

FACULTY OF AGRICULTURE

DEPARTMENT OF ENTOMOLOGY

GENTVAC01 - COMMERCIAL BEE KEEPING

Learning Objectives

- To understand about the morphology physiology and behaviour of bees
- To know about the honey beerearing equipments and techniques
- To understand about the methods of management of commercial apiary

Unit-I: Morphology and Physiology of Bees

Scope of beekeeping in India - Importance and history of apiculture - Morphology structure and physiological adaptation of bees - Necessities of these adaptation

Unit-II: Kinds Castes and Behaviour of Bees

Bee species - Bee castes - Their duties, colony organization and life history social behaviour, Colony control - Bee communication - Bee dance, Swarming

Unit-III: Hives and Equipment

Bee keeping hives, Installation of hives, tools - Identification and their use

Unit-IV: Bee Pasturage

Bee pasturage - Nectar and pollen yielding plants - bee foraging bee poisoning

Unit-V: Management of Apiary and Value Addition of Bee Products

Apiary - selection of site, seasonal management, bee products - users and value addition

PRACTICAL

Acquaintance with honey bee species structural adaptation, castes Hives, Beekeeping equipment, bee forage plants, Identification Selection of apiary site, value addition of honey and other products

THEORY LECTURE SCHEDULE

1. Scope of be keeping in India importance and history of apiculture
2. Morphology of bees
3. Structural adaptations of bees
4. Physiological adaptation of bees
5. Necessities of bee adaptation

6. Bee species and castes
7. Duties of bees
8. Colony organisation and life history of bees
9. Social behaviour and colony control
10. Bee communication bee dance, bee swarming
11. Bee keeping Hives and their installation
12. Other tools identification and their use
13. Nectar and Poland yielding plans
14. Bee poisoning
15. Selection of apiary site
16. Seasonal Management of apiary
17. Bee products uses
18. Value additional of bee products

Practical Schedule

1. Identification of bee species
2. Identification of castes of bees and their structural adaptations
3. Identification and handling of bee keeping equipment
4. Identification of bee forage plants
5. Hands on experience in the seasonal management of apiary
6. Value addition of honey

Reference books:

1. Abrol D.P 2009 Bees and Beekeeping in India, Kalyani publishers, New Delhi 705p.
2. Atwal, A.S., 2006, The world of honey bee, Kalyani publishers, New Delhi, 257p.
3. Craig Hughes, 2010, Urban beekeeping ; A Guide to Keeping Bees in the City, E Good Life Press, Preston.
4. Ted Hooper, by author Clive De Bruyn, by (author) Margaret Thomas, 2014, the beginner's bee book, Stenlake Publishing, Ayrshire.
5. David Cramp, 2012, The complete step by step book of beekeeping; a practical guide to beekeeping, from setting up a colony to hive management and harvesting the honey, Lorenz Books London.

E-resources

1. <http://www.sristi.org/hbnew>
2. <http://www.agrimoon.com/agriculture-icar-ecourse-pdf-book/>