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Relationship of profile of respondents with knowledge and adoption of sugarcane production technologies

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Abstract
The present study was conducted with specific objectives to study "Knowledge and adoption of sugarcane production technology" for this study, from Latur district two talukas *viz*. Chakur and Udgir were selected. From these two talukas twelve villages were selected randomly and ten respondents from each villages were selected, i.e. 120 respondents from 12 villages constituted the sample for the study. Ex-Post Facto research design was used for the research study.
As regards, the relationship of selected personal characteristics of sugarcane grower namely, education, land holding, annual income, social participation, extension contact, sources of information, economic motivation and risk orientation had established positive and significant relationship with knowledge and adoption of sugarcane production technologies.

Keywords: Knowledge, adoption, sugarcane crop, sugarcane production technology, sugarcane growers

1. Introduction
The world demand for sugar is the primary driver of sugarcane agriculture. Cane accounts for 80 per cent of sugar produced. Sugarcane is a renewable, natural agricultural resource because it provides sugar, biofuel, fiber, fertilizer. Sugarcane juice is used for making white sugar, brown sugar (Khandsari), Jaggery (Gur) and ethanol.
India is the 2nd largest producer of sugar after Brazil. The yield of sugarcane per hectare in India is 69.84 tonnes. Sugar industry is the second largest industry in the country after cotton textiles and contributes around 6 per cent of the agricultural GDP. Indian sugar industry contributes substantially to the rural economy as the sugar mills are located in rural areas and employ rural folk to a large extent. Sugar plays important role in daily diet and it has nutritional importance. To supply the sugar to increasing population of India, need to increase the production per unit area of sugarcane.
The area under this crop is low with low productivity. This might be the wide gap in between the knowledge already possessed by the respondents and their application in the field. It creates the wide scope for increasing sugarcane production per unit area. However, a majority of sugarcane grower doesn't have the knowledge and adopt the recommended production technology to the fullest extent.

2. Methodology
The present study was conducted in two tehsils of Latur district *viz*. Chakur and Udgir. Six villages from each randomly selected tehsils. The data were collected from 10 respondents from each of randomly selected these twelve villages, i.e. 120 respondents from 12 villages constituted the sample for the study.
The respondents were personally interviewed with interview schedule. The data were tabulated and analyzed by using statistical tools like frequency, percentage and correlation coefficient.

3. Results
The findings of the present study as well as relevant discussion have been presented under following heads.
1. Relationship of profile of respondents with knowledge and adoption of sugarcane production technologies
2. Relationship of profile of respondents with knowledge of respondents about sugarcane production technologies

Table 1: Relationship between profile (Independent variables) of respondents and their level of knowledge (Dependent variable)

Sr. No.	Independent variables	Correlation coefficient (r)
1.	Education	0.324**
2.	Land holding	0.202*
3.	Annual income	0.259**
4.	Farming experience	-0.233*
5.	Social participation	0.308**
6.	Extension contact	0.461**
7.	Source of information	0.417**
8.	Economic motivation	0.301**
9.	Risk orientation	0.279**

* Significant at 0.05 per cent level of probability
** Significant at 0.01 per cent level of probability NS - Non significant

It is conspicuous from the Table 1 that, result of correlation coefficient (r) showed that independent variable namely education, annual income, social participation, extension contact, source of information, economic motivation, and risk orientation were positive and highly significant with the knowledge level of respondents about sugarcane production technologies. While land holding was positively and significantly related with the knowledge level of respondents about sugarcane production technologies whereas, farming experience was having negative and significant relationship with knowledge level of respondents about sugarcane production technologies.
Similar result was reported by Mane (2012) [5], Jadhav (2013), Lad (2013) [3, 4], Ambavane (2014) [1], Shete (2014) [6] and Shinde (2014) [7].

3.1 Relationship of profile of respondents with adoption of sugarcane production technologies.

Table 2: Relationship between profile (independent variables) of respondents and their level of adoption (dependent variable)

Sr. No.	Independent variables	Correlation coefficient (r)
1.	Education	0.282**
2.	land holding	0.203*
3.	Annual income	0.247*
4.	Farming experience	-0.079^{NS}
5.	Social participation	0.268**
6.	Extension contact	0.243*
7.	Source of information	0.391**
8.	Economic motivation	0.202*
9.	Risk orientation	0.220*

* Significant at 0.05 per cent level of probability
** Significant at 0.01 per cent level of probability
NS - Non significant

It is observed from the table 2 that, education, social participation and source of information were positive and highly significant relationship with adoption of sugarcane production technologies. While, land holding, annual income, extension contact, economic motivation, and risk orientation were positively and significantly related with adoption of sugarcane production technologies.
Whereas, farming experience was having negatively non-significant relationship with adoption of sugarcane production technologies.
Similar result was reported by Bedre (2009) [2], Mane (2012) [5], Jadhav (2013) [3], Lad (2013) [4], Ambavane (2014) [1], Shete (2014) [6] and Shinde (2014) [7].

4. Conclusions

It was found that personal characteristics like education, annual income, social participation, and extension contact, source of information, economic motivation and risk orientation were positive and highly significant with the knowledge level of sugarcane production technologies by the respondents. While land holding was positively and significantly related with the knowledge level of sugarcane production technologies by the respondents whereas, farming experience was having negative and significant relationship with knowledge level of sugarcane production technologies by the respondents.
It was also found that personal characteristics like education, social participation and source of information were positive and highly significant relationship with adoption of sugarcane production technologies. While, land holding, annual income, extension contact, economic motivation and risk orientation were positively and significantly related with adoption of sugarcane production technologies whereas, farming experience was having negatively non-significant relationship with adoption of sugarcane production technologies.

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