



# Building a WORM FARM

**C**omposting organic waste with the help of red wiggler worms is an excellent way to reduce garbage going to landfills while returning vital organic material to the soil. The worms are housed in a container that may be kept inside, allowing year-round composting by everyone, even people living in apartments. Worm farms should be kept in warm, dark and dry places with temperatures between 40-80 degrees. Over time, the worms turn food waste into rich material that can be added to soil.

Worm farms have the added benefit of breeding worms for release in gardens, where they aerate the soil.



## Choosing a Container

You can buy worm-composting containers or make them out of wood or plastic. An old barrel or box will do nicely.

The size of container should be proportional to the amount of food waste you produce. As a guide, save your food waste for one week, weigh it, then use a container that is 1 square foot per pound of food waste. (For 5 pounds of garbage you will need a 5-square-foot box, or several boxes that add up to 5 square feet.)

Your box(es) should be 8 to 12 inches deep. Drill 8 to 12 holes in the bottom of the box, each between ¼ - ½ inches in diameter, to provide ventilation and drainage for your worms. Drill more holes in a plastic box because they tend to need more drainage. Put a pan under the box, and raise it on legs (bricks or wooden blocks work well) to allow the worm farm to drain. The escaping liquid can be used as a plant fertilizer.

## Making Your Worms' Bed

Shredded newspaper, dry leaves, peat moss, chopped straw and compost make a good bed. Mix up the bedding to create richer compost.

Toss in a few handfuls of sand to help the worms digest their food.

The bedding should be moist like a wrung-out sponge, and should fill three-quarters of the box. Fluff the bedding for ventilation, then add the worms.

## Get Your Worms Here!

Red wiggler worms tend to work best in worm farms. Daring worm farmers can collect their little composters from dung heaps, but red worms can also be purchased from bait shops. You will need about 2 pounds of worms (about 200 worms) for every pound of food waste you produce each day. You can start smaller; the worms will reproduce in short order.

## Bon Appétit

Worms like to eat fruit and vegetable peels, pulverized eggshells, tea bags and coffee grounds. Don't compost meats, dairy products, oily foods and grains — they smell and attract pests. Bury the food waste in different areas of the bedding and cover it.

## Worm Farm Maintenance

Add food according to the ratio above for 10 weeks,

when the bedding is nearly or completely replaced by brown and earthy-looking worm castings. The castings will take up much less space than the original bedding.

Separate the worms from the compost as soon as the bedding runs out, or they will die. The easiest method is to shift the compost to one side, then put in new bedding and food scraps. The worms will slowly migrate to the bedding. Once they have all moved, you can extract the compost as needed.

If you want to remove all the compost at once, dump your farm and separate the worms by hand. Kids enjoy this method, and it is a great opportunity to teach them about worms and their place in the ecosystem. This method also allows you to remove the tiny, lemon-shaped worm cocoons that contain between 2 and 20 baby worms and place them in new bedding or hatch.

## Using the Compost

Worm compost can be added to potting soil for houseplants, and spread on top of the potted soil as mulch. It can enrich garden soil or condition lawns.

## PROBLEMS AND SOLUTIONS

PROBLEM	CAUSE	SOLUTION
Strong, unpleasant odor	Lack of oxygen	Cut back on food and gently stir contents to improve ventilation
Wet bedding	Poor drainage	Check drain holes for blockage Drill more holes if necessary Cut back on food if drain holes are clear
Worms leave bedding	Bedding may be acidic	Reduce citrus peels in food and add a little garden lime
Farm draws fruit flies	Too much food or food on surface	Cover surface of compost in bin

Source: City Farmer, 1995