**DEPARTMENT OF ZOOLOGY, HINDU COLLEGE, UNIVERSITY OF DELHI**
organizes

# SHORT-TERM COURSE

on

**INTEGRATED PEST MANAGEMENT (IPM): EFFECTIVE, ECONOMICAL AND ECO-FRIENDLY WAYS OF KEEPING INSECT PESTS AT BAY**

## RESOURCE PERSONS :

**Dr. Paula Levin Mitchell**
Professor Emerita, Department of Biology
Winthrop University, USA

**Dr. Manoj K Nayak**
Principal Research Scientist, Leader, Postharvest Grain Protection Unit - Crop and Food Science, Agri - Science Queensland, Department of Agriculture and Fisheries

**Dr. S. Subramanian F.R.E.S**
Principal Scientist, Division of Entomology, Indian Agricultural Research Institute, New Delhi

**Dr Raghavendra K V**
Scientist, NCIPM, IARI, New Delhi

**Dr. Kalleshwara Swamy**
M.Sc (Agri), Ph.D., PGDAGM, FAAPMHE
Assistant Professsor of Entomology, College of Agriculture, UAHS

**Dr. Kuldeep Singh**
Scientist and Officer Incharge, IMCR - National Institute of Malaria Research

**Dr. Anupam V. Sharma**
Sr Assistant Professor, Department of Zoology, Hindu College, University of Delhi

**Dr. Indrakant K Singh**
Assistant Professor, Department of Zoology, Deshbandhu College, DU

**Dr. Anjana Singha Naorem**
Assistant Professor, Cotton University, Assam

**Dr. Sagar, D.**
Ph. D. (Ent), PGDMCJ
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Division of Entommology, IARI, Pusa Campus, New Delhi

**Mr. Kiran Kumar Salam**
Assistant Professor, Department of Zoology, Hindu College, University of Delhi

**REGISTER HERE :**
https://forms.gle/ARR4HTd2h1KDNWdt9

## *CONCEPT NOTE*

Integrated Pest Management (IPM) is a fairly modern concept with major shift from age-old principles of pest control that relied heavily on chemical treatments. IPM is a holistic approach that relies on a combination of common-sense practices that use current, comprehensive information on the life cycles of pests and their interaction with the broader environment. This information, in combination with available pest control methods, is used in effective way to manage pest damage by the most economical means, and with the least possible hazard to people, property, and the environment.

IPM is a systems approach that takes advantage of all available appropriate pest management options including, but not limited to, the judicious use of pesticides. For organic food production, however, many of the same concepts as IPM are applied, but the use of pesticides is limited to those that are produced from natural sources, as opposed to synthetic chemicals.

## *OBJECTIVE*

Through this short-term add-on course on IPM, the students shall be able to comprehend the fundamental principles of pest management in a very easy-to-understand manner, and enable them to take informed choices if they wish to pursue research studies in this field and establish themselves as IPM professionals in future.

## LIMITED SEATS !

**NUMBER OF SEATS - 30**

**FEE - ₹1000/- PER STUDENT**

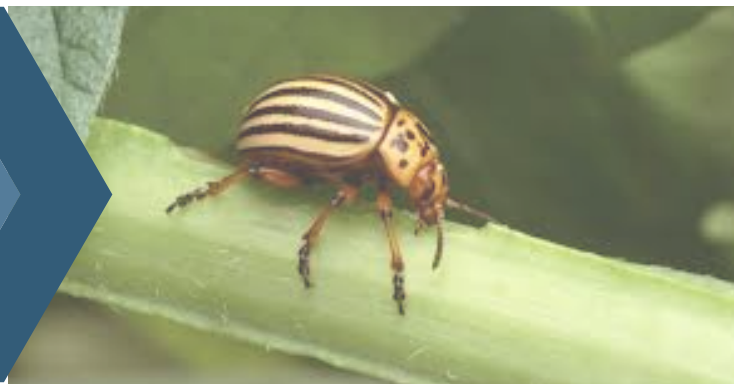
**ELIGIBILITY -** Students enrolled in a regular UG course in any University, with basic knowledge of Life Sciences. Scientific aptitude and passion for recording observations in the surroundings, and research is a must.

**PLATFORM - GOOGLE MEET**

## ABOUT IPM :

### Principles of an IPM Program

A. Identify pests, their hosts and beneficial organisms before taking action
B. Establish monitoring guidelines for each pest species
C. Establish an action threshold for the pest
D. Prevention
E. Evaluate and implement control tactics
F. Monitor, evaluate and document the results

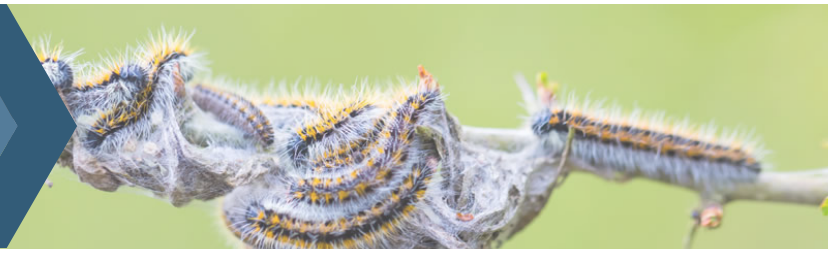


### Various methods/tools used in IPM

1) Alteration of surroundings so as to make it unfavourable for the establishment of pest population
2) Introduction of natural enemies of the pest: Predators, parasites and pathogens
3) Grow plants that resist pests
4) Disrupt development of pest by using Insect Growth Regulators (IGRs) \
5) Identify the initial symptoms of pest damage and prevent the pest population from reaching the Economic Injury Level or EIL
6) Disrupt pest behavior by using sex pheromones, repellents, etc.
7) Use botanical pesticides
8) Need-based and judicious use of chemical pesticides

### Advantages of an IPM Program

1. Lower cost intervention
2. Benefits to environment
3. Minimize residue hazards of synthetic pesticide
4. Safe for human health



## SCHEDULE :

| 26 Sept. 2020 | 3 Oct. 2020 | 10 Oct. 2020 | 17 Oct. 2020 |
|---|---|---|---|
| An overview of the Course; Fundamental concepts of IPM | Destructive phytophagous insect pests | Comprehensive account of Pest control methods | Pest Control methods: **Use of Endocrine disruptors: IGRs** |
| **Dr Subramanian** | **Dr Subramanian<br>Dr Anupam V. Sharma** | **Dr Raghavendra K V** | **Dr Anjana S. Naorem/<br>Dr Anupam V. Sharma** |
| Management of Stored grain pests | Variation in mouthparts of insects; significance in pest management | Pest Control methods: **Biological control** | Biotechnological interventions in pest control |
| **Dr Manoj Nayak** | **Dr Anupam V. Sharma** | **Prof. Paula Mitchell** | **Dr Indrakant K. Singh** |
| Interactive session | Interactive session | Interactive session | Interactive session |
| | | | |
| **24 Oct. 2020** | **31 Oct. 2020** | **7 Nov. 2020** | **21 Nov. 2020** |
| Insect vectors and diseases | Success Stories of IPM In India | Student Presentations | Student Presentations |
| **Mr Kiran K.Salam** | **Dr Kalleswara Swamy** | **Q&A Session** | **Q&A Session** |
| Lacunae in vector control programs | Scope of the course | **28 Nov. 2020** | |
| **Dr Kuldeep Singh** | **Dr Anupam V. Sharma** | Student Presentations | |
| Interactive session | Interactive session | **Q&A Session** | **VALEDICTORY** |

## TIMINGS : 2pm - 5pm

No session has been scheduled for 14th Nov. 2020 on account of Diwali festival on 15th Nov.2020

### For Queries :-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### EXECUTIVE COMMITTEE

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Dr. Anupam V. Sharma
Dr. C.L. Jonwal
Dr. Neetu Wadhwa
Dr. Varunendra Singh Rawat
Mr. Kiran Kumar
Mrs. Varsha Yadav
Dr. Divya Bajaj
Mr. Mohit Kumar

### COURSE COORDINATORS

Dr Anupam V. Sharma
Dr Anjana Singha Naorem

### COURSE CO-COORDINATORS

Dr Monika Ram
Dr Sagar D.
Mr Kiran K. Salam

### STUDENT COORDINATORS

Mr Jajgot Arora
Ms Anushka Rao
Mr Arvind K. Vaishnav