

Bad smells in a worm bin can result from either too many food scraps, too much moisture, or the presence of cheese or other animal products. Odors can be controlled by removing excess or inappropriate wastes, or adding drainage holes and fresh bedding.

2 The "Garbage Can" Food Scrap Composter

One of the simplest ways to compost food scraps is in a sunken garbage can. The can should have a tight-fitting lid and holes punched in the bottom. A galvanized metal can works well. Drill or punch about 20 drain holes, 1/4 or 3/8 inch diameter, in the bottom of the can. Then drill 10 airholes in the side, spaced around the lower edge of the can. If the lid is not tight, make a lid out of a piece of plywood with a handle on top and some wood blocks underneath to fit the lip of the can and help hold the lid on.

Dig a hole about 15 inches deep in a well-drained corner of your yard and set the can into the hole. Then push the soil back in around the sides. Your new composter is ready to use! You can add red wiggler or manure worms if you like (see "Worms" in the Worm Bin section), or just wait for them to come!

Harvesting the Compost

Depending on how many food scraps your household produces, the composter will fill in 4-8 months. Now it's time to harvest some compost. You can shovel the upper foot or so of undecomposed food off to one side and shovel the dark, soil-like compost out of the bottom. If the finished compost is wet and smelly, mix it with some soil and wait a week for it to turn drier and sweet smelling. Replace the top layer in the can. You can also bury the top layer in a trench in the garden, making more room for food scraps in the can. If you choose to use a second can, you can just let the food scraps sit until the worms move in and finish the composting!

Problems With the "Garbage Can" Food Scrap Composter?

Here are some common problems and how to fix them:

■ Odors and fruit flies

Stir in leaves or sawdust to keep the pile aerobic. Cover the fresh food scraps with leaves, sawdust, straw or shredded newspaper. If you prefer to use grass clippings as a covering material, first leave them in the sun for a week until they turn brown. Once a healthy worm population is established in the composter, they will help reduce odors by aerating the pile. Always keep the lid closed.

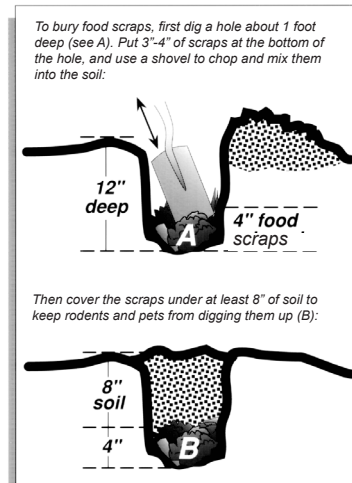
■ Raccoons or dogs knock the lid off

It's important to keep the lid on your composter to keep rodents out. Place a rock on the lid or tie a bungee cord from the can handle up through the lid handle and down to the other can handle to hold the lid on. And be sure to keep meat scraps out! They smell bad and attract animals, so put them in the garbage.

3 Burying Food Wastes

Another safe and easy way to compost food scraps is to bury them. Food scraps such as vegetable scraps, fruit peels and rinds, bread, grains, coffee filters and tea bags, can be safely buried in a vegetable or flower garden, or in holes dug around the drip line of trees and shrubs.

Do not bury meat or fish scraps, oily cooked foods, cheeses, butter, or other animal products. These items tend to attract rodents and other pests. Dispose of them in the garbage can or garbage disposal.



Questions?

For more information on composting, recycling, natural lawn care, and waste prevention, call 425-388-3425 press "0" or 1-800-562-4367, ext. 3425, press "0." (TTY 425-388-3700)

An excellent source of information on vermiculture (worm farming) is Mary Appelhof's book: Worms Eat My Garbage, ©1997 Flower Press. You can order it at bookstores or borrow it from public libraries.

Thanks to King County Solid Waste Division, Seattle Public Utilities, and Seattle Tilth for use of information.

Did You Know . . .

You can add food scraps to your yard waste collection in most areas of Snohomish County.



To find out more, call your garbage hauler or contact Snohomish County Public Works Solid Waste at 425-388-3425, press "0" or 1-800-562-4367, ext. 3425, press "0." (TTY 425-388-3700).



Snohomish County

Public Works

Solid Waste

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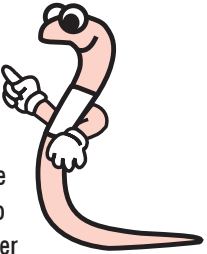
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Composting Food Scraps

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Food scraps can enhance your compost. However, they can also make a mess out of an otherwise healthy compost pile. When placed in an open pile outdoors, food scraps can create odors, make the compost unpleasant and unhealthy to handle, and attract rodents, flies and other pests. However, there are ways to compost food scraps without creating problems.



Let worms eat your food "scraps"! In the process, the worms will provide one of the best soil amendments available—worm castings. Worm castings are very expensive to purchase, but your worms will turn food scraps into an abundance of castings, providing a natural time-release fertilizer for your plants. Composting food scraps also helps reduce household garbage volume and produces worms for fishing bait.

Using Compost

The most common uses of compost are as mulch on established plants, as a soil enricher at planting time, and in potting mixes. Food scrap compost contains more nutrients than yard debris compost and should be used more sparingly. It can be applied as a one-inch mulch around plants or up to two inches can be dug into garden soil. For a potting mix, add up to 20% food scrap compost to a commercial or homemade potting mix.

This pamphlet describes how to compost food scraps three different ways. See inside for details.

- 1** Worm bins
- 2** "Garbage can" food scrap composters
- 3** Burial of food scraps

1 The Worm Bin

A worm bin should be a sturdy wooden or plastic box with a tight-fitting lid. It can be made from an old cupboard or packing crate, or constructed with plywood and two-by-fours. The tight lid keeps pets and rodents out, and protects the worms. A shallow box about 1 foot deep is best because the worms must live near the surface to breathe. Drill small holes in the bottom for drainage.

The bin should be sized to provide one square foot of surface area for each pound of food scraps added per week. For example, a 2-foot by 4-foot box will handle 8 pounds of kitchen scraps a week—the amount typically produced by two or three adults.

The Worms

Red worms (also known as “red wigglers” or “manure worms”) are the worms used for worm bin composting because they thrive on organic materials such as food scraps. Red worms are not the same as “earthworms” or “nightcrawlers,” which need mineral soils to survive. One to two pounds of red worms are needed to start a home worm bin.

Get your worms from a friend’s bin or an existing compost or manure pile. Bait shops also sell red worms, but their prices can be high for the amount of worms needed to start composting. If you need help locating worms for your worm bin, call Snohomish County Public Works Solid Waste at 425-388-3425, press “0.” (TTY: 425-388-3700)

Your initial supply of worms will increase quickly! By one estimate, eight worms can multiply to 1,500 in six months. Once your system is established, there will be plenty of extra worms to help your friends start bins, too.

Build an E-Z Worm Composting Bin

Costs to build this bin will vary depending on current lumber costs. Worm bins can also be made from recycled wooden boxes or other containers. Worm bins must have a tight-fitting lid to keep pests out, and ventilation or drainage holes to provide adequate air circulation and control moisture levels.

Materials (Avoid pressure treated wood)

- 1 – 4' X 8' sheet of 1/2" exterior plywood
- 3 – 8' and 1 – 6' 2x4's (utility grade)
- 3/4 lb of 6d galvanized finishing nails (or 1 1/4" galvanized drywall screws)
- 12 – 16d galvanized finishing nails
- 2 – 2" galvanized door hinges with 1" screws

Tools Required

Tape measure, skill saw or rip hand saw, hammer, saw horses, long straightedge or chalk snap line, screwdriver, and drill with 1/2" bit. Remember to use eye and ear protection.

Building tip: Use drywall screws and a drill with a screw bit to speed construction and strengthen bin.

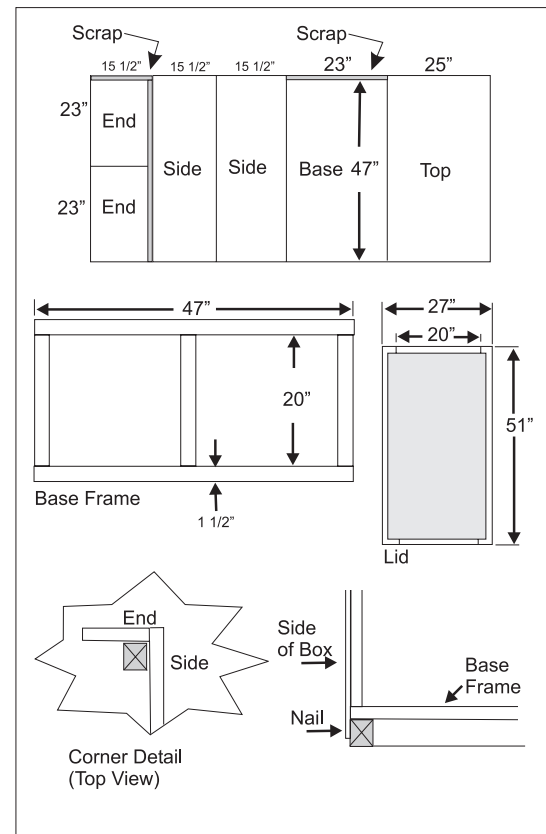
Construction

Measure and cut the plywood as indicated in the illustration. Remember that the saw blade is approximately 1/8" wide so measure and cut each piece separately. To make the base frame, cut one 8 foot 2x4 into two 47" pieces and cut three 20" pieces from another 8 foot 2x4. The remaining piece will be used for the ends of the box. Place the 2x4's on edge, as illustrated in the base frame diagram, and nail together with two 16d nails at each joint. Nail or screw the plywood base on the 2x4 base frame.

To build the box, cut two 12" pieces from the scrap 2x4 remaining from the base frame and two 12" pieces from another 8 foot 2x4. Place a 12" 2x4 under each side of an end panel so that the 2x4 is flush with the top and side edges of the end panel (the 2x4 will be 3 1/2" from the bottom of the end panel). Nail or screw the boards in place using 6d nails or 1 1/2" drywall screws. Repeat this process for the other end panel. Place the end panels on edge (with the 2x4 on the inside) and nail or screw the side panel into the 2x4 to the end panels. Turn the box over and nail or screw the other side panel in place. Place the box on the base frame and nail or screw the box through the side and end panels to the frame, staggered every three inches to reinforce the box. Drill twelve 1/2" drain holes in the bottom of the box. Measured on the outside, the finished box will be 24" wide, 48" long and 15 1/2" high.

To build the lid, cut one 51" piece and one 20" piece from the leftover 8 foot 2x4 and one 51" piece and one 20" inch piece from the 6 foot 2x4. Lay these pieces flat in a rectangle with the shorter pieces on the inside as shown in the lid diagram. Center the plywood lid on the 2x4 frame and attach with nails or screws.

To attach the lid to the box, turn the lid upside down and center the box upside down on the lid (the lid will overhang the box). Position the hinges at the ends of the box on one side, and screw the hinges to the box and the lid through the 2x4 of the lid and box so that the lid will stand upright when opened.



The “Bedding”

Worm bins are filled with “bedding” to provide the worms with a balanced diet as well as a damp, aerated place in which to live. Common bedding materials include newspaper, natural paper egg cartons, corrugated cardboard, shredded office paper, coarse sawdust, peat moss and brown leaves. Composting food scraps in a worm bin without bedding will produce a slimy, smelly mess.

Tear newspaper, paper egg cartons or cardboard into 1- to 2-inch wide strips before using as bedding. Bedding material should be thoroughly soaked in water for several minutes. Squeeze out excess water before adding the bedding material to the worm bin. Be sure to loosely fill the bin with bedding. There will be plenty of room for your food scraps, too.

Bury food scraps in the bedding. Always cover them with a few inches of the bedding to prevent flies and odors from becoming a problem. Rotate burial places throughout the bin to provide worms with a balanced diet of kitchen scraps and bedding, and to keep the pile aerated.

What to Feed Your Worms

Yes!	No!
Vegetable scraps	Meat
Grains	Fish
Most fruit rinds and peels	Cheese, Eggs
Breads	Oily foods
Coffee grounds, filters	Butter
Tea bags	Pet waste
	Lots of citrus

The “Harvest”

Harvesting worm compost for garden use is easy. Simply push the nearly finished compost to one side of the bin and put fresh bedding in the empty side. For the next six weeks, bury food scraps in the newly bedded side only. The worms will migrate over to the fresh food in the rebedded side of the bin as the food on the other side finishes decomposing. When the old bedding and food scraps are completely composted, they become a dark and crumbly soil-like material which can be harvested and replaced with fresh bedding, starting another cycle.

Problems With the Worm Bin?

Fruit flies are the most common problem people encounter with worm bins, usually in the summer. Discourage fruit flies by fully covering fresh food scraps with a few inches of bedding, and by covering the bedding with a sheet of plastic or cardboard tucked in at the edges. Other pests should not be a problem if the bin’s lid provides a good seal.