



# SHORT COURSE

ON

## Scientific Management of *Apis mellifera* Colonies for Nutritional and Economic Security

FROM

25<sup>th</sup> January to 3<sup>rd</sup> February, 2022 (10 Days)



**Course Director:**  
**Course Coordinators:**

**Dr. Ram Niwas**  
**Dr. Sunita Yadav**  
**Dr. Manoj Kumar**  
**Sh. Harish Kumar**

**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, related to agriculture, food, nutrition, medicine, industrial products and environment. Keeping in view all these advantages, there exists a unique opportunity for rural development through the promotion and extension of beekeeping activities. The diverse flora and varied climatic conditions across India are most suitable for promotion of beekeeping activities as India is one of the mega biodiversity countries with 45,000 recorded species of plants and shrubs, representing seven per cent of the world's flora. Asia and South East Asia are believed to be center of origin for the *Apis* species and India being an Asian country represents good diversity of honey bee species which is home for six of the nine honey bee species discovered so far. India with diverse climate and flora offers enormous scope for promotion and expansion of beekeeping activities as components of various sustainable agricultural production systems. It is a good source of supplementary income for the farmers and unemployed youth, and the high quality beekeeping products have large export potential in international market. Diversification of beekeeping activities by promoting production, processing and marketing of high value hive products other than honey and beeswax like royal jelly, propolis, bee venom, pollen etc. has become more important these days. Pollination by honey bees and other pollinators is capable of enhancing the quantity and quality of several crops like rapeseed and mustard, sunflower, niger, safflower, berseem, pigeon pea, apple, mango, citrus, guava, litchi, ber, phalsa, gooseberry, coriander, cauliflower, radish, onion, cucumber etc. Moreover, there is an urgent need to exploit the role of specific pollinators in matching the optimum pollination requirement of the greenhouse crops to realize maximum productivity. The need for pollination services will greatly increase in the near future as the area cultivated with pollinator-dependent crops has increased disproportionately over the last decades. Among the domesticated bee species, European honey bee, *Apis mellifera* has occupied dominating position in commercial pollination in the world. There are reports of declining bee populations in many parts of the world 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, diversification of bee products and utilizing the bee colonies for planned pollination is the need of the hour. Due recognition must be given to apiculture at both state and national levels, because it is a very important eco-friendly discipline with multipronged applied activities and sub-disciplines to realize higher hive and crop productivity, enhanced profitability, and social and economic upliftment of our rural population. Beekeeping is a highly profitable venture requiring small investment of capital and skilled labours in comparison to other poverty alleviation activities, therefore it can play a vital role in rural development by providing nutritional and economic security to the people.

We have seen the first phase of the Green Revolution; we have seen the White Revolution; now it is the time to see the second Green Revolution in association with honey bees and a Golden Revolution by honey production. Therefore, training on **Scientific Management of *Apis mellifera* Colonies for Nutritional and Economic Security** 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

- History of beekeeping in India with particular reference to introduction and success of *Apis mellifera*
- Morphological, anatomical, physiological and behavioral adaptations in *A. mellifera*
- Seasonal management of honey bee colonies
- Basic principles, requirements and concepts of starting beekeeping
- Specifications of apicultural equipments and their significance in commercial beekeeping
- Management of honey bee colonies for honey production and crop pollination
- Nutrition and feeding management in honey bees
- Migratory beekeeping for *Apis mellifera*: need, prospects, problems and management
- Traditional and novel techniques of mass queen bee rearing of *A. mellifera*
- Stock improvement, selective mating and establishment of mating nuclei of *A. mellifera*
- Production, processing, storage, uses and marketing of hive products
- Role of honey bees and other pollinators in crop productivity
- Present status of enemies and diseases of *A. mellifera* in India and innovations in organic management of

**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 made available on the CBP Vortal itself. They will also be informed through e-mail.

**Location:** Hisar is located 165 km from Delhi and 320 km from Jaipur. It is connected to Delhi by train as well as bus. The private AC buses ply between Inter State Bus Terminus, ISBT New Delhi and Hisar at an interval of approximately 1-2 hrs. There are three trains from Delhi viz. Haryana Express (leaving New Delhi Railway Station at 5.30 PM), Gorakhdham express (leaving New Delhi Railway Station at 5.40 AM) and Kisan Express (leaving old Delhi Railway Station at 2.00 PM).

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

### **How to apply?**

The participants' application will be received online using CBP vortal (<https://cbp.icar.gov.in>) through <https://iasri.icar.gov.in> or under the link Capacity Building Program at <http://icar.org.in>. After filling the online application, take a printout of the application and get it approved by the competent authority of your organization. Upload the scanned copy of application through CBP vortal. Candidates should also send the hard copy of the complete and recommended application through mail/fax/speed post through proper channel to the Course Director; a scanned copy must also be submitted by email. The final selection will be subjected to receipt of the application duly recommended by the competent authority. Candidates should compulsorily bring permission and relieving letter from the respective institute. The number of the candidates will be limited to 25.

### **Important Dates:**

Last date for receiving the nomination form : 20<sup>th</sup> December, 2021

Intimation of selection : 22<sup>nd</sup> December, 2021

Confirmation by participants : 27<sup>th</sup> December, 2021

Intimation to waitlisted participants, if selected : 29<sup>th</sup> December, 2021

**Registration Fee:** A registration fee of Rs. 50/- (Rupees fifty only) per participant is fixed as per the ICAR guidelines, which can be paid through Bank Demand Draft in favour of Comptroller, Chaudhary Charan Singh Haryana Agricultural University, Hisar payable at Hisar along with the application form.

**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:**

Dr Ram Niwas, Prof. & Head-cum-Course Director

Department of Entomology

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**Application Form for participation in Short Course**

(To be sent to Course Director of Short Course)

ICAR sponsored 10-days short course on **Scientific Management of *Apis mellifera* Colonies for Nutritional and Economic Security** will be held during 25<sup>th</sup> January to 3<sup>rd</sup> February, 2022 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. 50/- (Rupees fifty 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 10-days Short course in Department of Entomology, Chaudhary Charan Singh Haryana Agricultural University, Hisar during 25<sup>th</sup> January to 3<sup>rd</sup> February, 2022

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.