KRISHITANTRA
Harvesting Happiness

ICDA
INTERNATIONAL CONFERENCE ON DECARBONIZING AGRICULTURE

25, 26 & 27 NOVEMBER 2023
MANGALORE • KARNATAKA

# INTERNATIONAL CONFERENCE ON DECARBONIZING AGRICULTURE

**Inaugural Session 9.45AM-12.00 PM, 25-11-2023**
**Venue-TMPAI International Convention Centre, Mangalore**

| TIME | PROGRAMME | |
|---|---|---|
| **8.30-9.50 AM** | **Registration of the delegates** | Organizers- ICDA-2023 |
| **9.50am-10.0am** | **Welcoming Dignitaries onto the Dais** | Event Manager- ICDA-2023 |
| **9.50-10.00 AM** | **Lighting of the Lamp** | All Guests |
| **10.00-10.05AM** | **Welcome Address and about ICDA-2023** | Mr. Sandeep Kondaji, Founder & CEO, KRISHITANTRA |
| **10.05-10.10 AM** | **Chief Patron Address ONLINE(TBC)** | Dr.Himanshu Pathak, Secretary, DARE & DG, ICAR, New Delhi |
| **10.10 -10.15AM** | **Guest of Honor Address (TBC)** | Dr. Ch. Srinivasa Rao-Director,ICAR-National Academy of Agricultural Research Management. |
| **10.15-10.20 AM** | **Guest of Honor Address** | Dr.Raman Meenakshi Sundaram, Director, ICAR-Indian Institute of Rice Research , Hyderabad |
| **10.20-10.25 AM** | **Guest of Honor Address** | C.M Patil- CEO & Founder, KrishiKalpa |
| **10.25-10.40** | **Launch of KT CROP CARBO TRACKER** | Mr. Sandeep Kondaji, Founder & CEO, KRISHITANTRA &<br>Mr. Santosh Srikantaiah, Head of Innovation, NTTDATA, India |
| **10.40-11.00 AM** | **Release of Publications** | All guests including lead authors |
| **10.45-11.30 AM** | **ICDA-2023 awards distribution** | All guests |
| **11.30-11.50 AM** | **Inaugural Address by Chief Guest** | Chairman, NABARD |
| **11.50-11.55 AM** | **Vote of Thanks** | |
| **11.55-12.00 PM** | **Group photo & light refreshments** | |
| | **Anchoring and stage host-Event Manager** | |

**12.00 -13.00Hrs** — ***Keynote Address follows***
***KT -CROP CARBO TRACKER***
***Mr. Sandeep Kondaji,* Founder & CEO, KRISHITANTRA**

13.00 Hrs - 14.00 Hrs Lunch Break

14.00 onwards- Technical and Webinar Sessions (Parallel technical sessions will run)

**TECHNICAL SESSION /PANEL DISCUSSIONS 1 ,**
**2 PM TO 4.30PM , Dated: 25-11-2023**
**VENUE -MAIN HALL, TMPAI**

**Climate Change Impacts, Mitigation And Adaptation Strategies- Global warming is one of the most pressing issues today and emissions are contributing to climate change, which is a real and present threat to planet Earth. With longer summers, extreme winters, wildfires, rising sea levels, heat waves and other calamitous events, the impact of climate change is evident. In 2015, in Paris, the nations of the world committed themselves to trying their best to prevent planet warming by more than 1.5°C from its pre-industrial state.**
***The focus of this session will be on the recent advances made and tools and techniques available to address* comprehensively climate change and its impacts, based on the most up-to-date scientific research**

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| **Opening Remarks-Chairperson** | | **Dr S Sridhara**<br>Professor Agronomy and Coordinator Center for Climate Resilient Agriculture at University of Agricultural and Horticultural Sciences, Shimoga, India |
| | **Moderator** | Vimal Panjwani, CEO, AgriVijay |
| | **Co-Chairperson** | Hoang Thi, Chairperson, Vietnam Pepper & Spice Association |
| | **Rapporteur** | TBC |
| **Keynote speaker** | **Vimal Panjwani, CEO, AgriVijay** | Solar Revolution in Agriculture |
| **Keynote speaker** | **M.H. Kalubarme ISRO** | Soil And Weather Based Sugarcane Suitability Related to Climate Change Using Geo-Informatics Technology. |
| **Keynote speaker** | **Dr S Sridhara** | Climate Resilient Agro-Techniques For Agriculture And Horticulture Crops |
| **Keynote speaker** | **Dr. Francesco Carnevale Zampaolo** | SRI- for Climate-Smart Livelihood and Nutritional security |
| **Keynote speaker** | **Dr.K.C.Siva balan, Chairman, CREA Trichy, Tamil Nadu** | Farmers organization and Climate Smart Agriculture (CSA) : Case study from Tamil Nadu, India |
| **Keynote speaker** | **Dr.Siddhartha Kumar Singh , ICAR-IIVR. Varanasi** | Developing a low carbon foot printing for Vegetable based cropping systems |
| **Keynote speaker** | **Satyendra BAU, Sabour** | Green Super Rice (GSR) For Climate Resilience And Sustainability |
| **Keynote speaker** | **Akhtar Rasool** | Detecting Toxic Chemicals In Water Bodies Using Plant Algae Biosensors |
| | Felicitations | |

## TECHNICAL SESSION /PANEL DISCUSSIONS 2
## 4.30 PM TO 7.00PM , Dated: 25-11-2023
## VENUE -MAIN HALL, TMA Pai International Convention Centre, Mangalore, Karnataka

**Measuring baseline emissions- Despite low per-capita emissions (1.8 tons CO2), India is the third-largest emitter globally, emitting a net 2.9 gigatons of carbon-dioxide equivalent (GtCO2) every year as of 2019. The Sixth Assessment Report (AR6) of the Intergovernmental Panel on Climate Change (IPCC) tells us that global emissions need to be reduced by 43% within this decade for us to have a fighting chance of limiting global temperature rises to within 1.5° C. How, then can India realize the promise of its green transformation?**
***The focus of this session will be on the recent advances made and tools and techniques available to address*** **Determining emissions reductions, Verification, and validation in all aspects of Agronomy, Horticulture, Agroforestry, Irrigation, Fertilizer application, Farm mechanization Food, Nutrition both traditional and modern, Documenting indigenous practices, changes in farming practices, Ocean Uptake, Geological Sequestration**

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| **Opening Remarks-Chairperson** | | Mallesh T M, CEO & Founder,Cultyvate |
| | **Moderator** | Dr. R M Mahendra Kumar, Head, Crop Production, ICAR-IIRR, Hyderabad |
| | **Co Chairman** | Dr. Francesco Carnevale Zampaolo -Programme Director, SRI-2030 |
| | **Rapporteur** | TBC |
| **Keynote speaker** | **Mallesh T M, CEO & Founder,Cultyvate** | Measuring baseline emissions, Determining emissions reductions and Verification-A cultivate experience |
| **Keynote speaker** | **Dr. R M Mahendra Kumar, Head, Crop Production, ICAR-IIRR, Hyderabad** | Baseline Gaseous Measurements In Rice Based Cropping Systems |
| **Keynote speaker** | **Dr. MBB Prasad Babu, Head, Soil Science, ICAR-IIRR, Hyderabad** | Mitigating methane emissions from rice fields-validation of a decade-long field studies |
| **Keynote speaker** | **Dr. Amanullah The University of Agriculture Peshawar, Pakistan** | Decarbonizing Agriculture: A Path to Sustainability - Implications for Pakistan, India, and the World |
| **Keynote speaker** | **Dr Micheal Crawford,CEO, SOIL CRC** | Soil improvements, carbon sequestration-Towards reducing carbon foot printing |
| **Keynote speaker** | **Dr. S.K. Sinha SRI, PUSA** | Effect of combination of press mud and bio-fertilizer on soil fertility and productivity of sugarcane in calcareous soils of Bihar |
| **Keynote speaker** | **Dr. Mangal Deep Tuti Sr. Scientist, ICAR-IIRR** | Carbon footprint of rice-based cropping system |
| **Keynote speaker** | **Dr. Sunita Kumari Meena SRI, PUSA** | Assessment of Carbon Emissions and Associated Environmental Implications of Sugarcane Cultivation in Calcareous Terrains |
| | **Felicitations** | |

**TECHNICAL SESSION /PANEL DISCUSSIONS 3**
**9 AM TO 11.30PM , Dated: 26-11-2023**
**VENUE -MAIN HALL, TMA Pai International Convention Centre, Mangalore, Karnataka**

**Use of precision agriculture platforms- Currently, India has an energy savings-based market mechanism, and the new scheme will enhance the energy transition efforts with an increased scope that will cover the potential energy sectors.**
***The focus of this session will be on the recent advances made and tools and techniques available to address* - Decarbonizing agriculture will require a combination of policy interventions, technological innovations, and changes in farming practices. Overall, decarbonizing is a complex process, requires a collaborative effort between governments, businesses, and individuals.**

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| **Opening Remarks-Chairperson** | | M.H. Kalubarme<br>Retired Scientist SG, SPACE Applications Centre, ISRO, Ahmedabad |
| | **Moderator** | Dr. Dharmesh Verma, Consultant, Krishitantra |
| | **Co Chairman** | Dr. Dharavath Ramesh<br>Associate Professor, Department of Computer Science & Engineering, Indian Institute of Technology (Indian School of Mines) Dhanbad |
| | **Rapporteur** | TBC |
| **Keynote speaker** | **Dr. Dharavath Ramesh<br>IIT, Dhanbad** | Precision Agriculture: An Amalgamation of Technology Advancements |
| **Keynote speaker** | **Dr G.S. JASUDASU<br>Scientist, ICAR -IIRR, Hyderabad** | Use of Nano particles in plant disease management |
| **Keynote speaker** | **Dr Sat Kumar Tomer, CEO & Founder, Satyukt** | Understanding Satellite imageries processing in Agriculture |
| **Keynote speaker** | **Dr. Dharmesh Verma<br>Consultant, Krishitantra** | 'Rice Mapping Using Sentinel 1 SAR and Sentinel-2 Time Series images' |
| **Keynote speaker** | **Dr K Basavaraj<br>Scientist, ICAR -IIRR, Hyderabad** | Bio Sensors: As a tool for detection of Plant Diseases |
| **Keynote speaker** | **Dr. Brajendra<br>PS, ICAR-IIRR, Hyderabad** | Carbon Rice Tracker- A Meta Version |
| **Lead speaker** | **Er.Satish Kumar<br>BAU, Sabour** | Nano Technological Foot Printing For Food Processing And Preservation |
| **Lead Speaker** | **Er. Ashok Kumar<br>BAU, Sabour** | 3d Printing Low Carbon Footprint Technique For Food Customization And Elaboration |
| | **Felicitations** | |

**TECHNICAL SESSION /PANEL DISCUSSIONS 4**
**11.30 AM TO 1.00PM , Dated: 26-11-2023**
**VENUE -MAIN HALL, TMA Pai International Convention Centre, Mangalore, Karnataka**

**Decarbonizing Agriculture - Decarbonizing refers to the process of reducing carbon emissions and transitioning to a low-carbon economy. Agriculture is a significant contributor to global greenhouse gas emissions, accounting for approximately 25% of total emissions. B**
***The focus of this session will be on the recent advances made and tools and techniques available for* Charting a Pathway for Sustainable Growth- Green synthesis of fertilizers, nano fertilizers, Natural Farming, Biodynamic farming, Advances in cultural practices, Crop-Livestock Integration, organic farming, Eco-agriculture& perm cultur, Using renewable energy, Adopting agroforestry practices Innovative methods of Pest and disease management, PM KUSUM Scheme, R strategy, Zeba technologies, Changing growing environments such as SRI, DSR,AWD SCI etc.**

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| **Opening Remarks-Chairperson** | | C.M Patil, CEO & Founder, KrishiKalpa |
| | **Moderator** | Dr. Gabrijel Ondrasek<br>University Of Zagreb, Faculty Of Agriculture, Croatia |
| | **Co Chairman** | Dr. Htet Ne Oo<br>University Of Technology (Yatanarpon Cyber City), Myanmar |
| | **Rapporteur** | TBC |
| **Keynote speaker** | **Dr. Gabrijel Ondrasek** | Salt Stress in Plants and Mitigation Approaches |
| **Keynote speaker** | **C.M Patil<br>CEO & Founder, KrishiKalpa** | Increasing farmers income, building ecosystem partners for farmers |
| **Keynote speaker** | **Srivatsa Sreenivasa Rao<br>CEO & Founder, TraceX** | Achieving positive carbon foot printing in block chain, traceability |
| **Keynote speaker** | **Rahul Prakash<br>CEO & Founder, Amal Farm** | Achieving positive carbon foot printing in GI tagged products ecommerce |
| **Keynote speaker** | **Shashank<br>CEO & Founder, Dehaat** | Achieving positive carbon foot printing in Organic fertilizer manufacturing |
| **Keynote speaker** | **Dr Mahender Kondapalkala<br>CEO & Founder, Greenbliss Agro** | Achieving positive carbon foot printing in Organic fertilizer manufacturing |
| **Keynote speaker** | **Rajesh Ranjan, CEO NabVentures** | Agri startups working in sustainability and achieving net zero emissions goals |
| **Keynote speaker** | **Jinesh Shah,<br>Partner,Omnivore** | Agri startups working in sustainability and achieving net zero emissions goals |
| | **Felicitations** | |

**TECHNICAL SESSION /PANEL DISCUSSIONS 5**
**2.00 PM TO 4.00 PM , Dated: 26-11-2023**
**VENUE -MAIN HALL, TMA Pai International Convention Centre, Mangalore, Karnataka**

***The focus of this session will be on the recent advances made and tools and techniques available for* Phenomics and Genomics approach of decarbonizing develop disruptive technologies to meet goal of decarbonisation, Plant Photosynthesis.-**

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| **Opening Remarks-Chairperson** | | Dr. Satendra K Mangrauthia<br>Senior Scientist and Genomics Expert, ICAR-IIRR, Hyderabad |
| | Moderator | |
| | Co Chairman | Dr. Upendra Kumar, Senior Scientist, ICAR-NRRI, Cuttack |
| | Rapporteur | TBC |
| **Keynote speaker** | Dr B. Sailaja, University of Georgia, USA | Genomic and Genome Editing for sustainable agriculture |
| **Keynote speaker** | Dr Akshaya Biswal (CIMMYT, Mexico) | Genomic and Genome Editing for sustainable agriculture |
| **Keynote speaker** | Dr Manish Solanki (IIRR) | Genomic and Genome Editing for sustainable agriculture |
| **Keynote speaker** | Dr. Upendra Kumar, Senior Scientist, ICAR-NRRI, Cuttack | Short-circuit pathways in the nitrogen cycle: Opportunities and Challenges |
| **Keynote speaker** | Dr. Hemant Purohit,<br>VP- HiMedia Microbiome Research Center, | Strategizing for developing low carbon footprint at Microbiome Research Center |
| **Keynote speaker** | Dr. Narsi Reddy<br>Co-Founder and MD, URBAN KISSAN, Hyderabad | Microbiomes For Decarbonizing |
| **Keynote speaker** | Dr. C Girish<br>Senior Scientist, ICAR-IIRR, Hyderabad | Genomic assisted breeding for direct Seeded rice traits improvement |
| **Keynote speaker** | Dr. Anantha<br>Senior Scientist, ICAR-IIRR, Hyderabad | Developing nutrient /stress-tolerant varieties using molecular approaches |
| | **Felicitations** | |

**TECHNICAL SESSION /PANEL DISCUSSIONS 6**
**2.00 PM TO 4.30 PM , Dated: 26-11-2023**
**VENUE -MAIN HALL, TMA Pai International Convention Centre, Mangalore, Karnataka**

**Carbon sequestration happens through various natural processes, including plant photosynthesis, soil organic matter formation, ocean uptake, and geological sequestration. By understanding these processes, we can develop strategies to enhance carbon sequestration and mitigate the impacts of climate change.**
***The focus of this session will be on the recent advances made and tools and techniques available for* approach of decarbonizing develop disruptive technologies to meet goal of decarbonisation,**

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| **Opening Remarks-Chairperson** | | Dr. Ranjan Bhattacharyya, ITPS, UNFAO, Rome, Italy |
| | **Moderator** | Dr. Pramod Jha, PS, ICA-IISS, Bhopal |
| | **Co Chairman** | Ms Daria Bunu, Associate R&D Specialist, NTTDATA, Japan |
| | **Rapporteur** | TBC |
| **Keynote speaker** | **Dr. Amanullah The University of Agriculture Peshawar, Pakistan** | Carbon Sequestration - A Vital Component of Decarbonization |
| **Keynote speaker** | **Dr. Ranjan Bhattacharyya PSM NRL, Building, ICAR-IARI, New Delhi** | Agricultural best management practices for Soil carbon sequestration in the northern India |
| **Keynote speaker** | Dr. Pramod Jha, PS, ICAR-IISS, Bhopal | Carbon sequestration in agricultural soils: Issues and strategies |
| **Keynote speaker** | **P. H.Vaidya Professor, Vasantrao Naik Marathwada Krishi Vidyapeeth Parbhani** | Pond silt characterization for possible carbon sequestration |
| **Keynote speaker** | **Dr. Brajendra PS, ICAR-IIRR, Hyderabad** | Carbon dynamics in agroforestry systems |
| **Keynote speaker** | **Hemendra Mathur Co-Founder, ThinkAg** | Policy Interventions in carbon trading |
| **Keynote speaker** | **Dr. Ajeet kumar, SRI, PUSA** | Strategies To Enhance Carbon Sequestration Through Sugarcane Cultivation and Mitigate The Impacts Of Climate Change |
| **Keynote speaker** | **Manoj Kumar R , CEO & Founder, Capsber Agriscience** | Achieving positive carbon foot printing in Organic fertilizer manufacturing |
| **Keynote speaker** | **Dr. K Surekha PrinciPAL Scientist, ICAR-IIRR, Hyderabad** | 4r stewardship-based phosphorus fertilization -A review |
| **Lead Speaker** | **Kalikant Choudhary Deputy Project Director, Atma ,Siwan** | Strategizing an innovative Integrated wetland development scheme in Bihar |

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| | **Felicitations** |

## TECHNICAL SESSION /PANEL DISCUSSIONS 7
## 4.30 PM TO 7.00 PM , Dated: 26-11-2023
## VENUE -MAIN HALL, TMA Pai International Convention Centre, Mangalore, Karnataka

**Developing carbon credit trading platform Soil carbon modeling, Carbon accounting, Carbon sequestration, Soil carbon fractionation, soil organic carbon (SOC) stock-increasing SOC levels is an important strategy for decarbonizing agriculture and mitigating the impacts of climate change. By implementing practices that promote SOC, farmers can help to build more sustainable and resilient agricultural systems that benefit both people and the planet.**
***The focus of this session will be on the recent advances made and tools and techniques available for* approach of decarbonizing develop disruptive technologies to meet goal of decarbonization,**

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| **Opening Remarks-Chairperson** | | Santosh Srikantaiah,<br>Head of Innovation, NTTDATA, India |
| | **Moderator** | Dr. Ritesh Sharma<br>PS, BEDF, Meerut |
| | **Co Chairman** | Dr. Sairam Reddy, Founder and CEO<br>Urban Kisaan |
| | **Rapporteur** | TBC |
| **Keynote speaker** | **Dr. Sairam Reddy, Founder and CEO Urban Kisaan** | Vertical farming for low carbon footprint |
| **Keynote speaker** | **Dr. Bishnu Deo Singh KVK, Munger** | Millets for nutritional and low carbon footprint |
| **Keynote speaker** | **Santosh Srikantaiah, Head of Innovation, NTTDATA, India** | Developing carbon crediting platform using AI |
| **Keynote speaker** | **Ms Daria Bunu, Associate R&D Specialist, NTTDATA, Japan** | USING AI IN CARBON TRADING |
| **Keynote speaker** | **Dr. Ritesh Sharma PS, BEDF, Meerut** | Organic Farming in basmati rices |
| **Keynote speaker** | **Dr. A K Vishwakarma PC, ICAR(Niger and Sesame)** | Low-input sustainable agriculture |
| **Keynote speaker** | **Dr. Varsha BAU, Ranchi** | Foods for fossil fuel decarbonising |
| | **Felicitations** | |

**TECHNICAL SESSION /PANEL DISCUSSIONS 8**
**8.30 AM TO 9.30 AM , Dated: 27-11-2023**
**VENUE -MAIN HALL, TMA Pai International Convention Centre ,Mangalore, Karnataka**

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| | **Creating knowledge base and awareness About carbon emissions data, accounting rules, technologies for carbon capture, storage and utilization, quantifying carbon emissions, targets, actions, schemes, policies for emissions reduction in agriculture, and setting emissions reduction targets *The focus of this session will be on the recent advances made and tools and techniques available for* approach of decarbonizing develop disruptive technologies to meet goal of decarbonisation,** | |
| **Opening Remarks-Chairperson** | | Professor Bhanooduth Lalljee<br>University of Mauritius. |
| | Moderator | Dr. P Muthuraman, Head, TTT, ICAR-IIRR, Hyderabad |
| | Co Chairman | Dr. A Amarender Reddy,<br><br>Joint Director, School of Crop Health Policy Support Research, ICAR-NIBSM, Raipur |
| | Rapporteur | TBC |
| **Keynote speaker** | Dr. A Amarender Reddy, | Agricultural policy scenario in India@75 |
| **Keynote speaker** | Dr. P Jeykumar<br>ICAR-IIRR, Hyderabad | Biocontrol agents in disease and pest management |
| **Keynote speaker** | Dr. P Muthuraman, Head, TTT, ICAR-IIRR, Hyderabad | Readying small-scale farmers for carbon trading |
| **Keynote speaker** | Dr. Amtul Waris<br>ICAR-IIRR, Hyderabad | Climate smart villages |
| **Keynote speaker** | Dr. B Nirmala, Senior Scientist, ICAR-IIRR, Hyderabad | Agroecosystem approaches for climate resilience |
| **Keynote speaker** | Dr. Ritesh Sharma<br>PS, BEDF, APEDA | Opportunities and Challenges of Meeting Carbon Adjustment Mechanisms in Agricultural Export |
| | **Felicitations** | |

**TECHNICAL SESSION /PANEL DISCUSSIONS 9**
**9.30AM TO 11.00AM , Dated: 27-11-2023**
**VENUE -MAIN HALL, TMA Pai International Convention Centre, Mangalore, Karnataka**

**Carbon footprint analysis Per capita carbon emissions, carbon accounting system and assessment processes and methodologies in agriculture, carbon capture storage and sequestration strategies in agriculture. Developing a carbon trading mechanism, certifying emissions reductions *The focus of this session will be on the recent advances made and tools and techniques available for* approach of decarbonizing develop disruptive technologies to meet goal of decarbonisation,**

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| **Opening Remarks-Chairperson** | | Dr. Mohammad Jawaid<br>UNIVERSITI TEKNOLOGI MALAYSIA (UTM) |
| | **Moderator** | Dr. Gobinath<br>Scientist, ICAR-IIRR, Hyderabad |
| | **Co Chairman** | Siddhartha Kumar Singh, Principal Scientist, Agronomy, ICAR-Indian Institute of Vegetable Research,Varanasi |
| | **Rapporteur** | TBC |
| **Keynote speaker** | **Siddhartha Kumar Singh , Principal Scientist, Agronomy, ICAR-Indian Institute of Vegetable Research,Varanasi** | Organic farming for sustainable vegetable production and livelihood enhancement |
| **Keynote speaker** | **Dr. M Azam<br>PS, ICAR-IIRR, Hyderabad** | Nano Silica products for achieving storage efficiencies |
| **Keynote speaker** | **Dr. Gobinath<br>Scientist, ICAR-IIRR, Hyderabad** | Nano fertilizers for achieving low carbon footprinting |
| **Keynote speaker** | **Dr. Kemparaju<br>Scientist, ICAR-IIRR, Hyderabad** | Biodiversity, ecosystem, and genetic resources |
| **Keynote speaker** | **Mr. Pankaj Kumar<br>KVK, Katihar** | Millets for nutritional and food security for small and marginal farmers |
| **Keynote speaker** | **Dr. Humera Quadriya<br>Krshitantra, Consultant** | Microbes for decarbonizing |
| | **Felicitations** | |