

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.