

How to Make a Worm Farm

Worms can do wonders for the garden: they aerate the soil and their castings are an excellent fertilizer. To get a constant supply of this worm fertilizer as well as extra worms for the garden, start a worm farm.

Use Red Worms or Tiger Worms only (available from most plant nurseries). The common garden worm is not suitable.

Setting up the system

Worm farms are simple structures that you can make yourself. They consist of three or four stackable crates or bins made of plastic, wood or any other lightweight, waterproof material. The worms live in the bins and simply wriggle their way up from the lowest bin into the one above, where they can smell fresh food, fruit, vegetable and other scraps that might otherwise go to waste. These scraps are turned into the castings that make such good fertilizer. Some companies sell worm farms at a cost of \$50 to \$75 for four bins.

The base bin has a solid floor to catch liquid run-off that percolates down from the upper bins, and preferably a tap near the base. By tipping the stack, liquid waste can be drained away through the tap without having to remove the upper bins.

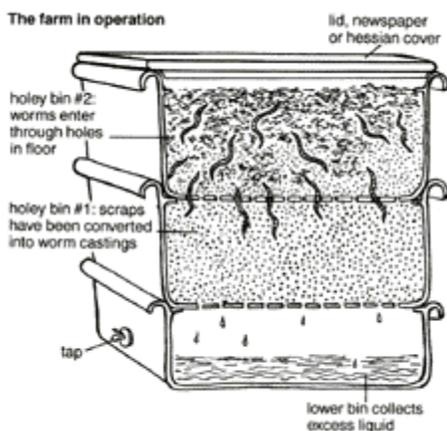
The upper bins are perforated to let the worms move up through the floor to reach fresh food supplies. These 'holey' bins lock into each other and are deep enough to leave enough room for the worms to move about without being squashed.

To create congenial living conditions for the worms, you need newspaper and soil to start the farm and a continuing supply of suitable food scraps.

Starting the farm

On top of the base bin fit an upper (holey) bin #1 that has been lined with a few sheets of shredded newspaper and a couple of handfuls of soil. Spray lightly with fresh water. Add the Red or Tiger worms along with a small amount of food scraps. Exclude light from the upper bin and keep it moist by covering it with newspaper, hessian or another bin. Allow the farm to settle in for a couple of weeks before lifting the cover and putting in more food scraps. Check on the bin's progress and add more food scraps as the worms grow and multiply. Make sure that your worms have enough food, but don't over feed them - uneaten food will simply rot, resulting in a smelly farm and unhappy worms.

When holey bin #1 is about half full of worms and worm castings, remove the newspaper or hessian and place holey bin #2 on top. Put food scraps in bin #2 and, again, exclude light and keep the contents moist. In about a week the worms from bin #1 will have moved up into the fresh food in bin #2, leaving behind worm castings that can be spread on the garden.



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 or another bin.

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 eaters. Once the worms are settled in and growing, give them a good supply of suitable food.

Worms like most vegetable and fruit scraps (except onions and citrus), but as worms do not have teeth, scraps should be cut into small pieces: waste from a vegetable juicer is ideal.

Worms also like:

- soaked and ripped pizza boxes
- shredded and soaked cardboard
- paper
- fruit and vegetable (except onions and citrus)
- leaves
- dirt
- hair
- egg shells.



Plants from the onion family (including garlic and shallots) and citrus fruits contain volatile oils. If any of these are included in the food scraps the worms will climb out of their bin to get away from the smell.

If this happens to your worm farm, place another bin with a fresh food supply on top of the contaminated bin. Once the worms have climbed out of the contaminated bin (about a week) remove it and use the castings for normal compost - the uneaten onion and citrus won't hurt the garden.

Dog droppings or stable sweepings can also go into the bin. Worms will eat droppings from herbivorous animals (horses, cattle) and omnivores/carnivores (dogs, cats, etc.), but never add human feces because of possible bacterial contamination.



Worm farm 'produce'

Castings can go straight onto the garden or pot plants. If they are covered with mulch their moisture and nutrient content will be conserved.

An excellent liquid fertilizer can be made from the castings by adding water until the mixture looks like weak tea. African violets and other plants that like being fed from the roots, just love this mixture.

Moisture drained from the worm farm's bottom crate is also a good liquid fertilizer, but it too should be diluted.

Excess worms can be put in the compost heap where they will help speed up the composting process.