

PROCEEDINGS OF THE CONFERENCE OF G.K.V. SOCIETY: A BRIEF REPORT

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First International Conference was organized by GKV society through virtual mode on 'Recent Advances for Managing Sustainable Soil Health and Crop Production' from February 18-20, 2022. For the Conference, more than 450 participants had registered. The conference was divided into five sessions for both oral and poster presentations which included two sessions for Natural Resource Management, two sessions of Crop Improvement and Crop Protection and one session for Horticulture, Post-Harvest Technology and Engineering. Both oral and poster session were run parallel for smooth conductance of the conference. Due to limited time slots available for each session, 90 oral and 90 posters were selected in total for the presentations in different sessions and the rest were included as participants. The conference was graced by various national and international eminent personalities who spared their valuable time to deliver the lead talks in different sessions of the conference and enlightened us with their area of research and findings that can pave the way for future research and collaborations.

The conference was inaugurated by Dr S.K. Chaudhari, Deputy Director General, Natural Resource Management, Indian Council of Agricultural Research (ICAR), New Delhi. In his address, he highlighted that the success of Indian Agriculture is attributed to the vision and strategic planning of ICAR. He also elaborated about the achievement of high food grain, oilseed and pulse production despite the geographical and climatic constraints being faced by the country. He also emphasized on the need to work together to face the present challenges of Indian agriculture.

The first oral technical session of Natural Resource Management (NRM), was chaired by Dr AK Patra, Director, ICAR-IISS, Bhopal and co- chaired by Dr. T. J. Purakayastha, Principal Scientist, ICAR-IARI, New Delhi, the lead talk was delivered by Dr. Kuldip Kumar, Principal Environmental Scientist, Metropolitan Water Reclamation District of Greater Chicago, USA on the topic 'Sustainability: Still Relevant or A Paradigm in Crisis'. In his lecture he explicitly showed that the algae can be used as a tool for treating the wastewater and as a source of biofuel, fertilizers and animal feeds. He sensitized all to think beyond the sustainability to restore the material balance to ensure the overall health and resilience of the planet. Our another lead speaker, Dr. V.K. Singh, Director, ICAR-CRIDA, Hyderabad deliberated about different mandates of NICRA, vulnerability and risk assessment of climate change, its modelling aspects in relation to crop yield and also about the different strategies to mitigate the impacts of climate change. In this session there were total 11 presentations on different topics of the participants.

The second session of NRM on oral presentations was chaired by Dr SK Singh, Professor, BHU, Varanasi. In this session, Dr. S.P. Datta, Professor, Soil Science and Agricultural Chemistry, IARI, New Delhi delivered a lecture on the topic 'Soil and Immunity of Human during Pandemic' in which he discussed about different aspects of soil health. He also elaborated about the relationship between soil health and human health along with the maintenance of soil health for the well being of humans. In this session, total 26 researchers presented their work on different aspects of natural resource management.

On day 2, oral session of Crop Improvement and Crop Protection was chaired by Dr. V.K. Yadav, Head, Seed Technology Division, ICAR-IGFRI, Jhansi and co-chaired by Dr. Gyanendra Singh, Head, Crop Improvement, ICAR-IIWBR, Karnal for the morning session. In the first session, there were three lead talks. The first lecture was delivered by Dr. Deepmala Sehgal, Scientist Wheat Geneticist/QTL Deployment Coordinator, Global Wheat Program, CIMMYT, Mexico on the topic 'Discovering novel alleles for crop improvement using association mapping approach'. Second lead speaker Dr. Subodh Kumar Sinha, Principal Scientist, ICAR-National Institute for Plant Biotechnology, New Delhi, India shared his experience and presentation on the topic 'Exploring nitrate acquisition and transport related genes for improvement of nitrogen use efficiency in wheat'. One more lecture on 'Scenario of Next-generation genomics and breeding in pulse crops' was delivered by Dr. Abhishek Bohra, Scientist, ICAR-IIPR, Kanpur. In this session, total 11 oral

presentations were made on various researches based on crops like wheat, oat, mungbean, clusterbean and cucumber.

The technical session IV on Crop Improvement and Crop Protection was chaired by Dr. K.K. Sharma, Coordinator, AINP on Pesticide Residues, ICAR-IARI, New Delhi and co- chaired by Dr. Robin Gogoi, Principal Scientist, ICAR-IARI, New Delhi. The first presentation was made by Dr. Harsh Vardhan Singh, Director, ICAR-NBAIM, Mau, India on the topic 'Microbial interventions: Customized solution for plant and soil health of resource poor farming communities. He gave an elaborate presentation on the role of agriculturally important microorganisms in enhancing the crop productivity. He also insisted that the productivity can be increased by the use of biofertilizers, PGPR activities of microbes, Arbuscular Mycorrhizal fungi, etc. The second presentation was made by Dr. Anup Chandra, Scientist, ICAR-IIPR, Kanpur, India on the topic 'Recent advances in insect pest management of pulses'. The different pest control strategies were discussed in detail. Chairman raised concerns about the decreased number of registered pesticides for pulses and suggested that IIPR can work in coordination with pesticide companies to generate data for increasing the label claim of the pesticides for application in pulses for pest control. The lead presentations were followed by the oral presentations. Out of 14 scheduled presentations, 9 presentations were made by the corresponding participants.

Technical session V on Horticulture, Post-Harvest Technology and Engineering, Prof. Nazeer Ahmed, Former Vice Chancellor, SKUAST-K, Srinagar, India chaired the session and Dr. D. B. Singh, Former-Director, ICAR-CITH, Srinagar, India served as co-chairman of the session. For the session, first lecture was delivered by Dr. Sanjai K Dwivedi, Scientist 'G' & Director, Directorate of Personnel (DoP), DRDO, New Delhi on the topic 'Future Fruits of Himalayas'. He presented the importance of fruits crops grown in Indian Himalayan regions. He briefed about many fruit crops and leafy vegetables rich in antioxidants and vitamins, and this rich biodiversity needs to be exploited for cultivation under these regions. Next lecture was delivered by Dr. S.R. Singh, Principal Scientist, ICAR-Central Institute for Subtropical Horticulture, Lucknow, India on 'Vertical hydroponics: A future technology for urban horticulture'. He shared his experiences regarding standardization of different nutrients and methodology for usage under urban areas where the demand of the vegetables including leafy vegetables is more and these technologies can be exploited to generate more income as well as supply nutritious vegetables to the consumers. Dr Javid Iqbal Mir Senior Scientist, ICAR-CITH Srinagar, India delivered a lecture on the topic 'Breeding for introgression of scab resistance and other quality traits in important apple cultivars'. He presented the breeding strategies for introgression of scab resistance and quality improvements in apple. His presentation was very well focused on the future research to develop apple using the local variety *ambri* using molecular techniques to develop a variety for resistance and with good colour. After the lectures oral presentations were made and out of 14 presenters, 11 participants presented their research work.

In addition, Poster presentation sessions were run for 3 days parallel to oral sessions which were evaluated by respective Chairman and Rapporteur of the session. In the valedictory session, Dr V.K Sharma, Convener of the International Conference, welcomed the Chairman, Chief Guest, the Lead speaker and the august gathering. He introduced Dr. B.R. Tripathi and the purpose of organizing the Memorial Lecture by GKV Society, Agra. The session was chaired by Dr. V.S. Tomar, Former Vice-Chancellor, JNKVV, Jabalpur, M.P., India. The session was also graced by Dr. Pradip Dey, Project Coordinator, AICRP on STCR, ICAR-IISS, Bhopal, M.P., India as a chief guest. Dr. K.N. Tiwari, Former Director, International Plant Nutrition Institute (IPNI) - India Program delivered Dr. B.R. Tripathi Memorial Lecture on the topic 'Recent advances in the application of nano-fertilizers for sustainable agricultural development'. After the lead lecture, concluding remarks were given by Dr. V.S. Tomar. Dr Pradip Dey also presented his views about sustainable agricultural development. Then the proceedings of the three-day program were presented by Dr Indu Chopra, Joint Organizing Secretary. The GKV society had also invited applications for various awards to be conferred by the society for the year 2022. The awards included: Best Master's Thesis Award, Best Doctoral Thesis Award, Young Scientist Award, Young Woman Scientist Award, Outstanding Scientist Award, Lifetime Achievement Award and Fellow of GKV Society Award. All the awards for oral and poster presentations for each session along with the above-mentioned awards were declared by Dr Vinay Singh, Chairman of the Conference and Secretary of GKV society. The Conference concluded with the formal vote of thanks being proposed by Mr Kapil A. Chobhe.