

## Department of Botany

**C. Kandaswami Naidu College for Women, Cuddalore – 607 001.**

### **Best practice**

#### **1) Title :**

Inculcation of research attitude, creative skills and awareness about plants and environment in students

#### **2) Objectives of the practice:**

This practice has been effectively implemented for the stakeholders with the following objectives:

- To inculcate research attitude
- To spread awareness about plants and environment
- To provide a platform for interaction of students with the past faculty of the department
- To improve creative skills in the students.

#### **3) The Context:**

Botany Department of C. Kandaswami Naidu College for women, Cuddalore is organized each year towards in honor of the eminent botanist and teacher who steered the department to success in its infancy. The world of plants holds the solution to most of our problems namely Environment and Earth, the major issues faced globally. To throw light on this aspect of plants, students are encouraged to portray their knowledge about plants and environment in the form of poster, rangoli, flower arrangement, fruit art and models. This not only provides an outlet to their innovative ideas but also puts to test their creative skills. Students are able to interact with the past faculty of the department and gain from their expertise and knowledge. A lecture is organized in which eminent people in the field of plant sciences are invited. This introduces the students to the latest happenings in the world of plants. Keeping the above objectives in mind various departments in our institute have formulated events which serve as a platform where interaction, presentation of research by students is the main aim.

#### **4) The Practice:**

Department of Botany has an annual event which encourages the students to prepare models, posters on the themes given. Students of the college are invited to present their work related to the theme of the event in the form of Paper, Posters, Models, Rangoli, Flower arrangement or Fruit art. The best presenters, posters, models are awarded which creates a positive competition in the students. Also the students are able to interact amongst the peers which helps widen their perspectives about the topic.

Apart from the academic part, these events are managed by the B. Sc III students with guidance from their teachers. This event also serves to be platforms for the students to learn management skills.

#### **5) Evidence of Success :**

- Each year the participation of students has shown overwhelming response.
- The feedback from the students is positively encouraging.
- The students have formed a CLUB to spread the popularity of Plant Sciences.

#### **6) Problems Encountered and Resources Required:**

- Financial resources need to be raised for conducting events which at times becomes a shortcoming in the management of events.
- Publicity of the events can be improved by using the power of internet networking.
- Availability of a parallel acoustically well- equipped auditorium would ease the load off the main auditorium.

# Best Practice

**1. Title:** Vermiculture

## **2. Objective of the practice:**

Objective of the vermiculture practice is to convert organic waste from the college by using Vermicomposting technique into compost, thereby achieving dual outcomes of sustainable waste management and its use as organic compost.

Intended outcomes of vermicomposting practice, produce compost of superior value with very high nutritional value. The vermicompost is not only used inside the campus garden, but is also sold to public at very subsidized rate.

## **3. The Context:**

Garden waste involves a lot of solid waste in the form of dry twigs, leaves, flowers, ripe fruits etc seen everywhere littering the campus. There are a large number of trees in the campus, which gives a good ambience to the college. Moreover the trees provide shade, where the students relax during the break. The students and the workers in the college play a main role in collecting all these debris and transferring them into the vermicompost pit.

There is a dual purpose, one is solid waste management and the other is obtaining high quality compost.

## **4. The Practice:**

Compost pits are formed for the purpose of vermicomposting. The pits are filled with organic waste every day. Each pit has a capacity of 300-400 kgs. The organic waste is mixed with cow dung, which ensures proper mixing and faster decomposition.

It also improves the quality of compost. The composting is done on a phased manner. Once the compost is ready, it is then sealed in bags and containers.

The compost takes only 40 days. Uniqueness of this project lies in the fact that it has a potential for skill development and employment generation besides solid waste utilization in the form of nutrient rich compost.

The raw material is easily available inside the college campus and training can be easily imparted. It can be done in variety of places ranging from villages to metros.

The setup cost is minimal and the return on investment is good. Vermicomposting requires no energy or electricity input unlike production of synthetic fertilizers which is an energy intensive process.

Most of the energy is derived from fossil fuel based sources in order to produce synthetic fertilizers.

Vermicompost contains plant hormones like auxin and gibberellins and enzymes which are believed to stimulate plant growth and discourage plant pathogens.

Thus, Vermicompost result into good plant yield. Adding Vermicompost enriches soil by adding essential plant nutrients like nitrogen, phosphorus and potassium, improve crop yields, and reduce chances of plant diseases.

## **5. Evidence of Success:**

We are converting 50-60% of waste into compost. The compost is of good quality. The compost is used in garden for enriching the soil.

This has eliminated the need for chemical fertilizers for the same. Surplus compost is also marketed as green compost. It provides the revenue to the department and organic compost to the end users.

We also provide skill training to students from other departments, who wish to learn this skill of vermicomposting. This enhances their job potential and provides a sustainable source of income to them.

We also encourage other department students to visit our vermiculture pit and learn about practices of vermiculture. Active involvement of students, enhance their waste management skills and inculcate green habits in them.

Our initiative has extended over a period of time and is greatly accepted by students and other staff members too, who show interest in buying vermicompost for their gardens.

Instead of reading from text books prescribed in the syllabus, the students get real hands on training and they get a chance to visualize the process of waste getting converted to compost.

The students, who are involved in the process, show a lot of interest in applying the same to their garden plants and seeing the results in the growth and yield of plants.

## **6. Problems encountered and Resources required:**

Vermicompost requires consistent supply of organic waste, segregated from all non-biodegradable things that otherwise can be present and affect the productivity of earthworms and quality of compost thereby.

Availability of cow dung was abundant. It has to be mixed along with the waste and soil for the production of best quality compost, which is rich in organic content. No major problems are encountered as such in converting waste to organic compost.