

REPORT
HANDS ON TRAINING AND WORKSHOP ON –
BEE KEEPING AND APHID

Organized by:

DEPARTMENT OF ZOOLOGY, Centre of Excellence, Government
Post Graduate College, Sanjauli

Under

DBT Star College Scheme

A lecture cum workshop for students provides a unique learning experience by combining theoretical knowledge with practical application. This approach helps the students bridge the gap between theory and real world skills, enhancing their understanding and competence in a particular subject.

The Zoology Department of the Centre of Excellence, Government Post Graduate College, Sanjauli, under the DBT Star College Scheme, successfully organized **Hands on Training and Workshop on- Bee Keeping and Aphid on the 22nd day of December 2023.**

The esteemed **Resource Person** for the event were **Dr. Sharad Gupta** and **Dr. Meena Chaudhary** respectively.

The workshop began with lighting the lamp in front of Goddess Sarasvati. This was followed by a welcome speech by **Dr. Minakshi Sharma, Associate Professor and HOD, Department of Zoology** and by presenting token of gratitude to the esteemed guests

This was followed by a **Lecture cum Presentation on Apiculture/ Bee Keeping- Its Importance and Scope in Himachal Pradesh** by **Dr. Sharad Gupta**. Sir is a **Sub Matter Specialist of Apiculture** in the Department of Horticulture, Himachal Pradesh. The key points of the lecture cum presentation on

Apiculture included-

Apiculture- It is the rearing and maintenance of honey bee colonies

Colonies of honey bee-

1. **Queen bee-** only fertile female bee in the entire colony, develops from fertilized egg
2. **Worker bee-** sterile female bee, develops from fertilized egg
3. **Drone-** fertile males bee, develops parthenogenetically

Species of honey bee-

1. ***Apis mellifera***- It is an imported specie. The yield of honey from this specie goes upto **30kg per box per year** which generates an income of **approximately 3 lakh** from **100 colonies**.
2. ***Apis cerana***- It is an indigenous specie.
3. ***Apis florea***
4. ***Apis dorsata***

Products and Services obtained from honey bee-

1. **Honey-** It has **medicinal**(used in the treatment of wounds, diabetes, cancer, asthma and cardiovascular diseases), **nutritional, anti-oxidative, anti-microbial, apoptotic, anti-inflammatory, immunomodulatory properties**.
2. **Bee Wax-** Bee wax is a **natural wax** produced by honey bee of genus *Apis*. It is **obtained from sealing of cells, pieces of honey comb and old honey comb**. **100 bee colonies can yield 100-200kg of bee wax** generating an income of **Rs.20000 per year**.
3. **Pollen-** It is collected by honey bee through honey trap. It serves as a product of great **nutritional value**. **100 bee colony can yield 400kg of pollen** generating an income of **Rs.20,000 per year**.
4. **Propolis-** Propolis is a natural resinous mixture produced by honey bees from substances collected from parts of plants, buds, and exudates. It is

used in the **cosmetic and pharmaceutical industry**. Each colony can **yield 30-40gm of propolis**.

5. Bee Venom- It has **anti-cancerous property**. **1gm of bee venom** which can be **yielded by 20 bee hives** goes at the rate of **Rs.7000**

6. Pollination

7. Bee hives can be rented for **pollination purpose**

Assistance provided by the **Department of Horticulture, Himachal Pradesh-**

The **Department of Horticulture, Himachal Pradesh**, provides a **subsidy of Rs.1,76,000** for the rearing and maintenance of **50 bee hives**.

Training Programme-The **Department of Horticulture, Himachal Pradesh**, organises a **5 day bee management training programme** to increase the quotient of **self employment**.

This was again followed by a **Lecture cum Presentation on Cytocontrol Biology and Biocontrol of Aphid Pest** by **Dr. Meena Kumari**. Ma'am is an **Associate Professor** in the **Department of Bio-science at Himachal Pradesh University** and a **member of Entomology Department of India** and has **published more than 25 research papers** in **national and international journals**. The key point of this lecture cum presentation included-

Aphids- These are the **small sap-sucking insects**.

Properties of Aphids-

- 1. They show parthenogenesis** (alternation between asexual and sexual generation), **viviparity, telescoping of generation**
- 2. They also show polymorphism**
- 3. They have holocentric nature of chromosome** which makes them **highly adaptive to different climatic/ environmental conditions**.

Ma'am focused on **Green Apple Aphid** and **Woolly Apple Aphid** that feed on **apple and pear plants**.

This was followed by a **Presentation on Apiculture** by **Vineeta Negi** (student **B.Sc Life Science, 2nd Year**)

At the very last of the workshop the students were provided with a **Hands on Training** of the various **Lab Equipments**, under the guidance of **Ms. Sarla Thakur, Assistant Professor of Zoology**.

The workshop commenced with a vote of thanks by **Dr. Shweta Sharma, Assistant Professor, Department of Zoology** to the esteemed Resource Persons.



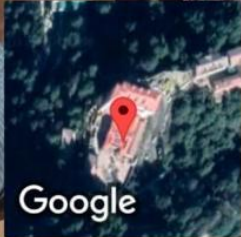






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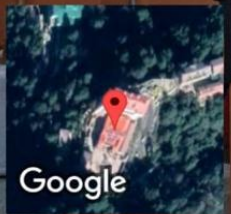






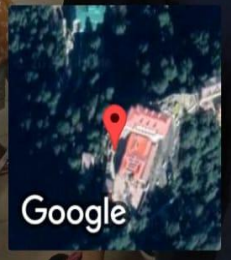
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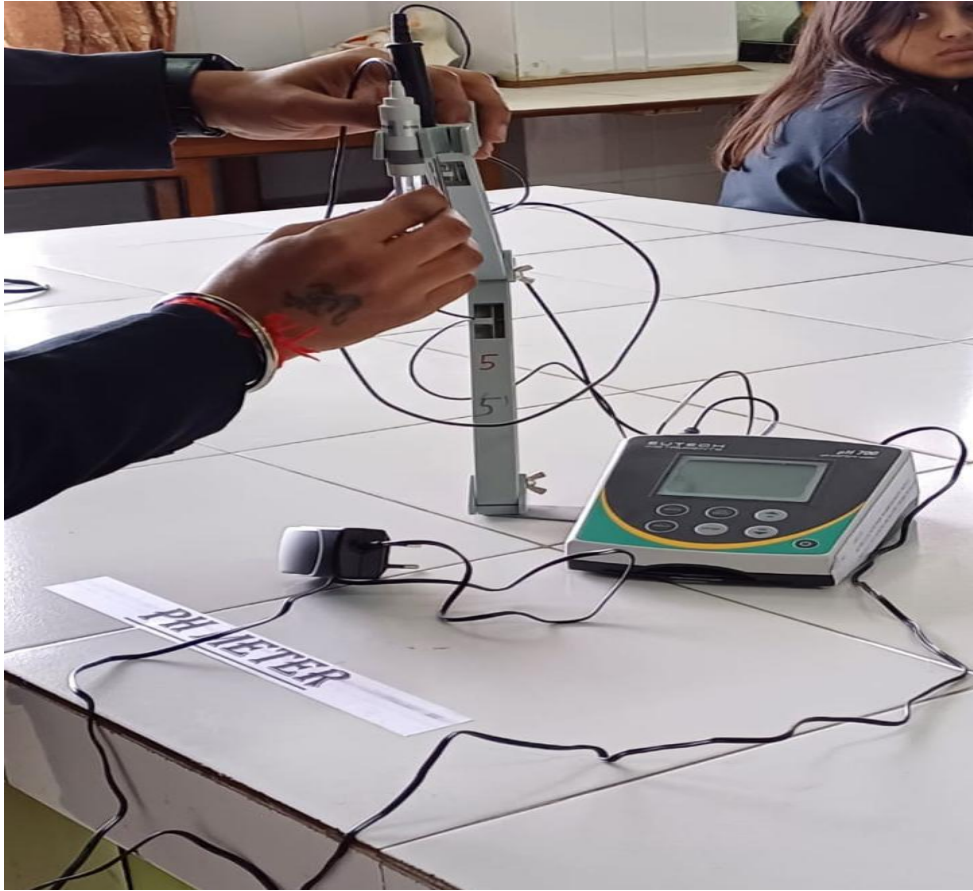
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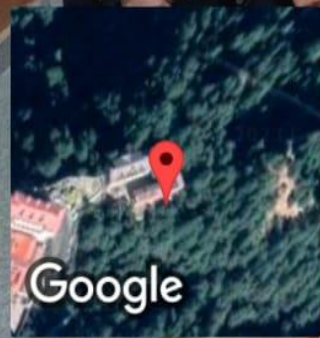




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Reported by – Angel Dipta

Student, B.Sc Life Science 1st Year