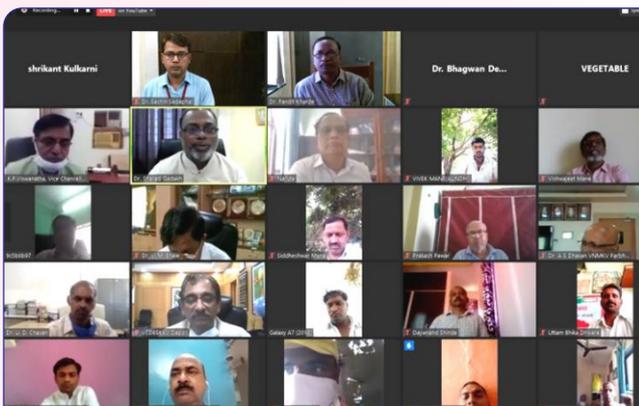


Online Kharif Crop Seminar for farmers organized



May 21-22, 2020. A two day online Kharif Crop Seminar was organized by the Mahatma Phule Krishi Vidyapeeth, Rahuri in coordination with the State Department of Agriculture, M. S. for the benefit of farmers of Maharashtra state. Shri. Dadaji Bhuse, Hon'ble Minister of Agriculture and Ex Servicemen Welfare, Govt. of Maharashtra was the Chief Guest for the valedictory online programme. Vice Chancellor Dr. K. P. Viswanatha presided over the programme. Dr. Suhas Diwase, Commissioner (Agriculture), M. S., Shri. Vishwajit Mane, Director General, MCAER, Pune, Dr. Lakhan Singh, Director, ICAR-ATARI, Pune were the Chief Guests for this programme. Dr. V. M. Bhale, Vice Chancellor, Dr.PDKV, Akola, Dr. A. S. Dhawan, Vice Chancellor, VNMAU, Parbhani, Dr. S. D. Sawant, Vice Chancellor, DrBSSKV, Dapoli, Dr. A. L. Pharande, Dean, Faculty of Agriculture, Dr. S. R. Gadakh, Director of Research and Extension Education, Shri. Narayan Shisode, Director, Extension and Training, M. S., Shri. Shivaji Jagtap, DSAO, Ahmednagar were present online for this programme.

Shri. Bhuse in his address to the farmers stressed the need for reducing the cost of agricultural production. He asserted the farmers that the Government is with them and the marketing of their produce would be taken due care by Department of Agriculture in the COVID-19 pandemic situation. He also ascertained the farmers of the state that ample quantity of fertilizers and seed of kharif crops is being made available by the Government in the market. Vice Chancellor Dr. Viswanatha in his presidential address said that the university has made 1900 qtl seed, 24 lakh planting material, 450 qtl biological agents and 250 qtl bio fertilizers for the farmers in the ensuing kharif season through its Sale Counters in ten district jurisdiction. He hoped that there would be good monsoon this year and the university is working hand in hand with the Department of Agriculture for the benefit of farmers. Dr. Divse hoped to boost the confidence of farmers through regular interactions. Shri. Mane appealed to the farmers for adopting agricultural technologies of the university. Farmers Shri. Vivek Mane from Mohol, Dist. Solapur and Shri. Pramod Patil from Palus, Dist. Sangli interacted with the Hon'ble Minister on this occasion. Dr. Gadakh welcomed the dignitaries and proposed vote of thanks. Dr. P. B. Kharde anchored the online programme. More than 500 farmers across the state participated in this online seminar. The university experts



Dr. Sunil Karad, Dr. H. T. Patil, Dr. B. S. Raskar, Dr. Satish Jadhav, Dr. Shrikant Kulkarni, Dr. Madhukar Bhalekar and Dr. T. K. Narute addressed the farmers on maize, bajra, sugarcane, grapes, pomegranate, kharif vegetables and tomato virus, respectively during the crop seminar. Scientists Dr. B. K. Mali, Prof. M. M. Desai, Dr. S. S. Dr. B. A. Deshmukh, Dr. S. M. Kale and Shri. A. A. Attar took efforts in organizing this seminar.

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 and webinars for the farmers, students and scientists, faculty during the lockdown period in view of Coronavirus disease (COVID-19) pandemic situation.

One Week Online Farmers Training Programme organized



April 30 to May 4, 2020. An online training course on Use of Digital Technology for Marketing Farm Produce was organized by the Centre for Advanced Agricultural Science and Technology (CAAST) on Climate Smart Agriculture and Water Management (CSAWM), MPKV, Rahuri. Dr. Suhas Diwase, IAS, Commissioner, Agriculture, M. S. was the Chief Guest for the inaugural function. He narrated importance of digital marketing, social media tools, search engine marketing, mobile marketing, email marketing, digital display marketing etc. for agriculture-based organization. The expert Mr. Swapnil Kharde delivered lecture on use of different digital technologies for marketing of agricultural produce, Dr. Sanjay Pandhare on role of digital technology in agricultural management, Mr. Purvish Diwanji on digital technology and Maha FPOs experience, Mr. Dnyaneshar Bodke and Mr. Pramod Bodke on Successful use of digital technology in producer to consumer chain, Dr. Deepak Chauhan on agriculture produce market rate in digital era, Mr. Kamal Khurana on challenges and opportunities in fruits and vegetable crops supply management and Dr. Rahul Tidake on Covid-19 and after digital technology in farm produce.

Mr. Kailash Chaudhary, Hon'ble Minister of State for Agriculture and Farmers Welfare, Govt. of India, New Delhi was the Chief Guest for the online valedictory function and Dr. S. K. Chaudhari, Deputy Director General (NRM), ICAR, New Delhi was the guest. Vice Chancellor Dr. K. P. Viswanatha presided over the online function. Dr. A. L. Pharande, Dean, Faculty of Agriculture and Dr. S. R. Gadakh, Director of Research and Extension Education, Dr S. D. Gorantiwar, Principal Investigator, CAAST-CSAWM and Convener and Dr. M. G. Shinde, Co-Principal Investigator, CAAST-CSAWM and Organizing Secretary were present. Remarks were given by Dr. Amol Shinde, Additional Private Secretary to Union Minister of Agriculture for State to the participants. Dr. Gorantiwar briefed about CAAST-CSAWM project and Dr. Shinde reviewed the



e-training programme. The Chief guest Mr. Chaudhary highlighted to promote economically viable, democratic and self-governing Farmer Producer Organisations (FPOs) for increasing the collective production and marketing power of farmers. DDG Dr. Chaudhari guided participants regarding Kisan Rath Mobile App that will facilitate farmers and traders to identify suitable transport facilities for the movement of farm produce during coronavirus lockdown. Vice Chancellor Dr. Viswanatha focused on importance of digital marketing during the lockdown period in view of Coronavirus disease (COVID-19) pandemic situation. Dr. P. G. Popale, Assistant Professor (IDE), Research Associates Dr. S. N. Ghadge (Agri. Extn. & Comm.), Dr. S. A. Dhenge (SS), Er. Mohasin Tamboli (CS & E) and Dr. V. S. Malunjar (SWCE), CAAST-CSAWM were the programme coordinators. Dr. Shinde extended vote of thanks. Dr. Ghadge and Dr. Dhenge compared the programme. More than 500 farmers participated in this online programme.

One week online farmers training programme on Organic farming inputs organized



May 11-15, 2020. A one week online farmers training programme on Use of Organic Farming Inputs, Production, Certification and Marketing System was organized by the Centre for Advanced Agricultural Science and Technology (CAAST) on Climate Smart Agriculture and Water Management (CSAWM), MPKV, Rahuri. Mr. Eknath Dawale, Secretary, Agriculture, GoM was the Chief Guest for the inaugural function. Vice Chancellor Dr. K. P. Viswanatha presided over the function. 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 S. D. Gorantiwar, PI, CAAST-CSAWM was the Convener, Dr. M. G. Shinde, Co-PI, CAAST-CSAWM was the Co-Convener and Dr. U. S. Surve, Associate Professor of Agronomy was the Organizing Secretary of this e-training programme. Mr. Dawale in his address cited the importance of organic farming and suggested the SAUs to develop quality organic inputs. Dr. Viswanatha appraised of the initiatives of the university for organic farming.

Dr. Prashant Naikwadi, National President, ROMIFINDIA, Pune, Dr. Santosh Chavan Expert, Organic Farming, Pune, Dr. Harihar Kausadikar, Director, Education and Research, MCAER, Pune, Shri. Sanjay Raut, vermicompost entrepreneur, Pravaranagar, Shri. Vivek Rohkal, Director, Vijaya Agro Industries, Sangamner, Shri. Tushar Ugale, Assistant Professor (Agril. Ento), K. K. Wagh Agriculture College, Nashik, Shri. Sachin Palkar, Expert, Organic farming, SAP Agro Services, Mumbai, Shri. Anil Deshmukh, Director, Krishivishwa Biotech and President, Krishivishwa Foundation, Virgaon, Akola, Mr. Swapnil Kharde, Digital Marketing Expert, Pune, Mr. Rahul Rasal, Progressive Farmer, Parner, Ahmednagar were the resource persons for aforesaid online e-training programme.



Mr. Dadaji Bhuse, Hon'ble Minister of Agriculture and Ex Servicemen Welfare, GoM was the chief guest for the online valedictory function. Vice Chancellor Dr. K. P. Viswanatha presided over the function in presence of University Directors Dr. A. L. Pharande and Dr. S. R. Gadakh. Dr. Gorantiwar briefed about CAAST-CSAWM project. Dr. Surve reviewed the e-training programme. Dr. Pharande welcomed the guest and gave a preamble of the programme. The Chief Guest

Mr. Dadaji Bhuse in his address highlighted the marketing of organic agricultural farm produce, establishment of processing units and certification. Dr. Viswanatha in his address focused on importance of organic farming and university efforts for research on organic farming. Research Associates Dr. S. N. Ghadge (Agri.Ext. & Comm.), Dr. S. A. Dhenge (SS) and Er. Mohasin Tamboli, (CS & E), CAAST-CSAWM were the programme co-ordinators. Dr. Shinde extended the vote of thanks. Dr. Ghadge and Dr. Dhenge anchored the programme. Around 967 farmers and 205 SMSs from KVKs participated in this training programme.

Live Webinar Series on Application of OMICS in Climate Smart Agriculture organized



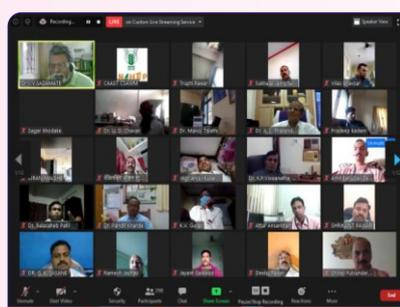
April 30 to May 2, 2020. A Live Webinar Series on Application of OMICS in Agriculture was organized by CAAST-CSAWM, MPKV, Rahuri. The inaugural function was carried in presence of Dr. S. D. Gorantiwar, Principal Investigator, CAAST-CSAWM, MPKV, Rahuri and Convener of this webinar event series. He gave the introductory remarks about the project objectives and brief idea about webinar series. Dr. M. G. Shinde, Co-Principal Investigator, CAAST-CSAWM, MPKV, Rahuri was Co-Convener of the event series. Dr. P. L. Kulwal, Professor of Agricultural Botany and Member, CAAST-CSAWM was the Organizing Secretary. Dr. Rajeev K Varshney, Research Program Director, ICRIASAT, Hyderabad, Dr. Joy K Roy, Scientist, National Agri-Food, Biotechnology Institute, Mohali, Punjab, Dr. Jagadish Rane, Principal Scientist and Head, School of Drought Stress Management, ICAR-NIASM, Baramati, Dr. Amitha Mithra, Scientist (SS), ICAR-National Institute for Plant Biotechnology, New Delhi, Dr. Amol Kumar Solanke, Scientist (SS), ICAR-National Institute for Plant, Biotechnology, New Delhi were the experts for this webinar series. Dr. Roy delivered the expert lecture on Identification of Novel Allele for High Amylose Starch Biosynthesis through EMS Mutagenesis and QTL Mapping in Wheat, Dr. Mithra on Mutagenesis for Functional Genomics,



Dr. Rane on Plant Phenomics: Expectations, Progress and Opportunities to Deliver Products for Managing Crop Abiotic Stress, Dr. Solanke on Genomics of Finger millet (*Ragi*) for Climate Resilient Agriculture and Dr. Varshney on 5Gs for Climate Smart Agriculture.

During the valedictory function of this live webinar series, the chief guest was Dr. T. R. Sharma, Deputy Director General (Crop Science), Indian Council of Agricultural Research, New Delhi. Vice Chancellor Dr. K. P. Viswanatha presided over the function. The valedictory function was carried out in the special presence of Dr. A. L. Pharande, Dean, Faculty of Agriculture and Dr. S. R. Gadakh, Director of Research and Extension Education. On-line certificates were distributed to representative participants. The Chief Guest Dr. Sharma addressed and guided participants regarding his experiences in the field of biotechnology and bioinformatics. Dr. Viswanatha shared his views regarding use of OMICS in Climate Smart Agriculture. Research Associates Dr. Prashant Kale (Biotech) and Dr. Nandalal Deshmukh (Plant Protection) were the coordinators for the event series. Dr. M. G. Shinde expressed thanks.

e-training programme on Media for Effective Transfer of Technologies organized



May 24-28, 2020. A one week online training programme on Use of Different Media for Effective Transfer of Agricultural Technologies was organized by CAAST-CSAWM, MPKV, Rahuri. Dr. M. C. Ahire, Member, CAAST and Associate Dean, College of Agriculture, Dhule was the Organizing Secretary, while, Dr. S. B. Shinde, Head, Department of Agriculture Extension and Communication was the Co-organizing Secretary of the training programme. 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 training programme. The inaugural function was conducted in presence of Dr. R. B. Deshmukh, Former

Vice Chancellor, MPKV, Rahuri. In his address he briefed the necessity of effective media for connecting farmers to climate change and marketing. He put his views on the role of media in transfer of technologies. Dr. V. V. Sadamate, Former Advisor, Planning Commission, Government of India in his address in the valedictory programme narrated the role and importance of different media in agriculture development. Vice Chancellor Dr. K. P. Viswanatha in his presidential address expressed the importance on use of various media in Covid-19 situation. He further stated the university efforts for transfer of technologies to the farmers. Shri. Sanjay Awate, Chief Editor, *Divya Marathi*, Mumbai said that the media can play an important role in transfer of agricultural technologies and reiterated the importance of print media. Dr. A. L. Pharande, Dean, Faculty of Agriculture and Dr. S. R. Gadakh, Director of Research and Extension Education also addressed the participants. Dr. Ahire delivered lecture on importance of Agriculture Journalism for agriculture development and Dr. Shinde on Communication Skills for transfer of agricultural technology. Dr. Pravin Kapse, Public Relation Officer, VNMAU, Parbhani delivered lecture on Agricultural Extension through Social Media, Dr. Pramod Sawant, Registrar and Head, Department of Agriculture Extension and Communication, DBSKKV, Dapoli delivered lecture on Use of Different Extension Methods for Transfer of Farm Technologies, Shri. Vinaykumar Awate, Superintendent Agricultural Officer, MANREGA, Pune on Writing skills for agricultural magazines, Shri. Adinath Chavhan, Chief Editor, Agrowon, Pune on Drafting and Writing Skills for agricultural newspaper, Shri. Shivaji Fulsundar, Former Deputy Director, Doordarshan Kendra, Mumbai on Presentation Skills for agricultural Doordarshan programme, Shri. Gopal Awate, Deputy Director, All India Radio, Pune on Agricultural Extension through AKASHVANI, Dr. D. M. Mankar, Director of Extension Education, Dr. PDKV, Akola on Agriculture Extension through Panchayat Raj Institution and Dr. P. B. Kharde, Incharge, Communication Centre, MPKV, Rahuri delivered lecture on Use of different agriculture university publications for transfer of farm technologies. Total 550 participants participated in the training programme. The overall training programme was coordinated by Assistant Professors Dr. S. S. Sadaphal and Dr. M. B. Dhadwad and Research Associates Dr. S. N. Ghadge and Dr. S. A. Dhenge. Dr. Sadaphal and Dr. Dhadwad anchored the programme. Dr. Shinde proposed thanks.

Online training programme on Carbon Sequestration organized



May 11-13, 2020. A three day online training programme on Carbon Sequestration in Climate Smart Agriculture was organized by the CAAST-CSAWM project, MPKV, Rahuri. The training session started with preamble by Dr. B. D. Bhakare, Head, Dept. of Soil Science and Agril. Chemistry and Organizing Secretary of e-training programme. 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-training programme. Dr. R. S. Chaudhary, Head, Division of Soil Physics, Indian Institute of Soil Science, Bhopal, Madhya Pradesh, Dr. M. C. Manna, Head, Division of Soil Biology, Indian Institute of Soil Science, Bhopal, Madhya Pradesh, Dr. S. P. Wani, International Consultant in Asian Department Bank and International Rice Research Institute, Hyderabad, Dr. K. Sammi Reddy,

Head, Division of Resource Management, ICAR-Central Research Institute for Dryland Agriculture, Hyderabad and Dr. C. B. Pandey, Head, Division of Natural Resources, Central Arid Zone Research Institute, Jodhpur, Rajasthan were the invited resource persons.

Dr. S. K. Chaudhari, Deputy Director General (NRM), ICAR, New Delhi was the chief guest for valedictory function and Dr. A. K. Patra, Director, Indian Institute of Soil Science, Bhopal and President, Indian Society of Soil Science, New Delhi was guest of honour. Vice Chancellor Dr. K. P. Viswanatha chaired this function in presence of University Directors Dr. A. L. Pharande and Dr. S. R. Gadakh. Dr. Gorantiwar briefed about CAAST-CSAWM and review of the training programme was taken by Dr. Bhakare. Dr. Pharande welcomed the guest and gave preamble of the session. Dr. Gadakh gave his remarks. Dr. Chaudhari guided and enlightend the participants about soil organic carbon and soil health management. Dr. Viswanatha in his presidential address focused on importance of organic carbon in agriculture. Dr. Patra also addressed the participants. The training programme was coordinated by Research Associates Dr. Nilam Kondvilkar (SSAC), Dr. Rohit Sonwane (Agronomy), Dr. Sunil Thorat (Agronomy) and Er. Mohsin Tamboli (Comp.). Dr. Shinde proposed thanks. Dr. Kondvilkar anchored the programme. The online training programme benefitted more than 500 farmers, scientists and students.



e-training programme on Fundamentals of Robotics Technology organized

May 26-31, 2020. A one week e-training programme on Fundamentals of Robotics for Precision Agriculture was being organized by the CAAST-CSAWM, MPKV, Rahuri. Dr. G. S. Mundada, Ex BOS Chairman, Electronics Engineering, SPPU Pune and Professor, Department of Electronics Engineering, PICT Pune, Mr. Sandip Mahajan, General Manager, Advanced Technologies, John Deere India Pvt Ltd., Mr. Zakee Ahmed S. Mohammed, Assistant Professor, Department of ETC Engineering, PICT Pune, Mr. Sumit Deotarse, Senior Engineer, John Deere India Pvt Ltd., Dr. Ajij Sayyad, Vice Principal (Academics), MIT,



Aurangabad, Mr. Shridhar Dudam, Chief Technology Officer, Smart Logic Technologies, Pune were the resource persons for this e-training course. A special lecture on Future Prospects of Automation and Robotics was given by Dr. C. R. Mehta, Director, Central Institute of Agricultural Engineering, Bhopal. Dr. K. Alagusundaram, Deputy Director General (Agricultural Engineering), ICAR, New Delhi was the chief guest, while, Dr. C. R. Mehta, Director, CIAE, Bhopal was guest

of honour. Vice Chancellor Dr. K. P. Viswanatha was the chairman of this online function. Dr. S. D. Gorantiwar, Head, Department of Agricultural Engineering and PI, CAAST-CSAWM gave the preamble. Dr. S. M. Nalawade, Organizing Secretary gave the review of this online training programme. Dr. A. L. Pharande, Dean, Faculty of Agriculture introduced the guests. Dr. Mehta emphasized on the automated vehicle equipped with GPS and vision system for identifying the objects in the precision agriculture for different application. Dr. Alagusundaram said that the new methodology of teaching/learning could save time and money in this COVID-19 situation. He said that robotic and drones are futuristic technology which can be part of custom hiring centre. Dr. Viswanatha in his presidential address enlightened that FPO can be promoted for use of advanced technology through Custom Hiring Centre to increase mechanization in Indian agriculture. Dr. S. R. Gadakh, Director of Research and Extension Education extended the vote of thanks. Research Associates Er. Shradha Warale (E & TC), Dr. Girishkumar Bhanage (FMPE) and Er. Yogesh Dighe (Mech. Engg.), CAAST-CSAWM were the Programme Coordinators. Er. Warale anchored the session. About 520 trainees participated in this e-training programme.

Online training programme on Advanced Agrometeorological Techniques organized

April 30 to May 4, 2020. A one week online training programme on Advanced Agrometeorological Techniques for Climate Smart Agriculture was organized by CAAST-CSAWM, MPKV, Rahuri. At the outset Dr. R. P. Andhale, Associate Professor, Agronomy, Co-Nodal officer, GKMS Project and Member, CAAST-CSAWM welcomed and introduced guests and dignitaries. Dr. J. D. Jadhav, Director, CAFT, Head, Dept. of Agromet, Nodal Officer, GKMS and FASAL Projects and Member, CAAST-CSAWM felicitated the expert speaker Dr. R. H. Patil, Head, Dept. of Agricultural Meteorology, Nodal Officer, GKMS and FASAL Projects College of Agriculture, Dharwad University of Agricultural Sciences, Dharwad, Karnataka state and Dr. Sumesh K. G., Assistant Professor, Agrometeorology, College of Agriculture, Dharwad University of Agricultural



Sciences, Dharwad, Karnataka. Dr. S. D. Gorantiwar, PI, CAAST-CSAWM briefed about importance of advanced agrometeorological techniques for climate smart agriculture. Dr. Patil and Dr. Sumesh guided faculties, students on the aspect of importance of Weather generators: introduction and their applications, Crop weather relationship, Monsoon and its inter annual variations, Science behind climate change, adaptation and mitigation options, Agromet Advisory Services: Role at Micro level, Weather forecasting techniques and forecast models, Crop simulation models: tools to understand crop-weather relation and forecast yield, Estimation of crop water requirement under changing climate using CROPWAT model, Advanced instrumentation in Agrometeorology and use of large scale special data in Agricultural Meteorology using Linux platform. The valedictory programme was organized online in presence of Vice Chancellor Dr. K. P. Viswanatha who presided over the programme, Dr. M. C. Varshneya, Former Vice Chancellor, Kamdhenu University, Gandhinagar and Anand Agriculture University, Anand, Gujarat, Dr. S. K. Bal, Project Co-ordinator, AICRP on Agrometeorology, CRIDA, Hyderabad, Dr. A. L. Pharande, Dean, Faculty of Agriculture, Dr. S. R. Gadakh, Director of Research and Extension Education, Dr. S. D. Gorantiwar, PI, CAAST-CSAWM project, Dr. M. G. Shinde, Co-PI, CAAST-CSAWM Project, Dr. R. P. Andhale, organizing secretary, all CAAST members, scientists and students. Dr. Viswanatha narrated the importance of climate resilient agriculture for sustainable crop production. The programme ended with vote of thanks proposed by Dr. Jadhav. Research Associates Dr. Snehal Kanade, Dr. Vaibhav Malunjkar and Er. Mohsin Tamboli coordinated the programme.

Online training programme on Machine Learning organized

May 15-17, 2020. A three day online training programme on Machine Learning and its Applications in Climate Smart Agriculture was organized by the CAAST-CSAWM, MPKV, Rahuri. The training session started after preamble by Prof. V. P. Patil, Associate Professor of Mathematics and Organizing Secretary of e-training programme. 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-training programme. Dr. Ramesh Agrawal, Professor, School of Computer and Systems Sciences, Jawaharlal Nehru University, New Delhi was the expert for this training programme. Dr. Agrawal conducted all the six sessions on Machine Learning. He started his first session with typical goal of machine learning followed by different examples of Machine Learning. In the second session he explained supervised learning with good hands on practice on perceptron using the MATLAB. In his third session he continued on supervised learning in which he explained the decision tree and random forest with good hands on practice. His fourth session was on unsupervised learning: clustering, cluster techniques and examples of clustering applications. He also explained the similarity and dissimilarity between objects. His fifth and sixth sessions were on deep learning which constitutes a recent, modern technique for image processing and data analysis with promising results and large potential. The training programme was coordinated by Research Associates Er. Mohasin Tamboli (Computer), Er. Shraddha Warale (E & TC) and Er. Kalpesh Borse (WREM), CAAST-CSAWM, MPKV, Rahuri. More than 100 trainees participated in this programme.

Online training course on Fundamentals of Pressurized Irrigation Methods organized



May 5-10, 2020. A one week online training course on Fundamentals of Pressurized Irrigation Methods was organized by CAAST-CSAWM in collaboration with the Rashtriya Krishi Vikas Yojana (RKVY) project on Irrigation Water Requirement Advisory Service (IWRAS), MPKV, Rahuri. The training session started with preamble by Dr. P. G. Popale, Organizing

Secretary of this e-training programme and Assistant Professor of IDE. Dr. S. D. Gorantiwar, PI, CAAST-CSAWM and Dr. M. G. Shinde, Co-PI, CAAST-CSAWM were the Convener and Co-Convener of this e-training programme, respectively. Dr. S. D. Gorantiwar, PI, CAAST-CSAWM, Dr. M. G. Shinde, Co-PI, CAAST-CSAWM, Dr. A. A. Atre, Procurement Officer, CAAST-CSAWM, Dr. N. N. Firake, Recruitment officer, CAAST-CSAWM, Dr. M. S. Mane, Head, Dept of IFD-IWM, Dr. S. D. Dahiwalkar, Co-PI, RKVY-IWRAS, Er. Madhuri Ghugari, Director, Agrinext Consultancy, Pune, Dr. S. K. Dingre, Associate Professor of IDE, College of Agriculture, Kolhapur, Dr. Rajanee Salunkhe, Research Associate (IDE), RKVY-IWRAS, Er. D. P. Pawar, Research Associate (IDE), RKVY-IWRAS, Er. Nikhil Duggad, Research Associate (CSE), RKVY-IWRAS, Er. Sachin More, Master Trainer Agricultural Skill Council of India, Ministry of Skill Development and Entrepreneurship, GoI were the experts and resource persons for this e-training programme. Dr. U. M. Khodake, Associate Dean, College of Agril. Engg. & Tech., VNMKV, Parbhani, Dr. S. B. Wadatkar, Head, Dept. of IDE, Dr. PDKV, Akola, Dr. R. T. Thokal, Chief Scientist, AICRP on Water Management, Dr. BSKKV, Dapoli, Er. M. B. Fuke, Jain Irrigation Systems Ltd., Kolhapur, Er. S. B. Dere, Dere Agro Industries, Ahmednagar delivered special lectures in the training programme.

Dr. K. E. Lawande, Former Vice Chancellor, Dr. BSKKV, Dapoli was the chief guest of valedictory programme. Vice Chancellor Dr. K. P. Viswanatha presided over the programme. Dr. A. L. Pharande, Dean, Faculty of Agriculture and Dr. S. R. Gadakh, Director of Research and Extension Education were also present. Dr. Shinde briefed about CAAST-CSAWM. Dr. Gorantiwar reviewed the e-training programme.



Dr. Gadakh welcomed the guest and gave preamble of the session. Dr. Pharande also expressed his remarks. Dr. Lawande highlighted the importance of micro irrigation and the reasons of its less adoption. Vice Chancellor Dr. Viswanatha in his presidential address focused on adoption of micro irrigation in command area. Dr. Popale expressed thanks. Dr. Pradnya Jadhav anchored the programme. The training programme coordinated by Research Associates Dr. Pradnya Jadhav (IDE), CAAST-CSAWM, Dr. Rajanee Salunkhe (IDE, RKVY-IWRAS) and Er. Abhijit Kulkarni (CSE, RKVY-IWRAS), MPKV, Rahuri.

Participants trained on Python Programming



May 7-10, 2020. An online training programme on Introduction to Python Programming and its Applications in Climate Smart Agriculture was organized by the CAAST-CSAWM project. Prof. V. P. Patil, Associate Professor of Mathematics was the 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 this e-training programme. The resource

persons were Er. Gajendra Deshpande, Assistant Professor, Dept of Computer Science and Engineering, KLS Gogte Institute of Technology, Belgaum, Er. Badal Gupta, Data Scientist, Decimal Technologies, New Delhi and Er. Gajanan Kothawade, Research Fellow, Washington State University, Pullman, U.S. Dr. Manikrao Salunkhe, Vice Chancellor, Bharati Vidyapeeth, Pune was the chief guest for the valedictory function. Vice Chancellor Dr. K. P. Viswanatha chaired the programme. University Directors Dr. A. L. Pharande and Dr. S. R. Gadakh were also present. Dr. Gorantiwar briefed about CAAST-CSAWM project. Prof. Patil gave review on the e-training programme. Dr. Pharande welcomed the guest. Dr. Gadakh gave his remarks. The Chief Guest Dr. Salunkhe highlighted the effects of climate change and its measures using different mathematical tools like fuzzy logic, MATLAB and Python. Dr. Viswanatha in his address focused on importance of python programming. Dr. Shinde expressed thanks. Er. Shraddha Warale anchored the programme. The training programme was coordinated by Research Associates Er. Shraddha Warale (E&TC), CAAST-CSAWM, Er. Kalpesh Borse (WREM) and Dr. Pradnya Jadhav (IDE), MPKV, Rahuri.

Online training programme on Smart Handling and Processing Systems of Horticultural Produce organized

May 9-14, 2020. The Centre for Advanced Agricultural Science and Technology for Climate Smart Agriculture and Water Management, MPKV, Rahuri had organized a one week online training programme on Smart Handling and Processing Systems of Horticultural Produce. Dr. S. N. Jha, ADG (Process Engineering), ICAR, New Delhi, Dr. R. T. Patil, Ex. Director, CIPHET, Ludhiana, Dr. N. J. Thakor, Ex. Dean, Faculty of Agricultural Engineering, Dr. BSKKV, Dapoli, Dr. H. G. More, Ex. Dean and Director of Extension Education, MPKV, Rahuri, Dr. Nachiket Kotwaliwale, Head, Agro Produce Processing



Division, ICAR-Central Institute of Agril, Engg., Bhopal, Dr. R. K. Vishwakarma, Principal Scientist, CIPHET, Ludhiana, Dr. Udaykumar Nidoni, Head, Department of Processing and Food Engineering, UAS, Raichur, Dr. Sharmila Patil, Scientist, CIRCOT, Mumbai, Er. Vilas Shinde, Chairman, Sahyadri Farmers Producer Company Ltd., Nasik and Mr. Swapnil Kharde, Digital Marketing Consultant and Assistant Professor, IMERT, Pune were the resource persons for this training Programme. Online training was started with the preamble by Dr. S. D. Gorantiwar, PI, CAAST-CSAWM, MPKV, Rahuri. Prof. D. C. Joshi, Vice Chancellor, Kota Agriculture University, Kota, Rajashtan was the Chief Guest for the valedictory programme. Vice Chancellor Dr. K. P. Viswanatha was the chairman for this online function. Dr. A. L. Pharande, Dean, Faculty of Agriculture welcomed all the dignitaries. Prof. Joshi stressed on the importance of the processing systems of horticultural produce. Dr. Viswanatha guided on value addition of horticultural produce. Dr. Shinde extended the vote of thanks. Dr. Deshmukh anchored the programme. Research Associates Dr. N. J. Deshmukh (Plant Prot.), Dr. V. S. Malunjkar (Soil and Water Cons. Engg.) and Er. M. A. Tamboli (Computer), CAAST-CSAWM were the Programme Coordinators. More than 300 participants attended this online programme.

Online training programme on Crop protection from pests and diseases organized



May 17-18, 2020. The CAAST-CSAWM project organized a two day online training programme on Climate Change and Crop Protection from Pests and Diseases. Dr. P. B. Mohite, Former Professor, Department of Agricultural Entomology, Rajarshree Chhatrapati Shahu Maharaj College of Agriculture, Kolhapur and Dr. S. V. Kolse, Associate Professor, Dept. of Plant Pathology and Agril. Microbiology, MPKV, Rahuri were the resource persons for this training Programme. The training was started with the preamble by Dr. S. D. Gorantiwar, PI, CAAST-CSAWM, MPKV, Rahuri. Dr. S. D. Sawant, Vice Chancellor, Dr. BSKKV, Dapoli was the Chief Guest for the valedictory programme. Vice Chancellor Dr. K. P. Viswanatha chaired the online function. Dr. A. G. Chandele, Former Head, Dept. of Agricultural Entomology, MPKV, Rahuri was the Guest of Honour. Dr. A. L. Pharande, Dean, Faculty of Agriculture welcomed the dignitaries. Dr. Sawant in his address highlighted the impact of climate change on occurrence of pests and diseases. Dr. Viswanatha guided on creating awareness of imbalance use of pesticides and

insecticide and their hazardous effect on human health. Dr. Chandele guided on importance of biological management of pests and diseases. Dr. S. R. Gadakh, Director of Research and Extension Education offered his remarks. Dr. C. S. Patil, Head, Dept. of Agril. Entomology, MPKV, Rahuri extended the vote of thanks. Research Associates Dr. N. J. Deshmukh (Plant Prot.) and Er. M. A. Tamboli, (Computer.), CAAST-CSAWM were the Programme Co-ordinators. Dr. Deshmukh anchored the programme. About 1260 farmers and 250 KVK SMSs participated in this training programme.

Online International Training Programme on Conservation Agriculture organized

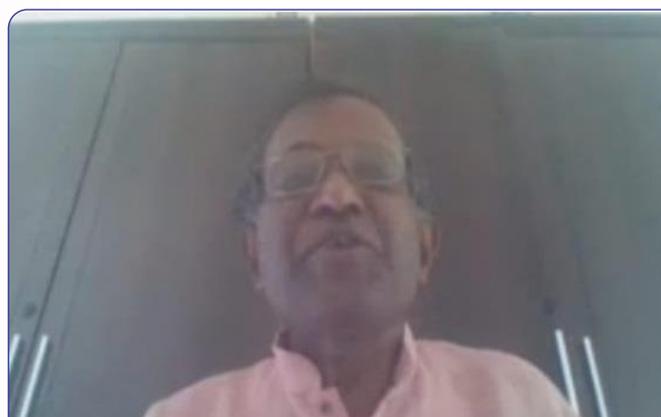


May 18-22, 2020. An online Training Programme on Conservation Agriculture based Crop Management Technologies in Climate Smart Agriculture was organized by the CAAST-CSAWM, MPKV, Rahuri. The training session started with a preamble by Dr. B. D. Bhakare, Head, Dept. of Soil Science and Agril. Chemistry and Organizing Secretary of e-training programme. 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-training programme. Dr. A. R. Sharma, Director of Research, Rani Lakshimbai Central Agriculture University, Jhansi, Uttar Pradesh, Dr. M. L. Jat, Principal Scientist, Cropping System Agronomist and CIMMYT-CCAFS South Asia Coordinator, International Maize and Wheat Improvement Centre (CIMMYT), New Delhi, Dr. Biswapati Mandal, Former Pro Vice Chancellor, Bidhan Chandra Krishi Viswavidyalaya, Mohanpur, West Bengal, Dr. A. K. Biswas, Principal Scientist and Head, Division of Soil Chemistry and Fertility, Indian Institute of Soil Science, Bhopal, Madhya Pradesh, Dr. S. P. Wani, International Consultant in Asian Development Bank and International Rice Research Institute, Hyderabad, Dr. K. Sammi Reddy, Head, Division of Resource Management, ICAR-Central Research Institute for Dryland Agriculture, Hyderabad, Dr. G. Pratibha, Principal Scientist, ICAR-Central Research Institute for Dryland Agriculture, Hyderabad, Dr. Bipin Kumar, Scientist, Water Science and Technology, Water Technology Centre, IARI, New Delhi and Dr. M. R. Deshmukh, Assistant Professor, Department of Agronomy, PGI, Dr. PDKV, Akola were the resource persons for this e-Training programme.

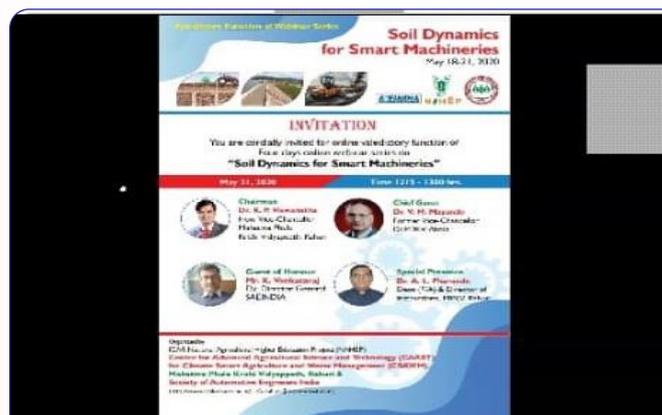
Dr. B. Venkateswarlu, Former Vice Chancellor, VNMKV, Parbhani and Executive Council Member, MPKV, Rahuri was the chief guest for the concluding programme. Dr. A. S. Dhawan, Vice Chancellor, Vasantnao Naik Marathwada Krishi Vidyapeeth, Parbhani and Dr. R. B. Deshmukh, Former Vice Chancellor and Member, Academic Council, MPKV, Rahuri were the guests of honour. Vice Chancellor Dr. K. P. Viswanatha presided over this online function. Dr. A. L. Pharande, Dean, Faculty of Agriculture and Dr. S. R. Gadakh, Director of Research and Extension Education were also present. Dr. Gorantiwar briefed about CAAST-CSAWM and Dr. Bhakare took review of the training programme. Dr. Pharande welcomed the guests and gave preamble. Dr. Venkateswarlu guided and enlightened the participants about conservation

agriculture and soil health management. Dr. Viswanatha focused on the importance of organic carbon in agriculture. Dr. Dhawan and Dr. Deshmukh also addressed the trainees. The training programme was coordinated by Research Associates Dr. Rohit Sonwane (Agronomy), Dr. Nilam Kondvilkar (SSAC), Dr. Sunil Thorat (Agronomy) and Er. Mohsin Tamboli (Comp.), CAAST-CSAWM, MPKV, Rahuri. Dr. Gadakh proposed thanks. Dr. Sonawane anchored the programme.

Online webinar series on Soil dynamics for Smart Machineries



May 18-21, 2020. An online webinar series on Soil dynamics for Smart Machineries was organized by CAAST-CSAWM, MPKV, Rahuri in association Society of Automotive Engineers India. Dr. M. G. Shinde, Professor of Soil and Water Conservation Engineering, MPKV, Rahuri, Prof. B. G. Birajdar, Professor, Civil Engineering Department, COE, Pune, Dr. Peeyush Soni, Associate Professor, Agricultural and Food Engineering Department, IIT, Kharagpur, and Dr. Shrikant Shinde, Assistant Professor, Dept. of Civil Engineering, VIIT, Pune were the resource persons for this training course. Dr. V. M. Mayande, Former Vice Chancellor, Dr. PDKV, Akola was the Chief Guest, while, Mr. K. Venkataraj, Deputy Director General, SAEINDIA was the Guest of Honour for the valedictory online programme. Vice Chancellor Dr. K. P. Viswanatha was the Chairman for the function. Dr. A. L. Pharande, Dean, Faculty of Agriculture welcomed all the dignitaries. Dr. Mayande cited the importance of soil dynamics in context with smart machineries. Dr. Viswanatha shared his views on importance of soil dynamics and its applicability in smart machineries. Dr. Shinde, Co-PI, CAAST-CSAWM extended the vote of thanks. Research Associates Er. K. S. Borse (WREM) and Dr. G. B. Bhanke (FMPE), CAAST-CSAWM were the training co-ordinators. Total 102 candidates attended the webinar.



World Honeybee Day celebrated



May 20, 2020. The World Honeybee Day was celebrated by MPKV, Rahuri through a online seminar organized by the Centre for Advanced Agricultural Science and Technology for Climate Smart Agriculture and Water Management and Department of Agricultural Entomology. An expert lecture on the topic Honey Bee: Architect of green and sweet revolution was organized through online mode. Vice Chancellor Dr. K. P. Viswanatha was the chairman of this programme. Dr. T. B. Nikam, Founder and Director, Suprkruti Madhushal, Nashik was the resource person who delivered the lecture. He said that beekeeping is an ideal low cost, eco-friendly enterprise which does not compete for resources of farming systems that provides sustainable livelihood to the rural people. It generates employment for rural people. Dr. Viswanatha in his address guided on the importance of honeybee. He further added that Maharashtra has a rich and diverse flora and there is great scope for beekeeping. The potential of honey bees for pollination remains underutilized. Dr. C. S. Patil, Organizing Secretary and Head, Dept. of Agril. Entomology welcomed all the dignitaries. Dr. M. G. Shinde, Co-PI, CAAST-CSAWM gave the preamble. Dr. N. K. Bhute, Assistant Entomologist and Member, CAAST-CSAWM extended the vote of thanks. Research Associates Dr. N. J. Deshmukh (Plant Prot.) and Dr. P. B. Kale (Biotechnology) were the Programme Co-ordinators. Dr. Deshmukh anchored the programme. More than 500 participants attended this lecture.

e-training programme for farmers organized on Farmers Producer Organization

May 22-27, 2020. A one week e-training programme on Sustainable Economic Development through Farmers Producer Organization was organized by the CAAST-CSAWM, MPKV, Rahuri. The training session was started after preamble by Dr. Sanjay Pandhare, Joint Organizing Secretary of this e-training programme. Dr S. D. Gorantiwar, PI, CAAST-CSAWM was the Convener, while, Dr. M. G. Shinde, Co-PI, CAAST-CSAWM was the Organizing Secretary of this e-training programme. The expert Dr. Sudhir Kumar Goyal, Former Principal Secretary, Agriculture, Govt. of Maharashtra delivered a lecture on Farmer Producer Organization, a new direction for cooperative, Dr. Sanjay Pandhare on Steps to production company progress : Maha FPOs experience, Dr. Ashok Alur on Established and successful management of FPO, Shri. Ramesh Gosavi on preparation of project report for FPO, Shri. Ulhas Borse on FPO: Establishment and guideline,



Dr. G. Basavaraj on Farmer Producer Organization : as bank tool. Dr. Ashok Dhawan, Vice Chancellor, VNMKV, Parbhani was the chief guest of valedictory function. Vice Chancellor Dr. K. P. Viswanatha presided over this function. The function also had special presence of Mr. Vilas Shinde, Director, Sahyadri Farms and Managing Director, Sahyadri Farmers Producer Company and Dr. S. R. Gadakh, Director of Research and Extension Education. Dr. Gorantiwar welcomed the guests and gave preamble of the session. Dr. Gadakh gave his valuable remarks. Dr. Dhawan highlighted that the farmer producer organization is an important organization for mobilizing farmers and collective self help action for improving their economic and social situation. In his presidential address Dr. Viswanatha focused on the main objective of FPO in mobilizing farmers into member-owned producer companies, to enhance production, productivity and profitability of agriculturists, especially small farmers in the country. Dr. Shinde expressed thanks. Research Associates Dr. S. N. Ghadge (Agri.Ext. & Comm.) and Dr. S. A. Dhenge (SS) and Er. Mohasin Tamboli (CS & E), CAAST-CSAWM, MPKV, Rahuri were the programme coordinators. Dr. Ghadge and Dr. Dhenge compared the sessions. About 500 farmers were trained through this programme.

Online interaction organized for members of Farmers-Scientists Forum

May 12, 2020. An online interaction programme was organized for members of Farmers-Scientists Forum by Directorate of Extension Education, MPKV, Rahuri. Vice Chancellor Dr. K. P. Viswanatha while addressing the member farmers highlighted the importance of Farmers-Scientists Forum platform for effective dissemination of agricultural technologies. He hoped that this forum would help to address the farmers issues. Dr. S. R. Gadakh, Director of Research and Extension Education in his address hoped for regular interaction between the farmers and scientists. The member farmers need to transfer the university technologies to nearby farmers. Feedback of the farmers will be addressed, he said. Dr. A. V. Solanke, Head, Department of Agronomy guided on kharif crop planning. Associate Deans Dr. Satappa Kharbade, Dr. Y. G. Fulpagare, Dr. M. C. Ahire, Dr. S. D. Gorantiwar, Head, Agril. Engg., Prof. M. N. Desai, Manager, ATIC and Dr. P. B. Kharde, Officer Incharge, Communication centre were present for the interaction. About 120 member farmers from university jurisdiction interacted and participated in this meet. Dr. B. A. Deshmukh anchored the programme, while, Dr. Kharde expressed thanks.

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