

Compost Units Series

Wood-and-Wire Three-Bin Turning Compost Bin

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Waste Management

A wood-and-wire three-bin turning unit can be used to compost large amounts of yard, garden and kitchen wastes in a short time. Although relatively expensive to build, it is sturdy, attractive and should last a long time. Construction requires basic carpentry skills and tools.

1. Cut two 31 1/2-inch and two 36-inch pieces from a 12-foot length of 2 x 4 lumber. Butt-joint and nail the four pieces into a 35-inch x 36-inch "square." Repeat, building three more frames with the remaining 12-foot lengths of 2 x 4 lumber.

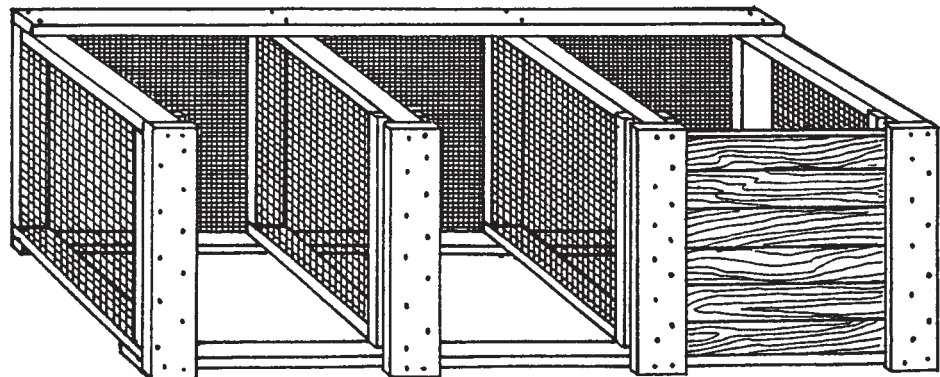
MATERIALS

Lumber should be cedar, pine painted with nontoxic wood preservative or latex paint, or recycled composite lumber:

- Four 12-foot lengths of 2 x 4 lumber
- Two 10-foot lengths of 2 x 4 lumber
- One 10-foot length of 2 x 4 lumber
- One 16-foot length of 2 x 6 lumber
- Six 8-foot lengths of 1 x 6 lumber
- One 22-foot length of 36-inch wide 1/2-inch hardware cloth
- 16d galvanized nails (2 pounds)
- Poultry wire staples (250) or a power stapler with 1 inch galvanized staples
- Twelve 1/2-inch carriage bolts, 4 inches long, with washers and nuts
- One quart wood preservative or stain

Optional materials – for lids

- One 4 x 8 foot sheet of 1/2-inch exterior plywood
- One 4 x 4 foot sheet of 1/2-inch exterior plywood
- Six 3-inch zinc-plated hinges
- Twenty-four 3/16-inch galvanized steel bolts, with washers and nuts
- Tape measure
- Hand saw or circular power saw
- Hammer
- Tin snips
- Carpenter's square
- Drill with 3/16-inch and 1/2-inch bits
- Screwdriver
- Adjustable wrench
- Pencil
- Safety glasses, ear protection, dust mask and work gloves



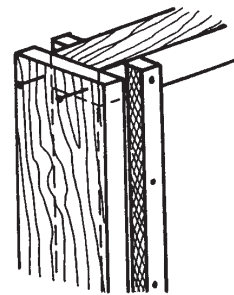
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2. Cut four 37-inch lengths of hardware cloth. Fold back the edges of the wire 1 inch. Stretch the pieces of hardware cloth across each frame. Make sure the corners of each frame are square and then staple the screen tightly into place every 4 inches around the edge. The wood-and-wire frames will be dividers in your composter.
3. Set two dividers on end, 9 feet apart and parallel to one another. Position the other two dividers so that they are parallel to and evenly spaced between the end dividers. Place the 36-inch edges on the ground. Measure the position of the centers of the two inside dividers along each 9-foot edge.
4. Cut a 9-foot piece from each 10-foot length of 2 x 4 lumber. Place the two boards across the tops of the dividers so that each is flush against the outer edges. Measure and mark on the 9-foot boards the center of each inside divider.
5. Line up the marks, and through each junction of board and divider, drill a 1/2-inch hole centered 1 inch from the edge. Secure the boards with carriage bolts, but do not tighten them yet. Turn the unit so that the treated boards are on the bottom.
6. Cut one 9-foot piece from the 10-foot length of 2 x 4 lumber. Attach the board to the back of the top by repeating the process used to attach the base boards. Using the carpenter's square, or measuring between opposing corners, make sure the bin is square. Tighten all the bolts securely.
7. Fasten a 9-foot length of hardware cloth to the back side of the bin with staples every 4 inches around the frame.
8. Cut four 36-inch long pieces from the 16-foot length of 2 x 6 lumber for front runners. (Save the remaining 4-foot length.) Rip-cut two of these boards to two 4 3/4-inch wide strips. (Save the two remaining strips.)
9. Nail the 4 3/4-inch wide strips to the front of the outside dividers and baseboard so that they are flush on the top and the outside edges. Center the

two remaining 6-inch wide boards on the front of the inside dividers flush with the top edge and nail securely.



10. Cut the remaining 4-foot length of 2 x 6 lumber into a 34-inch long piece, and then rip-cut this piece into four equal strips. Trim the two strips saved from step number eight to 34 inches. Nail each 34-inch strip to the insides of the dividers so that they are parallel to and 1 inch away from the boards attached to the front. This creates a 1-inch vertical slot on the inside of each divider.
11. Cut the six 8-foot lengths of 1 x 6 lumber into 18 slats, each 31 1/4 inches long. Insert the horizontal slats, six per bin, between the dividers and into the vertical slots.
12. (Optional) Cut the 4 x 8-foot sheet of exterior plywood into two 3 x 3-foot pieces. Cut the 4 x 4-foot sheet of exterior plywood into one 3 x 3-foot piece on one of the three bins, and attach each to the back, top board with two hinges.
13. Paint or stain all untreated wood.

Adding Wastes

With this type of bin, do not add wastes as they become available. Collect enough waste to fill one of the three bins. Collect woody as well as nonwood wastes. Chopping and shredding materials are recommended. Layer different materials in, or you can mix the wastes together.

Maintaining the Pile

After a few days, the temperature of the pile should reach between 130°-140°F. In a few days, the temperature will start to drop. (You may want to monitor the temperature with a thermometer.) When the temperature starts to drop, turn the compost into the next bin. The temperature of the pile will increase again and then, in four to seven days, start to drop. Turn the compost into the third bin. The total time for composting should be four to six weeks.

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