

A large, faint background illustration of a person with curly hair, wearing a long-sleeved shirt and pants, kneeling in a yard and building a compost bin. In the background, there is a house with a door and a window, and some trees.

Build Your Own Backyard Composter

Compost Pile

No construction necessary. Find a sheltered spot in your backyard to begin your pile. That's it! Just keep in mind that items such as paper towels and napkins can blow around without an enclosure.

Single Wooden Unit

This is a simple and inexpensive composter to build, but does require some minor carpentry know-how. A second unit may be used to mature compost while new items are added to the first box. [View plans](#)

Wooden Pallet Unit

One easy way to build a simple and effective compost bin is to use four wooden shipping pallets and tie them together. Many retail outlets will allow you to reclaim the discarded pallets for use at home. [View plans](#)

Snow Fence Bin

Wood or plastic snow fence (or chicken wire) is used in this design to keep it cheap and easy! [View plans](#)

Wire-Mesh or Hardware Cloth Unit

An inexpensive solution for backyard composting, the enclosure is circle shaped and provides lots of ventilation for air circulation. [View plans](#)

Garbage Can/Drum Composter

A garbage can or a drum (plastic or metal) may be used as a composter. It requires very little space in your backyard and is cheap and easy to set up. [View plans](#)

Rotating Barrel Composter

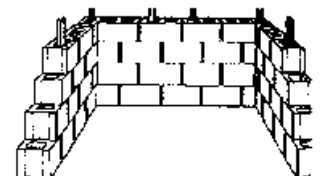
If your composting needs are small and you neither relish nor have the time for turning materials, then this is a good choice for you. It is constructed with a minimum of hand-powered tools and is not difficult or time-consuming to build. It will cost about \$60 to build, providing you use a second-hand barrel. [View plans](#)

Wood-and-Wire Three-Bin Turning Unit

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. With optional lids and bottom, this unit can be made rodent-resistant. [View plans](#)

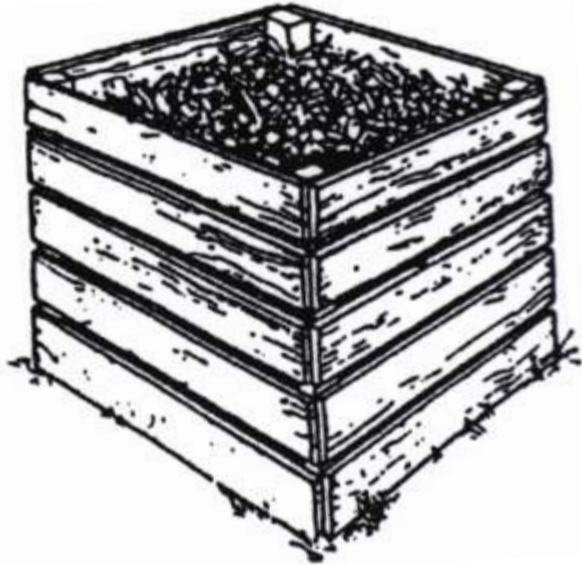
Cement Block Bin

Cement blocks or bricks may be used to build a composter. It is easy to set up and can be constructed with two sections to facilitate the turning of the pile from one section to the next, and can be built to suit your location.



Wooden-Pallet Holding Unit

A holding unit can be built inexpensively using wooden pallets or 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.



Required Materials

- * 4 wooden pallets (5 pallets if you want a bottom in the container), sized to make a four-sided container at least 3' x 3' x 3'.
- * nails
- * baling wire

OR

- * 2 - 8' lengths of 2 x 4 lumber
- * galvanized 8D nails (1 pound)

Required Tools

- * saw
- * sledge hammer
- * claw hammer
- * work gloves

Building a Holding Unit Using Wooden Pallets

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

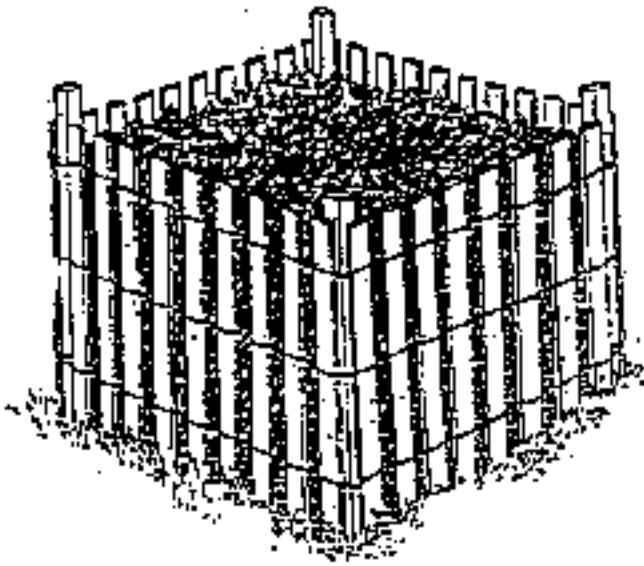
Building a Holding Unit Using Lumber

1. Saw the 8' lengths of 2 x 4 lumber into four pieces, each 4' long, to be used as corner posts.
2. Choose a 3' square site for your compost bin. Use the sledge hammer to pound the four posts into the ground 3' apart, at the corners of the square.
3. Saw each of the 12' boards into four 3' 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" between the boards to allow air to get into the pile.

If you wish to decrease your composting time, build a second holding unit so that the material in one can mature while you add new material to the other.

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.



Required Materials

- * 4 - wooden or metal posts, 4-5 feet long (use naturally rot-resistant wood, such as cedar, for wooden posts)
- * heavy wire for ties
- * 1 - 13' length of snow fencing, at least 3' tall (16' if making the optional top)

OR

- * 2 - 8' lengths of 2 x 4 lumber
- * galvanized 8d nails (1 pound)

Required Tools

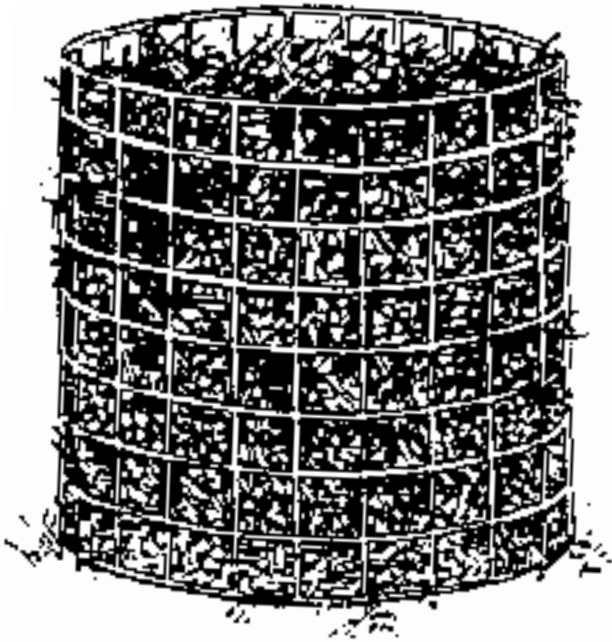
- * tin snips for heavy-duty wire
- * sledge hammer
- * pliers
- * work gloves

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 wire ties using pliers.
3. Attach the ends of the snow fence together in the same way, forming a 3-foot-square enclosure.

Wire-Mesh Holding Unit

A wire-mesh holding unit is inexpensive and easy to build out of either galvanized chicken wire or hardware cloth (non galvanized 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 more 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 of the pile is still decomposing.



Required Materials

- * 4 - wooden or metal posts, 4-5 feet long (use naturally rot-resistant wood, such as cedar, for wooden posts)
- * heavy wire for ties
- * 1 - 13' length of snow fencing, at least 3' tall (16' for optional top)

OR

- * 2 - 8' lengths of 2 x 4 lumber
- * galvanized 8d nails (1 pound)

Required Tools

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

Building a Wire-Mesh Holding Unit Using Chicken Wire

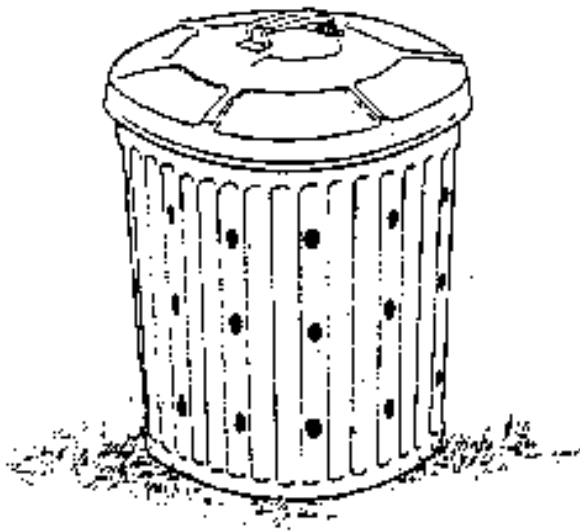
1. Fold back 3 to 4 inches of the wire at each end of the cut piece to provide a strong, clean edge that will not poke or snag and that will be easy to latch.
2. Stand the wire in a circle and set it in place for the compost pile.
3. Cut the heavy wire into lengths for ties. Attach the ends of the chicken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

Garbage Can/Drum 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.



Required Materials

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

Required Tools

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

Building a Garbage Can Composter

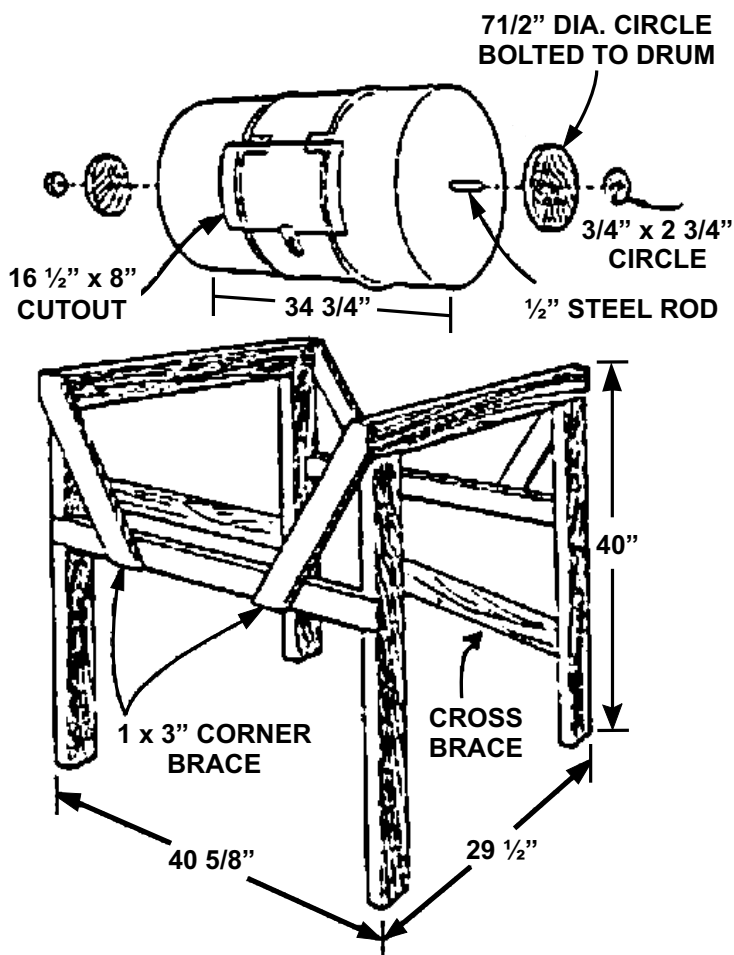
1. Drill three rows of holes 4 to 6 inches apart all around the sides of the garbage can. Then drill several holes in the base of the garbage can. The holes allow air movement and the drainage of excess moisture.
2. Place 2 to 3 inches of dry sawdust, straw or wood chips in the bottom of the can to absorb excess moisture and let the compost drain.



Rotating Barrel Composter (Page 1 of 2)

If your composting operation is small and you neither relish nor have the time for turning materials, then you'll find this composter suited to your needs. The barrel is rotated several times whenever new materials are added. It is constructed with a minimum of hand powered tools, and is not difficult or time-consuming to build. It will cost about \$60 to build, providing you use a second-hand barrel.

See page 2 for detailed building instructions.



Required Tools:

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

Required Materials:

Drum

- * 1 - 45-gallon drum, use "food grade" drum only (composter)

Wood

- * 4 - 40 x 2 x 4" (frame uprights)
- * 2 - 29 3/4 x 2 x 4" (frame horizontals)
- * 2 - 40 5/8 x 1 x 3" (cross braces) white pine
- * 4 - 23 3/4 x 1 x 3" (corner braces) white pine
- * 2 - 27 x 2 x 4" (cross boards) white pine
- * 2 - 7 1/2" dia. x 3/4" (bearings) white pine or plywood
- * 2 - 2 3/4" dia. x 3/4" (bearings) white pine or plywood

Hardware

- * 2 - 1 1/2 x 2' hinges
- * 1 - small hasp
- * 1 - 1/2 x 40 1/2" steel rod
- * 8 - 1/4 x 1 1/4" stove bolts
- * 12 - 1/4 x 1" stove bolts
- * 28 - 1 1/2" #10 wood screws

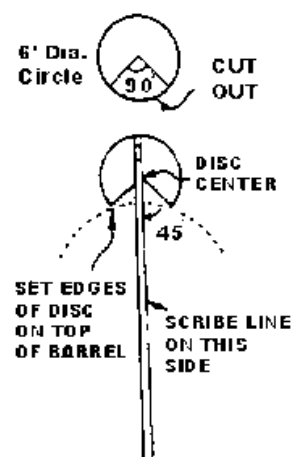
Glue and Paint

- * wood glue
- * approximately 1 pint of flat black paint

Rotating Barrel Composter Cont'd (Page 2 of 2)

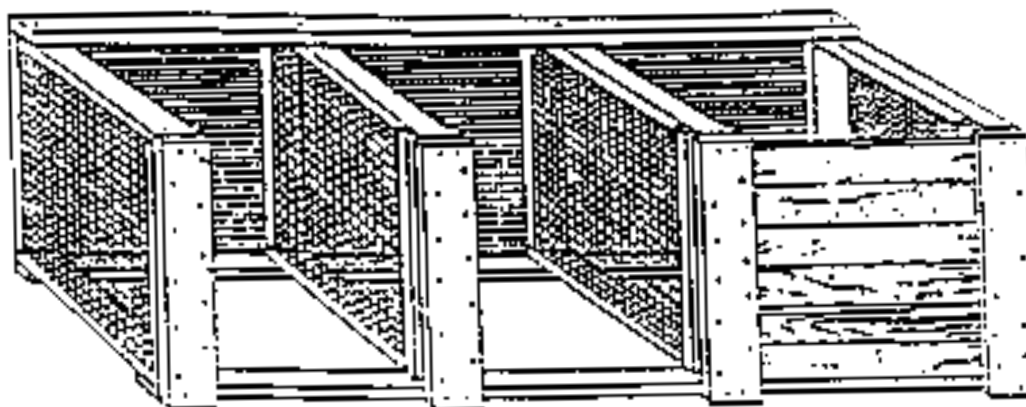
Building a Rotating Barrel Composter

1. Obtain a good 45-gallon drum that has not contained any toxic chemicals. Ask for a 'food grade' barrel. If metal, it must be unpainted on the inside and de-rusted (use a metal brush). Add a protective coating inside using natural rust primer. A plastic drum can also be used.
2. Drill a 1/2" hole in the exact centre of both ends of the barrel to accommodate the 1/2" steel rod. (See illustration for how to make a simple tool to locate center.) Hold the rounded end of the gauge anywhere along the circumference and scribe a line on the approximate centre. Move the gauge 90 degrees and scribe another line. The intersection of these lines will be the exact centre.
3. Next, scribe the lines for the opening in the barrel making sure to round the corners slightly. Drill a 1/4" hole somewhere along one of the lines to start the saber saw. If your barrel has ribs, as most do, you will have to cut a 1" vee notch on each rib to facilitate opening the door. Attach the hinges and the hasp to the barrel and lid using 1 x 1/4" stove bolts.
4. From 3/4" white pine, cut two circles 7 1/2" in diameter and two circles 2 3/4" in diameter. Drill a 1/2" hole in the center of each and apply glue to the 2 3/4" circles. Glue the 2 3/4" circles to the 7 1/2" circles. This can be done easily if the circles are temporarily slipped over the 1/2" steel rod and clamped. After the glue has dried, remove the disks, insert the rod through the barrel and assemble as shown in the illustration, using four 1 1/4" x 1/4" stove bolts in each.
5. To build the support frame, cut the 2x4's to length and, using a corner lap joint, assemble with two 1 1/2" #10 wood screws in each joint. The uprights will also have to be dadoed 23" from the bottom to accept a 1 x 3" board. To make a corner lap joint, simply remove one-half the thickness of the stock to a length comparable to the width of the stock on both ends of all pieces.
6. Half-inch holes to accommodate the rod will have to be drilled in the exact centre of the top horizontal pieces before assembling the top portion of the support frame. Slip the 1/2" steel rod with barrel attached, through these holes and insert the cross members into the dadoed uprights. Fasten with 1 1/2" #10 screws. Next cut the 1 x 3 x 23 1/4" piece at 45-degree angles at both ends, and attach with 1 1/2" #10 screws across corners as shown in the illustration.
7. For extra support, use 2 x 4 x 27" cross boards on each side. Cut them to an angle as the upper end is at 14 1/2" and the lower end 29" from the top of the 2 x 4 frame horizontals.
8. Drill several rows of 1/4" holes along the bottom of the barrel exactly underneath the door opening to eliminate excess moisture. Paint the outside of the unit a flat black colour to more readily absorb heat from the sun.



Wood-and-Wire Three-Bin Turning Unit

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's sturdy, attractive and should last a long time. Construction requires basic carpentry skills and tools. With optional lids and bottom, this unit can be made rodent-resistant.



Required Materials

- * 4 - 12' lengths of 2x4 lumber
- * 2 - 10' lengths of 2x4 lumber
- * 1 - 10' length of construction grade 2x4 lumber
- * 1 - 16' length of 2x6 lumber
- * 6 - 8' lengths of 1x6 lumber
- * 1 - 22' length of 36" wide 1/2" hardware cloth
- * 2 lbs - 16d galvanized nails
- * poultry wire staples (250)
- * 12 - 1/2" carriage bolts, 4" long, with washers and nuts
- * 1 - quart wood preservative **

Optional materials (for lids and bottom):

- * 1 - 4x8' sheet of 1/2" exterior plywood
- * 1 - 4x4' sheet of 1" exterior plywood
- * 6 - 3" zinc-plated hinges
- * 24 - 3/16" galvanized steel bolts, with washers and nuts
- * sufficient galvanized sheet metal to cover bottom of bins

See page 2 for detailed building instructions.

** Use wood preservative or stain suitable for vegetable garden compost or naturally rot-resistant lumber, such as cedar.

Tools

- | | | |
|----------------------------------|----------------------------------|---|
| * tape measure | * tin snips | * pencil |
| * hand saw or circular power saw | * carpenter's square | * safety glasses, dust mask, ear protection and work gloves |
| * hammer | * drill with 3/16" and 1/2" bits | |
| | * screwdriver | |
| | * adjustable wrench | |

Wood-and-Wire Three-Bin Turning Unit Cont'd (Page 2 of 2)

Building a Wood-and-Wire Three-Bin Turning Unit

1. Cut two 31 1/2" and two 36" pieces from a 12' length of 2x4 lumber. Butt-joint and nail the four pieces into a 35" x 36" "square" Repeat, building three more frames with the remaining 12' lengths 2x4 lumber.
2. Cut four 37" lengths of hardware cloth. Fold back the edges of the wire 1". Stretch the pieces of the hardware cloth across each frame. Make sure the corners of each frame are square and then staple the screen tightly into place every 4" around the edge. The wood-and-wire frames will be dividers in your composter.
3. Set two dividers on end, 9' 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" edges on the ground. Measure the position of the centres of the two inside dividers along each 9' edge.
4. Cut a 9' piece from each 10' length of 2x4 lumber. Place the two treated boards across the tops of the dividers so that each is flush against the outer edges. Measure and mark the center of each inside divider.
5. Line up the marks and and through each junction of board and divider, drill a 1/2" hole centred 1" 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' piece from the 10' length of construction-grade 2x4 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' length of hardware cloth to the back side of the bin, with staples every 4" around the frame.
8. Cut four 36" long pieces from the 16' length of 2x6 lumber for front runners (save the remaining 4' length). Rip-cut two of these boards to two 4 3/4" wide strips. (Save the two remaining strips)
9. Nail the 4 3/4" wide stripes to the front of the outside dividers and baseboard so that they are flush on the top and the outside edges. Centre the two remaining 6" wide boards on the front of the inside dividers flush with the top edge and nail securely.
10. Cut the remaining 4' length of 2x6 lumber into a 34" long piece and then rip-cut this piece into four equal strips. Trim the two strips saved from the step number eight to 34". Nail each 34" strip to the insides of the dividers so that they are parallel to, and 1" away from, the boards attached to the front. This creates a 1" vertical slot on the inside of each divider.
11. Cut the six 8' lengths of 1x6 lumber into eighteen slats, each 31 1/4" long. Insert the horizontal slats, six per bin, between the drivers and the vertical slots.
12. (Optional) Cut the 4x8' sheet of exterior plywood into 3x3' pieces. Cut the 4x4' sheet of the exterior plywood into one 3x3' piece on one of the three bins and attach each to the back, top board with two hinges.
13. (Optional) For complete rodent protection, cut sheet metal to fit bottoms of bins.
14. Treat all wood with products suitable for making vegetable garden compost OR use naturally rot-resistant lumber.

