

## Composting with Worms

It used to be that the only reason people raised worms was for fishing bait. Now, many people use worms to digest the majority of their food waste. Food wastes can make a smelly mess in your garbage, draw rodents to an open compost pile, and add to water pollution problems when ground in a garbage disposal. Here's where the worms come in!

Worms neatly digest food waste. With that and some recycled newspaper, they make beautiful, rich compost for the garden. You can build a worm bin and let worms eat your food "garbage." In the process, the worms will provide you with one of the best soil amendments available, worm castings. Worm castings are very expensive to purchase, but your worms will turn food wastes into an abundance of castings for your plants.

A bin can be built for between \$25 and \$50 using new wood and hardware. Worm bins can also be made from recycled wooden boxes or other containers. Any worm bin must have drainage in the bottom and a tight-fitting lid to keep moisture in and pests out. Of course, worm bins may be purchased ready-made. See below for information on building your own bin.

A starter batch of worms can be dug out of a friend's worm bin or from an existing manure or compost pile, or a batch can be purchased. These are red worms, not earthworms. Earthworms need a mineral soil. Red worms like moist, organic muck. It may seem silly to buy worms, but if it saves you from having to sift through cow pies, the money will be well spent!

**For information on sources of red worms and/or worm bins, go to <http://www.metrokc.gov/dnrp/swd/naturalyardcare/documents/Kitchen-Compost-worms>.**

### **You Have the Bin (Located Away from the Hot Sun), Now Add the Worms**

Step One: Tear a stack of newspapers into one-inch strips. (A worm bin can hold over ten grocery bags of shredded newspaper.) Don't worry about the newspaper ink, it no longer contains heavy metals. Corrugated cardboard, coarse sawdust, and dry leaves also make good worm bedding.

Step Two: Fill a wheelbarrow or big tub with your shredded newspaper or other bedding material and wet it thoroughly. After it has soaked a few minutes, squeeze moisture out of the bedding and drop it in a pile next to the bin. Let it drain while you wet down the next batch of bedding. When the bedding is damp, but not dripping, put it into the worm bin.

Step Three: If you have a friend with a worm bin ask for a supply of starter worms. If you have no friends with worm bins, see the information above for sources of worms to purchase.

Step Four: Start burying your food wastes in the wormy, bedding-filled bin. Rotate your burying spots, so that the food gets evenly distributed. Covering the food with bedding will help control flies and smells. Keep a small covered bowl or jar next to the kitchen sink to collect "worm food."

<p><b>Do Feed Your Worms:</b></p> <ul style="list-style-type: none"> <li>• Vegetable Scraps</li> <li>• Grains</li> <li>• Fruit Rinds and Peels</li> <li>• Breads</li> <li>• Coffee Grounds, Filters</li> <li>• Tea Bags</li> </ul>	<p><b>Don't Feed Them:</b></p> <ul style="list-style-type: none"> <li>• Meat</li> <li>• Fish</li> <li>• Cheese</li> <li>• Oily Foods</li> <li>• Butter</li> <li>• Pet Wastes</li> </ul>
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**Step Five:** When the worms have broken down the bedding and food into dark, crumbly compost, push the compost over to one side of the bin. (It will have shrunk in volume.) Fill the empty side with new bedding and start burying your food scraps there. As the worms finish decomposing the old stuff, they will migrate over to the new feeding ground. After a month or two, most of the worms will be out of the old compost. Remove it and use it in the garden as needed.

If there are still a lot of worms in the finished compost, use their love of darkness to help you return them to the bin. Pile the compost on a tarp or sheet of plastic in the full sun. After about 15 minutes scrape off the top, worm-free, inch or two. Keep doing that until you have a very wormy bottom layer that can go back into your bin. Or, use the bottom layer as a gift to a friend.

It's important that you do this every month or two. A buildup of too many worm castings can be toxic to your worms.

### **Building a Worm Bin**

**Materials:**

- 1 sheet of 1/2" plywood
- 1 14" utility 2 x 4
- 1 16' utility 2 x 4
- 1 lb. 4d galvanized nails
- 1/4 lb. 16d galvanized nails
- 2 3" door hinges

**Tools:**

Tape measure, skill saw or rip hand saw, hammer, sawhorses, long straight edge or chalk snap line, screw driver, chisel, wood glue and drill with 1/2" bit.

*USE EYE AND EAR PROTECTION*

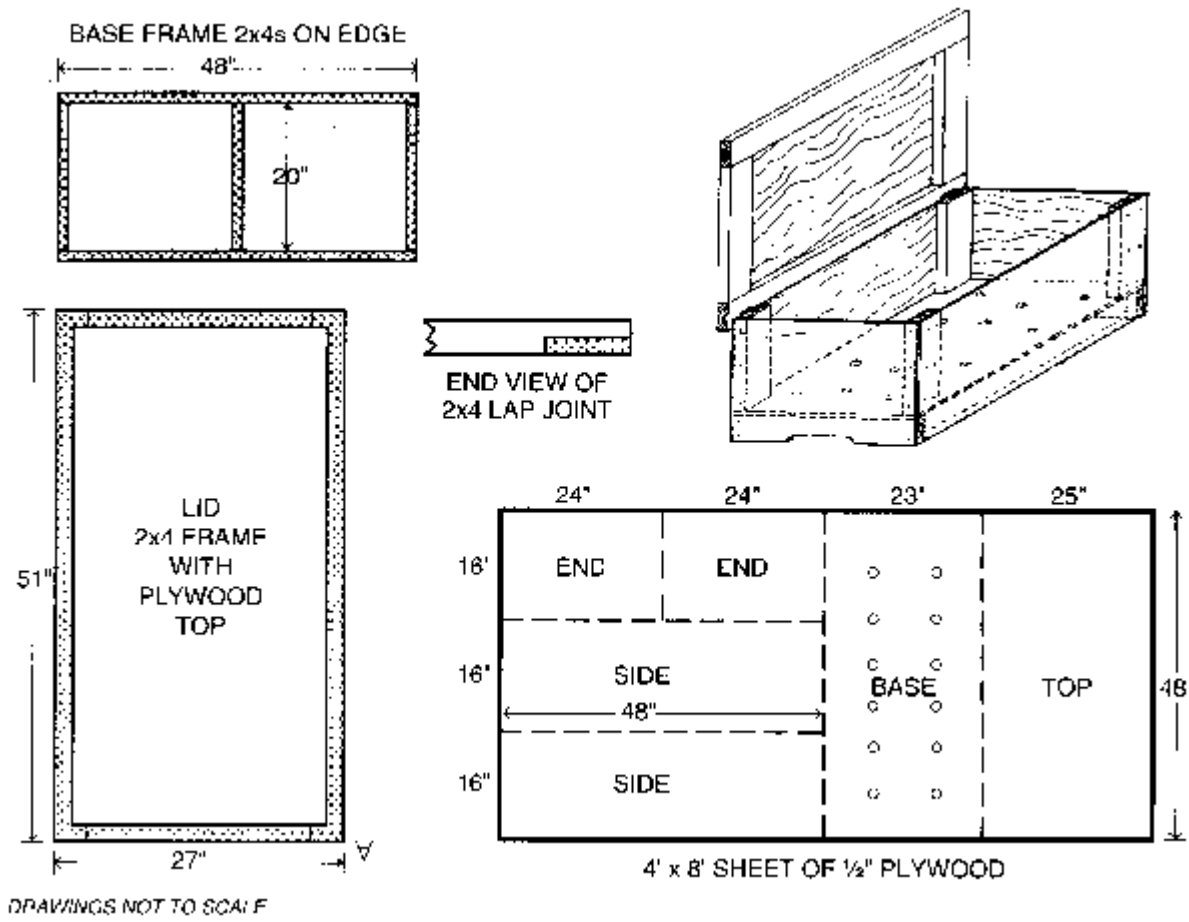
Measure and cut plywood as indicated in drawing below. To make the base, cut the 14' 2 x 4 into five pieces: two 48" and three 20" long. The remaining 12" piece will be used to make the sides. Nail the 2 x 4s together on edge with 16d nails at each joining as illustrated in the base frame diagram. Nail the plywood base piece onto the 2 x 4 frame using the 4d nails.

To build the box, cut three 12" pieces from the 16' 2 x 4. Place a one-foot 2 x 4 under the end of each side panel so that the 2 x 4 is flush with the top and side edges of the plywood and nail the boards in place. Nail the side pieces onto the base frame.

To complete the box, nail the ends onto the base and sides. To reinforce the box, place a nail at least every 3 inches wherever plywood and 2 x 4s meet. Drill twelve 1/2" holes through the bottom of the box for drainage.

To build the lid, cut the remainder of the 16' 2 x 4 into two 51" lengths and two 27" pieces. Cut lap joints in the corners then glue and nail the frame together. Center the plywood onto the 2 x 4 frame and nail with 4d nails. Lay the top on the ground with the plywood side touching ground. Attach hinges to the top and back using short screws on the top and the long screw on the back. Position hinges so the screws go through plywood to the 2 x 4s.

You can coat your bin with clear polyurethane, varnish, or paint to protect it from weathering.



Thanks to Whatcom County Extension for the worm bin diagram and instructions.  
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