



JOURNAL OF EMERGING TECHNOLOGIES AND INNOVATIVE RESEARCH (JETIR)

An International Scholarly Open Access, Peer-reviewed, Refereed Journal

SUGARCANE PRODUCTION IN INDIA – AN OVERVIEW

¹Dr.M.Suguna, ²M.Jayanthi

¹Assistant Professor, ²PhD Research Scholar

¹Department of Commerce,

¹Periyar University, Salem, India

Abstract : Current stance on sugarcane production in India has been attributes to drought, as the reduction in cultivation area and lack of rainfall, decrease in soil health, high level input cost, farmers and researchers are not satisfied in case of sugarcane price fixed by the government; falling yields and rising labour costs have also increased contributed to it. The production sugarcane in 2019-2020 is estimated using moving average analysis and to know the current stance of sugarcane production level in India, the area involved in sugarcane cultivation and the net production of sugarcane are correlated. This study concluded that by increasing price of sugarcane we can equalize the production and demand as the farmers get moderate return.

IndexTerms - Sugarcane production, cultivation problems, sugarcane cultivation, sugarcane farmers.

I. INTRODUCTION

Sugarcane is a tall, perennial grass reaching 3 to 4 meters in height, comprised by jointed, fibrous stalks. Though its cultivation started around 327 BC in the Indian subcontinent, it way to the rest of the world via trade routes through Middle East. Later, it arrived and flourished as an industry as an industry in the New World. Sugarcane is a grass plant of the genus *Saccharum*, tribe *Andropogoneae* that can be found in 36 species variety. It was originally native to warm tropical regions of Asia, but after early civilizations found out about its usefulness it quickly spread. This enables new civilization to improve their sugar production with crossbreeding. Globally, Sugarcane is one of the important commercial crops and not only one of the principle sources of sugar but also ethanol and jiggery. In many countries its by-products are used as fodder to feed livestock. Today sugarcane is cultivated in most countries with warm climes. Brazil, India, China, Thailand and Pakistan are the top five countries that produces large amount of sugarcane. It is still used in a more number of religious rituals in India. (www.worldatlas.com). Sugarcane cultivation inn India involves the total area of 5, 00,000 Ha. Based on the data provided by Indian Sugar mill Association, by breaking the record of 32 MT in 2017-2018 our country's sugarcane cultivators will produce 35.5 MT of sugar in the 2018-2019 seasons i.e. October-September.

II. REVIEW OF LITERATURES

(Islam M.S. Khatun. S. Kamruzzaman 2016) main objective of the study was to explore socio-economic condition along with the profitability of sugarcane cultivation. The authors suggested that disease free clean seed and modern production technology must be disseminated in char areas. To earn more profit in char areas proper management practice can help sugarcane the farmers. (T.S.Krishnamoorthy Durgesh Nandhini 2017) main objective of this study was to analysis the state-wise production and also the reasons for the change in level of sugarcane production of in the time period of 2000-2010. These authors concluded that the major reason for low production and low productivity of sugarcane is the unpredictable monsoon condition. Therefore by tacking initiatives on proper irrigation management could enable the scope to increase the of sugarcane production in India. (kishore N & Gayathri D 2017) these authors reviewed the whole process of developing mechanization. And have concluded that the state and central government has to create free awareness programs to adopt developed mechanization in case of sugarcane cultivation to make it more profitable.(Siddu Hanabar & Y.N. Havaladar, et.all., 2021) These researchers study is constraints in the cultivation and marketing of sugarcane. This study result revealed that many constraints such as non-availability of water, delay in the onset of monsoon. High wage rates, low market prices, high commission charges and high transport charge. In order to overcome these constraints, 80.14 % people suggested government should provide drip irrigation facility. The majority of farmers strongly suggested government provides minimum support price of the produce was charged to the farmers.

III. STATEMENT OF THE PROBLEM

Tamil Nadu is one of major sugarcane producer in the country. It is eyewitness a substantial drop in cultivation of the commercial crop in the past decade in Tamil Nadu. The area of sugarcane in the state has resisted 41% dip i.e. fallen from 39, 12,000 ha in 2006-2007 to 23, 73,000 ha in 2016-2017. While the reduction in farming area has been attributes to drought and poor rainfall, decline in soil health, high level input cost, farmers and research state insufficient sugarcane price fixed by the government, declining yields and rising labour costs have also contributed to it.

IV. RESEARCH METHODOLOGY

This study is based on secondary data. Source collected from various Government websites/portals, Journals, Magazines, Articles and Media reports, etc. Data Source: Department of Agriculture, Cooperation & Farmers Welfare, (ISMA) Indian Sugar Mills Association, (USDA) United States Department of Agriculture Foreign Agricultural Service.

V. SUGARCANE PRODUCTION**5.1 Around the world**

Based on the report provided by United States Department of Agriculture Foreign Agricultural Service November 2019 Global production for 2019-20 is estimated down 6 million tons to 174 million primarily due to the 5 million ton drop in India resulting from lower area and expected yields. Top producers of Brazil and India are basically tied as sugarcane. India is use of consumption is projected to continue to rise due to record. Global stocks are projected down 5 million tons to 50 million with lower stocks in China, India, and Pakistan Exports are estimated to be flat while.

Table 5.1: Top ten countries sugarcane production in the World- 2021

S.No	Country	Production (MT)	Percentage (%)
1	Brazil	37,300,000	32
2	India	26,605,000	23
3	China	11,474,000	10
4	Thailand	10,024,000	9
5	United states	7,666,000	7
6	Pakistan	6,103,000	5
7	Mexico	6,021,292	5
8	Russian Federation	5,249,339	5
9	France	4,692,000	4
10	Germany	4,563,80	0.4
Total Production		11,51,34,631	100

(Sources: <http://worldpopulationreview.com>)

Table 5.1 From the above table it is observed that, Brazil tops the list of Sugarcane production with the percentage of 32 and Germany with the percentage of 0.4 is the least, India is the second largest producers with the percentage of 23.

5.2 In India

(Abayomy Jegede) India is one of the most important agrarian economies in the world. India is the home to almost every kind of crop grown in globally. Majority of the Indian population's occupation is agriculture. Sugarcane is one of the most popular crops in India More than 60% of India's land area is under cultivation. Sugarcane is one of the most important crops in rural economy of India. About 50 million farmers' families are dependent on sugarcane cultivation and our country produces approximately 30 to 33 million tons of sugar annually which makes as one of the largest producers of the world, (Economic times).

Table 5.2: Area, Production and Yield of Sugarcane in India

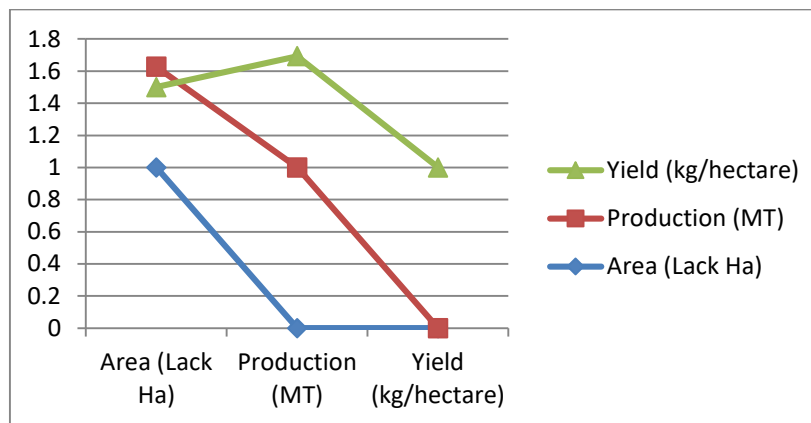
S.No	Year	Area (Lack Ha)	Production (MT)	Yield (kg/hectare)
1	2013-14	49.93	352.14	70522
2	2014-15	51.44	359.33	69857
3	2015-16	49.27	348.45	70720
4	2016-17	44.36	306.07	69001
5	2017-18	47.32	376.90	79650

(Sources: Department of Agriculture, Cooperation & Farmers Welfare)

Table 5.3: Correlation of Area, Production and Yield of Sugarcane

	Area (Lack Ha)	Production(MT)	Yield (Kg/hectare)
Area (Lack Ha)	1		
Production(MT)	0.627245381	1	
Yield(Kg/hectare)	-0.126543576	0.69318169	1

Fig. 5.1 Correlation Graph of Area, Production and Yield of Sugarcane



Production (MT) and Yield (Kg/hectare) are correlated positively (0.69). Area (Lack Ha) and Production (MT) are correlated positively (0.62). Area (Lack Ha) and Yield (Kg/hectare) are negatively correlated (-0.12).

As reported by ISMA, India has more than 5 million ha of land under cultivation. In 2019 the average yield of sugarcane is more than 75000kg per ha with the total production above 360 million tons. Climate is such that it suits the plantation of sugarcane throughout the year in India. Total sugarcane production in our country nearly 20% lower than 2019-20 seasons' 331.61 lakh tons as in the current sugar season which is around 260 lakh tons. As stated by Indian Sugar Mills Association (ISMA), sugarcane production is estimated to be 260 lakh tons (The Hindu-Business line) -Agri business, Sugarcane is one of the few perennial crops in the country. Some of the states such as Uttar Pradesh and Maharashtra have good irrigational facilities; a greater part of the states in India depend on rains. Regrettably, the rains level was not satisfactory this year. This can have a consequence on the total yield of sugarcane production. As sugarcane is a multipurpose crop no part of sugarcane goes waste. The most important use of the sugarcane is the production of sugar. There are other by-product such as jiggery, molasses and even paper. Molasses forms the base for an intoxicating drink as well. Every state produces sugarcane in a few quantities, Except for Rajasthan, Jammu & Kashmir and the North Eastern states.

Table 5.3: State-wise Sugarcane Production in India

S.No	State	Production in lakh tons					
		2012-13	2013-14	2014-15	2015-16	2017-18	2018-19
1	Andhra Pradesh & Telangana	143	140	139	124	95	149
2	Bihar	126	149	149	139	147	122
3	Gujarat	144	133	132	138	108	95
4	Haryana	71	81	79	75	86	93
5	Karnataka	371	419	467	397	246	346
6	Maharashtra	736	752	989	800	459	753
7	Punjab	63	63	66	74	78	66
8	Tamil Nadu	301	257	223	245	210	375
9	Uttar pradesh	1411	1332	1269	1225	1441	1330
10	Uttarakhand	66	60	61	59	69	64
Total Production		3432	3386	3574	3276	2939	3393

The Production Forecast for the year 2019-2020 is 3203 lack tones; reported on the basis of result obtained from moving average analysis, which shows that the production of Sugarcane might get reduced in the upcoming year.

5.1 In Tamil Nadu

Tamil Nadu does not have many rivers and does not get much rainfall from the north east monsoon winds; It as to depend on the Cauvery River that flows through Karnataka. In spite of all these drawbacks, 107 tons per ha Tamil Nadu holds the Indian record of producing. Despite of having less area under sugarcane cultivation when compared to Karnataka the total output of Tamil Nadu is around 37.5 million tons. Many parts of the state have black alluvial soil, which is perfect for sugarcane plantation. Tamil Nadu is a worthy number 3 as far as sugarcane production in India is concerned.

VI. CONCLUSION

It is concluded from the research finding that although sugarcane is the main crop but farmers faced a lot of problems regarding sugarcane production. Its sector are facing major challenges are irrigational problems, decrease in soil health, high level input cost, sugarcane price is low level. As a result, these problems in return cause low productivity of the crop due to which the area under sugarcane cultivation is decreasing which affect the socio-economic conditions of the farmers. The demand and

production of sugarcane must be equivalent; the farmers could improve the production after a rise in price of sugarcane by the government, so that they sugarcane take moderate return.

REFERENCES

- [1] T.S. Krishnamoorthy Durgesh Nandhini. 2017. "A Study on Sugarcane Production in India". Journal of International Journal of Advanced Research in Botany (IJARB) Volume 3, Issue 2, 2017, PP 13-17.
- [2] Kishore N., Gayathri D., Venkatesh J., Rajeswari V., Sangeeta B. And Chandrika A 2017. "Present Mechanization status In Sugarcane A Review". International Journal of Agriculture Sciences. Volume 9, Issue 22.
- [3] Siddu Hanabar, Y.N. Havaladar, K.V.Ashalatha, N.L.Pavithra and Anand 2021. "Constraints in the Cultivation and Marketing of Sugarcane in the District of Belagavi, Karnataka, India". International Journal of Current microbiology and Applied Sciences, ISSN: 2319-7706 Volume 10 number 02.
- [4] Islam M. S.I, Khatun, S.I, Kamruzzaman, M.I, Kaysar 2016. "Economics of sugarcane cultivation in some selected char lands of Bangladesh."Journal of International Journal of Business, Management and Social Research, Vol. 02, Issue 02: 132-139. Economics of sugarcane cultivation in some selected char lands of Bangladesh.
- [5] Dr. M. Suguna, M.Jayanthi 2017-18 "Challenges and opportunities in Agricultural Trade" NABARD National Conference on "Rural Banking and Agri-Business for Economic Transformation". Journal of applied science and Engineering methodologies Scientist link Group of Publications-chennai.
- [6] Dr. M. Suguna, M.Jayanthi 2018. Problems and Prospects in Digital Marketing of Agricultural Products. Shanlax International Journal of management. vol 5 Special issue 4. March 2018.
- [7] Abayomy Jegede September 13, 2019 <https://www.trendrr.net>
- [8] <http://agricoop.gov.in/acts-and-rules-listing>
- [9] <https://www.atlasbig.com/en-us/countries-sugarcane-production>
- [10] <https://www.drycargomag.com/>
- [11] <https://www.isosugar.org/sugarsector/sugar>
- [12] <https://www.trendrr.net/735/top-10-largest-sugarcane>
- [13] <https://economictimes.indiatimes.com/>
- [14] <https://timesofindia.indiatimes.com/>
- [15] <https://www.trendrr.net>
- [16] www.isma.com