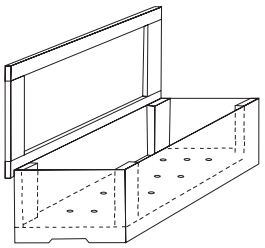
Earth Matters
Environmental Info from Pierce County

Worm Composting Bin

This bin can be used year round to recycle most food wastes (don't use meat, bones or fatty foods like dairy products or cooking oil). This bin's size is convenient for using indoors on a table top. A box this size will handle about 6 pounds of garbage per week (typical for a family of four to six).



Materials

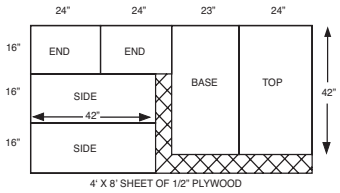
One sheet of ½" plywood, one 12-foot 2"x4", one 16-foot 2"x4", 1 lb. 6d galvanized nails, ½ lb. 16d galvanized nails, and two galvanized door hinges with screws
1-2 lbs. red worms (Approx. 800 to 2,400 worms)

Tools

Safety glasses, ear protection, tape measure, skill or rip hand saw, hammer, saw horses, long straight edge or chalk line, screwdriver, and drill with 1/2" bit.

Construction

Diagram A



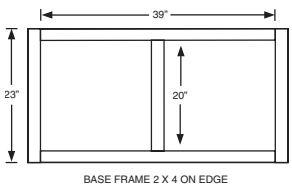
- Cut plywood as indicated in Diagram A

Two 16" x 24" ends, one 23" x 42" base, two 16" x 42" sides and one 24" x 42" top

- Build base

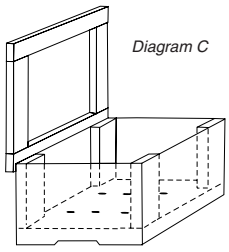
(Diagram B) Measure and cut the 12-foot 2"x4" into five pieces: two 39", two 23" and one 20" long. Following the diagram, nail the 2"x4"s together on edge using two 16d nails per joint. Nail the plywood base piece onto the 2"x4" base frame.

Diagram B



- Build sides

(Diagram C) Cut four 1-foot lengths out of the 16-foot 2"x4". Take each plywood side piece and place a 1-foot 2"x4" under each of their ends so that the 2"x4" is flush with the top and side edges of the plywood, and nail the boards into place. Nail the side pieces onto the base frame. To complete the box, nail the ends onto the base and sides.

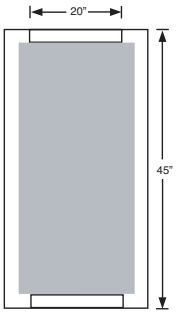


Reinforce the box by staggering a nail every three inches wherever plywood and 2"x4"s meet. Drill twelve ½" holes through the bottom of the box for drainage.

- Top it all off

(Diagram D) To build the lid, take the remaining 12-foot 2"x4" and cut it into two 45" pieces and two 20" pieces. Lay them flat with the short pieces on the inside as indicated in the diagram, so that the plywood top is inset from the edges of the 2"x4" by 1-1/2" all the way around its perimeter. Nail the plywood onto the 2"x4" securely. Place the hinges on the back side of the box at both ends on the 2"x4"s, and on the underside of the 2"x4" lid frame, so that the lid will stand upright when opened.

Diagram D



Tips

Start with damp peat moss, cardboard, shredded newspaper, straw and/or brown leaves. A mixture of these materials is better than using just one type. Soak the bedding material in water and squeeze out excess water before placing in the bin. Worms breathe through their skin and will suffocate if the environment gets too dry. Adding leaf litter will inoculate the bin with a variety of organisms that will help break down organic material.

Optimum temperatures for worm composting are below 84 degrees F and above freezing. A properly maintained bin is odorless, and with the size of this bin, finding space in the garage or basement should not be a problem. You can cut notches into the bottom base for easier handling and transport. (Worms Eat My Garbage, by Mary Appelhoff, is an excellent guide to worm composting and is available through Pierce County libraries.)

Diet

Start slow in a brand new bin with only 2 to 3 pounds of garbage per week initially. Mix the kitchen waste throughout. Any vegetable, fruit or grain scraps can be composted in the worm bin. Coffee grounds, tea bags and egg shells are fine, too. Avoid meat scraps, bones, dairy products (cheese) and fatty foods to prevent odors.

Harvesting the Compost

When most of the bedding material has broken down (3-6 months), push all of the material to one side and add new moist bedding to the empty half. At this time only add food waste to the new half. Worms will begin to migrate to and populate the new bedding in a few weeks. The finished compost can now be harvested. Red worms can be purchased, or found in the wild in cool compost piles, manure piles and leaf piles.

Pierce County
Public Works and Utilities
Environmental Services
(253) 798-2179
www.piercecountywa.org/composting