

REPORT ON THE 2nd DAY OF THE GREEN SKILL DEVELOPMENT PROGRAMME (GSDP)

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

Conducted by:

**EIACP Hub Manipur, Department of Environment & Climate Change,
Government of Manipur**

Day: 02

Date: 15 September 2026

Venue: College of Agriculture, Iroisemba, Central Agricultural University (CAU), Imphal

Mode: Classroom lectures with PowerPoint presentations, followed by interactive discussions

Resource Persons: Dr. Pukhram Bhumita, Assistant Professor and In-charge, Integrated Bee Development Centre (IBDC), Central Agricultural University, Imphal.

Introduction

As part of the Green Skill Development Programme (GSDP), a training session on “**Entrepreneurship in Honeybee and Queen Bee Rearing**” was conducted for the trainees of the Certificate Course on Apiculturist (Wild Bee) – NTFP. The session focused on the scope of beekeeping as an entrepreneurial activity and the various opportunities for income generation through honeybee rearing, queen bee production, honey processing, and the production and marketing of value-added bee products.

Major Topics Covered

The session began with an introduction to scientific beekeeping and apiculture, including the importance of honey bees and their products such as honey, beeswax and propolis. The different types of entrepreneurship associated with honey bees were discussed, particularly:

1. Honey bee rearing and colony management.
2. Mass multiplication and rearing of queen bees.
3. Large-scale processing of honey.
4. Processing, value addition and marketing of honey and other bee products.

The trainees were introduced to important honey bee species, including *Apis cerana*, *Apis mellifera*, *Apis florea*, *Apis dorsata* and other bee species. Their characteristics, nesting behaviour, domestication potential and honey production were discussed.

The session further covered honey bee rearing and beehive management, including movable-frame hives, traditional hives and basic equipment used in beekeeping. The

different castes of honeybees—queen, worker and drone—and their respective roles in colony development and functioning were also explained.

Queen Bee Rearing and Entrepreneurship

A major component of the session was queen bee rearing. The importance of maintaining a young, healthy and quality queen for colony growth, productivity and desirable characteristics was explained. The trainees learned about the need for queen bees in commercial beekeeping, including colony replacement, requeening and sale to other beekeepers.

The natural situations that trigger queen rearing—emergency, swarming and superseding—were discussed. Methods of increasing honeybee colonies through colony division and artificial swarming were also introduced. The trainees were also introduced to mass queen rearing techniques, including Miller, Alley, Smith, Hopkins, Doolittle or grafting methods and the Karl Jenter queen cell cup kit method. Particular emphasis was given to the Doolittle method of queen rearing, including the preparation of artificial queen cell cups, selection of suitable larvae, use of royal jelly, preparation of cell-builder colonies, grafting, and transfer of sealed queen cells to queenless colonies.

Honey Processing and Value Addition

The session also highlighted entrepreneurship through large-scale honey processing. The use of honey extractors, honey processing units, bottling machines, raw honey extraction machines and packaging machines was discussed. The trainees were introduced to the importance of processing, packaging and marketing for developing honey-based enterprises. The presentation also discussed the market value of honey from different bee species and **a sample profitability analysis of processed honey in the context of Manipur.**

Entrepreneurship through Honey Bee Products

The trainees were further introduced to various value-added products obtained from honeybees, including royal jelly, candles, bee pollen substitutes, bee propolis, bee venom and comb foundation sheets. The potential for skill development and entrepreneurship through these products was discussed.

Learning Outcomes

The session provided the trainees with an understanding of the entrepreneurial potential of apiculture and the opportunities available beyond conventional honey production. The trainees gained knowledge of honey bee colony management, queen bee production, colony multiplication, honey processing, value addition and marketing of bee products.

The session encouraged the trainees to consider beekeeping and related activities as viable livelihood and self-employment opportunities, particularly through scientific management, quality queen production, honey processing, and diversification into value-added bee products.

Conclusion

The training session successfully familiarised the trainees with various avenues of entrepreneurship in honeybee and queen bee rearing. The knowledge imparted during the session is expected to help the trainees develop relevant skills and explore sustainable livelihood and self-employment opportunities in apiculture and honeybee-based enterprises.

Glimpses of Day 2 of the Green Skill Development Programme (GSDP) – Certificate Course on “Apiculturist (Wild Bee) – NTFP” for ST Candidates, conducted by EIACP Hub Manipur, Department of Environment & Climate Change, Government of Manipur, at the College of Agriculture, Iroisemba, CAU, Imphal, on 15 September 2026.









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