



Centre of Excellence for Digital Farming Solutions for Enhancing Productivity by Robots, Drones and AGVs (DFSRDA)

## *Online International Training Programme on Recent Physio - Molecular Digital Tools in Abiotic Stress Management for Crop Modeling*

29<sup>th</sup> June - 3<sup>rd</sup> July, 2020



**Vasantrao Naik Marathwada Krishi Vidyapeeth  
Parbhani - 431402 (MS) India**

## ABOUT

The Centre for Advance Agricultural Science and Technology (CAAST) for Digital Farming Solutions for Enhancing Productivity by Robots Drones and AGV'S (DFSRDA), Vasantrya Naik Marathwada Krishi Vidyapeeth, Parbhani, Maharashtra (India) is organizing a one week online International training programme on "Recent Physio-Molecular Digital Tools in Abiotic Stress Management for Crop Modeling" from 29<sup>th</sup> June -3<sup>rd</sup> July, 2020.

DFSRDA-CAAST is being implemented under World Bank Sponsored National Agricultural Higher Education Project (NAHEP) of Indian Council of Agricultural Research (ICAR), New Delhi, Government of India, since from July 2019. One of the main objective of this centre is the capacity building among PG/PhD students and faculties of VNMKV and other universities about recent advances in agricultural science and technology.

## BACKGROUND

Abiotic stress drastically limits agricultural crop productivity worldwide. Climate change threatens the sustainable agriculture with it's rapid & unpredictable efforts, making it difficult for agriculturist and farmers to respond to the challenges coping up with environmental stresses. This challenge comes at a time when plant sciences are witnessing remarkable progress in understanding the fundamental processes of plant growth and development.

In order to deal with the challenge & crop improvement in the era of climate change, it is essential that we adopt the approaches in which plants responds to environmental changes in terms of producing novel phenotypes.

## AIM

The online training aims to share the knowledge & experience of the researchers about various methodologies, strategies & recent

scientific development about management of abiotic stresses of the crops in addition to the immediate challenges of climate change in agriculture & allied sectors. This training will helps to bring together researchers / scientists from different institutions working in the area of development of climate resilient varieties and to equip the young scientists to face the challenges posed by changing climatic condition by using plant phenomics tools and to discuss how effective the plant physio-molecular research should be conducted and integrated within multidisciplinary research team.

## OBJECTIVES

- To provide technical knowledge on designing new plant architecture aimed at producing climate resilient crop varieties through different physiological, digital and remote sensing tools.
- To familiarized young professionals with digital tools of molecular physiology & their utilization in agriculture so it will help to make them capable to undertake advanced teaching, research and extension activities.
- To divulge the achievements of physio-molecular research and their impact on crop improvement and food security.
- Impart Knowledge for modeling crops using phenomics tools.

## TARGET AUDIENCE

PG/PhD Students, Faculties, Scientists and Staff of Vasantrya Naik Marathwada Krishi Vidyapeeth, state agricultural universities, ICAR and non agriculture universities within country and abroad from the field of agriculture and allied sciences. The Research fellows working in various National / International adhoc schemes are eligible to register.

## REGISTRATION

The training will be available to 400 registered eligible candidates (200 candidates of VNMKV and 200 candidates of other universities/ Institutions).

The link for the online registration is [https://docs.google.com/forms/d/e/1FAIpQLSdlbfvloKcF\\_h1vA5BBZ74CVzmF1Eac1EGE8zDb26QqYH2Rw/viewform?usp=sf\\_link](https://docs.google.com/forms/d/e/1FAIpQLSdlbfvloKcF_h1vA5BBZ74CVzmF1Eac1EGE8zDb26QqYH2Rw/viewform?usp=sf_link)

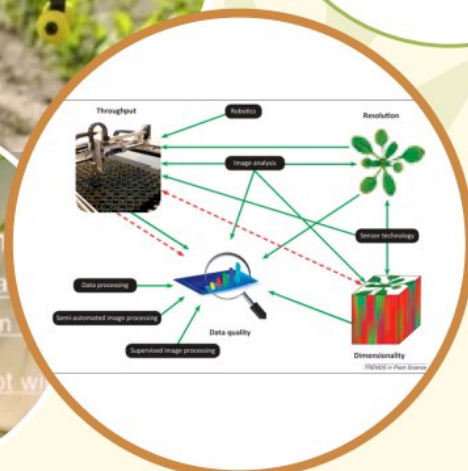
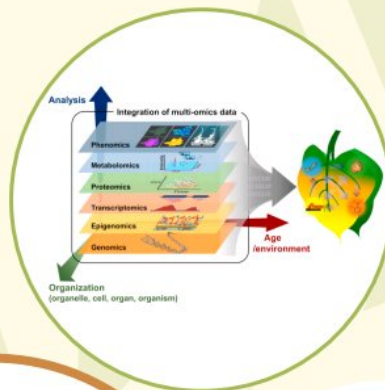
Registration is free and open till 27<sup>th</sup> June 2020 (2.00 pm IST).

Registration QR Code



## COMMUNICATION ABOUT SELECTION

- ▶ Selected candidates will receive confirmation through registered e-mail id.
- ▶ The What's App group of the selected candidates will be formed at least one day before the start of the training programme and all the communications regarding the training programme will be posted in the group.
- ▶ Alternatively, candidates can keep accessing the CAAST - VNMKV website (<https://nahep.vnmkv.org.in/>) regarding the selection, preferable on the day before the start of the training programme.
- ▶ Daily lectures through ZOOM, online platform will be conducted along with online discussions and tutorials. The link, ID and password for joining the online session will be communicated through What's App group of the selected candidates 30 minutes before the start of the session.
- ▶ Certificates will be issued to those participants only who will complete all online sessions, assignments/tutorials and feedback.



## Experts Talk



**Water Use and Water Use Efficiency in Dryland Crop Production**

**Prof. Kadambot Siddique**  
Director  
The University of Western Australia



**Physiological, Digital and Remote Sensing Tools to Screen for Drought and Heat Tolerance**

**Prof. P.V. Vara Prasad**  
Director  
Kansas State University, Manhattan  
Kansas, USA



**Role of Plant Physiology in Enhancing Crop Productivity**

**Dr. P.S. Deshmukh**  
Emeritus Scientist & Former Head  
Division of Plant Physiology  
ICAR-IARI, New Delhi



**Chronology of Methods For Abiotic Stress Studies**

**Dr. Velamoor Rajagopal**  
Former Director, CPCRI Kerala  
and President, Society for  
Hunger Elimination (SHE)



**Imaging Sensors for High Throughput Plant Phytotyping for Abiotic Stress Management**

**Prof. Viswanathan Chinnusamy**  
Head  
Division of Plant Physiology  
ICAR-IARI, New Delhi



**Genomic Assisted Breeding for Chickpea Improvement**

**Prof. C. Bharadwaj**  
Principal Scientist  
Division of Genetics  
ICAR-IARI, New Delhi



**Plant Phenomic Tools for Enhancing Abiotic Stress Tolerance in Rainfed Crops**

**Prof. M Maheswari**  
Head  
Division of Crop Science  
ICAR - CRIDA Hyderabad



**Functional Root Traits for Improving Drought Tolerance in Rice**

**Dr. Niteen N Kadam**  
Institute of Genomics Biology  
University of Illinois  
Illinois, USA



**Phenotyping Crops for Combinations of Abiotic Stresses**

**Dr. Rajeev N Bahuguna**  
Dr. Rajendra Prasad Central  
Agricultural University  
Pusa, Samastipur, Bihar



**High-Throughput Root Phenotyping : From Lab to Field**

**Dr. Vivek Deshmukh**  
Senior Researcher  
Farmship Co.Ltd.,  
Japan (Tokyo)

### Chief Patrons



**Dr. A.S. Dhawan**  
Hon. Vice - Chancellor  
VNMKV, Parbhani



**Dr. R.C. Agrawal**  
National Director  
NAHEP, ICAR, New Delhi

### Patrons



**Dr. Prabhat Kumar**  
National Coordinator  
NAHEP, ICAR, New Delhi



**Dr. D.N. Gokhale**  
Director of Instruction & Dean (F/A)  
VNMKV, Parbhani

### Convenors



**Dr. G.U. Shinde**  
PI, NAHEP, CAAST DFSRDA  
VNMKV, Parbhani



**Dr. Rajesh P. Kadam**  
Head, Dept. of Extension Education and  
Co- PI (SSPN), NAHEP, CAAST DFSRDA  
VNMKV, Parbhani

### Co-Convenor



**Dr. K. S. Baig**  
Associate Director (Seed)  
STR & BSP Unit  
VNMKV, Parbhani

### Organizing Secretary



**Dr. Godawari S. Pawar**  
Associate Professor  
STR and BSP Unit &  
Core- Team Member NAHEP  
VNMKV, Parbhani

### Training Co-ordinators

(NAHEP, CAAST DFSRDA VNMKV, Parbhani)

**Dr. Hemant N. Rokade**  
**Raheem Khan Nizam Khan**

**Er. Shailesh S. Shinde**  
**Dr. Rashmi A. Bangale**

**Dr. Swati Mundhe**  
**Er. Gopal D. Raner**