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## SOCIO-ECONOMIC CONDITIONS OF SUGAR CANE CULTIVATORS IN KARNATAKA: A CASE STUDY OF KALABURAGI DISTRICT

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### ABSTRACT:

The present investigation was carried out during the year 2018-19 in Kalaburagi district of Karnataka state to know the socio-economic characteristics of sugarcane cultivators. In Karnataka sugarcane production was scattered due to low productivity and irrigation facilities. In the study area to assess the socio-economic conditions of sugarcane farmer researcher collected a sample 240 sugarcane cultivators constituted the sample size for the study and data were collected randomly by means of personal interview with the help of structured interview schedule. The result depicted that the majority of the sugarcane growers (70.83 per cent) were old age group, can read and write (33.33 per cent), belonged to other backward castes (73.33 per cent), (66.66 per cent) belonging to joint family system and 50.00 per cent were having 5 to 13 members in family, 41.66 per cent having participation in only one organizational or social activities, 58.33 per cent belonged to less than 1.0 hectare land holding size and 41.66 per cent were having obtained 150 to 200 per cent cropping intensity, 50.00 per cent were used as big dairy consisting more than 14 milch animals, 66.66 per cent were having medium material possession with 62.50 per cent modern farm power & implements. Respondents were found such who had the earning annual income of range between 50,000 to 1,00,000/-. It was found that maximum respondents (45.83 per cent) high mass media exposure consisting more than 10 sources of information.



**KEYWORDS:** present investigation , socio-economic characteristics.

### INTRODUCTION

Sugarcane is an important cash crop grown in India. Sugarcane cultivation and development of sugar industry runs parallel to the growth of human civilization and is as old as agriculture. The importance and use of sugarcane and sugar in the country's socio-economic milieu is deep rooted

and immense. In the current day rural economy set up sugarcane cultivation and sugar industry has been a focal point for socioeconomic development in rural areas by mobilizing rural resources, generating employment and higher income, transport and communication facilities.

About 7 million sugarcane farmers and a large number of agricultural labourers are involved in sugarcane cultivation and ancillary activities. Apart from this, the sugar industry provides employment to 5 lakh skilled and semi-skilled workers in rural areas.

Sugar can be produced from sugarcane, sugar-beet or any other crop having sugar content. But in India, sugarcane is the main source of sugar. At present, this is the second largest agro-based industry of India after cotton textile industry. India is the world's largest producer of sugarcane and second largest producer of sugar after Cuba. But India becomes the largest producer if gur and khandsari are also included. This industry involves a total capital investment of Rs. 1,250 crore and provides employment to 2.86 lakh workers. In addition, 2.50 crore sugarcane growers also get benefit from this industry.

In India Karnataka stands 3rd in cane production next to Uttar Pradesh and Maharashtra States and 2nd with respect to sugar recovery after Maharashtra. Sugarcane is grown in 16 districts of the state. Belgaum, Bagalkot, Bijapur, Mandya, Mysore, Chamrajnagar and Bidar are the major sugarcane producing districts.

Karnataka has 30 mills producing 1,151 thousand tonnes or over 6 per cent of the total sugar of India. Belgaum and Mandya districts have the highest concentration of sugar mills. Bijapur, Bellary, Shimoga, Chittradrurga, Kalaburagi are the other districts where sugar mills are scattered. Karnataka is bestowed with favourable agro-climatic conditions duly supplemented with suitable soils for sugarcane cultivation. There are number of perennial rivers with dams, reservoirs, bore-wells and open-wells to supply water for sugarcane cultivation. The northern part of the state

But the Karnataka in know a days sugar productivity and production was very low due to the factors responsible for lower cane productivity in the state. The state has adverse effects of various biotic and a biotic stress on sugarcane crop. Farmer use of imbalance and over/under use of chemical fertilizers. It is more relevant for the application of nitrogen to sugarcane and un-controlled and faulty irrigation schedules and methods for sugarcane. Deterioration of soil physical characters due to poor drainage/no drainage systems for sugarcane fields. Lesser/no use of organic manures in sugarcane cultivation including green manuring. Less or no emphasis on use of bio-agents and bio-fertilizers in controlling sugarcane pest and diseases and also in cropping system of sugarcane. Planting of poor-quality cane seeds which are not from a definite source. Adoption of un-scientific agronomic practices for sugarcane cultivation. Ignorance of inter-cropping cultivation and measures to enhance soil productivity in sugarcane.

**Table 1**  
**Region-wise Agro-climatic and sugarcane features in the state**

SN	Region	Variety	Major planting period	Agro-climatic and other features
1	Southern & Coastal	Co62175 Co 86032 Co8371	Aug to February	<ul style="list-style-type: none"> <li>• Medium to low recovery and high productivity</li> <li>• Canal irrigation is a major source of irrigation and some parts irrigation is carried out by bore well/lift irrigation schemes</li> <li>• High cane yielding and low sugar recovery variety Co 62175 is a predominant variety.</li> </ul>
2	Central Karnataka	Co 7804, Co 62175, Co8371, Co86032	June, July August, October, November	<ul style="list-style-type: none"> <li>• Medium to low yield and low recovery</li> <li>• High cane yielding and low sugar recovery variety Co62175 is a predominant variety</li> <li>• Water shortage during summer months</li> <li>• Cane area is scattered</li> </ul>
3	North west Karnataka	CoC671 Co91010 Co 94012 Co 86032 Co 92020 Co 8011	June to February	<ul style="list-style-type: none"> <li>• Medium to lower cane yield and high sugar recovery</li> <li>• Acute water shortage during summer months</li> <li>• Lower ratoon yields</li> <li>• Saline and alkali problems</li> </ul>

4	North east Karnataka	CoC 671 Co 86032 Co 94012 Co8011	December to March	<ul style="list-style-type: none"> <li>• Lower cane yield and medium recovery</li> <li>• Planting period is limited</li> <li>• Water scarcity during summer months</li> <li>• Poor ratoon yields.</li> </ul>
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Source: <https://www.nijalingappasugar.com/sugarcanescenario.html>

1. Note: Southern & Coastal: High cane yield per ha and low sugar recovery (Mandya, Mysore, Hassan).
2. Central Karnataka: Medium to low yield and low recovery (Haveri, Davangere, Bellary, Gadag).
3. North west Karnataka: Medium cane yield and high sugar recovery (Belgaum and Bagalkot, Bijapur).
4. North east Karnataka: Low yield and medium recovery (Bidar, Gulbarga)

But the government of Karnataka has gives minimu support prices for in sugar cane policy for sugar growing production.

Under the FRP system, the farmers are not required to wait till the end of the season or for any announcement of the profits by sugar mills or the Government. The new system also assures margins on account of profit and risk to farmers, irrespective of the fact whether sugar mills generate profit or not and is not dependent on the performance of any individual sugar mill In order to ensure that higher sugar recoveries are adequately rewarded and considering variations amongst sugar mills, the FRP is linked to a basic recovery rate of sugar, with a premium payable to farmers for higher recoveries of sugar from sugarcane.

Accordingly, FRP for 2017-18 sugar season has been fixed at Rs. 255 per qtl. linked to a basic recovery of 9.5% subject to a premium of Rs.2.68 per qtl for every 0.1 percentage point increase above that level. The FRP of sugarcane payable by sugar factories for each sugar season from 2009-10 to 2017-18 is tabulated below:-

**Table**  
**The FRP of sugarcane payable by sugar factories for each sugar season from 2009-10 to 2017-18**

Sugar Season	FRP (Rs. per quintal)	Basic Recovery Level
2009-10	129.84	9.5%
2009-10	139.12	9.5%
2010-11	145.00	9.5%
2011-12	170.00	9.5%
2012-13	210.00	9.5%
2013-14	220.00	9.5%
2014-15	230.00	9.5%
2015-16	230.00	9.5%
2016-17	230.00	9.5%
2017-18	255.00	9.5%

Source: <https://dfpd.gov.in/sugar.htm>

**Table 1.2**  
**No. of Working Sugar Factories & Cane Crushed in Karnataka as on 01-04-2016 to 31-03-2017**

SN	District/State	Working Factories (Nos.)	%	Cane Crushed (in MTs)	%	Sugar Produced (in MTs)	%
1	Davanagere	1	1.61	261353	1.30	20756	0.97
2	Mandya	3	4.84	1007165	5.03	88750	4.14
3	Mysuru	1	1.61	578389	2.89	51228	2.39
4	Chamarajanagar	1	1.61	285853	1.43	26406	1.23
5	Belagavi	23	37.10	8433642	42.08	923185	43.10
6	Vijayapura	8	12.90	1924621	9.60	278195	12.99

7	Bagalkot	10	16.13	4923273	24.57	505330	23.59
8	Dharawad	0	0.00	00	0.00	00	0.00
9	Gadag	1	1.61	390999	1.95	36482	1.70
10	Haveri	1	1.61	247906	1.24	20506	0.96
11	Uttara Kannada	1	1.61	617092	3.08	66328	3.10
12	Ballari	1	1.61	186663	0.93	18856	0.88
13	Bidar	6	9.68	547675	2.73	47217	2.20
14	Kalaburagi	3	4.84	480654	2.40	43796	2.04
15	Yadgiri	1	1.61	154704	0.77	15163	0.71
STATE		62	100.00	20039989	100.00	2142198	100.00

Source: Karnataka At A Glance

From the given above table discussed that number of working sugar factories in Karnataka during the year 2016-17. The results explained that sugar cane production was increasing day by day but that growth rate was scatter in Karnataka. In Karnataka presently 62 factories are working and these industries produces 2142198 metric ton sugar in Karnataka.

## REVIEW OF LITERATURE

**Biwas Bharati, Rajendra Panta and Kapil Khanal (2018)** research was conducted in Nawalparasi district for accessing the Socio-economic conditions of sugarcane producers. Altogether 60 respondents, 30 from Susta Rural Municipalities and 30 from the Pratapur Rural Municipalities involved in sugarcane cultivation were selected for study. The main source of income was found to be agriculture in both Rural Municipalities. The major expenses occupied by variable cost were labor cost (in Rs) followed by sett cost, cost of fertilizer, transportation, irrigation and insecticide. The gross return per hectare was Rs 2,70,222.30 and net profit per hectare for sugarcane production was Rs 1,02,826.2 found to be more profitable crop in the study area. The analysis of total variable cost, gross margin and B/C ratio revealed that sugarcane production is most profitable business. Lack of irrigation, fertilizer and labor were major production constraints whereas late payments, large number of middlemen were key marketing problems.

Dheerendra Kumar, A. S. Maurya, Jagatpal, Sanjay Kumar and Gaurav Kumar (2017). The present investigation was carried out during the year 2014-15 in Hamirpur district of Uttar Pradesh to know the socio-economic characteristics of sugarcane growers. A total of 120 sugarcane growers constituted the sample size for the study and data were collected randomly by means of personal interview with the help of pre structured schedule. the result depicted that the majority of the sugarcane growers (70.83 per cent) were old age group, can read and write (33.33 per cent), belonged to other backward castes (73.33 per cent), (66.66 per cent) belonging to joint family system and 50.00 per cent were having 5 to 13 members in family, 41.66 per cent having participation in only one organizational or social activities, 58.33 per cent belonged to less than 1.0 hectare land holding size It was found that maximum respondents (45.83 per cent) high mass media exposure consisting more than 10 sources of information.

**Arun Kumar Pal, Rahul Katiyar, H.C. Singh and Rajmani. (2017)** the present study was conducted in Moradabad District of Western region of Uttar Pradesh. Total 200 respondents selected for the study. The Majority 75.00 per cent marginal 73.68 per cent small and 67.74 per cent medium farmers adopted agriculture as a main occupation. The Maximum sugarcane growers belonged to backward caste i.e. 58.06 per cent medium, 58.03 per cent marginal and 52.63 per cent small farmers. The Most of the 56.00 per cent respondents owned marginal (upto 1 ha) size of holding followed by 2.50 and 15.50 per cent respondents were having small and medium size of land holdings, respectively. The Most of the farmers i.e. 77.19 per cent small, 74.19 per cent medium and 37.50 per cent marginal farmers belonged to medium income group. The Most of 43.00 per cent sugarcane grower were using canal, 32.00 per cent canal + private tubewell /pump set as a source of irrigation. The Majority of 56.50

per cent farmers' sugarcane growers belonged to medium productively level where as 26.50 per cent belonged to low Productivity level and 17.00 per cent belonged to high productivity level.

**Shalini Raghav and Chandra Sen. (2014)** adoption of new farm technology is very crucial for agricultural productivity and development. Farmers' perception of new agricultural technology influences their decision to adopt the same. The study is based on personal interview and group discussion with sample farmers of the district. The study finds that marginal and small farmers are reluctant to use new technology because it increases the cost of production, whereas relatively large farmers believe that technologies are good to them in terms of high yield, less pests and more benefit. The study suggests that there is a need of government assistance to promote the participation of farmers, particularly female ones in agricultural training and workshop.

**Naheen Haider Zaidi and Abdul Munir. (2014)** sugarcane is mainly cultivated for sugar production in the world and is an important cash crop of India. It plays a key part in the upliftment of socio-economic condition of the growers. In Uttar Pradesh, sugarcane not only supports the economy but also the major crop which is the source of income of millions of farmers. As an important cash crop of mid-western plain zone sugarcane occupies nearly 70 percent of cultivated land. This study is based on primary data and conducted during the year 2012-13. To study the socio-economic status of the sugarcane growers, a sample of 227 respondents was carved out randomly from the five villages of district Bijnor of Western Uttar Pradesh.

**Devi Abujam Anuradha and Chahal S.S.(2013)** sugarcane crop is an annual crop which yields income to the farmers after nine months. Contrarily, most of the farmers were in immediate need of the money for livelihood. This gave rise to manifold obstacle in the production and disposal of sugarcane. Moreover, the farmers pass through various kind of constraints right from the time of sowing till the marketing of the crop. The study is attempted to identify various constraints faced by the cane growers in Punjab. The findings revealed that unaware of new technology, paucity of labour and high rate of wages, insufficient source of irrigation, and higher interest rate along with inadequate credit availability were major technological, socio-economics, infrastructure, financial and marketing problems constraints faced by the famers. The low sugar recovery, shortage of sugarcane supply, inability to pay arrear to the farmers were important problems faced during the processing of sugar which leads to non-viability of the sugar mills.

## OBJECTIVES OF THE STUDY

The present research constructed the following objectives:

1. To know the socio-economic conditions of sugarcane cultivators in Kalaburagi district.
2. To assess the impact on weather and crop conditions of sugarcane cultivators in Kalaburagi district.
3. To suggest measures to introduce welfare amenities and social security schemes for sugarcane cultivators and give suggestions for better lifestyle of cultivators.

## RESEARCH METHODOLOGY

The present study discussing the socio-economic conditions of sugarcane cultivators in Kalaburagi district in Karnataka state. The present study is based on primary and secondary data. The primary data were collected from the sugarcane cultivators. Data were collected through personal interviews based on a structural schedule. The secondary data were obtained from various government reports viz., Karnataka At a Glance, Karnataka Economic Survey various reports. Websites were also used for data collection of the present study. Data were processed and tabulated according to the requirement of various aspects of the present study. An average method of statistical tool was used for tabulation and interpretation of data. However, all data so gathered were finally examined and used for writing the present report of the study.

### 4.1 Sample Size:-

Kalaburagi district is taken to study the descriptive behavior of different cultivators. Month-wise sugar production data from 2017-18 to 2018-19, each year has 8 months of season. The Primary

data were obtained from the sugar fed journal related dissertation records which are maintained by sugar mills. Three villages from each blocks were purposively selected and 240 sugarcane cultivators were selected from all villages. Thus the total sample size was of 240 respondents. The data were collected through personal interview with the help of structured schedule. The data were analysed and find out the tabulation, percentage and rank order.

### RESULTS AND DISCUSSION:

The data of socio-economic characteristics of sugarcane growers are presented in Table.1 the result revealed that the majority of the sugarcane growers (70.83 per cent) were belonged to age group of above 50 years. The education status revealed that 33.33 per cent respondents can read and write, belonged to other backward castes 73.33 per cent. The majority of sugarcane growers (66.66 per cent) belonging to joint family system and the majority of respondents (50.00 per cent) were having 5 to 13 members in family.

**Table 4**  
**Socio-economic characteristics of sugarcane cultivators**  
**N=240**

Socio-economic characteristics of sugarcane cultivators	Particular	
	Frequency	Percentage
<b>Age categories (years)</b>		
Young age (15- 35)	38	15.83
Middle age (36 to 50)	32	13.33
Old age ( above 50)	170	70.83
<b>Caste</b>		
General caste	60	25.6
Other backward caste	176	73.33
Scheduled caste/Sch. Tribe.	4	1.66
<b>Education</b>		
Illiterate	10	4.16
Read only	40	16.66
Can read and write	80	33.33
Primary school	20	8.33
Middle school	50	20.83
High school	20	8.33
Graduate and above	20	8.33
<b>Marital status</b>		
Early age (Up to 20)	70	29.16
Optimum age (From 21 to 25)	120	50
Late age (More than 25 years)	50	20.83
<b>Family type</b>		
Nuclear Family	80	33.33
Joint Family	160	66.66
<b>Size of family</b>		
Small (1- 4 members)	80	33.33
Medium (5-13 members)	120	50
Large (more than 13 members)	40	16.66

<b>Social participation</b>		
No participation	20	8.33
Participation in one organization	100	41.66
Participation in two organization	30	12.5
Participation in more than two organization	90	37.5
<b>Cropping intensity (%)</b>		
Up to 100	80	33.33
From 101 to 150	30	12.5
From 151 to 200	100	41.66
More than 200	30	12.5
<b>Land holding size</b>		
Marginal (below 1 ha)	140	58.33
Small (1-2 ha)	50	20.83
Medium (2-4 ha)	30	12.5
Large (above 4 ha)	20	8.33
<b>livestock possession</b>		
Small dairy (1-4 milch animal )	40	16.66
Medium dairy (5-14 milch animal )	80	33.33
Big dairy (more than 14 milch animal )	120	50
<b>Material possession</b>		
Low (<10)	50	20.83
Medium (11 to 20)	160	66.66
High (>20)	30	12.5
<b>Farm power &amp; implements</b>		
Modern	150	62.5
Traditional	90	37.5
<b>Annual farm income</b>		
Low (Below Rs. 50,000/-)	40	16.66
Medium (Rs. 50,001-1,00,000/-)	110	45.83
High (Above 1,00,000/-)	90	37.5
<b>Mass media exposure</b>		
Low (up to 5 sources)	60	25
Medium ( 6 to 10 sources)	70	29.16
High (more than 10 sources)	110	45.83

Source: field study

The data also shows that maximum number of sugarcane growers (41.66 per cent) having participation in only one organizational or social activities, the land holding size revealed that maximum sugarcane growers (58.33 per cent) belonged to less than 1.0 hectare land holding size and the majority of sugarcane growers (41.66 per cent) were having obtained 150 to 200 per cent cropping intensity. It was also observed that the maximum sugarcane growers (50.00 per cent) were use as big dairy consisting more than 14 milch animals. The maximum sugarcane growers (66.66 per cent) were having medium material possession with 62.50 per cent modern farm power & implements. Respondents were found such who had the earning annual income of range between 50,000 to

1,00,000/-. It was found that maximum respondents (45.83 per cent) high mass media exposure consisting more than 10 sources of information.

### FINDINGS

It is interesting to conclude that the seasonal migration of workers in the field of sugarcane cultivators in Kalaburagi district of Karnataka state is a well-established phenomenon for development of agriculture. The analysis of socio-economic background has helped to understand the background situation of cultivators.

- The housing condition of the workers is great concern. Nearly half of the respondents are read and right habits. Among the literate's primary school education is larger than the secondary and higher secondary school.
- However, landless labourers and small landholders also work on others' farm as agricultural labourers. Mostly lower caste labourers work as casual labourers at native.
- However, among indebted labourers most of them are away from formal credit system. They have taken loan from relatives and money lenders
- Annual income of the migrant labourers at native shows association between caste and income. It is seen that the higher middle castes have more income than lower castes. Annual income of labourers at native place is not adequate. Most of the weaker section labourers' income is below poverty line.
- It can be concluded from the above analysis that; the labourers have come from various backgrounds at native.
- Most of the respondents socio-economic conditions are found poor, and most of them are from weaker sections of society.
- The educational status of cultivators is found not satisfactory; most of the labourers are small marginal farmers. Some of them are land less labourers who work on others farm after crushing season is over.
- Most of the labourers migrate due to survival problem and some of them for them to improve economic and social status.

### CONCLUSION

It is concluded that majority of the respondents' belonged to old age group, other backward caste, married in optimum age and read and write. These respondents had joint & medium family size, maximum number of respondents had participating in one social organization, having less than 1.0 hac. of land holding with 150 to 200 per cent cropping intensity. Most of the respondents having big dairy, modern farm power and implements, medium material possession, using mass media as a source of information with annual income range between Rs, 50,000 to 1,50,000/-.

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