotton cultivation in this district. In the present research essay, the total area of cotton crop in Yavatmal district and its proportion in cultivated area and cash crop has been studied tehsil wise.

Keywords: Cotton Crop Area, Cultivated Area, Cash Crop Area, Change

Introduction

Cotton crop is called white gold and Yavatmal district is the major cotton producing district in Maharashtra. Long and medium length cotton is mainly cultivated in Yavatmal district. There has been a change in the extent of cotton cultivation in the past few years.

In Vidarbha, cotton crop has a very important position compared to other crops. Yavatmal district ranks first in Vidarbha for cotton production. This is why Yavatmal is called as Cotton City. Due to the black cotton soil (black cotton soil) that favors this crop, cotton is grown in large quantities in this area. In the present study, the area of cotton crop in Yavatmal district from 2000 to 2020, its proportion in cultivated area and its proportion in cash crop has been studied tehsil wise.

Objectives

The main objectives of the present research are as follows.

1. To study the cotton growing area of Yavatmal district
2. To study the proportion of cotton crop in total cultivated area of Yavatmal district
3. To study the proportion of cotton crop in total cash crops of Yavatmal district

Data Source and Methodology

The present research has been completed mainly on the basis of information obtained through secondary sources. The relevant information is collected from season and crop reports and District Agricultural Statistical Office.

Proportion of cotton crop in total cultivated area and proportion in cash crops is calculated by following formula

$$\text{Proportion of cotton crop in total cultivated area} = \frac{\text{Area Under Cotton}}{\text{Total Cultivated Land}} \times 100$$

$$\text{Proportion of cotton crop in total cash crops} = \frac{\text{Area Under Cotton}}{\text{Area Under Cash Crops}} \times 100$$

The presented research is based on data for the years 2000, 2010 and 2020. The data obtained are presented in a table and the ratio of cotton crop to total crop area and cash crop area is shown by map.

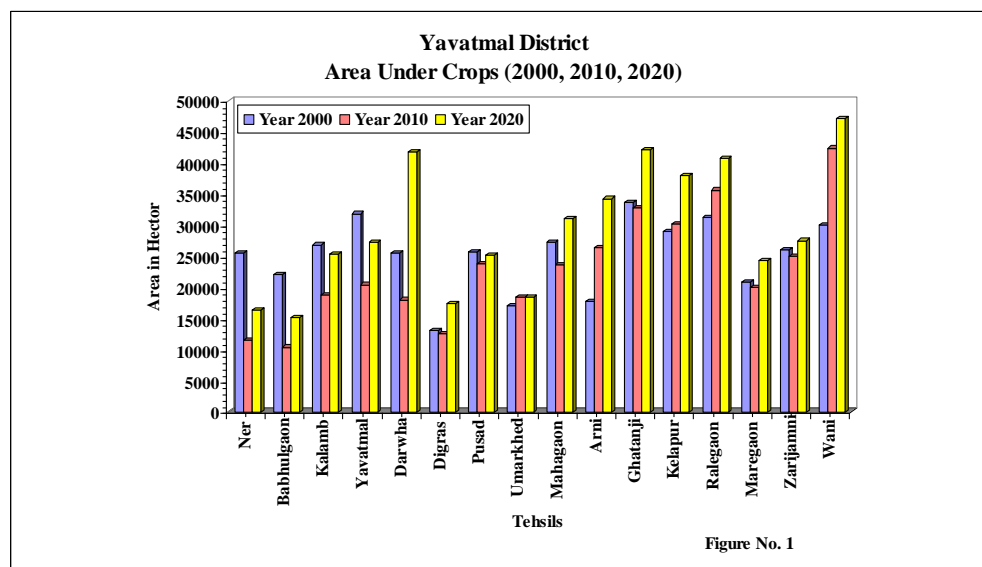
Study Area

Yavatmal district has been selected for the present research work and there are 16 tehsils under this district. Yavatmal district is located in the eastern part of Maharashtra state, the district extends from 19° 26' north to 20° 42' north latitude. The longitudinal extension is 77° 18' East to 79° 09' East longitude.

The total area of Yavatmal district is 13,582 sq.km which is 4.4% of the total area of Maharashtra state. The district is bordered by Amravati district to the north, Washim to the west, Chandrapur to the east and Nanded district to the south. Zarijamani and Kelapur tehsils of the district are bordered by Telangana state on the southern side.

Area Under Cotton

In Yavatmal district in the year 2020, 403327 hectare area was under cotton crop which was 39.75% of the total cultivated area. In the year 2010, it showed a decrease compared to the year 2000, during this period, the area under cotton crop was 369891 hectares, accounting for 25.52% of the total cultivated area. In the year 2020, there is an increase in the cotton area, during this period it is observed that this area is 472002 hectares and its proportion is 37.41% of the total cultivated area.



Proportion of Cotton Crop in Total Cultivated Area

Table No. 1 shows the total area under cotton crop in Yavatmal district from 2000 to 2020 and its proportion in total cultivated area by tehsil.

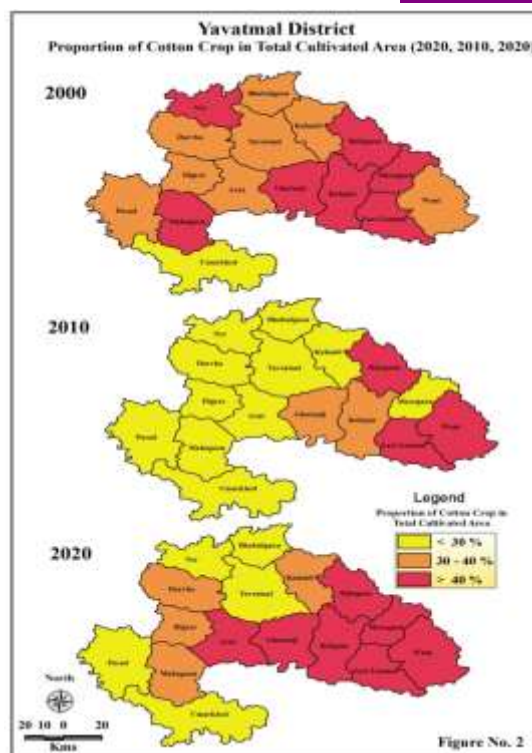
In the year 2000, the proportion of cotton crop in the total cultivated area was between 45 and 50% in Kelapur (48.19%), Jharizamani (48.09%), Ralegaon (47.79%) and Ner (46.64%) tehsils. Whereas in Mahagaon (42.20%), Ghatji (42.18%) and Maregaon (41.09%) tehsils, the ratio was between 40 and 45%. Umarkhed tehsil had the lowest proportion of cotton area i.e. 29.52% in the total cultivated area. In other tehsils, the ratio was between 30 and 40%.

Table No. 1 Yavatmal District – Proportion of Area Under Cotton Crops To Total Cultivated Area (2000-2020)

Tehsil	2000		2010		2020	
	Cotton Area (Hecator)	Share to Total Cultivated Area %	Cotton Area (Hecator)	Share to Total Cultivated Area %	Cotton Area (Hecator)	Share to Total Cultivated Area %
Ner	25538	46.64	11570	12.43	16360	19.29
Babhulgaon	22139	35.99	10422	13.21	15145	21.33
Kalamb	26811	38.36	18824	24.96	25268	35.97
Yavatmal	31814	36.27	20423	21.18	27282	29.48
Darwha	25510	39.34	18019	15.14	41814	36.43
Digras	13103	31.48	12650	17.25	17480	30.88
Pusad	25639	35.59	23727	18.84	25223	28.28
Umarkhed	17001	29.52	18390	14.45	18500	19.57
Mahagaon	27287	42.20	23641	23.34	31052	32.11
Arni	17817	32.45	26382	29.30	34226	45.58
Ghatanji	33605	42.18	32790	36.53	42123	48.85
Kelapur	28947	48.19	30203	36.72	37894	50.47
Ralegaon	31256	47.79	35615	41.11	40780	54.72
Maregaon	20870	41.09	19927	29.96	24260	43.75
Zarijamni	26015	48.09	24970	41.18	27496	52.21
Wani	29975	39.93	42338	50.88	47099	61.83
Total	403327	39.75	369891	25.52	472002	37.41

Source – Yavatmal District Agricultural Statistical Office and Season and Crop Report – 2021-22

In Yavatmal district in 2010, cotton cultivation rate in Wani tehsil was 50.88% which was the highest in the district. After that in Jharizamani (41.18%) and Ralegaon (41.11%) tehsils the total cultivated area of cotton crop was between 41 and 42%. Whereas in Kelapur (36.72%) and Ghatji (36.53%) tehsils, this ratio was between 36 and 37%. In other tehsils the percentage is between 12 to 30% and the lowest percentage of cotton cultivation is 12.43% in Ner tehsil. In the year 2010, the area of soybean crop was the highest in the district, so it is found that the amount of cotton cultivation has decreased.



Amount of cultivation of cotton crop has increased. This year also in Wani tehsil this amount is more and about 61.83% area was under cotton crop. In Ralegaon (54.72%), Jharizamani (52.21%) and Kelapur (50.47%) tehsils, 50 to 55% of the area was under cotton cultivation. In the year 2020, it is observed that the Whereas in Ghatji (48.85%), Arni (45.58%) and Maregaon (43.75%) tehsils more than 40% of the cultivated area was under cotton crop. Umarkhed (19.57%) and Ner (19.29%) tehsils have the lowest proportion of cotton crop which is less than 20%. In other tehsils, the proportion of cotton crop was between 20 and 40%. During this period it is seen that the impact of cotton crop has increased in the total cultivated area.

Proportion Of Area Under Cotton Crops To Total Cash Crops

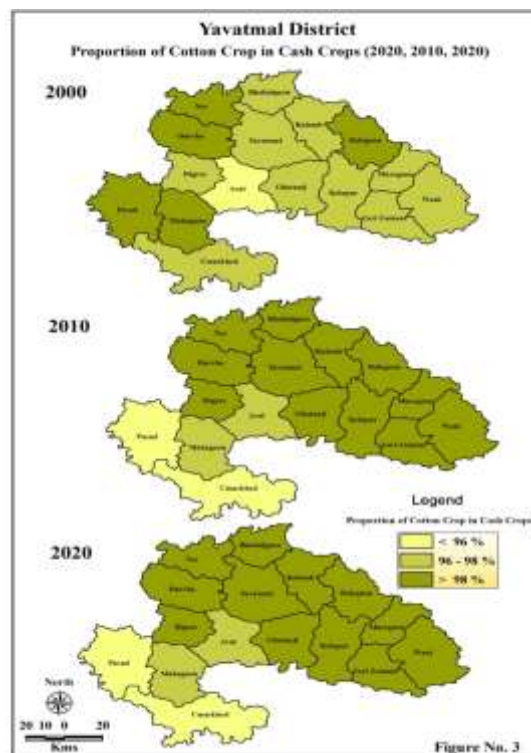
Cash crops include various crops like cotton, sugarcane, spice crops etc. Cotton is an important and number one cash crop in agriculture in Yavatmal district. The presented component shows the total cash crop area under cotton crop in Yavatmal district.

Table No. 2 Yavatmal District - Proportion Of Area Under Cotton Crops To Total Cash Crops (2000-2020)

Tehsil	Proportion Of Area Under Cotton Crops To Total Cash Crops %		
	2000	2010	2020
Ner	98.62	99.80	99.85
Babhulgaon	97.86	99.31	99.36
Kalamb	97.50	99.06	99.12
Yavatmal	96.72	99.40	99.43
Darwaha	99.24	98.89	98.92
Digras	97.54	98.52	98.54
Pusad	98.23	93.51	93.66
Umarkhed	97.93	75.81	76.02
Mahagaon	98.59	96.55	96.63
Arni	95.49	97.10	97.25
Ghatanji	97.51	99.71	99.77
Kelapur	97.52	99.58	99.64
Ralegaon	98.28	99.89	99.91
Maregaon	96.08	99.91	99.93
Zarijamni	96.78	99.68	99.78
Wani	97.95	99.86	99.89
Total	97.66	97.28	97.46

Source – Yavatmal District Agricultural Statistical Office and Season and Crop Report – 2021-22 In Yavatmal district, the proportion of cotton crop in cash crops was between 97 and 98% during the three periods from 2000 to 2020. Also, in almost every tehsil, cotton accounted for more than 95% of the cash crop. That is, cotton is the major cash crop in all tehsils of the

district. In the year 2000, the ratio of cotton crop to cash crop was between 95.49 to 99.24% in all tehsils. During this period, the ratio was highest in Darwa at 99.24% and lowest in Arni at 95.49%. Cotton is the major cash crop in Darwa tehsil though the total cultivated area of cotton crop is less.



In the year 2010, the proportion of cotton crop in the total cultivated area has decreased in the district, but if we consider the total cash crops, the proportion of cotton has increased. During this period, Maregaon (99.91%), Ralegaon (99.89%), Wani (99.86%), Ner (99.80%), Ghatji (99.71%), Zarizamani (99.68%), Kelapur (99.58%), Yavatmal (99.40%), Babhulgaon (99.31%) and Klamab (99.06%) accounted for more than 99% of the area under cash crops under cotton. In Umarched the ratio was between 93 and 99%. In the year 2020 also, the proportion of cotton crop in the cash crop is found to be the same as in the year 2010. In the same 10 tehsils where this ratio was more than 99% in the year 2010, this ratio is also more than 99% during this period. In Umarched, the ratio is 76.02% in 2020 which is the lowest in the district. In other tehsils the ratio was between 93 and 99%.

Conclusions and Suggestions

Umarched, Ner and Babhulgaon tehsils in Yavatmal district had less total area under continuous cotton cultivation during the period 2000 to 2020. In this tehsila, the production of pulse crop is mainly more and the area of cotton crop is less as compared to other tehsilas as the area of soybeans is more in single crop. While Vani, Kelapur, Jharizamani and Ralegaon tehsilas are more dominated by cotton crop. This region of the district is mainly known as cotton producing region. In Umarched tehsil the amount of cotton is less compared to other tehsils and although cotton is the major cash crop in Umarched tehsil the influence of cotton is less as compared to other tehsils. In Umarched mainly fruits, and spice crops are included in the cash crop. The proportion of total cultivated area of cotton crop was 39.75% in 2000. Whereas in 2010 it decreased by 14.23% to 25.52%. So in 2020 this ratio has increased by 11.89 to 37.41% compared to 2010. In the district, as of 2020, more than 50% of the cultivated area in Vani, Jharizamani, Kelapur and Ralegaon talukas is under cotton crop. In Yavatmal district, the proportion of cotton in the total cultivated area has increased in 2020 compared to 2010 but has slightly decreased compared to 2000. The area under cotton increased but the area under cultivation did not increase as much as the area under cultivation. This difference has been observed as irrigation facilities are not uniformly developed everywhere. The use of suitable fertilizers and seeds for cotton crop, as well as suitable inter-cropping, proper irrigation will increase the area of cotton and its production, so that the farmers should sell the seeds at a low price, and also pay a modest interest at the door. This will increase both the area and productivity of cotton crop in the district.

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