

Annex 1 - Setting up a Wormery

Even though there may be several composting worm suppliers in the country where you are implementing your project, getting worms in large enough quantities for tiger worm toilets may not be that easy. Setting up your own wormeries might be the easiest solution to meet the need. Here are the key things to consider for setting up wormeries:

Wormery construction

Different types of materials can be used to set up a wormeries box, i.e. carton box, plastic drum, temporary box made of tarpaulin with bamboo frame, or masonry brick basin. It should be located in the shade to prevent overheating, protected from direct rain, have a cover to protect from birds, elevated from the ground, and with a drainage system to prevent water build up and flooding. The surface area is a critical factor, 1 square meter area is enough to grow 2 kg of baby worms.

Bedding material

Use organic materials for the bedding area mixed with cow manure (as the source of food for the worms). Rice straws layer to be placed at the bottom to filter the liquid, mix cow manure and chopped banana trunk on top of it (banana trunk is good to maintain moisture). Use 10 to 20cm depth of bedding materials.

Feeding

The food should be periodically topped up as the worms process it. Cow manure has been found to be an excellent food. Organic food waste is also suitable.

Watering

To maintain the right moisture inside the wormeries, adding enough water twice a week may be needed. The amount of water needs to be carefully measured to ensure that all the bedding materials are soaked but not flooded. The drainage system below can be used to regulate the water.

Protection from rodents

Beside the top cover (to protect birds preying on the worms), ants and other insects are the common rodent for the worms. Using ant-chalks or anti-insect painting is necessary to protect the wormeries being invaded by unwanted predators.

Harvesting the worms

Successful wormeries can double the weight of worms within 6 weeks. Experience suggests that the India blue and Africa night crawler worms multiply faster than the Red worm. When it's time to harvest the worms a wormery of 2 m² will require at least 2 labourers for a 5-6 hours. It is labour intensive as it requires removing the compost & bedding materials batch by batch and finding and separating worms by size; mature large size and small baby size.

The mature large worms can be removed and used in the TWTs and the smaller baby worms and the compost & bedding materials are put back into the wormeries. Add some extra food and new bedding materials for the next growing cycle. It's important to make sure all the old food, compost and bedding materials are put back into the wormeries, as there may be a lot of worm eggs inside this mix.



Cow manure and chopped banana trunk ready to be mixed to set up a new wormery



Wormeries established in Rakhine, Myanmar, in plastic drums, under shade and above the ground