



International WEB-CONFERENCE

on

Sustainable Environment and Agriculture:

Technological Progressions and Transitions

Organized By

Academy of EcoScience

(AOES)

In collaboration with

Centre for Environment Science and

Climate Resilient Agriculture

(CESCRA), IARI New Delhi

(August 9, 2020)

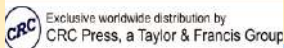
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The conference proceedings will be published in the form of an edited book with **Apple Academic Press** Exclusive worldwide distribution by **CRC Press, a Taylor & Francis Group**



About the WEB-CONFERENCE

Sustainable agriculture has become a popular phrase for an environmentally sound, productive, economically viable and socially desirable agriculture. Soil and water must be used effectively to minimize negative impacts on the environment and ensure resilience to climate change with the key goal of increasing production, enhancing livelihoods and reducing negative impacts on the environment. Agricultural automation involves the use of tools and machinery to improve the efficiency of human time and work without degrading soil quality or other production factors and affects sustainability as it is directly linked to the environment and other socioeconomic issues. The farmers are unlikely to address the world's food and agricultural enterprises in the coming decades. The food system is vast, complex, and interconnected with many interdependent factors that make it difficult to define or resolve them. To understand and uncover solutions that can only be found when explored beyond the traditional boundaries of food and agricultural disciplines, it will require a radically different and innovative approach. Broader perspectives are needed to provide a better view of how to optimize the world's food and farming system. Agricultural innovations include both technological and biological inventions and developments, such as machine modifications, the physical environment or the system's biological components. Advances in these innovations that require the use of computers and sensors have increased yields and reduced the use of inputs and influenced agriculture while advances in mechanization have increased production efficiency with fewer people and improved the protection of farm workers. On the other hand, reducing energy requirements is another concern since energy means a non-renewable source of fossil fuel. Direct seeding or reduced tillage operations are also becoming widespread worldwide in order to reduce the demand for energy while maintaining a better soil. The environmental concerns change the agricultural production concepts. One of the improvements in concepts is variable fertilizer intensity and spraying applications as these agricultural activities are directly linked to environmental concerns along with the effective use of inputs. Therefore, the future production processes are expected to be complex in order to also take on climate change. Acquiring the viewpoint involves reframing problems and using new methods to define and resolve key points of program interference. In this context, the main objective of this conference will be to provide practical debates on defining key research issues for sustainable agriculture and a healthier world in terms of technical development and transitions.

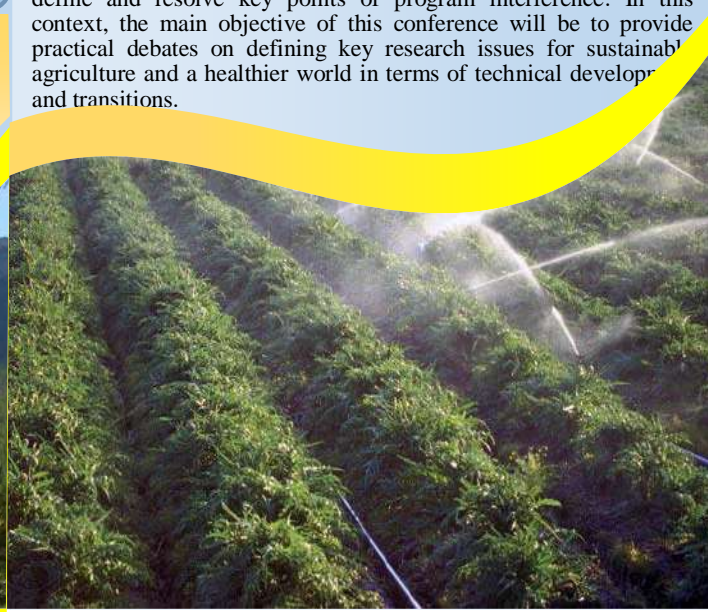
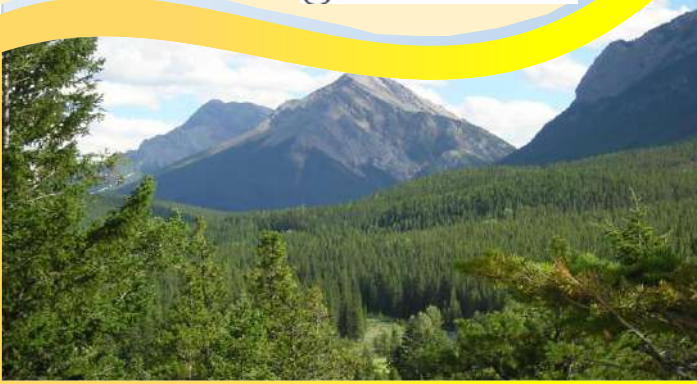
About the Academy of EcoScience

Academy of Eco Sciences is a Non-Governmental Organization, working in the areas of Safe and Sustainable Environment, Biodiversity Conservation, and Natural Resources Management. It works in the advancement of our collective scientific inputs and practices to protect our environment. It is a global approach that maximizes the partnership between experts and organizations from different fields of science. AOES acts as a common and dynamic platform to share the ideas, expertise, and knowledge regarding the sustainable ecological functioning. It provides best possible opportunities to get awards/certificate of appreciation to the people for their significant contribution towards Environment.

About CESRA, IARI New Delhi

The journey of Indian Agricultural Research Institute (IARI), popularly known as Pusa Institute, began in 1905 at Pusa (Bihar) with the generous grant of 30,000 pounds from an American philanthropist, Mr. Henry Phipps. Post-independence, the institute has been renamed as Indian Agricultural Research Institute (IARI). It attained the status of a Deemed University in the year 1958. The green revolution that brought smiles to millions of Indians bloomed from the fields of IARI with the development of famous wheat varieties which contributed an estimated one billion tons of addition production. Currently, the Institute has 20 divisions 5 multi-disciplinary Centers, situated in Delhi, 8 regional stations, 2 off-season nurseries, 3 All India coordinated research projects with headquarters at IARI and 10 national Centers functioning under the all India coordinated research projects. CESCRA is one of the important centers of IARI.

To sustain the food and nutritional security of the country, urgent need is to make Indian agriculture more resilient to environmental degradation and climate change. To address the challenges of Environmental pollution and climate change, Centre for Environment Science and Climate Resilient Agriculture (CESCRA), a multi-disciplinary Centre was established at Nuclear Research Laboratory Building, Indian Agricultural Research Institute, New Delhi 110 012 with its inauguration by Dr. S. Ayyappan, Director General, ICAR and Secretary, DARE in presence of Dr. H.S. Gupta, Director, IARI on January 11, 2012. Centre has emerged based on the outstanding contributions of two decades by the Division of Environmental Sciences. The Center has ambitious programme of collaborating with the public, private and civil society organizations to develop and demonstrate the technologies on-farm and promote them to enhance resilience of Indian agriculture and improve the livelihood of farmers. The mandates of the Centre include



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Principal Scientist/Professor

Centre of Environmental Science and Climate Change (CESCRA), ICAR-Indian Agricultural Research Institute, New Delhi



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NOTE

1. Participants are requested to register well before the deadline.
2. The webinar will be conducted on zoom platform and the link will be sent to the registered email id's, WhatsApp numbers two hours earlier to the scheduled time of web-conference.
3. All interested registered participants can send their abstracts on info@aoes.org.in or bscfjk2020@gmail.com
4. All the participants would be provided with e-certificates for academic recruitments and promotions.
5. Updates regarding the web-conference would be communicated via email and WhatsApp
6. All the updates will also be viewed on <http://aoes.org.in>

SPEAKERS



Prof. M.S. Reddy

Founder Chairman, Asian PGPR Society
Consultant and Entrepreneur
Auburn University, USA

Dr. Dilfuza Egamberdieva

Leibniz Centre for Agricultural
Landscape Research (ZALF),
Müncheberg, Germany



Dr. Amjad M. Hussaini

Sr. Assistant Professor
Division of Plant Biotechnology
SKUASK-K; Visiting Scientist
Department of Plant Sciences, University of Oxford

Technical Sessions

✦ **Session 1:** Agricultural system and environment - productivity, resilience, sustainability and Disease management. (**Speaker: Prof. M.S. Reddy**)

Participant Presentations –05

✦ **Session 2:** sustainable Organic Farming: Trends and developments (**Speaker: Dr. Dilfuza Egamberdieva**)

✦ **Session 3:** Advancement of technologies: AI and Research in Food and agricultural Science; Genomics and precision breeding. (**Speaker: Dr. Amjad**)

Participant Presentations –05

REGISTRATION

Registration is available for all Students, Scholars, Faculty Members and Scientists, Academicians.

Click here (<https://forms.gle/wsN4FcewkujReZqK7>) for registration (FIRST COME FIRST IN)

Last date of registration, August 7, 2020

Registration Fees for Indian Nationals

Students/Research Scholars-----250 (INR)

Faculty -----300 (INR)

Registration fees for other Nationals-----30 \$ (USD)

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Major Themes

- ✦ Understanding interactions between the various components of the agricultural system and environment towards productivity, resilience and sustainability.
- ✦ Prioritization of Trans disciplinary science and research approaches in minimizing the diseases in crops and increasing the agricultural produce
- ✦ Development and validation of reliable and precise sensors / biosensors for rapid detection and monitoring
- ✦ Advancement of new and existing technologies for safeguarding the environment and enhancing the production
- ✦ Bioinformatics and statistical integration of data science related to agriculture and environment
- ✦ Adoption and development of information technology, data science, and artificial intelligence in food and agricultural research.
- ✦ Use of genomics and precision breeding to genetically improve traits of agriculturally important organisms.
- ✦ Understanding of soil, and plant microbiomes and their wider applications across the agricultural system and cleaner environment