

Red Worm Vermicompost:

A Social Business for Organic Fertilizer:

Presented by: Md. Sazzad Hossain

What is Vermiculture & Vermicomposting



- *Vermiculture* is ...

“the culture of earthworms”

- *Vermicomposting* is ...

“using earthworms and microorganisms to convert organic waste into black, earthy-smelling, nutrient-rich worm castings (worm feces).” In Bangladesh such projects exists at *Tangail, Meherpur, Dinajpur, Rangpur* and *Jhinaidah*.

About the Entrepreneur...



● Md. Sazzad Hossain

- Masters in Business Studies – Marketing
– National University, Bangladesh
- Hands on 7 day training on vermiculture from Md. Shawkat Osman- Sub Assistant Agricultural Officer, Meherpur
- 5 day training on Entrepreneurship Development from Small and Cottage Industries Training Institute (SCITI)

How it began...

 April 2013 – Site construction

Aug 2013 – Release of **25,000** earth worms

Nov 2013 – **First Harvest** of vermicompost

Feb 2014 – Earthworm no. increase to **250000**

Mar 2014 – Production of **400 Kg/month/pit**

Worm information...



2 types of worms used:

- **Australian Eudrilus Eugenie**
- **African Black Nizer**

Food source:

- **Manure (current production)**
- **Kitchen waste (sorted)**

Life span:

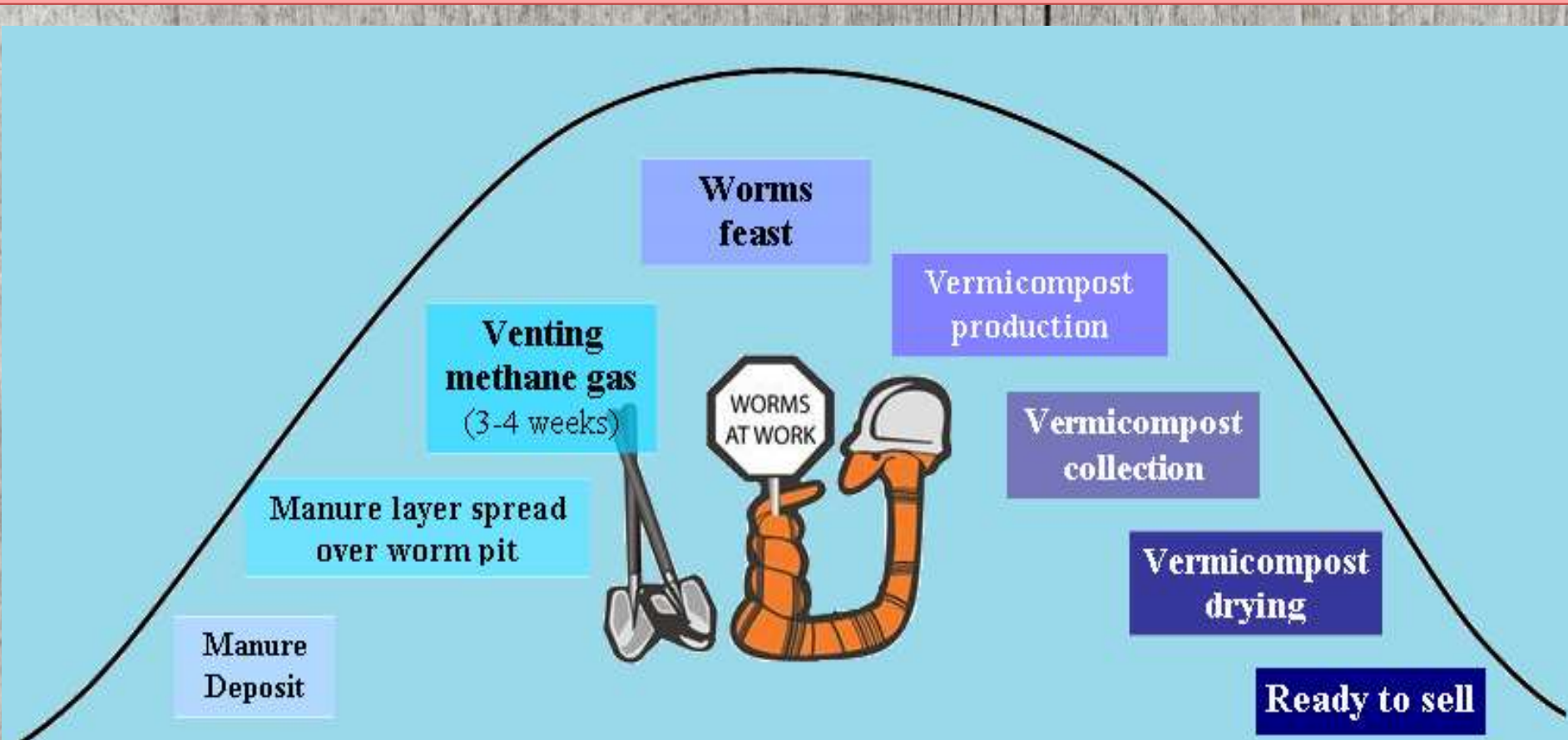
- **24 to 30 months**

Reproduction rate:

- **16-18 times per year**



How It Works:



What helps worm's grow...



- **Ambient temperature** of 10° C or less
- Keeping them **away from direct sunlight**
- **Shaded** from rain
- **Humid Environment**
- **Air Circulation**
- Micro Organisms
 - **Worm mass, Bacteria, Fungi** etc.

What it can be used for...

Vermicompost can be used on a wide range of products which includes:

- Gardening**
- Agriculture purposes**
- Vegetables**
- Flower gardens, pots etc.**
- Fish food (shrimp, catfish)**





Worms to be aware of...

Non-Biodegradables

- Plastic, Glass, Rubber

Pet feces (cats, poultry, birds)

Rodents (rats, mice)

Toxic materials

- Ex: orange peels
- Plant cuttings treated with herbicides or insecticides

Worm farms should not be situated beside highways

Investment cost...

Total Investment Size **Tk. 1,126,000**

Owners

52%

Searching

48%

Will set up a company and run as social business .

Land rent (Tk. 36,000/year)	36,000
Exiting 5 Pit	37,500
Worm (200000 pcs x Tk. 1)	200,000
Tube well	5,000
Office space	60,000
Shed making	45,000
Operational expenses	200,000
<u>Existing Investment:</u>	583,500
Water pump	15,000
25 Pit Making	187,500
Electrical Line Install	20,000
Furniture	15,000
Weighing scale	5,000
Working Capital	300,000
<u>Proposed Investment:</u>	542,500

Profit and Loss Account...



	1st year	2nd year	3rd year	4th year	5th year
Turnover	1,440,000	2,160,000	2,880,000	3,600,000	4,320,000
Total expenses	1,383,500	1,902,000	2,462,730	3,138,073	3,929,698
Net profit (After Tax)	<u>35,313</u>	<u>161,250</u>	<u>260,794</u>	<u>288,704</u>	<u>243,939</u>

Break Even point


1st Year

Pay back period

4th year



Social Impact & Positives of vermicompost...

- Brings back **natural fertility** of soil
 - No chemical fertilizers** are required
 - Absorbs** and **retains** rain water in soil
 - Year round** availability
 - Reduce, Reuse, Recycle**
 - Non polluting
 - Profitable commercial business**
- 



There is no such thing as waste, for one organism's waste is another's resource.

How can **WE** be more *Waste-Free* ?

Thank You!

