

Contribution of Rajshree Shahu Maharaj in Agricultural Development of Kolhapur District

Dr. Samina S. Jamadar¹ DRK College, Kolhapur

Dr. Sarika N. Shinde² Night College, Kolhapur.

Abstract :

The cropping pattern in India has changed significantly during the last 65 years. The farmers were mostly cultivating those crops which are requires less water. The production and productivity of these crops were mostly dependence on monsoon. With the progress of irrigation the cropping pattern has also changed. With the enhancing irrigation facility farmers were preferred commercial or sugarcane crop instead of some traditional crops. The productivity of sugarcane crops is fluctuating more rapidly than the area and production under Sugarcane crops in India. With the development of agro based industries and agro processing industries, there is increase in an area under the cultivation of sugarcane crop.

KEYWORDS: - Sugarcane, Area, Production, Productivity and Kolhapur District

➤ Introduction

Agriculture plays a key role in the rural economy of India. It contributes nearly 17 percent in the total gross domestic product. Around two-third of the total work force is being engaged in agriculture sector and they are directly and indirectly depend on agriculture for livelihood. The planners did not realise the targeted growth rate of agriculture, it was varied only between 2 percent to 5 percent during last fifty years of planning. During the planning period agriculture production was highly influenced by natural calamities. After independence, the government has introduced several schemes and policies for the development of agriculture sector. A huge public investment has been taken place in the field of agriculture and irrigation during last 65 year. The 1970 decade was a transmission phase of Indian agriculture, in which there was use of new technology and High Yield Varieties (HYV), famously known as green revolution has increased notably, and as a result of that India becomes exporter of foodgrain. Since the beginning of the 1990s, Indian economy has entered in a new phase, of deregulation, liberalization, privatization and globalization. These policy changes have important implications for agriculture. There are three important directions in which reforms in agricultural sector have been initiated. In the first place, restriction on the movement of food grains from one region to other has been removed. An all-India market in agriculture products has emerged. Secondly, agricultural trade policy is liberalized, and exports are being encouraged. Indian agriculture is slowly but progressively getting integrated with global economy. Thirdly, far-reaching reforms have been introduced in the credit delivery system. At the same time important productive and supportive measures e.g. rural poverty alleviation programmes, agricultural price support policies etc. have continued.

The cropping pattern in India has changed significantly during the last 65 years. The farmers were mostly cultivating those crops which are requires less water. The production and productivity of these crops were mostly dependence on monsoon. These crops are known as kharip crop. The proportion of these crops is more in total agriculture production at the time of independence and the initial few

years of independence. With the progress of irrigation the cropping pattern has also changed. With the enhancing irrigation facility farmers were preferred commercial or cash crops instead of some traditional crops. With the development of agro based industries and agro processing industries, there is increase in an area under the cultivation of cash crops.

The adequate production of foodgrain is essential for the fulfillment of food requirement of the raising population. However the contribution of food grain in economic cycle is less than that of cash crops. Because cash crops provides large number of employment opportunities to the unemployed youth of the country. The higher level cash crop production leads into the development and expansion of agro based industries and agro-processing units which contributes income and employment generation in the country. In fact it also helps in improving the condition of balance of trade in particular and balance of payment in general. It means that production of cash crop is essential for economic development in general and economic empowerment of the farmers in particular. However, it does not mean that food grain crops are not contributing in economic development but the contribution of food grain in economic development is invisible or it is slightly less than that of cash crop.

➤ **Contribution of RajshreeShahuMaharajin Irrigation Sector**

Weir is a low dam that is built across a river to raise the water or control its flow. In most of districts of Maharashtra Kolhapur type weirs have been constructed on a large scale as a means of small irrigation the Kolhapur type weirs is constructed by using stone masonry and cement. It is not an integrated structure the silt is carried downstream with the first heavy rains alike vanarai weirs during the last phase of monsoon that is around September-October steel the slots this makes the weir an integrated structure and rainwater from the tail end of the monsoon begins accumulating behind it with judicious use the water is expected to last throughout the summer when the next monsoon arrives the flats are removed and reinserted by its tail end the cycle goes on year after year with the scrupulous adherence to this cycle Kolhapur type weirs prove to be an effective means of water conservation and irrigation. Chh. ShahuMaharaj the ruler of the erstwhile princely state of Kolhapur type for the first time innovated such type of weirs in Radharanagari tehsil of his state during the period 1907 to 1918 later on his son Chh. RajaramMaharaj constructed such a structure at Kasbah Bavda near Kolhapur type city. These original weirs are deemed to be the predecessors of today's Kolhapur type weirs all over Maharashtra and are being constructed in a large number particularly in the drought prone areas of the state these weirs ensure permanent availability of water to the standing crops raise the levels of well water thereby enhancing the area of irrigated land which in turn enhances agricultural income and also ensures availability of water for domestic and cattle's use ensures availability of water for domestic and cattle's use.

➤ **Concept And Information of Irrigation System**

A dam is a barrier across the horizontal width of a river that changes the characteristics of the water flow and usually changes the elevation of the river level. There are many designs of weirs, but typically the water flows freely over the top of the weir crest before descending. Weirs are commonly used to prevent flooding, measure discharge, and help make rivers more navigable by boats. In

some places, the terms dam and weir are synonymous, but generally a clear distinction is made between the structures. A dam is usually designed specifically to hold back water behind a wall, while a dam is designed to change the flow characteristics of a river. The state government's water management policy has recommended strict monitoring of 32,000 Kolhapur type weirs to optimize water storage in dams used for kharif and Rabi crops in the district of Maharashtra. In the wake of the government's plan to make 28,000 villages out of 40,000 villages in the state drought-free, it has been decided to explore different methods for water storage and management.

Kolhapur type weirs, which were built in large numbers, have been in a state of total neglect for 15 years. There has never been an initiative to make investments for its maintenance. The Kolhapur type weirs are critical for water storage in dams, which could be utilized during the dry spell in summers to fight drought, said an official in the water resources department.

The Kolhapur type weirs (K.T Weirs) and bridge-cum-barrages built across dams and rivers are used to regulate the water flow and storage, which is significant for tackling drought. The decision to explore various methods to optimize water storage and management comes in the backdrop of the government's plan to make 28,000 of the state's 40,000 villages drought-free in almost 70 per cent Kolhapur type weirs, the gates are either missing or badly maintained. As a result, it does not serve the purpose of water storage, said a source. These projects are not monitored due to lack of manpower. An audit report also shows that successive governments for the last 15 years have never paid much attention on determining the time-table of opening and closing of the Kolhapur type weir gates, thus, defeating the objective for which it was constructed. The Kolhapur type weir model of water storage and management, which is a success story if maintained properly, is being studied by several other states.

➤ **Research Problem of The Study**

Sugar is agro based product and it is almost 98 per cent of its total production, used in food factories and sweet factories. The only 2 per cent of total sugar production is used in domestic purpose. That's why production of sugarcane crops in India and increase in production is fivefold.

➤ **Objective of The Study**

1. Contribution of RajshreeShahuMaharaj in Agricultural Development
2. Production and Productivity of Sugarcane crop in Kolhapur District.
3. To study the change of Sugarcane Crop between the period from 2011 to 2020.
4. To suggest measures for improvement if necessary.

➤ **Research Methogology**

Only secondary data has been collected from Books, Journals, Gazetteer, Agricultural epitomes, RBI Report, Crop reports published by the department of agriculture (2011 to 2020).

➤ **Limitation of The Study**

The major limitation of this research is that the present research is related to only Production and Productivity of Sugarcane crop in Kolhapur district and conclusion of this research may not be applicable to other area.

➤ **Productivity Formula**

$$\text{Productivity} = \frac{\text{Output}}{\text{Input}}$$

➤ **Data Analysis and Interpretation****Table 1 Area, Production and Productivity of Sugarcane Crop in Maharashtra and Kolhapur District**

(Area in “00” Ha., Production in “00” Tons)

Year	Sugarcane Crop in Maharashtra			Sugarcane Crop in Kolhapur District		
	Area	Production	Productivity	Area	Production	Productivity
2011	9645	856914	88.85	1399	125910	90
2012	10220	894561	87.53	1461	128472	88
2013	9381	753350	80.31	1420	137391	97
2014	9371	839542	89.59	1352	135802	100
2015	10296	915380	88.91	1463	150316	103
2016	9868	692353	70.00	1453	130977	90
2017	6333	542368	86.00	1326.31	124990	94
2018	9020.35	831376	92	1439.05	147790	103
2019	11628.36	897704.93	77.20	1492.80	124917.50	83.68
2020	8224.07	693129.18	84.28	1404.84	113841.18	81.03
Total	93986.78	7916678.1		14211	1320406.7	
Average	9398.68	791667.81		1421.10	132040.67	
SD	1400.57	119467.93		52.01	11095.18	
CV	14.90	15.09		3.66	8.40	
CAGR	-0.02	-0.02		0.0005	-0.01	
Maximum	11628.36	915380		1492.8	150316	
Minimum	6333	542368		1326.31	113841.18	

Source:-Department of Agricultural, Government of Maharashtra 2019-20.

In this table 1 indicate that the Area, Production and Productivity of Sugarcane Crop in Maharashtra and Kolhapur District. The average area under Sugarcane and production of Sugarcane during the period 2011 to 2020 was 9398.68 thousand hectare and 791667.81 thousand tons respectively. The compound annual growth rate of area under Sugarcane crops and production was -0.02 and -0.02 percent respectively. The coefficient of variance of area under Sugarcane crops and Sugarcane production was 14.90 and 15.09 percent respectively. It means that production of Sugarcane is unstable than area under Sugarcane. The maximum area under Sugarcane crops and Sugarcane production has been observed as 11628.36 thousand hectare and 915380 thousand tons respectively. Likewise the minimum area under Sugarcane crops and Sugarcane production were 6333 thousand hectare and 542368 thousand tons respectively during the study period. It means that the productivity of sugarcane crops is increasing more rapidly than the area and production under Sugarcane crops in Maharashtra. In this table observed 2011 this year Maharashtra per million hectors

sugarcane productivity is 88.85 and 2020 this year per million hectares sugarcane productivity is 84.28.

The average area under Sugarcane and production of Sugarcane during the period 2011 to 2020 was 1421.10 thousand hectare and 132040.67 thousand tons respectively. The compound annual growth rate of area under Sugarcane crops and production was 0.0005 and -0.01 percent correspondingly. The coefficient of variance of area under Sugarcane crops and Sugarcane production was 3.66 and 8.40 percent respectively. It means that production of Sugarcane is unstable than area under Sugarcane. The maximum area under Sugarcane crops and Sugarcane production has been observed as 1492.8 thousand hectare and 150316 thousand tons respectively. On the contrary lowest area under Sugarcane crops and Sugarcane production were 1326.31 thousand hectare and 113841.18 thousand tons respectively during the study period. It means that the productivity of sugarcane crops is increasing more rapidly than the area and production under Sugarcane crops in Kolhapur district. In this table observed 2011 this year Kolhapur district per million hectares sugarcane productivity is 90 and 2020 this year per million hectares sugarcane productivity is 81.03.

➤ **Conclusion**

After having overall discussion on the area and production of sugarcane analysis in the study region, researcher is now in position to draw appropriate conclusions of the study which are classified as per the objectives of the study and it is presented as below.

1. The average area under Sugarcane and production of Sugarcane during the period 2011 to 2020 was 9398.68 thousand hectare and 791667.81 thousand tons respectively. The compound annual growth rate of area under Sugarcane crops and production was -0.02 and -0.02 percent respectively. The coefficient of variance of area under Sugarcane crops and Sugarcane production was 14.90 and 15.09 percent respectively.
2. It means that the productivity of sugarcane crops is increasing more rapidly than the area and production under Sugarcane crops in Maharashtra. In this table observed 2011 this year Maharashtra per million hectares sugarcane productivity is 88.85 and 2020 this year per million hectares sugarcane productivity is 84.28.
3. The average area under Sugarcane and production of Sugarcane during the period 2011 to 2020 was 1421.10 thousand hectare and 132040.67 thousand tons respectively. The compound annual growth rate of area under Sugarcane crops and production was 0.0005 and -0.01 percent correspondingly.
4. The coefficient of variance of area under Sugarcane crops and Sugarcane production was 3.66 and 8.40 percent respectively. It means that production of Sugarcane is unstable than area under Sugarcane.
5. The maximum area under Sugarcane crops and Sugarcane production has been observed as 1492.8 thousand hectare and 150316 thousand tons respectively.
6. On the contrary lowest area under Sugarcane crops and Sugarcane production were 1326.31 thousand hectare and 113841.18 thousand tons respectively during the study period.
7. It means that the productivity of sugarcane crops is increasing more rapidly than the area and production under Sugarcane crops in Kolhapur district. In this table observed 2011 this year Kolhapur district per million hectares sugarcane

productivity is 90 and 2020 this year per million hectares sugarcane productivity is 81.03.

➤ **Suggestions**

1. The crop loan should be made available easily, timely and at the affordable cost to the farmers especially during the harvesting period.
2. The transportation system especially agricultural roads are needed to be developed from farm to sugarcane factory. The agricultural roads are not well developed in the study region, so it has been suggested that agro roads should be developed in India.
3. The agricultural cost of production is seems more compare with state and national level figures in study region, hence it has been suggested that farmers should promotes to use cost effective farm techniques.
4. The average land holding size is very small in the study region, hence it has been suggested that to think about cooperative farming or joint farming so as cost of production may reduce and increase in productivity of the land.
5. The Government has no control over the market prices of agriculture commodities, hence more frequently the market price during pick period is observed lower than that of minimum support price. The government should control market prices through redefining agriculture pricing policy.

➤ **Referances**

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