

L-09/KVK Lohit/2009-10

# VERMICOMPOST PRODUCTION TECHNOLOGY



**Krishi Vigyan Kendra**  
Lohit District  
Arunachal Pradesh

**VERMICOMPOST:** Vermicompost is a good quality organic manure prepared from bio-degradable organic wastes using earthworm. Earthworms value as a super composter has been proved beyond doubt and they are good friends of the farmer.

**Advantages of Vermicompost:**

- ✍ Improves soil structure, texture, aeration, water holding capacity and prevents soil erosion.
- ✍ It is very rich in all the essential nutrients to increase crop production and is eco-friendly.
- ✍ It is rich in beneficial micro-flora such as N-fixers, P-solubilizers etc that enhances decomposition of organic matter in soil.
- ✍ Vermicompost can be used as an alternative of other organic manures like FYM/Cow dung/Compost etc and reduces use of chemical fertilizer.

**Material required for Vermicompost preparation:** Any type of biodegradable wastes can be used such as-

- ✍ Crop residue
- ✍ Weed biomass
- ✍ Vegetable wastes
- ✍ Leaf litter
- ✍ Hotel/kitchen refuse etc.

**Earthworm species suitable for Vermicompost preparation:**

*Eisenia foetida, Eudrillus euginae, Amyanthus diffringens, Prionnyx excavatus etc.*

## Sources of earthworms:

- ✍ Department of Agronomy, AAU, Jorhat-785 013, Assam.
- ✍ F. T. C., Kherem, Lohit District.
- ✍ Any other reliable source.

## Method of preparation:

- ✍ It can be prepared in concrete tank, plastic tub, gamla, drum etc. It is better to prepare this in concrete tank of the size 3.0 feet width, 1.5-2.0 feet height and length of variable size depending on the availability of the raw materials.
- ✍ The available bio-wastes like crop refuse, weed biomass, kitchen waste, etc. are to be collected and heaped for 7-10 days under sun and be chopped to 8-10 inch size, if necessary.
- ✍ 1-2 inch layer of fine dry soils is to be placed at the bottom of the tank.
- ✍ Fine bedding material such as partially decomposed cowdung/dried leaves may be placed over the soil layer.
- ✍ Place the chopped weed biomass and partially decomposed cowdung in alternate layers of 10-20 cm thickness in the tank/pot. The ratio of bio-waste and cowdung should be 60:40 on dry weight basis.
- ✍ Release 2-3 kg earthworms of efficient species like *Eisenia foetida*, *Eudrillus euginae* etc over the mixture.
- ✍ Sprinkling of water should be done as and when necessary to maintain the mixture in moist condition.

✍ Optimum time for harvesting can be judged by visual observation when scrapes of the biodegradable wastes are no longer visible. Harvest the Vermicompost when ready and heap it under shade for 06-12 hrs. This will help in separation of the earthworms from the compost. Sieving may also be done to separate the earthworms and cocoons.

✍ It may be dried under shaded condition and may be packed in poly bags, plastic bags for marketing, if necessary.

Vermicompost is an environmentally safe, economically viable and technically adaptable method of converting organic wastes into useful manure. Lack of availability of quality organic manure in large quantity is one of the major bottleneck for planters, gardeners etc in spite of their keenness for increasing production in a sustainable manner and for producing organic tea, fruit, vegetables. Therefore, tremendous market potentiality exists for organic manure like vermicompost. So, Vermicomposting as an enterprise can help the rural youth for self employment and the farmers in reducing their cost of cultivation by producing quality manure by themselves.

<b>Prepared by</b>	<b>Mr. Debasish Borah</b> <i>Subject Matter Specialist (Agronomy)</i> <b>Miss Madhumita Sonowal</b> <i>Subject Matter Specialist (Plant Protection)</i>
<b>Published by</b>	<b>Programme Coordinator</b> KVK-Lohit District Under NRC on YaK (ICAR) Dirang, West Kameng District, Arunachal Pradesh Phone no: 03806 200100 & 222381.
<b>Design and layout</b>	<b>Mr. Shyam Narayan Prasad</b> <b>Md. Ziaur Rahman</b>