



National Seminar on



Technologies and Sustainability of Protected Cultivation for Hi-Valued Vegetable Crops

February 01-03, 2018

Navsari Agricultural University
Navsari-Gujarat (INDIA)



:: ORGANIZER ::

NAVSARI AGRICULTURAL UNIVERSITY, NAVSARI

In Association With

The Horticultural Society of Gujarat

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ABOUT THE EVENT

There has been a rapid stride in urbanization with an increase in world population by leaps and bounds, expected to double in 30 years. With the population growth rate at 1.58%, India is predicted to have more than 1.53 billion people, all set to take the numero uno position by the end of 2030. Households in large cities in low-income countries like India spend 50-80% of their incomes on food, still nutritional deficits in macronutrients and essential micronutrients are common. Green Revolution with its emphasis on high yielding varieties, chemical fertilizers, pesticides and better agronomic practices swept like a wave in the country.



However, continuous use of GRTs indiscriminately have led to decline in production and productivity of various crops as well as deterioration of soil health, environment and more importantly the quality of horticultural crops. Use of current agrotechnologies and varieties coupled with climate change will certainly exacerbate impact on crop production, soil fertility, microbial population and quality of food in near future. Water requirement is expected to rise up to the level of 1093 BCM and 1447 BCM by 2025 and 2050, respectively of which 910 and 1072 BCM constituting 83.26 and 74.08 per cent, respectively of water would alone be required for irrigation purposes.

Based on FAO projections, 13% more land in developing countries like India will be converted to agricultural use in the next 30 years. From a global perspective this amounts to a meagre 2% increase from the 38% of global land area used in 2008 to a total of 40%. This land expansion will account for only 20% of future increases in food production. Another 10% additional production can be projected from increased cropping intensity including Seed Replacement Rate (SRR). Therefore, for the rest 70%, we will have to call upon innovation of efficient technologies and also judiciously use the ones at hand.



Space for horizontal expansion is very little and the only available option is vertical expansion through increased productivity and cropping intensity using modern methods like protected intensive farming/vertical farming employing plant environment control measures, quality seeds, fertilizer, irrigation, MIS and plant protection *etc.* Protected farming is economically more rewarding in production of high value, low volume crops, seeds and planting materials and off-season vegetables. With appropriate structures and plant environment control measures, the constraints of environment prevalent in the region can be overcome allowing almost year-round cultivation, increased productivity by 25-100% and in certain cases even more, as well as conservation of irrigation water by 25-50%. Protected farming offers itself as alternate farming method with much higher carrying capacity.

OBJECTIVES

- * To assess the current scenario and emerging trends in greenhouse production system of hi-valued vegetable crops
- * To strategize crop improvement work in green house vegetable crops
- * To discuss and share various technological interventions for higher productivity of vegetable crops under protected conditions
- * To examine and maneuver the scope of vertical farms in ambitious smart cities of India
- * To validate the scope and opportunities of organic farming under protected conditions
- * To understand disease and pest dynamics in greenhouse vegetable production system and adopt better devices for the management
- * To discuss and prioritize pre and post-harvest and marketing blue prints
- * To share and discuss on the issues and policy initiatives, ICT, other extension services etc. for better adoption and remuneration from protected cultivation
- * To come out with effective recommendations for higher productivity and sustainability of protected cultivation

THEMATIC AREAS OF THE SEMINAR

1. Greenhouse Productions systems- Opportunities and Challenges

- The Indian Greenhouse industry
- Technological and ecological approaches to design and manage greenhouse production
- Structural modifications suited to different agro-ecological conditions
- Structural innovations to utilize vertical space in short statured vegetable crops
- Climate control mechanism in different protected structures
- Crop medeling and its applications in protected cultivation
- Designing and development of tools, devices and equipments for easy operations in greenhouse
- Rainwater water harvesting and protected structures
- Renewable energy sources and protected structures



2. Biodiversity and Genetic Improvement

- Introduction and Utilization of plant genetic resources
- Development of vegetable cultivars exclusively for protected cultivation
- Introduction and Identification of new hi-valued vegetable crops
- Breeding vegetable crops for tolerance/resistance against biotic and abiotic stresses



3. Technological interventions for higher productivity in vegetable crops under protected environment

- Hi-tech nursery raising and management
- Development of crops specific packages for vegetable crops under protected culture
- Identification of economically viable cropping systems
- Optimizing nutrient and water inputs in greenhouse vegetable production
- Irrigation water quality and its management



- Innovations for multistoried cropping inside protected structures
- Light management in vegetable production systems
- Pollination control and protected structures
- Seed production and protected structures
- Vegetable grafting-A surgical approach to combat biotic and abiotic stresses
- GAP for greenhouse vegetable crops



4. Emerging trends in protected cultivation

- Basics of soilless culture
- Structural designs of vertical farms for ambitious smart cities of India
- Vertical farming of vegetables in urban and peri-urban areas
- Nutrient and leachate management in production system
- Water-Energy conservation and recycling in vertical farms
- Microgreens cultivation



5. Organic farming of vegetable crops under protected culture

- Standardization of organic substrates for vegetable crop production
- Optimization of nutrient sources for organic production
- Disease and Pest management under organic system



6. Management of pest and diseases under protected culture

- Greenhouse environment-pest dynamics and management
- Effective IPDM strategy for greenhouse vegetable crops
- Nematode management
- Alternatives to chemical soil-sterilization



7. Post-harvest handling and value addition

- Challenges in harvesting and handling of fresh vegetables
- Implications of physiology during handling and storage
- Pre and Post-harvest treatments for shelf-life extension
- Impact of Climate change on quality of produce
- Key components to avoid post-harvest losses
- Processing and value addition of vegetable crops



8. Market intelligence and strategies

- Vegetable produce logistics in India
- Alternate marketing systems for greenhouse produce
- Crop specific market intelligence and strategy (s)
- Supply chain management of vegetable produce
- Marketing strategy for export of greenhouse vegetable produce



9. Impact and assessment of protected cultivation

- Government agencies- Financial assistance for better adoption of technology
- Success stories- Economic realization through protected cultivation
- Skill development in farmers and young India on protected cultivation through trainings
- Role of ICT in greenhouse production system



HOST INSTITUTE

An Agricultural University at Navsari in the Indian state of Gujarat established on May 01, 2004 by carving out of Gujarat Agricultural University for carrying out location specific and need based research, which commenced with establishment of a college of Agriculture in 1965 on a sprawling farm land of 400 hectares, located on the historic road of Dandi March. The university has specialization in providing higher education specifically in the fields of Horticulture, Agriculture, Forestry, Veterinary and Fisheries. Demographical jurisdiction of NAU covers seven districts, four of which are tribal dominated and rest three districts are well urbanized and industrialized covering an area of 2663107 ha. The Navsari Agricultural University has four fully developed faculties of Agriculture, Horticulture, Forestry and Veterinary, 2 Zonal Research Stations, three main crop based research stations on cotton, sorghum and mango, 3 regional research stations at Waghai, Vyara and Gandevi and 6 verification/testing centers to provide technological backup for the agricultural development in its domain. The extension component includes 5 Krishi Vigyan Kendras, Sardar Smruti Kendra, Agricultural Technology Information Centre, Agriculture Educatorium, Agro I.T.I and a Training and Visit scheme and Tribal Women Training Centre, MGMT programme, FFP etc.

THE HORTICULTURAL SOCIETY OF GUJARAT

The Horticultural Society of Gujarat came into existence in the year 1994 with its Secretariat at ASPEE College of Horticulture and Forestry, NAU, Navsari. The Society is actively involved in promotion and adoption of various horticultural technologies for overall development of horticulture sector at cooperative levels in the state of Gujarat. It also aims at generation of awareness on technological aspects of horticulture through publications, workshops, seminars, conferences etc. with the involvement and participation of horticulture scientists of national and international repute. It also strives to create infra structural facilities at state level for growth and development of horticulture. This seminar is one such attempt to bring together scientists, administrators, technicians, private industry, producers and consumers on a single platform and share their research and ideas on technology, emerging priorities, sustainability of protected cultivation of vegetable crops.

Deliberations and discussions in the seminar will surely identify knowledge gaps and new research directions towards economic rise of greenhouse vegetable growers.

SEMINAR VENUE

Swami Vivekananda Hall, ASPEE College of Horticulture and Forestry, Navsari Agricultural University, Navsari, Gujarat, India.

HOW TO REACH

The nearest domestic airports are at Surat & Vadodara 30 & 170 km north of Navsari, with the other international terminals being the Chhatrapati Shivaji International Airport at Mumbai, 230 km to the south and the Sardar Vallabhbhai Patel International Airport, Ahmedabad to the north, approximately 300 km from Navsari.

Navsari is well-equipped with latest facilities of transportation system, which lies on the Mumbai-Ahmedabad Western Railway link. The city has its own railway station that has direct trains to neighboring cities of Gujarat and other states of India. Navsari is only 30 km south of Surat.

Navsari is well connected by NH 228 also known as Sabarmati-Dandi Highway. NH No. 8 (Delhi-Mumbai) also passes besides the city, which is 10 km away from it.



WEATHER DURING FEBRUARY

The weather in Navsari during "Springtime" remains very pleasant with average maximum and minimum temperature of 32 and 13 °C, respectively.

LANGUAGE

The official language of Seminar will be English.

PAPER PRESENTATIONS

The seminar will include Lead, Oral and Poster Presentations.

LEAD PAPERS

Eminent Scientists in the field of protected cultivation of vegetable crops will be invited to deliver talks on thematic areas of the Seminar in different technical sessions.

ORAL PRESENTATION

Amongst the accepted papers, shortlisted ones by the technical committee will be considered for oral presentation in each technical session with time limit of 10 minutes only.

POSTER PRESENTATION

The other contributions of scientific community will be presented as poster papers concurrent to the concerned technical session for wider coverage of thematic areas of the seminar. The presenter (s) of posters is required to be at venue during respected poster session for screening by technical review committee. The maximum size of poster is 120 cm high and 90 cm wide.

ABSTRACT GUIDELINES

The abstract should be prepared in 12 Point/ Times New Roman font with single spacing not exceeding 300 words. It should contain clear title, name (s) and affiliation of contributors. The name of presenter should be underlined and email & cell No. should be added below the affiliation of contributors. Figures, tables, references and sub-headings should be avoided in the abstract. The abstract may be forwarded through mail at naunspcveg18@gmail.com

BEST PAPER AWARD

Best oral and poster papers in each thematic area of the seminar adjudged by the panel of scientists/persons will be felicitated by the organizers with a certificate.

PUBLICATIONS

The lead papers and the papers shortlisted for oral and poster presentation will be published in Souvenir to be brought out during the Seminar with space for advertisement. Abstract (s) of registered authors will only be published in abstract book of the Seminar.

INTERACTIVE SESSION

An interactive session of greenhouse growers and entrepreneurs with NHB, APEDA, State Horticulture Department, Scientists and industry people will also be organized addressing opportunities and challenges in greenhouse production system of vegetable crops.

IMPORTANT DATES TO REMEMBER

Abstract Submission (latest by): November 30, 2017

Communication regarding status of Abstract: December 15, 2017

Submission of registration fee (latest by): December 31, 2017

REGISTRATION

Registration Fee for the seminar may be transferred in advance through NEFT/RTGS to "The Horticulture Society of Gujarat" Account No 10389374537 at SBI NAU Branch-Navsari (IFSC: SBIN0003889) under intimation to organizing secretary at naunspcveg18@gmail.com via Registration Form. Registration Form for the seminar may be downloaded from www.nau.in and duly filled in Registration Form along with transaction details may be communicated at naunspcveg18@gmail.com

Non-refundable Registration Fee for different categories is given below:

Category	On time (₹)	With late fee (₹)
Members of HSG	4000	5000
Non-members of HSG	5000	6000
Corporate/ Private Body (s)	6000	7000
Students	1500	2000
Foreign Delegates	US\$ 175	US\$ 200

Spot registration can also be done on the first day of seminar up to 10.00 am with late fee.

ACCOMMODATION & TRANSPORTATION

Owing to limited accommodation facilities available in the host Institute, shared economy accommodation will be provided to registered delegates on first-come-first-serve basis. The accommodation for other delegates may be arranged in nearby hotels in Navsari by the organizers subject to confirmation and intimation to organizing secretary well in advance along with requisite fee (half of the hotel tariff in advance). The Participants can directly contact the following persons

Dr. H. V. Pandya (Convener-Accommodation Committee): +91 98984 60192 hvpandya@nau.in

Dr. S. J. Patil (Convener-Transport Committee): +91 99980 12218 goldmedalist@nau.in

Tentative Tariffs for Hotel Accommodation at Navsari

Hotel Royal Regency +91 9727520000	Super Deluxe 1680/-	Royal 2016/-	Suite 2744/-
Arunoday Hotel (02637) 255605, 250605	Single (AC/Non-AC) 1000/500	Double (AC/Non-AC) 1500/700	

Please confirm your participation and accommodation as well as itinerary/travel plan by communicating at naunspcveg18@gmail.com latest by December 31, 2017 in a given format downloadable at www.nau.in

Transport facilities will be made available for the delegates from Navsari Railway Station/ Bus Depot as well as from their respective stay to the venue of Seminar.

EXHIBITION

An exquisite exhibition on various technological aspects and greenhouse production system will also be arranged on public-private partnership mode to facilitate better exposure amongst greenhouse growers, entrepreneurs etc. The Industries/private bodies related to protected Cultivation may approach the organizers at naunspcveg18@gmail.com for detailed information on exhibition.

ADVERTISEMENT

The Seminar on "Technologies and Sustainability of protected cultivation for Hi-Valued Vegetable crops" will provide excellent opportunity for companies/organizations to promote their products and services in greenhouse production system. Advertisement will provide coverage space in the Souvenir, banner/logo display during the session (s), distribution of promotional material etc.

CULTURAL PROGRAMME

A Cultural Eve will be organized to enlighten the moods of delegates with cultural richness of Gujarat and India, details of which will be provided on the day of registration.

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Title of the Thematic Area and Number:
Whether Accommodation Required: Yes/ No
Type of Accommodation: 1. Shared Economy Accommodation
2. Hotel (AC/ Non-AC)
Payment Details through RTGS/NEFT: Date:
Bank Transaction Receipt No.: Branch:
Name of Bank:
Amount (₹ / \$):
Date: Signature:
Place:

Duly filled in scanned copy of Registration Form along with
Fee Transaction Details (mention name) may be sent at naunspcveg18@gmail.com

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