



Jaihind Comprehensive Educational Institute's

Jaihind College Of Engineering

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AN ISO 14001:2004 EMS CERTIFIED INSTITUTE

(Approved by AICTE, Recognised by DTE and Affiliated to Savitribai Phule Pune University)

Hon'ble Tatyasaheb Gunjal, Founder President

DTE Code - EN6609

VARMI COMPOST PLANT

Developed by,

JCEI'S JAIHIND COLLEGE OF ENGINEERING, KURAN

Under S.W.O Activity (2013-14)



Vermicompost is the product or process of composting using various worms, usually red wigglers, white worms, and other earthworms to create a heterogeneous mixture of decomposing vegetable or food waste, bedding materials, and vermicast. Vermicast, also called worm castings, worm humus or worm manure, is the end-product of the breakdown of organic matter by an earthworm. These castings have been shown to contain reduced levels of contaminants and a higher saturation of nutrients than do organic materials before vermicomposting.

Containing water-soluble nutrients, vermicompost is an excellent, nutrient-rich organic fertilizer and soil conditioner. This process of producing vermicompost is called *vermicomposting*.

For vermicomposting at home, a large variety of bins are commercially available, or a variety of adapted containers may be used. They may be made of old plastic containers, wood, Styrofoam,

or metal containers. The design of a small bin usually depends on where an individual wishes to store the bin and how they wish to feed the worms.

Some materials are less desirable than others in worm bin construction. Metal containers often conduct heat too readily, are prone to rusting, and may release heavy metals into the vermicompost. Some cedars, Yellow cedar, and Redwood contain resinous oils that may harm worms, although Western Red Cedar has excellent longevity in composting conditions. Hemlock is another inexpensive and fairly rot-resistant wood species that may be used to build worm bins.¹

Bins need holes or mesh for aeration. Some people add a spout or holes in the bottom for excess liquid to drain into a tray for collection. Worm compost bins made from plastic are ideal, but require more drainage than wooden ones because they are non-absorbent. However, wooden bins will eventually decay and need to be replaced.

Small-scale vermicomposting is well-suited to turn kitchen waste into high-quality soil amendments, where space is limited. Worms can decompose organic matter without the additional human physical effort (turning the bin) that bins composting requires.



Pic. 1. Gandul Khat in Jaihind College of Engineering Campus



Pic. 2. Gandul Khat in Jaihind College of Engineering Campus

Sewage Treatment Plant

Developed by,
Final Year Students of Mechanical Engineering (2016-17)



Institute has developed the sewage treatment plant to manage sewage and liquid waste through the project initiated and developed by the students of final year mechanical department. The liquid effluent filtered through this plant is used for watering of trees.