



VERMICOMPOST

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Vermicompost (**vermi - compost**) is the product of the decomposition process using various species of worms, usually red wigglers, white worms, and other earthworms, to create a mixture of decomposing vegetable or food waste, bedding materials, and vermicast. This process is called **vermicomposting**, while the rearing of worms for this purpose is called **vermiculture**. **Vermicast** (also called **worm castings**, **worm humus**, **worm manure**, or **worm feces**) is the end-product of the breakdown of organic matter by earthworms.

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01.

PROPERTIE

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PROPERTIES

- Richer in many nutrients than compost produced by other composting methods.
 - It has also outperformed a commercial plant medium with nutrients added.
 - It is rich in microbial life
 - Also contain worm mucus which helps prevent nutrients from washing away with the first watering and holds moisture better than plain soil.
 - Increases in the total nitrogen content in vermicompost
 - An increase in available nitrogen and phosphorus.
 - A decrease in potassium.
 - A increased removal of heavy metals from sludge and soil.
 - The reduction in the bioavailability of heavy metals has been observed in a number of studies.
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02.

BENEFITS



BENEFITS

SOIL

- Improves soil aeration
- Enriches soil with micro-organisms
- Microbial activity in worm castings is 10 to 20 times higher than in the soil and organic matter that the worm ingests
- Attracts deep-burrowing earthworms already present in the soil
- Improves water holding capacity

PLANT GROWTH

- Enhances germination, plant growth, and crop yield.
- It helps in root and plant growth.
- Enriches soil organisms (adding plant hormones such as auxins and gibberellic acid).

BENEFITS

ECONOMIC

- Biowastes conversion reduces waste flow to landfills.
- Elimination of biowastes from the waste stream reduces contamination of other recyclables .
- Creates low-skill jobs at local level.
- Low capital investment.
- relatively simple technologies and practical for less-developed agricultural regions.

ENVIRONMENTAL

- Helps to close the "metabolic gap" through recycling waste on-site
- relatively simple and does not wear out quickly
- Production reduces greenhouse gas emissions such as methane and nitric oxide (produced in landfills or incinerators when not composted).

03.

USES



USES

SOIL CONDITIONER

- Vermicompost can be mixed directly into the soil, or mixed with water to make a liquid fertilizer known as worm tea.
- It is an uncomposted byproduct from when water-rich foods break down and may contain pathogens and toxins.
- The pH, nutrient, and microbial content of these fertilizers varies upon the inputs fed to worms. Pulverized limestone, or calcium carbonate can be added to the system to raise the pH.

04.

COLLEGE REPORT



ANNUAL REPORT OF THE ACTIVITIES OF VERMICOMPOST FOR THE LAST FOUR YEAR IN THE CAMPUS OF SB COLLEGE

2017-18 Around 275 kg of Vermicompost was produced. Compost was utilised for manuring vegetables and plants in Campus and it was also sold to farmers outside the campus. By supplying Vermicompost to the needy students and public Rs 5737 was generated.

2018-19
Organic Waste Management through
Vermicomposting-Revenue Generated- Rs 3012.

2019-20
Organic Waste Management through Vermicomposting-
Revenue Generated- Rs 3174

2020-21 An assessment survey was conducted in ward-7 of Thrikkodithanam Grama Panchayat. The survey yielded insights to the localised effect of climate change on farmer community. Respondents informed that torrential rains had removed fertility from their fields and they are being forced to apply chemical fertilizers to sustain their back-yard farming and vegetable gardens, causing serious soil pollution. Fouling and uncontrolled growth of aquatic weeds in Kokkattuchira pond was identified as serious issue affecting the water availability of the locality. To tackle the problem, an attempt was made to convert the weed to vermicompost. Trained Students of Dept. of Zoology conducted awareness campaigns and tried to train local farmers and ladies of self-help groups. They distributed vermicompost and pamphlets.

ACTIVITIES OF THE PROGRAM

- Need Assessment Survey
- Analysis of Data, Report Preparation and Presentation to Panchayat Samity
- Training for students
- Preparation of Education material
- Organising awareness campaign.
- Revenue Generated- Rs 3332

05.

ANALYSIS



PRESENT STATUS





ANALYSIS

The current status of vermicomposting in the institutional premises is non operational. A huge reason for this situation is the Covid - 19 pandemic. As the institutional services completely switched to online method and since the institution was locked down , Vermicomposting was also left without much care and guidance. Thus the worms almost died and the whole set up went futile.

Since, college has reopened to its full swing, this waste management idea should also be restarted as it is very important. Each single step of human beings does bring enormous impact to the nature, so such a simple ,easy and cost effective system can help the habitat of certain organisms and helps in the waste management, soil preservation and much more things.

06.

APPLICATIONS



APPLICATIONS

Vermicomposting is used for medium-scale on-site institutional organic material recycling. It is selected either as a more environmentally friendly choice than conventional disposal, or to reduce the cost of commercial waste removal.

Today many states have been effectively able to encourage several hundred farmers in Thondamuthur, Udumalapettai, Nagapattinam, Annur and Palani areas in and around Coimbatore to take up vermicompost manufacture and application.

07.

CONCLUSION

