

Plans for Constructing Compost Bins

Wooden-Pallet Holding Unit

A holding unit can be built inexpensively using wooden pallets, or pressure-treated lumber may be used to make a nicer looking bin. The costs will vary, depending on whether new lumber or pallets are used. Used pallets are often available from manufacturers and landfills.



Building a Holding Unit Using Wooden Pallets

1. Nail or wire four pallets together to make a four-sided bin at least 3 feet x 3 feet x 3 feet. The bin is then ready to use.
2. A fifth pallet can be used as a base, to allow more air to get into the pile and to increase the stability of the bin.

Building a Holding Unit Using Lumber

1. Saw the two 8-foot lengths of 2 x 4 pressure-treated lumber into four pieces, each 4 feet long, to be used as corner posts
2. Choose a 3-foot-square site for your compost bin. Use the sledge hammer to pound the four posts into the ground 3 feet apart, at the corners of the square.
3. Saw each of the five 12 foot boards into four 3 foot pieces. Allowing five boards to a side and starting at the bottom, nail the boards to the posts to make a four-sided container. Leave 2 inches between the boards to allow air to get into the pile.
4. If you wish to decrease your composting time, build a second holding unit so that the wastes in one can mature while you add wastes to the other.

Materials

- four wooden pallets (Five pallets if you want a bottom in the container), sized to make a four-sided container at least 3 feet x 3 feet x 3 feet
 - nails
 - baling wire
- or**
- two eight-foot lengths of 2 x 4 pressure-treated lumber
 - five 12-foot lengths of 1 x 6 pressure-treated lumber
 - galvanized 8d nails (1 pound)

Tools

- saw
- sledge hammer
- claw hammer
- work gloves

Wire-Mesh Holding Unit

A wire-mesh holding unit is inexpensive and easy to build out of either galvanized chicken wire or hardware cloth. (Nongalvanized chicken wire can also be used, but will not last very long.) Posts provide more stability for a chicken wire bin, but make the bin difficult to move. A wire-mesh bin made without posts is easy to lift, and provides access to the compost that is already “done” at the bottom of the pile while the compost at the top is still decomposing.



Materials

- at least a 10-foot length of 36-inch-wide 1-inch galvanized chicken wire
- **or**
- at least a 10-foot length of 1/2-inch-wide hardware cloth (Note: The maximum bin diameter for a given length of chicken wire is the length of the chicken wire divided by 3.14.)
- heavy wire for ties
- three or four 4-foot-tall wooden or metal posts (for chicken wire bin).

Tools

- heavy-duty wire or tin snips
- pliers
- hammer (for chicken-wire bin)
- metal file (for hardware cloth bin)
- work gloves

Building a Wire-Mesh Holding Unit Using Chicken Wire

1. Fold back 3 to 4 inches of wire at each end of the cut piece to provide a strong, clean edge that will not poke or snag, and that will be easy to latch.
2. Stand the wire in a circle and set it in place for the compost pile.
3. Cut the heavy wire into lengths for ties. Attach the ends of the chicken wire together with the wire ties, using pliers.
4. Space wood or metal posts around the inside of the chicken-wire circle. Holding the posts tightly against the wire, pound them firmly into the ground to provide support.

Building a Wire-Mesh Holding Unit Using Hardware Cloth

1. Trim the ends of the hardware cloth so that the wires are flush with a cross wire to get rid of edges that could poke or scratch hands. Lightly file each wire along the cut edge to ensure safe handling when opening and closing the bin.
2. Bend the hardware cloth into a circle, and stand it in place for the compost pile.
3. Cut the heavy wire into lengths for ties. Attach the ends of the hardware cloth together with the wire ties, using pliers.

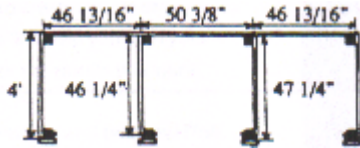
Wooden-Three-Bin Turning Unit

This turning unit is a permanent, sturdy structure, but it may be difficult to space the posts to the exact dimensions illustrated. Before cutting the removable slats that slide into the grooves at the front of each bin, cut one slat and check for proper fit in each bin.



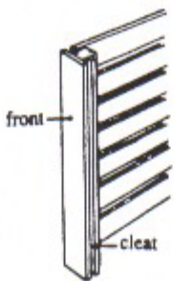
Building a Wooden-Three Bin Turning Unit

1. On level ground, set the eight posts as shown below using a post hole digger. (The posts are shown as darkened squares). Embed each post 2 feet into the ground. Be sure all posts are plumb (perpendicular to the ground). The top of each post should be at the same distance above the ground (48 inches).



[Note: Dimensions given for the back are included to assist in post spacing.]

2. Nail (or screw) on the back and side slats and dividers (pre-drill all holes to prevent splitting). Use adhesive on all joints. The bottom slats should be at ground level. Leave 1 1/2-inch horizontal spaces between slats. Note the ends of the dividers should come out to 1 inch behind the front of the front posts, as shown in the illustrations above.



3. Install the fronts and cleats, as shown for one of the center divider posts at right.

4. After the front slats have been sized and cut, slide them into place between the fronts and cleats as shown in the completed bin illustration above.

5. (Optional) Nail or screw the top rail to each front post, as shown in the completed bin illustration above. Do not use adhesive, and do not drive the nails in fully, as they will be removed to allow access to slats. The top rail is suggested to prevent the front posts from moving laterally. Another option to discourage the lateral movement of the posts is to use 4-inch x 4-inch x 7-foot posts and embed them one foot deeper.

Materials

(All lumber should be pressure-treated)

- eight 4-inch x 4-inch x 6-foot posts
- seven 1-inch x 6 inch x 12-foot back slats
- fourteen 1-inch x 6 inch x 4-foot end/side slats
- four 1-inch x 6-inch x 4-foot fronts
- fourteen 1-inch x 6-inch x 46 1/4-inch dividers
- twenty-four 1-inch x 6-inch x 42 13/16-inch (approximate) front slats
- [Note: before cutting all the front slats, cut one and check for proper fit in each bin]
- four 1-inch x 1(+)-inch x 4-foot cleats, rip cut from one 4-foot 1 x 6 (the cleats are retainers for slats)
- 8d galvanized deck nails or screws
- one tube exterior construction adhesive
- (optional) one 1-inch x 6-inch x 12-foot top rail

Tools

- post hole digger
- hammer
- saw
- tape measure
- drill
- adhesive gun

Snow-Fence Holding Unit

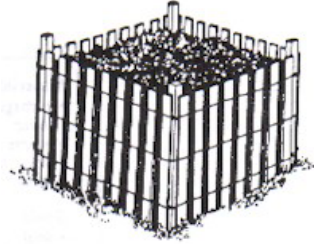
A snow-fence holding unit is simple to make. It works best with four posts pounded into the ground for support.

Materials

- four wooden or metal posts, 4-5 feet long (Use pressure-treated or plastic lumber for the wooden posts.)
- heavy wire for ties
- a 13-foot length of snow fencing, at least 3 feet tall

Tools

- heavy-duty wire or tin snips
- pliers
- sledge hammer
- work gloves

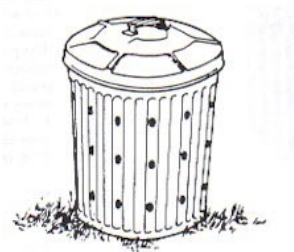


Building a Snow-Fence Holding Unit

1. Choose a 3-foot square site for your holding unit, and pound the four wooden or metal posts into the ground 3 feet apart, at the corners of the square.
2. Cut the heavy wire into lengths for ties. Attach the snow fence to the outside of the posts with the wire ties, using pliers.
3. Attach the ends of the snow fence together in the same way, forming a 3-foot square enclosure.

Garbage Can Composter

A garbage can composter is inexpensive and easy to build. It can be used for food or garden wastes. The wastes do, however, need to be turned.



Building a Garbage-Can Composter

1. Drill three rows of holes 4 to 6 inches apart all around the sides of the garbage can. Then drill several holes in the base of the garbage can. The holes allow air movement and the drainage of excess moisture.

2. Place 2 or 3 inches of dry sawdust, straw, or wood chips in the bottom of the can to absorb excess moisture and let the compost drain.

Materials

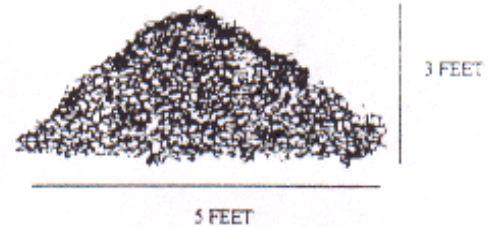
- garbage can with cover
- coarse sawdust, straw, or wood chips

Tools

- drill
- pitch fork, shovel, or compost turner
- work gloves

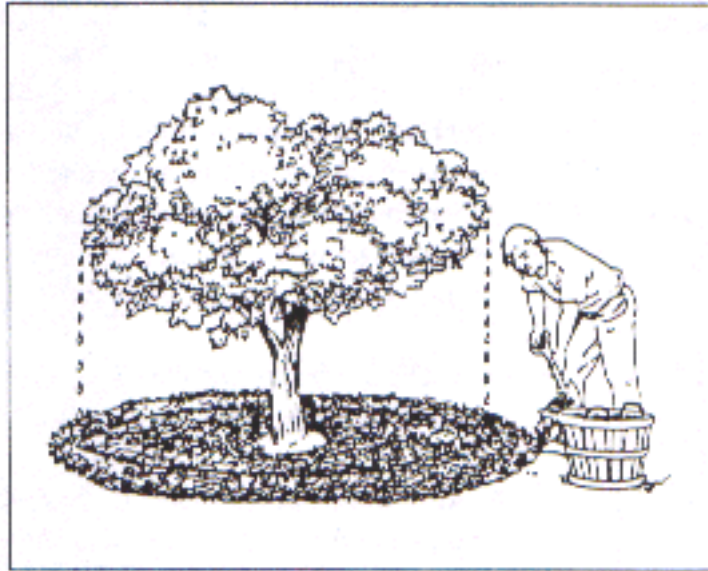
Heaps

Heap composting is similar to turning-unit and holding-unit composting except that it does not require a structure. As illustrated in Figure 1, a heap should measure about 5 feet wide and 3 feet high: its length will vary depending upon the amount of materials used. Materials can be added as they become available, or stockpiled until sufficient materials are available to make a good sized heap. It is best to have two heaps. When the first one is large enough, it should be allowed to decompose undisturbed. Additional waste can then be added to the second heap.



The pile may be turned regularly, or not at all. If the heap will be turned, vegetative waste can be composted along with yard waste. If the pile will not be turned, adding vegetative waste may attract pests. Covering the heap with a layer of yard waste, mulch, or soil will help prevent moisture loss and may reduce pest problems.

Compost Application Guidelines		
Landscape Use	Approximate Rate (lbs/1,000 sq. ft.)	Comments
Lawn and athletic field establishments	3,000 to 6,000 (1 to 2 inches)	Incorporate into top 4 to 6 inches of soil
Lawn topdressing	400 to 800 (1/8 to 1/4 inch)	Broadcast uniformly on grass surface
Shrub and tree maintenance	200 to 400 (1/16 to 1/4 inch)	Work into soil or use as a mulch
Container mix	Not more than 1/3 by volume	Blend with perlite, vermiculite, sand or bark



The application of compost, as a mulch, around a tree.

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