

## **BEST PRACTICE -1**

### **1. Title of the Practice: Conversion of Organic Waste to Profitable Product**

### **2. Objectives of the Practice:**

- a. To demonstrate practically the production methodology on vermicomposting.
- b. To provide our students and entrepreneurs a skillful training.
- c. To promote composting as a treatment practice for organic waste.
- d. To promote a sustainable environmental management.

**3. The Context:** Lot of waste is generated from falling leaves from tree resources of the college and is generally subjected to burning in earlier practices. Annually, a huge amount of litters from tree of the college generated in both the college and hostel campus which are collected, deposited in one place and allowed to decompose partially after proper segregation of plastic and other non-degradable matters. These organic wastes in form of litter are then filled in the vermicompost plant.

**4. The Practice:** Vermicompost is a method of preparing organic compost with the use of earthworms. It is one of the easiest methods to recycle agricultural wastes and to produce quality compost. It is a mesophilic process, utilizing microorganisms and earthworms that are active at 10o-32°C. Vermicompost is stable, fine, organic manure, which enhances soil quality by improving its physiochemical and biological properties. Earthworms consume biomass and excrete it in digested form called worm casts or black gold. Earthworms can be used in breakdown of plant organic matter, aeration and drainage, maintenance of environmental quality and monitor of the environment for soil fertility, organic and heavy metal non-degradable toxic material pollution. It can be used as rooting medium as it contains significant amounts of auxins along with other enzymes, hormones etc. has positive effect on agricultural economy as its preparation method is quite cheap compared to synthetic fertilizers. Besides that, it increases harvest yields, produces disease resistant crops, it improves soil structure, texture, water holding capacity, thus prevents soil erosion. Moreover, it is free from pathogen, toxic elements and weed seeds. Benefits of the practice of producing profitable product in the form compost from solid waste are-

- Ensures early availability of various essential nutrients for gardening and Agri/Horticultural use.
- Earthworm castings are stable and do not break easily thus reduces erosion hazard by wind and water run-off.
- Vermicomposting reduces the cost of cultivation and increases the yield both in qualitative and quantitative terms.
- Helps in control of diseases and pests and balance nutrition.
- Soil fertility are improved both in terms of structural and nutrient aspects thus making cultivation/soil management easy year by year.

**5. Evidence of Success:** We are converting 80-90 of waste into compost using Vermicomposting in more than 4 pits, where each pit has capacity of 7-12 quintals. The compost is used in college gardens and has eliminated the need for chemical fertilizers. Surplus compost is marketed as green compost to the local farmers and gardeners in very low price. It provides the revenue to the college and organic compost to the end users. We also provide skill training to students. However, it has the scope of imparting training to individuals like farmers, gardeners and other institution to enhance their job potential and provide a sustainable source of income to them.

**6. Problems:** Resources Required Initial cost of setting vermicompost plant is more and college has to manage it with great hurdle. In regards of cost affair, support and involvement from the government front is prerequisite in terms of financial assistance and subsidy.

## **BEST PRACTICE -2**

### **1. Title of the practice:** Preservation of Important Plant species

#### **Objectives:**

- a. To develop medicinal plant garden
- b. To preserve locally rare medicinal plant species.
- c. Seed preservation of locally available crop plants.
- d. To enhance interest among students towards gardening.
- e. To impart practical knowledge of cultivation of medicinal plants.

#### **Context:**

Abhayapuri College is located in the middle of the Abhayapuri town, a historic place once ruled by the Bijni estate. The Abhayapuri town was established by the queen Abhayeswari, who was one of the pioneers of nature conservation in the entire region of southern Assam. On her direct supervision, a massive plantation of Indian Mast tree, locally known as 'Devdaru' (Scientific name: *Polyalthia longifolia*) was planted during her reign. Due to the presence of the tree species, the town is also known as 'Devdaru nagari'. The entire area of Abhayapuri is surrounded by several protected areas, like Bamungaon reserve forest in the North side, Kakoijana reserve forest is located in the North West side. Malegarh and Singimari forest hills are in the Southern part of Abhayapuri. All the forests are habitats of several species of animals and plants including critically endangered Golden langur. Kujia, Mora kujia and Koiya are the rivers flowing near Abhayapuri.

Abhayapuri college has been trying to influence the entire student community of the college including teaching and non teaching staff to protect the local natural resources through activities like awareness programmes, plantation etc. Therefore, it has chosen the conservation of important local plant species as its best practice. Among them, the medicinal plant species are given special consideration for their immense potential for human well being.

#### **The practice:**

The Botany department of the college has been taking the initiative to identify and collect locally important medicinal plants. The students have been involved in the process of collection. The Abhayapuri college environment cell has also been playing a proactive role of awareness on plantation in the college campus. The college has also implemented a few projects regarding preservation cum plantation of important plant species with the

help of other agencies. The beautification of the college campus has also been managed with such initiatives.

**Evidence of Success:**

About 100 different species of plants are grown on the college campus. Some of the important medicinal plants are- Neem, Arjun, Indian bullet tree, Elephant apple, Amla, etc.

Establishment of Medicinal and Aromatic plant garden in the Kedarnath campus at Bamungaon.

**Problems Encountered and Resources Required:**

**Problems:** Limited resources in terms of finance and manpower.

**Resource required:** Water supply facility, full time gardener