

Travelling Allowance

All the outstation participants would be paid travel fare to and fro journey as per their entitlement restricted to AC II tier rail/bus fare or any other means of transport by the shortest route. Travel by air is not permissible. Participants are requested to produce a photocopy of the train/bus ticket.

Boarding and Lodging

Participants will be provided rent-free accommodation in the Guest House of IISR, wholesome meals and refreshments as per the normal rules of the training course. The participants are requested not to bring their family/accompanying persons with them. Local participants will be provided lunch and intersession tea only. Outstation participants are requested to reach one day prior to the first day of training programme and are requested to plan their departure on the last day of Short Course after 18:00 hrs.

How to reach IISR

The institute is located near the Base Hospital, Lucknow Cantonment about 6 km from Lucknow Railway Station on Raebareli road (on the way to Sanjay Gandhi Post Graduate Institute of Medical Sciences; SGPGI). Pre-paid three-wheeler autos/taxis can be availed to reach the IISR campus.

Important Dates

Last date for receiving application	: September 10, 2017
Intimation of selection	: September 20, 2017
Commencement of the Short Course	: October 25, 2017

Contact Persons

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Short Course

on

Modern Genomic Tools and Breeding Strategies for Biotic and Abiotic Stress Management in Sugarcane

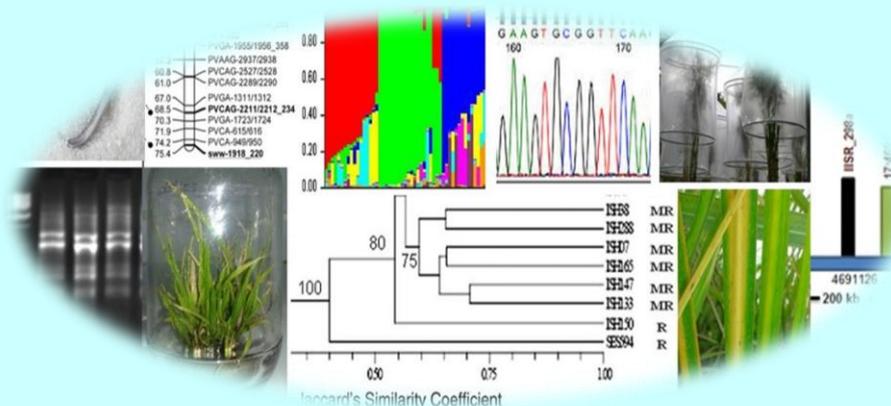
October 25 to November 03, 2017

Course Director: **Dr. Sanjeev Kumar**

Course Coordinators

Dr. J. Singh

Dr. Somnath K. Holkar



Sponsored by

Indian Council of Agricultural Research, New Delhi

ICAR-Indian Institute of Sugarcane Research
Raebareli Road, P.O. Dilkusha, Lucknow-226 002 U.P.
www.iisr.nic.in

Background

Sugarcane is an important industrial crop accounting for nearly three quarters of the sugar produced worldwide, of which India contributes ~20%. It is the second largest agro-based industry with ~75% of the rural population associated with sugarcane agriculture/industry. In recent past, there has been paradigm shift with the crop being a renewable source of fuel, feed and bioenergy apart from many other by-/co-products. The sugarcane cultivars are species hybrids and complex polyploids with a large number of chromosomes. Cytogenetic studies have helped in understanding the chromosomal peculiarities of the crop. Being a complex genetic system it is very difficult to genetically manipulate sugarcane by conventional means. Still, high sugar, high yielding sugarcane varieties presently under cultivation have been a result of relentless efforts of breeders throughout the country. Efforts have been made in last few decades to understand the genetics and gene regulation in sugarcane using modern molecular tools. Despite the genetic complexities of the crop, cutting-edge technologies like molecular marker applications for gene mapping, functional genomics, expression studies have been successfully applied in this crop in the areas of crop improvement and stress management so as to complement the conventional breeding. In recent past, EST resources from sugarcane exposed to different biotic/abiotic stresses were developed in order to understand its genome, and efforts are on for whole genome sequencing of this important commercial crop. This Short Course would be an effort to update participants about the achievements made in sugarcane and the technologies available to decipher the its complex genetic system including molecular and novel genomic tools for management of biotic and abiotic stresses.

About the Institute

The ICAR-Indian Institute of Sugarcane Research (IISR), Lucknow was established in 1952 by the erstwhile Indian Central Sugarcane Committee for conducting research on fundamental and applied aspects of sugarcane as well as to coordinate the research work on this crop in different states of the country. The Government of India took over the Institute on Jan. 1, 1954, and on April 1, 1969, it was transferred to the Indian Council of Agricultural Research (ICAR), New Delhi. Presently, IISR, Lucknow conducts research on fundamental and applied aspects of sugarcane like developing high sugar breeding stocks and varieties, especially for sub-tropical region, development of farm implements for mechanization of sugarcane cultivation, and production/protection techniques. It has linkages with SAUs, Research Centres and other organizations for collaborative research and exchange of information. It also provides training/consultancy/advisory services to farmers and industries.

About the Short Course

There will be series of lectures and hands-on practical on various aspects of sugarcane breeding, molecular biology, molecular markers, transgenics, diseases, genomics, and bioinformatics. The participants will also gain some insight in to other aspects like production practices, physio-biochemical interventions, protection strategies, mechanization, etc. The well-equipped laboratories in the institute will serve as the venue for 10 days journey in to the world of sugarcane.

Faculty

The experienced scientific staff of IISR will form the major part of the faculty for the Short Course. Guest speakers from other ICAR/CSIR institutes in Lucknow will also be invited for discourse on their areas of expertise.

Eligibility

The Short Course is open for participants from ICAR Institutes/State Agricultural Universities/Central Agricultural Universities/Agricultural faculties of AMU, BHU, Vishwa Bharti and Nagaland University/Krishi Vigyan Kendras. The participants should have Master's Degree in Agriculture and allied disciplines with working knowledge of computers. They should be employed not below the rank of Assistant Professor or equivalent rank in the concerned subject. Participants will be selected on the basis of their ability to benefit from the programme. The number of participants in the Short Course will be limited to 25.

How to apply

The interested candidates should apply online using CBP vortal through <http://proj.iasri.res.in/cbp> or under the link Capacity Building Program at ICAR website (<http://www.icar.org.in>). Steps for submission of online application form are as follows:

- To create User Id use "**Create New Account**" link on home page. Login using your User Id & Password. If you have forgotten your password click on "**Forgot password**" link.
- After login, choose this training under Short Course category, and click on "**Participate in Training**" link and fill the performa. After filling the online application, fill 'Draft/Postal' order details and take a printout of application and get it approved by the competent authority of the organization. Upload the scanned copy of the application through CBP vortal. In addition, send the hard copy to The Course Director of the Short Course.
- Advance copy of application can be sent by E-mail to Course Director.
- The selected candidates will be informed by e-mail/CBP vortal well in advance. Once the candidates are intimated about their selection for Short Course, they need to confirm their acceptance.