

**Proceedings &
Recommendations of the
48th meeting of Sugarcane Research &
Development Workers of Tamil Nadu & Puducherry**

November 1-2, 2017

Kallakurichi - II Co-op. Sugar Mills Ltd.,
Kallakurichi



ICAR-Sugarcane Breeding Institute

Coimbatore – 641 007

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**ICAR-SUGARCANE BREEDING INSTITUTE
COIMBATORE - 641 007**

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**PROCEEDINGS AND RECOMMENDATIONS OF
THE 48TH MEETING OF SUGARCANE RESEARCH
AND DEVELOPMENT WORKERS OF
TAMIL NADU & PUDUCHERRY**

The 48th meeting of Sugarcane Research and Development Workers of Tamil Nadu & Puducherry was held at Hotel Radisson, Salem during November 1-2, 2017.

The following topics were discussed:

- i. i. Review of action taken on the recommendations of the previous meeting
- ii. Soil fertility based fertigation for sugarcane
- iii. Review of Sugarcane mechanization initiatives including mechanical harvesting
- iv. Current varietal position and Performance of new sugarcane varieties
- v. All India Co-ordinated Research Project on Sugarcane, Co-ordinated agronomic experiments and SBI-SISMA trials
- vi. Sugarcane seed nursery programme

The meeting was hosted by the Kallakurichi - II Co-op. Sugar Mills Ltd. (Gomuki), Kallakurichi. About 400 delegates comprising scientists from ICAR-Sugarcane Breeding Institute, Coimbatore and Tamil Nadu Agricultural University, Coimbatore, Cane Development personnel from various sugar factories, officers from the Department of Agriculture, Directorate of Sugar and other Cane Development organizations in Tamil Nadu & Puducherry participated in the meeting. The factory had organized a varietal display of recent

and popular varieties at the venue. The factory had also arranged for a motivational talk by *Pulavar* Ramalingam, Teacher (Retd.), Chennai.

Smt. A. K. Sivamalar, Managing Director, Kallakurichi - II Co-op. Sugar Mills Ltd. welcomed the gathering.

Delivering the Theme address, Dr. Bakshi Ram, Director , ICAR-Sugarcane Breeding Institute (ICAR-SBI), Coimbatore said that during the previous year, the state of Tamil Nadu had reportedly witnessed its worst drought in 140 years and the rainfall deficit due to failure of the north-east monsoon was as high as 82 per cent. Sugar production in the state for the ensuing season too could be drastically hit as the continued drought had left many mills crushing below their installed capacity. It is estimated that the state would be only producing less than 10 lakh tonnes this year, which is not an encouraging sign, he added.

Besides adverse climatic conditions and water shortage, prolonged cultivation of variety Co 86032 was also one of the reason for the decreasing trend in sugarcane productivity in Tamil Nadu & Puducherry, he said.

Expressing concern over the decline in soil fertility in the region, Dr Ram informed that all the districts of Tamil Nadu are low in available N except Salem, which is medium and majority of the soils are having marginal Fe and low Zn. Organic carbon content had dropped from 1.2 % in 1971 to 0.68 % in 2002 and further down to 0.5 % at present , which calls for judicious nutrient management measures. Judicious water usage too is the need of the hour, he added.

With the help of the sugar industry in the state 20 new cane varieties are being tested in various locations in the state and are being evaluated for various characteristics such as, yield, quality, tolerance to biotic & abiotic stresses etc.,. The introduction and popularization of superior varieties among these is expected to augment the production of cane, he hoped.

Dr. Ram concluded that the only option to realize the vision of the Hon'ble Prime Minister of India to double the cane growers' income by 2022 is to use improved varieties and follow improved cultivation practices.

Dr. A. Ramamourti, Director of Agriculture, Govt. of Puducherry, in his Keynote address said that this region has not fully utilized the potential of mechanization in sugarcane. A collective effort is needed among all the stakeholders to promote mechanization. Constraints such as small and fragmented land-holdings, high cost of repair & maintenance of machines at custom-hiring centres and lack of harvesters that can work in 2-3 feet rows need to be overcome. Value-addition, effective transfer of scientific technologies and bringing more area under micro-irrigation are a few areas which the sugar mills need to concentrate, he added.

Dr. M. Maheswaran, Director of Research, Tamil Nadu Agricultural University, Coimbatore in his Special address highlighted the need for involving sugar factories in the evaluation of varieties. Inviting the sugar factories in the region to participate in the annual Scientific Workers' Conference being organized by TNAU, he said that a road map need to be prepared exclusively for Tamil Nadu's sugar industry, similar to the one prepared by ISMA (Indian Sugar Mills Association) and NFCSF (National Federation of Co-

operative Sugar Factories along with ISEC (Indian Sugar Exim Corporation) and KPMG International for the whole Indian sugar industry, recently.

Quoting from the Tamil classic, *Thirukkural*, Dr. K. Ganeshmoorthy, Director, Centre for Plant Breeding & Genetics, in his Special address mentioned that though our farmers had known centuries back that manuring a crop is better than ploughing; and, after weeding, protecting the crop from pests and diseases is better than irrigating (*Erinum Nandraal Eruvitudhal Kattapin Neerinum Nandradhan Kaappu*), farming is still not a profitable venture for many of the present day farmers. The present day research priorities should be on developing technologies to bring down the cost of production and evolving high-yielding, high-sugar, pest and disease tolerant varieties that require less water, he added.

Shri M. Senthamilselvan, Joint Director of Agriculture, Salem and Shri S.Vadivel, President, Board of Directors, Kallakurichi - II Co-op. Sugar Mills Ltd delivered Special addresses.

The “*Compendium of Research Articles & Status Papers*” of the meeting was released by Shri M. Senthamil Selvan, Additional Director of Sugar , Govt. of Tamil Nadu.

Appreciating the regular conduct of Sugarcane R&D workers’ meetings, Shri M. Senthamil Selvan, in his Inaugural Address said that the production of sugarcane has come down during the current year due to the prevailing drought condition.

He hoped that this steep decline in the production of cane is only a temporary phenomenon and good monsoon will once again augment cane production in the state. The farmers too are likely to be benefitted with

a probable increase in the price of sugar. Value-addition is one option through which the cane price could be increased, he felt. Shri Senthamil Selvan also informed that the Government has already instructed the 43 sugar mills in the state to settle the dues of the cane farmers at the earliest.

The Inaugural session ended with the vote of thanks by Shri A. Mamundi, CDO, Kallakurichi - II Co-op. Sugar Mills Ltd.

INTRODUCTORY SESSION

Chairperson : Dr. Bakshi Ram,
Director,
ICAR-Sugarcane Breeding Institute,
Coimbatore

Co-chairperson : Shri M. Senthamil Selvan,
Additional Director of Sugar,
Govt. of Tamil Nadu

Presentation on : Shri M. Senthamil Selvan,
'Current Scenario Additional Director of Sugar,
of Sugarcane in Govt. of Tamil Nadu
Tamil Nadu'

Presentation on : Dr. D. Puthira Prathap,
Taken Report on the Principal Scientist
recommendations of 47th (Agricultural Extension),
R&D workers meet of ICAR-Sugarcane Breeding
TN & Puducherry : Institute, Coimbatore

In his presentation on the current scenario of sugarcane in the state, Shri. M. Senthamil Selvan, Additional Director of Sugar, Govt. of Tamil Nadu mentioned that about 155.86 lakh tonnes of sugarcane was crushed by the mills in 2015-16, and 119.04 lakh tonnes of cane during last year. Due to the steep fall in

sugarcane production, the sugar mills in the state are expected to crush only about 79.10 lakh tonnes of cane during this year, he added.

As for production of sugar in the state, it stood at 13.63 lakh tonnes in 2015-16 and 10.62 lakh tonnes, last year. The production estimate for the current year is 7.14 lakh tonnes of sugar, he informed.

The Action taken report on the 22 recommendations of the 47th Sugarcane R&D Workers' meet held at Perambalur was presented by Dr. D. Puthira Prathap, Principal Scientist, ICAR-Sugarcane Breeding Institute, Coimbatore. It was mentioned that 17 Co-op/Public sector sugar factories and 24 Private factories in the region had sent their status reports.

TECHNICAL SESSION - I

Topic : Soil fertility based fertigation for sugarcane

**Chairperson : Shri P. N. Sridhar IAS.,
Managing Director, DDCSM,
Dharmapuri**

**Co-chairperson : Dr. L. Chitra, P&H,
SRS (TNAU), Sirugamani**

**Rapporteur : Dr. A. Bhaskaran, ICAR-SBI,
Coimbatore.**

In his lead paper on 'Soil fertility based fertigation for sugarcane', Dr. A. Bhaskaran, Senior Scientist, ICAR-SBI, Coimbatore explained the various dimensions of drip fertigation in sugarcane in detail, with relevant research results. He informed that states like Maharashtra and Karnataka, which together have 27 percent of the area under sugarcane in India, have

already initiated steps to enforce rules making drip method of irrigation mandatory for the cultivation of sugarcane.

Based on the presentations and discussions, the following observations and recommendations were made:

1. The sugar factories and the Departments of Agriculture in Tamil Nadu and Puducherry should take initiatives for increasing the area under drip fertigation by at least 10 % and sustain it.
2. Sugar mills should go for adoption of soil test based fertigation schedule
3. Adoption of the decision support system software for fertigation scheduling by the factories
4. Demonstration trials on drip fertigation at factory or farmers' fields
5. Identification and correction of micronutrient deficiencies at early crop stage
6. Efforts to request the government for reducing the duty on water-soluble fertilizers, through the Directorate of Sugar.

TECHNICAL SESSION - II

Topic : **Review of Sugarcane mechanization initiatives including mechanical harvesting and Special Lectures**

Chairperson : Shri K. Nagendran,
Special Director,
Thiru Arooran Sugars Ltd.,

Co-chairpersons : 1. Dr. M. Jayachandran, P&H, SRS
(TNAU), Cuddalore

2. Shri A. Mamundi, CDO,
Kallakurichi - II CSM

Rapporteur : Dr. N. A. Saravanan,
SRS (TNAU), Melalathur

Shri K. Nagendran, in his introductory remarks traced the history of mechanization in the region and highlighted the importance of mechanization in the wake of increasing input costs and labour costs in Tamil Nadu. He also mentioned that this session is being held based on the recommendations of the 47th meeting of sugarcane R&D workers of TN & Puducherry held at Perambalur.

Altogether, 38 sugar factories presented their status reports on the mechanization initiatives in their respective factories.

Dr. S. Vasantha, Principal Scientist, ICAR-SBI delivered a Special lecture on 'Use of growth promoters in cane cultivation' wherein she mentioned that foliar application of Ethrel (Ethephon) at 1% could effectively control flowering in sugarcane.

Dr. P. Murali , Scientist, ICAR-SBI in his Special lecture on , 'Assessing yield estimation in sugarcane crops' listed out the agencies that are involved in collection of yield data and the system of data collection for yield estimation in sugarcane.

From the report presentations and discussions, the following observations and recommendations emerged.

1. Land preparation with deep tillage equipment such as chisel plough, MB plough and power harrow will contribute to higher cane yield under wider row planting besides facilitating mechanical harvesting. Factories should encourage this.
2. Wide row cane planting at 4 feet or 5 feet spacing should be adopted in all the sugar mill areas as a primary requirement for cane mechanization.
3. Intercropping with plants or green manure crops like *Sesbania* can be adopted in one or two rows, both in plant and ratoon crop based on wide row spacing provided for sugarcane to enhance the soil organic matter content.
4. The adoption of single bud planting in cane cultivation and mechanization of all intercultural operations can be followed to get higher cane yield with less cost of cultivation.
5. Multi-ratooning in wider row cane crops can be practiced for total mechanization in factory areas.
6. The sugar mills should provide the agricultural machinery for performing all cane cultivation operations through contract operation and the cost of operation should be fixed by the mills at a reasonable level which could be recovered from the crop loans.
7. All the sugar mills should initiate measures to identify suitable farm holdings for wide row cane planting during 2017-2018 planting season to enable machine harvesting from 2018-19 season onwards.
8. The Government of Tamil Nadu may be represented through the Director of Sugar for granting subsidy for

the purchase of cane harvester and other agricultural implements required for cane mechanization.

9. Training programmes may be organized for harvester operation and maintenance by associating with the harvester manufacturing companies.

TECHNICAL SESSION - III

- Topic** : **Current varietal position in Sugar factories & Performance of new sugarcane varieties**
- Chairperson** : Dr. G. Hemaprabha, Head,
Dvn. of Crop Improvement,
ICAR-SBI, Coimbatore
- Co-chairperson** : Smt. A.K. Sivamalar,
Managing Director, Kallakurichi -
II Co-op. Sugar Mills Ltd.
- Rapporteur** : Dr. S. Ganapathy ,
SRS (TNAU), Cuddalore

Based on the presentations by the factories on the current varietal position , lead presentations by the scientists and discussions that followed, the following observations and recommendations were made:

1. Co 86032 remains to be the dominant variety and whenever degeneration of the variety was observed, micro propagated seedlings are being used to sustain yield values.
2. 2005 G019 was reported to be performing well in Ambur co-operative sugars and BMT results are awaited.
3. Since red rot has been noted in CoC 24, the variety needs replacement. A few varieties identified need more elaborate trials before adoption.

4. Promotion of Co 06022 may be restricted to drought affected areas in the region
5. CoV 09356 has been reported to show YLD symptoms at Shree Ambika Sugars, Thuhili. Those factories going for this variety may obtain TC derived seedlings from ICAR- SBI.
6. A few new varieties have been reported to be introduced during the past three years. Any new variety must be propagated only after accessing its juice quality by BMT at a specific factory area.

TECHNICAL SESSION - IV & V

Topic : **All India Co-ordinated Research Project on Sugarcane trials, Co-ordinated agronomic experiments (ART) , SBI-SISMA trials & Seed Nursery Programme**

Chairperson : Dr. Bakshi Ram,
Director,
ICAR – SBI, Coimbatore

Co-chairpersons: 1. Dr. A. Thirumurugan, P&H, SRS
(TNAU), Melalathur
2. Dr. S. Jayaram, RSCL,
Mundiyampakkam

Rapporteur : Dr. R. Nageswari, SRS (TNAU),
Sirugamani

Dr. C. Appunu, Scientist, ICAR-SBI presented the results of AICRP (S) and SBI-SISMA trials. Dr. D. Neelamathi, PS, ICAR-SBI presented a lead paper on Sugarcane Seed Nursery programme. This session was followed by a General Interactive session.

Based on the presentations and discussions followed,

the following observations and recommendations were made:

1. The Co-operative sugar mills have to visit those nearby located private mills conducting SISMA trials, and get the seed cane material from the private sugar mills or from ICAR-SBI, for the promising clones and they can be evaluated for their yield and quality parameters to identify varieties suitable for cultivation
2. The nomenclature of the sugarcane clones evaluated from SRS, Cuddalore should have a common form of 'CoC' and 'C' to have uniform nomenclature.
3. The clones which are included under AICRP(S) only will be promoted for release by the Central Varietal Release Committee (CVRC) for adoption at the National level.

PLENARY SESSION

Chairman : Dr. Bakshi Ram,
Director,
ICAR - SBI, Coimbatore

Present : Dr. M. Jayachandran, P&H, SRS
(TNAU), Cuddalore

Smt. A. K. Sivamalar,
Managing Director,
Kallakurichi - II Co-op.
Sugar Mills Ltd.

Shri K. Nagendran,
ThiruArooran Sugars Group

All Chairpersons/Co-chairpersons/
rapporteurs of sessions

Vote of Thanks : Dr. D. Puthira Prathap,
ICAR- Sugarcane Breeding Institute,
Coimbatore

During this session, the chairpersons/rapporteurs of different technical sessions presented the proceedings and recommendations. Following this, awards were presented for best presenters of status reports. The following were the award winners.

1. Mr. Sivaraman, EID Parry (I) Ltd.,
2. Mr. Sridhar, Sakthi Sugars Ltd., Aappakudal
3. Mr. Rajesh, VV Sugars (Dhanalakshmi Srinivasan Sugars Ltd.)
4. Mr. Venugopal, Sakthi Sugars Ltd., Sivaganga
5. Mr. Ramamoorthi, Kothari Sugars & Chemicals Ltd., Sathamangalam
6. Mr. S. Sanjeevi, Kallakurichi II Co-op Sugar mills Ltd.,
7. Mr. Gopinath, Ponni Sugars Ltd., Erode
8. Mr. Ranjithkumar, Rajshree Sugars & Chemicals Ltd.,
9. Mr. Gurumoorthi, Salem Co-op Sugar mills Ltd.,

The Chairperson summarized the proceedings of the two-day meeting and requested all the participants to make concerted efforts to implement the various recommendations arrived at the meeting.

The meeting ended with the Vote of Thanks proposed by Dr. D. Puthira Prathap, Principal Scientist (Agricultural Extension), ICAR-Sugarcane Breeding Institute, Coimbatore during which it was informed that

Sakthi Sugars Ltd., Sakthinagar will be hosting the 49th meeting of Sugarcane R&D workers of Tamil Nadu & Puducherry.



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CANE BREEDING INSTITUTE, COIMBATORE
ni - II Cooperative Sugar Mills Ltd., Kachirayapalayam.

eting of Sugarcane Research and
Workers of Tamil Nadu and Puduch



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