



How to Build Your Own Worm Farm

Working with Nature

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Build a worm farm and feed your waste to those hungry munching worms.

Remember – always wash your hands after handling the waste, the worms or the worm castings.

You Will Need:

- a box-like container that is at least 30cm high, 50cm long, 30cm wide
- compost worms (1 kilo or 1,000 worms)
- bedding – a mixture of shredded newspaper and / or cardboard, soil, dried leaves
- food - fruit and vegetable scraps

During a period of two to three months, the worms and other micro-organisms will eat the food waste and bedding and produce a rich soil conditioner. This you can use in your garden to grow plants and to improve the soil.

1. Construction of your worm farm

Build a wooden worm bin, buy a plastic tub with a lid, or use an old suitcase or drawer. Wooden containers are absorbent and good insulators. Plastic containers maintain a constant moisture level.

The container should be between 30 to 60 cm deep. Drill many small holes in the bottom and sides for aeration and drainage.

For example:

A bin 60 x 80 x 30 cm will accommodate about 1 kilo of worms and process about 2 kilos of fruit and vegetables scraps each week.

Put the bin on bricks or wooden blocks for air. Place a tray underneath the worm farm to capture any excess moisture.

Cover the bin to conserve moisture and provide darkness for the worms. Use a sheet of material or dampened newspaper on top of the bedding to retain moisture.

Worm bins may be located outdoors, or in a shed, on a deck or under the kitchen sink. They need to be kept moist, dark and out of hot sun.

2. Bedding

Suitable bedding material includes shredded newspaper or cardboard, straw or peat moss. Mix more than one bedding item to create an environment with spaces for air and to allow easy movement by the worms.

Fill the bin three-quarters full with bedding that has first been moistened so it is as wet as a wrung out sponge. Add a handful of soil for grit for the worm's digestion.

Cover the bedding with an old carpet or wet newspaper. It is important to maintain a constant moisture level. During the course of several months, the worms will eat the bedding. Add more moistened bedding as necessary to maintain the bin at 3/4 full.

3. What to feed your hungry worms

Worms do not have teeth; food scraps should be cut into small pieces.

Suggested Menus:

Food scraps and chopped fruit and vegetables (except onions and citrus)	Shredded and soaked cardboard
Egg shells	Tea bags, coffee grounds and filters
	Shredded newspaper

To avoid odour or pest problems, do not feed the worms meats, dairy products, oily foods or grains.

When adding food waste to the bin, pull aside some of the bedding and bury the food. Bury successive loads in different locations in the bin.

How to care for your Worms:

1. Do not feed them, plants from the onion family (garlic, shallots, leek)
2. Do not feed them citrus fruits or meat (can lead to bad smells and maggots)
3. Too much food will result in bad odours. Make sure that the worms are eating what you are putting into the bin, before adding more.
4. Too little food will result in very stringy, pale-looking worms. Do you have enough food in your worm bin for healthy worms?
5. The bedding must remain not too dry and not too wet

4. Harvesting

After several months, there should be a marked reduction in the amount of bedding in the bin. Dark, crumbly worm castings will have collected in a layer on the bottom of the bin.

The quickest method to remove the worm castings is to begin feeding the worms on only one side of the bin.

Wait two weeks until the worms have migrated to that side, then move the bedding from the whole bin to that side and remove the layer of finished worm castings. Use the worm castings on plants; 1/3 worm castings to 2/3 soil.

Add new moistened bedding to the empty side of the bin. Next time you add food, put it in the new bedding. The worms will migrate into the new bedding to eat the food. After several more months, repeat the procedure to remove the finished worm castings from the other side of the bin.

5. To avoid unpleasant odours

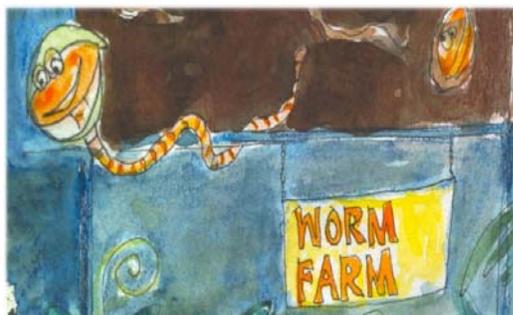
- add only enough food so that the worms can eat it in a few days
- chop the food into fine pieces so it can be digested faster
- maintain air spaces in the bedding
- keep bedding moist but not wet
- add only the proper food items
- if acidic, add finely crushed egg shells

To discourage fruit flies:

- bury the food waste in the bedding
- be sure the bin has a cover
- Keep the temperature levels mild and the moisture level damp not soggy.

The worms will reproduce about every 60 days; so if your bin gets overcrowded, pass some on to your classmates.

Happy Organic Recycling



Hints for Happy Worms

Light - Worms usually live underground so they thrive in an environment that is cool, dark and moist. To keep the worm farm dark put newspaper, hessian or another bin on top of the 'food' bin, but always lift this cover before adding more food .

Moisture - Worms like moisture and should not be allowed to dry out. A light spray of fresh water when the worm farm is first constructed will generally provide sufficient moisture for the farm. Once the farm is settled in you should not need to add extra water. If you add too much extra water or allow rainwater to get into the bins, the worms may drown.

Food - Worms are voracious (supersonic) eaters. Once the worms are settled in and growing, give them a good supply of suitable food. **MAKE SURE IT'S NOT TOO MUCH!**

Worm Castings – also known as Worm Poo

- Worm castings and worm juice are the products left after your hungry worms have devoured all the organic scraps that you have fed them.
- Worm castings can be sprinkled in the garden or onto pot plants. We recommend 20% vermicast mixed with 80% potting mix. In the garden add a 5 cm layer of vermicast to the soil and turn in. A mulch cover will provide additional organic matter for the vermicast.
- An excellent liquid fertiliser can be made from worm castings by adding water until it looks like weak tea. African violets and other plants that like being fed from the roots love this mixture.
- Liquid can be drained from the worm farm's bottom crate. This is also a good liquid fertiliser, but it should be diluted.

