Backyard Composting

Worm Composting Bin

Worms in the house? Yuk! But this composting system actually works! The worms stay in the box and eat household scraps, and the box gives off little odor. Worm composting can be done in apartment buildings or other homes with no yard space. You might try it in your school!

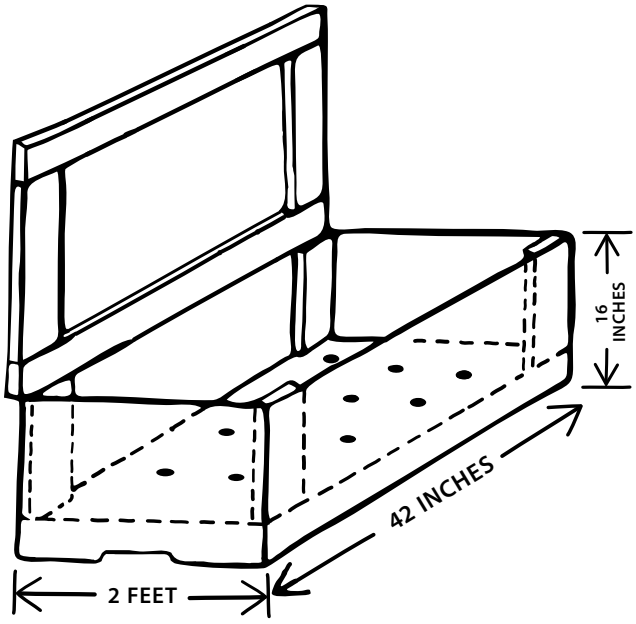
What You Need

Materials

- 1 4-x-8-foot sheet of one-half inch exterior plywood
- 1 12-foot length of 2 x 4 lumber
- 1 16-foot length of 2 x 4 lumber
- one-half pound of 16d galvanized nails
- 2 pounds of 6d galvanized nails
- 2 galvanized door hinges
- optional: 1 pint of clear varnish or polyurethane
- optional: plastic sheets for placing under and over the bin
- 1 pound of worms for every one-half pound of food wastes produced per day (Worms sold as fishing bait are best. Worms are available from most bait supply stores.)
- bedding for worms: moistened shredded newspaper or cardboard, peat moss or brown leaves

Tools

- tape measure
- skill saw or hand saw
- hammer
- saw horses
- long straight-edge or chalk snap line
- screwdriver
- drill with one-half inch bit
- eye and ear protection
- work gloves
- optional: paint brush



Building a Worm Composting Bin

1. Measure and cut the plywood as shown. You have one 24- x 42-inch base, two 16- x 24-inch ends and two l6- x 42-inch sides.
2. Cut the 12-foot length of 2 x 4 lumber into five pieces: two 39-inch pieces, two 23-inch pieces and one 20-inch piece.
3. Lay the five pieces on edge on a flat surface to form a rectangle with the long pieces on the inside and the 20-inch length centered parallel to the ends. Nail the pieces together with two 16d nails at each joint.
4. Nail the 23- x 42-inch piece of plywood onto the frame with 6d nails every 3 inches.
5. Cut four 1-foot lengths from the 16-foot length of 2 x 4 lumber. (Save the remaining 12-foot piece.) Take the two 16- x 42-inch pieces of plywood and place a 1-foot length flat against each short end and flush with the top and side edges. Nail the 2 x 4 in place using 6d nails.

6. Set the plywood sides up against the base frame so the bottom edges of the 2 x 4s rest on top of the base frame and the bottom edges of the plywood sides overlap the base frame. Nail the plywood sides to the base frame using 6d nails.
7. Drill 12 half-inch holes through the plywood bottom of the box for drainage.
8. To build the frame for the lid, cut the remaining 12-foot piece of the 16-foot length of 2 x 4 lumber into two 45-inch pieces and two 20-inch pieces. Lay the pieces flat to form a rectangle, with the short pieces on the inside.
9. Lay the 24- x 42-inch piece of plywood on top of the lid frame so the plywood is 1½ inches inside all the edges of the frame. Nail the plywood onto the frame with 6d nails.
10. Attach the hinges to the inside of the back of the box at each end (on the 2 x 4) and the corresponding underside of the back edge of the lid frame, so the lid stands upright when opened.
11. The unfinished box should last for at least five years; finishing the box with varnish or polyurethane, however, will protect the wood and prolong the life of the box. Two coats of varnish with a light sanding between coats should be sufficient.
12. Find a good location for the box. It can be placed anywhere as long as the temperature is more than 50° F (10°C). The most productive temperature is 55° to 77°F (13° to 25°C). Garages, basements and kitchens are all possibilities as well as the outdoors in warm weather (not in direct sunlight). Make sure to place the box where it is convenient for you to use. It is wise to place a plastic sheet under the box.

Adding the Worms

Moisten the bedding material for the worms by placing it in a 5-gallon bucket and adding enough water to dampen all the material. Don't worry about getting the bedding material too wet; the excess moisture will drain off when it is placed into the composting bin. Be careful if you use peat moss because it will hold too much water. It is a good idea to put wet bedding material into the bin outdoors and wait until all the water has drained out (one to two hours). Add about 8 inches of moistened bedding to the bottom of one side of the bin. Add the worms! Leave the lid off for a while and the worms will work down into the bedding away from the light.

Adding Your Wastes

Dig a small hole in the bedding, and add your vegetable and fruit scraps. Then cover the hole with bedding. Small amounts of meat scraps can be added in the same way. Do not add any inorganic or potentially hazardous material such as chemicals, glass, metal or plastic.

Maintaining Your Compost

Keep the composting material moist, but not wet. If flies are a problem, place more bedding material over the wastes or a sheet of plastic over the bedding, or place some flypaper inside the lid. Every three to six months, move the compost to one side of the bin and add new bedding to the empty half. At this time, add food wastes to the new bedding only. Within one month, the worms will crawl to the new bedding and the finished compost on the "old" side can be harvested. Then add new bedding to the "old" side.

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