After the “anaerobic process”, remove the cover and stock the vermi bed with one kilo of earthworms or approximately 1,000 pieces for every one square meter of vermi bed that contains 100–200 kg of materials.

Vermicompost is harvested when most of the materials have been consumed by the worms. This takes about 30–45 days, depending on environmental and culture conditions. Maintain the moisture content and temperature of the vermi beds through regular checking. Protect the earthworms from predatory animals.

In harvesting, separate the “vermi” from the vermicompost either manually (hand-picking) or by using a screen. Properly pack vermicompost in sealed bags or sacks and store in a cool dry place.

Vermimeal Production

Harvested “vermi” from the culture beds may either be used for the next vermicomposting cycle or made into vermimeal through the following process:

1. Wash the worms thoroughly with clean flowing water to remove dirt.
2. Kill the “vermi” by putting them in a basin with warm water (40º–60ºC).

3. Dry under the sun until brittle.
4. Grind dried worms manually or through a grinder into meal form.
5. Store in sealed polyethylene bags with proper label and store in cool dry place.

Source:

Philippine Council for Aquatic and Marine Research and Development. How to produce vermicompost and vermimeal with “vermi” in the backyard. Los Baños, Laguna: PCAMRD-DOST, (undated). 1p.

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Backyard Production of Vermicompost and Vermimeal

Vermicomposting is the process of converting biodegradable wastes from the household and farm into compost (organic fertilizer) through the action of earthworms. With the aid of aerobic microorganisms (i.e., bacteria and fungi), earthworms digest the processed organic materials with a C: N ration of 1:25 at favorable temperature and moisture conditions.

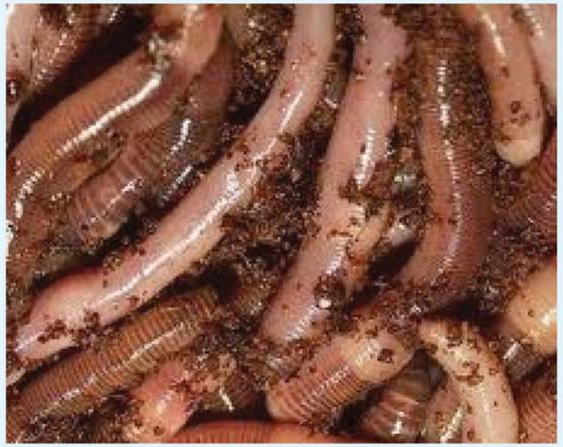
The materials that pass through the digestive tract of the earthworms come out in a texturized, sanitized, and deodorized form of castings known as vermicompost.

While the vermicomposting of kitchen wastes can be done in the household level using bins, it can also be applied on a bigger scale at the village level where the process can be done in a central area.

For commercial vermicomposting, an area of at least 1,000 m^2 is recommended. With two full-time workers, as much as 60 mt of vermicompost for the 0.1-ha area can be produced in a cycle of 45 days.

The basic machines needed to mechanize the system are grass cutter, mechanical shredder, sorter, weighing scale, and bagging machine that would cost around ₱200,000 to procure.

The Importance of the "Vermi"



The "vermi" or earthworms are important in enriching the soil with organic matter which comes from biodegradable materials such as dead plants and animals which the earthworms ingest. Besides this, there are other benefits from earthworms.

The castings of earthworms also known as vermicompost is an excellent soil enhancer and bioactive fertilizer for organic farming. Earthworms can also be made into feed for fish and other domesticated animals called vermimeal.

The "African Nightcrawler" (*Eudrilus eugeniae*) is the earthworm species suited to be grown in the Philippines for the production of vermicompost and vermimeal. Vermicompost is used or sold as organic fertilizer for plant and crop farming. Vermimeal is used as an alternative for imported fish meal that we feed to fish and other farmed animals.

Vermicompost Production

The first step in vermicompost production is to gather and prepare all the materials to make the vermi bed. The biodegradable materials may be sourced from the backyard or kitchen. In the backyard, use dried leaves, newly cut grass or plant trimmings. From the kitchen, discarded vegetable parts, fruit peelings and fish entrails may also be used.

Before stocking the earthworms, make sure that all the materials in the vermi bed are prepared.

To start, mix the dried leaves and kitchen waste thoroughly with enough water. Cover the materials with a plastic sheet, old sacks or banana leaves to start the "anaerobic process". This process is completed after one to two weeks.