Best Practice

Department: Zoology
Session:

1. Title of the Practice : Training on "Modern Bee-Keeping"

2. Objectives of the Practice:
Honey bees are part of the biodiversity on which we all depend for our survival. They provide high-quality food—honey, royal jelly and pollen — and other products such as beeswax, propolis (mixture of pollen and natural resins) and honey bee venom which are of high economic importance. .Besides normal duties & classes the Department of Zoology provides hand on train of Modern Bee Keeping to the honours class students of the department.

3. The Context:
Important features required for a successful apicultural practice-
(i) Knowledge of the nature and habits of honey bees and their productive tamable species (ii) Selection of a suitable location for keeping the beehives. (iii) Management of beehives during different seasons. (iv) Trials for cross hybridisation among the selected parents.

Effect of Environment Enemies and Diseases on Honey Bees-
Global warming, pollution, disease and pests that affect honey bees are causing huge losses to the beekeepers. In Dhubri the attack of the Wax Moths (Galleria melonella) is found to be most common and the main enemy of the honey bees. Seasonal high air pollution with high aerosol and other SPMs are the another main environmental threat for bee keeping during non-rain brick-burning seasons on running of the brick kilns. Non availability of flowers other than winter and spring in the locality.

4. The Practice:

The care and management of honey bees in the beehive for the commercial production of honey and wax is known as apiculture or beekeeping. Bees are professionally reared in apiaries, which are areas where a large number of beehives can be placed. Apiaries are typically established in regions with sufficient bee pastures, such as areas with flowering plants, cultivated crops, and wild shrubs.

In beekeeping, mainly two species of honeybees are reared. It includes both the local and exotic varieties of commercially importance. They are as follows:

Apis indica
The most popular species of honey bee is *Apis indica*, which can produce between 2 and 5 kg of honey per colony. It is commonly called the Indian bee.

Apis mellifera

It is a honey bee species that produces a lot of honey. Beekeepers typically maintain it for the honey it produces. It is commonly called the Italian bee. It is an exotic variety. It shows less swarming. Swarming is considered as the natural method honey bees use for multiplying their colonies. In this method a new honey bee colony is formed when the original colony normally replaces the old queen. They leave the bee hive with about half of the worker bees and the amount of honey they can carry.

Among these two species the ***Apis mellifera*** is the most productive but most susceptible species of honey bees with high rate of mortality as they are from Europe, comparatively perennial flower-rich countries with comparatively less rainfall. They are also least protective species for bee-enemies for their calmness. They are also not foragers during rainy days and goes starvation during this season.

5. Evidence of Success :

Evidence of success-

Three batches of students from (session 2021-2022 to present) were already trained up with hands on training both in College Campus and through field visit to the apicultural sites of the district. (*** Evidence Photographs enclosed herewith)

Future plan-

As this locality is flourished during winter with hectors of Mustard Crop for which apiculturists come from outside for the purpose and do seasonal apiculture here, it is planned to train up the local farmers involving with Mustard Cultivation with the help from District Agriculture Office by the trained students of the departments as well as the faculty members.

6. Problems Encountered and Resources Required

[Please identify the problems encountered and resources required to implement the practice (in about 150 words)]:

a) Mortality of European Honey Bees (***Apis mellifera)*** during rainy season for insufficiency of flowers

b) High air pollution during brick kiln running seasons

c) Necessity of sufficient fund for feeding of the Honey Bee colonies with artificial food in rainy and less flowering seasons and other annual maintaining measures.

*****Evidence Photographs of Bee Keeping Training-**

Field visit of the students to the Bee-Keeping Sites of Tar Ghat locality on winter of 2022

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BEST PRACTICE
Dept- Philosophy
Session- 2022-23

1. Title of the practice – Extension programme to create awareness on Environmental Ethics.
2. Objectives of the practice –
    a. To create awareness among the students regarding various environmental issues like- significance, conservation and protection of the environment.
    b. To create awareness amongst the students of neighboring area by imparting basic knowledge about the environment.
    c. To make students responsible towards the society by taking part in such types of activities.
    d. To make students understand the ethical values of the environment and thereby develop an attitude for conservation of environment.
    e. Through such activities students can make awareness in his/her neighborhood.
3. The Context – In our day to day life we often discussed about ethical behaviors towards human beings. But every object of the universe, whether living or non- living has some ethical values. Present day crisis of Global Warming occurs due to the ignorance of that fact. The challenge of environmental ethics is to redefine ethical obligation. Certain elements like- population growth, pollution, deforestation etc. are responsible for environment challenges. Through such programmes students become aware of such challenges and they also learn how to overcome such challenges to some extent. They learn about the importance of population control, reduce pollution through various alternative measures like- using solar energy, afforestation etc.
4. The practice – Every year the department of Philosophy arranged for an extension programme for the B.A 6th semester (Hons) students as a part of teaching learning process on 'Environmental Ethics' to create awareness among the students.

    The students of the department visited schools of neighboring area and take classes on various issues of environment, like- what is environment, significance of the environment in our life, how to conserve, preserve and protect our environment etc. A feed back form has been prepared by students which are to be duly filled up by the students ofthe visiting school. Later on, the students of the department analyses those forms.

    NEP 2020 gives stress on traditional value systems in curriculum and students participations in such programme to create awareness. Although the department organized such programme long before the implementation of NEP 2020, yet, the department would like to follow the guidelines of NEP 2020 in organizing such programe in near future.

    So far the department has not faced any constraints or limitations.
5. Evidences of success – The programme is basically organized for the students of secondary levels. By participating in the programme students take active part in programmes like – 'World environment Day' by planting saplings in their respective schools.
6. Problems encountered and Resources required – While organizing such programmes, the department have to face certain problems. The plan of activities of the department has to be prepared before the commencement of each semester. But, sometimes it

happens that, classes of a particular semester could not start as per academic guidelines due to some reason. In that case, certain activities could not arranged in stipulated time which are to be rescheduled whenever possible.

Moreover, a certain amount of money is required to organize such activities. Often such demands are to meet by the contributions of the faculty members of the department.