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SOCIO-ECONOMIC STATUS OF SUGARCANE GROWERS: A CASE STUDY OF BIJNOR DISTRICTS IN WESTERN UTTAR PRADESH

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ABSTRACT

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.

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INTRODUCTION

Sugarcane (*Saccharum spp.*) is one of the most important crops in the world because of its strategic position and immense uses in the daily life of any nation as well as for industrial uses aimed at nutritional and economic sustenance (Girei and Giroh, 2012). Sugarcane is being considered as not merely a sugar-containing crop since it is increasingly assuming the status of energy crop. In India, about more than 50 million farmers, their dependents and a large number of agricultural labourers are involved in sugarcane cultivation, harvesting and ancillary activities constituting 7.5 per cent of the rural population and many workers are employed indirectly in processing. Moreover, the fact that sugarcane prices are better than that of many other crops will also attract farmers to this tropical crop. Sugar cane gives almost double the returns compared to most other crops (Ramanathan, 2013). Today, sugarcane cultivation and sugar industry stands as supporting pillars of Indian economy. Besides, the sugar industry also supports the alcohol and paper industries with it are by products and the cattle feed is assuming importance for the development of animal husbandry in India (Shivanand *et al.*, 2011). Being cash crop sugarcane is of great importance for the farmer due to its income and employment generating

nature. It is an important crop of agriculture sector which share 7 per cent of the total value of the agricultural output and occupies only 2.5 per cent of the country's gross cropped area (Kumar *et al.*, 2012). Uttar Pradesh alone accounts for 42.47 per cent of the total area and 41.31 per cent of the total production of sugarcane in the country. Sugarcane is cultivated throughout the state except some parts of the dry west, and south-west. The maximum concentration is found in the Upper Ganga-Yamuna Doab, Rohilkhand and the trans-Saryu plain which together account for 70 percent of the State's production. Amongst the 100 leading sugarcane producing districts of the country 33 belong to Uttar Pradesh. Muzaffarnagar, Meerut, Saharanpur and Bijnor are the four leading producers of sugarcane in the country account for over 17 per cent of the country's (42 percent of Uttar Pradesh) production of sugarcane (Raja, 2013). In district Bijnor, sugarcane has status of main crop and productivity of sugarcane in the district is 641 q./hectare which is very low in comparison to national average. Farmers are growing sugarcane as a sole crop over a large area and due to mono cropping productivity and income per unit are very low. At present there are 9 sugar mills in district Bijnor.

The Study Area

District Bijnor of Western Uttar Pradesh is located between 29°2' and 29°57' North latitude and 77°59' and 78°56' East

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longitude. It is surrounded on the East by the district – Udham Singh Nagar of Uttarakhand, on the West by the Muzaffarnagar on the North by Haridwar and Gharwal of Uttarakhand, on the North-West by the Shaharanpur, on the South-West by Meerut, on the South by the Moradabad and on the East-South by district Jyotibaphule Nagar. District Bijnor is the gateway of hilly region of Uttarakhand. The Length of the district from North to South is 99.2 km and its breadth from East to West is 98.6 km. The western boundary is formed throughout by the deep stream of the river Ganga. The district may be described topographically as plain tract with slight undulations caused by the valley of few rivers. The main crops of the area are sugarcane, wheat and rice. Although district Bijnor is a prominent agricultural district but the number of industrial units both big and small are also considerable.

MATERIALS AND METHODS

Objectives of the Study

The several studies have been made so far mainly focusing on the socio-economic status of farmers but a very few on evaluating the sugarcane growers. Considering the role of sugarcane crop in socio-economic development of the growers the present paper is an attempt to study the socio-economic status of sugarcane growers in Bijnor District of Western Uttar Pradesh.

Research Methodology

This study is based on primary data for the period of year 2012-13. 227 sugarcane growers belong to different size of land holdings i.e. marginal (64), small (70), medium (58) and large (35) have been selected randomly from the five villages namely Madhusudnapur Nand Jhalra, Shahmuzaffarpur Chamrawala, Jogipura, Taharpur Said and Jaswantpur Lukadari of district Bijnor on the basis of 30 percent of the total sugarcane grower's household. For the purpose of study eight variables viz. age, education, caste, family type, size of land holdings, farm implements, occupational pattern and source of agricultural information taken into consideration which constituted the socio-economic profile of sugarcane growers. Sugarcane growers as respondents have been interviewed personally with the help structured collective questionnaire. Simple statistical tool like percentage was used for analysis and interpretation of data. The word grower is interchangeably used synonymous with the farmers in this paper.

RESULTS AND DISCUSSION

Socio-economic status is a combined measurement of economic and social position of an individual or a group in relation to others in the society. It has a profound role in determining one's accessibility to the common resources, livelihood pattern, household food and nutritional security etc. It also guides the psychological and behavioral components of a sample viz. knowledge, attitude, perception, adoption, change-proneness, level of aspiration, risk bearing ability, economic motivation etc (Roy *et al.*, 2013).

Age Composition

The age composition of a population is a good indicator of the type of population under study. If a population is developed

one, the proportion of people in higher age groups are to be more, otherwise, the reverse is happened, i.e. if the proportion of people in the younger age group is more, then the population is a developing one which is generally the case in India (Awais and Ahmad, 2013). In the present study age composition of the respondent shown in table 1, which depict the majority (50 percent) of marginal farmers belonging to below 30 years of age group, remaining 35.93 and 26.65 percent marginal farmers belong to 30-45 years and 45-60 years of age group respectively. Only 7.81 percent marginal farmers belong to above 60 years of age group. Maximum number of small farmers (34.28 percent) belonging to below 30 years of age group, only 5.71 percent small farmer belongs to above 60 years of age group, while 30-45 and 45-60 years of age group of small farmers amounting 27.14 percent and 21.42 percent respectively. However in case of medium farmers 36.20 percent and 31.03 percent belong to below 30 years and 30-45 years age group, other respondent at the age of 45-60 years shown 24.13 percent, while 6.89 percent medium farmers belong to above 60 years of age group. Maximum number of large farmer belongs to below 30 years of age group (31.42 percent) followed by 30-45 years (25.71 percent) and 45-60 years (22.85 percent) while 8.57 percent large farmer belonged to above 60 years of age group. Thus, it is clear from table that there is major concentration of farmers in the productive age group, which is expected to influence on the supply of labour and enhance the earning capacity of the household and very keen to grow sugarcane crop.

Level of Education

Education is regarded as an important asset for an individual as it provide the key to the understanding of the society and equip the individual to assert his rights and to claim due share from others. Education not only improves level of awareness and knowledge but also changes attitude and values, modernizes and since economic benefits and social prestige are derived from formal education, a place of respectability is given to education (Kendre, 2011). Table 2 explain that educational status of marginal farmers were having education up to class 5th (31.25 percent), followed by 6 to 10 class (29.68 percent), who can read only are (9.37 percent), intermediate (4.68 percent) and graduation (1.56 percent). Illiterate marginal farmers are found 23.43 percent. A close look from below table shows that maximum numbers of small farmer have education 6 to 10 class (38.57 percent) followed by up to 5th class (24.28 percent), intermediate (11.42 percent), can read only (10 percent) and graduation (2.85 percent) while 12.85 percent are illiterates. Medium farmers have highest education in 6-10 class (39.65 percent) level followed by up to 5th class (25.86 percent), intermediate (12.06 percent) and graduation (3.44 percent). 8.62 percent and 10.04 percent medium farmers can read only and are illiterate respectively. Majority of the large farmers have education from 5th class to graduation level. Large farmers, who can read only and illiterate are (8.57 percent) and (5.71 percent) in the study area. It can be envisaged from analysis and discussion that the highest percentage of farmers getting education 6 to 10 class followed by up to 5th class.

Caste

Caste system is unique in Indian society and also forms the basis of inequality and exploitation. This was believed to be

Table 1. Age Composition of the Farmers (percentage)

S. No.	Age Categories	Marginal Farmer (n=64)	Small Farmer (n=70)	Medium Farmer (n= 58)	Large Farmer (n= 35)	Total (n=227)
1.	Below 30	50.00	34.28	36.20	31.42	38.76
2.	30 – 45	35.93	27.14	31.03	25.71	30.39
3.	45 – 60	26.56	21.42	24.13	22.85	23.78
4.	Above 60	7.81	5.71	6.89	8.57	7.04

Source: field survey.

Table 2. Level of Education of the Farmers (percentage)

S. No.	Level of Education	Marginal Farmer (n=64)	Small Farmer (n=70)	Medium Farmer (n= 58)	Large Farmer (n= 35)	Total (n=227)
1.	Illiterate	23.43	12.85	10.04	5.71	14.09
2.	Can read only	9.37	10.00	8.62	8.57	9.25
3.	Up to 5 th class	31.25	24.28	25.86	28.57	27.31
4.	6 – 10 class	29.68	38.57	39.65	40.00	36.12
5.	Intermediate	4.68	11.42	12.06	11.42	9.69
6.	Graduation	1.56	2.85	3.44	5.71	3.08

Source: field survey.

Table 3. Caste of the Farmers (percentage)

S. No.	Caste Category	Marginal Farmer (n= 64)	Small Farmer (n= 70)	Medium Farmer (n= 58)	Large Farmer (n= 35)	Total
1.	Schedule Caste	51.56	22.85	15.51	11.42	27.75
2.	Backward Caste	40.62	30.00	22.41	22.85	29.95
3.	General	31.25	52.85	43.10	48.57	42.29

Source: field survey.

Table 4. Distribution of Farmers according to Family Type (percentage)

S. No.	Family	Marginal Farmer (n = 64)	Small Farmer (n=70)	Medium Farmer (n= 58)	Large Farmer (n= 35)	Total (n=227)
1.	Nuclear Family	43.75	58.57	36.20	42.85	42.29
2.	Joint Family	56.25	45.71	50.00	71.42	57.70

Source: field survey.

Table 5. Distribution of Respondent according to Land holding (percentage)

S. No.	Particulars	Number	Percentage
1.	Less than 1 hectare (Marginal Farmer)	64	28.19
2.	1 to 2 hectares (Small Farmer)	70	30.83
3.	2 to 4 hectares (Medium Farmer)	58	25.55
4.	Above 4 hectares (Large Farmer)	35	15.41
	Total	227	100.00

Source: field survey.

Table 6. Availability of Farm Implements* (percentage)

S. No.	Type of Implements	Marginal Farmer (n= 64)	Small Farmer (n= 70)	Medium Farmer (n= 58)	Large Farmer (n= 35)	Total (n=227)
1.	Bullock Cart	45.31	55.71	72.41	88.57	62.11
2.	Tractor	3.12	11.42	18.96	48.57	16.74
3.	Sugarcane Planter	-	-	5.17	11.42	3.08
4.	Thresher	-	15.71	46.55	37.14	22.90
5.	Iron/ Wooden Plough	54.68	70.00	74.13	85.71	69.16
6.	Seed Drill	-	27.14	41.37	42.85	29.55
7.	Leveler	-	34.28	50.00	31.42	34.80
8.	Pump set	-	35.71	53.44	54.28	37.88
9.	Sprayer	-	42.85	51.72	45.71	41.85
10.	Harrow/ Cultivator	6.25	21.42	29.31	40.00	20.70
11.	Chaff Cutter	51.56	72.85	77.58	82.52	73.12

*Multiple Responses

Table 7. Proportion of Farmers according to the type of Occupational Pattern* (percentage)

S. No.	Occupational Type	Marginal Farmer (n= 64)		Small Farmer (n= 70)		Medium Farmer (n= 58)		Large Farmer (n= 35)	
		Subsidiary	Casual	Subsidiary	Casual	Subsidiary	Casual	Subsidiary	Casual
1.	Business	12.51	3.12	15.71	12.85	29.31	18.96	28.57	22.85
2.	Animal Husbandry	23.43	15.62	21.42	27.14	25.86	27.58	25.71	31.42
3.	Services	4.68	-	7.14	-	17.24	12.06	22.85	20.00
4.	Transportation	29.68	21.87	25.71	17.14	13.79	15.51	20.00	17.14
5.	Agriculture Labour	37.50	29.68	34.28	30.00	8.62	6.81	5.71	2.85

*Multiple Responses

Table 8. Source of Agricultural Information (percentage)

S. No.	Sources	Marginal Farmer (n= 64)	Small Farmer (n= 70)	Medium Farmer (n= 58)	Large Farmer (n= 35)	Total (n= 227)
1.	Extension Staff	26.56	35.71	46.55	54.28	38.76
2.	Fellow cultivator	48.43	58.57	72.41	80.00	62.55
3.	Demonstration	15.62	28.57	37.33	57.14	31.71
4.	Mass Media	18.75	24.28	67.24	77.14	41.85
5.	Relatives	60.93	68.57	70.68	65.71	66.51

Source: field survey.

It is evident from table 6 that majority of marginal farmers have chaff cutter (51.56 percent), iron/ wooden plough (54.68 percent), bullock cart (45.31 percent), harrow/ cultivator (6.25 percent) and tractors (3.12 percent). Highest percentage of availability of farm implements in small farmer is chaff cutter (72.85 percent) followed by iron/ wooden plough (70 percent), bullock cart (55.71 percent), sprayer (42.85 percent), pump set (35.71 percent), leveler (34.28 percent), seed drill (27.14 percent), harrow/ cultivator (21.42 percent), thresher (15.71 percent) and tractor (11.42 percent). It is also observed from table that medium farmers have maximum number of chaff cutter (77.58 percent), bullock cart (72.41 percent), iron/ wooden plough (74.13 percent). Other farm implements are pump set (53.44 percent), sprayer (51.72 percent), leveler (50 percent), thresher (46.55 percent), seed drill (41.37 percent), harrow/ cultivator (29.31 percent), tractor (18.96 percent) and sugarcane planter (5.17 percent) respectively. In case of large farmers numbers of tractor are (48.57 percent), pump set (54.28 percent), harrow/cultivator (40.00 percent) and sugarcane planter (11.42 percent) in the study area. Bullock cart (88.57 percent), iron/ wooden plough (85.71 percent) and chaff cutter (82.52 percent) also have highest percentage of farm implements followed by sprayer (45.71 percent), seed drill (42.85 percent), leveler (31.42 percent), and thresher (37.14 percent) in the study area.

Occupational Pattern

All farmers are distributed in accordance with the subsidiary and a casual occupation since agriculture is main occupation. In every household, some of the members are involved full time in agriculture whereas others expense part time by practicing subsidiary and casual occupations as shown in the below table:

The data exhibited that majority of marginal farmer are engaged in agriculture labour activities (37.50 percent), followed by transportation (29.68 percent), animal husbandry (23.43 percent), business (12.52 percent) and services (4.68 percent) as a subsidiary occupation. At the same time the percentage of marginal farmers on as casual occupation of agriculture labour (29.68 percent) followed by transportation (21.87 percent), animal husbandry (15.62 percent) and business (3.12 percent). However, the maximum percentage of small farmers worked as a subsidiary agriculture labour (34.28 percent) and casually (30 percent). Other occupation of small farmers as a subsidiary worked transportation (25.71 percent), animal husbandry (21.42 percent), business (15.71 percent) and only in services (7.14 percent). While casually small farmers worked as transportation (17.14 percent), animal husbandry (27.14 percent) and business (12.85 percent) respectively. A look from the table 7 shows that majority of the medium farmers have as a subsidiary occupation, business (29.31 percent) and animal husbandry (25.86 percent) followed by services (17.24 percent), transportation (13.79

percent) and agriculture labour (8.62 percent). Whereas casually medium farmers engaged in animal husbandry (27.58 percent), business (18.96 percent), and transportation (15.51 percent), services (12.06 percent) and agriculture labour activity (6.81 percent). The major subsidiary occupation of large farmers is business (28.57 percent) followed by animal husbandry (25.71 percent), services (22.85 percent), transportation (20 percent) and agriculture labour (5.71 percent), at the same time casual occupation of large farmers are animal husbandry (31.42 percent), business (25.71 percent), services (20 percent), transportation (17.14 percent) and agriculture labour (2.85 percent) in the study area.

Source of Agricultural Information

It would be understood from table 8 that the proportion of farmers receiving agricultural information from different sources. Here we find that marginal farmers have agricultural information from their relatives (60.93 percent) followed by fellow cultivators (48.43 percent), extension staff (26.56 percent), mass media (18.75 percent) and demonstration (15.62 percent). Sources of agricultural information in small farmers are relatives (68.57 percent) and fellow cultivator (58.57 percent) followed by extension staff (35.71 percent), mass media (24.28 percent) and demonstration (28.57 percent) respectively. On the other hand, in case of medium farmers mass media was an effective modern means of communication (67.24 percent) as a source of agriculture information. Major source of agricultural information is fellow cultivator (72.41 percent), relatives (70.68 percent), extension staff (46.55 percent) and demonstration (37.33 percent). To the extent that majority of large farmer receive agricultural information from fellow cultivator (80 percent) and mass media (77.14 percent) followed by relatives (65.71 percent), demonstration (57.14 percent) and extension staff (54.28 percent). The above analysis explains that relatives and fellow cultivator are major source of agriculture information followed by mass media among the sugarcane farmers in the study area.

Conclusion

On the basis of above-said discussion, it is concluded that the farmers in all category belong to below 30 year age group and very intense to grow sugarcane in their fields. Farmers are educated mostly up to 10th class. A general caste is dominating in sugarcane farming. Majority of the farmers in all categories belong to joint family system. Farmers according to their size of land holding belonged to small category. Maximum numbers of agriculture implements are found in large and medium farmers. The subsidiary and casual occupational pattern of marginal and small farmer are agriculture labour, while medium and large farmers engaged in business activities as a subsidiary and casual occupation. Major source of agriculture information is relatives followed by fellow

cultivators in the study area. The findings of this 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 growers. Due to their poor purchasing power, marginal and small farmers find it difficult to purchase inputs and farm implements for adoption of improved technologies. Farmers need to be encouraged to adopt high-value low-volume crops, including medicinal and aromatic plants, high productive dairy animals, fisheries, poultry, bee-keeping etc, in the study area.

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