

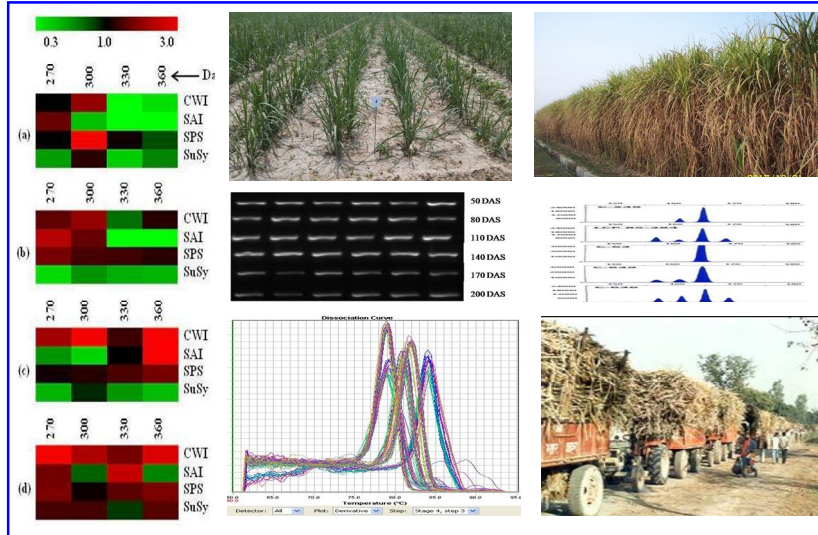


Announcement
ICAR Sponsored Winter School on

Physio-biochemical and genomic tools to manage drought and post-harvest sucrose losses in sugarcane

Nov 20 to Dec 10, 2018

Course Director
Dr. Amaresh Chandra FNAAS



Organized by

Plant Physiology and Biochemistry Division
ICAR-Indian Institute of Sugarcane Research, Lucknow

Sponsored by

Education Division
Indian Council of Agricultural Research, New Delhi-110 012

About the Winter School

Sugarcane is an important cash crop and >70% of the world's sugar comes from it. In majority (>50%) sugarcane is grown in sub-tropical zones of India. In recent past drought has significantly reduced the sugarcane cultivation and that has led to overall less sugar production in country. New tools and techniques are now available to fasten the process of screening/ breeding the variety for drought tolerance. In this context, it is prerequisite to familiarize to various stakeholders about the basic and fundamental of these techniques and procedures. New research in the direction of genomics is going to play a pivotal role in coming days.

Post-harvest loss of sucrose in sugarcane is considered as one prime reason to realize low sugar recovery in sub-tropical zones. A well ripened harvested crop may lose its sucrose within a few days after harvest, which tends to increase further due to high ambient temperature, pre-harvest burning, harvest/transportation injuries & microbial infestation. Sugar recovery scenario for the last 25-30 years shows that sugar recovery in India is hovering between 9.5-10.55%, while ~12-14% in other countries like Australia, Brazil, could be due to improved cane varieties & reduced rate of pre and post-harvest sucrose losses. Therefore, management of post-harvest sucrose losses is one of the important issues for improving sugar recovery. This course will provide an insight of recent research & development made on the topic addressing problems like drought and low sugar recovery happening due to post-harvest deterioration of cane.

Course contents

- . The following major topics are intended to be covered:
 - Impact of drought on sugarcane and sugar production
 - Impact of climate change on sugarcane physiology and productivity
 - Drought tolerance and physiological interventions
 - Identification of new genes and regulatory sequences including DREB involved in drought tolerance
 - Functional genomics to understand drought tolerance in sugarcane
 - Physio-biochemical approaches to overcome delayed sprouting/ germination and tiller dynamics to improve cane productivity
 - Use of water saving techniques to realize better cane yield
 - Source-sink dynamics & molecular insight to improve sink strength
 - Cane seed saving practices to improve productivity and minimizing cost of cane cultivation

- Visualization and management of post-harvest sucrose losses
- Biotechnological approaches to address post-harvest sucrose losses
- Improving ratoon productivity addressing winter initiated ratoon sprouting, rhizospheric engineering and mechanization
- Techniques involve in genomics and physio-biochemical research
- Visit to different institutes, universities and sugar industry

About the Institute

The ICAR-Indian Institute of Sugarcane Research (IISR), Lucknow was established on Feb. 16, 1952 by the erstwhile Indian Central Sugarcane Committee. Government of India took over the Institute on 1st January 1954. On April 1st 1969, it was transferred to ICAR, New Delhi. It is located near the Base Hospital, Lucknow Cant., ~ 6 km from Lucknow Railway Station & Alam Bagh Bus Stand on Rae Bareli Road (on the way to SGPGI). Pre-paid three-wheeler /taxies can be availed to reach the IISR.

Eligibility

The Winter School is open for participants from ICAR institutes/ SAUs/ CAUs/Agriculture Faculty of AMU, BHU, Vishwa Bharti & Nagaland University in the cadre of Assistant Professor or equivalent & above. The minimum qualification is M.Sc./M.Tech degree from any recognized university in relevant disciplines of agriculture. A maximum of 25 participants will be selected for the winter school.

Travel, Boarding and Lodging

All the outstation participants will be paid travel fare (to and fro), as per their entitlements by rail (restricted to AC II tier) or by bus on production of the tickets. No DA will be provided. Participants shall be provided free accommodation in the IISR guest house, wholesome meals and refreshments as per rules. The participants are requested not to bring their spouse or any family members. Local participants will be provided lunch & inter session tea only. Outstation participants are requested to reach one day prior & plan their departure on last day of winter school after 17.00 hrs.

How to Apply

As per the guidelines of ICAR, the candidates **must** apply online at: <http://iasri.res.in/cbp/> or <http://cbp.icar.gov.in/>. Click on Capacity Building Program link at <http://icar.org.in>. Following steps be followed:

1. To create user Id, use “Create new Account” Link on Home page. Login using your user Id and Password.
2. After login, choose this training under SWS category and click on “Participate in training” link and fill the proforma. After filling the online application, fill draft/ postal order details and take a print out of the application and get it approved/ signed by the competent authority of the organization. Upload the scanned copy of the application through CBP portal. Also send the signed hard copy, along with the postal order/demand draft of Rs 50/- in favour of “Director IISR” payable at Lucknow (UP) as a registration fee (non-refundable) through proper channel to the Course Director of the Winter School by post. Advance copy can be sent by email to Course Director/Course Coordinators.
3. The selected candidates will be informed by post/e-mail/fax/CBP portal.
4. Once the candidates are intimated about their selection for Winter School, they need to confirm their acceptance by last date.

Important Dates

Last date for receiving of application	: October 30, 2018
Notification of selection	: November 05, 2018
Commencement of the winter school	: November 20, 2018

All Correspondence may be addressed to:

Dr. Amaresh Chandra, Principal Scientist & Course Director

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Course Coordinators

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