

## What is Vermicompost?

- Vermicomposting is the process of producing organic fertilizers (vermicompost) using wastes (sericultural, agricultural, etc.) through the digestive action of earthworms.
- *Eudriluseuginea*, is the compost or manure earthworm that feeds on decaying matter. It can stay up to the 6-inch portion of the top soil but is dependent on decaying organic materials above the soil for survival.
- Vermicompost is a high-quality organic fertilizer that contains all the basic nutrients viz. N, P, K and also other trace elements.

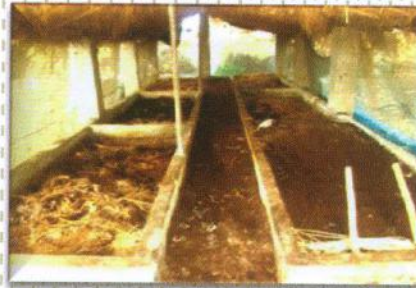
## A Farmer of Diara Village:

Md. Kazim Ali, a sericulture farmer who is also cultivating seasonal crops. Instead of using chemical fertilizers, he is more dependent on vermicompost prepared by him on his fields by the raw materials from his own farm. He is producing 20 quintals from one cycle and obtained 5 cycles in a year. He explained his vermicomposting method as follows:



## Steps in Vermicomposting:

1. **Site Selection:** shady, free from flood, near water source, cool temperature, and near material source.
2. **Beds Preparation:**
  - Construct a shed of 40'x12' with thatched materials at top.
  - Prepare worms bed of 10'x3.5'x1' with 2' narrow path in between of beds.
3. **Gathering of Substrate (Day 1):**
  - **Carbon source:** Collect sericultural or agricultural wastes like banana leaves or stalks, grass, papaya leaves, etc.
  - **Nitrogen source:** cow dung slurry



## Stages of Vermi-composting:

### 1. Anaerobic Stage (Day 2-15):

Mix the collected substrates with cow dung slurry, sprinkle water, if too dry. Place in a big can with tight cover or put in a sack and tie. Keep it in shady place and unopened for 10-15 days.



### 2. Aerobic Stage (Day 16-45):

Place the anaerobically-decomposed substrate on the prepared beds, 4 inches thick, un-pressed and release earthworms in it. Water only when the top is dried out and maintain cool temperature.



### 3. Migration (Day 45-50):

If substrate is 80-90% consumed, processed and decomposed, allow the worms to migrate in to other place or bag with the anaerobically-decomposed substrate in it.



#### 4. Harvesting (Day 50-60):

Pull out the substrate where worm has migrated and place in vacant beds. Manual picking of remaining worms is recommended while sieving. Don't water the bed 1 week before harvesting.



#### 5. Storage and Farm Consumption:

Air dry the compost upto 30% humidity and seal in plastic bag if you intended to sell the product or apply the compost directly to field as any other organic fertilizers.

#### Kazim Ali's Economics of Vermi-composting:

Estimate for Construction of a Temporary Shed and initial operational cost of one cycle

Sl.	Particulars	Quantity	Rate (Rs.)	Amount (Rs.)
1.	Shed (40'x12') with worm beds (10'x3.5'x1')	1	20000	20000
2.	Cost of Earth worms (initial requirements)	2000	50 paise per worm	1000
3.	Cow dung (If needed, Rs. 100 per qntl.)	From own farm	-	-
4.	Labor	40Mandays	200	8000
5.	Substrates	From own farm	-	-
6.	Miscellaneous	-	-	-
Total expenditure				29,000

- Selling Price of vermicompost: Rs.1000/qntl
- Selling Price of earthworm: 50 paise per worm)

#### Economics of Vermicompost Unit

Cycle/year	1	2	3	4	5
Cost (Rs.)	29000	8000	8000	8000	8000
Selling (Rs.)	20000	20000	20000	20000	20000
Benefit (Rs)	-9000	12000	12000	12000	12000

(Note: These 5 cycles are repeatable each year)

#### Details of Farmers for Information:

##### Murshidabad:

1. Kazim Ali, Diara, Mob. 9593157411
2. Rakia Siddique, Domkal, Mob. 9083698176

#### For detailed Information:

Central Sericultural Research & Training Institute  
Central Silk Board, Ministry of Textiles  
Berhampore-742 101, Murshidabad, W.B.

**Tel:** 03482-251046, **EPABX:** 253962/63/64

**FAX:** +91-3482-251233

**E-mail:** [csrtiber@gmail.com](mailto:csrtiber@gmail.com)/[csrtiber.csb@nic.in](mailto:csrtiber.csb@nic.in)

**website:** [www.csrtiber.res.in](http://www.csrtiber.res.in)

प्रकाशन: डॉ कणिका त्रिवेदी, निदेशक

केन्द्रीय रेशम उत्पादन अनुसंधान व प्रशिक्षण संस्थान  
केन्द्रीय रेशम बोर्ड, वस्त्र मंत्रालय, भारत सरकार, बहरमपुर -  
742101, मुर्शिदाबाद (म. ब.)

संपादन: श्री एन. बी. कर, डॉ एस. चट्टोपाध्याय, श्री देबोजित दास, श्री आर. बी. चौधरी, श्री तापस कुमार मैत्र एवं श्री बिपद कर्मकार

मुखपृष्ठ व परिकल्पना: श्री एन. बी. कर एवं श्री तापस कुमार मैत्र

# “Vermicompost”

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## Compilation

Mr. ShafiAfroz, Scientist B  
Dr. SubhraChanda, Scientist D  
Shri Ashok Sahoo, Tech. Assistant  
Dr. KanikaTrivedy, Director

Central Sericultural Research & Training Institute  
Berhampore-742 101, Murshidabad, W.B.