

Extent of Adoption of Organic Sugarcane Cultivation Practices in Belgaum District of Karnataka State

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Abstract:- A sample survey study was on extent of adoption of organic sugarcane cultivation practices in Belgaum district of (Karnataka) covering 2 taluks of 12 respondents purposively selected villages with 120 randomly selected sample growers in order to evaluate Adoption of organic sugarcane growers and the related correlates sufficient previous researchers were reviewed to select the critical variables for developing the oretical concept and deriving the hypothesis. The data were collected to observation, informal discussion and formal interview techniques with the help of predesigned tested instrument for recording the relevant information. The data thus, collected were processed, analyzed, interpreted in the light of objectives set forth with the application of suitable statistical test. Majority of respondents (53.50%) of respondents belonged to medium adoption category, followed by 31.50 and 15 percent of the respondents belonged to low and high adoption categories, respectively. The mean adoption score of the respondents was 13.88.

I. INTRODUCTION

India is the seventh largest country in the world with geographical area of 328.73 million hectares representing 2.45 percent of the world's geographical area. The total population of the country is 1027 million, which is equal to 15.70 percent of world's population. Agriculture is the main sector in the country which provides livelihood to 67 percent of the labour force contributes to 27 percent of the nation's GDP and accounts for about 21 percent share of total value of the country's export. Agricultural sector showed a growth rate of 2.67 percent per annum during the period 1949-50 to 1995-906 (Anonymous, 2002). Agriculture is the predominant sector of Indian economy that meets the basic requirements, food, clothing and shelter of the people, which contributes 26 percent to national income. The role of agriculture on the economy of India may be considered in the light of contribution it makes in three important aspects i.e., national income, employment and foreign exchange. India has a wide diversity of crops, among them food grains occupy a major portion of the land area, while sugarcane and fibre crops occupy relatively lesser acreage. In spite of low acreage under sugarcane, it commands greater significance due to their remarkable contribution to our national economy through foreign exchange earnings. In the recent past, though the productivity of these crops has increased, the magnitude has been very small. In order to increase our national income, the organic production of such cash crops is imperative because of its importance in foreign exchange earnings.

Sugarcane (*Saccharum officinarum*) is native to India and has been cultivated from the historic times over the years and also it is a major commercial crop next to cotton in India. Sugarcane is most important source of sugar. Indian agro-climatic conditions are favourable for the production of sugarcane. Sugarcane plays a pivotal role in the agro-industrial economy of India and in fact on real economy, performance of sugar industry is directly related to the sugarcane production in India. India is an agrarian economy. India is the home to almost every kind of crop grown in the world Agriculture is the occupation of a majority of the Indian population. More than 60% of India's is under agriculture. Sugarcane is one of the most popular crops in India with more than 5 million hectares of land u cultivation. The average yield of sugarcane is more than 75000 kg/hectare with the total product exceeding 360 million tonnes in 2017-2018.

India's climate is such that it suits the plantation of sugarcane throughout the year. This is one few perennial crops in the country. Some of the states such as Uttar Pradesh and Maharashtra good irrigation facilities. A majority of the states in India depend on the rains. Unfortunately, have not been satisfactory this year. This can have an effect on the total yield of sugarcane. Sugarcane is a multipurpose crop. No part of the sugarcane goes waste. The primary use of the the production of sugarcane. There are other by-products such as jaggery, molasses, and even paper. Molasses forms the base for an intoxicating drink as well. Except for Rajasthan, Jammu & Kashmir the North Eastern states, every state produces sugarcane in some quantity. We shall look at the top 10 sugarcane-producing states in India. We are submitting this data after taking into effect the drought like situation this year in parts of Maharashtra and Tamil Nadu. Otherwise, there could have been a change in the rankings.

Here are the top 10 largest sugarcane producing states in India 2018. Uttar Pradesh, Maharashtra, Karnataka, Andhra Pradesh, Haryana, Bihar, Gujarat and Punjab.

Karnataka comes next on the list at No 4. Karnataka has the rivers Krishna and Cauvery flowing through the state. A couple of huge irrigation projects on the Cauvery River ensure that Karnataka more than its share of the Cauvery water. This water is useful for the plantation of sugarcane in numbers in the districts of Shimoga, Mysore, Belgaum, and Chitradurga. With a total sugarcane cultivable area of 4 lakh hectares, the output is around 34.6 million tonnes. Karnataka has their producing high-quality

sugarcane with the yields touching 84 tonnes per hectare. The average yield India is around 75 tonnes per hectare.

during 2017-18 out of Among ten taluks of Belgaum district, Gokak and mudalagi block were selected based on highest

II. METHODOLOGY

The research study on organic sugarcane cultivation practices was conducting during the year 2017-2018 in Belgaum district of Karnataka in the present investigation, descriptive type of research design was employed .the phenomenon had already occurred describe the characteristics of a population or phenomenon being studied .the characteristics used to describe the situation or population are situation being studied, are usually some kind of categorical scheme. Belgaum district Extent of adoption of organic sugarcane cultivation practices in “Belgaum district of karnataka” study was started in Belgaum district

area under sugarcane production .out of all villages 12 villages were selected and 120 respondents were randomly selected .random sampling method was used to obtained the 120 respondents from the list obtained ,in line of the objectives , the interview schedule was prepared and respondents were interviewed at their home and farms .11 independents and one dependent variables were chosen for present study .in light of the objective, the interview schedules were prepared and respondents were interviewed there home and fields .The collected data were analyzed by using percentage, mean, standard deviation, and correlation coefficient (r). A simple percentage technique was also applied to materialize the constraints and suggestions.

III. RESULTS AND DISCUSSION

Sl. No.	Practices	Fully adopted		Partial adopted		Not adopted	
		F	%	F	%	F	%
1.	Field selection	100	83.33	10	8.33	10	8.33
2.	Improved varieties	90	75.00	10	8.33	20	16.67
3.	Planting time	100	83.33	20	16.67	0	0.00
4.	Seed treatment	80	66.67	30	25.00	10	8.33
5.	No. of sets used per acre	100	83.33	20	16.67	0	0.00
6.	Age of planting material	110	91.67	10	8.33	0	0.00
7.	Method of planting	80	66.67	20	16.67	20	16.67
8.	Spacing method	32	26.67	80	66.67	8	6.67
9.	FYM application	100	83.33	10	8.33	10	8.33
10.	Seed rate	5	4.17	95	79.17	20	16.67
11.	Plant protection measures	80	66.67	23	19.17	17	14.17
12.	Organic manure application	90	75.00	10	8.33	20	16.67
13.	Green manure application	20	16.67	50	41.67	50	41.67
14.	Bio-fertilizer application	20	16.67	90	75.00	10	8.33
15.	Weed management	100	83.33	10	8.33	10	8.33
16.	Ratoon management	80	66.67	10	8.33	30	25.00
17.	Irrigation management	70	58.33	40	33.33	10	8.33

Table 1. Adoption level of organic sugarcane Respondents

From the table 1 it showed that regarding adoption level of the organic sugarcane practices. 91.67 percent of the respondents were fully adopted the age of the planting material followed by field selection, planting time, no. of sets used per acre from application and weed management (83.33% each).79.17% of the respondents were partially adopted the seed rate practices followed by bio-fertilizers application (75.00%), spacing method (66.67%), green manure application (41.67%), irrigation management (33.33%), seed treatment (25.00%), plant protection measures (19.17%), method of planting time and no. of sets used per acre (16.67% each).

However, 41.67 percent of the respondents were not adopted green manure application followed by Ratoon management (25.00%), seed rate, improved varieties, organic manure application, method of planting (16.67% each) and plant protection measures (14.17%). This may be due to adoption level Probable reason for the respondents to be in medium adoption category might be due to the medium to high knowledge possessed by more than half of respondents. Knowledge limits the action of individuals as it is pre-requisite for any individual to think of the problems or constraints in making a decision to either adopt or reject the practice.

Higher adoption of the above sustainable cultivation practices by majority of the sugarcane farmers might be due to the fact that they are simple, require no cash and involve very low-cost practices. In other words, simpler practices are adopted more by the farmers. The possible reason for the above findings may be the tendency of growers to adopt only those practices, which they feel are simple, involve low cost and are effective in getting higher yield. This finding gains support from the findings of Muthuraman (1995), Laskhminarayan (1997) and Rathod (2005).

➤ *Overall Adoption of organic sugarcane Respondents.*

Table 2: (n=120)

Category	Frequency	Percentage
Low	38	31.50
Medium	64	53.50
High	18	15.00
Total	120	100
Mean = 13.88		SD = 3.89

The data in Table 2 and depicts that the results reveals that, 53.50 percent of respondents belonged to medium adoption category, followed by 31.50 and 15 percent of the respondents belonged to low and high adoption categories, respectively. The mean adoption score of the respondents was 13.88.

IV. CONCLUSION

It is concluded that majority of the respondents were middle age group having education up to primary level and having medium level of farming experience, risk orientation, economic orientation, mass media exposure and majority of them were having low level of extension contact, innovativeness. It was found that majority of them had medium level of adoption regarding cultivation practices of sugarcane crop. The major constraints reported by the respondents were difficulty in controlling pests and diseases, lack of marketing facilities, less knowledge about organic sugarcane cultivation practices, lack of knowledge about fund availability from the government. State Department of Horticulture and University of Agricultural and Horticultural Sciences should make integrated extension efforts (trainings, demonstrations, field days, literatures etc.), provide marketing facilities, establish organic sugarcane growers clubs and groups to provide the required technical knowledge about cultivation practices of sugarcane growers for maximum adoption organic sugarcane cultivation.

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