



ICAR Sponsored
WINTER SCHOOL
ON
INSECTICIDE RESISTANCE
AND ITS MANAGEMENT STRATEGIES

Date

01-21 December 2026

Venue

ICAR-Indian Institute of Rice Research,
Rajendranagar, Hyderabad - 500030, Telangana, India

Course Director

Dr. V. Chinna Babu Naik

Principal Scientist (Agricultural Entomology)
Division of Crop Protection,
ICAR-IIRR, Hyderabad

Co-Course Directors

Dr. A.P. Padmakumari

Dr. Kalyani M. Barbadikar

Organized by

ICAR-INDIAN INSTITUTE OF RICE RESEARCH
DIVISION OF CROP PROTECTION



WINTER SCHOOL 2026

on

“Insecticide Resistance and its Management Strategies”

About the Winter School

Insecticide resistance is a major constraint to the effective and sustainable management of agricultural insect pests. Continuous and indiscriminate insecticide use, selection pressure and adaptive responses of pest populations can lead to reduced susceptibility, declining insecticide efficacy, pest resurgence, disruption of natural enemies, increased production costs and environmental concerns. Therefore, systematic understanding of resistance detection, monitoring, mechanisms and management is essential for sustainable pest management.

The “21-day Winter School on “Insecticide Resistance and Its Management Strategies” is proposed to provide advanced theoretical and practical training in contemporary approaches to insecticide resistance, with particular emphasis on major important agricultural pests. The programme will integrate lectures, hands-on practical sessions covering insecticide resistance, monitoring, bioassay techniques, biochemical and molecular mechanisms, pesticide residue analysis host plant resistance, biological control, pheromone-based technologies, integrated pest management and resistance management.

ICAR–Indian Institute of Rice Research (ICAR–IIRR), Hyderabad has established expertise in insecticide resistance monitoring, insect toxicology, host plant resistance, biochemical and molecular characterization of insect pests and integrated pest management, etc. Building on this expertise, the Winter School will also introduce emerging tools such as molecular and genomic approaches, RNA interference and CRISPR/Cas-based technologies. The programme aims to strengthen the capacity of agricultural scientists and professionals to generate and interpret resistance data, understand resistance mechanisms and develop scientifically sound, sustainable and integrated pest-management strategies.

Scope and aim of the winter school

The Winter School aims to provide advanced knowledge on insecticide resistance and its implications for sustainable pest management. It will cover resistance monitoring, bioassays, biochemical, genetic and molecular mechanisms of resistance. The programme will provide hands-on exposure to modern tools and techniques for resistance detection and characterization. Emphasis will be placed on integrated resistance management, host plant resistance, biological control and eco-friendly approaches. The training will strengthen the capacity of scientists and teachers for research, surveillance and effective field-level pest management.

Course Content

- Insecticide resistance monitoring
- Insecticide resistance mechanism
- Biochemical mechanisms of resistance
- Molecular mechanisms of resistance
- Insecticide resistance management
- Detection of pesticide residue
- Insect rearing protocols
- Insecticide Bioassay techniques
- Bioassay data analysis
- Bioinformatics tools
- Molecular Entomology viz., DNA isolation, PCR, Gel electrophoresis, Primer Designing etc.
- Genome editing approaches viz., RNAi and CRISPR/Cas



Eligibility

Participants should not be below the rank of Assistant Professor/Scientist and should be working in the fields of Agricultural Entomology, Plant Pathology, Nematology, Microbiology, Biotechnology, Plant Protection (SMS), or other related Plant Science disciplines, in ICAR Institutes, Agricultural Universities (SAUs), Krishi Vigyan Kendras (KVKs).

Selection of Participants

Twenty-five participants will be selected for the programme. Candidates with experience in fields pertaining to training will be given preference. Participants' nomination from the respective heads of organizations does not entail confirmed participation in the programme. The ICAR-IIRR will provide an official confirmation letter outlining the candidates' selection.

How to Apply

There is no course fee. However, registration fee of Rs 50/- should be paid to Director, ICAR-IIRR, SBI, Budvel, Near NIRD Cross Roads, Rajendranagar, Hyderabad - 500030, A/c No: 52114970145, IFSC code: SBIN 0020378.

Interested candidate may send the scanned copies of their applications along with a brief CV duly signed by the candidates and their higher authority to mail iirr winterschool@gmail.com. Participants are suggested to bring their personal laptop for practical.

Scanner for Payment



Important

The application will be considered for final selection only after receipt of the approved original application before the prescribed last date.

Important Dates

Receipt of applications: November 05, 2026

Intimation to selected candidates: November 06, 2026

Confirmation by selected candidates: November 09, 2026

Final list of selected candidates: November 10, 2026

Boarding and Lodging

Free boarding and lodging will be provided to the participants during the training programme as per the approved ICAR norms for Winter School. The candidates are eligible for Travelling Allowance only for travelling by train to the maximum of AC II-tier (AC III-tier for Rajdhani/Duronto train/Vande Bharat) fare by the shortest route. Please note that, strictly, no accommodation in the guest house will be provided to the family members or guests of the participants.

Location, Weather Conditions and How to Reach

Hyderabad is a well-connected city with good accessibility by air, rail and road. The ICAR–Indian Institute of Rice Research (ICAR-IIRR) is located at Rajendranagar, Hyderabad-500030, Telangana, India (<https://maps.app.goo.gl/V5F7U74rDHkpatF7>). Hyderabad has a generally pleasant climate during the winter-school period in October, although occasional rainfall may occur as October falls within the southwest monsoon period. The city has an annual mean temperature of about 26°C.

The Institute is approximately 18-20 km from Rajiv Gandhi International Airport, Shamshabad, and about 16 km from Hyderabad Deccan (Nampally) Railway Station. It is also around 25 km from Secunderabad Railway Station and 16 km from Kacheguda Railway Station. Participants can avail themselves of pre-paid taxis, app-based cabs and auto-rickshaws from the airport or railway stations to reach ICAR-IIRR, Rajendranagar (17°19'13.6"N, 78°23'37.7"E).

For more information, contact:

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Ph No: 9665694463 (Waatsu, 9284832433; Mail: iirr winterschool@gmail.com)
- Co-Course Director** : **Dr. A.P. Padmakumari**, Principal Scientist & Haed, ICAR-IIRR,
Dr. Kalyani M. Barbadikar, Senior Scientist, ICAR-IIRR,
- Co-ordinator** : **Dr. Satish N. Chavan**, Senior Scientist, ICAR-IIRR,
: **Dr. K. V. Raghavendra**, Scientist, ICAR-IIRR,
: **Dr. Satyaswara Jasudasu Gompaa**, Scientist, ICAR-IIRR,
: **Dr. Papa Rao Vaikuntapu**, Scientist, ICAR-IIRR,
: **Dr. Arun Kumar**, Principal Scientist

DIRECTOR

Dr. M.S. Prasad,
ICAR-IIRR, Rajendranagar, Hyderabad



LOCAL ATTRACTIONS:

Hyderabad is the vibrant capital of Telangana and a booming global IT hub. Famous for its rich history, the “City of Pearls” blends centuries-old Mughal and Qutb Shahi architecture with a modern, cosmopolitan lifestyle, and is world-renowned for its iconic Charminar and flavourful Hyderabad Biryani.

Charminar:

The iconic 16th-century architectural monument and the heart of the Old City.



Golconda Fort:

A majestic 12th-century hilltop citadel renowned for its impressive acoustic engineering and evening sound and light show.



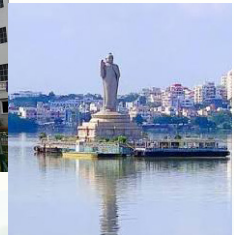
Ramoji Film City:

The world’s largest integrated film city complex, offering immersive studio tours and entertainment.



Salar Jung Museum:

One of India’s largest national museums, featuring a massive collection of global antiques, including the famous Veiled Rebecca statue.



Hussain Sagar Lake:

Asia’s largest artificial lake, featuring a massive monolithic Buddha statue right at its Centre.

Statue of Equality:

A spectacular 216-foot golden monument dedicated to the 11th-century reformer Ramanujacharya.



APPLICATION FORM
ICAR-Sponsored Winter School on
“Insecticide Resistance and Its Management Strategies”
from 01-21 December 2026

1. Full name (in block letters)	:	
2. Designation	:	
3. Present employer and address	:	
4. Address for communication	:	
5. Mobile no. with WhatsApp facility/ email ID	:	
6. Permanent address	:	
7. Date of birth (DD/MM/YYYY)	:	
8. Gender (Male / Female / Other)	:	
9. Marital status (Married/Unmarried)	:	
10. Teaching/Research/Professional Experience (mention the post(s) held during the last 5 years and the number of publications)	:	
11. Have you participated in any training (Summer/Winter School/Short Course, etc.) during the last 5 years under ICAR/other organizations: Yes/No (If yes, Name of the Institute, Title of the training)	:	
12. Details of fee payment (Rs. 50/-)	:	
13. Date of transaction	:	
14. Transaction Details	:	

Academic Record

Exam Passed	Subjects Main/ Subsidiary	Year of Passing	Class rank/ Distinction etc.	University/ Institution
Ph.D.				
Master's degree				
Others (specify)				

Discipline:

Level of knowledge of Statistics and Computer usage: Excellent / Good / Average

Signature of the Applicant with Date

Recommendations of the forwarding Institute

Signature of the Forwarding Authority
with Seal and Date

CERTIFICATE

It is certified that the information furnished above is correct. Travelling allowances will/ will not be paid by this office.

Signature of the Sponsoring Authority
with Seal and Date