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A Study on Socio-economic Condition of Sugarcane Farmers in Mandya District

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Abstract: Sugarcane is the one of the major commercial crop and it is considered as major source of income to the farmers. Sugarcane industry plays a major role in the rural and industrial development of a country. Asia is one of the leading producers of sugar followed by the Europe. Most of the sugar in Asia produced from sugarcane whereas in Europe beet is used to produce sugar. Currently, sugarcane is grown in an area of 16 m. ha across 79 countries in the world. The global production of raw sugar is about 112 m.t and India produce 167 m.t stands first in area (3.93 m. ha) among the sugarcane growing countries of the world. In Karnataka sugarcane is cultivated over an area of 4.80 lakh ha with production 36.76 million tons of sugarcane and productivity of 85.50 tons per hectare (Indiastat 2015-2016) in Belgaum. In Karnataka, Mandya district is the second largest producer of sugarcane followed by Belgaum. According to Mandya district agriculture statistics, 30,000 hectares of land have been used for sugarcane cultivation in this region. The current study is focused on socio – economic conditions of sugar cane farmers in Mandya district. The study is based on primary data and it is collected by using purposive random sampling techniques with prepared questionnaire schedule. Total 200 samples were collected and to analyze data statistical techniques were used.

Keywords: Sugarcane, farmers, production, income

INTRODUCTION

Sugarcane production begins in New Guinea since 6000 BC. There are two types of cultivated cane are used in India they are (a) S.barberi (thin, hardy north Indian types) and the Chinese S.inenses and (b) S.officinarum (thick, juicy noble canes). The S. officinarum cane is a superior and high priced which is originated in Indo-Myanmar China border with New Guinea as the main center of diversity. It has a good quality of thick, juicy, low-fibred canes of high sucrose content. In India origin of S.spontaneum is in subtropical and habitat of two wild canes is swamps, river banks, water

courses etc. Tropical cane (Thick cane) spreads probably from India to China, Arabia, Egypt and Sicily.

The sugarcane and sugar beer are the main source of sugar production in the world. The 60 percent of sugar produced from sugarcane and reaming form the beet. Asia is the major producer of sugar from sugarcane followed by Europe from sugar beet. The global production of raw sugar is about 112 m.t and India produce 167 m.t stands first in area (3.93 m. ha) among the sugarcane growing countries of the world. In India Uttar Pradesh is the largest cultivator of sugarcane followed by Maharashtra, Karnataka, Tamil Nadu, Andhra Pradesh, Gujarat, Bihar, Haryana and Punjab. These nine are most important sugarcane producing states.

In Karnataka Bagalkot, Mandya, Vijayapur and Bidar are the leading districts in terms of area under sugarcane production. In Karnataka sugarcane is cultivated over an area of 4.80 lakh ha with production 36.76 million tons of sugarcane and productivity of 85.50 tons per hectare (Indiastat 2015-2016) in Belgaum. In Karnataka, Mandya district is the second largest producer of sugarcane followed by Belgaum. According to Mandya district agriculture statistics, 30,000 hectares of land have been used for sugarcane cultivation.

OBJECTIVES

1) To study the Socio-Economic conditions of sugarcane farmers in Mandya district.
2) To highlights the problems faced by sugarcane farmers in particular study area.

Methodology

The study is based on primary collected in Mandya District. The secondary data collected from various published and unpublished sources such as articles, books, internet sources. The primary data collected by adopting purposive random sampling technique with scheduled questionnaire. Total 200 samples of Sugarcane growing farmers were selected in the three taluks namely Srirangapatna, Mandya and Krishnarajapete in Mandya district. To analyses the data statistical tools such as trend analysis, percentage analysis were used.

Significance of the Study

Sugarcane farming is playing an important role in the life of an economy. It is the backbone of our economic system. The Indian sugar sector is very

important in the rural economy. About 50 million sugarcane grower families are dependent on sugarcane cultivation and the country produces approximately 30-33 million tonne sugar annually, which makes it one of the largest sugar producers of the globe.

The World Sugar Economy in 2018

In 2018 after three years of a global statistical deficit the world sugar economy returned to a surplus. World output exceeded global use of sugar by 6.171 mlntones.

World production showed an increase by 8.034 mlntonnes to a record 178.612 mlntonnes. The new record was achieved despite a massive year-on-year reduction in output in Brazil (-8.809 mlntonnes). Meanwhile, production increased considerably in India (+10.845 mlntonnes) and Thailand (+4.653 mlntonnes) compared to2017.

By contrast, world consumption remained flat with a minuscule year-on-year decline recorded for 2018 (-0.04 percent). The world total reached 172.441 mlntonnes, down 67,000 tonnes from the previous year, when consumption grew only by 0.4 percent. World average per capita consumption decreased to 22.6 kg as against 22.9 kg in 2017 and 23.0 kg a yearearlier.

Table 1: Ten Largest Producers/ Consumers

10 Largest Producers			*10 Largest Consumers*		
		(in mln metric tonnes, telquel)			
1	India	33.30	1	India	25.39
2	Brazil	29.29	2	EU-28	17.94
3	EU-28	18.18	3	China	16.10
4	Thailand	15.44	4	Brazil	10.47
5	China	10.71	5	USA	10.19
6	USA	7.83	6	Indonesia	6.89
7	Pakistan	6.28	7	Russian Fed.	5.82
8	Russian Fed.	6.18	8	Pakistan	5.25
9	Mexico	5.92	9	Mexico	4.27
10	Australia	4.64	10	Egypt, Arab R.	3.30

Source: www.isosugar.org/sugarsector/sugar

Sugarcane is grown on around 2.8 percent of Gross Cropped Area of India. India produced around 362 million tonnes of sugar in 2017-18. Largest sugarcane producing state of India is Uttar Pradesh, which has 49.98 percent share in overall sugarcane production as per 2017-18 figures. The second and third largest states are Maharashtra and Karnataka. Other main

Table 2: Indian Production of Sugarcane (2017-18)

Sl No	*State*	*Production*	*Share (percent)*
1	Uttar Pradesh	1,77,060.00	49.98
2	Maharashtra	83,130.00	22.06
3	Karnataka	28,260.00	7.50
4	Tamil Nadu	16,540.00	4.39
5	Bihar	13,980.00	3.71
6	Gujarat	12,050.00	3.20
7	Haryana	9,630.00	2.56
8	Punjab	8,020.00	2.13
9	Andhra Pradesh	7,950.00	2.11
10	Uttarakhand	6,300.00	1.67
	Total	3,62,920.00	

Source: National Horticulture Board (NHB) Production (000 Tonnes)

sugarcane producing states of India include Tamil Nadu, Bihar, Gujarat, Haryana, Punjab, Andhra Pradesh and Uttarkhand.

Sugarcane Production in Karnataka

In India Karnataka stands 3rd in cane production next to Uttar Pradesh and Maharashtra States. Sugarcane is grown in 16 districts of the state. Belgaum, Bagalkot, Bijapur, Mandya, Mysore, Chamrajnagar and Bidar are the major sugarcane producing districts. Karnataka's sugarcane yield is much below the average yield. It is just one-sixth of the average production.

RESULTS AND DISCUSSION

Table 3shows the demographic conditions of sugar cane farmers in Mandya district.The result represents that out of 200 respondents 83 percent male and 17 percent females are involved in sugarcane farming.Respondents below 25 years are 12.5 percent, respondents aged 25-50 years are 66.5 percent and respondents aged above 50 years are 21 percent respectively.Overall analysis depicts that respondents educated below SSLC / secondary education are more involved in sugarcane productivity. According to the information obtained the family income of the respondents is 35.5 percent of the respondent's income is around 1 lakh, 51 percent of the respondent's income is ranged around 1 to 2 lakh, 13.5 percent of the respondent's income is ranged around 2-5 lakh.69.5 percent of the respondent's family is having less than 3 members, 28 percent of the respondents having 3 to 6 members, 2.5 percent of the respondents having 7 to 9 members in their family respectively.

Table 3: Socio-Economic Conditions of Sugar Cane Farmers in Mandya District

1	*Gender of Farmers*	*Frequency*	*Percent*
	Male	166	83.0
	Female	34	17.0
	Total	200	100.0
2	*Age of Farmers*	*Frequency*	*Percent*
	Below 25 years	25	12.5
	25-50 years	133	66.5
	Above 50 years	42	21.0
	Total	200	100.0
3	*Education of Farmers*	*Frequency*	*Percent*
	Below SSLC	62	31.0
	SSLC	73	36.5
	Professional	13	6.5
	PUC	40	20.0
	Degree	12	6.0
	Total	200	100.0
4	*Monthly income*	*Frequency*	*Percent*
	1 lakh	71	35.5
	1- 2 lakh	102	51.0
	2- 5 lakh	27	13.5
	Total	200	100.0
5	*Area of living*	*Frequency*	*Percent*
	Rural	181	90.5
	Urban	19	9.5
	Total	200	100.0
6	*Family members*	*Frequency*	*Percent*
	Below 3 members	139	69.5
	3-6 members	56	28.0
	7-9 members	5	2.5
	Total	200	100.0
7	*Experience in Agriculture*	*Frequency*	*Percent*
	Below 10 years	16	8.0
	10-20 years	154	77.0
	Above 20 years	30	15.0
8	*Ownership of Land*	*Frequency*	*Percent*
	Own land	195	97.5
	Lease hold land	5	2.5
	Total	200	100.0
9	*Mode of cultivation*	*Frequency*	*Percent*
	Traditional	63	31.5
	Modern	137	68.5
	Total	200	100.0

Source: Primary data

8 percent respondents are having less than 10 years of experience, 77 percent farmers are having 10-20 years of experience, 15 percent of the respondents are having 20 years of experience in the field of farming. Overall results suggest that most of the respondent's cultivation sugarcane is having 10 to 20 years.97.5 percent respondents are possessing their own land; 2.5 percent respondents are possessing lease hold land. Overall most of the farmers using their own land and all family members are involved in processes of sugarcane cultivation.Among them 31.5 percent respondents are using the traditional method, 68.5 percent of them have implemented modern farming such as usage of tractor tiller, pest control methods etc., Overall analysis implies most of the farmers are currently using modern methods if farming.

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Table 4: Critical Factors of Sugar Cane Farmers in Mandya District

1	*Experience in Agriculture*	*Frequency*	*Percent*
	Below 10 years	16	8.0
	10-20 years	154	77.0
	Above 20 years	30	15.0
	Total	200	100.0
2	*Ownership of Land*	*Frequency*	*Percent*
	Own land	195	97.5
	Lease hold land	5	2.5
	Total	200	100.0
3	*Area of Land Under sugar cane cultivation*	*Frequency*	*Percent*
	Below 2.5 acres	51	25.5
	2.5-5 acres	104	52.0
	Above 5 acres	45	22.5
	Total	200	100.0

contd. table 4

4	*Source of Irrigation*	*Frequency*	*Percent*
	Canal	67	33.5
	underground water	100	50.0
	Well with pump set	33	16.5
	Total	200	100.0
5	*Types of Fertilizers*	*Frequency*	*Percent*
	Bio fertilizers	20	10.0
	Chemical fertilizers	164	82.0
	Composite fertilizers	16	8.0
	Total	200	100.0
6	*Productivity Per Acre*	*Frequency*	*Percent*
	50 tons	67	33.5
	80 tons	133	66.5
	Total	200	100.0
7	*Average Cost per Acre*	*Frequency*	*Percent*
	20000	13	6.5
	30000	147	73.5
	50000	40	20.0
	Total	200	100.0
8	*Average Profit per Acre*	*Frequency*	*Percent*
	100000	113	56.5
	200000	87	43.5
	Total	200	100.0
9	*Transport Method*	*Frequency*	*Percent*
	Machine power	177	88.5
	Men power	23	11.5
	Total	200	100.0
10	*Loans taken from Bank*	*Frequency*	*Percent*
	No	18	9.0
	yes	182	91.0
	Total	200	100.0
11	*Source of Loans*	*Frequency*	*Percent*
	Friends and relatives	4	2.0
	Public sector banks	62	31.0
	Private sector banks	17	8.5
	Regional Rural banks	78	39.0
	Cooperative banks	17	8.5
	Private Money Lenders	22	11.0
	Total	200	100.0

Source: Primary data

33.5 percent farmers are using canal irrigation, 50 percent of the respondents are using underground water and remaining 16.5 percent of the respondents are using well with pump set water sources of water to

cultivating in the sugarcane. Mandya district in one of the best district in Karnataka to have multiple irrigation facilities.10 percent farmers are using bio fertilizers, 82 percent farmers are using chemical fertilizers and 8 percent farmers are using composite fertilizers. To conclude, 82 percent of farmers they are using chemical fertilizers due to more productivity in sugarcane cultivation.33.5 percent respondents are procuring 50 tons per acre, 66.5 percent of the farmers are procuring 80 tons per acre. Majority of the farmers are yielding better productivity in sugarcane cultivation.6.5 percent of farmers are spending 20000 rupees per acre, 73.5 percent respondents are spending 30000 rupees per acre and 20 percent respondents are spending 50000 rupees per acre for sugarcane cultivation.56.5 percent farmers have gained 1 lakh profit per acre, 43.5 percent farmers have gained 2 lakh profit per acre.88.5 percent of them are using Machine Power, 11.5 percent of them have incorporated Men Power. Although other transport methods such as Bullock cart, Tractor are used.9 percent of the respondents have not availed any loan facilities from banks. 91 percent of the respondents have availed the loan services from bank for the purpose of agriculture activities such as transportation, fertilizers, labors etc.2 percent of the respondents have accessed financial support from Friends and relatives, 31 percent of the respondents availed financial support from Public sector banks, 8.5 percent of them accessed financial assistance from private sector banks, 39 percent of them accessed financial assistance from cooperative banks and 11 percent of the respondents accessed financial assistance from private money lenders.

Table 5: Critical Factors of Sugar Cane Farmers in Mandya District

12	Subsidy Benefits	Frequency	Percent
	No	158	79.0
	Yes	42	21.0
	Total	200	100.0
13	Loan Waiver	Frequency	Percent
	No	90	45.0
	Yes	110	55.0
	Total	200	100.0
14	Crop Insurance	Frequency	Percent
	No	179	89.5
	Yes	21	10.5
	Total	200	100.0
15	Retailing of sugar cane	Frequency	Percent
	To factory	161	80.5
	To jaggery plant	39	19.5
	Total	200	100.0

contd. table 5

16	Factory Distance	Frequency	Percent
	Less than 10 km	47	23.5
	10-20 km	124	62.0
	Above 30 km	29	14.5
	Total	200	100.0
17	Payment received from Factory	Frequency	Percent
	Within month	39	19.5
	1-2 months	102	51.0
	2-6 months	30	15.0
	More than 6 months	29	14.5
	Total	200	100.0
18	Trust on weighbridge	Frequency	Percent
	No	76	38.0
	Yes	124	62.0
	Total	200	100.0
19	Satisfaction about sugar cultivation	Frequency	Percent
	No	19	9.5
	Yes	181	90.5
	Total	200	100.0

Source: Primary Data

79 percent respondents have not accessed any subsidy services. 21 percent of the respondents have availed subsidy services. 45 percent respondents' loan is not waivered and 55 percent respondents'loan is waived in banks.89.5 percent respondents are not having any crop insurances. 10.5 percent of respondents are having crop insurances.80.5 percent of sugarcane is sold in factory, 19.5 percent of the sugarcane is sold in jaggery plant. 23.5 percent of respondents require to travel less than 10 km to sale their commodities. 62 percent of farmers require to travel 10-20 km; 14.5 percent of respondents require to travel more than 30 km to sell the commodities to respectivefactories.19.5 percent of the respondents receive finance within month, 51 percent of the respondents receive finance between 1-2 months, 15 percent of the respondents receive finance between 2 – 6 months, and 14.5 percent of the respondents receive finance after 6 months.38 percent of the respondents believe in weighbridge; 62 percent of the respondents do not believe inweighbridge.9.5 percent of them are not satisfied with sugarcane cultivation. 90.5 percent of farmers are satisfied about sugarcane cultivation.

CONCLUSION

Based on the above results it is concluded that majority of the respondents are belonged to low income, poor adoption irrigation technology and

insufficient usage of fertilizers and pesticides. This is mainly due to the less participation and contacts with the extension agents. The study will help the extension system to redesign the activities for the transfer of technologies in sugarcane crop on the production, productivity, marketing and socio-economic status of sugarcane farmers. It will also help in identifying major factors for high yield in the sugarcane production, technologies and feedback for the research system. The study will help the policy maker's administrators and planners to suit the existing situation in sugarcane cultivation practices and sugarcane production. Moreover, which in turn it will lead to the sustainable livelihood and improved quality of life of the sugarcane farmers.

Suggestion

- Sugarcane farmers should be provided by drip irrigation by giving subsidy from government
- Sugarcane farmers should provide loans without intere state
- Sugarcane should be sold at least at the rate of 4000 rupees per ton for up liftmen of farmers in sugarcane production.
- Sugarcane farmers should be provided by the pesticides and fertilizers from the factory at the low price.
- All the sugarcane farmers should be provided by the crop insurance.
- The sugarcane farmers from the rural areas should be more facilitated the transport systems
- All the sugarcane farmers should provide the money from the factory within a month.

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