

REPORT ON GREEN SKILL DEVELOPMENT PROGRAMME

Certificate Course on "Apiculturist (Wild Bee) – NTFP" for ST Candidates

Day 3 – Technical Training Session

Date: 16 September 2026

1. Programme Particulars

Resource Person: Dr. Pukhram Bhumita, Assistant Professor, I/C – Integrated Bee Development Centre (IBDC), College of Agriculture, Iroisemba, CAU, Imphal, Manipur
Venue: College of Agriculture, Iroisemba, CAU, Imphal
Mode of Training: Classroom lecture supported by PowerPoint presentation and interactive discussion.

2. Introduction

The third day of the Green Skill Development Programme (GSDP) – Certificate Course on Apiculturist (Wild Bee) – NTFP for ST Candidates was conducted on 16 September 2026 at the College of Agriculture, Iroisemba, CAU, Imphal.

The technical session was conducted by Dr. Pukhram Bhumita, Assistant Professor and I/C, Integrated Bee Development Centre (IBDC), College of Agriculture. The session covered the ecological importance of bees, basic biology and social organisation of honey bee colonies, identification and functions of different castes, precautions to be observed while handling bees, and the economic potential of various bee products and value-added products.

3. Objectives of the Session

The session was aimed at developing a basic understanding among the trainees regarding the ecological and economic importance of bees and introducing them to the scientific principles of apiculture. It also sought to familiarise participants with colony structure and behaviour, safe handling practices, different hive products, and opportunities for livelihood generation through value addition.

4. Technical Session

4.1 Ecological Importance of Bees

The session began with an introduction to the critical role played by bees in ecosystems, particularly their contribution to pollination, agricultural productivity and food security.

The resource person used illustrative examples to explain the enormous amount of work undertaken by bees in producing honey and emphasised that apiculture should not be viewed merely as a honey-producing activity but also as an important nature-based livelihood closely connected with biodiversity and agricultural production.

4.2 Social Organisation of the Honey Bee Colony

The participants were introduced to the three principal castes found in a honey bee colony:

- Queen: the reproductive female primarily responsible for laying eggs;
- Workers: sterile females responsible for foraging, building cells, maintaining the hive and defending the colony; and

- Drones: male bees whose primary biological role is reproduction.

The distinguishing characteristics of the three castes were explained with reference to their body structure, wings, abdomen, sting, brood cells, size, shape and approximate number within a colony.

This component of the training helped the participants understand the division of functions within a bee colony and the importance of each caste in maintaining a healthy and productive colony.

4.3 Bee Behaviour and Safe Hive Handling

Practical aspects of handling bees were also discussed. The resource person explained that certain strong odours and scents may disturb or provoke bees. Participants were therefore advised to avoid strong perfumes and other potentially irritating odours before approaching or working with a bee colony.

The discussion highlighted the importance of understanding bee behaviour and adopting appropriate precautions while inspecting colonies and harvesting honey.

4.4 Interaction with the Trainees

The session was interactive, with trainees raising questions particularly on the role and identification of the queen bee and the behaviour of colonies.

Questions included how to identify a healthy queen under field conditions, what measures may be taken when a queen is lost or dies, and how beekeepers can minimise disturbance to bees during honey harvesting. The resource person responded to the queries with practical guidance and encouraged the trainees to develop their identification skills during subsequent hands-on sessions.

The active participation of trainees during the session is also documented in the photographs on page 3 of the report.

5. Bee Products and Scope for Value Addition

An important component of the session focused on the economic potential of apiculture. Participants were informed that a bee colony provides several useful products in addition to honey, including:

Beeswax, bee pollen, royal jelly, bee venom and propolis.

The resource person explained that diversification into such products can increase the economic potential of apiculture and create additional livelihood opportunities.

The session also introduced examples of value-added honey products, including honey jam and honey wine, to demonstrate the scope for processing and product diversification.

6. Key Learning Outcomes

By the end of the Day 3 session, the trainees were familiarised with the ecological significance of bees, the caste system and functions within a honey bee colony, basic behavioural characteristics relevant to hive management, precautions to be followed while approaching and handling colonies, major bee products, and the potential for value addition and enterprise development.

The session therefore combined scientific understanding, practical knowledge and livelihood-oriented learning, which are important components of skill development in apiculture.

7. Conclusion

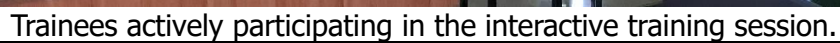
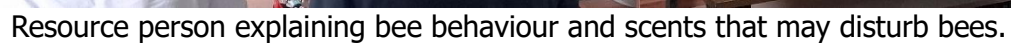
The Day 3 technical session provided the trainees with a useful foundation in honey bee biology, colony organisation, bee behaviour and hive products. The interactive nature of the programme enabled participants to clarify practical issues associated with queen identification, colony management and safe handling of bees.

The introduction to different bee products and value-added products further broadened the trainees' understanding of apiculture as a potential green livelihood and entrepreneurship opportunity, beyond conventional honey production.

The knowledge gained during the classroom session will provide a useful basis for the practical and hands-on components of the training programme.



Dr. Pukhram Bhumita delivering the technical session through PowerPoint presentation





Resource person explaining honey bee biology and colony organisation.