

Knowledge Level of Sugarcane Growers on Sustainable Sugarcane Initiative (SSI)

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ABSTRACT

The study aims to assess the knowledge level on Sustainable Sugarcane Initiative (SSI) of sugarcane growers in Villupuram district. It was found that more than three fourths of the respondents had high level of knowledge on SSI. It was inferred from the study that the awareness created through trainings, demonstrations, field days and exposure visits under Tamil Nadu Irrigated Agriculture Modernization and Water Bodies Restoration and Management project might be the reason for high level of technology-wise knowledge on SSI among the beneficiary respondents.

Keywords : Sugarcane, Knowledge, farmer, Tamil Nadu.

INTRODUCTION

Sugarcane occupies a prominent position on the agricultural map of India, covering large areas in sub-tropics and tropics. In 2014-15, there were 538 sugar mills in the country when compared to 139 mills in 1950-51 and the acreage under sugarcane increased from 1.71 million ha in 1950-51 to 4.90 million ha in 2015-16 . There is hardly any possibility of additional area forthcoming under sugarcane, primarily due to decreasing availability of arable land. Monoculture of sugarcane has resulted in substantial reduction in productivity. It is apparent that, in future, the production target of sugarcane has to be met mainly by increasing the

productivity of the crop. Depending on the yield level of the crop and the climatic conditions prevailing in different parts of the country, the water requirements vary considerably from 1200 to 3000 mm.

The common method of irrigation followed for sugarcane was the surface irrigation, either by flood or through furrows. However, the irrigation efficiency of surface irrigation is only 30-50 per cent and there was considerable wastage of water. Micro irrigation and water use efficient cultivation techniques become relevant in this context, for conserving water and optimizing its use. The Water Resources Organization (WRO), Government of Tamil Nadu

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with the aim to augment sugarcane production and to achieve 100 per cent capacity utilization by the sugar mills had implemented various technologies under TN-IAMWARM project (Tamil Nadu Irrigated Agriculture Modernization and Water bodies Restoration and Management Project) a multidisciplinary project funded by World Bank.

To achieve higher production by means of ensuring efficient utilization of water and fertilizers, the Sustainable Sugarcane Initiative (SSI) under TN-IAMWARM project was implemented in the year 2011 by raising bud-chip seedlings in the shade nets. To expand the sugarcane area under drip irrigation, the Government has increased the subsidy from 65 to 100 per cent for micro irrigation to small and marginal farmers and 75 per cent to other farmers, which will save around 40 per cent of irrigation water and increase the cane yield by about 35 to 45 per cent.

Cultivating sugarcane crop through Sustainable Sugarcane Initiative (SSI) along with drip fertigation, enhances yield, conserves water and other input costs like labour, fertilizer etc., Any first-hand information gained on this new initiative would help the policy makers and extension agents to reorient their strategies. Keeping the above points in mind, a research was undertaken to study the knowledge level of sugarcane growers on Sustainable Sugarcane Initiative (SSI).

METHODOLOGY

Villupuram district in Tamil Nadu has the highest share of area under sugarcane cultivation (79,437 ha) in Tamil Nadu (Season and crop report of Govt. of Tamil Nadu : 2013-14). Gadilam, Gomukinadhi, Ongur and Varahanadhi sub-basins were purposively selected for the study since these sub-basins had enhanced projection for SSI sugarcane cultivation than other sub-basins. SSI under TN-IAMWARM is operated in 5 taluks, 15 blocks and 78 villages covered under Gadilam, Gomukinadhi, Ongur and Varahanadhi sub-basins of Villupuram district. The total SSI beneficiaries in 15 blocks under the TN-IAMWARM project were 124. All the 124 beneficiaries of SSI were selected for the study.

FINDINGS AND DISCUSSION

Knowledge is a pre-requisite for adoption of innovation, as this would enable the farmers to completely understand a technology and its relative advantage. Hence, an attempt was made to assess the knowledge. Overall and technology-wise knowledge level of the respondents were studied and the findings are presented in Table 1 and Table 2.

Technology - wise Knowledge Level of the Respondents

The technology-wise knowledge level of the respondents on the SSI was studied and the results are presented in Table 1.

Table 1.
Distribution of Respondents According to their Technology - wise Knowledge Level

(n=124)

Sl. No.	Recommended Practices	Number*	Per cent
1.	Using protrays for SSI nursery	120	96.77
2.	Nursery duration for sugarcane -25 days	111	89.51
3.	Main field planting in sugarcane - 5000 numbers of single budded seedlings per acre	95	76.61
4.	Plant spacing 5' x 2'	79	63.70
5.	Sub surface drip irrigation method used to irrigate the field in SSI	122	98.38
6.	Spacing for placing drippers - 75 cm	86	69.35
7.	Irrigation interval - 3 days or daily	100	80.64
8.	Fertigation method of fertilizer application for SSI	116	93.54
9.	Fertigation interval - 15 days	87	70.16
10.	Detrashing and mulching at 5 th and 7 th month of sugarcane crop	89	71.77

*Multiple responses obtained

It is observed from Table 1 that 98.38 per cent of the respondents had knowledge about sub-surface drip irrigation method used to irrigate the field in SSI, followed by use of protrays for SSI nursery (96.77%); 93.54 per cent of the respondents had knowledge about applying fertilizer through fertigation method, followed by knowledge about allowing 15 days of nursery duration for sugarcane (89.51%).

The possible relative advantages of SSI over conventional cultivation have made it popular among the beneficiaries which might have been the reason for increased knowledge on basic features like sub surface drip irrigation method, protray nursery and fertigation method of fertilizer application for SSI.

In addition, awareness created through trainings, demonstrations, field days and exposure visits under

TN-IAMWARM project might have resulted in high level of technology-wise knowledge on SSI among the beneficiary respondents.

Overall knowledge level of the respondents

In order to assess the overall knowledge level of the respondents, necessary data were collected and they were categorized into three groups namely low, medium and high using cumulative frequency .

More than three-fourths of the respondents (82.30%) had high level of knowledge on SSI, followed by 9.70 per cent with medium level and the remaining (8.0%) had low level of knowledge on SSI.

The increased awareness created through trainings, demonstrations, field days and exposure visits under TN-IAMWARM project might be the reason for this high level of knowledge on SSI among the beneficiary respondents.

CONCLUSION

The overall knowledge level of the sugarcane growers on SSI was high. Further, it was observed from the technology wise knowledge level that respondents had less knowledge about intercultural activities, fertigation interval, dripper spacing and spacing between plants compared to the other components of SSI. Hence the agriculture department officials may take steps to increase awareness and knowledge on those practices through distribution of printed literature like leaflets on SSI, regular field visits, front-line demonstrations and trainings.

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