



THE STUDY OF SUGARCANE CULTIVATION IN SOLAPUR DISTRICT (M.S.): A GEOGRAPHICAL ANALYSIS

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Abstract

The present study analyses the spatio-temporal trends and geographical factors influencing sugarcane cultivation in Solapur district, Maharashtra. Agriculture remains the backbone of India's economy, and sugarcane is one of the most important commercial crops, providing raw material for sugar, jaggery, and related industries. Using secondary data from 1991 to 2011, this study evaluates changes in sugarcane area at the tahsil level. The findings indicate a significant increase in sugarcane cultivation from 48,901 hectares in 1991 to 65,704 hectares in 2011. However, there is considerable spatial variation: talukas like Akkalkot, Barshi, and Mangalwedha witnessed rapid expansion due to improved irrigation, while Pandharpur and Malshiras showed a decline. Irrigation facilities, soil type, and rainfall are the key determinants of sugarcane distribution. The study highlights the importance of irrigation infrastructure and sustainable water use for stabilizing sugarcane productivity in drought-prone regions like Solapur.

Keywords: - Sugarcane cultivation; Irrigation; Solapur district

Introduction: -

Etymologically, agriculture geography deals with the arts and science of the domestication of plants and animals (M. Husain, 2002). In the modern sense, agriculture consists of cultivating crops that raise livestock, fish, pig, goat, and poultry farms. The Indian economy directly and indirectly depends on agriculture. Agriculture provides livelihood to about 65 per cent of the total labor force. Agriculture is the basis of trade, transport, and trade. In Maharashtra, approximately 65 per cent of the total workers depend on agriculture and allied activities. (Dr. M. R. Nangare and dr. Patil R.R. 2020)

Agriculture is one of the most important agricultural sectors in India. Agriculture is the only means of living for almost two-thirds of the workers in a country. India's agricultural sector accounts for 43% of India's geographical area and contributes to 16.1% of India's GDP. Agriculture still contributes significantly to India's GDP despite a decline in its share in India's GDP. Several crops are grown by farmers. Sugarcane is an important commercial crop grown in India and includes various food crops, commercial crops, and oil seeds. Sugarcane is the main source of sugar in Asia and Europe. Sugarcane is grown primarily in the tropical and subtropical zones of the Southern Hemisphere. Sugarcane is a raw material for the production of white sugar, jaggery (gur), and khandsari. It is also used for chewing and juice extraction for beverage purposes. (Dr. M. R. Nangare and Dr. Patil R.R. 2020)

Sugarcane is the most important commercial crop in the Solapur district, similar to India and tropical countries. The district accounts 18.25% of the cane crushed in the state during 2011-12. Sugarcane is certainly one of the most profitable crops because it requires less labor, considering crops such as onion and chili. Hence an attempt is made here to examine the "The study of sugarcane cultivation in Solapur district (MS): A geographical analysis.

Study Region:

For the present investigation Solapur District was selected as the study region. Geographically, the Solapur district is located between 17°10' North to 18°32' North latitude and 74°42' East to 76°15' East longitude. It covers an area of 14,895 sq. km. The district is situated on the south eastern fringes of the state of Maharashtra, and is bounded to the north by the Ahmednagar and Osmanabad districts, to the east by the Osmanabad and Gulbarga districts of the state of Karnataka, to the south by the Sangli and Bijapur districts, and to the west by the Pune and Satara districts.

The shape of the district resembles that of a flying eagle. The proportion of the area of Solapur district compared to Maharashtra is about five (5%). It is administratively subdivided into 11 types. The soils in the district can be classified into three main types. These are black, coarse grey, and reddish soils.

Agro - climatically, the entire district is under a rain shadow area. Rainfall is uncertain and scarce. The average rainfall for the district was 545.4 mm.

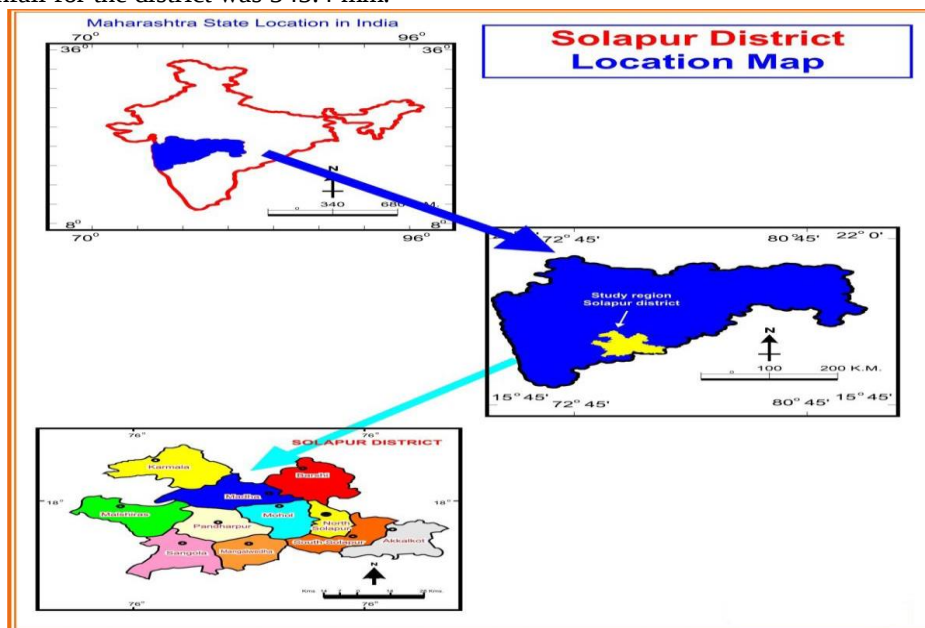


Fig. no. 01

Objective:

The main objectives of this paper are as following,

- 1) To study of sugarcane cultivation in Solapur district.
- 2) To study the factor responsible for sugarcane cultivation in Solapur district.

Database and Methodology:

The study was conducted in the Solapur district in Maharashtra state. For this study, only secondary information was collected from different sources. Secondary data, such as information related to sugarcane cultivation and geographical information collected through the Agriculture Department and Socio-Economic Review and District Statistical Abstract of Solapur District from 1991 to 2011, were used.

Result and Discussion:

Sugarcane is one of the leading cash crops in Solapur District. Sugarcane occupies an important role in the district's economy. It is a long-duration crop that requires 10–15 months to mature. It requires a hot and humid climate with an average temperature of 210–270 °C and a depth of 75–150 cm. rainfalls. It grows well in black cotton. Irrigation facilities are essential for sugarcane cultivation (Dr. M.R. Nangare, 2021).

Table No.1
Tahsil wise Area under Sugarcane area in Solapur District-(1991-2011)

Sr.No	Tahsils	Sugarcane Area in Hectare		
		1991	2011	Volume of changes
1	Karmala	4250	4611	361
2	Madha	2500	4395	1895
3	Barshi	1038	7858	6820
4	North Solapur	750	2780	2030
5	Mohol	3266	4871	1605
6	Pandharpur	13680	8251	-5429
7	Malshiras	14178	9965	-4213
8	Sangola	2685	3679	994
9	Mangalwedha	1779	6155	4376
10	South Solapur	2319	3592	1273
11	Akkalkot	2456	9547	7091
12	District	48901	65704	16803

(Source: Compiled by researcher on the basis of Socio-economic Abstract of Solapur

District 1991 and 2011)

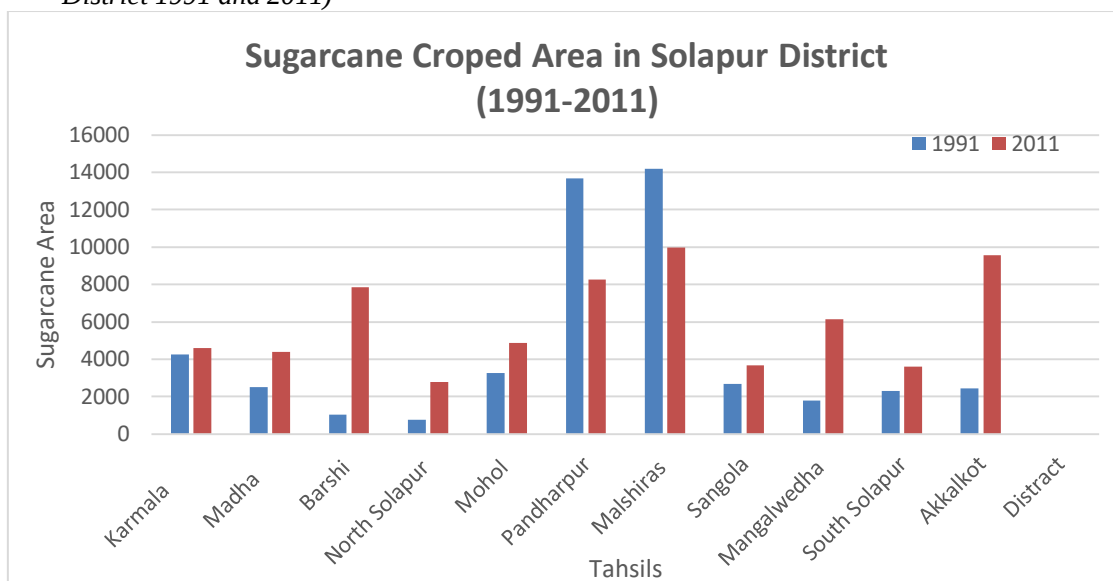


Fig. no. 02

The table no. 01 shows that the area under sugarcane cultivation was 48901 ha in 1991 in the Solapur district. The taluk Malshiras and Pandharpur occupy the largest area (>8000 hectares) under sugarcane in the study region in 1991, and the area under irrigation is higher in Malshiras and Pandharpur talukas, which are provided with irrigation water from the Ujjain and Veer Bhadgar dams. The concentration of sugarcane industry in these two talukas, due to that, the area under sugarcane cultivation is higher in these talukas, whereas only Karmala taluk had a moderate area (4000 to 8000 hectares) under sugarcane. Low-level areas (<4000 ha) under sugarcane crops were recorded in taluk Sangola, Mohol, Madha Akkalkot, South Solapur, Mangalwedha, North Solapur, and Barshi. This is because the irrigation facility was less in these talukas, and because of the lack of irrigation facilities in these talukas, farmers grow other cereals in large quantities instead of sugarcane.

In 2011, the area under sugarcane cultivation was 65704 hectares. The Taluk-level analysis showed more variations. The taluk Malshiras, Akkalkot, and Pandharpur occupied the largest area (>8000 ha) under sugarcane in the study region in 2011. The sugarcane area has increased in Akkalkot taluk due to increased groundwater irrigation facilities, whereas Barshi, Mangalwedha Karmala, Madha, and Mohol taluks were recorded at moderate levels (4000 to 8000 ha) in sugarcane crops. Low-level areas (<4000 ha) under sugarcane crops were observed in Sangola, South Solapur, and North Solapur taluks. These talukas are known as major drought-prone talukas, and because of the low irrigation area in this area, the area under sugarcane cultivation was low in 2011.

The area of sugarcane crop significantly increased during the investigation period. The Taluk-level analysis showed both positive and negative changes. Positive changes were recorded in Madha, Barshi, North Solapur, Solapur, Karmala, Akkalkot, Mohol, Sangola, and Mangalwedha taluks, and negative changes were recorded in Pandharpur taluk. Currently, sugarcane is a major and principal crop in the Solapur district. This is because of the increase in sugar factories in the district as well as the increase in irrigation facilities.

Conclusion:

The Geographical analysis of sugarcane cultivation in Solapur district reveals both growth and disparities. While the total sugarcane area expanded during 1991–2011, its distribution was uneven across the taluks. Areas with assured irrigation, such as Akkalkot, Barshi, and Mangalwedha, experienced rapid growth, whereas drought-prone talukas, such as Pandharpur and Malshiras, faced a decline. The expansion of sugar factories and the adoption of irrigation techniques, particularly drip irrigation, have played a vital role in increasing the sugarcane area. However, the study also indicated the vulnerability of water-intensive crops, such as sugarcane, in semi-arid climates. Therefore, future strategies should emphasize efficient water management, crop diversification, and the adoption of sustainable agricultural practices to ensure long-term productivity and livelihood security in Solapur District.

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