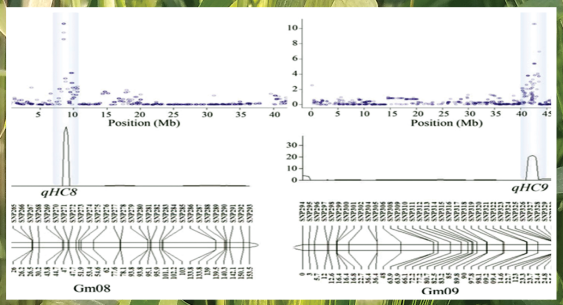
SPARC-MHRD
sponsored International Workshop
on

The Plant Genomics Workshop 2020

25 February to
05 March
2020



Organized by

Department of Botany & Plant Physiology
College of Basic Sciences & Humanities
CCS Haryana Agricultural University, Hisar-125004, (Haryana) India

ABOUT THE UNIVERSITY

Chaudhary Charan Singh Haryana Agricultural University (popularly known as HAU) is one of the biggest agricultural universities of Asia, located at Hisar in the North Indian State of Haryana. CCS Haryana Agricultural University came into existence on 2nd February 1970 through the 16th Act of Parliament, renamed as Chaudhary Charan Singh Haryana Agricultural University (CCSHAU) in 1991, to fulfil the mandates of teaching, research and extension of a comprehensive land grant institution. Since its foundation in 1970, it has grown by leaps and bounds to become India's flagship research-led University, known for the excellence in teaching, research, and extension activities not only in Haryana but among national and international communities as well. It is a leader in agricultural research in India and has contributed significantly to Green and White Revolutions in the country in 1960s and 70s. This university keeps pace with the changing needs and expectations of the society at global level. The mandate of the University is to produce high quality human resource through multi-disciplinary approach to serve the nation in the areas of agricultural and allied fields. Our faculty and senior team travels all over the globe to learn and imbibe the best practices so as to give a solid foundation for learning. Our research programmes range across all disciplines of agricultural sciences, basic sciences, home/community sciences, engineering & technology and we are national leaders in agriculture extension, technology transfer, varietal development, incubation and entrepreneurs. The University is the twice recipient of ICAR Best Agricultural Institution Award 1996 and Sardar Patel Outstanding ICAR Institution Award 2016, and is one of the top ranked university by ICAR & NIRF (MHRD).

COURSE BACKGROUND

The Plant Genomics Workshop 2020 is a 10-days workshop on advances in genotyping, quantitative trait mapping, and marker-assisted breeding by Department of Botany & Plant Physiology. Prof. Francois Belzile and Prof. Richard Belanger from Laval University, Quebec, Canada are International Partners of this project. Canadian counterpart Dr. Shivaraj SM from Laval University, having vast expertise in molecular biology, will be leading the workshop.

Recent advances in sequencing technology and computational resources have accelerated genomics and translational research in crop science. Among the versatile applications, genotyping-by-sequencing technology (GBS) is one of the frontier area exploring sequencing advances evolved rapidly. The GBS approaches have proved effective for the utilization in genotyping-based applications like genome-wide association study (GWAS) and genomic selection (GS). However, the potential of GBS, GWAS, and GS approaches has not been fully explored because of constraints like high cost, required expertise, and technological adaptations. Project is aiming for advancement in the GBS technology to make it affordable for a wide-range of applications and technological adaptation in Indian labs. Considering the need of trained human resources for the better exploration of the GBS approaches in the crop improvement programs, efforts will be made through the workshop. In this regard, GBS technology developed at University Laval, Canada which is compatible with various sequencing methods and well-optimized with an automated analytical pipeline will be adopted and improved further. A series of lectures will be delivered in the workshop which will help to acquire the technological advances. In general, the workshop will provide in-depth understanding and hands on experience for GBS data analysis, marker development, GWAS, and genomic selection. The novel concepts like speed breeding, phenomics, meta-analysis and integrated omics will be discussed in length. This workshop will be an ideal platform for students, researchers, academicians, and professionals working in crop science, more particularly molecular breeders.

OBJECTIVE OF WORKSHOP CUM HANDS-ON-TRAINING

To make young researcher familiar with advanced genotyping techniques and promote applications in crop improvement programs.

THE WORKSHOP WILL COVER THE FOLLOWING TOPICS

- Molecular markers and applications
- High throughput genotyping
- Mapping of simple to complex traits
- Introduction to genomic selection
- Candidate gene identification
- Genome-wide marker development
- Genotyping-by-sequencing
- Genome wide association study
- Identification of Meta-QTLs
- Integrated omics approaches for plant breeding
- Development of high density linkage map using SNP genotyping

Each topic listed above will be covered in two sessions, one having lecture and second with hands-on training. Every participant must have laptop.

WHO CAN ATTEND

Researcher in government institutes and private companies, postgraduate and doctor students, Scientist and technical staff, anyone having minimum master level education and actively involved in plant science and breeding area.

REGISTRATION FEE

Registration in free, without any registration charges. Limited participants will be accommodated in the Guest house on first come first basis.

HOW TO APPLY

International students and faculty should get their application processed through the Dr Dalvinder Singh, Coordinator International Affairs CCSHAU, Hisar (Email: international_cell@hau.ac.in; dsingh4@gmail.com) and National participants through their competent authority to Dr Vinod Goyal : vinod.goyal@hau.ac.in

ORGANIZING COMMITTEE

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Application Form

Department of Botany & Plant Physiology
College of Basic Sciences & Humanities
CCS Haryana Agricultural University, Hisar

Name _____

Date of Birth_____

Designation _____

Department _____

Institute_____

State _____Tel. No. _____Mobile No. _____

E mail ID_____

Sex _____ Age _____ Nationality_____

Educational Qualifications _____

E-mail Id. _____

Mobile No. _____

Research area of interest_____

List of three most recent publications relevant to the workshop with impact factor/NAAS Rating :

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Expectations and research benefits from the participation in the event?

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Accommodation Required : Yes No

Signature of Applicant

Signature of Research Supervisor/Project Coordinator/
Head of the Department/Institution/University with seal

Maximum Number of Participants: 30

Participants must bring their own Laptop.