

# Vermi-Composting

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Vermi-composting is a simple biotechnological process of composting, in which certain species of earthworms are used to enhance the process of waste conversion and produce a better end product. Vermi-composting differs from composting in several ways. It is a mesophilic process, utilizing microorganisms and earthworms that are active at 10–32°C (not ambient temperature but temperature within the pile of moist organic material). The process is faster than composting; because the material passes through the earthworm gut, a significant but not yet fully understood transformation takes place, whereby the resulting earthworm castings (worm manure) are rich in microbial activity and plant growth regulators, and fortified with pest repellence attributes as well!



## **Bamboo waste vermi-composting**

It was found that, approximately 11.25 tons of bamboo leaf wastes will be obtained from the one hectare of bamboo forests. Bamboo leaf wastes consist of 19.5–26.3% cellulose, 11.30–13.50% hemi cellulose and 8.7–11.60 % lignin. It also contains 34.6–37.5% organic carbon.

### **Preparation**

Mix the bamboo leaf wastes and cow dung in the ratio of 5:1 and add microbial consortia (@ 2 kg/ton) and allow it for partial composting.

Then release the earthworms into the compost pit (*Eudrilla euginea*) @ 3 kg/ ton and keep it for 75 days. Finally the vermin-compost was prepared after 75 days of composting.

This vermin-compost contains; 1.14% nitrogen, 0.65% phosphorus, 0.88% potassium & 16.54% humus content.