





# Webinar on

# Genomics Strategies for Improvement of Abiotic Stress Tolerance in Crop Plants

# 27<sup>th</sup> November, 2020



Registration Link: https://forms.gle/dHzBqc4M8Esy9dc1A

## Organized by

ICAR- National Institute of Abiotic Stress Management (NIASM) Baramati, Pune, Maharashtra, India

&

The Alliance of Bioversity International & International Centre for Tropical Agriculture(CIAT), Asia-India Office, India



## Webinar on Genomics Strategies for Improvement of Abiotic Stress Tolerance in Crop Plants



## About the Webinar

Abiotic stresses like drought, salinity, extreme ambient temperatures and freezing cause major losses to crop productivity worldwide by adversely affecting plant growth and metabolism. Dealing with the abiotic stresses is a tedious task due to their convolution, uncertainty and differential temporal and spatial effects. Being a tropical country, India is more challenged with multitude of several abiotic stresses. Thus, understanding abiotic stress responses in plants and enhancing stress resilience to maintain the efficiency of agroecosystems on long-term basis are extremely demanding areas in agricultural research. This requires improvement in the tolerance of plants to environmental stresses. Recent advances in genomics have built invaluable resources and molecular genetic tools for elucidating and dissecting the molecular mechanisms that regulate gene functions, which subsequently will allow us to manipulate the responses of plants to various abiotic stresses Devising genomics strategies to manage various abiotic stresses such as drought, salinity and heat stresses are of urgent global То cope with the unfavourable priority. environmental situation, genetic enhancement is considered to be a major option. Improving the multiple abiotic stress tolerance under field condition of a crop is cumbersome for a breeder as yield usually has a relatively low heritability even under ideal conditions. Therefore, to devise effective solution to this problem, multipronged strategies including molecular physiology, genetic engineering, genome editing, genetic enhancement and identification of novel genetic resources will be discussed during this virtual conference..









Patron

Dr. Himanshu Pathak ICAR-NIASM, Baramati

*Moderator* 

Dr. KC Bansal

### **Dr. Mark Tester** King Abdullah University of Science & Technology (KAUST), Saudi Arabia



**Dr. Himabindu, K.** The International Crops Research Institute for Semi-Arid Tropics (ICRISAT), Hyderabad



**Dr. Matthew Reynolds** International Maize and Wheat Improvement Centre (CIMMYT), Mexico



**Dr. Girdhar K Pandy** University of Delhi, South Campus, New Delhi, India



**Dr. Viswanathan Chinnusamy** Indian Agricultural Research Institute (IARI), New Delhi

#### Convener

**Dr. Ajay Kumar Singh** ICAR-NIASM, Baramati



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November 27, 2020 at 17.00 IST

Programme		
Expert	Торіс	Time
<b>Dr. Himanshu Pathak</b> Director, ICAR-NIASM, Baramati, Maharashtra, India	Introductory Remarks	17:00
<b>Prof. K C Bansal</b> The Alliance of Bioversity International and CIAT, Asia-India office, New Delhi, India	About the Webinar	17:10
<b>Prof. Mark Tester</b> King Abdullah University of Science & Technology (KAUST), Thuwal, Saudi Arabia	<b>Lead Talk:</b> Genomics for the development of salt tolerant crops	17:20
<b>Dr. Himabindu, K</b> The International Crops Research Institute for Semi- Arid Tropics (ICRISAT), Hyderabad	Integrated omics approach reveals drought tolerance mechanism in chickpea	18:00
<b>Dr. Matthew Reynolds</b> CIMMYT, Mexico	Harnessing translational research for climate resilience in wheat	18:30
<b>Dr. Girdhar K Pandey</b> University of Delhi, South Campus, New Delhi, India	Potassium deficiency imposed abiotic stress management in plants: A functional genomics intervention	19:00
<b>Dr. Viswanathan Chinnusamy</b> IARI, New Delhi	Genetic engineering and genome editing for abiotic stress tolerance in crops	19:30
<b>Dr. Himanshu Pathak</b> Director, ICAR-NIASM, Baramati	Q&A Concluding Remarks	20:00
<b>Dr. Ajay Kumar Singh</b> Convener School of Drought Stress Management ICAR-NIASM, Baramati	Vote of Thanks	20:30

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