



**Field view of sugarcane variety Co 11015**

Sugarcane, an important cash crop of India, supports the livelihood of 5 million farmers, 15 million agricultural laborers, five lakh skilled and semi-skilled workers. Sugarcane has enjoyed as a major crop in the tropical India especially in Maharashtra, Karnataka, Tamil Nadu, Gujarat, Kerala and Madhya Pradesh, Telangana and interior Andhra Pradesh. Since 2000 AD, Co 86032 with many advantages including high sugar yield, amenability to varying agronomic practices and longer field life, abiotic and biotic stress tolerance. However, sugarcane cultivation is crippled in the Southern states especially in Maharashtra and Tamil Nadu due to repeated monsoon failures. Tamil Nadu's average cane productivity above 100 t/ha was the highest in the country, which deteriorated year after year in the recent past. The area and production of sugarcane in Tamil Nadu was 1,65,000 ha cane area and about 16.208 lakhtonnes of production in 2018-19. Reviving the past glory of sugarcane in the state is a real challenge. The need of the hour is amalgamation of recent technologies in agriculture including wide row planting, drip irrigation on a high yielding sucrose rich variety which

can mature 2-4 months to steadily make sugarcane agriculture competitive to increase the profitability of the farmers and sugar factories.

Identification of an early maturing, sucrose rich variety combining high yield amenable to modern agronomic practices is the need of the hour to save the sinking sugar industry of the state of Tamil Nadu. In this context, the new variety Co 11015 was identified which has clear superiority in sugar content and has the ability to mature quickly for harvesting from 8 months onwards. This clone was tested along with 19 other promising clones in nine sugar factory locations in Tamil Nadu under a joint initiative between ICAR Sugarcane Breeding Institute, Coimbatore and South India Sugar Mills Association, Chennai. The trial was conducted following the norms of varetal testing and was conducted for two plant and one ratoon crops during 2017-19 period.

Ever since this clone completed testing in first plant crop, the testing sugar factories realized its potential and took to fast seed multiplication. The trial was concluded with Co 11015 emerging as the best clones with clear superiority for sucrose content, cane yield and sugar yield. The clone is being tested through AICRP and is now in the final year of testing. There are clear indications of its superiority in the locations in Maharashtra, Gujarat and Telengana. The variety was notified for release in Tamil Nadu in January, 2020 and since then the potential of the variety has started reaching the beneficiaries. During February, 2021, the total area covered by this variety in Tamil Nadu is 9570 ha

### **Characteristics of Co 11015**

1. A fast growing variety
2. High yielding and high quality short duration sugarcane variety suitable for Tamil Nadu for normal and drought prone areas
3. Recorded 10.23 per cent improvement in yield (142.72 t ha<sup>-1</sup>) over the check Co 86032 (129.48 t ha<sup>-1</sup>) in trial conducted across Tamil Nadu.
4. Improvement of 20.13 per cent recorded for sugar yield (20.16 t ha<sup>-1</sup>) compared to the check Co 86032 (16.78 t ha<sup>-1</sup>) in trial conducted across Tamil Nadu.
5. Resistant (nodal method) and moderately susceptible (plug method) and field tolerant to red rot strains prevalent in Tamil Nadu.

6. This is a short duration maturing clone with >17 % sucrose at 240 days thereby sugar recovery during the early crushing season can be improved. Further, the juice quality improves upto 12 months, hence can be harvested from 8 to 12 months.
7. This clone fits well in realizing three crops in two years, hence highly suitable to regions with water scarcity.
8. This variety is also suitable for special season harvest as it recorded an improvement of 8.98, 6.93 and 9.15 per cent sucrose over Co 86032 at 240, 300 and 360 days respectively in July planted trials.
9. Performs well in wide rows ( above 4 feet spacing)
10. Co 11015 has the ideal plant characters of height (> 250 cm) with erect plant type, excellent field stand with medium thick canes.
11. It is a good ratooner and registered 9.61 per cent, 18.57 per cent and 8.62 per cent increase in cane yield, sugar yield and sucrose per cent respectively over Co 86032.
12. This clone responds well with single bud settling planting under wider row spacing and hence suitable for SSI technology
13. Co 11015 produces A1 quality jaggery of golden yellow colour.

#### **Solution description- in terms of varietal performance**

The new variety has an edge over the other varieties as this is a short duration variety which can be harvested from 8 months onwards. The juice sucrose content attains above 18% and juice purity above 85% as a mark of the maturity of the cane. The variety has an advantage over the available varieties for its extra early character

**Co 11015** was identified for the state of Tamil Nadu during 2019 and started spreading in the same year.