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Adoption of sugarcane production technologies by its beneficiaries and non beneficiaries through ATMA programme in Sitapur district of Uttar Pradesh

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Abstract

Agriculture is the backbone of Indian economy and agricultural development is central to all strategies for planned development. The agricultural growth has powerful leverage effects on the rest of the economy and all the three basic objectives of economic development of the country, viz. output growth, price stability and poverty alleviation are best served by the growth of the agricultural sector. Sugarcane is the most important cash crop. India rank first both in respect of area and total production among the sugarcane growing countries of the world. Even if, there is enormous opportunity of making further progress in relation to increase the sugarcane production by way of adoption of modern technology in sugarcane production. Hence, this study is being undertaken to analyze the adoption level of sugarcane production technologies in Ealliya block of Sitapur district (Uttar Pradesh) and found that beneficiaries have medium level of adoption followed by high low level of adoption respectively. Whereas majority of the non beneficiaries were categorized in the low level of adoption followed by medium and high level of adoption respectively.

Keywords: adoption, beneficiaries, ATMA, Sitapur, Uttar Pradesh

Introduction

Sugarcane (*Saccharum officinarum*) species is widely cultivated in India because of high sucrose content. Sugarcane is a tall perennial plant growing erect even up to 5 or 6 meters and produces multiple stems. The plant is composed of four principal parts, root system, stalk, leaves and inflorescence. The main product of sugarcane is sucrose, which accumulates in the stalk internodes. Sucrose, extracted and purified in specialized mill factories, is used as raw material in human food industries or is fermented to produce ethanol. Ethanol is produced on a large scale by the Brazilian sugarcane industry. Sugar is the major produce of sugarcane. The domestic demand of sugar is rotating around 22-23 million tonnes annually, where as the production of sugar in India during last 5 years is rotating around 24.3 to 26.3 Million ton. Maharashtra is the largest producer of sugar contributes about 34% of sugar in the country followed by Uttar Pradesh. Broadly there are two distinct agro-climatic regions of sugarcane cultivation in India, viz., tropical and subtropical. However, five agro-climatic zones have been identified mainly for the purpose of varietal development. They are (i) North Western Zone (ii) North Central Zone (iii) North Eastern Zone (iv) Peninsular Zone (v) Coastal Zone. Tropical region Shared about 45% and 55% of the total sugarcane area and production in the country, respectively along with the average productivity of 77 t/ha (2011-12). Sub-tropical region accounted for about 55% and 45% of total area and production of sugarcane with an average productivity about 63 t/ha (2011-12).

Research methodology

The present study was conducted in Sitapur District of U.P. which was purposively selected because maximum areas of the district are covered by the ATMA project. The district comprises 19 blocks out of which Ealliya block is selected purposively because the maximum area of the block covered by ATMA project. The sample are comprised of 110 respondents from 10 villages which were selected randomly. Ex-post facto research design was used in the study. The pre structured interviews schedule was used to collect the data related to adoption of sugarcane production. The information collected was scored, tabulated, computed and analyzed to have necessary interpretation.

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Results & Discussion

The results obtained from present study as relevant discussion have been presented below.

1. Socio-economic status of the beneficiaries and non-beneficiaries.

S. No.	Socio-Economic Status	Beneficiaries		Non beneficiaries	
		Frequency	Percentage	Frequency	Percentage
1	Low (11-16)	11	20.00	24	43.64
2	Medium (17-22)	29	52.73	21	38.18
3	High (23-28)	15	27.27	10	18.18
4	Total	55	100.00	55	100.00

The socio-economic status of the beneficiaries and non-beneficiaries are given in Table. The data pertain that the majority of the beneficiaries 52.73 per cent were found to have medium socio-economic status followed by 27.27 per cent of the beneficiaries were categories high socio- economic status and only 20.00 per cent beneficiaries found to have low socio-economic status and only 20.00 per cent beneficiaries

found to have low socio-economic status. Whereas 43.64 per cent of the non-beneficiaries were found to be low socio-economic status, followed by 38.18 per cent non-beneficiaries were categorized medium socio-economic status and 18.18 per cent of the non-beneficiaries were found to have high socio-economic status.

2. Level of adoption of sugarcane production technologies by beneficiaries and non beneficiaries.

S. No.	Adoption	Beneficiaries		Non beneficiaries		
		Frequency	Percentage	Adoption	Frequency	Percentage
1	Low(24-34)	10	18.18	Low (24-34)	38	69.09
2	Medium(35-45)	24	43.64	Medium(35-45)	12	21.82
3	High(45-55)	21	38.18	High (45-55)	05	09.09
4	Total	55	100.00	Total	55	100.00

The data in table shows that (43.64%) beneficiaries were categorized in the medium level of adoption followed by (38.18%) beneficiaries were categorized in the high level of adoption and (18.18%) were categorized in the low level of attitude respectively. Whereas majority of the non-

beneficiaries (69.09%) were categorized in the low level of adoption followed by (21.82%) non beneficiaries were categorized in the medium level of adoption and (9.09%) were categorized in the high level of adoption respectively. Similar finding is also reported by Shanker *et al* (2009) [5].

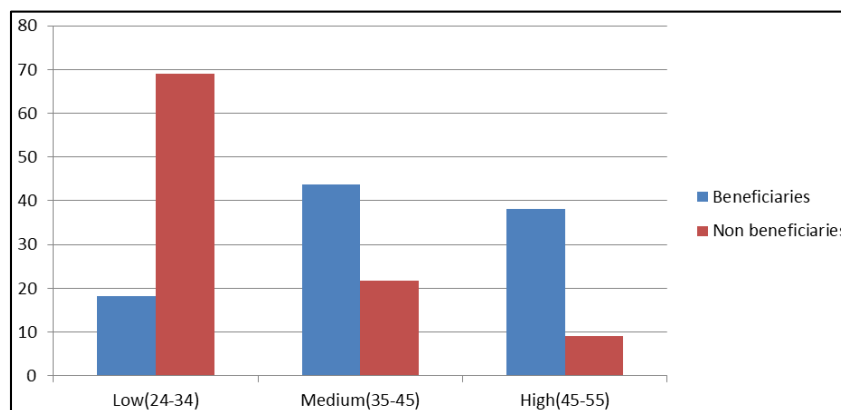


Fig 1

Relationship between socio-economic characteristics and adoption behaviour of sugarcane production technologies of beneficiaries and non-beneficiaries.

S. No.	Characteristics	“r” value(beneficiaries)	“r” value(non-beneficiaries)
1.	Age	-0.285*	-0.123*
2.	Education	0.215*	0.145*
3.	Land holding	0.021NS	0.015NS
4.	Annual income	0.052NS	0.028NS
5.	Mass media	0.133*	0.101*
6.	Innovativeness	0.364*	0.219*

* = Significant at p = 0.005, NS Non significant

It clearly states that the age was negatively significant, land holding and annual income was non significant to both beneficiaries and non beneficiaries whereas education, mass

media and innovativeness had positively significant to adoption of sugarcane production technologies.

Conclusion

It is concluded that the majority of the beneficiaries have medium to high level adoption of sugarcane production practices but non beneficiaries have low to medium level adoption of sugarcane production practices. Education, income, land holding have positively significant with the adoption of sugarcane production practices. Govt. should take proper steps are suitable extension strategies to be followed for maximum adoption of sugarcane production technologies.

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