



ICAR-Sponsored 10-Day Short Course

INDIAN COUNCIL OF AGRICULTURAL RESEARCH
ICAR-Indian Agricultural Research Institute
Centre for Protected Cultivation Technology
(CPCT), Pusa Campus, New Delhi-110 012

 **DATES**
14–23 December 2026

 **VENUE**
CPCT, ICAR-IARI,
Pusa Campus,
New Delhi-110 012

 **SEATS**
25 participants

APPLY BY
12 November 2026

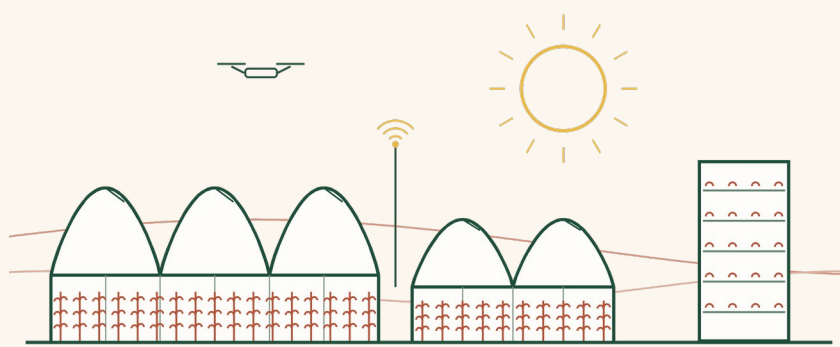
Selected participants informed by
18 November 2026

PATRON
Director, ICAR-IARI

COURSE DIRECTOR
Dr Raman Selvakumar

COURSE COORDINATORS
Dr Hemlata Bharti
Dr Paresh Chaukhande

ICAR-Sponsored Short Course on Climate-Smart Protected Cultivation and Future Farming Technologies for Viksit Bharat



ABOUT THE COURSE

Protected cultivation stabilises vegetable and flower production against heat waves, erratic rainfall, cold spells and pest pressure, while improving water and nutrient-use efficiency compared with open-field production. The course covers zone-specific structures, energy-efficient climate control, soilless and vertical production, cultivars developed for protected cultivation, and the sensors, automation and decision-support tools that support precision management under protected cultivation, through lectures by ICAR-IARI and partner-institute specialists and hands-on sessions in the polyhouses, net houses, hydroponic units and nurseries of CPCT.

THE ORGANISERS

The ICAR-Indian Agricultural Research Institute, New Delhi, is a leading national institution for agricultural research, postgraduate education and extension. Its Centre for Protected Cultivation Technology (CPCT) develops protected structures, soilless production systems and nursery technologies for vegetables and flowers, and trains scientists, extension workers and farmers from across the country.

OBJECTIVES

- To update participants on climate-smart protected structures and microclimate management suited to Indian agro-climatic zones.
- To provide hands-on exposure to soilless culture, fertigation, vertical farming and controlled-environment production.
- To discuss breeding, seed and grafting strategies for protected crops and integrated management of pests, diseases and nematodes.
- To introduce sensors, IoT, artificial intelligence and robotics for precision monitoring, decision support and automation in protected cultivation.
- To examine the economics, enterprise models and policy support for protected cultivation.

Ten days, ten themes

Each day pairs specialist lectures with a hands-on session at CPCT.

01

MON 14 DEC

Inauguration; climate risk and structures

Climate risks for horticulture; zone-specific polyhouses, net houses and tunnels; covering materials.

03

WED 16 DEC

Soilless culture and fertigation

Substrates, nutrient film technique (NFT), deep-flow technique (DFT) and aeroponics; nutrient solutions, EC/pH and drip fertigation.

05

FRI 18 DEC

Crops, cultivars and seed

Cultivars for protected cultivation; parthenocarp and gynoecy; vegetable grafting; protected nurseries.

07

SUN 20 DEC

Digital, AI and automation

Sensors, IoT and climate controllers; image-based phenotyping; AI-based decision support; robotics.

09

TUE 22 DEC

Field exposure

Visits to protected-cultivation units, hi-tech nurseries and FPOs in the National Capital Region.

02

TUE 15 DEC

Microclimate and energy

Temperature, humidity, light and carbon dioxide control; evaporative cooling; solar and agrivoltaic options.

04

THU 17 DEC

Vertical farming and controlled-environment agriculture (CEA)

Plant factories, LED spectra and photoperiod, microgreens, and disease-free planting material.

06

SAT 19 DEC

Plant health under protection

Integrated management of insect pests, diseases and root-knot nematodes; biocontrol; residue-safe production.

08

MON 21 DEC

Floriculture and postharvest

Protected cut flowers, high-value and exotic vegetables, harvest indices, postharvest handling and quality.

10

WED 23 DEC

Enterprise and valedictory

Economics of structures, FPO and start-up models, schemes and credit; presentations; valedictory.

ELIGIBILITY

Scientists, Assistant Professors, and faculty members of equivalent or higher rank from ICAR institutes, State and Central Agricultural Universities and other NARES institutions who hold at least a Master's degree in horticulture, agriculture, agricultural engineering or an allied discipline and have a minimum of two years of teaching, research or extension experience are eligible to apply.

TRAVEL AND STAY

Outstation participants will be reimbursed to-and-fro travel from their place of duty by the shortest route, up to AC-II tier rail fare or the equivalent bus fare, as per ICAR norms. Accommodation at ICAR-IARI will be provided to outstation participants subject to availability, and local participants will be provided working lunch and refreshments on course days.

HOW TO APPLY

- 1 Fill in the application form enclosed with this brochure.
- 2 Have it recommended and forwarded, with signature and seal, by the Head of the Institute or Controlling Officer.
- 3 Upload it as a single PDF through the online application form (scan the QR code below), or e-mail it to icarshortcourse2026@gmail.com with the subject "Application – ICAR Short Course on Climate-Smart Protected Cultivation".
- 4 Confirm participation within five days of selection.



SCAN TO APPLY ONLINE

Fill in the Google Form and upload the forwarded application as one PDF. **Open the form**

SELECTION

Twenty-five participants will be selected, including not more than two local participants, and will be informed by e-mail by 18 November 2026.

CERTIFICATE

Awarded to participants who attend all ten course days.

CONTACT

COURSE DIRECTOR

Dr Raman Selvakumar

Senior Scientist, CPCT, ICAR-IARI, Pusa Campus, New Delhi-110 012

E-MAIL

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MOBILE 9149967133

COURSE COORDINATORS

Dr Hemlata Bharti

Dr Paresh Chaukhande

LAST DATE

12 November 2026



ICAR-Sponsored Short Course on
**Climate-Smart Protected Cultivation and Future Farming
Technologies for Viksit Bharat**

14–23 December 2026 · CPCT, ICAR-IARI, Pusa Campus, New Delhi-110 012

*Affix a recent
passport-size
photograph*

APPLICATION FORM

Last date for receipt of the forwarded application: 12 November 2026

A. PERSONAL AND OFFICIAL DETAILS

1. Full name (in block letters)	
2. Designation	
3. Discipline / specialisation	
4. Name of the institute / university / KVK	
5. Full postal address with PIN code	
6. Mobile number	
7. E-mail address	
8. Date of birth	
9. Gender	
10. Category <i>General / OBC / SC / ST / EWS</i>	
11. Date of joining the present post	
12. Place of duty	
13. Nearest railway station <i>For travel reimbursement</i>	

B. QUALIFICATIONS AND EXPERIENCE

14. Educational qualifications

Degree	Subject / specialisation	University	CGPA / % score	Year
Bachelor's				
Master's				
Doctoral				
Other				

15. Professional experience

Research (years)	Teaching (years)	Extension (years)

C. RELEVANCE TO THE COURSE

16. Present area of work and its relevance to protected cultivation

Research, teaching or extension activities, crops handled, facilities available at the parent institute (not more than 150 words)

17. Have you attended an ICAR Summer / Winter School or Short Course earlier? If yes, provide the title(s) and year(s) below.

☐ Yes ☐ No

Title of course

Year

18. Are you a local participant (place of duty within Delhi–NCR)?

☐ Yes ☐ No

19. Is accommodation required during the course? (outstation participants; subject to availability)

☐ Yes ☐ No

20. Expected benefit of the course to your institution and stakeholders

Not more than 75 words

D. DECLARATION BY THE APPLICANT

I hereby declare that the information furnished above is true to the best of my knowledge. If selected, I shall attend the course for its full duration and abide by the rules and regulations of ICAR–IARI, New Delhi, during the course.

Place: _____

Date: _____

Signature of the applicant

E. RECOMMENDATION AND FORWARDING BY THE HEAD OF THE INSTITUTE

Certified that the particulars furnished by the applicant are correct as per the office records. The application is recommended and forwarded, and the applicant will be relieved to attend the ICAR-Sponsored Short Course at CPCT, ICAR–IARI, Pusa Campus, New Delhi–110 012, from 14 to 23 December 2026 if selected, and will be permitted to draw travelling allowance as per ICAR norms.

Place: _____

Date: _____

Signature of the Head of the Institute /

Controlling Officer

Name, designation and office seal

Upload the completed and forwarded form as a single PDF through the online application form (scan the QR code), or e-mail it to icarshortcourse2026@gmail.com with the subject line “Application – ICAR Short Course on Climate-Smart Protected Cultivation”.

Course Director: Dr Raman Selvakumar, Senior Scientist, CPCT, ICAR–IARI, Pusa Campus, New Delhi–110 012



SCAN TO APPLY