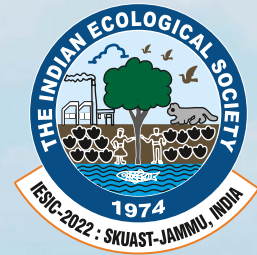


Indian Ecological Society  
International Conference  
**IESIC 2022**



# Souvenir

**Sustainable Agricultural Innovations  
for Resilient Agri-Food Systems**



Collaborative Host Organization

**Sher-e-Kashmir University of Agricultural  
Sciences & Technology of Jammu, India**

**Website: <https://iesconf.in>**

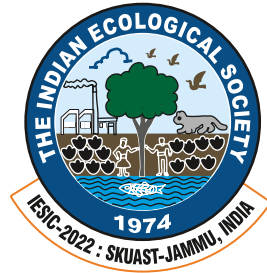
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The Indian Ecological Society International Conference

**IESIC-2022**

## **Sustainable Agricultural Innovations for Resilient Agri-Food Systems**

13-15 October, 2022

# Souvenir



*Collaborative Host Organization*

**Sher-e-Kashmir University of Agricultural  
Science & Technology of Jammu, India**



## Editors

**Rajinder Peshin**, Sher-e-Kashmir University of Agricultural Sciences and Technology of Jammu, Jammu, India

**Virender Kaul**, Professor (Retd.) at Sher-e-Kashmir University of Agricultural Sciences and Technology of Jammu, Jammu, India

**Kamal K Sood**, Sher-e-Kashmir University of Agricultural Sciences and Technology of Jammu, Jammu, India

**Ashok K Dhawan**, President Indian Ecological Society, Ludhiana, India

**Manmohan Sharma**, Sher-e-Kashmir University of Agricultural Sciences and Technology of Jammu, Jammu, India

**Stanzin Yangsdon**, Sher-e-Kashmir University of Agricultural Sciences and Technology of Jammu, Jammu, India

**Obaid Zaffar**, Sher-e-Kashmir University of Agricultural Sciences and Technology of Jammu, Jammu, India

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डॉ. जितेन्द्र सिंह

राज्य मंत्री (स्वतंत्र प्रभार),  
विज्ञान एवं प्रौद्योगिकी मंत्रालय,  
राज्य मंत्री (स्वतंत्र प्रभार) पृथ्वी विज्ञान मंत्रालय,  
राज्य मंत्री प्रधान मंत्री कार्यालय,  
राज्य मंत्री कार्मिक, लोक शिकायत एवं पेंशन मंत्रालय,  
राज्य मंत्री परमाणु उर्जा विभाग तथा अंतरिक्ष विभाग  
भारत सरकार



सत्यमेव जयते



DR. JITENDRA SINGH

Minister of State (Independent Charge),  
of the Ministry of Science and Technology,  
Minister of State (Independent Charge)

of the Ministry of Earth Sciences,  
Minister of State in the Prime Minister's Office,  
Minister of State in the Ministry of Personnel,  
Public Grievances and Pensions,  
Minister of State in the Department of Atomic Energy and  
Department of Space,  
Government of India

#### MESSAGE

It gives me immense pleasure to learn that Indian Ecological Society is organizing International Conference (IESIC-2022) on "Sustainable Agricultural Innovations for Resilient Agri-Food Systems" at Sher-e-Kashmir University of Agricultural Sciences and Technology, Jammu from October 13-15, 2022.

Development of resilient agri-food systems in the backdrop of climate change phenomenon is a challenging task before the scientific community for ensuring food security to the ever increasing global population. Plant, animal and microbial genetic resources are eroding at a faster pace, thereby posing a serious threat to the ecological balance. Soil, water and air quality has deteriorated in past couple of decades at a rate experienced never before. The carbon stocks are fast depleting. Natural calamities such as cyclones, floods, droughts and temperature extremes have become more frequent and serious. These aberrant climatic situations have pronounced impact on agriculture and food systems worldwide. Thus, scientific fraternity to seriously ponder over these challenges and devise sustainable solutions for conservation of natural resources and their judicious utilization.

Over the past decades, agri-food systems have evolved in many aspects. Besides conventional land-based food systems based on crops, livestock and fish, there has been emphasis on sustainable production of food from the sea based eco-systems. Business model innovations, sectoral and fiscal policies as well as private-public coordination strategies, supporting the development of agri-food systems, are the corner stone of sustainability.

Earth observation technologies (EOTs) and remote sensing, machine learning, Artificial Intelligence, Internet of Things (IoT), ICT, farm engineering, biotechnology, nanotechnology, drone technology, IPM, software based big data analysis, etc. have made agriculture and production systems more precise, predictable and secure.

The thematic areas of the conference have been very thoughtfully chosen for deliberations on developing resilient agri-food systems using sustainable agricultural innovations. I have been informed that a galaxy of scientists and scholars from different countries shall be attending the Conference.

Diverse participation from ICAR, CSIR, ICMR, Indian Universities including SAUs, Research Institutes and policy planners shall prove beneficial to all the stakeholders for devising joint strategies.

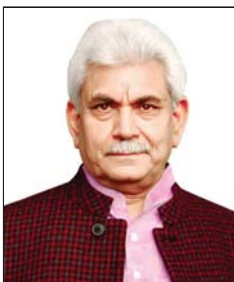
I congratulate Indian Ecology Society and SKUAST-Jammu for taking the initiative to organize an international conference on an important subject. I wish the very best to Vice-Chancellor, SKUAST-Jammu and organizers for success of the Conference.

(Dr. Jitendra Singh)  
MBBS (Stanley, Chennai)  
MD Medicine, Fellowship (AIIMS, NDL)  
MNAMS Diabetes & Endocrinology

Anusandhan Bhawan, 2, Rafi Marg  
New Delhi - 110001  
Tel.: 011-23316766, 23714230  
Fax: 011-23316745

South Block, New Delhi - 110011  
Tel.: 011-23010191, Fax: 23017931  
North Block, New Delhi - 110001  
Tel.: 011-23092475, Fax: 011-23092716





**Shri Manoj Sinha**  
Hon'ble Lt. Governor  
UT of J&K



**RAJ BHAVAN**  
**JAMMU-180001**

I am pleased to know that the Indian Ecological Society is organizing an International Conference on ***“Sustainable Agriculture Innovations for Resilient Agri-Food Systems”*** at SKUAST Jammu from 13<sup>th</sup> to 15<sup>th</sup> October.

The Indian Ecological Society has been a constant source of science-based information for nearly four decades. I trust that the conference will address the issues of land use systems and make it more sustainable and resilient to changing climate and increasing global temperatures.

The interaction with the leading scientists from Europe, USA, Africa and Asia during the conference will enhance the understanding of Genetics Innovations for Climate-resilient Agri-Food system, Pest Management Innovations, Policy Regulations for Sustainable Agri-food systems, Biodiversity Conservation and Management.

I believe this conference will provide a reset to our research ambitions and usher a new era of scaled-up collaboration between researchers, industry and government across the globe.

I wish the organizers of the conference, a great success.

3<sup>rd</sup> October, 2022  
Jammu.

  
( **Manoj Sinha** )



**डॉ. हिमांशु पाठक**  
सचिव एवं महानिदेशक

**Dr HIMANSHU PATHAK**

SECRETARY (DARE) & DIRECTORY GENERAL(ICAR)



सत्यमेव जयते

भारत सरकार  
कृषि अनुसंधान और शिक्षा विभाग एवं  
भारतीय कृषि अनुसंधान परिषद्  
कृषि एवं किसान कल्याण मंत्रालय, कृषि भवन, नई दिल्ली-110 001  
GOVERNMENT OF INDIA  
DEPARTMENT OF AGRICULTURAL RESEARCH INSTITUTE  
AND  
INDIAN COUNCIL OF AGRICULTURAL RESEARCH  
MINISTRY OF AGRICULTURE AND FARMERS WELFARE  
KRISHI BHAVAN, NEW DELHI-110 001  
Tel.: 23382629, 23386711; Fax: 91-11-23384773  
E-mail: dg.icar@nic.in

## Message

I am happy to learn that the Indian Ecological Society is organizing International Conference (IESIC 2022) on "Sustainable Agricultural Innovations for Resilient Agri-Food Systems" at the Sher-e-Kashmir University of Agricultural Sciences & Technology of Jammu from 13-15 October, 2022.

The global population in 2050 is projected to cross 9 billion which shall necessitate quantum increase in food production while the natural resources are not only depleting but also deterioration. The climate change is becoming a formidable challenge for future agriculture and environmental sustainability. The sustainability of global food production will depend on our ability to innovate and become more climate-resilient. Sustainable supply of food and energy without posing any threat to environment is the current demand of our society. Making our food systems more sustainable will depend on innovative tools and approaches being developed and deployed around the world. We need to get practitioners, innovators, investors and corporates focused on adopting sustainable practices and helping generating inclusive livelihoods across the agri-food value-chain. The activities must include poor and vulnerable communities and reduce levels of hunger and malnutrition while safeguarding the water, soil and air quality and minimizing greenhouse gas emissions, and food loss and waste. It is heartening that scientists from many countries including Mexico, USA, France, Germany, Denmark, Switzerland, Kenya, and Nepal will be participating in the Conference.

I hope that the international conference will address the complex issues of sustainability and resilient agri-food systems and usher into actionable recommendations.

I wish the International Conference a grant success.

**(Himanshu Pathak)**

**14 September, 2022**  
**New Delhi**





**Prof. J.P. Sharma**  
Ph.D. IIT Delhi  
Vice-Chancellor

## From the Desk of Conference Chair

I am happy to note that the Indian Ecological Society is organizing International Conference (IESIC 2022) on “Sustainable Agricultural Innovations for Resilient Agri-Food Systems” at the Sher-e-Kashmir University of Agricultural Sciences and Technology of Jammu, India from 13 to 15 October 2022.

The theme of the event holds immense importance in the current world scenario. Agricultural production systems which are already being affected by over population, climate change, ecosystem degradation and biodiversity loss faced another jolt as a result of COVID19. The pandemic has severely affected the food productivity throughout the world. Social distancing and travel restrictions led to inadvertent delays in sowing and harvesting of crops, shortage of labour and disrupted supply chains. The World Food Programme estimates that an additional 130 million people will face acute hunger as a result of the crisis, nearly doubling the 135 million people already facing acute hunger. Food production has now become more risky and uncertain.

It is my aspiration that this international conference will be a foundation for the growth of new ideas by addressing all dimensions related to production, processing, distribution, and consumption of food, including the socio-economic and environmental impacts. The conference will provide an opportunity to participants representing academia, research and industry to interact, on a global platform and share ideas that would certainly help in addressing the various environmental issues being faced by agriculture world over.

I look forward to welcoming you in Jammu for the IESIC 2022.

  
(J. P Sharma)  
Vice-Chancellor

Jammu  
19<sup>th</sup> Sep 2022

**SKUAST**  
**Jammu**

Chatha, Jammu, J&K 180 009, INDIA

Tel.: +91-191-2263714, Fax: +91-191-2262073  
E-mail: [vc@skuast.org](mailto:vc@skuast.org), [vcskuastjammu@gmail.com](mailto:vcskuastjammu@gmail.com)  
Visit us at: [www.skuast.org](http://www.skuast.org)



**Prof. Nazir A. Ganai**  
Vice-Chancellor

## MESSAGE

I am glad to know that Indian Ecological Society & SKUAST-Jammu are organizing an International Conference from October 13-15, 2022, on a very important thematic area of **“Sustainable Agricultural Innovations for Resilient Food Systems”**.



Global agriculture is challenged by deteriorating biophysical resource base, disrupted supply chains, rising fuel prices and political unrests. As we are witnessing policy and action shifts towards climate action for ensuring sustainable agriculture for ensuring food and nutritional security, resilient food systems are imperative. There have to be matching innovations to overcome food, nutrition, energy and climate crises, ranging from sustainable resource management and intensification, appropriate scale mechanization, using digital tools as well as a systems approach for research. Agriculture is not just food, but nutrition, health, technology and business and resilience has to be built across all domains for promoting knowledge, technology and resource based healthy livelihood systems. There is a need to revisit old policies and their impacts, identify new and emerging challenges and work towards holistic new policy frameworks that can help promote ecosystem services and add resilience to farming systems. I am hopeful that the conference will provide a great platform for developing a new philosophy for managing our research and innovations towards sustainable and resilient food systems.

I extend my best wishes to the organizers and hope that the conference will provide appropriate platform for deliberations on various issues and strategy related to sustainable food production.

  
( Nazir Ahmad Ganai )



## ANAND AGRICULTURAL UNIVERSITY ANAND-388 110, GUJARAT



**Dr. K.B. Kathiria**  
Vice Chancellor

Tel: (O) +91-2692-261273  
Fax: (O) +91-2692-261520  
Email: [vc@aaui.in](mailto:vc@aaui.in)

### MESSAGE

I am glad to note that the Indian Ecological Society is organizing the “Indian Ecological Society International Conference (IESIC 2022)” on “Sustainable Agricultural Innovations for Resilient Agri-Food System” in collaboration with Sher-e-Kashmir University of Agricultural Science and Technology of Jammu during October 13-15, 2022.

The society (IES) is actively engaged in ecology conservation and environment protection aspects at national level. The management of various aspects of ecology and environment protection is very much important area in present day context, particularly agricultural point of view.

The Organization of international conference for such sensitive issue is a commendable job. I am sure, the conference will deliberate on the critical issues and come out with innovative ideas and practical solutions and that will certainly help our country to attain newer heights in years to come.

I congratulate Prof. J.P. Sharma, Vice Chancellor, SKUAST, Jammu, Prof. Rajinder Peshin, Vice President, Indian Ecological Society as well as IESIC team for holding this important International Conference at SKUAST, Jammu.

I wish the conference a grand success.

Place : Anand

**(K.B. Kathiria)**

Date : 28/09/2022





भारत सरकार  
कृषि अनुसंधान और शिक्षा विभाग एवं  
भारतीय कृषि अनुसंधान परिषद्  
कृषि एवं किसान कल्याण मंत्रालय, कृषि भवन, नई दिल्ली-110 001  
GOVERNMENT OF INDIA  
DEPARTMENT OF AGRICULTURAL RESEARCH INSTITUTE  
AND  
INDIAN COUNCIL OF AGRICULTURAL RESEARCH  
MINISTRY OF AGRICULTURE AND FARMERS WELFARE  
KRISHI BHAVAN, NEW DELHI-110 001  
Tel.: 23382629, 23386711; Fax: 91-11-23384773  
E-mail: dg.icar@nic.in

त्रिलोचन महापात्र, पीएच.डी.  
एफ.एन.ए., एफ.एन.ए.एस.सी., एफ.एन.ए.ए.एस  
पूर्व सचिव एवं महानिदेशक  
TRILOCHAN MOHAPATRA, Ph.D.  
FNA, FNASc, FNAAS  
Ex-SECRETARY & DIRECTOR GENERAL

## Message

I am happy to know that the Indian Ecological Society (IES) is organizing an International Conference on “**Sustainable Agricultural Innovations for Resilient Agri-Food Systems**” at the Shere-e-Kashmir University of Agricultural Science and Technology, Jammu, India during October 13-15, 2022. The current food systems have succeeded in increasing the world’s food production but are confronted with a set of challenges. Agriculture has profoundly altered water and natural resource use as further affecting terrestrial, freshwater, and marine ecosystems. Agriculture is highly dependent on nature and weather, leaving them vulnerable to pests and diseases, droughts and floods, market and other shocks and stresses. The global food demand is increasing, however new threats to food production are arising due to climate change, water scarcity and land degradation. A sustainable *Agricultural Innovations for Resilient Agri-Food Systems* is the global concern.

I am happy to note that the conference will deliberate on agricultural innovations to enhance food security and productivity in a sustainable manner, climate-resilient food solutions, restoration of natural resources, future of farming and public health and food safety.

I convey my best wishes for the success of the conference.

  
( T. MOHAPATRA )

Dated the 18<sup>th</sup> February, 2022  
New Delhi





केन्द्रीय कृषिवानिकी अनुसंधान संस्थान  
पहुज बाँध के सामने, झाँसी-ग्वालियर मार्ग, झाँसी 284003 (उप्र)  
**Central Agroforestry Research Institute**  
Opposite Pahuj Dam, Gwalior Road, Jhansi 284003, Uttar Pradesh



**डा. अ. अरुणचलम / Dr. A. Arunachalam**

निदेशक / Director

**MESSAGE**

I am very happy to know that Indian Society of Ecology joining hands with Sher-e-Kashmir University of Agricultural Sciences and Technology, Jammu to organize the “International Conference on Sustainable Agricultural Innovations for Resilient Agri-Food Systems” during October 13-15 October, 2022.

I am sure, the conference will provide great scope for networking and foster fruitful partnerships between various stakeholders to take Indian agriculture to the next level. The keynote and plenary talks from leading scientists and experts, as well as the oral and poster abstract presentations in the various scientific sessions, will provide the participants with the most up-to-date information in the field and insights for addressing the current societal needs.

I sincerely hope that this international conference will be intellectually rewarding and will provide the most benefit to young researchers, faculty, and students. I convey my warm greetings and extend my best wishes for the success of the conference.

I convey my best wishes for the grand success of the International Conference on “Sustainable Agricultural Innovations for Resilient Agri-Food Systems”.

(A. Arunachalam)

# CCS Haryana Agricultural University

## Hisar-125 004, Haryana, India

**Prof. B. R. Kamboj**

Vice-Chancellor

CCS Haryana Agricultural University, Hisar-125 004, India

**Telephone :**

Office : +91-1662-231640, 255258

Residence : +91-1662-231238

Fax : +91-1662-289952

E-mail: vc@hau.ac.in



### MESSAGE

Sustainable agriculture is undoubtedly an alternative to conventional input-intensive agriculture. Conventional methods have long-term negative impacts that include topsoil degradation, falling groundwater levels, and biodiversity reduction. The scenarios for the preferment of sustainable agriculture practices are now attaining a favourable shape in India. The agriculture segment in India stands at the junction of revolution. The green revolution which is characterised by intensive modern farming techniques, the use of high yielding variety (HYV) seeds and fertilisers has been the most paramount era in agriculture. However, with growing awareness for food safety and sustainable farming in India as also globally, it is the need of the day to reimagine the future plans of India's Agri sector. Agriculture is rightly considered a pillar of the Indian economy as 54.6% of its populace is dependent on agriculture as the main source of revenue. At the national level, it has a share of 18.4% to the GVA (13.1% to GDP), indicating its importance to the country's economy. Therefore, farming, demands resilience and innovation not only to lift productivity but also to ensure the overall sustainability of the agriculture sector. Unquestionably, COVID-19 has furthermore exaggerated the need for Agri-sector restructuring. However, the hostile influence of climate change creates a lop-sided impact on this critical sector. The past few years have observed unparalleled natural crises - be it drought, cyclones, pandemics, heavy rains, or floods. At the same time, food safety has become a primary concern of consumers and markets alike, along with the use of sustainable farming methods. For example, food traceability is attaining speedy impetus. Such technological sophistication permits consumers to answer various questions like where, when, and who grew the crop, as well as providing footprint data of the crop's journey from pre-harvest to reaching the market shelf. The technologies and novelty, essential to creating sustainable food production and consumption will continue to advance with the addition of more Agri-tech start-ups and forthcoming innovative organisations. On the other hand, modern Agri-tech firms can be helpful in several ways like empowering farmers, promoting sustainable agricultural practices, crop-wastages reduction, strengthening domestic and international market links along with boosting farmers' income. Tech-driven farm interventions; improved climate prediction proficiencies will further aid in dropping crop damage and lessen the challenges posed by climate change. Furthermore, our promise to regulate and augment agricultural production, increase farmers' income, and elevate awareness about food safety on a wider scale will safeguard the sector's overall sustainability in the times to come.

I am pleased to know that the Indian Ecological Society, on the same line, is organizing the Indian Ecological Society International Conference 2022 (IESIC 2022) on "Sustainable Agricultural Innovations for Resilient Agri-Food Systems" at the Shere-e-Kashmir University of Agricultural Science and Technology of Jammu, India from 13 to 15 October 2022. This is the necessity of the day. My best wishes are with the organizers for its successful organization and long-term paybacks.

**B.R. KAMBOJ**



Tel. : 0161-2553360, 2553320  
E-mail : vcgadvasu@gmail.com (Official)  
inderjeet.dr@gmail.com (Personal)

ਗੁਰੂ ਅੰਗਦ ਦੇਵ ਵੈਟਨਰੀ ਅਤੇ ਐਨੀਮਲ ਸਾਇੰਸਿਜ਼ ਯੂਨੀਵਰਸਿਟੀ  
ਲੁਧਿਆਣਾ-141 004, ਪੰਜਾਬ (ਭਾਰਤ)

GURU ANGAD DEV VETERINARY & ANIMAL SCIENCES UNIVERSITY  
LUDHIANA - 141 004, PUNJAB (INDIA)

ਡਾ. ਇੰਦਰਜੀਤ ਸਿੰਘ  
ਉਪ-ਕੁਲਪਤੀ

Dr. Inderjeet Singh  
Vice-Chancellor



*Dear Dr. Peshin,*

It's a matter of pleasure to learn that the Indian Ecological Society in collaboration with the Sher-e-Kashmir University of Agricultural Science and Technology of Jammu is organizing "Indian Ecological Society international conference (IESIC 2022)" under the apropos theme "Sustainable Agricultural Innovations for Resilient Agri-Food Systems". This international event being organized in the lap of mother nature (Jammu), bringing together various stakeholders viz. professionals, researchers, academia, industries, policymakers, marketing functionaries, students, field functionaries etc. will provide them a mega platform for presenting and learning about the latest multidisciplinary agricultural research innovation, technologies and strategies for resilient agri-food systems.

The accelerating climatic conditions concoct the need for more resilient food systems having adaptability to the emerging challenges. Thus, it is high time that the rationale of climate-resilient agriculture is respected and applied meticulously to ensure food and nutrition security for all especially future generations. This underpins the role of Integrated Farming Systems synergizing the crop-livestock as a sustainable model for coaction between agricultural production, environmental quality and food and nutrition security.

I trust that the deliberations of the conference will result into a practical blueprint for resilient agri-food systems. I also believe that the conference will stimulate collaborations amongst similar thinkers and will instigate the assimilation of innovate ideas amongst the professionals for thinking out of the box for developing pragmatic solutions to the problem. I wish the event goes off with a grand success.

(Inderjeet Singh)





भाकृअनुप-भारतीय मृदा एवं जल संरक्षण संस्थान (भामृजसंस)  
२१८ कौलागढ़ रोड, देहरादून-२४८ १९५ (उत्तराखंड)  
ICAR-Indian Institute of Soil & Water Conservation (IISWC)  
218, Kaulagarh Road, Dehradun 248 195 (Uttarakhand)



डॉ० एम० मधु  
निदेशक  
Dr M.Madhu  
Director

### Message

I am extremely happy that the Indian Ecological Society with the collaboration with SKUAS&T, Jammu, India is organizing an International Conference on "Sustainable Agricultural Innovations for Resilient Agri-Food Systems."

The ecological fragile region of Indian Himalayas is having greater potential to support various ecological services for the betterment of the society. In order to have harmony with the nature, many challenges are to be addressed holistically through various nature positive solutions. I am sure that the Conference will generate well discussed and region-specific knowledge for adoption at farm level. While, there is no gain saying that soil and water constitute the fulcrum of a robust agricultural system, the challenge always has been transfer of knowledge and absorption by the farmers. I look forward to innovative suggestions in negotiating this critical challenge.

I am extremely honored to be part of this event for the sustainable development of the Himalayan region and I hope the conference will lead to practical action.

(M. Madhu)

Tel. : (O) 0135-275 8564, (Res) 0135-275 4968  
Fax : 0135-275- 4213  
Facebook: <https://www.facebook.com/IISWC.Dehradun>

Email : [directorsoilcons@gmail.com](mailto:directorsoilcons@gmail.com); [director.iiswc@icar.gov.in](mailto:director.iiswc@icar.gov.in)  
[madhupmd@gmail.com](mailto:madhupmd@gmail.com)  
Website : [www.iiswc.icar.gov.in](http://www.iiswc.icar.gov.in); [www.cswcrtiweb.org](http://www.cswcrtiweb.org)  
Twitter : <https://twitter.com/icariiswc>

**Dr. K. M. INDIRESH**

Vice-Chancellor,  
University of Horticultural Sciences,  
Bagalkot, Karnataka  
Ph. (O) 08354-230351,  
Email : vc@uhsbagalkot.edu.in  
Website: www.uhsbagalkot.edu.in



## **MESSAGE**

It gives me immense pleasure to keep on record a Message that the Indian Ecological Society is organizing an International Conference 2022 on **“Sustainable Agricultural Innovations for Resilient Agri-Food System”** at the Sher-e-Kashmir University of Agricultural Science and Technology of Jammu during 13<sup>th</sup>-15<sup>th</sup> October, 2022.

The Indian Agriculture has changed in its dimensions after globalization and needed structural changes and reforms to meet the emerging challenges. New agriculture has to be globally competitive and locally feasible. Agriculture provides the food which is the basic requirements for sustainability of human life on earth. The growing population of India needs increased production of different agricultural crops which can be achieved by adopting latest multidisciplinary agricultural research innovations, technologies and strategies for resilient agri-food systems.

Each of these challenges requires new interventions, new outlook, new approaches, new knowledge, new technology and trained human resource to ensure local feasibility, national utility and global competitiveness of agriculture. The challenge ahead is to explore the opportunities to ensure a vibrant, responsive, sustainable and productive agriculture. Therefore, it is imperative to take stock of research achievements as technological outputs and draw lead for future research towards providing economical, effective and eco-friendly remedies to safeguard resourceful food and nutritionally rich crops.

In this context, taking due cognizance of rapidly changing climate, present Indian Ecological Society International Conference (IESIC 2022) on International Conference on **“Sustainable Agricultural Innovations for Resilient Agri-Food System”** would help in understanding the agricultural innovations to enhance food security and productivity in a sustainable manner, climate resilient food solutions, restoration of natural resources, etc. in three days deliberations.

I appreciate and congratulate the initiative taken up by the Indian Ecological Society in organizing this International Conference. I am sure that the Conference will be higher beneficial to professionals, researchers, academia, industries, policymakers, marketing functionaries, students and field officers.

At the same time, I wish the conference a grand success.

Date: 12-04-2022

Place: Bagalkote (Karnataka)

(K. M. Indires)  
Vice-Chancellor  
UHS, Bagalkot



# Karnataka Veterinary, Animal & Fisheries Sciences University

P. B. No. 6, Nandinagar, BIDAR - 585 226, Karnataka



Ph : 08482 245264  
Fax : 08482 245107  
Mobile : +91 94485 57668  
e-mail : vckvafsub@gmail.com  
www.kvafsu.edu.in

**Prof. K. C. Veeranna**

M.V.Sc, Ph.D.

**Vice-Chancellor**

I am pleased to share that Indian Ecological Society is organizing International Conference- 2022 (IESIC 2022) on "Sustainable Agricultural Innovations for Resilient Agri-Food Systems" at Shere-e-Kashmir University of Agricultural Science and Technology of Jammu, India from 13 to 15 October 2022.

The world and India is home for wide range of biodiversity which needs a global attention in the context of present changes due to climate change, increasing population, changing food habits, agriculture practices etc. In this context, IESIC 2022 would be a great forum for presenting and learning about the latest transdisciplinary agricultural research innovations and strategies for resilient agri-food systems to enhance food security and productivity in a sustainable and climate-resilient way along with restoration of natural resources, public health and food safety. Indian Ecological Society since its inception has been encouraging and promoting ecological studies in the country and to integrate research in different fields of ecology. This IESIC 2022 would be yet another move in this direction. I am sure the conference would address and deliberate on the most emerging and need-based topics as proposed.

I congratulate and extend my best wishes to the organizers of IESIC 2022 for choosing very relevant and timely topic of the Conference. I hope the discussion and deliberations by the researchers and delegates would help in meeting the challenges related to ecology and agri-food systems and ensure sustainable food production and livelihood security for India and the globe.

**I wish the Conference a grand success.**

*K. C. Veeranna*  
(K. C. Veeranna) 18/04/2022

**Vice-Chancellor**

**Karnataka Veterinary and Fisheries  
Sciences University, Bidar.**





भा.कृ.अनु.प.-राष्ट्रीय डेरी अनुसंधान संस्थान  
ICAR-NATIONAL DAIRY RESEARCH INSTITUTE  
(मान्य विश्वविद्यालय)  
(Deemed University)  
(भारतीय कृषि अनुसंधान परिषद)  
(Indian Council of Agricultural Research)  
करनाल-132001, (हरियाणा) भारत  
KARNAL- 132001, (Haryana) India



डॉ. एम. एस. चौहान  
एफएनए, एफएनएससी, एफएनएएस, एफएनडीएस  
निदेशक  
**Dr. M. S. Chauhan**  
FNA, FNASc, FNAAS, FNADS  
Director

संदर्भ सं./Ref. No.  
दिनांक /Dated

It is heartening to note that the Indian Ecological Society (IES) is organizing the Indian Ecological Society International Conference 2022 (IESIC 2022) on "Sustainable Agricultural Innovations for Resilient Agri-Food Systems" at the Shere-e-Kashmir University of Agricultural Science and Technology of Jammu, India from 13 to 15 October 2022. Since its inception in 1974, IES has been spearheading research and education to encourage and promote ecological studies in the country to integrate research in different fields of ecology.

By 2050 the world will have to sustain nine billion people approximately, which may require increased food production by about 70%. At the same time, climate change further strains our ever-depleting natural resources, increasing the vulnerability of the highly resource-dependent agricultural sector. The sustainability of global food production will depend on our ability to innovate and become much more climate-resilient.

Across all Agri-Food Systems viz., crops, livestock, aquaculture, fisheries and forestry, the sustaining productivity of grains, enhancing smallholder competitiveness, and adapting to climate change are becoming increasingly urgent concerns. A central concern about achieving global food security is reconfiguring agri-food systems towards sustainability.

Much of the global production of food relies on smallholder farmers who often lack access to adequate and affordable production technology. The rising energy, labour, and nutrient costs are already pressuring profit margins in the agri-food systems globally. The role of artificial intelligence, analytics, latest sensors, and other emerging technologies could further increase crop yields, improve the efficiency of water, and build sustainability and resilience across crop cultivation and animal husbandry.

In order to cater to the needs of domestic and export markets, the Government of India has been promoting organic farming all over the country through dedicated schemes namely *Paramparagat Krishi Vikas Yojana* (PKVY). It primarily aims at increasing soil fertility and thereby helping in production of healthy food through organic practices without the use of agro-chemicals. Post-harvest management support including processing, packing, and marketing has been made integral part of these schemes to encourage organic farming with adoption of sustainable cost-effective innovative technologies and land management practices to increase food production with environmental sustainability.

On this propitious occasion, I would urge all the faculty, scientists, researchers, industry personnel and policymakers to deliberate on the issues related to the emerging and re-emerging challenges with regard to agricultural innovations to enhance food security and productivity in a sustainable manner as well as to dwell at length on issues such as restoration of natural resources, public health and food safety.

I wish the conference a great success.

(M. S. Chauhan)

दूरभाष/Tel : 0184-2252800/ 2259002 / 2259005 (O)  
0184-2259406  
एक्सचेंज/Exch. : 2250366/ 2250716  
ईपीएबीएक्स/EPABX : 1002/1005 (O)



Healthy Soils for a Healthy life

फैक्स/Fax : 0184-2250042  
ई.मेल/e-mail : director.ndri@icar.gov.in  
dir.ndri@gmail.com



**Prof. (Dr.) Naredra Kumar Gontia**

**Vice Chancellor**

**Junagadh Agricultural University**

**Junagadh-362 001**

**Tel: (O)+91 285 2671784,**

**FAX: +91 285 2672004,**

**Email: vc@jau.in**



## Message

India is blessed with vast diversity and natural resources which has 2<sup>nd</sup> largest arable and maximum agricultural area under irrigation in the world. India is among top five countries in terms of area and production of major cereals, pulses, beverages and spices, fruit and vegetable crops and animal products. However, more than 75 per cent being small and marginal farm holders, with the growing population and over-exploitation of natural resources, the application of innovative and sustainable technologies is vital for sustained growth.

Agriculture is extremely vulnerable to climate change. Higher temperatures and changes in precipitation patterns increase the likelihood of short-run crop failures and long-run production declines. The climate change impact will not be only limited to crop failure but also land-use change, habitat fragmentation, pollution and species exploitation and damaged ecosystem.

I am pleased to know that Indian Ecological Society International Conference 2022 on "Sustainable Agricultural Innovations for Resilient Agri-Food Systems" In collaboration with Sher-e-Kashmir University of Agricultural Sciences and Technology of Jammu is organized during October 13-15, 2022 at CHATHA-JAMMU. The deliberations will be made on agricultural innovations to adopt and mitigate climate change with application of modern technologies including Artificial Intelligence sensors, automation and drones in agriculture. I complement the organizers for choosing such highly relevant topic for conference which will be helpful for sustainable development of agriculture.

**Date:- March 29, 2022**  
**Junagadh**

**(N.K. Gontia)**



डॉ० राजेन्द्र प्रसाद केन्द्रीय कृषि विश्वविद्यालय  
पूसा ( समस्तीपुर ) - 848 125, बिहार  
**Dr. Rajendra Prasad Central Agricultural University**  
Pusa (Samastipur) - 848 125, Bihar



डॉ. रमेश चन्द्र श्रीवास्तव  
कुलपति

**Dr R.C. Srivastava**  
M.Tech., Ph.D. (IIT, Kgp)  
FNAAS, FIASWC, FISAE, FIE, FCHAI  
Vice-Chancellor



Phone : 06274-240226 (O)  
06274-240264 (R)  
Mob. : 09040033323  
Email : vc@rpcau.ac.in  
Website : www.rpcau.ac.in

Date : 29/03/2022

No. \_\_\_\_\_ /Dr RPCAU (VC)

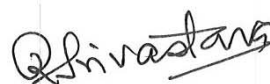
## Message

I am delighted to know that the Indian Ecological Society is going to organize “Indian Ecological Society International Conference (IESIC 2022)” on the topic “Sustainable Agricultural Innovations for Resilient Agri-Food Systems” at the Sher-e-Kashmir University of Agricultural Science and Technology of Jammu on 13-15 October, 2022.

As we know, the global agriculture is experiencing phenomenal changes due to sprawling urbanization, increasing population, fast changing food habits and above all, due to climate change through increasing temperatures, changing rainfall patterns and greater frequency and intensity of extreme weather events. In order to ensure the food security in the changing global scenario there is need to encourage the practices that encourage the protection and restoration of water sources and promote water use optimization; foster soil conservation and improved carbon stocks, waste water treatment for reuse and reduction / recycling of waste. This should also include capacity building for good agricultural practices and sustainable soil and water management for sustainable production system in tune with the requirements under changing climatic condition. Further the recent waves of COVID-19 pandemic during last two years has forced us to re-orient our academic and research process for innovative and need based practices to cope up with the situation.

I hope the “IESIC 2022” will provide the appropriate platform in different sessions to deliberate and discuss various issues and strategy related to sustainable agriculture under changing climate scenario. I am confident that the outcome of this International Conference will come out with valuable recommendation which will provide the basis for planning the policies for innovative research and development to ensure global food safety

I wish IESIC 2022, a grand success

  
(R. C. Srivastava)



# SARDARKRUSHINAGAR DANTIWADA AGRICULTURAL UNIVERSITY

Sardarkrushinagar - 385 506, Gujarat, INDIA



**Dr. R. M. Chauhan**  
Vice Chancellor



Mobile : +91 94288 81868  
Phone : 02748 - 278222 / 278444 (O)  
: 02748 - 278220 / 278221 (R)  
Fax : 02748-278261  
E-mail : vc@sdau.edu.in

No. SDAU RBIC/ 184 /2022

Date: 15th July 2022

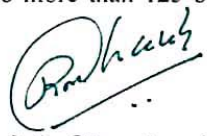
## Message

Since its establishment in 1974, The Indian Ecological Society has been working relentlessly for preserving the innate quality of our ecology, natural resource and environment towards a bright future. I congratulate the Society and its workers along with all others for their relentless support to the society for sustaining the environment and the agro-ecosystems. I also appreciate the contribution of Shere-e-Kashmir University of Agricultural Science and Technology for its untiring efforts for improving the livelihood of the farming community and people of Jammu & Kashmir.

We understand the harm caused by the modern agricultural technologies to the environment in the wake of Green Revolution but at the same time we are vigilant enough to safeguard and preserve our ecosystems and to explore new opportunities to bring sustainability of the agroecosystems. In this regard, the work done by The Indian Ecological Society and the Shere-e-Kashmir University of Agricultural Science and Technology has been extraordinary and need applause for further cementing their dedication and determination for the environmental protection.

I hope the Conference "Sustainable Agricultural Innovations for Resilient Agri-Food Systems" to be held from October 13-15, 2022 will highlight the key issues of Indian Agricultural systems related to the ecology, environment and food safety. The prime focus of this conference; genomic, proteomic and metabolomic innovations for climate-resilient agriculture; genetically engineered crops; food safety, bio-fortification, food supply chain; ICT in agriculture; farm mechanization; tools of molecular and genetic engineering; conservation and management of biodiversity; slow-release fertilizers, precision farming, soil conservation and micro-irrigation; diversification of energy needs for agriculture and identification of invasive species and their management etc will contribute greatly in highlighting the key innovations of sustainable agriculture and resilient agri-food systems. This conference may go a long-distance towards enriching the knowledge, encourage new researchers, and may open new areas of innovations for maintaining the ecological balance and food safety.

Once again, I congratulate the "Indian Ecological Society" and "Shere-e-Kashmir University of Agricultural Science and Technology" for organising this conference and all others directly or indirectly involved in making this conference a great success and furthering their support for sustaining our ecology and agro-ecosystems and for providing food safety to more than 125 billion people of our nation.

  
(R. M. Chauhan)

डॉ. सुरेश कुमार चौधरी

उप महानिदेशक (प्राकृतिक संसाधन प्रबंधन)

**Dr. Suresh Kumar Chaudhari**

Deputy Director General (Natural Resources Management)



24.01.2022

## Message

The current food systems, although, have succeeded to meet food security but are confronted with a growing set of challenges and inadequacies. With global food demand keeps increasing; new threats to food production are arising due to depletion of natural resources, climate change, water scarcity and land degradation. The global food system will need to become both more resilient and climate resistant. Climate change is set to be a major disruptor in efforts to deal with one of the greatest challenge faced by humankind. Climate change impacts are already reducing crop and livestock productivity and decreasing food security for millions of people around the world—and these impacts will intensify over the coming decades. The global food system is already showing its limits in dealing with current demand. In future, it will have to deal with megatrends such as population growth and increased urbanization. No country will be able to claim to be food secure without regional and international cooperation. Food availability, physical and economic access to food and proper food utilization are necessary for *Sustainable Resilient Agri-Food Systems*.

I am happy to know that the Indian Ecological Society (IES) is organizing an International Conference on "**Sustainable Agricultural Innovations for Resilient Agri-Food Systems**" at the Sher-e-Kashmir University of Agricultural Science and Technology, Jammu from October 13-15, 2022. I extend my best wishes to the organizers of the conference and hope that discussions and deliberations of the conference will help in meeting the challenges of food security and productivity in a sustainable manner.



(S.K. Chaudhari)





**Dr. Amaresh Chandra**

FNAAS, FUPAAS, MNASc, FRMSI, FSAB

ICAR-Indian Grassland and Fodder Research Institute (IGFRI)

Near Pahuj Dam, Gwalior Road, Jhansi (UP) INDIA - 284003

Director

Innovations in Fodder Production for Sustainable Livestock Production

## Message

Livestock products are an important agricultural commodity for global food security because they provide 17% of global kilocalorie consumption and 33% of global protein consumption. The livestock sector contributes to the livelihoods of one billion of the poorest population in the world and employs close to 1.1 billion people. Global demand for livestock products is expected to double by 2050, mainly due to improvement in the worldwide standard of living. Meanwhile, climate change is a threat to livestock production because of the impact on quality of feed crop and forage, water availability, animal and milk production, livestock diseases, animal reproduction, and biodiversity. There is growing interest in understanding the interaction of climate change and agricultural production and it is motivating a significant amount of research. There is still limited research regarding the impacts of climate change on livestock production. The livestock sector in India contributes nearly 1/3rd of total agricultural output and is an integral part of India's agricultural economy which plays a multifaceted role in providing livelihood support to the rural population. Rapid urbanization coupled with default competition from food crops has led the forage crops in a verge which is very alarming when feeding the large livestock population is concerned. Beside it, abiotic stresses notably salinity, acidity; heat, frost and cold stress are becoming increasingly significant as limiting growth factors for forage crops and grasses in present days. The dynamics of pests and pathogen is also changing in response to altered weather pattern. Technological innovations in the form of precision farming, resource conservation technology, nanotechnology, molecular, biotechnological, tissue culture and genetic engineering and moreover, alternative arrangement besides regular resources have to be explored rigorously in forage improvement to feed the burgeoning cattle population in India. It is imminent to adopt a multi-pronged strategy for adequate availability of fodder in order to provide a buffer even in climatic adversity. India with only 2.29% of land area of the world, is maintaining nearly 17.4% of world human population and 10.7% of livestock (more than 510 million heads) creating a huge pressure on land, water and other resources. Furthermore some part of our country is also largely inhabitable due to harsh climate as reflected by very low population density. Indeed, the actual milk yield of bovine animals is reported to be 26-51% below the attainable yield under field conditions, which otherwise could have been realized with better feeding, breeding and disease management. As per the estimates of Roy et al., (2019), there is an overall deficit of 11.24% in green fodder availability in the country. Total green fodder availability is 734.2 mt against requirement of 827.19 mt. Major source of green fodder in India is from cultivated land followed by pasture land and forests. There is an overall deficit of 23.4% in dry fodder availability in the country. Total dry fodder availability is 326.4mt against requirement of 426.1 mt. Major source of dry fodder in India is food grains crops residues followed by forests and other sources. Nearly 85.78 million tonnes of concentrate is required at national level, however, at present the estimated annual availability of total concentrate feed is only 61 million tonnes (Anonymous, 2018) which makes a deficit of approximately 24.78 million tonnes or 28.9% of the demand. There has to be a concerted effort that envisages accelerating production of fodder through promotion of integrated technologies and processes for enhancing the availability of fodder round the year. Forage production from unused lands like common property resource, degraded and waste lands, mechanized farming, biofortification of forage crops with improved digestibility, rhizosphere engineering for enhanced nutrient use efficiency etc. are some of the important areas to be stressed. Many aspects related to forage breeding, plant genetic resources, plant-protection measures, forage quality, palatability and seed production need to be appropriately addressed adopting an integrated approach. I hope this conference will facilitate and provide a professional, skill-based platform and will act as a knowledge hub to the scientists, teachers and students of agriculture, animal husbandry, forestry and allied sectors; regarding recent trends in sustainable livestock and crop production technologies vis-à-vis climate change.

I wish a grand success of the Conference.

(Dr. Amaresh Chandra)





International Union of Forest Research Organizations  
Union Internationale des Instituts de Recherches Forestières  
Union Internacional de Organizaciones de Investigación Forestal  
Internationaler Verband Forstlicher Forschungsanstalten

IUFRO Headquarters, Marxergasse 2, 1030 Vienna, Austria - Tel: +43-1-877 01 51-0 / Fax: +43-1-877 01 51-50

## Message

The International Union of Forest Research Organizations (IUFRO) is proud to be a collaborator in the Indian Ecological Society's International Conference 2022 "Sustainable Agricultural Innovations for Resilient Agri-Food Systems" hosted by Sher-e-Kashmir University of Agricultural Sciences and Technology in Jammu.

The scope of this conference lies at the heart of several significant global challenges related to the sustainable management and restoration of rural landscapes to address food security, rural livelihoods, land degradation, biodiversity conservation, water scarcity and climate change, among other issues. The connections between agricultural systems and forests are profound. Forests, as well as trees integrated in agricultural landscapes, provide a number of essential direct services to agriculture, including protection of soils from wind and water erosion, habitat for beneficial pollinators and predators of agricultural pests. However, the ongoing degradation of forests and their conversion to other land uses, principally for agricultural production, is the major driver of forest loss worldwide with severe long-term consequences for biodiversity, land productivity and ultimately for people.

During this important conference, I encourage delegates to consider the roles and values of the broader landscape in which agricultural systems exist, as well as the principles and goals of the UN Decade on Ecosystem Restoration which is now in its third year.

In particular, I would urge you to explore the common ground that exists – but is too often underappreciated – between scientists in the fields of agricultural and forest science, ecologists, and the holders of traditional knowledge, a rich source of insights and innovation that deserves our respect. Working together, we can accelerate efforts to build more sustainable rural landscapes through innovative approaches based on the best available knowledge and experience from all sources. Such collaboration will yield benefits for the environment and the people we serve, now and into the future.

Dr. John Parrotta  
President, IUFRO

30 September 2022



# केन्द्रीय कृषि विश्वविद्यालय

लम्फेलपात, इम्फाल - ७९५००४, मणिपुर (भारत)

**CENTRAL AGRICULTURAL UNIVERSITY**

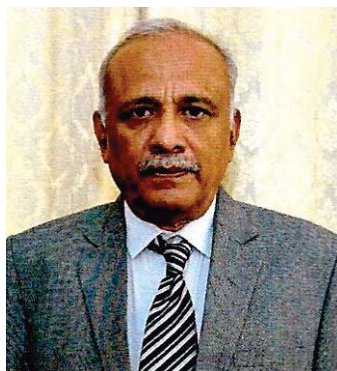
LAMPHELPAAT, IMPHAL-795004, MANIPUR (INDIA)

**Dr. Anupam Mishra**

Vice-Chancellor

Tel : (0385) 2415933 (O)  
Email : [vcofficecau@yahoo.in](mailto:vcofficecau@yahoo.in)

## MESSAGE



**Dr. Anupam Mishra**

I am immensely happy to learn that the Indian Ecological Society in collaboration with Sher-e-Kashmir University of Agricultural Sciences and Technology of Jammu, India are jointly organising a three days Indian Ecological Society International Conference (IFSIC 2022) on “*Sustainable Agricultural Innovations for Resilient Agri-Food System*” during 13<sup>th</sup>- 15<sup>th</sup> October, 2022 at Sher-e-Kashmir University of Agricultural Sciences and Technology of Jammu,, India. The theme chosen for the conference is of topical interest. The IESIC is a premier global event for presenting and learning about the latest transdisciplinary agricultural research innovations and strategies for resilient agri-food systems.

It is of great significance that this august body is going to deliberate upon several important topics, including genetic innovations for climate-resilient agri-food systems; public health, food security and safety; pest management innovations; technological, policy, institutional and scaling innovations; policy regulation for sustainable agri-food systems; Biodiversity conservation and management; innovations in soil health and water management; agriculture and forestry on paths towards carbon neutrality; recognizing and identifying invasive species. I am sure that the deliberations made at the conference will immensely help in sustainability in agriculture and innovations for resilient agri-food systems. I wish the organisers and the participants of the conference a grand success.

Imphal  
July 19, 2022

**Dr. Anupam Mishra**  
Vice Chancellor  
Central Agricultural University  
Imphal



**ICAR-National Academy of Agricultural  
Research Management,  
Rajendranagar, Hyderabad, 500030, India**



**Dr. Ch. Srinivasa Rao**

FNASc, FNAAS, FISSS, FAPAS, FISPRD, FTAS

PhD (IARI), Post-Doctoral (Tel-Aviv University, Israel)

Director

## MESSAGE

In recent decades, human numbers and food demand grew at an unprecedented pace, thus, the population is relied on agriculture for the food production to a greater extent. As a consequence, there is a tremendous pressure on the existing natural resources which are utmost important for the agricultural production. Therefore, there is a pressing priority for the sophisticated production in farming through the adoption of latest agricultural innovations and technologies for attaining resilient agri-food systems in sustainable approach. Sustainability and resilience of agri-food systems typically focuses on the nexus between the agriculture and environment which reconnects the agriculture, food and environmental issues from a perspective that takes diversity in agri-food systems into account. Agriculture sector must focus on the strategies to adapt and respond to climate change and addressing the emerging challenges faced by the global food production system.

Climate change and its catastrophic impacts on agricultural lands are witnessed all over the globe in the form of droughts, cyclones, floods, heat waves etc. that are challenging the agriculture community by pressurizing the sustainable agriculture ecosystems. Thus, to ensure the sustainability in the country's food security, agriculture research innovations must aim towards the optimization of the natural resources utilization such as soil and water conservation technologies, improving soil nutrient use efficiency, recycling the natural resources etc. It provides an opportunity for the farmers to enhance the crop productivity besides managing the natural resources which safeguards the long-term viability and diminishes the negative environmental impacts on the agricultural production. We need a big step towards the betterment of farming communities in India.

I am pleased to know that Indian Ecological Society International Conference (IESIC)-2022 on “**Sustainable Agriculture Innovations for Resilient Agri-Food Systems**” in collaboration with Sher-e-Kashmir University of Agricultural Sciences and Technology of Jammu, India held on from 13 to 15 October 2022, which is aimed to deliberate on agricultural innovations to enhance the food security and productivity in a sustainable manner, climate-resilient food solutions, restoration of natural resources, future of farming, public health and food safety.

**(Ch. Srinivasarao)**





**Dr A K Dhawan**  
President  
Indian Ecological Society



**THE INDIAN ECOLOGICAL SOCIETY**  
**PUNJAB AGRICULTURAL UNIVERSITY**  
**LUDHIANA-141 004, INDIA**

## *Message*

Population, climate change and natural resources [land, water, soil health, inputs (chemical fertilizers)] are the main challenges for enhancing agriculture production and related activities. Meeting today's needs without affecting tomorrow's, for national food security & agriculture-dependent rural livelihood, decision makers need new tools that steer toward multi-sector, evidence-based collaboration. Agricultural systems will henceforth have to be designed not only to produce agricultural goods, but also to provide better economic, social, environmental and health performances of agriculture. Countries, companies and consumers can make a difference by reducing food losses and wastage, eating lower-impact diets, investing in sustainable production (scientifically addressed, revalidated at regional level, end user acceptability) and proper implementation & monitoring.

The Indian Ecological Society (IES) on various occasions in the past has successfully engaged in diverting brains of the world to think of ways to protect the environment and promote ecological studies.

The Indian Ecological Society International Conference 2022, Jammu Chapter in collaboration with Sher-e-Kashmir University of Agricultural Sciences and Technology of Jammu (SKUAST-J) is organizing three days' conference from 13-15 October, 2022 on **"Sustainable Agricultural Innovations for Resilient Agri-Food Systems"** at SKUAST of Jammu, Chatha Campus Jammu (Jammu and Kashmir) India. The conference will focus on the areas of genetics innovations for climate-resilient agri-food systems, public health, food security and safety, pest management innovations, technological, policy, institutional, and scaling innovations, policy regulation for sustainable agri-food systems, biodiversity conservation and management, innovations in soil health and water management, agriculture and forestry on paths towards carbon neutrality and recognizing and identifying invasive species.

I hope this conference will definitely fulfill its objective to bring out certain viable and sustainable agricultural innovations and strategies.

A.K. Dhawan

Mobile No.: +9041640454; Fax No.: 0161-4629027  
Web site: [www.indianecologicalsociety.com](http://www.indianecologicalsociety.com), [www.iesconf.in](http://www.iesconf.in)  
E-mail: [indianecologicalsociety@gmail.com](mailto:indianecologicalsociety@gmail.com)

F.No.13026/26/2022-SE(JKL)  
Government of India  
Ministry of Home Affairs  
Department of Jammu, Kashmir and Ladakh Affairs  
\*\*\*

North Block, New Delhi  
Dated: 12.07.2022

To

Prof. Rajinder Peshin,  
Vice President, The Ecological Society,  
SKUAST-Jammu, Chatha, Jammu-180009  
Email: iesic@gmail.com  
Mobile: 9419205774

**Sub: Grant of security clearance in respect of International Conference 2022 on Sustainable Agricultural innovations for Resilient Agri-Food Systems from 13-15<sup>th</sup> October, 2022 at Sher-e-Kashmir University, Chatha, Jammu – reg.**

Sir,

I am directed to refer to your online application dated 20.01.2022 on the subject cited above and to say that Indian Ecological Society, Ludhiana, can organize the Indian Ecological Society International Conference, 2022 (IESIC 2022) on "Sustainable Agricultural Innovations for Resilient Agri-Food Systems" at Shere-e-Kashmir University of Agricultural Sciences and Technology of Jammu, from 13-15<sup>th</sup> October, 2022 on the following conditions:-

- i) The participants should abide by the declared itinerary, possess valid travel documents/permission wherever required and do not violate pertinent rules and regulations of Union/J&K UT Government.
- ii) They should not indulge in photographing or videographing defence establishments and any other vital installations.
- iii) They should not use Thuraya Satellite phones or any flying gadgets for aerial filming without special permission from competent authority.
- iv) They should confine their visit for purpose only and not indulge in any activity prejudicial to the security of the J&K UT/country.
- v) They should not visit any other places without prior permission from J&K admn./Police authorities. They should not be allowed to undertake visit in Cantonment/Restricted/ Protected/Prohibited areas and not use satellite phones/Thuraya set/Drone cameras without prior permission and not take photographs of vital installation/Security/Defense establishments in the area.
- vi) They should not offer any comments against any faith, culture, race or ethnicity of the local populace.
- vii) They should cooperate with local Police/security agencies and follow security protocol in letter & spirit during their stay in J&K.
- viii) In view of COVID-19 situation, protocol of testing and quarantine as prescribed by the GoI/UT of J&K may also be adhered properly.

Yours faithfully,

  
(Ipsita S. Paul)

Under Secretary to the Govt. of India

Telefax: 011-2309-2932

Email: [ipsitasaha.paul@gov.in](mailto:ipsitasaha.paul@gov.in)

**Copy for information to :-**

1. The Financial Commissioner/Additional Chief Secretary, (Home Department), G/o UT of J&K, Jammu/Srinagar.
2. DGP, J&K, Govt. of J&K, Jammu/Srinagar.
3. Spl. DG, CID, Govt. of J&K, Jammu/Srinagar.
4. Shri K.G. Praveen Kumar, Joint Secretary, Cab. Sectt, Pt. Deendayal Upadhyay Antyodaya Bhawan, CGO Complex, Lodhi Road, New Delhi 110003.
5. Shri Rahul Rasgotra, Additional Director, IB, North Block, New Delhi.

Requested to take  
necessary action and  
ensure proper security



विदेश मंत्रालय, नई दिल्ली  
Ministry of External Affairs  
New Delhi

**OFFICE MEMORANDUM**

No. AA/121/01/2022-231

22 September 2022

**Subject: Political clearance for the participation of foreign nationals in the "Sustainable Agricultural Innovations for Resilient Agri-Food Systems" from 13-15 October 2022 at Sher-e-Kashmir University of Agricultural Sciences and Technology of Jammu.**

Reference Indian Ecological Society's letter No.IESIC2022 dated 31 August 2022 on the above mentioned subject.

2. Conference visa/visa of appropriate category will be issued by Indian Missions/Posts abroad to the foreign participants, as per list attached, on production of the invitation letter from the organiser subject to usual checks in accordance with the extant visa norms. This will be further subject to GoI travel guidelines relating to COVID-19 and completion of required formalities and clearances/approvals from MHA/other authorities (where applicable).

3. This issues with the approval of the Competent Authority.

(Kamkhola Kipgen)  
Section Officer (Monitoring)

Rajinder Peshin,  
Vice President,  
Indian Ecological Society.  
Email: [iesic2022@gmail.com](mailto:iesic2022@gmail.com), [rpeshin@rediffmail.com](mailto:rpeshin@rediffmail.com)

**Copy to: Ministry of Home Affairs,  
[Kind Attn: Shri R.K. Arya, SO (CC)],  
Foreigners Division,  
NDCC Building -II  
Jai Singh Road, New Delhi**





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## About the Indian Ecological Society

The Indian Ecological Society (IES) was established in 1974 with eminent ecologist, educationist and administrator, Prof. A.S. Atwal as the Founder President. It is one of the pioneering organizations of India engaged in advances in ecological sciences and environmental protection.



### The specific aims and objectives of the society are:

- To advance the cause of ecology in India
- To encourage and promote ecological studies in the country and to integrate research in different fields of ecology
- To cooperate with organizations with related aims and interests, and provide opportunities for communication among ecologists
- To provide technical know-how for reducing environmental pollution through proper recycling of industrial and agricultural wastes
- The Society attempts to fulfill the above objectives by publishing the Indian Journal of Ecology, proceedings and such other publications as may be considered desirable. The journal is considered a premier journal reporting research findings in the field of basic and applied ecology.

**The Society attempts to fulfill and to integrate research in different above objectives by publishing the Indian Journal of Ecology since 1974. ([www.indianecologicalsociety.com](http://www.indianecologicalsociety.com))**

### Focus and Scope

- Multidisciplinary agricultural and environmental research
- Sustainable agriculture
- Natural resource management
- Ecological monitoring, biodiversity and ecosystem research
- Natural resource management

### Special Interest Groups

- Agricultural Ecology
- Aquatic Ecology
- Conservation Ecology
- Ecological Genetics
- Forest Ecology
- Invasive Species
- Ecology & Evolution
- Soil and Plant health
- Tropical Ecology
- Environmental Pollution
- Climate change

**The society has organized several National and International Seminars, Symposia and Conferences on different areas of ecology**

- National Symposium on “Land and Water Management in the Indus Basin (India)”, November 9-11, 1978 at Punjab Agricultural University, Ludhiana
- Seminar on “Status of Wild Life in Punjab”, November 1-8, 1983 at Punjab Agricultural University, Ludhiana
- Seminar on “Status of Environmental Pollution in Punjab”, February. 4, 1985 at Punjab Agricultural University, Ludhiana.
- International Conference on “Ecological Agriculture; Towards Sustainable Development”, Nov. 15-17, 1997 in collaboration with Center for Research in Rural and industrial Development, Chandigarh.



- Conference on “Biopesticides: Emerging Trends” (BET 2001), February 7-9, 2001 Chandigarh in collaboration with Society of Biopesticide Sciences India and Punjab State Council for Science & Technology, Chandigarh.
- Conference on “Biopesticides: Emerging Trends” (BET 2005), October, 2005 at Palampur, in collaboration with Society of Biopesticide Science India.
- Conference on “Iufro Symposium on Short Rotation Forestry: Synergies For Wood Production And Environmental Amelioration”, February 10-12, 2011 Punjab Agricultural University, Ludhiana in collaboration with Department of Forestry & Natural Resources, PAU, Ludhiana.
- Workshop cum Conference on “Eco-restoration of Lentic-Lotic Systems through Six Pillar Approach of Integrated Lake Basin Management” was organized by Shirshiti Environment and Sustainable Society (SESS) Society for Environment Education Research and Management (SEERAM), Pune, Maharashtra in collaboration with Indian Ecological Society (IES), PAU, Ludhiana – 141 001, India and Youth for Sustainable Development, Shimla – 01 held at Dumra Auditorium, DMC, Ludhiana, India on dated January 7-8, 2014.
- International Conference on “Natural Resource Management: Ecological Perspectives (IESIC 2016)”, February 18-20, 2016 in collaboration with Sher-e Kashmir University of Agricultural Sciences and Technology of Jammu, Jammu, India
- Conference on “Climate Change and Agricultural Production” March 6-8, 2017 in collaboration with Bihar Agricultural University, Sabour-813210, Bhagalpur, India
- Proceedings of the National Conference” Alternate Farming Systems to Enhance Farming’ Income” September 19-21,2017 at YSP University of Horticulture and Forestry Nauni -173230, Solan, India

(www. <https://indianecologicalsociety.com/>)



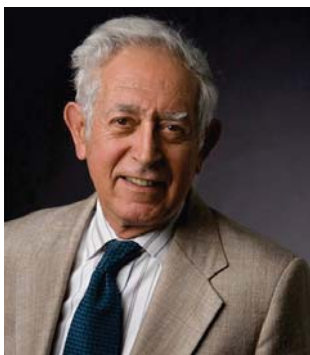
**Prof. Avtar Singh Atwal**  
Founder President



## **The Indian Ecological Society**

Prof. Avtar Singh Atwal Former Professor and Head Department of Zoology-Entomology Dean, College of Agriculture and Dean, Post Graduate Studies Punjab Agricultural University, Ludhiana, India Prof. Avtar Singh Atwal was born on June 25, 1927 at village Khanewal, District Multan, now in Pakistan. He did his B.Sc. (Agriculture) from Punjab Agricultural College and Research Institute, Lyallpur (Pakistan) in 1947, where he obtained first position in the University and was awarded the Gold Medal. He completed his Ph.D. from the Waite Agricultural Research Institute, University of Adelaide, South Australia in 1954 under the Colombo Plan. He remained Post Doctorate Research Fellow of the National Research Council of Canada during 1955-57. It was during his doctoral research when he came into contact with eminent ecologists and thus, he imbibed the spirit of ecological principles and practices which he later introduced in the academics of the Punjab Agricultural University, Ludhiana. Prof. Atwal started his professional career as Lecturer in Entomology in 1947 and worked as Assistant Professor/Associate Professor till 1960. He was Entomologist to the Government of Punjab and State Locust Control Officer (1961-63), when he introduced successfully the aerial spraying for locust control. He was the first Professor and Head, Department of Zoology-Entomology of the newly formed Punjab Agricultural University (PAU), Ludhiana (1963-66). He worked as Dean, College of Agriculture (1966-73 and 1975-79) and Dean, Post Graduate Studies (1979-85), PAU, Ludhiana. In between, he was Advisor to Jammu & Kashmir Government and Vice-Chancellor (Designate), J & K Agricultural University (1973-75) and prepared the project for establishing the University. He worked as full time Member, Punjab State Planning Board (1986-89). Even when he worked on other positions, he maintained his interest in ecological approach to pest control and agricultural development for the first 20 years, and in the role of honey bees and other insects for pollination of crops for the next 20 years. He has published 15 books, 250 research and strategy papers on agricultural education, research and development. Prof. Atwal has made outstanding contributions in the fields of agricultural research, education and development. He was the first scientist in India to successfully introduce the Italian honey bee, *Apis mellifera* Linnaeus in early sixties through a unique experiment, using the technique of interspecific queen introduction. *A. mellifera* colonies were raised by introducing the fertilized queens among the workers of *Apis cerana* Fabricius. Persistent efforts spread over a decade led to the successful establishment of *A. mellifera* in Punjab and the entire Indo-Gangetic plains where Honey Revolution has followed the Green Revolution. Prof. Atwal will be remembered as the Father of Modern Beekeeping in India as he opened new vistas of commercial beekeeping in the country. As one of the founder Deans of Punjab Agricultural University, Prof. Atwal played a pivotal role in introducing many innovative programmes and developing several new Departments. He was instrumental in revising and restructuring the PAU course curricula keeping in view the changing educational needs. For making education wholesome many new disciplines were started and trained faculty was recruited by making personal contacts from throughout India and even foreign countries. Some of the new disciplines of Ecology, Forestry, Agrometeorology, Food Science and Technology, and Floriculture and Landscaping at PAU are the outcome of his visionary approach in planning. It was during his tenure as Dean, when this college had won the Institution Award of the Federation of Indian Chambers of Commerce 194 Biopesticides International Vol. 10, no. 2 and Industry in 1977.

Prof. Atwal established the Indian Ecological Society in 1974 and was its founder President. He nurtured this society with complete devotion and organized several symposia and conferences. The books written by Prof. Atwal would continue to shape up the destiny of students and teachers in many Asian countries. His monumental book "Agricultural Pests of South Asia and Their Management" is one of the most popular text books ever written on this subject; since its first publication in 1976, the book has been reprinted many times with eight revisions. Even after his retirement, he continued to publish for the benefit of students and farmers; his recent book "Mellifera Beekeeping and Pollination" has been acclaimed as a master piece giving details of behaviour of four species of honey bees and their role in crop pollination. Prof. Atwal was a widely travelled person, visiting more than 35 countries in almost all the continents of the world. He has been a member of several national and international bodies associated with agricultural research and development. He has attended 20 World Congresses and 25 International Conferences related to various aspects of agriculture, ecology and environment. Prof. Atwal expired on September 26, 2014 after a brief illness.



**Professor David Pimentel**

## **Memorial Lecture by Professor John Perkin**

David Pimentel (May 24, 1925 – December 8, 2019), was a professor of Insect Ecology & Agricultural Sciences in the Department of Entomology and Section of Ecology and Systematics at Cornell University. He made contributions in ecology, entomology, agriculture, biotechnology, conservation, and environmental policy. He was recognized as an international authority on many important interactions between humans and the environment. He published over 700 scientific items, of which 37 are books, and served on many national and government committees, including the National Academy of Sciences, the President's Science Advisory Council, the Office of Technology Assessment of the U.S. Congress, the U.S. State Department, and the Departments of Agriculture, Energy, and Health, Education and Welfare. Pimentel served on committees for many national and government organizations, including the Secretary's Commission on Pesticides and their Relationship to Environmental Health (United States Department of Health, Education, and Welfare) which issued a report in 1969 that recommended the banning of DDT and led to the creation of the EPA.

Pimentel was an agronomist and entomologist, but he had a broad ecological perspective on agronomy, which usually is focused narrowly on yields and production. [citation needed] In the early 1970s he pointed out the energy intensiveness of modern agriculture. He followed that with several important papers on soil erosion. In 1999 Pimentel published estimates detailing the economic losses of invasive species. He estimated an annual economic loss of \$123 billion. In most of his studies he attempted to generate quantitative estimates, even of quite difficult and large scale issues.

Pimentel calculated that the policy of growing maize to produce the ethanol, as well as other biofuels, cost more energy to maintain than it actually produced. These conclusions were met with hostility from some quarters.

### **Prof. John H Perkins**

*Member of the Faculty Emeritus. The Evergreen State College, Washington, USA.*

*"I am really delighted to participate in this conference. I will be talking about the innovations of agricultural systems that we use today that were enabled by intensive uses of energy. Two features really stand out first the yield really did go up and that is a benefit but second those benefits came with serious downside. In some cases economic development was very uneven and people ended up worse off than they were before in other cases we had serious agricultural pollution from the agro-chemicals third became resistant to pesticides which risks continuing those high yields and fourth and most significantly the heavy use of fossil fuels in agriculture contributed significantly to the potential catastrophic climate changes we are now enduring. The world thus faces a dilemma do we stay with those innovations that we are so successful in yields but risk catastrophic climate change which will in fact endanger those yields or does the world continue innovation in agricultural technology so that we don't suffer those risks from climate change. The path forward will not be easy but I am convinced that agricultural scientists can help lead the way. I look forward to our discussions in Jammu in October"*





## About the conference from the scientists

### Dr. Menale Kassie

Head of Social Sciences and Impact Assessment Unit at the International Centre of Insect Physiology and Ecology, Nairobi, Kenya

*"I am honored to participate in the Indian Ecological Society International Conference held in October 2022 in Jammu, India. The theme of the conference is sustainable agricultural innovations for resilient agri-food systems this is a unique conference organized when the world faces an unprecedented storm because of the climate change the Covid-19 pandemic and conflicts which disrupts significantly the agri-food systems globally and especially in the global south this calls for the importance of strengthening the resilience of local agri-food systems by promoting socio-technical innovation bundles at the conference I will speak on the role of sustainable intensification innovation bundles for local agri-food systems and provide evidence on their impacts on income for nutritional security resilience to production risk input use and the environment, I very much look forward to meeting all at this exciting conference. Thank you."*



### Prof. Dinesh K. Marothia

President, Indian Society of Agricultural Economics, Mumbai (Formerly Chairman, Commission for Agricultural Costs and Prices, GoI, Member State Planning Commission, GOCG)

*"The topic of the IESIC is socially, ecologically, environmentally and economically important and crucial to provide directions to sustainable development goals, the theme require thoughtful and information and management of natural resources using an inter-disciplinary perspective for sustainable agri-food systems. I will be sharing my views on safeguarding common pole resources for a social, ecological transformation of indigenous food system. I am sure collectively we can address the complex issue of balancing sustainability between the natural resource use and the agri-food system through synthesizing traditional and contemporary wisdom. I am honored to be participating in the conference. I very much look forward to see you all. Thank you."*



### Dr. Shannon Olsson

National Center for Biological Sciences, Tata Institute of Fundamental Research, Bengaluru, India & Global Director, the echo network

*"I am extremely honored and excited to be participating in IESIC to be held this October 13-15 in Jammu and the topic is sustainable agricultural innovations for resilient agri-food systems. First of all I think it is incredibly meaningful and important that we are having a discussion about sustainable agriculture being held by an ecological society I feel very strongly that concerns of our ecosystems of biodiversity our natural resources and on the ecosystem services that are being provided to us for our food security are the thing that we need to focus on right now they are the thing that needs to be taken forward by innovations but also in our hearts, in our communities, in order to realize the sustainable future that we all are envision it is one of the main goals of my own career and my work with the echo network to have organizations across different sectors from government and industry and NGOs and academia and service and philanthropy to all work together towards this goal and therefore it is my call to you that I hope you will attend this conference no matter who you are because I think it will be really important opportunity for us to get together to discuss these issues and to find ways to work forward together so I look forward to meeting you there, I look forward to working with you and solving this problem together. Thank you so much."*



### Dr. Virendra Pal Singh

Former Regional Representative for ICRAF- South Asia, World Agroforestry Centre, CGIAR

*"I am interested for participating and listening to this august body of speakers in the conference, international conference which is organised by the Indian Ecological Society at Jammu. In this conference I would also like to speak on Agroforestry for sustainable livelihoods, food and nutritional security and environmental protection. I was just browsing through the IPCC 2022 report and I am very glad to find out that Agroforestry is mentioned among few of the items for climate change mitigation by a carbon sequestration. I look forward for meeting you all during the conference at Jammu and have a greater interaction with all of you in the conference. Thank you."*



### **Dr. B.M. Prasanna**

*Director, Global Maize Program CIMMYT, and OneCGIAR Plant Health Initiative Lead Nairobi*

*"I look forward to participating in the international conference to be organized by the Indian ecological society at Jammu in October 2022 and to deliver a talk on breeding and deploying climate change resilient maize varieties in the tropics. Tremendous traits have been made over the past decade by way of breeding and delivery of a large number of improved crop varieties adapted to diverse agro-ecologies and meeting the different demands of the stakeholders however with the world population projected to reach 9 billion by 2050 it is imperative to increase cereal production by at least 37 % annually in order to meet the surging food demand. The output of the three major cereal crops alone maize wheat and rice needs to increase by 70 % by 2050 to meet the worlds growing rural and urban populations. There are now exciting opportunities to utilize, novel modern breeding tools technologies and approaches including double haploid or speed breeding or rapid generation advancement high throughput and precision phenotyping and genomics assisted breeding for accelerated development of climate resilient crop varieties at the same time breeding institutions do need to adopt innovative strategies including strong public-private partnerships for targeted delivery of climate resilient crop varieties especially in those vulnerable agro-ecologies inter-institutional synergies generation of new scientific knowledge on stress tolerance in drought plants and scaling up adoption of climate resilient crop varieties together with climate smart agricultural practices are indeed critical for us effectively tackle climate-induced stresses once again I look forward to the presentations and discussions during the international conference to be organized by the Indian Ecological Society in Jammu in October 2022. Thank you."*



### **Prof. Zeyaur R. Khan**

*Leader, Push-Pull Implementation & Impact of Sustainable Agricultural Practices at Farm Level Programme, International Centre of Insect Physiology and Ecology, Nairobi, Kenya & Adjunct Professor, Cornell University, New York, USA*

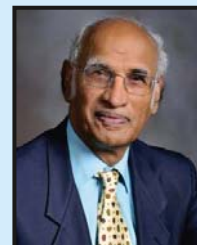
*"I am anxiously looking forward to participating during the IESIC 2022 to be held in Jammu this year and to present my work there. This conference on Sustainable Agricultural Innovations will be the most interesting meeting of the year covering many important areas for enhancing food security and environmental sustainability. The attendees of the conference will have an excellent opportunity to listen to and interact with twenty keynote speakers who are top world-renowned scientists in their fields, and with many oral and poster presenters. It will be an excellent opportunity for both Indian and foreign scientists and students to attend this conference in person after two years of COVID-19 pandemic. I still remember attending Twenty-five years ago, in 1997 a very well-planned International Conference organized by the Indian Ecological Society in Chandigarh. That conference had attracted many participants from India and abroad and gave the participants an excellent platform to interact with each other. The organizers took very good care of each of us. I am very confident that under the leadership of Prof. Peshin and his organizing committee the IESIC 2022 in Jammu will be a great success".*



### **Dr. Muni Muniappan**

*Director IPM Innovation Lab, Virginia Tech, Virginia, USA*

*"I am happy to participate in this international conference on sustainable agricultural innovations for resilient agriculture agri-food systems organized by the Indian Ecological Society this conference is very timely, it gives an opportunity to review problems faced by the world to feed the bargaining current population of 6.9 billion people which is expected to reach 9.75 billion in 2050. In recent years globalization has enhanced global trade and transport which facilitated movement of invasive species with that person disease in general cause about 40 crop loss unless properly managed indiscriminate use of pesticides has caused human and environmental health problems. Adoption of integrated pest management approach will lead to tackling pest and disease problems in economical, effective, acceptable and safer to human and environmental health. Hopefully this conference will lead to highlight the problems, identify solutions to alleviate them in a sustainable manner and make the world a safer place for future generations I look forward to listening to presentations and to interact with scientists participating in this conference. Thank you."*



### Prof. Jules Pretty

Professor of Environment & Society, Director, Centre for Public and Policy Engagement (CPPE), School of Life Sciences, University of Essex, United Kingdom

*“This is a timely and internationally-important conference addressing the triple challenge of creating a transition towards agricultural and food systems that are more productive, have positive impacts on nature and ecosystem services, and play a significant role in reversing the climate crisis. This is not simple, yet we know so much more today about how to redesign systems towards these aims. Now comes the pressing need to scale them up to benefit all agricultural systems and farm families worldwide.”*



### Dr. Oliver Dangles

IRD – UMR CEFÉ, Montpellier, France

*“Identifying the synergies and trade-offs among the sustainable development goals related to Agri-food systems is one of the greatest challenges of our time. The **“Sustainable Agricultural Innovations for Resilient Agri-Food Systems”** conference will bring together an impressive diversity of knowledge, disciplines, and viewpoints to build a more holistic approach to food systems.”*





## Our keynote speakers

**Prof. Nazir A Ganai**, graduated in Veterinary and Animal Sciences from RAU Bikaner in 1989, had his doctoral degree in Animal Genetics and Breeding from National Dairy Research Institute Karnal. This was followed by series of post-doctoral trainings at Wageningen University Netherlands, Durham University England and Wisconsin University USA. He has been associated with ICAR through series of programs under NATP, NAIP, NASE, NAHEP, and has handled 11 research projects as Principal Investigator with a funding of over Rs 52 crores. He is credited with the establishment of the Divisions of Animal and Plant Biotechnology, Center of Bioinformatics, Center for Artificial Intelligence and Machine Learning in Agriculture, SKUAST-K Innovation, Incubation and Entrepreneurship Center. Dr Ganai is presently leading SKUAST-Kashmir as its 7th Vice Chancellor since Dec 2021. During this brief stint, university has earned the distinction of being the 6th best SAU, Brand Excellent institution under Atal Innovation ranking, and Grade A accredited institution. He has the distinction of developing the Model NEP-2020 tailored to Agricultural Education, which has been appreciated by ICAR. Recently he has opened up the university for admissions to National and International Students. Under his leadership, SKUASTK is among the top performing institutions under NAHEP in the country.



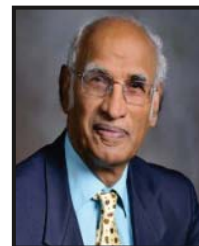
**Prof. John H. Perkins** received his PhD (biological sciences, Harvard University, 1969) and then developed interests in “troublesome technologies:” innovations with many benefits but also damages to health and the environment. Insects, Experts, and the Insecticide Crisis (1982) followed development of Integrated Pest Management (IPM) technology as a response to damages from insecticides. Wheat, Genes, and the Cold War (1997) recounted development of Green Revolution technology in India, USA, and UK. Changing Energy (2017) explored development of energy technologies, their benefits, and risks from climate change. In October 2022, he will assess major links between innovations in agricultural and energy technologies.



**Prof. Zeyaur Rahman Khan** is Principal Scientist and Program Leader with the International Centre of Insect Physiology and Ecology (icipe), Nairobi, Kenya, and Adjunct Professor of Entomology with Cornell University, USA. He is internationally lauded for his development and Africa-wide dissemination of the innovative system of “push–pull farming,” which simultaneously addresses issues of crop pests, soil improvement, food security, climate change and sustainability. He obtained his masters and doctoral degrees from IARI, New Delhi. He is winner of Louis Malass is International Scientific Prize in Agriculture; Honorary Fellow of the Royal Entomological Society; Fellow of Entomological Society of America; Fellow of African Academy of Sciences; Council Member, International Congress of Entomology; author of 170 scientific papers and 20 books and book chapters.



**Dr. Rangaswamy N. Muniappan** is a specialist in tropical economic entomology, biological control of insect pests and weeds, and integrated pest management. He has made considerable contributions in the development of crop-specific IPM techniques, fostering partnerships with private sector organizations, encouraging scaling up through the dissemination of information, and promoting partnerships as a means of capacity building. Muniappan has also served in management positions for international scientific bodies and conducted international workshops in Africa, Asia, Europe, U.S.A., Central America, and Australia. He is called on by governments around the world and international agencies to consult on invasive pests.



**Dr B.M. Prasanna** is the Director of the Global Maize Program of CIMMYT (International Maize and Wheat Improvement Center). Based in Nairobi, Prasanna has been leading the multi-disciplinary CIMMYT Global Maize Program team since 2010, with focus on maize improvement in sub-Saharan Africa, Latin America, and Asia. From June 2015 to December 2021, Prasanna also served as the Director of the CGIAR Research Program on Maize Agri-food Systems (MAIZE). Prior to joining CIMMYT, Prasanna served the Indian Council of Agricultural Research (ICAR) at the Indian Agricultural Research Institute (IARI), New Delhi, for over two decades. He has received several prestigious awards for his research work on maize genetics and breeding.



**Prof. Per Kudsk** is Professor and Head of the Crop Health Section at the Department of Agroecology at Aarhus University in Denmark. He has done research on various aspects of integrated weed management. He has coordinated and been partner in several national and international research projects in the EU, Africa and South America. Currently he is coordinating the EU H2020 project IWMPRAISE with 36 partners. He served as President of the European Weed Research Society from 2008 to 2009. In 2014, he was appointed Honorary Member of the Weed Science Society of America. He has authored or co-authored around 110 papers published in peer-reviewed articles and as book chapters.



**Prof. Dinesh K. Marothia** is the President, Indian Society of Agricultural Economics (ISAE), Mumbai. Among many distinguished positions in academic, Federal and State governments and professional societies, he was Founder Professor and Head, Department of Agricultural and Natural Resource Economics, Indira Gandhi Agricultural University, Founder Director, India Natural Resource Economics and Management Foundation, Anand, Gujarat, Decentralization Expert, European Commission SPP- India, Fellow, World Agroforestry Centre - South Asia, Chairman, Commission for Agriculture Costs and Prices, Govt. of India, Member, Chhattisgarh State Planning Commission, two terms President and Fellow of National Institute of Ecology (NIE), Conference President Agricultural Economics Research Association, Chairman Editorial Board (Ind. Jn. Agri. Econ.), Advisor, editorial Board (Int. J. Ecol. Environ. Sci.). He is Fellow of ISAE.



**Prof. T V K Singh**, Fellow of Royal Society of Entomology, London, retired as Dean of Agriculture from PJTSAU, served as ICAR Emeritus Scientist. Guided more than 50 students of M. Sc and Ph.D. Bestowed with several prestigious awards, authored more than 155 research papers, 13 books, 4 chapters in books, 2 books edited besides participating in 35 symposia / seminars and workshops. Presently engaged as Chief content reviewer for 'Plantix' app, an android application that uses artificial intelligence developed by PEAT GmbH, a Berlin based company.



**Dr. Menale Kassie** is a Principal Scientist and Head of the Social Sciences and Impact Assessment Unit at the International Centre of Insect Physiology and Ecology. He has previously worked for the International Maize and Wheat Improvement Centre, the University of Gothenburg, Sweden, and for government organizations in Ethiopia. received a Ph.D. in Development Economics from the Norwegian University of Life Sciences (Norway). Kassie has received awards in his career. In 2020, he was nominated to receive the 2022 TWAS Siwei Cheng Award in Economic Sciences and elected an Associate Fellowship of the Ethiopian Academy of Sciences. He received icipe's 2019 outstanding professional staff award.



**Dr. Yves Vigouroux** is Director of Research at the French Sustainable Development Institute (IRD). He currently directed the "Diversity, Adaptation and Development of plants" laboratory, a laboratory of 120 researchers, professors, engineers and technicians, post-doctorates, PhD and Master Student peoples in Montpellier, France. He holds a Master degree in Ecology and Evolution from the University of Montpellier, an engineering degree in Agronomy from AgroParisTech, a PhD in population Biology from the University of Burgundy, France. He did a Post-doctorate at the J Doebley laboratory in Madison, Wisconsin, USA before joining IRD. His research focus on cultivated and wild plants, the origin of domestication, the response to ongoing climate changes and the study of mitigation strategy.



**Dr. Pratap S. BIRTHAL** is ICAR National Professor and Director at the National Institute of Agricultural Economics and Policy Research, New Delhi, India. Earlier, he had served as Principal Economist at the International Crops Research Institute for the Semi-arid Tropics, Hyderabad, and Director, Institute of Development Studies Jaipur. He has been a consultant to World Bank, FAO, and several CGIAR institutions. He is a Fellow of the National Academy of Agricultural Sciences (NAAS) and the Indian Society of Agricultural Economics; and a recipient of the prestigious Rafi Ahmad Kidwai Award from the Indian Council of Agricultural Research. He has published more than 150 research articles in high-impact national and international journals.



**Dr. Alison Bentley** is the Director of CIMMYT's Global Wheat Program, based in Mexico. Her research combines genetics and genomics to develop and deliver new tools and technology to improve plant breeding, crop production and adaptation to climate change. At CIMMYT, Alison leads a team of scientists using scientific approaches to develop improved wheat germplasm. This germplasm captures packages of traits providing productivity, resilience, and broad adaptation, supporting global wheat improvement and smallholder livelihoods. Prior to joining CIMMYT in November 2020, Alison worked in the UK focused on translation of fundamental scientific breakthroughs into tangible impacts for the agri-food sector. She has a doctorate in agricultural science and PhD in agriculture from The University of Sydney, Australia.



**Dr. Shannon Olsson** listens to nature's chemical conversations across India's diverse ecosystems. A Fulbright Scholar, Ramanujan, and INK Fellow, Shannon's research has been featured by CNN, Inverse, Cosmos, TEDx, Syntalk, Sci-Illustrate, Dublin Science Gallery, V&A London, Chemical and Engineering News, and the DST Science Express train, among others. Since 2014, Shannon has been a faculty member of the National Centre for Biological Sciences, Tata Institute of Fundamental Research. She is currently a co-PI in the Biodiversity Collaborative, a founding member of ECOBARI and Global Director of the echo network. She also serves through the echo network's international hub as Special Scientific Envoy to India with the Danish Academy of Technical Sciences.



**Dr. V.P. Singh** from 1978, worked with the International Rice Research Institute until 2002. Beginning in 2003, he undertook another major responsibility of establishing ICRAF's Regional Research Program and served its Founding Regional Director for South Asia till 2014. In 2014, he organized the 3rd World Congress on Agroforestry and contributed to the development and launch of the National Agroforestry Policy for India. Currently he is engaged as a consultant in CIAT-UNDP and IFAD Programs. He is a recipient of many awards, life memberships in international societies and has published more than 200 journal papers.



**Dr. Pramod Kumar Jha** is a professor emeritus at Tribhuvan University and was the head of the Central Department of Botany for almost one decade. He has 46 years of teaching and research experience in Tribhuvan University, conducted several international research projects and visited over two dozen countries for academic purpose. He is a Fellow of The World Academy of sciences (TWAS) and Academician of the Nepal Academy of Science and technology, and recipient of several national and international awards. He has published over 250 research /review papers in national and international journals, books and proceedings, and authored and edited 23 books. He is associated with several professional societies and Journals. He founded Ecological Society (ECOS), Nepal in 1992 and supervised 11 Ph D students in Nepal..



**Prof. Matin Qaim** is Professor of Agricultural Economics and Director at the Center for Development Research (ZEF), University of Bonn. Before, he had professorships and research positions at the Universities of Gottingen, Hohenheim, and California at Berkeley. Qaim's main research areas relate to sustainable food systems, poverty reduction, and rural development. He has research experience in numerous countries of the Global South. Qaim has over 250 publications, mostly in top international journals. He is member of the German National Academy of Sciences, Fellow of the American Agricultural & Applied Economics Association (AAEA), and President-Elect of the International Association of Agricultural Economists (IAAE).



**Dr. Purnima Menon** is Senior Director, Food and Nutrition Policy for the CGIAR and the International Food Policy Research Institute. She comes to her senior leadership role after several years as senior research fellow and a theme leader for South Asia Nutrition Programs in IFPRI's Poverty, Health and Nutrition Division. She leads research teams who develop and conduct implementation research on scaling up interventions, including on evaluating large-scale programs in nutrition, agriculture, gender, technology, and health. Dr. Menon has research experience in India, Bangladesh, Nepal, Ethiopia, Haiti and Vietnam, collaborates widely, and invests deeply in research translation in her engagements with policy communities. In addition to her research, Dr. Menon previously co-convoked a global nutrition policy course with the Institute for Development Studies in the UK and has designed and taught many adaptations of this course in India. She serves on several global advisory groups, including Exemplars in Global Health; Partnership for Maternal, Newborn and Child Health; the Technical Expert Advisory group on Monitoring (TEAM) for the World Health Organization and UNICEF; and several advisory groups on nutrition in India and South Asia. Dr. Menon has a PhD in International Nutrition from Cornell University and an MSc in Nutrition from University of Delhi.



**Dr. Alice C. Hughes** is a former Professor for the Chinese Academy of Sciences, before moving to the University of Hong Kong in late 2021. She has worked extensively across the Tropics, and previously held positions in Thailand, Australia, Costa Rica, and the UK before moving to China. Alice is the author over 100 papers. Alice also works with a number of NGOs, the Biodiversity committee of the Chinese Academy of Sciences and the biodiversity special policy study of CCICED. Alice aims to ensure that biodiversity policy reflects the best of biodiversity science and works to actively communicate conservation standards and tools on a regional and global basis. Her work aims to span the gap between conservation science and conservation action, understanding the threats to diversity and analyzing effective targets to be developed which provide a practical path to stemming global and regional drivers of diversity loss, and maximizes synergies with climate goals and ecosystem service provision.



**Dr. Bhannu Chowdhary** is currently the Dean at the College of Agriculture & Veterinary Medicine, UAE University. During the past 42 years he has worked in various prestigious universities in India, Hungary, Sweden, Denmark, USA, Qatar and UAE as a teacher, researcher and a senior administrator. His research focus is in animal genetics. He has published over 220 original research articles in prestigious international journals, received several million dollars in research funding, and won prestigious recognitions. He has served as the President of the Texas Genetics Society, is Professor Emeritus at Texas A&M University, and is a Member of the MBR Academy of Scientists.





**Dr. Swoyambhu Man Amatya** has obtained AIFC from the then Indian Forest College in 1974 where he was awarded V.S. Rao prize. He has obtained M. Sc. from Oxford University, U.K. and Ph.D. from Tribhuvan University, Kathmandu. Dr. Amatya has already served with the Government of Nepal in the capacity of Director General and Secretary. Government of Nepal has awarded him His Majesty King Birendra Academic Award for Science and Technology and Rastriya Pratibha Pusakar. Dr. Amatya is Adjunct Professor at the Agriculture and Forestry University and Coordinator of Agroforestry Working Group of IUFRO, Vienna.



**Dr. Venkatesh Hubli** is Director of Research Savannah Seeds. He is Post graduate from UAS Dharwad Karnataka. He has 32 years of research experience in Private Seed Companies such as Cargill Seeds, Monsanto, Devgen, Syngenta & Savannah/Rice Tec and has worked 10 years each on Sunflower, Maize, and Rice. He is the Fellow of Oil seeds Society of India. He is Advisory council member of HRDC - IRRI Philippines. He has worked with eminent scientists such as: Dr Gurdev Kush world Food Prize Winner; Dr Tunya Kunta, Experienced Corn Breeder for APAC; Dr John De Leon, Program Head Phil Rice Dr Ilyas Ahmed first hybrid rice scientist ICAR. He has released many new sunflower, maize and rice hybrids he has received many awards and appreciation such as: breeding champion, Ice Breaker, Dr Rob Fraley / Eric Fay award of appreciation letters.



**Mr. R.K. Anand** is a postgraduate in agriculture from HAU, Hisar, and an MBA from Symbiosis University, Pune. He started his career as a Research Scientist, in the Entomology department at HAU, Hisar, and published 10 research papers in a span of 2 years. He moved to Africa to leverage the opportunity of large-scale commercial farming for the tenure of 4-5 years. He has contributed 20 years to the Agri-input industry and understands the challenges and needs of the farming community and their solutions. After the Agrochemical industry, he switched over to organic and natural farming with biological products in 2005 and established organic farming solutions and GAP cultivation to help farmers grow and export their farm produce organically, especially focused on the crops like Rice, Grapes, Spices, Tea, and Coffee in developed countries. He is proficient with the regulatory requirements of pesticides in India and globally.



**Dr Neeraj Sharma**, Principal Biologist and Portfolio Leader with Corteva Agriscience has 9 plus years of versatile R&D experience with developing crop protection chemistries. He has carried out field evaluations across Punjab, Haryana, Himachal, Chhattisgarh, Odisha and Madhya Pradesh and received several R&D awards for enabling advancing of pipeline molecules. He participated in various national and international conferences/symposiums and provided valuable guidance to undergraduate and post graduate students about emerging opportunities and challenges of the crop protection industry. He believes that proper management of Crop protection products will help underpin sustainable agriculture and safeguard environmental concerns.



## The Indian Ecological Society Achievement Award: 2022

### Dr. Mahalingam Govindaraj

**Dr. Mahalingam Govindaraj** is a plant breeder and geneticist and has 14 years of experience. Expertise in crop improvement, biofortification, mainstreaming nutrition, millets, public-private partnerships, and seed systems. M Govindaraj is currently working as a Senior Scientist at HarvestPlus-CIAT. Coordinating global biofortification breeding with CGIAR & NARS. He holds a PhD specializing in plant breeding and genetics. Previously he led the pearl millet biofortification research and development program in India and West and Central Africa. Developed and disseminated 10 biofortified cultivars in India and Africa. He also worked as lead sorghum breeder at ICRISAT, His vast experience in crop improvement includes pre-breeding, germplasm, population improvement, inbred development, hybrid breeding, breeding for disease/insect, end-use quality traits (iron, zinc, protein, grain colour), and product profiling and testing. Instrumental in minimum micronutrient (Fe/Zn) as mandatory standards in national millet cultivar release policy in India, hybrid parent research consortia and biofortification partnership. Supervised the dissertation research of several Master's and PhD students. Globally recognized with various individual and team awards. Author of more than 100 publications. For more than a decade, he has directed the development and dissemination of high-yielding, high-iron and high-zinc pearl millet varieties which have contributed to better nutrition for thousands of farmers and their communities. For his outstanding work, Dr. Govindaraj has been named the 2022 recipient of the Norman E. Borlaug Award for Field Research and Application, Endowed by The Rockefeller Foundation.



## The Indian Ecological Society Fellows 2022

### DR. VIKAS JINDAL

**Dr Vikas Jindal** joined as Assistant Entomologist in Punjab Agricultural University, Ludhiana in April 2004. He was promoted to the post of Senior Entomologist in 2016 and Principal Entomologist in 2019. He did his M.Sc. and Ph.D. from the Punjab Agricultural University, Ludhiana. A recipient of Dr Sardar Singh Gold Medal in M.Sc. program, he has presented his work at several national and international conferences in India, Belgium, South Africa, Greece, USA and Australia. He was a Visiting Scholar at the *Ohio Agricultural Research and Development Center*, Ohio State University, Wooster, USA for one year (2010-2011) where he worked on RNA interference, a technique to study functions of genes in organisms. He was awarded prestigious 'Raman Post Doctoral Fellowship' for one year sponsored by UGC, New Delhi to study physiology of insect neuropeptides at Kansas State University, USA during 2016-2017. He has won many ad hoc research grants from DST, DBT, UGC, SERB and ICAR New Delhi as Principal Investigator/ Co-PI. He has guided 4 M.Sc. and 1 Ph.D. student and actively involved in guiding students at UG level. He has been associated with more than 20 recommendations made by PAU for management of insect pests for the benefit of farmers. He has contributed more than 150 gene sequences to the international database (NCBI and BOLD) and published more than 70 research papers in national and international journals, 7 book chapters, 17 strategy papers and 18 extension articles. He is Associate Editor of the Indian Journal of Ecology and Biopesticides Newsletter, Review Editor, Frontier in Insect Physiology and life member of several national societies.



### DR VIJAY KUMAR

**Dr Vijay Kumar** joined as Assistant Entomologist in Punjab Agricultural University, Ludhiana in June 1999. He was promoted to the post of Senior Entomologist in 2011 and Principal Entomologist in 2014. He completed Master's and Doctoral degree from the Punjab Agricultural University, Ludhiana. Dr. Kumar is a well-known cotton entomologist at the national level and played a crucial role in managing whitefly in Punjab since 2016. He was recipient of GS Khush Team Award for dissemination of IPM technology during 2017. He also received a letter of Appreciation from the Vice Chancellor, PAU, Ludhiana, for developing IPM tactics for controlling whitefly in cotton. He was instrumental in developing forewarning models of whitefly in cotton. He has presented his research finding at several national and international conferences in India, Greece and Australia. As Principal Investigator/ Co-PI, he handled many research projects funded by DST, SERB, ICAR, RKVY and private industry. He has guided 7 M.Sc. and 3 Ph.D. students. Dr Kumar has been continuously working for the farmers of Punjab and contributed 78 recommendations for management of insect pests of field crops. He has published more than 92 research papers in national and international journals, 15 book chapters, 10 strategy papers and 282 extension articles. He is Joint Secretary of the Indian Ecological Society; Indian Society for Advancement of Insect Science and life member of several national societies.



### PROF. KAMAL KISHOR SOOD

**Dr. Kamal Kishor Sood** is a professor of Agroforestry at Sher-e-Kashmir University of Agricultural Sciences and Technology of Jammu. He received his B.Sc and M.Sc degrees in forestry from Dr. Y.S. Parmar University of Horticulture and Forestry, Himachal Pradesh and was awarded gold medals in both the degree programmes. Under prestigious Commonwealth Fellowship, he received his Ph.D. degree from University of Aberdeen, Scotland, United Kingdom. He has more than 30 years of professional experience as a forestry manager, academician and researcher. He has worked in various capacities in central government and state government institutes. Prof. Sood has been PI and Co-PI of various projects funded by ICAR, DBT, CSIR and Ministry of Education. He has published more than 60 research papers in international and national journals of repute and with impact factor. Besides, he has published 35 papers in international and national conference proceedings and 24 book chapters. He has also edited two books. As environmental scientist Dr. Sood enabled cement industries in Himachal Himalayas to adopt ecofriendly measures and policies. He has served/serving as





member Editorial Boards of reputed international and national journals such as Journal of Medicinal Plant Research, Peak Journals (USA), International Journal of Agricultural Sciences and Natural Resources (USA), American Journal of Agriculture and Forestry, Caspian Journal of Environmental Sciences (Iran), Indian Journal of Ecology and Indian Journal of Environmental Sciences. Dr. Sood is on panel of experts at various universities, Agricultural Scientists Recruitment Board and Advisor (Forestry), Union Public Service Commission, New Delhi. He was *Visitor's Nominee* to Court of Assam University (Central University) nominated by the President of India. He is currently also an expert member of National Research Policy Committee of Indian Council of Forestry Research and Education. His current interest is propagation of multipurpose trees, agroforestry and its role in carbon sequestration.

#### DR VANEET INDER KAUR

**Dr Vaneet Inder Kaur** joined as Assistant Professor (Fisheries) in KVK Usman (Amritsar) of Punjab Agricultural University, Ludhiana on September 1, 2005 and transferred to College of Fisheries (erstwhile Fisheries Unit), Guru Angad Dev Veterinary and Animal Sciences University (GADVASU), Ludhiana on March 2007. She was promoted to the post of Senior Scientist (Fisheries) in 2017 and Principal Scientist (Fisheries) in 2020. Recipient of Award for “Best Teacher” and “Best Extension Worker” by GADVASU and award for “Most Promising Lady Fisheries Scientist” by Vets Club, Ludhiana for the year 2017, she has presented her work at various national and international platforms. She also attended 2 months International Training in the field of “Nutraceuticals” at Ghent University, Belgium during 2014, fully sponsored by ICAR-NAIP, New Delhi. She has won many ad-hoc research grants from ICAR, UGC, DOF (MFHAD) and RKVY as PI/Co-PI. She has guided 7 M.Sc. and 3 Ph.D. students, along with active involvement in extra-curricular activities and execution Experiential Learning Programs of UG students under student READY programme. One of her Ph.D. student won 1 year Overseas Visiting Doctoral Fellowship (OVDF) by DST-SERB and completed her research during 2020-21 at SLU, Sweden. She has developed Package and Practice of ‘Ornamental fish culture & breeding’, ‘Culture & breeding of high value species’ and ‘Low cost duckweed based carp grow out diets’. Presently, she is part of one of the University level prestigious IDP-NAHEP Project of ICAR, as Co-I from COF and taking up number of activities for the benefit of UG students & faculty. She has published more than 50 research papers in national & international journals, 7 strategy papers, 1 edited book, 4 chapters in books, & 53 extension articles and delivered 45 radio/TV talks. She always remained instrumental in developing and upgrading farm facilities at Instructional cum Research farm of COF. She is associated with Indian Journal of Ecology since 2015 as Joint Secretary-cum-Treasurer and now as one of the Councilors. She is Reviewer for the referred international journals like Frontiers in Physiology, Aquaculture International and African Journal of Agriculture Research along with life member of several National Societies.



## Chief patron

**Dr. Himanshu Pathak**

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**Prof. Rajinder Peshin**

Vice President Indian Ecological Society, Sher-e-Kashmir University of Agricultural Sciences and Technology  
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## International Steering Committee

|                                  |                                                                                                                                                                            |
|----------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Prof. Nazir A. Ganai</b>      | Vice-Chancellor, Sher-e- Kashmir University of Agriculture Sciences & Technology, Kashmir, India                                                                           |
| <b>Dr Suresh Kumar Chaudhari</b> | Deputy Director General (Natural Resource Management), Indian Council of Agricultural Research, New Delhi- India                                                           |
| <b>Dr. Bommakanti Rajender</b>   | IAS, Alternate Permanent Representative of India to FAO, Rome                                                                                                              |
| <b>Dr. Zeyaur R. Khan</b>        | Thomas Odhiambo Distinguished Research Fellow, Leader, Push-Pull Programme, International Centre of Insect Physiology and Ecology, Nairobi, Kenya                          |
| <b>Dr Muni Muniappan</b>         | Director IPM Innovation Lab, Virginia Tech, Virginia, USA                                                                                                                  |
| <b>Dr B.M. Prasanna</b>          | Director, CGIAR Research Program Maize & Global Maize Program, CIMMYT                                                                                                      |
| <b>Dr Alice C. Hughes</b>        | Former Professor, Chinese Academy of Sciences, University of Hong Kong                                                                                                     |
| <b>Prof. John H Perkins</b>      | Member of the Faculty Emeritus The Evergreen State College, Washington, USA.                                                                                               |
| <b>Prof. Per Kudsk</b>           | Head of the Crop Health Section in the Department of Agroecology at Aarhus University, Denmark                                                                             |
| <b>Dr. J. P. Singh</b>           | Plant Protection Adviser, Directorate of Plant Protection, Quarantine & Storage Ministry of Agriculture & Farmers Welfare, Government of India                             |
| <b>Dr. Olivier Dangles</b>       | French Research Institute for Sustainable Development (IRD), Deputy Chief Science Officer In-charge of Sustainability Science                                              |
| <b>Prof. Dinesh K. Marothia</b>  | President, Indian Society of Agricultural Economics, Mumbai (Formerly Chairman, Commission for Agricultural Costs and Prices, GoI, Member State Planning Commission, GOCC) |
| <b>Prof. T V K Singh</b>         | Consultant ICRISAT and Former Dean of Agriculture in Professor Jayashankar Telangana State Agricultural University, Hyderabad, India                                       |
| <b>Dr. Pratap Singh Birthal</b>  | ICAR National Professor, National Institute of Agricultural Economics and Policy Research, New Delhi, India                                                                |
| <b>Dr. Menale Kassie</b>         | Head, Social Science & Impact Assessment Unit, ICIPE, Nairobi                                                                                                              |



## National Advisory Committee

|                                      |                                                                                                                                                         |
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| <b>Dr. Ramesh Chandra Srivastava</b> | Vice-Chancellor, Dr. Rajendra Prasad Central Agricultural University, Pusa, Samastipur Bihar, India                                                     |
| <b>Dr. M.S. Chauhan</b>              | Director ICAR-National Dairy Research Institute (NDRI) at Karnal, Haryana, India                                                                        |
| <b>Dr. Narendra Kumar Gontia</b>     | Vice-Chancellor, Junagadh Agricultural University, Gujarat, India                                                                                       |
| <b>Dr. Mahadev B. Chetti</b>         | Vice-Chancellor University of Agricultural Sciences, Krishi Nagar, Dharwad, Karnataka, India                                                            |
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| <b>Dr. B. R. Kamboj</b>              | Vice-Chancellor, Chaudhary Charan Singh Haryana Agricultural University, Hisar, Haryana, India                                                          |
| <b>Prof. (Dr.) R. M. Chauhan</b>     | Vice-Chancellor, Sardar Krushinagar Dantiwada Agricultural University, Sardarkrushinagar, Gujarat-India                                                 |
| <b>Prof. S. K. Singh</b>             | Vice-Chancellor, ICAR-Agricultural Technology Application Research Institute Zone-2, Jodhpur, Rajasthan-INDIA                                           |
| <b>Dr. Anupam Mishra</b>             | Vice-Chancellor, Central Agricultural University, Imphal                                                                                                |
| <b>Dr. K.B. Kathiria</b>             | Vice-Chancellor, Anand Agricultural University, Anand.                                                                                                  |
| <b>Dr. K.M. Indires</b>              | Vice-Chancellor, University of Horticultural Sciences Udyanagiri, Navanagar, Bagalkote Karnataka, India                                                 |
| <b>Dr. D. B. Shakyawar</b>           | Vice-Chancellor, ICAR-National Institute of Natural Fibre Engineering and Technology                                                                    |
| <b>Dr. K. C. Veeranna</b>            | Vice-Chancellor, Karnataka Veterinary, Animal & Fisheries Sciences University                                                                           |
| <b>Dr. A. Vishnuvardhan Reddy</b>    | Vice-Chancellor, Acharya N.G. Ranga Agricultural University                                                                                             |
| <b>Dr. Raghavendra Bhatta</b>        | Director, ICAR, National Institute of Animal Nutrition and Physiology                                                                                   |
| <b>Prof. B. S. Hansra</b>            | Former ADG-ICAR & Director, School of Agriculture, IGNOU                                                                                                |
| <b>Dr. S.K. Singh</b>                | Director, ICAR-Agricultural Technology Application Research Institute, Zone-2, Jodhpur, Rajasthan                                                       |
| <b>Dr. Hrusikesh Patro</b>           | Director, Planning, Monitoring & Evaluation (DPME), Odisha University of Agriculture and Technology (OUAT), Bhubaneswar                                 |
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| <b>Dr. T. S. Riar</b>                | Additional Director Communication, Directorate of Extension, Punjab Agricultural University, Ludhiana, India                                            |
| <b>Prof. Sanjeev K. Chouhan</b>      | General Secretary, Indian Ecological Society, Director Research, YS Parmar University of Horticulture & Forestry, Nauni, Solan, Himachal Pradesh, India |
| <b>Dr. Pradeep Wali</b>              | Director Research, Sher-e-Kashmir University of Agricultural Sciences & Technology of Jammu, India                                                      |
| <b>Dr. Surinder Kumar Gupta</b>      | Director Extension, Sher-e-Kashmir University of Agricultural Sciences & Technology of Jammu, India                                                     |
| <b>Dr. Rakesh Nanda</b>              | Director of Education, Sher-e-Kashmir University of Agricultural Sciences & Technology of Jammu, India                                                  |
| <b>Dr. Jyoti Kachroo</b>             | Director Planning & Monitoring, Sher-e-Kashmir University of Agricultural Sciences & Technology of Jammu, India.                                        |

|                                  |                                                                                                                              |
|----------------------------------|------------------------------------------------------------------------------------------------------------------------------|
| <b>Dr. Asim Kr Mondal</b>        | Dean, Faculty of Agriculture, Sher-e-Kashmir University of Agricultural Sciences & Technology of Jammu, India.               |
| <b>Dr. Mahinder Singh Badwal</b> | Dean, Faculty of Veterinary Sciences and AH, Sher-e-Kashmir University of Agricultural Sciences & Technology of Jammu, India |
| <b>Dr. S.E.H Rizvi</b>           | Dean, Faculty of Basic Sciences, Sher-e-Kashmir University of Agricultural Sciences & Technology of Jammu, India             |
| <b>Dr. Rajesh Katoch</b>         | Dean, Student Welfare, Sher-e-Kashmir University of Agricultural Sciences & Technology of Jammu, India                       |
| <b>Dr. Sushil K. Gupta</b>       | Registrar, Sher-e-Kashmir University of Agricultural Sciences & Technology of Jammu, India                                   |
| <b>Dr. Rajinder Peshin</b>       | Controller of Examination, Sher-e-Kashmir University of Agricultural Sciences & Technology of Jammu, India                   |
| <b>Dr. Kamal Vatta</b>           | Professor & Head, Agricultural Economics & Rural Sociology, Punjab Agricultural University, Ludhiana                         |
| <b>Dr. Kuldeep Singh</b>         | Prof & Head, Department of Extension Punjab Agricultural University                                                          |

## Conference Secretariat & Organising Committee

- Prof. Sushil K. Gupta**, Professor, Division of Agroforestry, Sher-e-Kashmir University of Agricultural Sciences & Technology of Jammu, India
- Prof. K. K. Sood**, Professor, Division of Agroforestry, Sher-e-Kashmir University of Agricultural Sciences & Technology of Jammu, India
- Prof. Virender Kaul**, Former Head Division of Entomology, Sher-e-Kashmir University of Agricultural Sciences & Technology of Jammu, India
- Prof. P. S. Slathia**, Professor, Division of Agricultural Extension Education, Sher-e-Kashmir University of Agricultural Sciences & Technology of Jammu, India
- Prof. Manish Sharma**, Professor & Head, Division of Statistics & Nodal Officer Data Centre, Sher-e-Kashmir University of Agricultural Sciences & Technology of Jammu, India
- Prof. Vikas Sharma**, Professor & Head, Division of Soil Science and Agricultural Chemistry, Sher-e-Kashmir University of Agricultural Sciences & Technology of Jammu, India
- Dr. Lalit M Gupta** Professor & Head, Division of Agroforestry, Sher-e-Kashmir University of Agricultural Sciences & Technology of Jammu, India
- Dr. Sandeep Chopra**, Professor of Vegetable Science, Sher-e-Kashmir University of Agricultural Sciences & Technology of Jammu, India
- Dr. Sandeep Sehgal**, Professor Agroforestry Sher-e-Kashmir University of Agricultural Sciences and Technology of Jammu, Chatha, Jammu-180009, India
- Dr. Uma Shankar**, Professor, Division of Entomology, Sher-e-Kashmir University of Agricultural Sciences & Technology of Jammu, India
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- Dr. Puneet Chowdhary**, Chief Scientist & Head KVK Jammu, Sher-e-Kashmir University of Agricultural Sciences & Technology of Jammu, India
- Dr. Manmohan Sharma**, Professor, School of Biotechnology, Sher-e-Kashmir University of Agricultural Sciences & Technology of Jammu, India
- Dr Vishal Mahajan**, Senior Scientist (Forestry), KVK, Kathua, Sher-e-Kashmir University of Agricultural Sciences & Technology of Jammu, India
- Dr. Manoj Kumar**, Professor, Vegetable Science, Sher-e-Kashmir University of Agricultural Sciences & Technology of Jammu, India
- Dr. Sachin Gupta**, Professor, Division of Plant Pathology, Sher-e-Kashmir University of Agricultural Sciences & Technology of Jammu, India
- Dr. Deep ji Bhat**, Associate Professor, Division of Fruit Science, Sher-e-Kashmir University of Agricultural Sciences & Technology of Jammu, India
- Dr. Sudhakar Dwivedi**, Professor, Division of Agricultural Economics, Sher-e-Kashmir University of Agricultural Sciences & Technology of Jammu, India
- Dr. Anil Bhat**, Assistant Professor, Division of Agricultural Economics & ABM, Sher-e-Kashmir University of Agricultural Sciences & Technology of Jammu, India
- Sh. Atulya Giri**, Computer Programmer, Data Centre, Sher-e-Kashmir University of Agricultural Sciences & Technology of Jammu, India
- Sh. Soneal Kumar Dhar**, Assistant Programmer, Registrar's Office, Sher-e-Kashmir University of Agricultural Sciences & Technology of Jammu, India
- Sh. Raj Kumar**, FCLA, Division of Agricultural Extension Education, Sher-e-Kashmir University of Agricultural Sciences & Technology of Jammu, India



**Sh. Dev Raj**, Stenographer, Division of Agricultural Extension Education, Sher-e-Kashmir University of Agricultural Sciences & Technology of Jammu, India

**Dr. Rakesh Kumar**, FCLA, Division of Plant Pathology, Sher-e-Kashmir University of Agricultural Sciences & Technology of Jammu, India

**Ms. Stanzin Yangsdon**, PhD student, Division of Agricultural Extension Education, Sher-e-Kashmir University of Agricultural Sciences & Technology of Jammu, India

**Mr. Ankit**, PhD student, Division of Agricultural Extension Education, Sher-e-Kashmir University of Agricultural Sciences & Technology of Jammu, India

**Ms. Karukumalli Sindhura**, PhD student, Division of Agricultural Extension Education, Sher-e-Kashmir University of Agricultural Sciences & Technology of Jammu, India

**Mr. Obaid Zaffar**, PhD student, Division of Agricultural Engineering, Sher-e-Kashmir University of Agricultural Sciences & Technology of Jammu, India

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## Conference Committees

### 1. Reception Committee

| S.No. | Name of the Officer        | Designation                                                      | Position    |
|-------|----------------------------|------------------------------------------------------------------|-------------|
| 1.    | Dr. S.K. Gupta             | Director Extension, SKUAST-J                                     | Convener    |
| 2.    | Dr. Rakesh Nanda           | Director Education, SKUAST-J                                     | Co-convener |
| 3.    | Dr. Pradeep Wali           | Director Research, SKUAST-J                                      | Member      |
| 4.    | Dr. Jyoti Kachroo          | Director Planning & Monitoring, SKUAST-J                         | Member      |
| 5.    | Dr Asim Kumar Mondal       | Dean, Faculty of Agriculture SKUAST-J                            | Member      |
| 6.    | Dr. Mahinder Singh Bhadwal | Dean, FV.Sc. & A.H, SKUAST-J                                     | Member      |
| 7.    | Prof. S.E.H. Rizvi         | Dean, Faculty of Basic Sciences, SKUAST-J                        | Member      |
| 8.    | Dr. Sushil Sharma          | Dean, Faculty of Agricultural Engineering, SKUAST-J              | Member      |
| 9.    | Dr. Rajesh Katoch          | Dean Students Welfare, SKUAST-J                                  | Member      |
| 10.   | Dr. Sushil Kumar Gupta     | Dean, Faculty of Horticulture and Forestry & Registrar, SKUAST-J | Member      |
| 11.   | Dr. J. S. Soodan           | Dean, Faculty of Dairy Technology, SKUAST-J                      | Member      |
| 12.   | Sh. Madan Lal              | Comptroller, SKUAST-J                                            | Member      |
| 13.   | Dr. A.K. Sharma            | University Librarian, SKUAST-J                                   | Member      |
| 14.   | Er. Iqbal Singh            | Executive Engineer, Estates Division                             | Member      |

### 2. Registration Committee

| S.No. | Name of the Officer  | Designation                                 | Position    |
|-------|----------------------|---------------------------------------------|-------------|
| 1.    | Dr. P.S. Slathia     | Professor, Agricultural Extension Education | Convener    |
| 2.    | Dr. Meenakshi Gupta  | Associate Professor, Agro-forestry          | Co-convener |
| 3.    | Dr. Rakesh Kumar     | FCLA, Plant Pathology                       | Member      |
| 4.    | Dr. Neeraj Choudhary | Project Assistant, Bio-Technology           | Member      |
| 5.    | Mr. Atulya Giri      | Programmer (software) Data Centre           | Member      |
| 6.    | Ms. Stanzin Yangsdon | Ph. D Student                               | Member      |
| 7.    | Mr. Obaid Zaffar     | Ph. D Student                               | Member      |
| 8.    | Mr. Atul Jamwal      | Contractual (University Examination Cell)   | Member      |

### 3. Estates Committee

| S.No. | Name of the Officer/ Official | Designation                                   | Position    |
|-------|-------------------------------|-----------------------------------------------|-------------|
| 1.    | Er. Iqbal Singh               | Executive Engineer, Estates Division          | Convener    |
| 2.    | Er. Jasmeet Singh             | JE (Electrical)                               | Co-Convener |
| 3.    | Sh. N K Raina                 | Security Officer, Estates Division            | Member      |
| 4.    | S Karan Singh                 | Mechanic, Estates Division                    | Member      |
| 5.    | S. Harcharan Singh            | Mechanic, Faculty of Agricultural Engineering | Member      |
| 6.    | Sh. Lajinder Nath             | Skilled Labour (Electrician) Estates Division | Member      |
| 7.    | Sh. Panju                     | Skilled labour (Electrician) Estates Division | Member      |
| 8.    | Sh. Vipin Sharma              | Skilled labour (Electrician) Estates Division | Member      |

|     |                   |                                 |        |
|-----|-------------------|---------------------------------|--------|
| 9.  | S. Davinder Singh | Skilled labour Estates Division | Member |
| 10. | Sh. Swaran Lal    | Skilled labour Estates Division | Member |
| 11. | Sh. Dinesh        | Skilled labour Estates Division | Member |
| 12. | Sh. Ravi Kumar    | Skilled labour Estates Division | Member |

#### 4. Transport and Accommodation Committee

| S.No. | Name of the Officer/ Official          | Designation                                                            | Position                    |
|-------|----------------------------------------|------------------------------------------------------------------------|-----------------------------|
| 1.    | Dr. Rakesh Sharma                      | Professor, Agricultural Extension Education                            | Convener                    |
| 2.    | Dr. Manoj Kumar                        | Professor, Vegetable science and Floriculture                          | Co-Convener (Transport)     |
| 3.    | Dr. Deep Ji Bhat                       | Associate Professor, Fruit Science                                     | Co-Convener (Accommodation) |
| 4.    | Dr. Pranav Kumar                       | Assistant Professor, Veterinary & Animal Husbandry Extension Education | Member                      |
| 5.    | Dr. Suraj Prakash                      | Sr. Scientist (Extension Education) KVK, Rajouri                       | Member                      |
| 6.    | Dr. Lalit Upadhyaya                    | Sr. Scientist, KVK, Reasi                                              | Member                      |
| 7.    | Dr. Sanjay Koushal                     | Scientist, KVK, Reasi                                                  | Member                      |
| 8.    | Mr. Pankaj Sharma                      | Programmer Data Center                                                 | Member                      |
| 9.    | Mr. Manjot Singh Sidhu                 | Ph.D. Student                                                          | Member                      |
| 10.   | Mr. Divyanshu Sharma                   | Ph.D. Student                                                          | Member                      |
| 11.   | Mr. Aaqib Ayub                         | Ph.D. Student                                                          | Member                      |
| 12.   | Ms. Sonali (Accommodation)             | Ph.D. Student                                                          | Member                      |
| 13.   | Ms. Shivanjali Sarswat (Accommodation) | Ph.D. Student                                                          | Member                      |

#### 5. Food Committee

| S.No. | Name of the Officer/Official | Designation                                                   | Position    |
|-------|------------------------------|---------------------------------------------------------------|-------------|
| 1     | Dr. T. S. Riar               | Additional Director Communication Centre PAU, Ludhiana        | Convener    |
| 2.    | Dr. Kuldeep Singh            | Professor and Head Department of Extension Education PAU      | Co-convener |
| 3.    | Dr. Puneet Chaudhary         | Chief Scientist cum Head KVK Jammu                            | Co-convener |
| 4.    | Dr. L. K. Sharma             | Professor, Agricultural Extension Education                   | Member      |
| 5.    | Dr. Meenakshi Gupta          | Professor, Agronomy                                           | Member      |
| 6.    | Dr. Loveleesh Garg           | Assistant Professor, Punjab Agricultural University, Ludhiana | Member      |
| 7.    | Mr. Rahmat Gul               | Ph.D. Student                                                 | Member      |
| 8.    | Mr. Raman Thappa             | Ph.D. Student                                                 | Member      |

#### 6. Committee for conducting Inaugural and Valedictory Sessions

| S.No. | Name of the Officer/ Official | Designation                   | Position     |
|-------|-------------------------------|-------------------------------|--------------|
| 1.    | Dr. Moni Gupta                | Professor, Bio-Chemistry      | Convener     |
| 2.    | Dr. Sudhakar Dwivedi          | Professor, Economics & ABM    | Co- convener |
| 3.    | Dr. Sachin Gupta              | Professor, Plant Pathology    | Member       |
| 4.    | Sh. Komal Bhat                | Computer Programmer(Hardware) | Member       |



|     |                           |                       |        |
|-----|---------------------------|-----------------------|--------|
| 5.  | Sh. Prince Rajan Khajuria | Assistant Programmer  | Member |
| 6.  | Sh. Deepak Sharma         | Audio Visual Operator | Member |
| 7.  | Sh. Bachan Lal            | Telephone Technician  | Member |
| 8.  | Ms. Pavleen Kour          | Ph.D. Student         | Member |
| 9.  | Ms. Priti Singh           | Ph.D. Student         | Member |
| 10. | Ms. Jamyang Lahmo         | Ph.D. Student         | Member |
| 11. | Ms. Shallu Choudhary      | Ph.D. Student         | Member |
| 12. | Ms. Naveena               | Ph.D. Student         | Member |
| 13. | Ms. Mehnaza Basheer       | MSc. Student          | Member |

## 7. Technical Committee

| S.No. | Name of the Officer/Official | Designation                                                        | Position    |
|-------|------------------------------|--------------------------------------------------------------------|-------------|
| 1.    | Dr. Virender Kaul            | Former I/C Examination cell and Head Division of Entomology        | Convener    |
| 2.    | Dr. K.K.Sood                 | Professor, Agro Forestry                                           | Co-convener |
| 3.    | Dr. Vikas Sharma             | Professor and Head, Soil Science and Agricultural Chemistry        | Member      |
| 4.    | Dr Sanjay Khar               | Professor, Agricultural Engineering                                | Member      |
| 5.    | Dr. Vikas Jindal             | Principal Entomologist<br>Punjab Agricultural university, Ludhiana | Member      |
| 6.    | Dr. Jawala Jindal            | Sr. Entomologist<br>Punjab Agricultural University, Ludhiana       | Member      |
| 7.    | Dr. Manmohan Sharma          | Professor, School of Bio-Technology                                | Member      |
| 8.    | Dr. Sandeep Sehgal           | Professor, Agro-Forestry                                           | Member      |
| 9.    | Dr. Harpreet Kour Cheema     | Senior Entomologist, PAU Ludhiana                                  | Member      |
| 10.   | Dr. Kamlesh Bali             | Professor, Sericulture                                             | Member      |
| 11.   | Mr. Obaid Zaffar             | Ph.D. Student                                                      | Member      |
| 12.   | Ms. Neer Somakka             | Ph.D. Student                                                      | Member      |
| 13.   | Ms. Yousra Mukhtar           | Ph.D. Student                                                      | Member      |

## 8. Memento Committee

| S.No | Name of the Officer/Official | Designation                                                         | Position |
|------|------------------------------|---------------------------------------------------------------------|----------|
| 1    | Dr. Vaneet Inder Kaur        | Principal Scientist & Head, College of Fisheries, GADVASU, Ludhiana | Convener |
| 2    | Dr. Sachin Gupta             | Professor, Plant Pathology                                          | Member   |
| 3    | Dr. Kamlesh Bali             | Professor, Entomology                                               | Member   |
| 4    | Ms. Priti Singh              | Ph.D. Student                                                       | Member   |
| 5    | Ms. Neer Somakka             | Ph.D. Student                                                       | Member   |

## 9. Poster Sessions Committee

| S.No | Name of the Officer/Official | Designation                                   | Position     |
|------|------------------------------|-----------------------------------------------|--------------|
| 1.   | Dr. K.K. Sood                | Professor, Agro Forestry                      | Convener     |
| 2.   | Dr. Sandeep Chopra           | Professor, Vegetable Science and Floriculture | Co- Convener |
| 3.   | Dr. Amit Jasrotia            | Professor and Head, Fruit Science             | Member       |
| 4.   | Dr. P.S. Slathia             | Professor, Agricultural Extension Education   | Member       |
| 5.   | Dr. Uma Shankar              | Professor, Entomology                         | Member       |

|     |                   |                                                         |        |
|-----|-------------------|---------------------------------------------------------|--------|
| 6.  | Dr. Anil Bhushan  | Associate Professor, Vegetable science and Floriculture | Member |
| 7.  | Dr. Sanjeev Kumar | Associate Professor, Vegetable science and Floriculture | Member |
| 8.  | Dr. Vinod Gupta   | Professor, Agricultural Extension Education             | Member |
| 9.  | Mr. Rajan Sharma  | OCC, Agricultural Extension Education                   | Member |
| 10. | Mr. Jasbir Singh  | Contractual (University Examination Cell)               | Member |
| 11. | Mr. Ayush         | Contractual, School of Bio-Technology                   | Member |
| 12. | Mr. Janak Raj     | OCC, Agroforestry                                       | Member |

#### 10. Liaison, Media and Publicity Committee

| S.No. | Name of the Officer/Official | Designation                                     | Position     |
|-------|------------------------------|-------------------------------------------------|--------------|
| 1.    | Prof. Amrish Vaid            | Prof. & Head, Plant Pathology                   | Convener     |
| 2.    | Dr. Permendar Singh          | Sr. Scientist, ACRA-Rakh, Dhiansar              | Co- Convener |
| 3.    | Dr. Puneet Chaudhary         | Chief Scientist cum Head KVK Jammu              | Member       |
| 4.    | Dr. Vishal Mahajan           | Sr. Scientist (Agroforestry) & Head, KVK Kathua | Member       |
| 5.    | Dr. Vikas Gupta              | Jr. Scientist, ACRA- Rakh, Dhiansar             | Member       |
| 6.    | Dr. Vivak. M. Arya           | Associate Professor, Soil Science               | Member       |
| 7.    | Dr. Anil Bhat                | Assistant Professor, Economics and ABM          | Member       |
| 7.    | Dr. J.S Manhas               | Associate Prof. Directorate of Extension        | Member       |
| 7.    | Mr. Soneal Kumar Dhar        | Assistant Programmer                            | Member       |
| 8.    | Mr. Mukesh Kumar             | Artist cum Photographer                         | Member       |
| 9.    | Mr. Pankaj Sharma            | Artist cum Photographer                         | Member       |
| 10.   | Mr. Gurmeet Singh            | Contractual (Photographer)                      | Member       |
| 10.   | Mr. Jagjeet Singh            | Ph.D. Student                                   | Member       |

#### 11. Exhibition/ Stall Committee

| S.No. | Name of the Officer/Official | Designation                          | Position    |
|-------|------------------------------|--------------------------------------|-------------|
| 1.    | Dr. R. K. Salgotra           | Coordinator, School of Biotechnology | Convener    |
| 2.    | Dr. Puneet Chaudhary         | Chief Scientist cum Head KVK Jammu   | Co-convener |
| 3.    | Mr. Janak Raj                | OCC, Dean's Office                   | Member      |

#### 12. Invitation Committee

| S.No. | Name of the Officer/Official | Designation                                   | Position    |
|-------|------------------------------|-----------------------------------------------|-------------|
| 1.    | Dr. Lalit Mohan Gupta        | Professor and Head, Division of Agro Forestry | Convener    |
| 2.    | Dr. Prashant Bakshi          | Professor, ACHR                               | Co-Convener |
| 3.    | Dr. Vishal Gupta             | Associate Professor, Plant Pathology          | Member      |
| 4.    | Dr. Devinder Sharma          | Associate Professor, Entomology               | Member      |
| 5.    | Dr. Anil Bhushan             | Associate Professor, Vegetable Science        | Member      |
| 6.    | Mr. Danish Mushtaq           | Ph.D. Student                                 | Member      |
| 7.    | Ms. Zahida Parveen           | Ph.D. Student                                 | Member      |

#### 13. Medical Assistance

| S.No. | Name of the Officer/Official | Designation     | Position    |
|-------|------------------------------|-----------------|-------------|
| 1     | Dr. Anil Gupta               | Medical Officer | Convener    |
| 2.    | Dr. Sushma Gupta             | Medical Officer | Co-Convener |

#### 14. Accounts/ Finance Committee

| S.No. | Name of the Officer/Official | Designation                                           | Position    |
|-------|------------------------------|-------------------------------------------------------|-------------|
| 1.    | Dr. K. K. Sood               | Professor, Division of Agro Forestry                  | Convener    |
| 2.    | Dr. Rajinder Peshin          | I/C Examination Cell & Professor, Extension Education | Co-Convener |
| 3.    | Dr. Sanjay Khar              | Professor, Agricultural Engineering                   | Member      |
| 4.    | Dr. Rakesh Sharma            | Professor, Extension Education                        | Member      |
| 5.    | Mr. Raj Kumar                | FCLA, Extension Education                             | Member      |
| 6.    | Mr. Sham Lal                 | Statistical Assistant, University Examination Cell    | Member      |

#### 15. Protocol Committee for Keynote Speakers and Dignitaries

| S.No. | Name of the Officer/Official | Designation                                          | Position |
|-------|------------------------------|------------------------------------------------------|----------|
| 1.    | Dr Sushil K Gupta            | Registrar SKUAST Jammu and President IES J&K Chapter | Convener |
| 2.    | Dr. Prem Kumar               | Sr. Scientist, KVK Jammu                             | Member   |
| 3.    | Dr. Deep Ji Bhat             | Associate Professor Fruit Science                    | Member   |
| 4.    | Mr. Devanshu                 | Assistant Manager, Guest House (Railway Road)        | Member   |
| 5.    | Dr. Rakesh Kumar             | FCLA, Division of Plant Pathology                    | Member   |
| 6.    | Ms. Karukumalli Sindhura     | Ph.D. Student                                        | Member   |

#### 16. Help Desk

| S.No. | Name of the Officer/Official | Designation   | Position |
|-------|------------------------------|---------------|----------|
| 1.    | Mr. Ankit                    | Ph.D. Student | Member   |
| 2.    | Mr. Manoj Thakur             | Ph.D. Student | Member   |
| 3.    | Mr. Arayan Sharma            | Ph.D. Student | Member   |
| 4.    | Mr. Shivam Yadav             | Ph.D. Student | Member   |
| 5.    | Ms. Qurat                    | Ph.D. Student | Member   |
| 6.    | Ms. Shafia                   | Ph.D. Student | Member   |
| 7.    | Ms. Nida Patel               | Ph.D. Student | Member   |

#### 17. Seating Arrangement Committee

| S.No. | Name of the Officer/Official | Designation                                     | Position     |
|-------|------------------------------|-------------------------------------------------|--------------|
| 1.    | Dr. Manish Sharma            | Professor & Head, Statistics & Computer Science | Convener     |
| 2.    | Dr. A P Singh                | Chief Scientist & Incharge, ACRA Rakh, Dhiansar | Co- Convener |
| 3.    | Dr. Vivak. M. Arya           | Associate Professor, Soil Science               | Member       |
| 4.    | Dr. Vishal Gupta             | Associate Professor, Plant Pathology            | Member       |
| 5.    | Dr Manpreet Kour             | Assistant Professor, Agronomy                   | Member       |
| 6.    | Mr. Zahid Abbas              | Ph.D. Student                                   | Member       |
| 7.    | Mr. Ankit                    | Ph.D. Student                                   | Member       |
| 8.    | Mr. Atal Hameedi             | Ph.D. Student                                   | Member       |
| 9.    | Ms. Shafia Ashraf            | Ph.D. Student                                   | Member       |
| 10.   | Mr. Shivam Yadav             | Ph.D. Student                                   | Member       |

#### 18. Cultural Committee

| S.No. | Name of the Officer/Official | Designation                       | Position    |
|-------|------------------------------|-----------------------------------|-------------|
| 1.    | Dr. Moni Gupta               | Professor, Bio-Chemistry          | Convener    |
| 2.    | Dr. Sachin Gupta             | Professor, Plant Pathology        | Co-Convener |
| 3.    | Dr. Sarabdeep Kaur           | Associate Professor, Soil Science | Member      |
| 4.    | Ms. Sherab Dolma             | Ph.D. Student                     | Member      |
| 5.    | Ms. Safina Kouser            | Ph.D. Student                     | Member      |



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