Importance of vermicomposting

Vermicomposting restores microbial population which includes Nitrogen fixers, Phosphate solubilizers, etc.,

It provides major micro and macro nutrients to plants.

It improves texture and water holding capacity of soil.

Vermicomposting provides good aeration to the soil thereby improving root growth and proliferation of beneficial micro organisms.

Decreases the use of pesticides to control plant pathogens.

Improves structural stability of the soil preventing erosion.

Enhances the quality of grains, fruits with increased sugar content.

Vermicomposting can be quicker but requires more labour.

It provides better quality and quantity of crops.

Increases soil productivity and soil quality.

Lowers the Input cost of production.

Additional source of revenue generation.

It is cost-friendly and eco-friendly.

Problems in Traditional composting

The most common problem is excess moisture which causes foul odours, flies and the production of harmful substances to plants.

Another problem is generation of grass clippings in large batches.

Compost is slightly acidic where too acid is not conducive.

Compost can also be too dry sometimes which threats decom-
-position.

Sources of organic waste

Municipal solid waste, Industrial solid waste, agricultural waste and wastewaters form important source of organic waste.

They are biodegradable and suitable for composting.

Food, paper, wood, sewage sludge and yard waste are organic.

There are also paper mill sludge, meat processing waste, brewery waste and textile mill fibers.

General characteristic of Earthworm

Earthworms are nocturnal. They live in burrows.

The body is bilaterally symmetrical

The body is made of many look alike segments separated by septum. It is **metameric**.

In mature worms, from segment 14 to 17 is **clitellum**.

setae made of chitin are in setigerous pits of body wall. Setae are locomotory structures.

From 10th segment there are dorsal pores in inter-segmental grooves for coelom to communicate to exterior. This helps keep the body surface moist.

The body wall is made of cuticle, epidermis, dermis, muscles and coelomic epithelium.

A coelom is present between body wall and alimentary canal.

The nephridium is excretory organ of earthworms.

Earthworms are hermaphroditic. Due to protandry, self-fertilisation is avoided.

Types of Earthworms

(i) Based on feeding Habit

* Geophagus worms feeds on earth materials sediments, organic substance.

* saprophagus worms feeds on dead and decaying matter

(ii) Based on Inhabitation of soil layer

* Epigeic worms lives on surface of the soil.

* Aneuic worms live below the soil level.

* Endogeic worms lives deep within earth.

Biology of Eudrilus eugeniae

Kingdom : Animalia

Phylum : Annelida

Class : Clitellata

Subclass : Oligochaeta

Order : Haplotaxida

Family : Eudrilidae

Species : eugeniae