

## Joint AGRESCO-2020: New varieties, improved implements and recommendations of MPKV, Rahuri released

October 27-31, 2020. The Joint AGRESCO-2020 of four State Agriculture Universities of Maharashtra was organized by Dr. Panjabrao Deshmukh Krishi Vidyapeeth, Akola in coordination with the Maharashtra Council of Agriculture Education and Research (MCAER), Pune in online mode. During this Joint AGRESCO-2020 seven new varieties, three improved implements and 59 recommendations of MPKV, Rahuri were released.

### A. Field Crops

- 1. Chickpea : Phule Vishwaraj** - Chickpea genotype Phule Vishwaraj is recommended for release in Maharashtra for rainfed cultivation.



- 2. Safflower: Phule Bhivara** - Safflower variety Phule Bhivara is recommended for release for cultivation in safflower growing area of the country (Maharashtra, Karnataka, Andhra Pradesh and Telangana).



- 3. Safflower: Phule Nira** - Safflower Nira variety is recommended for release for cultivation in safflower growing of the country (Maharashtra, Karnataka, Andhra Pradesh and Telangana).



**4. Cowpea: Phule Sonali** - Determinate and uniform maturing Cowpea genotype Phule Sonali (PCP-1123) is recommended for release in cowpea growing areas of western Maharashtra.



**5. Mothbean : Phule Sarita** - Mothbean genotype Phule Sarita (MBS-803) is recommended for release in Scarcity zone of Western Maharashtra.



**6. Mungbean : Phule Chetak** - Early (69 days) and bold seeded mungbean variety Phule Chetak is recommended for *Kharif* cultivation in Maharashtra state.



**7. Wheat : Phule Satwik** - The bread wheat variety Phule Satwik (NIAW-3170) is recommended for Peninsular Zone and North Western Plains Zone of India under restricted irrigation condition.



## B. Farm Implements

**1. Tractor operated Phule Shredder** - Tractor operated Phule Shredder is recommended to release for shredding of pruned material and depositing horizontally on both sides of the bed in the orchards.



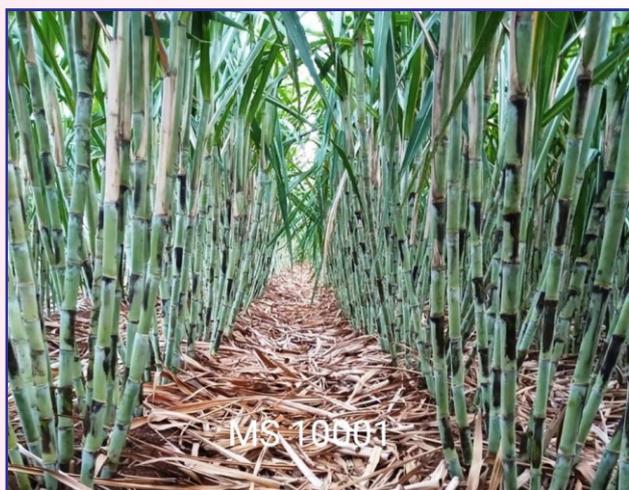
**2. Phule Hydro-Mechanically Controlled Offset Orchard Manager** - Tractor operated Phule Hydro-Mechanically controlled offset orchard manager is recommended to release for old root cutting and bed breaking operations simultaneously in orchards.



**3. Phule Basin Lister** - Tractor drawn automatic Phule Basin Lister is recommended to release for basin formation of 6 x 2 m size for *in-situ* water conservation for rainfed crops.



## Sugarcane variety MS 13081 (Phule 10001) identified for Peninsular Zone of India



October 19, 2020. The MPKV released sugarcane variety MS 13081 was identified for release in Gujarat, Madhya Pradesh, Chhattisgarh, Maharashtra, Karnataka, interior plains of Andhra Pradesh, interior plains of Tamil Nadu and Kerala (Peninsular Zone) in varietal identification committee meeting of AICRP on sugarcane held on 19.10.2020 at the ICAR- IISR, Lucknow during the 33<sup>rd</sup> Biennial Workshop of All India Coordinated Research Project on Sugarcane. MS 13081 is an early maturing clone, selected from the seedling progenies

of CoM 0265 X MS 0602 at Central Sugarcane Research Station Padegaon. MS 13081 was evaluated in AICRP(S) trials at 14 locations in Peninsular Zone of India during 2016-19 (IVT, AVT I Plant, AVT II Plant and Ratoon). The mean CCS yield of MS 13081 in Peninsular Zone (P.Z.) was 16.84 t/ha which was 11.58, 18.39 and 23.91 per cent higher over the zonal standards Co 86032, CoC 671 and CoSnk 05103,

respectively. MS 13081 ranked among top three entries for CCS yield in nineteen trials out of 34 trials in P.Z. The mean cane yield of MS 13081 in the zone was 118.51 t/ha. It exhibited 7.41, 22.85 and 17.24 per cent improvement over the standards Co 86032, CoC 671 and CoSnk 05103, respectively. MS 13081 ranked among top three entries for cane yield in thirteen trials out of 34 trials in P.Z. The mean sucrose percent in MS 13081 was 19.78, which was 2.71 and 4.44 per cent higher than the standards Co 86032 and CoSnk 05103, respectively. MS 13081 ranked among top three entries, for sucrose percent in five trials out of 34 trials in peninsular zone. The mean Pol per cent cane of MS 13081 was 15.59. It exhibited 3.29 and 5.48 per cent improvement over the standards Co 86032 and CoSnk 05103, respectively. MS 13081 ranked among top three entries, for Pol per cent cane in six trials out of 34 trials in peninsular zone. The mean CCS per cent of MS 13081 was 13.88. It exhibited 2.37 and 4.10 per cent improvement over the standards Co 86032 and CoSnk 05103, respectively. MS 13081 ranked among top three entries for CCS percent in four trials out of 34 trials in peninsular zone. MS 13081 has good ratoonability. It recorded mean ratoon cane yield of 101.48 t/ha. It exhibited 1.09, 22.85 and 17.24 per cent improvement over the standards Co 86032, CoC 671 and CoSnk 05103, respectively. MS 13081 showed R/MR reaction to red rot pathogen. Under artificial condition, MS 13081 showed MR reaction for wilt. Under artificial condition, MS 13081 showed R/MR reaction for YLD and smut diseases. Under natural condition, MS 13081 rated as resistant I for rust, brown spot, and pokkah boeng diseases. MS 13081 showed LS reaction for early shoot borer; LS/ MS for inter node borer, LS/MS for scale insects and MS reaction to mealy bugs. Vice Chancellor and Directors congratulated Dr. B. S. Raskar, Sugarcane Specialist, Dr. R.M. Garkar, Sugarcane Breeder (AICRPS) and scientists of CSRS, Padegaon.

### Rabi Crop Seminar organized

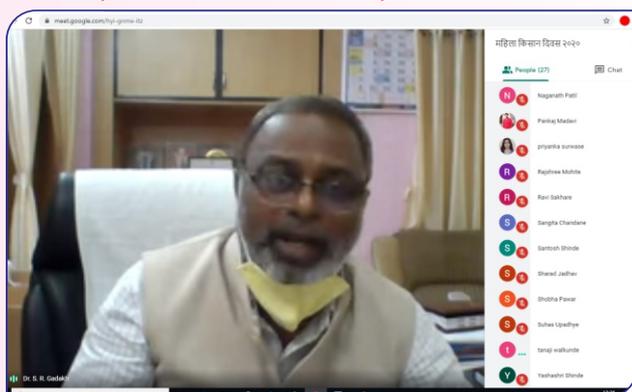


October 16, 2020. A Rabi Crop Seminar was organized by MPKV, Rahuri in coordination with Department of Agriculture in online mode. Dr. S. R. Gadakh, Director of Research and Extension Education presided over the programme. Dr Narayan Shisode, Director, Extension and Training, M.S., Shri. Mohan Wagh, Registrar, Shri. Dashrath Tambhale, Joint Director of Agriculture, Kolhapur division, Shri. Sanjeev Padwal, Joint Director of Agriculture, Nasik division, Shri. Dilip Zhende, Joint

Director of Agriculture, Pune division, Dr. Prafulla Lahane, Manager, Production, MAHABEEJ, Akola, Associate Deans Dr. P. N. Rasal, Dr. S. A. Ranpise, Dr. M. C. Ahire, Dr. C. D. Deokar and Dr. R. L. Suryavanshi were present on this occasion. Dr. Gadakh in his presidential address said that we have had sufficient rainfall this year. Hence, we need to capitalize on the available moisture for rabi crops. He further said that the university has established 27 Sale Counters in its jurisdiction where the university products like seed, biopesticides, liquid micronutrients, publications are available for sale. The university released technologies would be made available to the farmers through coordination with Agriculture Department, he hoped. Dr. Shisode called for strengthening the seed chain so that maximum seed could be made available to the farmers. Shri. Wagh opined that concerted efforts are needed for solving farmers immediate problems. The university scientists Dr. Suresh Dodke, Dr. Nandkumar Kute, Dr. Deepak Dudhade, Dr. Shahaji Shinde,

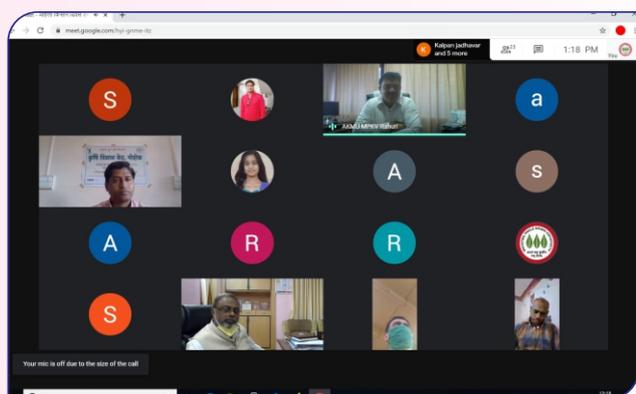
Dr. Jitendra Dhemre, Dr. Chandrakant Salunkhe and Dr. Lahane of MAHABEEJ guided the participants on rabi crops during the seminar. Dr. M. S. Mahajan, Extension Agronomist, REC, Dhule gave the introductory remarks. Dr. P. B. Kharde expressed thanks. Dr. B. A. Deshmukh anchored the programme. The District Supd. Agril. Officers, Sub Divisional Agril. Officers, Associate Directors of Research, Crop Specialists and scientists of KVKs participated in this seminar.

### Online training programmes organized on *Rashtriya Mahila Kisan Day* at KVK, Dhule and KVK, Mohol



October 15, 2020. Online training programmes were organized on the occasion of *Rashtriya Mahila Kisan Day* at Krishi Vigyan Kendra, Dhule and Krishi Vigyan Kendra, Mohol. The KVK, Dhule had organized online lectures on Dairy business and Aonla processing under the concept of Agriculture Entrepreneurship Development of women. Dr. A. L. Pharande, Dean, Faculty of Agriculture in his address said that more than 80 per cent women are involved in agriculture in rural areas. Appropriate skills and knowledge need to be imparted in them to make them self sufficient, he remarked. Dr. S. R. Gadakh, Director of Research and Extension Education while addressing the farm women said that women have an immense contribution to agriculture. Empowerment of women is needed, he said. Dr. C. D. Deokar, Associate Dean, College of Agriculture, Dhule briefed about the efforts of the college for benefit of farmers. Dr. Dinesh Nandre, Head, KVK, Dhule gave the introductory remarks. Dr. Dhanraj Chaudhary, SMS, ASDS guided the participants on Dairy business and Mrs. Amruta Raut, SMS, Food Science on aonla processing. Dr. Chaudhary anchored the programme, while, Dr. Pankaj Patil, SMS, Plant Protection proposed thanks. Dr. M. S. Mahajan, Extension Agronomist, REC, Dhule, Dr. P. B. Kharde, Officer Incharge, Communication Centre, KVK SMS and farm women were present on this occasion.

October 15, 2020. Krishi Vigyan Kendra, Mohol, Dist. Solapur celebrated *Rashtriya Mahila Kisan Day* using Google Meet online Platform. During this event, Dr. S. R. Gadakh, Director Extension Education and Research, Mr. Mohan Wagh, Registrar, Shri. Madan Mukane, Dy. Director, ATMA,



Solapur and Dr. T. R. Walkunde, I/c Head, KVK, Mohol were present. Dr. Gadakh highlighted the role and importance of farm women in agriculture sector and need of farm mechanization and improved farm tools for drudgery reduction of farm women. Shri. Wagh focused on need of farmers field school (FFS) for farm women covering the aspects on health and drudgery reduction. Scientists Dr. Suhas Upadhye, Associate Prof. (Agril. Engg.), ZARS, Solapur, Shri. D. N. Kshirsagar, SMS (FST), Dr. T. R. Walkunde, I/c Head and Dr. S. G. Jadhav, SMS (Agro.) guided the farm women in the webinar organized on this occasion.

### Online training programme on Nutritional Vegetable Gardening organized under ICAR Farmer FIRST Programme



October 26, 2020. A one day online training programme on Nutritional Vegetable Gardening was organized under the ICAR Farmer FIRST programme of MPKV, Rahuri in coordination with Department of Agriculture. Dr. S. R. Gadakh, Director of Research and Extension Education in his guidance to the farm women participants said that the average daily requirement of vegetables for a family is about 300 gm. Thus, the concept of nutritional vegetable gardening is very much required for a farm family for meeting our needs. The farm women can also grow some medicinal plants like *tulas*, *shatawari*, *aonla*, *vekhand* along with vegetables, he said. Dr. Lakhan Singh, Director, ICAR-ATARI, Pune while guiding the participants said that the ICAR has initiated the *Poshan Vatika* programme which is important from our health and diet point of view. Farm women need to avail the benefits, he hoped. At the outset Dr. P. B. Kharde, Officer Incharge, Communication Centre and PI, ICAR FFP briefed about the objectives of the programme. University scientists Dr. Anil Durgude, Dr. Vikram Jambhale, Prof. Dhanashree Patil and Dr. Kiran Jadhav (SMS, Hort., KVK, Mampurabad, Jalgaon) guided the participants on various aspects of nutritional vegetable gardening. Shri. Vijay Shedge, Senior Research Associate anchored the programme, while, Dr. S. S. Sadaphal, Co-PI expressed thanks. Farm women from Chinchvhire and Kangar villages participated in this training programme. The support staff Shri. Kiran Magar and Shri. Rahul Korhale took efforts in organizing the programme.

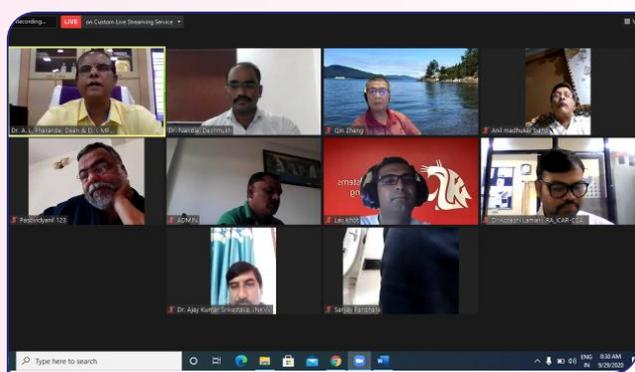
### Farmers-Scientists online fortnight training programme organized by REC, Pune

October 7-21, 2020. Farmers-Scientists online fortnight training programme was organized by Regional Extension Centre, Pune in coordination with Agriculture Department and Kisan. Shri. Sunil Borkar, Officer, Quality Control, Agriculture Department inaugurated the programme. Dr. S. A. Ranpise, Associate Dean, Lower Agriculture Education, MPKV, Rahuri, Shri. Dnyaneshwar Bote, District Supd. Agriculture Officer, Pune, Dr. Somnath Mane, Incharge, Extension Agronomist, REC, Pune and scientists Dr. Ravindra Karande and Dr. Sunil Jogdand were present on this occasion. University scientists guided the farmers on various aspects during the online fortnight training programme.

## CAAST-CSAWM programme activities

The Centre for Advanced Agricultural Science and Technology (CAAST) on Climate Smart Agriculture and Water Management (CSAWM), MPKV, Rahuri had organized various need based online training programmes for the farmers, students and scientists, faculty during the lockdown period in view of Coronavirus disease (COVID-19) pandemic situation.

### One week online International Training Programme organized



September 28 to October 2, 2020. Worldwide, though, agriculture is the main occupation of the majority of the people in one or other form, the UN Food and Agriculture Organization predicts that we need to boost worldwide food production by 70 percent over the next decades in order to feed the anticipated population of 2050. In view of this, a one week online international training programme on Agriculture 4.0: Precision and

Automated Ag Technologies was organized by CAAST-CSAWM, MPKV, Rahuri through online mode.

Dr. Qin Zhang, Professor and Director, Centre for Precision and Automated Ag Systems, Washington State University, USA., Dr. Lav R. Khot, Associate Professor of Precision Agriculture, Centre for Precision and Automated Agricultural Systems, Washington State University, USA, Dr. R. Troy Peters, Professor, Biological Systems Engineering, Washington State University, USA, Dr. Sindhuja Sankaran, Associate Professor, Department of Biological Systems Engineering, Washington State University, USA, Dr. Chongyuan Zhang, Postdoctoral Research Associate, Department of Biological Systems Engineering, Washington State University, USA, Ms. Momtanu Chakraborty Technical Support Engineer, Pix4D, North America, Mr. Abhilash K. Chandel, Ph.D. candidate, Biological Systems Engineering, Washington State University, Pullman, USA, Mr. Rakesh Ranjan, Ph.D. candidate, Biological Systems Engineering, Washington State University, Pullman, USA, Dr. Harshal Galgale, Senior Software Engineer, KisanHub, Cambridge, United Kingdom, Er. Anish Gorantiwar, Graduate Teaching Assistant, Center for Tire Research (CenTiRe), Blacksburg, Virginia, USA were the resource persons for this e training.

The online international training programme was started with the preamble by Dr. S. D. Gorantiwar, Head, Department of Agricultural Engineering and Principal Investigator, CAAST-CSAWM, MPKV, Rahuri. Dr. Khot guided on precision agriculture and automation technologies for speciality crop production management, Prof. Zhang on Agriculture Robotics: The Need, Impact and Strategy, Mr. Gorantiwar on UAV Based Image Processing Algorithm for Classification and Segmentation, Prof. Peters on irrigation system and technologies, Dr. Sankaran on importance of food security, food safety, need of customer and sustainability, Dr. Zhang on image analysis of unmanned aerial vehicle- based data for phenotype application, Ms. Chakraborty on different products of Pix4D like Pix4D mapper, Pix4D survey, Pix4D fields and Dr. Gorantiwar on real time irrigation management.

The international programme followed with the valedictory function in which Dr. K. Alagusundaram, Deputy Director General, (Agricultural Engineering), Division of Agril. Engg., ICAR, New Delhi was chief guest, Dr. R. C. Agrawal, National Director (ICAR-NAHEP) and Deputy Director

General (Education) ICAR, New Delhi. was Patron and special guidance for training programme. Vice Chancellor Dr. K. P. Viswanatha presided over the function. Dr. Prabhat Kumar, National Director (CAAST), ICAR-NAHEP, New Delhi was the Convenor. Dr. A. L. Pharande, Dean, Faculty of Agriculture and Dr. S. R. Gadakh, Director of Research, and Extension Education were present on this occasion. Dr. M. G Shinde, Organizing Secretary gave preamble of CAAST-CSAWM project and different activities under this project. Dr. S. M. Nalawade, Joint Organizing Secretary briefed about the background and review of one-week online international training programme, Dr. S. D. Gorantiwar, Co-Convenor welcomed and introduced the guests. Dr. Viswanatha enlightened the technology developed for irrigation by MPKV Rahuri for high value crops. Dr. Alagusundaram said that the new technology must be cost effective and need of precision automated planters. Drones should be developed to reduce cost of precise application. Dr. Agrawal highlighted the future technologies in agriculture i.e. drone technology, digital agriculture, precision agriculture. Dr. Kumar emphasized on the need of improvement in digital literacy of small and marginal farmers and focus on patenting a technology. Dr. Shinde extended the vote of thanks. Research Associates Dr. Vaibhav Malunjar (Soil Water and Conservation Engineering), Dr. Nandalal Deshmukh (Plant Pathology) and Er. Yogesh Dighe (Mech. Engg.) were the Programme Co-ordinators. Total 1400 participants of which 209 participants from different countries like Nigeria, Ghana, Cameroon, Nepal, United Arab Emirates, USA and Vietnam participated in this training programme.

### Webinar on Advances in Basic Plant Research in relation to Climate Change organized



October 8-9, 2020. A two day webinar on Advances in basic plant research in relation to climate change was jointly organized by Department of Biochemistry and CAAST-CSAWM, MPKV Rahuri. The aim of the event

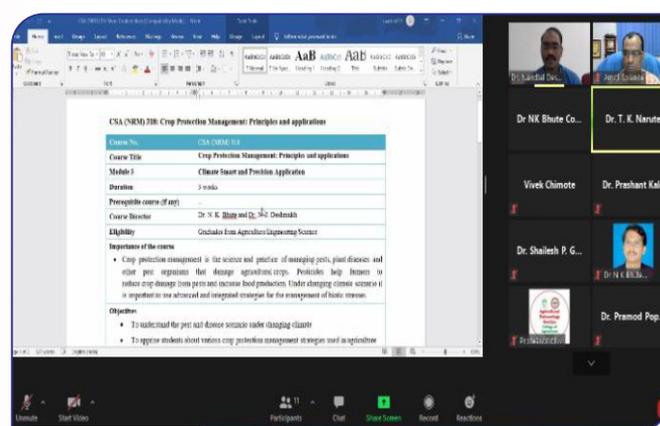


was to develop an overall understanding about basic aspects of plant research in relation to climate change, climate resilient crops, nutritional security, application of advanced genomic tools, marker technology for gene identification, nutri-genomics, crop phenotyping and overall crop improvement. The experts Dr. Viswanathan Chinnusamy Head, Division of Plant Physiology, IARI, New Delhi, Dr. M.S. Sheshshayee, Professor, Department of Crop Physiology, University of

Agricultural Sciences, Bangalore, Dr. Anil Dahuja, Principal Scientist, Division of Biochemistry, IARI, New Delhi and Dr. Ranjeet Ranjan Kumar, Senior Scientist, Division of Biochemistry, IARI, New Delhi guided the participants.

Dr. Shanti Lal Mehta, Former DDG (Education), ICAR, New Delhi and Former Vice Chancellor, MPUAT, Udaipur was the chief guest for valedictory function, while, Dr. S. R. Gadakh, Director of Research and Extension Education presided over the function. Dr. A. L. Pharande, Dean, Faculty of Agriculture was the Convener of this event. Dr. S. D. Gorantiwar, Principal Investigator, CAAST-CSAWM and Co-convener of this event gave introductory remarks about the project objectives and activities. Dr. R. M. Naik, Head, Department of Biochemistry and Organizing Secretary gave brief idea about the webinar. Dr. P. L. Kulwal, Professor of Agricultural Botany and Joint Organizing Secretary reviewed all the sessions during valedictory session. Dr. P. N. Rasal, Associate Dean, Post Graduate Institute gave welcome address and introduced the chief guest. Dr. Mehta addressed and guided participants regarding his experiences in the field of Basic Plant Sciences. He further congratulated organizers for selecting the thematic area of the webinar and emphasized that there is need to study metabolic pathways for crop productivity for meeting the challenge of climate change. Dr. Gadakh shared his views regarding basic sciences and climate change and climate smart agriculture. Dr. P. K. Lokhande, Associate Professor, Department of Biochemistry and Research Associates Dr. Prashant Kale (Biotech), Dr. Nandalal Deshmukh (Plant Protection), Dr. Mangal Patil (IDE) and Dr. Mohasin Tamboli (Comp. Applications) were the programme coordinators for the event. Dr. Naik proposed vote of thanks. The program was attended by virtually 600 participants and more than 1000 participants on YouTube.

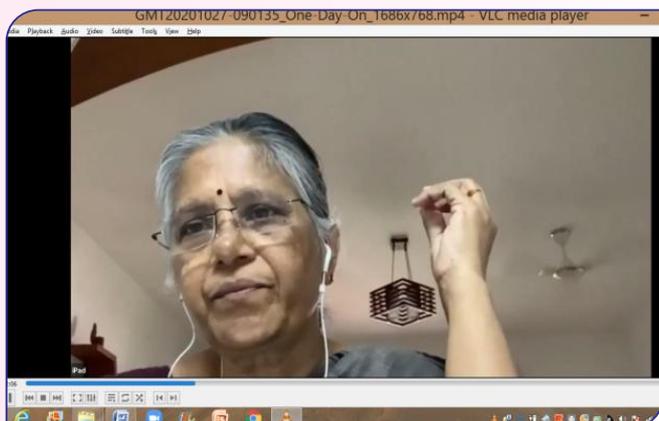
## Online workshop organized on Refinement of Plant Protection and Agril. Botany Course Curricula for the implementation of PG Diploma in Climate Smart Agriculture



October 21-22, 2020. A two day online workshop on Refinement of Plant Protection and Agril. Botany Course Curricula for the Implementation of the Post Graduate Diploma in Climate Smart Agriculture was organized by CAAST-CSAWM. Dr. A. U. Solanke, Scientist (Sr. Scale), ICAR-National Institute for Plant Biotechnology, New Delhi, Dr. S. P. Gawande, Scientist, Plant Pathology, Division of Crop Protection, ICAR-Central Institute for Cotton Research, Nagpur, Dr. D. T. Nagrale, Scientist, Plant Pathology, Division of Crop Protection, ICAR-Central Institute for Cotton Research, Nagpur, University Heads of Departments Dr. A. S. Jadhav (Agricultural Botany), Dr. T. K. Narute (Plant Pathology and Agricultural Microbiology), Dr. C. S. Patil, (Agricultural Entomology) and scientists Dr. A. A. Kale, Dr. V. P. Chimote, Dr. P. L. Kulwal, and Dr. N. K. Bhute were the expert persons for this workshop. The workshop included sessions on Crop

Protection Management Strategies in Climate Smart Agriculture; Advances in Plant Protection; Application of Phenomics in Climate Smart Breeding and Role of Genomics in Climate Smart Breeding. Lecturewise brief discussions were conducted on each subject. The experts suggested changes and modifications in draft. Dr. Bhute extended the vote of thanks. Research Associates Dr. N. J. Deshmukh (Plant Prot.) and Dr. P. B. Kale (Biotechnology) were the Programme Co-ordinators for this programme.

## Online workshop on Refinement of Course Curricula of Organic Farming and Integrated Farming System for implementation of PG Diploma in CSA organized



October, 27, 2020, A one day online workshop on Refinement of Course Curricula of Organic Farming and Integrated Farming System for implementation of the Post Graduate Diploma in Climate Smart Agriculture was organized by the CAAST-CSAWM project of MPKV, Rahuri. The workshop session started with preamble by Dr. U. S. Surve, Professor, Dept. of Agronomy and Organizing Secretary. Dr. S. D. Gorantiwar, PI, CAAST-CSAWM was the Convener and Dr. M. G. Shinde, Co-PI, CAAST-CSAWM was the Co-Convener of the e-workshop programme. Dr. N. Ravishankar, Principal Scientist and Programme Facilitator, ICAR-Indian Institute of Farming System Research, Modipuram, Dr. C. Jayanthi, Former Director- Director of Crop Management, Tamil Nadu Agricultural University, Coimbatore, Tamil Nadu, Dr. M. Govardhan, Chief Agronomist, AICRP on IFS, Rajendranagar, Hyderabad, Dr. V. A. Khadse, Extension Agronomist, Directorate of Extension Education, Dr. Panjabrao Deshmukh Krishi Vidyapeeth, Akola, Dr. Subhash Babu, Scientist, Division of Agronomy, IARI, New Delhi and Dr. Prashant Naikwadi, President, ROMIF India and Advisor, Organic Farming Scheme, Maharashtra State were the invited resource persons for this workshop. Dr. Surve welcomed the guest and gave preamble of the session. The experts refined the course curricula during the workshop. The programme was coordinated by Research Associates Dr. Rohit Sonwane (Agronomy) and Dr. Sunil Thorat (Agronomy).

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