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Bee Keeping and Honey Processing Unit at Vivekananda College, Thakurpukur

The Bee Keeping and Honey Processing Unit at Vivekananda College, Thakurpukur, is an exemplary initiative that blends education, research, and practical application. The unit not only promotes sustainable practices but also provides a hands-on learning experience for students.

Introduction Vivekananda College has established a bee-keeping unit to engage students in practical environmental and agricultural studies. This unit serves as an educational tool, encouraging students to learn about the lifecycle of bees, their role in pollination, and the process of honey production.

Certain insects in the animal kingdom, known as beneficial insects, produce substances that are economically vital. These beneficial insects are divided into two categories: productive insects, which produce useful products, and helpful insects, which benefit humans in various ways. Honeybees are both productive and helpful, providing valuable products such as honey, wax, and bee venom. The practice of rearing honeybees for these products is called Apiculture or bee-keeping, which is a cottage industry.

Setting Up the Bee Keeping Unit 5 Newton bee hive boxes are situated at strategic locations in the garden area within the college premises. The setup includes:

- **Bee Hives:** The college has installed 5 bee hives; each carefully managed to ensure the health and productivity of the bee colonies and has plan to increase the number of boxes.
- **Protective Gear:** Students and faculty members are provided with protective gear, including beekeeping suits, gloves, and hats, to ensure their safety while handling the bees.
- **Equipment:** Essential equipment such as smokers, hive tools, and frames are available to manage the hives and harvest honey efficiently.

Process of Bee Keeping and Honey Production The process involves several stages, each meticulously managed by trained personnel and students under expert supervision:



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1. **Hive Inspection:** Regular inspections are conducted to monitor the health of the bee colonies, check for diseases, and ensure that the bees are thriving.
2. **Feeding and Maintenance:** The bees are provided with supplementary feeding during times when natural forage is scarce. Maintenance of the hives is carried out to prevent overcrowding and swarming.
3. **Honey Harvesting:** Honey is harvested periodically. The frames filled with honey are removed from the hives and taken to the processing unit.
4. **Honey Extraction:** In the processing unit, honey is extracted from the combs using an extractor. The honey is then filtered to remove any impurities.
5. **Bottling and Storage:** The filtered honey is bottled and stored under hygienic conditions, ready for distribution.
6. The processed honey, is sold, providing a source of revenue and practical business experience for the college.

Host Plants-The primary host plants for the bees in the unit are sunflower and mustard, which provide the bees with abundant nectar and pollen, essential for honey production.

Educational and Environmental Impact The bee-keeping unit at Vivekananda College has a significant educational and environmental impact:

- **Educational Tool:** It provides a practical learning experience for students studying zoology, botany, environmental science etc. Students gain hands-on experience in bee-keeping, understanding the importance of bees in the ecosystem.
- **Research Opportunities:** The unit offers opportunities for research in areas such as bee behaviour, pollination, and sustainable agricultural practices.
- **Environmental Conservation:** By promoting bee-keeping, the college contributes to the conservation of bee populations, which are crucial for pollination and maintaining biodiversity.
- **Employment Opportunities:** Apiculture is an ideal and economically viable industry, especially at the village level. It provides employment to rural people, requiring semi-skilled laborers. Apiculture-related research institutions also offer employment to research workers.

Add-On Course

The college has introduced an Add-On Course on “Bee Keeping and Honey Processing” to provide students with specialized training and certification, equipping them with the skills needed for professional opportunities in this growing field.

Collaboration and Training



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The Department of Zoology at Vivekananda College, in collaboration with the Entrepreneurship Development Cell (EDC) and Baruipur Apiculture Industrial Co-operative Society Limited, has initiated a program to train underprivileged students in bee-keeping and honey processing. Additionally, the Zoology Department has started an Add-on course on “Beekeeping & Honey Processing” to further enhance students' skills and knowledge in this field.

Conclusion The Bee Keeping and Honey Processing Unit at Vivekananda College, Thakurpukur, is a commendable initiative that integrates education, research, and environmental conservation. It provides students with invaluable practical experience and contributes to the sustainability and conservation efforts essential for maintaining ecological balance. This initiative is a testament to the college’s commitment to fostering a comprehensive and practical educational environment.



A Typical Movable Newton Bee hive
for Culture of *Apis cerana indica*.



Honey Extractor

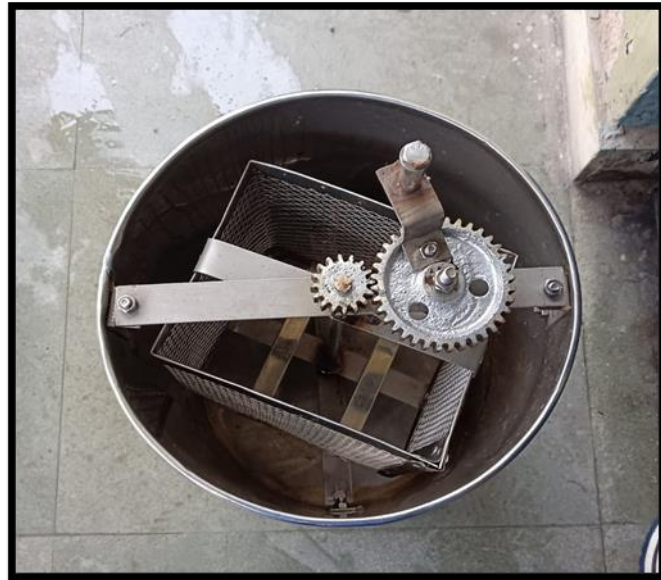


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Inner View of Honey Extractor



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Queen

Worker



Different castes of Honey Bee



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Worker Honey Bee is collecting nectar from flowers of Mustard plant in our college premises



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Add on Course Coordinator Dr. Amal Patra is checking the hive



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Our College Staff Mr. Sanjay Mondal is checking the hive



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Co-ordinator of Add-on course and unit In-Charge is checking the hive



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Dr. Patra is extracting Honey



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Hive filled with honey



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Extracted honey is stored in jar



Bottled honey ready for Sale



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