



14th *Swadesh Prem Jagriti Sangosthi- 2022*



**National Conference on
Climate Resilient and Sustainable Development of
Horticulture**

May 28-31, 2022, CSAUA&T, Kanpur, Uttar Pradesh, India

PROGRAMME

Organised by



ASM Foundation, New Delhi

&



**Chandra Shekhar Azad University of Agriculture &
Technology, Kanpur-208002, Uttar Pradesh**

In collaboration with



With support of



ABOUT THE ORGANISERS OF THE CONFERENCE



ASM Foundation, an ISO 9001:2008 certified organization is committed to economic development and knowledge empowerment of people through various activities. It has head quarter at New Delhi, India. The ASM Foundation has successfully organised Global and National Conferences, in the country and is known nationally and internationally. The Foundation, besides organising the conferences, exhibitions, and farmer's friendly activities, is committed to education, health care and economic development. The Foundation also confers awards in various categories to recognise the contribution of individuals/ organization. The effort of the Foundation is recognised by conferring awards by many institutions. www.ltamitsingh.org



Chandra Shekhar Azad University of Agriculture and Technology (CSAUAT), Kanpur, started its journey in 1893 as Revenue Officers' Training Center, became Agriculture College Cownpore (Kanpur) in 1906, popularly known as '**Patther College**', which was upgraded to U.P. Institute of Agriculture Science in 1969, and subsequently, the university in 1975. The University offers degree programs in Agriculture, Forestry, Horticulture, Community Science, Fisheries Science, Dairy Tech., Ag. Engg., Mech. Engg., Computer Science, Elect. & Comm. Engg., and Masters in Agri. Business, Agriculture, Home Science, Horticulture, through its 8 constituent colleges. Research is done through 4 Research Stations, 5 Regional Research Stations and 4 Crop Research Units, supported by fourteen Research cum Seed Production Farms. The university has developed 295 cultivars with their agro-technologies. National Academy of Agricultural Sciences honoured the University, in 2015, for developing rust resistant dwarf varieties of wheat, which contributed to green revolution. Every year a significant number of agriculture graduates of this university get awarded with ICAR-JRF and SRF for pursuing higher education. Development work of the University is spread over 22 districts of the States.

ABOUT THE COLLABORATORS



Jain Irrigation Systems Ltd. known as **JISL**, India is a multinational organization with global presence in 120 countries, provides solution for efficient management of water, protected cultivation, quality planting material, farmers access to market and processing, solar energy, waste utilization, and education. The company is one of the largest agro-based company in the world and has many innovations to its credit. In recognition company has been conferred with highest national award and much International recognition. www.jains.com



The Trust for Advancement of Agricultural Sciences (TAAS) was established on October 17, 2002 for harnessing the agricultural sciences for the welfare of the people through scientific interactions and partnerships. The TAAS acts as think tank on key policy issues relating to agricultural research for development. The main activities include organizing foundation day lectures, special lectures, brain storming sessions/ symposia/ seminars/ workshops on important themes, developing strategy papers on key policy matters, promoting farmers' innovations and conferring Dr. M.S. Swaminathan Award for Leadership in Agriculture. www.taas.in



Confederation of Horticulture Association of India (CHAI), an ISO 9001:2015 certified, non-profit organization, is a forum of stakeholders in horticulture /agriculture to work together in mission mode with set goals and objectives. Aims of CHAI are the furtherance of horticulture/ agriculture research and development, through; conduct and support in organizing of National/ International conference, workshops, publication of journal- International Journal of Innovative Horticulture. To bring the competitiveness, CHAI has instituted various awards to motivate the innovators for the excellence in research, education, extension, teaching and farming. www.confedhorti.org



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**National Conference on
Climate Resilient and Sustainable Development of
Horticulture**

May 28-31, 2022, CSAUA&T, Kanpur, Uttar Pradesh, India

Tentative Programme

Day Zero: Friday, 27th May, 2022

16.00-19.00. **Registration of the Delegates**

Day One: Saturday, 28th May, 2022

08.00-09.00 **Registration of Delegates**

09.00-11.00 **Inaugural Session**

11.00-11.15 **Networking Tea**

11.15-13.00 **Plenary Session-1 (Hall No.1) :** Paradigms in Climate Resilient and Sustainable Development of Horticulture - Challenges and Options

13.00-14.00 **Networking Lunch**

14.00-16.00 **Plenary Session-2 (Hall No. 1):** Paradigms in Climate Resilient and Sustainable Development of Horticulture - Challenges and Options

16.00-18.00 **Plenary Session-3 (Hall No. 1):** Paradigms in Climate Resilient and Sustainable Development of Horticulture - Challenges and Options

19.00- 20.30 **AGCM of CHAI & Award Function**

20.30-21.30 **Networking Dinner** -Hosted by Honourable Vice Chancellor, CSAU

Day Two : Sunday, 29th May, 2022

9.00-11.00 **Technical Session-2 (Hall No. 1):** Technological Challenges and Approaches for Climate Resilient Development of Horticulture

9.00-13.00 **Technical Session-3 (Hall No. 2):** Innovations in Production Systems Management of Perennial Horticulture for Climate Resilient and Sustainability

9.00-13.00 **Technical Session-4 (Hall No. 3):** Innovations in Production System Management for Vegetables, Tubers, Spices and Flowers for Climate Resilience and Sustainability

11.00-13.00 **Technical Session-5 (Hall No. 1):** Innovations for Climate Smart Production Systems in Horticulture for Resilience to Climate Change

- 13.00-14.00 **Networking Lunch**
- 14.00-16.00 **Technical Session-6 (Hall No. 1):** Varietal Improvement for Resilience to Climate Change and Sustainability in Production
- 16.00-18.00 **Technical Session-8 (Hall No. 1):** Nutrient Management for Enhancing Resilience to Climate Change
- 14.00- 16.00 **Technical session-7 (Hall No. 2):** Water Management for Enhancing Resilience to Climate Change
- 16.00-18.00 **Technical session-10 (Hall No. 2):** Human Resource Development and Diffusion of Knowledge for Technological Changes for Climate Resilient and Sustainable Development of Horticulture
- 14.00-18.00 **Technical Session-9(Hall No. 3):** Plant Health Management for Resilience to Climate Change and Sustainability in production

Day Three: Monday, 30th May, 2022

- 10.00-12.00 **Technical Session 13 (Hall No. 1):** Farmers' Participatory Discussion for Climate Resilient and Sustainable Development of Horticulture
- 12.00-13.00 **Technical Session-14 (Hall No.1):** Knowledge Empowerment of Farmers through Quiz
- 9.00-13.00 **Technical Session-11 (Hall No. 2):** Digital Horticulture for resilience to Climate Change and Sustainability
- 11.00-13.00 **Technical Session-12 (Hall No. 2)** Post harvest management Access to Market and Value Chain Management for Sustainable Production of Horticulture Crops
- 13.00-14.00 **Networking Lunch**
- 14.30-17.00 **Valedictory and National Award Function**
- 17.00-17.30 **Photography: All the Delegates and Organisers Team**
- 17.30-18.30 **Appreciation Meeting for Organisers**
- 19.30-21.00 **Preeti Bhoj - Hosted by Managing Trustee, ASM Foundation, New Delhi**

Day Four: Tuesday, 31st May, 2022

- 9.00-17.00 **Field Visits for the Delegates, Interested delegates**

National Conference on

Climate Resilient and Sustainable Development of Horticulture

28-31 May, 2022

CSAUA&T, Kanpur, Uttar Pradesh, India

Programme

Day Zero: Friday, 27th May, 2022

16.00-19.00 **Registration of the Delegates**

Day One: Saturday, 28th May, 2022

08.00-09.00 **Registration of Delegates**

09.00-11.00 **Inaugural Session**

09.00-09.05 Invocation & Floral Welcome of the Chief Guest and Guests

09.05-09.10 Welcome Address : **Dr. D. R. Singh**, Vice Chancellor, CSAUAT, Kanpur

09.10-09.15 Lighting of lamp and Tribute : **Chief Guest and Guests**

09.15-09.20 About Saheed Lt. Amit Singh : Mr Animaan Singh, Student, USA

09.20-09.25 About the Conference : **Dr. H. P. Singh**, Ex-DDG & Chairman, CHAI

09.25-09.32 **Conferment of CHAI Honoured Fellow-2022: Chairman CHAI**
Dr. A. K. Srivastava, Chairman, ASRB, DARE, MoA&FW, New Delhi

09.32-9.46 **Blessings of the Guests of Honour**
Dr v Praveen Rao, VC, PJTSAU, Hyderabad, Telangana
Prof. (Dr.) K. P. Singh, VC, MJPRU, Bareilly, U.P.

09.46-10.05 **Conferment of CHAI Awards-2022**

CHAI-Life Time Achievement Award-2022

Dr. T. Janakiram, VC, Dr.YSRHU, Venkataramannagudem, A.P.

CHAI- Life Time Recognition Award-2022

Dr. Anoop K. Srivastava, CCRI, Nagpur

CHAI-Honorary Fellow-2022

Dr. B. Neeraja Prabhakar, VC, SKLTSHU, Mulugu, Siddipet Dist

Dr. R. K. Singh, Former Director/VC, IVRI, Bareilly, U.P.

Dr. Narendra Kumar Gontia, VC, JAU, Junagadh, Gujarat

Prof. (Dr.) K. P. Singh, VC, MJPRU, Bareilly, U.P.

10.05-10.15 **Conferment of ASM Foundation Awards**

Amit Krishi Rishi Award

Dr. Ashok Dalwai, IAS, CEO, NRAA, MoA&FW, New Delhi

Amit Padma Jagriti Award

Sahyadri Farmers' Producer Company Ltd. Adgaon, Nashik, Maharashtra

Amit Prabudh Manishi Award

Prof. (Dr.) K. P. Singh, Vice-Chancellor, MJPRU, Bareilly, U.P.

10.15-10.25. Presidential Address Dr. A. K. Srivastava, Chairman, ASRB, DARE,
MoA&FW, New Delhi

10.25-10.30 Release of Publications : **Chief Guest and Guests on the dais**
Shodh Chintan-2022, Vol.XIV
Book of Abstract-2022
Proceeding-2020-2021
CD of the Event

10.30-10.55 Address of the Chief Guest : Dr. Ashok Dalwai, CEO, NRAA, MoA&FW, Delhi

10.55-11.00 Vote of Thanks : Dr. **Karam Hussain**, DR, CSAUA&T, Kanpur

11.00-11.15 **Networking Tea**

11.15-13.00 **Plenary Session -1: (Hall No 1) Paradigms in Climate Resilient and Sustainable Development of Horticulture - Challenges and Options**

Chairman : Dr R K Singh, Former Director/VC, IVRI, Bareilly, U.P.

Co-chairman : Dr. K. K. Kumar, Former Director, NRC on Licthi

Co-chairman : Dr B. N. S. Murthy, IIHR, Hesaraghatta Lake Post, Bengaluru

Convener : Dr. K. Suresh, PS, IOPR, West Godavari, A.P.

Convener : Dr Ajay Kumar Sharma, NRC Grape, Pune

1. Plenary Lecture

1.1.1 Climate resilient and sustainable development of horticulture-Options and Opportunities-
Dr. H. P. Singh, Former DDG (Horti) & Chairman (CHAI), New Delhi

1.1.2 Role of Integrated Aquaculture – Crop/Horticulture - Livestock systems (IACHLS) in
improving family farm production and income and addressing food security- **Dr. Dilip
Kumar**, Former Director, CIFE, Mumbai

1.1.3 Secondary agriculture: An approach for sustainable development in horticulture- **Dinesh
Kumar & Others**, PS, CCRI, Nagpur, Maharashtra

Discussion and Resolutions

13.00-14.00 **Networking Lunch**

14.00-16.00 **Plenary Session -2:(Hall No 1): Paradigms in Climate Resilient and Sustainable Development of Horticulture - Challenges and Options**

Chairman : **Dr. A. K. Srivastava**, Chairman, ASRB, MoA&FW, New Delhi

Co-chairman : Dr. R. G. Somkuwar, NRC for Grapes, Pune, Maharashtra

Co-chairman : Dr. M. Feza, BAU, Sabour, Bhagalpur, Bihar

Convener : Dr. H. Usha Nandhini Devi, TAU, Coimbatore

Convener : Dr. Harshawardhan Choudhary, IARI, New Delhi

2. Plenary Lecture

2.1.1 Horticulture – A Panacea for Current Challenges of Farmers, Consumers and Ecology - **Dr. Ashok Dalwai**, CEO, NRAA, New Delhi

2.1.2 Strategic development of horticulture in Telangana for resilience to climate change- **Dr. B. Neeraja Prabakar**, VC, SKLTSU, Siddipet District, Telangana

2.1.3 Integrating livestock with Horticulture for climate resilience and sustainability of horticulture production- **Dr. R. K. Singh**, Former Director, IIVR, Izatnagar, Bareilly

2.1.4 Strategic Research and Technological changes for climate resilient and sustainable Horticulture- **Dr. Janakiram**, VC, Dr YSRHU, Venkataramannagudem, A.P.

Discussion and Resolutions

16.00-18.00 **Plenary Session -3:(Hall No. 1) Paradigms in Climate Resilient and Sustainable Development of Horticulture - Challenges and Options**

Chairman : **Dr. Ashok Dalwai** , IAS, CEO, NRAA, MoA&FW, New Delhi

Co-chairperson: Dr. Babita Singh, Project Manager, GEF, Rainforest Alliance,

Co-chairman : Dr. Karam Hussain, DR, CSAUA&T, Kanpur

Convener : Dr. V. Suchitra, HRS, Adilabad, Telangana

Convener : Dr. Babita Chaudhary, CPRI, RS, Modipuram, Meerut, U.P.

3. Plenary Lecture

3.1.1 Milk-Fruits Based Composite Products: Novel Approach for Harnessing the Therapeutic Virtues of Milk and Fruits - **Ashish K. Singh and A. K. Srivastava**, National Dairy Research Institute, Karnal

3.1.2 Strategic approaches for climate resilient and sustainable development of horticulture through technological changes- **Dr. V. Praveen Rao**, VC, PJTSAU, Rajendranagar, Hyderabad, Telangana

3.1.3 Innovative Cutting Edge Technologies for Intensive and Integrated Sustainable Management of Horticultural Farm- **K. P. Singh**, VC, MJPRU, Bareilly, U.P.

Discussion and Resolutions

19.00- 20.30 AGCM of CHAI & Award Function

19.00-19.10	Welcome	:	Dr. Vishal Nath, OSD, IARI, Jharkhand
19.10-19.20	Report of CHAI	:	Binod Anand, CEO, CHAI
19.20-19.30	Report of Editor	:	Dr H Choudhary, Managing Editor
19.40-19.45	Award & Citation presentation	:	Dr. V. P. Singh, Former, Director
19.45-20.00	Conferment of Awards 2022 - Chief Guest Conferment of Fellowships - Chief Guest		

1. CHAI- Dr. R.S. Paroda Award

Dr. Dilip Ghosh, Director, CCRI, Nagpur, Maharashtra

2. CHAI- Dr. B.H. Jain Award

Dr. Chandeshwar Tiwari, Director Extension, VCSGUUHF, Bharsar, Pauri, UA
Dr. Babita Singh, Project Manager, GEF, Rainforest Alliance, New Delhi

3. CHAI-Ramnandan Babu Award

Dr. Kariyanna, Hitkari Horticulture Foundation, Bangalore

4. CHAI- Kautilya Lokniti Award-22

Professor(Dr) Rajiv Sharma

5 CHAI Achievers' Award-2022

Prof. Tusar Kanti Behera, Director, IIVR, Jakhini, Shahanshapur, Varanasi, U.P.
Dr. Prabhat Kumar, Horticulture Commissioner, GoI, MoA&FW, New Delhi

6. CHAI-Appreciation Award

Dr. Vijay Mahajan, DOGR, Rajgurunagar, Pune, Maharashtra

7. CHAI-JISL Fellowship Award

Dr. L. Pugalendhi, Dean, HC&RI, TNAU, Coimbatore

8. CHAI Dr. RAY Best Dissertation Award-2022

Dr. Manish Kumar, IARI, PG Outreach Programme at IIHR, Bengaluru

For his dissertation entitled “**Incorporation of phytophthora root rot resistance genes into cytoplasmic and genic male sterile (cgms) line through marker assisted selection in chilli (*Capsicum annuum* L.)**”

9. CHAI- Dr. Kriti Singh Best Paper Award-2022

Narendra Chaudhary, S. S. Sindhu, Ramesh Kumar, T. N. Saha, D. V. S. Raju and Ajay Arora
National Research Centre on Seed Spices, Tabiji, Ajmer. For scientific paper entitled “**Effect of 5-sulfosalicylic acid on antioxidant activity during senescence in Oriental lily**”, IJH, 10(2)

10. CHAI-Institutional Fellow Award-2022

Sri Konda Laxman Telangana State Horticultural University, VC, SKLTSHU, Siddipet, Telangana
Mahatma Jyotiba Phule Rohilkhand University, Vice Chancellor, Bareilly, U.P.

11. Conferment of Fellow of CHAI-2022

Dr. R. G. Somkuwar, NRC for Grapes, Pune, Maharashtra

Dr. K. Suresh, PS, IIOPR, West Godavari, A.P.

Dr. A. Subbiah, Asst. Professor, GRS, Anaimalayanpatty, Theni District

Dr. Harikanth Porika, Scientist, FRS, Sangareddy, Israel's MASHAV Alumni

Dr. Ravi Kumar Mathur, IIOPR, West Godavari District, A.P.

Prof. Tusar Kanti Behera, Director, IIVR, Jakhini, Shahanshapur, Varanasi, U.P.

Dr. H. Usha Nandhini Devi, Assistant Professor, DVSHC&RI, Coimbatore

Dr. V. Suchitra, HRS, Adilabad, Telangana

CHAI-Associate Fellow

Dr. Popy Bora, Scientist, AAU, Jorhat, Assam

19.20-19.25 **Proposals on Agenda and Discussion**

19.25-19.30 **Remarks Guest of Honour:**

19.30-19.35 **Remarks of the distinguished Fellows**

19.35-19.45 **Remarks of Chief Guest** : Dr. A. K. Srivastava, CHAI Honoured Fellow, Chairman, ASRB, New Delhi

19.45-19.55 **Concluding Remarks** : Dr. H. P. Singh, Founder and Chairman, CHAI

19.55-20.00 **Vote of Thanks** : Dr. J. S. Parihar, Former Director, ISRO, Ahmedabad

20.30-21.30 **Networking Dinner - hosted by CHAI**

Day Two: Sunday, 29th May, 2022

9.00-11.00 **Technical Session-2 (Hall No.1): Technological Challenges and Approaches for Climate Resilient Development of Horticulture**

Chairman : **Dr. Dilip Kumar**, Former Director, CIFE, Mumbai

Co-chairman : Major Singh, DOGR, Rajgurunagar, Pune

- Co-chairman : Dr. Vijay K. Yadav, JDR, CSAUAT, Kanpur
- Convener : A. K. Singh, FSRCHPR, Ranchi, Jharkhand
- Convener : Dr. Swati Saha, IARI, RS, Pune, Maharashtra

2.1 Keynote Presentation

- 2.1.1 Approaches for Climate resilient and sustainability development of horticulture in Gujarat- **Dr. A.R. Pathak**, Former VC, JAU, Junagadh, Gujarat
- 2.1.2 Strategies approaches for climate resilient and sustainable development of horticulture – a case study of A.P.- **Dr. Chiranjiv Choudhary**, Principal Chief Conservator of Forests, Forest Dept., A.P.
- 2.1.4 Challenges and Opportunities in Horticulture- **Sanjai K. Dwivedi**, DRDO, New Delhi
- 2.1.5 Regenerative Agriculture including Horticulture for Resilience to Climate Change and Sustainability- **Babita Singh and H. P. Singh**, CHAI, New Delhi
- 2.1.6 Diversification Of Alliums In View Of Present Climatic Conditions In India **Vijay Mahajan, and others, DOGR**, Rajgurunagar, Pune

2.2 Oral Presentation

- 2.2.1 Rainfall Variability and Probability Analysis for Identifying Planting Season at High Rainfall Tract of Northern Agro-Climatic Zone of Kerala- **K. Kandiannan & Others**, IISR, Kozhikode, Kerala
- 2.2.2 Cocoa (*Theobroma cacao* L.) the agro forestry crop and its resilience to palm based cropping system- **S. Elaine Apshara**, CPCRI, Vittal, Karnataka
- 2.2.3 Seasonal variation (Summer and Rainy Season) in Oil Content and Fatty Acid Composition in Oil Palm Hybrids- **K. Suresh & Others**, IIOPR, Pedavegi, A.P.
- 2.2.4 Climate Change and its effects on horticulture and agriculture crops in Uttar Pradesh- **Ajay Kumar & Others**, CSAUA&T, Kanpur
- 2.2.5 Effect of Global Warming Specially on Horticulture Crop- **Naushad Khan & Others**, CSAUA&T, Kanpur
- 2.2.6 Climate Change and Adaptation Strategies in Horticultural Crops- **Naushad Khan & Others**, CSAUA&T, Kanpur
- 2.2.7 Nutritional and Therapeutic Values of (*Trigonellafoenumgraecum*) Methi- **Rana Pratap Singh & Others**, CSAUA&T, Kanpur
- 2.2.8 Wetland Horticulture: Potential Future Crops- **Deepa H. Dwivedi**, Professor, Department of Horticulture, School for Agriculture Science and Technology, Babasaheb Bhimrao Ambedkar University, Lucknow

Discussion and Resolution

9.00-13.00 **Technical Session-3 (Hall No.2): Innovations in Production Systems Management of Perennial Horticulture for Climate Resilient and Sustainability**

Chairman : **Dr P. Rethinam**, Plantation Crops Specialist and Former Executive Chairman, APCC, Jakarta

Co-chairman : Dr R. K. Mathur, IOPR, Pedavegi, West Godavari District, A.P.

Co-chairman : - Prof. P. L. Saroj, Director, CISH, Lucknow

Convener : S. Elain Apshara, CPCRI, Vittal, Karnataka

Convener : S. S. Meena, NRC on Seed Spices, Tabiji, Ajmer, Rajasthan

Convenor. : Dr. Kundan Kishore, PS, FIAHS, CHES, Bhubaneswar

Convenor. :DrKrishna Prakash -ICAR-IARI, Gauria Karma, Hazaribagh

3.1 Keynote Presentation

- 3.1.1 Technological Options for Sustainable Horticultural Production Management System in Wastelands- **D. R. Singh**, CSAU A&T, Kanpur
- 3.1.2 Knowledge diffusion for sustainable development of horticulture- **Suresh K. Malhotra**, Project Director, ICAR-Directorate of Knowledge Management in Agriculture and Former Agriculture Commissioner, MoA&FW, GoI, New Delhi
- 3.1.3 Strategies and approaches for climate resilient and sustainable production of Litchi- **Vishal Nath & Others**, IARI, Jharkhand, Gauria Karma, Hazaribagh
- 3.1.4 Strategies for climate resilient and sustainable development of Oil Pal- **K. Manorama and R. K. Mathur**, IOPR, Pedavegi, West Godavari District, A.P.
- 3.1.5 Climate resilient and sustainable production of mango and guava in India- **M. Sankaran & Others**, PS, IIHR, Bengluru
- 3.1.6 Strategic Approaches for Climate Resilient and Sustainable Production of Plantation crops in India- **P. Rethinam & Others**, Plantation Crops Specialist and Former Executive Chairman, APCC, Jakarta
- 3.1.7 Approaches for sustainable development of Arid Horticulture- **Prof. P. L. Saroj**, Director, CISH, Lucknow
- 3.1.8 Climate Resilient Approaches for Sustainable Coconut Production- **Anitha Karun**, and K. Muralidharan, Director, ICAR-CPCRI, Kasaragod
- 3.1.9 Post-Independence Scenario of Table Grape Cultivation in India- **Dr. R. G. Somkuwar**, Director, NRC for Grapes, Pune, Maharashtra

- 3.1.10 Phenophase based interventions for enhanced physiological activity parameters contributing towards productivity of horticultural crops - **Dr. R. H. Laxman**, Kempapura, Bengaluru
- 3.1.11 Climate resilient sustainable technologies of dry-land fruits for economic and health security- **A. K. Singh**, CIAH-CHES, Godhra, Gujarat
- 3.1.12 Physiological understanding of abiotic and adoptive factors in production of sub-tropical fruits- **Dr. A. K. Trivedi**, PS, CISH, Rehmankhera, Lucknow
- 3.1.12 Emerging fruit crops for Domestic and International markets- **Dr. Kundan Kishore**, PS, FIAHS, CHES, Bhubaneswar

3.2 Oral Presentation

- 3.2.1 Sustainable production Moringa for improving the immunity system- **Dr. Sudha Vani**, Dr. YSRHU, A.P.
- 3.2.2 Role of Melatonin in flowering, fruit set and fruit ripening in fruit crops- **Ankit Kumar Pandey & Others**, BAU, Sabour, Bhagalpur
- 3.2.3 Gross return maximization through inclusion of vegetables crops as intercrops and application of bio agents in sole crop of banana in district Lakhimpur-Kheri of U.P.- **Pradeep Kumar Bisen & Others**, KVK-I, Lakhimpur –Kheri, CSAUA&T, Kanpur
- 3.2.4 A Super future fruit of India: Dragon Fruit- **Pragya Mishra & Others**, CSAUA&T, Kanpur, U.P.
- 3.2.5 Viticultural practices to prevent bunch compactness and improvement in quality and colour development in grapes cv. Red Globe **H.K. Porika and others**, Scientist, Fruit Research Station, SKLTSHU, Sangareddy, Telangana
- 3.2.6 Influence of Gamma irradiation on germination, growth and physiological traits of Dragon fruit. **Kuldeep K Shukla and others** Deptt. of Fruit Science and Horticulture Technology, OUAT, and CHES (ICAR-IIHR), Bhubaneswar
- 3.2.7. Cultivation of Perennial Vegetables: Climate Resilience Approaches for Sustainable Production- **Krishna Prakash and Others** -ICAR-IARI, Gauria Karma, Hazaribagh

Discussion and Resolution

3.3 Poster Presentation

- 3.3.1 Neem Tree - A Must for Every Household for Sustainable Development- **Devendra Swaroop & Others**, CSAUA&T, KVK, Thariaon, Fatehpur (U.P.)

- 3.3.2 Intercropping of Azad Dhaniya-1 in Banana plantain crop- **Dr. Mohd. Suhail** & Others, CSAUA&T, Kanpur (U.P.)
- 3.3.3 Effect of Temperature Rise on Crop Growth & Productivity in Central Plain Zone in Uttar Pradesh- **Ajay Kumar** & Others, CSAUA&T, Kanpur
- 3.3.4 Economic impact of Agro-meteorological Advisories Services (AAS) on Onion and Garlic crop under Fatehpur district of UP- **Wasim Khan** & Others, KVK, Fatehpur
- 3.3.5 Doubling farmer's income through intercropping of garlic with sataver (*Asparagus racemosus*)- **Dr. Mohd. Suhail** & Others, CSAUA&T, Kanpur (U.P.)

9.00-13.00 **Technical Session-4 (Hall No.3): Innovations in Production System Management for Vegetables, Tubers, Spices and Flowers for Climate Resilience and Sustainability**

Chairman : **Dr. B. Neeraja Prabhakar**, VC, SKLTSHU, Mulugu, Siddipet
Dist-Telangana

Co-chairman : Dr. Tusar Kanti Behera, IIVR, Varanasi

Co-chairman : Dr. Arun K Johary, Former Director Dabur, New Delhi

Co chairman : Dr. K. V. Prasad, Director, DFR, CoAC, Pune, Maharashtra

Convener : D. C. Manjunatha Gowda and others, DOGR, Rajgurunagar, Pune

Convener : Dr P. K. Singh, Head Vegetable Section, CSAUAT Kanpur

Convenor : Ranjan Srivastava, GBPUA&T, Pantnagar, Uttarakhand

4.1 Keynote Presentation

- 4.1.1 Climate resilient and sustainable development of vegetables- **Dr. Bijendra Singh**, VC, ANDUA&, Kumarganj, Ayodhya
- 4.1.2 Strategies for Climate resilient and Sustainable Development of Horticulture- **Prabhat Kumar**, HC, KB, New Delhi
- 4.1.3 Impact & Improvement Strategies for Climate Resilience and Sustainability in Onion & Garlic- **Major Singh**, Vijay Mahajan and A. Thangasamy, DOGR, Rajgurunagar, Pune
- 4.1.4 Strategies approaches for climate resilient and sustainable production of Seed spices- **Dr. Gopal Lal**, Member (Agriculture), CWMA and Formerly Director NRC on Seed Spices, Ajmer, Rajasthan
- 4.1.5 Strategies approaches for climate resilient and sustainable production of potato- **Dr. Manoj Kumar**, Director, CPRI, Shimla, H.P.
- 4.1.6 Strategies approaches for climate resilient and sustainable production of Onion and Garlic- **Dr. P. K. Gupta**, Director, NHRDF, New Delhi
- 4.1.7 Strategies approaches for climate resilient and sustainable production of cut flowers- **Dr. Ranjan Srivastava**, GBPUA&T, Pantnagar, Uttarakhand

- 4.1.8 Strategies approaches for climate resilient and sustainable development of ornamental Horticulture- **Dr. K. V. Prasad**, Director, DFR, CoAC, Pune, Maharashtra
- 4.1.9 Economically Important Endangered, Rare and Threatened medicinal plants and their conservation - **Dr. Arun K Johary**, Former Director Dabur, New Delhi
- 4.1.10 Strategic Approaches for Climate Resilient production of Mushroom- **Dr. V. P. Sharma**, Director, DMR, Solan, H.P.
- 4.1.11 Strategies approaches for climate resilient and sustainable production of Spices- **Dr. K. Kandiannan & Others**, IISR, Kozhikode, Kerala
- 4.1.12 Recent progress in vegetable grafting - a tool to combat biotic stress- **L. Pugalendhi** and H. Usha Nandhini Devi, TNAU, Coimbatore

4.2 Oral Presentation

- 4.2.1 Identification of CMS-S male-sterile cytoplasm among the Bunching onion (*Allium fistulosum* L.) collections – **D. C. Manjunatha Gowda** and others, DOGR, Rajgurunagar, Pune
- 4.2.2 Underutilized vegetables for nutritional security – **Nimisha Awasthi & Others**, CSAUA&T, Kanpur
- 4.2.3 Effect of weather parameters on yield and YVMV incidence in Okra- **Dr. C. Sarada & Others**, HRS, Lam Farm, Guntur, DrYSRHU, Lam
- 4.2.4 Characterization of wild relatives of tomato- **Sourav Roy & Others***, Bidhan Chandra Krishi Viswavidyalaya, Mohanpur, West Bengal
- 4.2.5 Manifestation of heterosis for different in fruit characters tomato - **Chandan Karak & Others**, Bidhan Chandra Krishi Viswavidyalaya, Mohanpur
- 4.2.6 Brunt of climate change and spice crops: Community participation and resilience- **A. B. Sharangi¹* and S K Acharya²**, Bidhan Chandra Krishi Viswavidyalaya, Mohanpur, Nadia, West Bengal
- 4.2.7 Grafting eggplant cultivars on rootstock of cultivated variety can increase yield, extend harvest period and impart high tolerance in bacterial wilt infected field- **Imtinungsang Jamir & Others**, Bidhan Chandra Krishi Viswavidyalaya, Mohanpur, Nadia, West Bengal
- 4.2.8 Performance of Tomato (*Solanum lycopersicum* L.) var. *Arka rakshak* for Growth and Yield under Polyhouse in Tehri Garhwal, Uttarakhand- **Aalok G. Yewale¹, C. Tiwari² & Others**, ¹ Scientist/Subject Matter, KVK VCSG UUHF, Ranichauri, Tehri Garhwal
- 4.2.9 Assessment of yield of okra [*Abelmoschus esculentus* (L.)] variety VL Bhindi- 2 under improved agronomic practices in Western Himalaya of Uttarakhand- **Shikha & Others**, KVK, Ranichauri, VCSG UUHF, Tehri Garhwal, Uttarakhand, ²V.C.S.G. Uttarakhand University of Horticulture and Forestry, Bharsar, Pauri Garhwal, Uttarakhand
- 4.2.10 *Kharif* Chickpea: A New Crop for the Vegetable Purpose- **Gurumurthy S. & Others**, ICAR- National Institute of Abiotic Stress Management, Baramati, Pune, Maharashtra

- 4.2.11 Orchid based multi-cropping/ Vertical farming.-**Rakesh Kumar Singh,R. H. Ch. Sangma and D.R. Singh**, *ICAR-National research centre for Orchids Pakyong East Sikkim*
- 4.2.12 Ultra High Density Planting of Potato by using Sprouted Eye pieces under Tropical Climate-**Suchitra. V, A. Bhagwan and B.Neeraja Prabhakar**, Horticultural Research Station Adilabad Telangana
- 4.2.13 Evaluation of Different Onion Varieties for Growth, Yield Attributes and Yield **Arjun Lal Ola**. and others RLBCAU, Jhansi, Uttar Pradesh

Discussion and Resolution

4.3 Poster Presentation

- 4.3.1 Field evaluation of happy seeder with conventional sowing (farmer practices) in CRM adopted village-Jirauli Kala district Hathras- **Kamal Kant & Others**, KVK, Hathras
- 4.3.2 Front Line Demonstrations for computing Yield and Yield gap of wheat productivity in Hardoi district of U.P.- **D. K. Mishra & Others**, CSAUA&T, Kanpur
- 4.3.3 Dynamics of Organic Indian Spices to Meet the Nutritional Security during Pandemic Covid-19- **Sanjive Kr. Singh**, Nirankar and P. K. Singh, CSAUA&T, Kanpur
- 4.3.4 Role of Vegetable crops in Doubling Farmers' Income - **Balwant Singh Sachan**, and Others, Department of Agricultural Economics & Statistics, CSAUAT, Kanpur
- 4.3.5 Studies on early reaping of potato under changing climate and their effect on farmers income- **Amar Singh & Others**, CSAUA&T, Kanpur, U.P.
- 4.3.6 Assessment of the Increases work efficiency through Vegetable Plucker- **Rashmee Yadav & Others**, KVK Auraiya
- 4.3.7 Study on the Household Nutritional Security through Nutritional Garden- **Rashmee Yadav & Others**, KVK Auraiya
- 4.3.8 Emerging Challenges and Opportunities for Sustainable Horticulture-**Arvind Kumar & Others**, CSAUA&T, Kanpur, U.P.
- 4.3.9 Effect of Climate Change in Indian Horticulture-**Arvind Kumar & Others**, CSAUA&T, Kanpur, U.P.
- 4.3.10 Studies on Growth and Cultivation of Oyster Mushroom (*Pleurotus sajorcaju*)-**Prithvi Pal & Others**, CSAUA&T, Kanpur, U.P.
- 4.3.11 Response of different cultivars of vegetable pea (*Pisum sativum*) on pods production under changing climate-**Amar Singh & Others**, CSAUA&T, Kanpur, U.P.
- 4.3.12 Evaluation of suitable potato variety for higher yield in district Etawah-**V. B. Jaiswal & Others**, KVK, Etawah and CSAUA&T, Kanpur, U.P.

11.00-13.00 **Technical Session-5 (Hall No.1): Innovations for Climate Smart Production Systems in Horticulture for Resilience to Climate Change**

Chairman : **Dr. K. P. Singh**, VC, MJPRU, Bareilly, U.P.

Co-chairman : Dr. Gopal Lal, Member (Agriculture), CWMA

Co-chairman : Dr Arvind Kumar Singh, Director Extension, CSAUAT, Kanpur

Convener : A. K. Singh, CIAH-CHES, Godhra, Gujarat

Convener : Dr. Mahak Singh, Prof., Genetics & P Breeding, CSAUAT, Kanpur

5.1 Keynote Presentation

- 5.1.1 An experience in vegetable nursery for sustainable development of horticulture – Case study Haryana- **Dr. Manoj Kumar**, Joint Director Horticulture and Dr. Sudhir Kumar, Deputy Director Horticulture, Center of Excellence for Vegetables, Gharaunda, Karnal, Haryana.
- 5.1.2 Design and development of vertical horticulture and greenhouse technology for production of vegetables and flowers- **Dr. S. R. Singh**, PS, CISH, Rehmankhara, P.O. Kakori, Lucknow
- 5.1.3 Protected Cultivation Technologies: Play A Key Role for Climate Resilient and Sustainable Development of Horticultural Crops- **Dr. Awani Kumar Singh** and Dr. Indra Mani, PS, CPCT, IARI, New Delhi
- 5.1.4 Strategies approaches for climate resilient and sustainable production of potato seeds- **Dr. Bir Pal Singh**, Ex. Director, CPRI. Shimla, H.P.

Discussion and Resolution

5.2 Oral Presentation

- 5.2.1 Performance of Apple ber on different training systems- **P. H. Nikumbhe** & Others, NRC for Grapes, Pune; CAZRI, Jodhpur; Rajasthan
- 5.2.2 Effect of seedling uprooting time and pruning on yield and related traits in onion (*Allium cepa*L.)- **Y. P. Khade** & Others, DOGR, Pune, Maharashtra
- 5.2.3 Scientific nursery raising of directly sown cucurbitaceous crops: A way to enhancing income- **Sudhir Kumar** and Ashraf Ali Khan; National Agriculture Research Centre, Kalai, Aligarh & KVK, Aligarh, CSAUA&T, Kanpur
- 5.2.4 Effect of Gamma Irradiation on Induction of Novel Colour in Chrysanthemum (*Chrysanthemum morifolium*Ramat.)- **Tarak Nath Saha** & Others, DFR, Pune, Maharashtra
- 5.2.5 Strategies for uniform colour development in grapes under tropical conditions- **Ajay Kumar Sharma** & Others, NRC for Grapes, Pune

- 5.2.6 A successful Tissue Culture model of Banana- **Anil B. Patil**, Tissue Culture Laboratory, JISL, Jalgaon, Maharashtra
- 5.2.7 Efficacy of Agro Charger as yield enhancer in cumin and coriander- **N. Chaudhary & Others**, NRC on Seed Spices, Tabiji, Ajmer, Rajasthan
- 5.2.8 Effect of fruit thinning on fruit quality in banana variety Grand Nain- **Kalyansing B. Patil**, JISL, Jalgaon, Maharashtra
- 5.2.9 Light Emitting Diodes: A new reality in Horticulture- **Meikam Ichancha & Others**, Bidhan Chandra Krishi Viswavidyalaya, West Bengal

Discussion and Resolution

5.3 Poster Presentation

- 5.3.1 Effect of intercropping of vegetable crops as well as rice crop by changing the spacing in sugarcane crop in mid-plains of Uttar Pradesh- **Pradeep Kumar Bisen & Others**. *KVK-I, Lakhimpur –Kheri & CSAUA&T, Kanpur*
- 5.3.2 Environmental Sustainability through New System of Compositing- **Jitendra Singh & Others**, KVK, Thariaon, Fatehpur
- 5.3.3 Evaluation of bio-efficacy of oxyfluorfen 20% + Clodinafop- Propargyl 5% DF against weed in onion crop- **Manoj Mishra & Others**, CSAUA&T, Kanpur
- 5.3.4 Cost Benefit Analysis of Vegetables in Kanpur Region- **Birendra Kumar** and others, CSAUA&T, Kanpur
- 5.3.5 Role of Vegetable crops in Doubling Farmers' Income- **Balwant Singh** and others, CSAUAT, Kanpur
- 5.3.6 Enhancing farmers' income by adopting integration of different agricultural enterprises- Raj Karan Sahu and others, CSAUAT, Kanpur
- 5.3.7 Studies on floral biology in different cultivars of Guava (*Psidium guajava* L.) **A. M. Butani** and others, JAU, Junagadh
- 5.3.8 Impact of startup on production of potato through tissue culture in Etawah: A Case Study- **Dhananjai Singh and Others**, KVK, *Etawah, CSAUAT, Kanpur*

13.00-14.00 **Networking Lunch**

14.00-16.00 **Technical Session-6 (Hall No.1): Varietal Improvement for Resilience to Climate Change and Sustainability in Production**

Chairman : Dr **Suresh K. Malhotra**, Project Director, DKMA&FAC, MoA&FW, GoI, New Delhi

Co-chairman : Dr. Vishal Nath, OSD, IARI, Jharkhand, Hazaribagh

Co-chairman : Dr. C.L. Maurya, Registrar, CSAUAT, Kanpur

Convener : **K. Kandiannan**, IISR, Kozhikode, Kerala

Convener : Dr. Munish K. Gangwar Head, CSAUAT, Kanpur

6.1 Keynote Presentation

- 6.1.1 Fruit Breeding in India: Achievements and Way Forward- **B. N. S. Murthy**, M. Sankaran and P.S. Nitin, IIHR, Hesaraghatta Lake Post, Bengaluru
- 6.1.2 Biotechnological Approaches for Climate Resilient Vegetable Crops Development - **Prof. T. K. Behera**, Director, IIVR, Varanasi
- 6.1.3 Innovations in Vegetable Breeding for Improving Resilience towards Climate Change -**Harshawardhan Choudhary** and B. S. Tomar, IARI, New Delhi
- 6.1.4 Bio-technological approaches for resilience to climate change in sub-tropical fruits- **Dr. Anju Bajpai**, PS, CISH, Lucknow
- 6.1.5 Biotechnological approaches for improving horticulture productivity- **M. Feza Ahamad¹** and Rajni Rajan², BAU, Sabour, Bhagalpur, Bihar

Discussion and Resolution

6.2 Oral Presentation

- 6.2.1 Performance of F1C3 Potato clones in West-Central Plain- **Babita Chaudhary & Others**, CPRI, RS, Modipuram, Meerut, U.P.
- 6.2.2 Evaluation of Papaya lines for PRSV Tolerance and Horticultural Traits - **Swati Saha & Others**, IARI, RS, Pune, Maharashtra
- 6.2.3 Studies on evaluation of chilli (*Capsicum chinense* Jacq.) genotypes with high yield and capsaicin for industrial purpose- **H. Usha Nandhini Devi** and L. Pugalendhi, TNAU, Coimbatore
- 6.2.4 Breeding for improved yield in bottle gourd- **A. K. Singh** and P. Bhavana, FSRCHPR, Ranchi, Jharkhand
- 6.2.5 Biotechnological interventions for oil palm (*Elaeisguineensis* Jacq.) crop improvement- **B. Kalyana Babu & Others**, IOPR, Pedavegi, West Godavari, Andhra Pradesh
- 6.2.6 Marker assisted selection of dwarf traits in oil palm (*Elaeisguineensis* Jacq.)- **H. P. Bhagya & Others**, IOPR, Pedavegi, Andhra Pradesh
- 6.2.7 Mapping of Quantitative trait loci (QTLs) for bunch traits using SSRs in African Oil Palm (*Elaeisguineensis* Jacq.)- **Anitha Pedapati & Others**, IOPR, Pedavegi, Andhra Pradesh
- 6.2.8 Performance of ajwain (*Trachyspermum ammi* L.) genotypes for growth and seed yield in different locations across the country- **S. S. Meena & Others**, NRC on Seed Spices, Tabiji, Ajmer, Rajasthan

- 6.2.9 Screening of Turmeric germplasm for resistance to rhizome rot, leaf spot and leaf blotch diseases under field conditions- **Ch. Ruth** & Others, DrYSRHU, Venkataramannagudem, A.P.
- 6.2.10 Evaluation of garden pea: its proximate composition and physiochemical properties analyzed by new technology- **Mamta Rathore** & Others, CSAUA&T, Kanpur
- 6.2.11 Evaluation of fenugreek genotypes for leafy purpose- **B. Tanuja Priya** & Others, AICRP on Spices, HRS, Dr. YSRHU, Lam
- 6.2.12 Evaluation of promising coriander genotypes for yield and quality- **K. Giridhar** & Others, AICRP on Spices, HRS, Dr. YSRHU, Lam
- 6.2.13 Inducing Variability through Physical And Chemical Mutagens and Screening of Mutants in Gladiolus Cultivar Prince of Orange- **Sheeba Belwal. and others**, Department of Horticulture, GBPUA&T, Pantnagar, UK

Discussion and Resolution

6.3 Poster Presentation

- 6.3.1 Assessment of High Yielding Varieties of Mustard through Front Line Demonstration in District Hathras- **S. R. Singh** and A. K. Singh, Krishi Vigyan. Kendra, Hathras (U.P)
- 6.3.2 Genetic variability, heritability and correlation coefficient in Cucumber (*Cucumis sativus*)- **S. P. Sachan** & Others, CSAUA&T, Kanpur
- 6.3.3 Studies on varietal trial with different genotypes on Onion (*Allium cepa* L.)- **Suraj Katiyar** & Others, CSAUA&T, Kanpur
- 6.3.4 Adoption level of improved varieties of vegetables- **J. L. Gupta** & Others, KVK, Lakhimpur Kheri-I and CSAUA&T, Kanpur
- 6.3.5 Varietal performance of table Potato (*Solanum tuberosum* L.) in the central up- **A. K. Yadav** & Others, CSAUA&T, Kanpur
- 6.3.6 Genetic divergence and selection of genotypes in Bottle Gourd (*Lagenaria siceraria*) - **I. N. Shukla** & Others, CSAUA&T, Kanpur
- 6.3.7 Performance evaluation of different varieties of tomato's at farmer's fields of Aligarh district of Uttar Pradesh- **Sudhir Kumar** & Others, CSAUA&T, Kanpur
- 6.3.8 Studies on genetic variability correlation and path analysis in brinjal (*Solenum melongena* L.)- **P. K. Tiwari** & Others, CSAUA&T, Kanpur
- 6.3.9 Evaluation of Garlic (*Allium sativum* L.) genotypes for yield and its contributing traits - **P. K. Singh** & Others, CSAUA&T, Kanpur
- 6.3.10 Performance of banana genotypes under Gangetic alluvial zone of West Bengal- **F. K. Bauri** and D. K. Misra, AICRP, Fruits, BCKV, Mohanpur, Nadia
- 6.3.11 Use of NBPGR-PDS (Passport Datasheets) APP: a Precision Tool in Management of Plant Genetic Resources : **Ankur Tomar & others**, NBPGR

6.3.12 Magnitude of variability in different genotypes of tomato under sub-tropical condition in India-**Prashant Srivastav & Others**, IAST, Integral University, Lucknow, Uttar Pradesh,

6.3.13 Study on Genetic Diversion in Tomato (*Solanum lycopersicum* L.) for yield and Quality traits - **Ankit Tiwari and Others**, IAST, Integral University, Lucknow, Uttar Pradesh,

14.00- 16.00 **Technical session-7 (Hall No.2): Water Management for Enhancing Resilience to Climate Change**

Chairman : **Dr. N. K. Gontia**, VC, JAU, Junagadh

Co-chairman : Dr. Manoj Kumar, Former Director, CPRI, Shimla, H.P.

Co-chairman : Dr. T. B. S. Rajput, Emeritus Scientist, WTC, IARI, N Delhi

Convener : Dr. S. R. Singh, CISH, Rehmankhara, Lucknow

Convener : Dr. Vijay Mahajan, DOGR, Rajgurunagar, Pune

7.1 Keynote Presentation

7.1.1 Enhancing Water Productivity for Resilient and Sustainable Development of Horticulture- **H. P. Singh and Babita Singh**, Confederation of Horticulture Associations of India (CHAI), New Delhi

7.1.2 Strategies approaches in micro irrigation for climate resilient and sustainable Horticulture- **Dr. T. B. S. Rajput**, Adjunct Professor, Emeritus Scientist, WTC, IARI, New Delhi

7.1.3 New Paradigms in micro irrigation for enhancing water productivity and achieving nutritional security- **Dr. N. K. Gontia**, VC, JAU, Junagadh

7.1.4 Micro Irrigation – an option for sustainable use of water for horticulture development- **Dr. C. B. Harinatha Reddy**, Project Officer, APMIP/Addl. Director of Horticulture, Govt. of A.P.

Discussion and Resolution

7.2 Oral Presentation

7.2.1 Adoption of Drip Fertigation is a need of hour for Bumper and Export Quality productions of Horticulture crops- **Dr. B. D. Jade**, Sr. Scientist, JISL, Jalgaon

- 7.2.2 Effect of dosage and frequency of fertigation on production, productivity and quality of mango (*Mangifera indica* L.) cv. Banganpalli- **J. Ravi Kanth & PJTSAU**, Rajendranagar, Hyderabad, Telangana
- 7.2.3 Fertigation practices in the scenario of climate change- **Dr. Anil Kumar Nair**, Yelahanka, Bangalore, Karnataka
- 7.2.4 Impact of land configurations, moisture regimes and integrated nutrient supply systems on dry matter accumulation, yield and water use efficiency of French bean (*Phaseolus vulgaris* L.)-**Binod Kumar & Others**, KVK Kannauj and CSAUA&T, Kanpur, U.P.
- 7.2.5 Application of drip fertigation to guava trees enhanced soil enzymatic and microbial activity in orchard- **Manpreet Singh Preet**, CSAUA&T, Kanpur

Discussion and Resolution

16.00-18.00 **Technical Session-8 (Hall No.1): Nutrient Management for Enhancing Resilience to Climate Change**

Chairman : Dr. Janakiram, VC, Dr YSRHU, Venkataramannagudem, A.P.

Co-chairman : L. Pugalendhi, TNAU, Coimbatore

Co-chairman : A. K. Srivastava, PS, CCRI, Nagpur, Maharashtra

Convener : Dr. A.K. Trivedi, PS, CISH, Rehmankhera, Lucknow

Convener : Dr Dhananjay Singh, Head, KVK Etawah, CSAUAT, Kanpur

8.1 Keynote Presentation

- 8.1.1 Three decades of horticulture research and development in Haryana- **Dr. Arjun Singh Saini**, Director General Horticulture, Haryana
- 8.1.2 Climate Smart Nutrient Management in Fruit crops- **A. K. Srivastava**, PS, CCRI, Nagpur, Maharashtra
- 8.1.3 Complimenting Nutritional Needs of Horticulture Crops and the Use of Wealth” Biostimulants as Supplements- **Sanjay Singh**, Slavs agro-tech pvt ltd, Karnataka
- 8.1.4 Organic farming a way forward for climate resilient and sustainable horticulture- **R. A. Ram**, PS, CISH, Rehmankhera, Lucknow
- 8.1.5 Drip-Fertigation Technology Assisted Precision farming-Future of Horticultural Crop Production- **Dr. P. Soman**, Chief Agronomist, Jain Irrigation Systems, Ltd., India

8.2 Oral Presentation

- 8.2.1 Effect of biofertilizers inoculation on onion yield, nutrient uptake and soil fertility status- **Vijay Mahajan** & Other, DOGR, Rajgurunagar, Pune
- 8.2.2 Performance of traditional scented rice (*Oryza sativa* L.) varieties followed by Broccoli (*Brassica oleracea* var. *italica*) under organic mode of cultivation- **S. K. Yadav** & Others, CoA, GBPUA&T, Pantnagar, Uttarakhand
- 8.2.3 Yield and economics of coriander under organic farming- **Rajiv** & others CSAUA&T, Kanpur
- 8.2.4 Effect of foliar NPK (19:19:19) and micronutrient application on seed yield and quality of vegetable pea- **D. P. Singh** and Rajiv, CSAUA&T, Kanpur
- 8.2.5 Effect of major nutrients (nitrogen, phosphorus and potassium) on yield and quality of rainy season onion (*Allium cepa* L.) raised from seedling- **Ram Batuk Singh** & Others, CSAUA&T, Kanpur
- 8.2.6 Effect of Foliar Application of Micro Nutrients on Growth Yield and Quality of Onion (*Allium Cepa* L.)- **I. N. Shukla** & Others, CSAUA&T, Kanpur
- 8.2.7 Yield and quality status of aonla cv. NA-7 as influenced by integrated nutrient management- **V. K. Tripathi** & Others, CSAUA&T, Kanpur
- 8.2.8 Effect of organic inputs and Biofertilizers on growth and flower yield of African marigold (*Tagetes erecta* L.)- **N. Sumana** & Others, DrYSRHU, Venkataramannagudem, A.P.
- 8.2.9 Impact of organic manures, PGPR and micro nutrients on physiological aspects, yield, quality and nutrient uptake in Ajwain (*Trachyspermum ammi* L.)- **G. S. Thanuja** & Others, DrYSRHU, Venkataramannagudem, A.P.
- 8.2.10 Effect of stage specific fertigation schedules on growth and yield of parthenocarpic cucumber under naturally ventilated polyhouse- **M. Ravindra Babu** & Others, CEPC, DrYSRHU, Venkataramannagudem, A.P.
- 8.2.11 Response of Integrated Nutrient Management on Growth, Yield Attributed and Yield of Okra (*Abelmoschus Esculentus* (L.) Moench).-**Anupama Verma** & Others, CSAUA&T, Kanpur, U.P.

Discussion and Resolution

8.3 Poster Presentation

- 8.3.1 Effect of Agri-Lime, Molybdenum and Sulphur Application on Green Pod Yield of Cowpea (*Vigna unguiculata*)- **I. N. Shukla** & Others, CSAUA&T, Kanpur
- 8.3.2 Replacement of Inorganic Fertilizer with Organic Fertilizer for Higher Yield and Quality of Okra- **Khalil Khan** & Others, KVK, Daleep Nagar, Kanpur Dehat

- 8.3.3 Scientific method in raising nursery of direct sown cucurbitaceous crops: A Way for Enhancing Income- **Sudhir Kumar** & Others, NARC, Kalai, Aligarh, and KVK, Aligarh, CSAUA&T, Kanpur
- 8.3.4 Effect of foliar application of NAA, GA₃ and Zinc Sulphate on fruit drop, growth, yield and quality of ber cv. Banarasi Karaka- **R. K. S. Gautam** & Others, CSAUA&T, Kanpur
- 8.3.5 A Case study: Assessment and Management of sodic land reclamation impact at district level- **Jitendra Singh** & Others, KVK, *Thariaon, Fatehpur*
- 8.3.6 Promoting Organic Farming: A Low-Cost Method to Increase Agricultural Productivity- **Sadhana Vaish** & Others, KVK, *Thariaon, Fatehpur*
- 8.3.7 Response of boron and sulphur on growth and yield of cucumber (*Cucumis sativus* L.)- **Sanjay Kumar** & Others, KVK, Farrukhabad and CSAUA&T, Kanpur
- 8.3.8 Integrated Management of Yellow Mosaic Virus of green gram (*Vignamungo*) under pulse-wheat cropping system in district Hathras (U.P.)- **S. R. Singh** and A.K Singh, Krishi Vigyan Kendra, Hathras (U.P.)
- 8.3.9 Effect of foliar spray of nutrient and plant growth regulators on yield and quality of winter season guava cv. Allahabad Safeda- **A. K. Dwivedi** & Others, CSAUA&T, Kanpur
- 8.3.10 Studies on Macro-Nutrient requirement of Potato (*Solanum tuberosum*. L.)- **Ram Pyare** & Others, CSAUA&T, Kanpur
- 8.3.11 Organic farming towards improving farmer socio-economic profile— **Birendra Kumar** and others, CSAUAT, Kanpur
- 8.3.12 Influence of Zinc, Boron and Molybdenum on Yield Attributing Characters and Seed Yield of Mung Bean [*Vigna radiata* (L.) **Rishabh Kumar Singh** and others Seed Science and Technology, CSAUAT, Kanpur
- 8.3.13 Evaluation of fertilizer doses for enhancing garlic (*Allium sativum*) yield-**M. K. Singh and Others, KVK, Etawah and CSAUA&T, Kanpur, U.P.,**
- 8.3.14 Organic farming: A vision towards a healthy nation-. **Naushad Alam and Others,** KVK, Fatehpur and CSAUA&T, Kanpur, U.P.
- 8.3.15 Chemical Free Farming Improved Aggregate and Quality of Agricultural Produce-**Khalil Khan and Others,** KVK, Dehat and CSAUA&T, Kanpur, U.P.
- 8.3.16 Evaluation of Boron Application on Vegetable Pea Variety Azad P-3 with and Without Biofertilizer Under Late Sown Condition -**K.D. Dixit & Others,** ARS Mainpuri, KVK, Firozabad and CSAUA&T, Kanpur, U.P.

14.00-18.00 **Technical Session-9 (Hall No.3): Plant Health Management for Resilience to Climate Change and Sustainability in production**

Chairman : Mr. R. G. Agarwal, M/s Dhanuka Agritech Ltd. Gurugram,

and

: Dr. Ajeet K Karnatak, VC, VCSUUh&F, Pauri Garhwal, UK

Panelist's : Dr. Bir Pal Singh, Ex. Director, CPRI, Shimla, H.P.
: Dr. Dilip K. Ghosh, CCRI, Amravati Road, Nagpu
: Dr Dharm Raj Singh, Dean College of Agriculture, CSAUAT,
Kanpur
: Dr. Kaushik Banerjee, ICAR-NRC Grapes, Pune
: Dr. Krishna Kumar, Dean College of Hort., DRPCAUI, Pusa
Dr. H. S. Singh, CISH, Rehmankhera, Lucknow

Convenor : Dr. P. K. Shukla, PS, CISH, Rehmankhera, Lucknow
Convener : Dr. Popy Bora, Assam Agricultural University, Jorhat, Assam
Convener : Dr A. K. Chakravarthy, EMPRI, Bangalore

9.1 Keynote Presentation

- 9.1.1 Strategies crop solutions for climate resilient and sustainable production in Horticulture- **Mr. R. G. Agarwal**, M/s Dhanuka Agritech Ltd. Gurugram, Haryana
- 9.1.2 Innovation in Pest Management for resilient and sustainable development of horticulture - **Dr. Ajeet Kumar Karnatak**, VC, VCSUUh&F, Pauri Garhwal, UK
- 9.1.3 Bio-intensive management of insect pest in horticulture crops- **Dr. H. S. Singh**, CHES, Aiginia, Bhubaneswar, Odisha
- 9.1.4 Recent trends in Developing Molecular Diagnostics for Virus/ Virus-like pathogens infecting Horticultural crops and their Novel Management Strategy- **Dilip K. Ghosh**, CCRI, Amravati Road, Nagpur
- 9.1.5 Effective Management of Insect Pests for sustainable development of Horticulture- **A. K. Chakravarthy**, EMPRI, Bangalore
- 9.1.6 The role NRL, ICAR-NRC for Grapes is playing in managing pesticide residues in fruits and vegetables- Ahammed Shabeer T.P. and **Kaushik Banerjee**, ICAR-NRC Grapes, Pune
- 9.1.7 Organic crop health management in Herbal plants: A new paradise shift in Agro-truism in India - **Krishna Kumar** and Dinesh Rai, College of Hort., Pipara Kothi, DRPCAUI, Pusa
- 9.1.8 Diagnostic and Sustainable management of disease sub-tropical fruits - **P. K. Shukla**, PS, CISH, Rehmankhera, Lucknow
- 9.1.9 Harnessing Plant Microbiome for disease management of horticultural crops : Changing paradigms- **Popy Bora**, Assam Agricultural University, Jorhat, Assam
- 9.1.10 Integrated approach for the sustainable management of Fusarium wilt and Eumusae leaf spot diseases in banana- R.Thangavelu, M. Loganathan and S. Uma, ICAR -National research centre for banana, Tiruchirapalli, Tamil Nadu

9.2 Oral Presentation

- 9.2.1 Management of citrus scab and citrus canker with fungicides and antibiotics in sweet orange- **T. Rajasekharam** & Others, DrYSRHU, Venkataramannagudem, A.P.
- 9.2.2 Harnessing pesticidal efficacy of rhizospheric *Bacillus* spp against *Oligonychus coffeae* of tea, *Camellia sinensis* – **Sukanya Gogoi** & Others, AAU, Jorhat, Assam
- 9.2.3 The potential habitat of onion thrips, *Thrips tabaci* Lindeman in India under CMIP6 projections- **V. Karuppaiah** & Others, DOGR, Pune, Maharashtra and CCARI, Ela, Old Goa
- 9.2.4 Evaluation of new insecticides against leaf curl virus vector of tomato (*Lycopersicon esculantum* Mill.)- **Bhupendra Kumar Singh** & Others, KVK, Etawah, & CSAUA&T, Kanpur
- 9.2.5 Evaluation of new fungicides against black scurf disease of potato- **Bhupendra Kumar Singh** & Others, KVK Etawah and CSAUA&T, Kanpur
- 9.2.6 Management of Shoot and Fruit Borer of Brinjal through Bio-pesticides- **Abhimanyu Yadav** & Others, KVK, Farukhabad, CSAUA&T, Kanpur
- 9.2.7 Effect of different Insecticides and Biopesticides against fruit borer (*Helicoverpa armigera* Hubner) on Tomato crop- **Ram Singh Umro** & Others, CSAUA&T, Kanpur
- 9.2.8 Studies on the population dynamics of fruit borer, *Helicoverpa armigera* Hubner on tomato, *Lycopersicon esculentum* Mill. in relation to abiotic factors and management with natural compounds-**Shailendra Pratap Singh** & Others, CSAUA&T, Kanpur
- 9.2.9 Effect of insecticides and its combination for the management of insect and diseases of onion (*Allium cepa* L.)- **R. K. Pal** & Others, CSAUA&T, Kanpur
- 9.2.10 Effect of Rhizobium and PSB inoculation with foliar spray of micronutrient on yield and quality attributes of Kabuli chickpea (*Cicer Kabulium* L.)- **Ashish Kumar Srivastava** and Shubham Singh, KVK, Firozabad, CSAUA&T, Kanpur
- 9.2.11 Management of shoot and fruit borer of brinjal on farmers' fields at Hathras district of Uttar Pradesh- **S. R. Singh** & Others, KVK, Hathras, Firozabad, U.P.
- 9.2.12 Production and Management of Quality planting of fruits- **Dr. D. Pandey**, Principal Scientist & I/c Head, Division of Crop Improvement & Biotechnology, Central Institute for Subtropical Horticulture, Rehmankhera, P.O. Kakori, Lucknow
- 9.2.13 Screening of promising germ-plasm of vegetable pea against major insect pest- **R. K. Pal** & Others, CSAUA&T, Kanpur
- 9.2.14 Impact of climate change on potato cultivars against late blight disease in subtropical plains of India- **Mehi Lal** & Others, CPRI, RS, Modipuram, Meerut

- 9.2.15 The Management of Common Scab Disease of Potato (*Solanumtuberosum*. L) in central U.P.- **P. K. Singh** & Others, CSAUA&T, Kanpur
- 9.2.16 Application of Silver Nanoparticles for the Management of Fusarium Wilt of Tomato Caused by *Fusarium oxysporum* f. sp. *Lycopersici*-**Saurabh Kumar** & Others, CSAUA&T, Kanpur
- 9.2.17 Comparable study on coloured sticky traps for onion thrips. -**P. K. Gupta** and M. K. Pathak, NHRDF, Karnal
- 9.2.18 Management of Sclerotinia blight of brinjal- **Vivek Singh** and U. K. Tripathi, Department of Plant Pathology, CSAUAT, Kanpur
- 9.2.19 9.2.19 Efficacy of Some Plant Extract Against Banana Pseudostem Weevil, *Odoiporus longicollis* Oliver- **Annabhatula Sasidhar, Inee Gogoi and Jabanika Hazarika**, Department of Entomology, AAU, Jorhat, Assam
- 9.2. 20 Seasonal Abundance of Banana Leaf and Fruit Scarring Beetle (*Basilepta subcostatum*, Jacoby- **Karanika Gogoi and Inee Gogoi**, Department of Entomology, AAU, Jorhat, Assam
- 9.2.21 Study on the cellular immunocytes of red pumpkin beetle, *Aulacophora foveicollis* (Coleoptera: Chrysomelidae) **Diplina Yein, Dr Mousumi Phukon and Dr Popy Bora**, Department of Entomology, Assam Agricultural University, Jorhat, Assam

Discussion and Resolution

9.3 Poster Presentation

- 9.3.1 Studies on host preference of pulse beetle, *Callosobruchus chinensis* L. and its eco-friendly management- **Pawan Singh** & Others, CSAUA&T, Kanpur
- 9.3.2 Studies of the infestation caused by mustard aphid, *Lipaphiserysimi* Kalt. and mustard sawfly, *Athalia lugensproxima* Klug. and their safer management on mustard, *Brassica campestris* L- **Mahandra Pal Singh** & Others, CSAUA&T, Kanpur
- 9.3.3 Evaluation of newer insecticides against major insect pests viz- yellow stem borer, *Scirpophagaintertulaswalk.*, green leaf hopper, *Nephotettixvirescens* Dist. gundhi bug, *Leptocorisaacuta* Thon. and rice leaf folder, *Cnaphalocrocismedinalis* Gn. and their effective management on rice- **Anuj Kumar** & Others, CSAUA&T, Kanpur
- 9.3.4 Development of IPM Module for the Management of Major insect pests of Sesame- **R. K. Pal** and M. Mishra, CSAUA&T, Kanpur

- 9.3.5 Flowering, fruiting, yield and quality parameters of papaya as influenced by Integrated Nutrient Management- **Amar Singh & Others**, CSAUA&T, Kanpur
- 9.3.6 Integrated Disease Management of Leaf Curl Virus of Chilli on farmers' fields of Hathras District- **S. R. Singh & Others**, KVK, Hathras, Firozabad (U.P.)
- 9.3.7 Relative Abundance of Natural Enemies in Rice Eco-System- **Dr. C. P. N. Gautam** and Dr Ram Veer, KVK, Hardoi (U.P.)
- 9.3.8 Management of Potato Black Scurf- **Dr. C. P. N. Gautam & Others**, KVK, Hardoi (U.P.)
- 9.3.9 Role Bio-agents in Integrated Pest Management- **Dr. Jagdish Kishor & Others**, KVK, Fatehpur (U.P.)
- 9.3.10 Management of black scurf of potato caused by *rhizoctoniasolanikühn* through fungicides and fungal antagonists at farmers' field- **Ram Palat & Others**, KVK, Aligarh and CSAUA&T, Kanpur
- 9.3.11 Role of granular insecticides in the management of sucking pests in Potato (*Solanumtuberosum*. L)- **R. K. Pal & Others**, CSAUA&T, Kanpur
- 9.3.12 Effect of sowing dates and cultivars on late blight disease and yield of potato- **Abhimanyu Yadav & Others**, CSAUA&T, Kanpur
- 9.3.13 Economics and fungicidal management of Phomopsis blight and fruit rot of brinjal- **Ashraf Ali Khan & Others**, KVK, Aligarh, CSAUA&T, Kanpur
- 9.3.14 Studies on effectiveness of different insecticides for the control of shoot and fruit borer, *Leucinodesorbonalis* G. on brinjal crop- **Aditya Bhadauria & Others**, CSAUA&T, Kanpur
- 9.3.15 Efficacy of Different Insecticides and Biopesticides against Tomato Fruit Borer (*Helicoverpaarmigera* Hubner) on Tomato Crop- **Ram Singh Umrao & Others**, CSAUA&T, Kanpur
- 9.3.16 Application of ZnO NPs for the management of Late Blight of Potato caused by *Phytophthora infestans* (Mont.) de Barry- **Shivam Kumar**, CSAUA&T, Kanpur
- 9.3.17 Eco-friendly Management of damping-off, Wilt and another Soil born Diseases of Vegetable Crops by Bio-char Application in Soil - **Saurabh Kumar**, CSAUA&T, Kanpur
- 9.3.18 Effect of soil amendments with inorganic chemicals for reducing the disease severity and incidence of common scab of potato [*Streptomyces scabies* (Thaxter) Waksman and Henrici]- **Shivam Kumar**, CSAUA&T, Kanpur
- 9.3.19 Production Potential of Hookah Tobacco + Vegetable pea Based Intercropping Systems in U.P.- **Arvind Kumar Srivastava**, CSAUA&T, Kanpur
- 9.3.20 Assessment of Suitable Measure for Management of Fruit and Shoot Borer in Brinjal- **Ajay Kumar Singh**, CSAUA&T, Kanpur
- 9.3.21 Comparative performance of bio and Chemical control measures against fruit and shoot borer of Okra - **Arun Kumar Singh and Others**, KVK, Dehat, KVK Aligarh
- 9.3.22 Prediction of potato late blight disease using weather parameters for the district Kannauj, Uttar Pradesh-**Amrendra Yadav and Others**, KVK, Kannauj and CSAUA&T, Kanpur, U.P.

9.3.23 Efficacy Of Fungicides In Management Of Downy Mildew And Powdery Mildew Disease Of Cucumber (*Cucumis Sativus* L.) Under Open Field Conditions, In Hardoi District of Uttar Pradesh . **C.P.N.Gautam and Others**, KVK, Hardoi (U.P.)

9.3.24 Validation of IPM Practices for the Control of Fruit and Shoot Borer of Okra- **Ashok Kumar and Others** KVK, Kanpur dehat and CSAUA&T, Kanpur, U.P.

9.3.25 Evaluation of Fungicides for the Control of Early Blight in Potato, **Subhash Chandra, Omkar Singh Yadav and Tej Prakash**, KVK, Firozabad U.P (CSAU & T, Kanpur)

16.00-18.00 **Technical session-10 (Hall No.2): Human Resource Development and Diffusion of Knowledge for Technological Changes for Climate Resilient and Sustainable Development of Horticulture**

Chairman : **Dr. Dilip Kumar**, Former Director, CIFE, Mumbai

Co-chairman : Dr Mathura Rai, Former Director, IIVR Varanasi

Co-chairman : Dr Prabhat Kumar, HC, KB, New Delhi

Convener : Dr Awani Kumar Singh, CPCT, IARI, New Delhi

Convener : Dr Dhananjay Singh, Head, KVK Etawah, CSAUA&T, Kanpur

10.1 Keynote Presentation

10.1.1 Strategies approaches for knowledge dissemination to achieve climate resilient and sustainable Horticulture- **V. V. Sadamate**, Agril. Extension Specialist & Former Adviser Agriculture, PC, GOI. Gurgaon, NCR Delhi

10.1.2 Horticulture based integrated farming system for improving the profitability of the farm and income of the farmers'-A case Study- **B. Srinivasulu**, Director Extension

10.1.3 Horticulture for Women Enterprise to address horticulture, challenges of women health- **D. E. Karunasree**, Head, KVK, Dr YSRHU, Venkataramanagudam

10.1.4 Fruit based Cropping / farming system for higher productivity and profitability-**B. L. Manjunath**, IIHR, Hesarghatta lake post, Bengaluru

10.2 Oral Presentation

- 10.2.1 Performance of cucurbitaceous demonstrations in central plain zone of Uttar Pradesh, India- **Rajiv**, CSAUA&T, Kanpur
- 10.2.2 Feasibility of *desi* poultry farming in litchi, mango and apple orchard- **Sanjay Kumar Singh** and S D Pandey, NRC on Litchi, Muzaffarpur, Bihar
- 10.2.3 Knowledge and Attitude of Farmers towards Organic Farming: A Study of Aligarh District of Uttar Pradesh- **Netrapal Malik & Others**, KVK, CSAUAT, Kanpur
- 10.2.4 Message Designing for Agricultural Information Sharing through Social Media- **Netrapal Malik & Others**, KVK CSAUA&T, Kanpur
- 10.2.5 On-Farm crop response to plant nutrients in predominant cropping systems and their impact on crop-livestock-human continuum- **U. S. Tiwari & Others**, CSAUA&T, Kanpur
- 10.2.6 Diversification of existing farming system under marginal household conditions- **M. Z. Siddiqui & Others**, AICRP-IFS (ICAR), CSAUA&T, Kanpur
- 10.2.7 Role of Women in Safe Seed Storage by Domestic Method- **Sadhana Vaish** and Others, KVK, *Thariaon, Fatehpur*
- 10.2.8 Nutri Garden – A Way Forward for Enhancing Farmer’s Income and Household Nutritional Security - **Dr. Priya Vashishtha**, KVK, Hardoi, CSAUA&T, Kanpur
- 10.2.9 Indigenous Cattle must for Natural Farming- **Devendra Swaroop & Others**, CSAUA&T, Krishi Vigyan Kendra, Thariaon, Fatehpur (U.P.)
- 10.2.10 Doubling Farmers’ income in Lakhimpur-Kheri district of Uttar Pradesh: Challenges and Solutions- **Sanjay Singh & Others**, KVK-I, Lakhimpur-Kheri, CSAUA&T, Kanpur
- 10.2.11 Four Golden Pillars: Generating More Than Doubling Income of Farmer- **Dr. K. M. Karetha**, JAU, Junagadh

Discussion and Resolution

10.3 Poster Presentation

- 10.3.1 Awareness of Sustainable Agricultural Practices for Better Health of Women Farmers in Fatehpur- **Sadhana Vaish & Others**, KVK, *Thariaon, Fatehpur*
- 10.3.2 Awareness, Availability and Utilization of Moringa among Farm Families in Kannauj (U.P.)- **Poonam Singh & Others**, KVK, Kannauj, and CSAUA&T. Kanpur
- 10.3.3 Kitchen Garden – A road map for enhancing the health status of girl children- **Priya Vashishtha & Others**, KVK, Hardoi, CSAUA&T, Kanpur
- 10.3.4 Prevalence of various medicinal herbs in the kitchen gardens in urban Kanpur region- **Alka Katiyar & Others**, KVK, Thariaon, Fatehpur, U.P. State Seed Certification Agency, Lucknow and KVK Aligarh
- 10.3.5 Growth Performance of Growing Goat Kids under Field Condition in Lakhimpur-Kheri district- **Nagendra Kumar Tripathi & Others**, KVK-I, Lakhimpur-Kheri and CSAUA&T, Kanpur

- 10.3.6 Demonstration on Grampriya Variety of Chicks under Tribal Poultry Production in Lakhimpur-Kheri district, Uttar Pradesh- **Nagendra Kumar Tripathi & Others**, KVK-I, Lakhimpur-Kheri and CSAUA&T, Kanpu
- 10.3.7 Effective Extension Strategies and Mobilisation of FPO's to Market- **M. K. Prasad** and others, KVK, Farrukhabad, CSAUA&T, Kanpur, CSAUA&T, Kanpur, U.P.
- 10.3.8 Health Benefits of Plants Based Antioxidants- A Review- **Nimisha Awasthi & Others**, KVK Aligarh and KVK Kanpur Dehat
- 10.3.9 Nutritional assessment and diet formulation of elderly of Hathras (Rural) District- **Pushpa Devi & Others**, KVK, Hathras, KVK, Farrukhaba, KVK, Hathras, KVK, Mainpuri
- 10.3.10 Major Challenges Faced By Vegetable Growers in Lakhimpur Kheri- **J. L. Gupta & Others**, KVK, LakhimpurKheri-I and CSAUA&T, Kanpur
- 10.3.11 Analyzing the use of medicinal plants by rural women during COVID-19 pandemic- **Alka Katiyar & Others**, KVK, Farukhabad, KVK Thariaon, Fatehpur, U. P. State Seed Certification Agency, Lucknow. KVK Aligarh, Sanjay Gandhi Postgraduate Institute of Medical Sciences, Lucknow, Uttar Pradesh
- 10.3.12 Mushroom: Health and Wealth Together- **Ajay Kumar Singh & Others**, KVK Kanpur Dehat, KVK Aligarh
- 10.3.13 Assessment of Diversity in Regional Cropping System and its Effect on Diversity in Dietary Intake of Rural Families- **Chandra Kala Yadav**, KVK Kannauj, KVK Aligarh
- 10.3.14 Role of KVK Homescientist in Empowering farm women in Mainpuri District- **Dr. Akansha Chaudhary**, KVK Mainpuri CSAUA&T, Kanpur
- 10.3.15 A brief on philatelic education in climate and global environment in connectivity with horticultural diversity- **Kalyan Chakraborti & Others**, ¹Bidhan Chandra Krishi Viswavidyalaya, Mohanpur, Nadia, West Bengal ²Vidyasagar University, Midnapore, West
- 10.3.16 Constraints faced by Potoato Growers in Adoption of Recommended Potato Production Technology-**S.B.Pal & Others**, KVK, Farrukhabad
- 10.3.17 A Comparative Study on Dietary Diversity and Consumption Pattern in Nutri-Smart and Non Nurti-Smart Villages in Kannauj (U.P)-**Poonam Singh and Others**, KVK, Kannauj
- 10.3.18 Agri-horti. System of agro-forestry for better economy under changing climate-**R.A. Singh and Others**, CSAUA&T, Kanpur, U.P.
- 10.3.19 Awareness level of Rural Farm Women about Organic Farming in District Raibareli (U.P.) **Deepali Chauhan¹, and Dr.C.P.N Goutam²**, Krishi Vigyan Kendra ,Raibareli

Day Three: Monday, 30th May, 2022

9.00-11.00 **Technical Session-11 (Hall No.2): National Workshop on Digital Horticulture for Resilience to Climate Change and Sustainability**

Chairman : Dr H P Singh, FormerDDG and Chairman, CHAI Or

Panelist. Mr Surjeet chaudhary, Former Secretary to Government of India
Dr S K Malhotra, DKMA&FAC, MoA&FW, GoI, New Delhi
: Dr. Jai Singh Parihar, Former Director, ISRO, Ahmedabad
: Dr K. B. Hebbar, CPCRI, Kasaragod
: Dr. Indermani Mishra, **JD**,Head & PS, IARI, New Delhi
: Dr. A. K. Srivastava, PS, CCRI, Nagpur, Maharashtra
: Dr. H. Chaudhary, IARI, New Delhi
Dr. Vishal Nath, OSD, IARI,
Dr Brajesh Singh, CPRI, Shimla
Convener : Dr Awani Kumar Singh, CPCT, IARI, New Delhi

11.1 Keynote Presentation

11.1.1 Digital horticulture for sustainability – a way forward- **Dr. H. P. Singh**, Chairman, CHAI, New Delhi

11.1.2 Current and Future Climate Suitability prediction for Plantation Crops (Coconut and Arecanut) Using Maxent and Adaptation Strategies for Sustainable Production- **K. B. Hebbar & Others**, CPCRI, Kasaragod

11.1.3 Integration of horticulture and Engineering for climate resilience and sustainability development of Horticulture-**Dr. Indermani Mishra**, Head & PS, IARI, New Delhi

11.1.4 Geomatics application for climate resilience in horticulture- **Dr. Jai Singh Parihar**, Former Director, ISRO, Ahmedabad

11.1.5. Engaging the Multi Stakeholders for empowered Human Resources at Grassroots to address Challenges of Climate change sustainably - **Binod Anand¹ and OM Prakash**, Dhanuka Agritech Ltd, Gurugram

9.00-11.00 **Technical Session-12 (Hall No.3): Post harvest management Access to Market and Value Chain Management for Sustainable Production of Horticulture Crops**

Chairman : **Dr. N. C. Gautam**, Former VC, MGCGV, Chitrakoot, Satna, M.P.

Co-chairperson : Dr. Neelima Garg, CISH, Rehmankhara, Lucknow

Co-chairman : Dr Y.P. Malik, Director Admin, CSAUAT, Kanpur

Co- chairman : Dr. Arun K Johary, Former Director Dabur, New Delhi

Convener : Dr Dinesh Kumar , PS, CCRI,-Nagpur, Maharashtra

Convenor. : Dr Sunil Pareek, NIFTEM, Kundli, Sonipat, Haryana
Convenor. : Deepa H. Dwivedi, Professor, BB Ambedkar University Lucknow

12.1 Keynote Presentation

- 12.1.1 Post Harvest Management for sustainable development of horticulture- **Dr. Neelima Garg**, PS & I/C Head, CISH, Rehmankhera, Lucknow
- 12.1.2 Branding, Labelling and Certification for maximising profits in Horticulture Produce - **Babita Singh** and Dr. Madhuri Nanda, Rainforest Alliance, India
- 12.1.3 Linking farmers with markets for enhanced horticulture productivity and food safety- **Dr. Anjani Kumar**, IFPRI, NASC Complex, Pusa, New Delhi
- 12.1.4 Prospects of Post Harvest Management, Value-addition and Waste utilization in Citrus fruits- **Dinesh Kumar & Others**, Principal Scientist, ICAR-Central Citrus Research Institute, Nagpur, Maharashtra
- 12.1.5 Post-harvest management of sub-tropical fruits- **Neeru Dubey**, Associate Vice President, Ernst and Young Private Limited, Elante Offices, Chandigarh
- 12.1.6 Climate resilient and sustainable development of Bee keeping for effective pollination- **Shri Naveen Kumar Patle**, Addl. Commissioner (Hort.), MoA&FW, KB, New Delhi
- 12.1.7 Innovations in Coconut Production System: Role of Kalpa® Agri-Business Incubator- **K. Muralidharan**, Head, Social Sciences Division, ICAR-CPCRI, Kasaragod
- 12.1.8 Recent Advances in Post-harvest Management of Mangos- **Sunil Pareek**, NIFTEM, Kundli, Sonipat, Haryana

12.2 Oral Presentation

- 12.2.1 A Study on Organoleptic and Biochemical Evaluation of Mango-Papaya-Ginger based RTS Beverage- **Setu Kumar & Others**, CSAUA&T, Kanpur
- 12.2.2 Backward and Forward Linkages Developed by Farmer Producer Organizations in Lakhimpur-Kheri- **Sanjay Singh & Others**, KVK-I, Lakhimpur-Kheri and CSAUA&T, Kanpur
- 12.2.3 Economics of Penconazole 1.1% + Mancozeb 50% DF formulate fungicides against powdery mildew and anthraconose disease in mango- **Mohd. Shamim & Others**, CSAUA&T, Kanpur
- 12.2.4 Sun Dried Oyster Mushrooms for Food Fortification to Enhance Its Consumption in Rural Community- **Chandra Kala Yadav & Others**, KVK Kannauj, Coordinator, DOE, Scientist (Agril. Extension) KVK Farukhabad, CSAUA&T, Kanpur
- 12.2.5 Modified Food Products of Underutilized Vegetables towards Nutrition Security- **Pragya Mishra & Others**, CSAUA&T, Kanpur, U.P.

- 12.2.6 Doubling the Income of Farmer Through Post Harvest Management and Value Addition of Horticultural Produces- **K. M. Karetha**, JAU, Junagadh
- 12.2.7 Value addition in edible Palmyra palm products towards commercialization- **Ivi Chakraborty & Others**, BCKV, Mohanpur, Nadia, West Bengal, North Eastern Hill University (NEHU), Tura Campus, Tura, Meghalaya
- 12.2.8 Nutrient analysis and acceptability of the fruits Ladoo- **Ritu Singh and Dr. P K Gupta**, KVK , NHRDF) , Ujwa, New Delhi
- 12.2.9 Effect of polyamines on biochemical parameters of mango (*Mangifera indica* L.) cv. Kesar- **A. M. Butani & others**, JAU, Junagadh, Gujarat
- 12.2.10 Sweet lime & orange peel: a source of mosquito repellent finish- **Archana Singh & Apoorva Gupta**. CSAUAT, Kanpur
- 12.2.11 Under Exploited Vegetable Crops: Rich Sources of Various Vitamins and Minerals in Human Nutrition— **Pranjal Singh , D.P. Singh and Others**, CSAUAT Kanpur
- 12.2.12 Compositions of Anthocyanin's in Different Gladiolus Varieties- Ganesh B Kadam, and others ICAR-Directorate of Floricultural Research, Pune, Maharashtra
- 12.2.13 Effect of Agrochemical on Uniform Colour Development in MANJARI SHYAMA -**S. D. Ramteke and Others**, NRCG, P. B. No. 3, Manjri Farm Post, Pune
- 12.2.14 Oil Absorption and Peroxide Value of Potato Chips Processed Using Different Frying Vegetable Media, **Bandana, Vineet Sharma, Brajesh Singh and Manoj Kumar**. ICAR-CPRI Campus, Modipuram, Meerut, UP

10.3 Poster Presentation

- 12.3.1 Efficacy of Chloromequat Chloride on vegetative growth, yield and residues in Thompson Seedless Grape: **S. D. Ramteke and Others**- ICAR-NRCG, Manjri Farm, Pune1
- 2.3.2 Efficacy of Acadian Gold star on growth, quality and the yield of grapes.**S. D. Ramteke and Others** ¹ICAR-NRCG, Manjri Farm, Pune
- 12.3.3 The impact of Mepiquat chloride (MC) 5% AS on yield and quality parameters and residue studies in grapes-**S. D. Ramteke and Others** ¹ICAR-NRCG, Manjri Farm, Pune
- 12.3.4 Studies on the Screening of Suitable Genotypes of Bael (*Aegle marmelos* Correa) for Quality Processed Products-**Prithvi Pal and Others**, KVK, Hardoi (U.P.),
- 12.3.5 Role of the Medicinal Plants in Home Remedies for Women- **Mithilesh Verma and Others**, KVK, Kanpur Dehat and CSAUA&T, Kanpur, U.P.

12.3.6 Assessment and Evaluation of the Income Generation through Preservation and Value addition-**Sunita Mishra and Others**, KVK, Etawah

Discussion and Resolution

10.00-1200 ***Technical Session 13 (Hall No.1): Farmers' Participatory Discussion for Climate Resilient and Sustainable Development of Horticulture***

Chairman : **Dr. D. R. Singh**, VC, CSAUA&T, Kanpur, U.P.

Co-chairman : Dr. Sadamate, Advisor, NITI Aayog, New Delhi

Co-chairman : Dr. Arul Raj, Former Director, IOPR, Pegabadi, Andhra Pradesh

Convener : Dr Tarak Nath Saha, IIFR, DFR, CoAC, Pune, Maharashtra

Convenor : Dr Dhananjay Singh, Head, KVK Etawah, CSAUA&T, Kanpur

12.00-13.00 ***Technical Session-14 (Hall No.1): Knowledge Empowerment of Farmers through Quiz***

Chairman : **Dr. D. R. Singh**, VC, CSAUA&T, Kanpur, U.P.

Panelist's : Dr. Jai Singh Parihar, Former Director, ISRO, Ahmedabad

: Dr. Sadamate, Advisor, NITI Aayog, New Delhi

: Dr. Arul Raj, Former Director, IOPR, Pegabadi, Andhra Pradesh

: Dr Anil B Patil, Sr Vice President, JISL, Jalgaon

: Dr. P. K. Gupta, Director, NHRDF, New Delhi

Moderator : Dr. Babita Singh, Director, CHAI, New Delhi

Mr. K. B. Patil, Sr VP, JISL, Jalgaon

13.00-14.00 **Networking Lunch**

14.30-17.00 **Valedictory and National Award Function**

14.00-14.05 Flower Welcome of guest and chief guest

14.05-14.20 Welcome : **Dr Karam Hussain**, DR, CSAUAT

14.20-14.50 Presentation of recommendations : **Dr. H. P. Singh**, Chairman, CHAI

14.30-15.00	Felicitation of chief Guest	: Guest of Honour.
15.00-15.10	Release of Publication	: Chief Guest and Dignitaries
14.10-15.40	Conferment of Award	: Chief Guest and Dignitaries
15.40-15.50	Award of Best Paper	: Chief Guest and Dignitaries & Others Awards
15.50- 16.20	Address of Guest of Honour	:Dr Neelam Patel, Sr Advisor, NITI Aayog Mr Surjit Chaudhary, Former Secretary to GoI
16.20-16.35	Presidential Address	: Dr. D. R. Singh, VC, CSAUAT, Kanpur
16.35-16.55	Valedictory Address	: Chief Guest
16.55-17.00	Votes of Thanks	: Dr. B. P. Singh, Former Director, CPRI, Shimla
17.00-17.30	Photography: All the Delegates and Organisers Team	
17.30-18.30	Appreciation Meeting for Organisers	
	Welcome	: Dr. K. K. Kumar , Former Director, NRCL, Muz
	Conferment of Certificate of Appreciation to Volunteers: All Guests	
	Remarks of the Chairman	:
	Local Organising Committee	: Dr. D. R. Singh , Vice Chancellor, CSAUAT, Kanpur
	Remarks of Organising Secretary	: Mrs. Bimala Singh , Managing Trustee, ASM Foundation
	Remarks of. the Chairman	: Dr. H. P. Singh , Chairman, CHAI and Advisory Committee of Conference
	Vote of Thanks	: Mr. K. B. Patil Sr Vice President, JISL, Jalgon
19.30-21.00	Preeti Bhoj - Hosted by Managing Trustee, ASM Foundation, New Delhi	

Day Four: Tuesday, 31st May, 2022

9.00-17.00 **Field Visits for the delegates**