

Productivity enhancement in sugarcane

through new variety Co 0212

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Sugarcane is the main source of sucrose being cultivated over 200,000 ha in Tamil Nadu and 10% area cultivated in Erode district. The average productivity of sugarcane in Erode district is 104 t/ha, which is low when compared to its potential yield. To improve the productivity of sugarcane KVK conducted on Farm trial on assessing the performance of the Co 0212 variety for wider adoption in the district. The variety Co 0212 recorded 17.24% more yield than the existing variety Co 86032. Success of the technology was demonstrated in association with ICAR-Sugarcane Breeding Institute and sugar mills for wider adoption in Erode district.

Keywords: KVK Interventions, Productivity enhancement, Sugarcane variety Co 0212

SUGARCANE is grown as an important commercial crop and it is the main source of sugar in India. In Erode district, sugarcane occupies 22,000 ha area every year. Due to the continuous cultivation of old variety in the same field over 3 years, it resulted in yield reduction in sugarcane crop. Generally, farmers are not aware of the recent varieties

released by research stations and State Agricultural Universities, which are resistant or tolerant to various pests and diseases apart from being higher in productivity. Considering the constraints faced by the farmers, ICAR-KVK Myrada conducted on farm trial on the performance assessment of the sugarcane variety Co 0212 in Erode district during

2017-18. Yield performance of the assessed variety and its economics of the assessed technology found to be higher than the farmers' practising variety. Success of the trial leads the KVK to demonstrate the variety in more farmers' field with the support of ICAR-SBI and sugar mills presented in the demonstration region (Fig. 1).



Fig. 1. Training to Extension Officials

KVK Interventions

To assess the performance of the selected variety, KVK identified the progressive and volunteered farmers in Poonthurai village of Erode district during 2017. The identified farmers trained on scientific adoption of the package of practices recommended by

Table 1. Technological interventions in the cultivation of sugarcane variety Co 0212

Planting materials used	Settlings
Quantity of planting materials used	12,500 numbers/ha
Age of planting	25 days old
Spacing	5 × 2 feet
Organic fertilizers	FYM 12.5 tonne/ha
Chemical Fertilizers	As per recommendations



Fig. 2. Demonstration field with farmers

the Sugarcane Breeding Institute, Coimbatore. The farmers were provided with good quality seedlings (sugarcane buds are treated with recommended chemicals with the support of a vacuum treatment chamber) for transplanting. The following technological interventions adopted during the entire crop cycle (Table 1).

Results of Interventions

Yield parameter like individual cane weight of 1.511 kg was recorded in Co 0212 was superior to the farmers' practice (Co 86032) which recorded 1.125 kg per cane. Similarly, Co 0212 recorded 127.50 tonnes/ha cane yield which was significantly higher over the farmers' practice (108.75 tonne/ha).

It was found that the average cost

of cultivation for Co 0212 was ₹ 146,000/ha and an average cost of ₹ 147,500/ha in farmers practice. The cost reduction in Co 0212 cultivation was mainly due to reduced planting materials as well as reduction in pest and disease infestation. The variety Co 0212 recorded the higher mean gross return of ₹ 299,625/ha and the net return of ₹ 153,625/ha with a high benefit-cost ratio of 2.05.

The varietal characters and its relative advantages published in SBI News were published in the local print media for a wider reach among the farmers and extension officials. Kendra also promoted the youth volunteers on planting materials development, to meet the farmers' requirement of the variety.

In continuation of the success of the trials, KVK demonstrated the

Table 2. Horizontal spreads of Co 0212 in Erode District, Tamil Nadu

Year	Area coverage (Ha)
2017	2
2018	80
2019	1,000
2020	2,400

same variety in 200 farmers' fields in collaboration with ICAR-SBI and Sakthi Sugars Private Limited. Further, to enhance the farmers' knowledge of recent production techniques, KVK organized 5 exposure visits to ICAR-SBI and one interface meeting with KVK, SBI officials and progressive farmers in the district. A total of 250 farmers, 10 sugar mill officials and 3 KVK officials participated and benefitted through this programme (Fig. 2).

Horizontal Spread of the Variety

The demonstrations conducted in the farmers' field were well appreciated by the neighbouring farmers and sugar mill which increased the area under Co 0212 in the recent time. The horizontal spreads of the variety in the district are presented in the following Table 2.

From the yield performance and economic impact of sugarcane variety Co 0212, the sugarcane farmers are convinced for growing the variety in large scale areas that will easily improve the sugarcane productivity in Erode district.

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ICAR New Portals

The Council has created the following portals for effective governance by utilizing the information and communication technology.

ICAR Data Centre and Unified Communication portals to secure institute information and information transmission.

- ICAR-Enterprise resource planning (ERP) System to this manage the human resource in information of the council including pay roll, finance and budgeting.
- KVK Knowledge Network Portal (<http://kvk.icar.gov.in>) to share basic information and facilities of KVKs with contingency plans, demonstration schedule, and advisories.
- Management System for Post-Graduate Education (MSPGE) enabling academic and e-learning modules while also being a repository of academic records
- E-Samvad, an online interface of the Council to answer citizens queries.
- KRISHI –A knowledge repository portal of digital information pertaining to research experiments, outputs, publications, etc.
- E-Krishi Manch, a dedicated portal for farmer-scientist interaction.