



ADVANCED TRAINING COURSE ON

Advances in Biology, Domestication and Management of Honey Bees and Native Pollinators FROM

20th November to 10th December, 2025



Course Director:

Dr. Sunita Yadav

Course Coordinators:

Dr. Deepika Kalkal

Dr. Manoj Kumar

Dr. Vijay Kumar Mishra

SPONSORED BY

INDIAN COUNCIL OF AGRICULTURAL RESEARCH, NEW DELHI

ORGANIZED BY

DEPARTMENT OF ENTOMOLOGY

CCS HARYANA AGRICULTURAL UNIVERSITY

HISAR-125 004 (INDIA)

Background

Beekeeping is a vast scientific subject, closely associated to agriculture, food, nutrition, medicine, industrial products and environment. As pollinators play a vital role in sustaining global biodiversity and agricultural productivity by facilitating the reproduction of over 75% of flowering plant species. Among the well known *Apis* honey bee species all over the globe (8) , Indian subcontinent is habitat for five species. A plethora of other bee species (>1000 species) and bee floral diversity (750-1000 bee floral plants) is known to occur in the country. Beekeeping or rearing of *Apis* species in hives is an ideal, low cost, eco-friendly, non land based enterprise which does not compete for the resources of farming systems that provides sustainable livelihood to the rural/indigenous people and can be adopted by landless people and women. In India, much of the work has been undertaken on various aspects of honey bees (*Apis* spp.) alone, which are not only good pollinators, but are a rich source of honey, wax, propolis, royal jelly and other beneficial products as well. However in nature, apart from honey bees there exist a large number of solitary bees such as mining bee, leafcutter bee, alkali bee, carpenter bee, etc. which play an important role in pollination of various crops and flowering plants growing in the wild. The potential of such bees for pollination remains underutilized. Efforts to domesticate native pollinators such as *Bombus*, *Melipona*, and *Xylocopa* species have expanded pollination opportunities in controlled agricultural systems, contributing to sustainable production of fruits, vegetables, and oilseed crops. There are reports of bee decline world over probably due to injudicious use of pesticides, climate change and large-scale conversion of barren lands into monocultures. Scientific management is required to cope with these emerging problems. Conservation of existing bee colonies, their rapid multiplication, increasing their productive efficiency, extraction and value addition of various bee products and utilizing the bee colonies for planned pollination is the need of the hour. These challenges necessitate integrative management approaches combining modern scientific advances with traditional beekeeping knowledge. Sustainable pollinator management now emphasizes habitat restoration, diversified floral resources, reduction in agrochemical use, and promotion of pollinator-friendly landscapes.

Overall, advances in the biology, domestication, and management of honey bees and native pollinators have not only enhanced our understanding of their ecological functions but also provided clues to develop practical strategies for sustaining pollination services critical to global agriculture and biodiversity conservation. Therefore, training on “**Advances in Biology, Domestication and Management of Honey Bees and Native Pollinators**” has been proposed for refreshing as well as upgrading the knowledge and skills of extension functionaries and scientists of different State Agricultural Universities and other Coordinating Centres.

Objectives

- To impart advance scientific knowledge in the field of apiculture
- To provide an opportunity to discuss and exchange ideas with experts in the field of apiculture

Course outline

- Historical development of apiculture and the occurrence of bee enemies and diseases in India.
- Taxonomy, characteristics, races and distribution of *Apis* species
- Seasonal management of honey bee colonies
- Diversity, taxonomy and distribution of native pollinators
- Biology of hive bees: lifecycle, colony structure and division of labour
- Honey bee pheromones: sources, composition, and significance within the colony
- Anatomical and physiological adaptations in *Apis mellifera*
- Principles and requirements for starting beekeeping and establishing *Apis mellifera* apiary successfully
- Seasonal management of *Apis mellifera* colonies
- Management of swarming, absconding, robbing, queenlessness, laying worker colonies and curbing drone population in hive bees
- Bee flora: distribution, importance and utility to honey bees and migratory routes in India
- Role of honey bees and other pollinators in crop productivity
- Mass Queen Rearing in *Apis mellifera* Colonies
- Diversity and management techniques of native pollinators
- Recent advances in *Varroa destructor* management
- Impacts of climate change on honey bees and native pollinators diversity

Participation & eligibility: Sponsored faculty of the rank of Asst./Assoc. Prof. from SAU/ICAR Institutes is eligible to participate in the training course. The status of selected candidates will be informed through e-mail.

Location: Hisar is located 165 km from Delhi and 320 km from Jaipur. Hisar is well connected through buses 24 x 7 from neighboring states as well as Delhi [Inter State Bus Terminus (ISBT) at Kashmiri Gate]. Trains for Hisar could be taken from Delhi: 12555/ Gorakhdham SF express (Departure from New Delhi Railway Station at 5:40 AM); 14731/Kisan Express (Departure from Old Delhi Railway Station at 2.00 PM) ; Sirsa Express (Departure from New Delhi Railway Station at 5.30 PM).

Season: Cold weather is expected during the training period. The participants are requested to carry woollens.

How to apply?

The participants' fill the application given in brochure and e-mail the form at hodentohau@gmail.com. After filling the application, take a printout of the application and get it approved by the competent authority of your organization. Send the approved hard copy of the application form to the Course Director latest by 12th of November, 2025 by post/e-mail.. The final selection will be subjected to receipt of the application duly recommended by the competent authority. Boarding and Lodging would be provided free by the University as per ICAR norms. **The number of the candidates will be limited to 25.**

Important Dates:

Last date for receiving the nomination form : 12th November, 2025

Intimation of selection : 13th November, 2025

Confirmation by participants : 14th November, 2025

Intimation to waitlisted participants, if selected : 14th November, 2025

Registration Fee: The registration fee is non refundable. The registration fee structure is Rs. 1000/- for SAU/ICAR Instruction and Rs. 5000/- for Private ICAR accredited Colleges/University applicant have to pay registration fee on the following given account

Account name	HOD Entomology Permanent Account
Account number	96200100001830
Bank name & branch	Bank of Baroda, Haryana Agriculture University, Hisar
IFSC Code	BARB0DBHAUH (Fifth character is zero)

Travel, Boarding & Lodging: Boarding and lodging would be provided free by the University as per ICAR norms. To and fro rail fare as per entitlement subject to maximum of AC-III Tier or bus fare by the shortest route to the selected candidates **on production of actual tickets will be reimbursed.** Taxi travel charges are not admissible. Food and accommodation will be provided by the organizers. No DA is admissible to the participants. The local participants are not eligible for boarding and lodging; however, working lunch and refreshments will be provided.

Please make all correspondence and general enquiries to:

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Application Form for participation in Advance Training
(To be sent to Course Director of advance training course)

ICAR sponsored 21-days Advance Training Course on **Advances in Biology, Domestication and Management of Honey Bees and Native Pollinators** will be held during 20th November to 10th December, 2025 in Department of Entomology, CCS Haryana Agricultural University, Hisar

1.	Full Name (in block letters)	:	
2.	Designation	:	
3.	Name of the Department	:	
4.	Name of the Inst./Univ.	:	
5.	Date of joining	:	
6.	Date of birth	:	
7.	Address for correspondence	:	
8.	Telephone/Mobile No./ Fax	:	
9.	E-mail	:	
10.	Teaching/Research/Professional Experience	:	

11. Educational Qualifications

Examination	Year of passing	Institute/University	Subject	Any distinction
Bachelor's degree				
Master's degree				
Ph.D.				
Other certificates, Diplomas etc.				

11. Mention details if you have participated in Summer or Winter Schools/Short Courses, etc. during the previous five years under ICAR/other organizations:

12. Postal order/DD No..... Date..... for Rs. 1000/- (Rupees one thousand only) (non refundable) for registration of application.

Signature of the applicant

Recommendations of the forwarding Institute

Dr./Shri/Ms..... is hereby nominated for participation in the 21-days Advance Training Course in Department of Entomology, Chaudhary Charan Singh Haryana Agricultural University, Hisar during 20th November to 10th December, 2025

Signature

Designation & Address

Certificate

It is certified that the information was furnished as per the office record and was found correct.

Signature, Designation, Address and Office Seal of the Sponsoring Authority.