Build Your Own

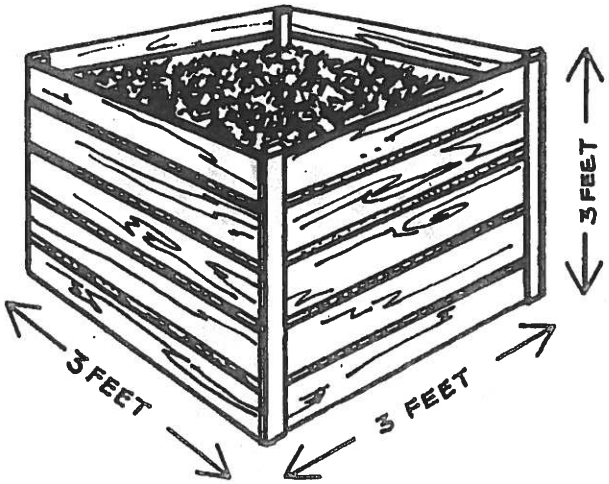
Backyard Compost Bin

CSWD | CHITTENDEN Solid Waste District

872-8100
www.cswd.net

Wooden Box Bin

A wooden box bin can be built inexpensively using wooden pallets. Or you can use lumber to make a nicer looking bin. The costs will vary, depending on whether you use pallets or new lumber. Used pallets are often available from manufacturers and landfills.



What You Need

Materials

- 4 wooden pallets (5 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
- wire ties

or

- 1 12-foot length of 2 x 4 lumber
- 5 12-foot lengths of lumber, 6 X 3/4
- nails

Tools

- saw
- sledge hammer
- work gloves

Building a Wooden Box Bin

If using wooden pallets:

1. Nail or wire four pallets together to make a four-sided container at least 3 feet x 3 feet x 3 feet. The container is 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.

If using lumber:

1. Saw the 12-foot length of 2 x 4 lumber into four pieces, each 3 feet long, to be used as corner posts.
2. Choose a 3-foot-square site for your compost bin, and 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 1/2 inch 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 the wastes in one can mature while you add wastes to the other.

Adding Wastes

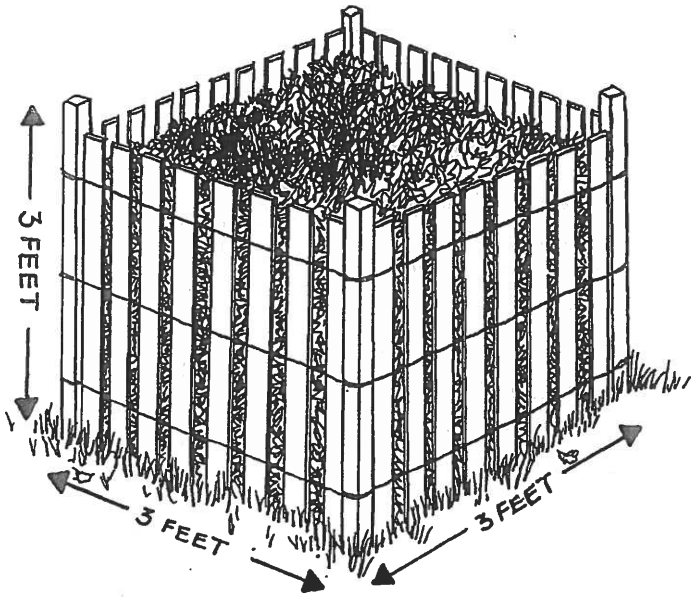
Add wastes as they become available. Nonwood materials such as grass clippings and garden weeds work best. You can speed up the process by chopping or shredding the wastes. If you have two units, when the first unit is full let the compost mature and add wastes to the second unit.

Maintaining Your Compost Pile

Although you do not need to turn this pile, make sure that it is moist during dry spells. Compost should be ready in about one year.

Snow Fence Bin

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



What You Need

Materials

- 4 wooden or metal posts, at least as tall as the snow fence
- heavy wire for ties
- 12 1/2 feet of snow fencing, at least 3 feet tall

Tools

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

Building a Snow Fence Bin

1. Choose a 3-foot-square site for your compost bin, 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.

Adding Wastes

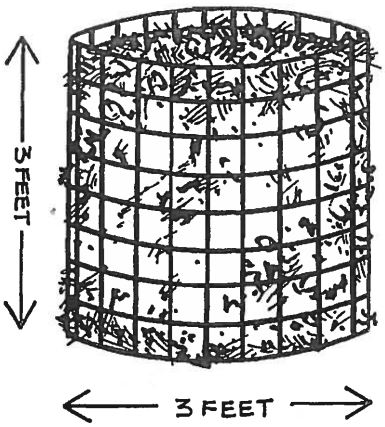
Add wastes as they become available. Nonwood materials such as grass clippings and garden weeds work best. You can speed up the process by chopping or shredding the wastes.

Maintaining Your Compost Pile

Although you do not need to turn this pile, make sure that it is moist during dry spells. Compost should be ready in about one year. Simply remove the fencing and the compost is ready to use.

Wire Mesh Bin

A wire mesh bin 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, allowing you to get at the compost that is already "done" at the bottom of the pile while the top of the pile is still cooking.



What You Need

Materials

- 12 1/2 feet of 36-inch-wide 1-inch galvanized chicken wire or 1/2-inch hardware cloth
- heavy wire for ties
- 3 or 4 4-foot 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 Bin

If 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 won't poke or snag and which 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.

If using hardware cloth:

1. Trim the ends of the hardware cloth so 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.

Adding Wastes

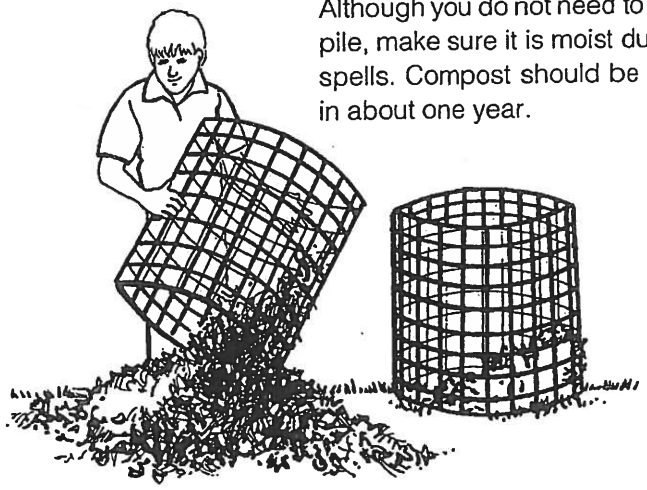
Add wastes as they become available. Nonwood materials such as grass clippings and garden weeds work best. You can speed up the process by chopping or shredding the wastes.

Maintaining Your Compost Pile

As you keep adding wastes to the wire mesh bin, the material at the bottom will become compost sooner than the material at the top. If you want to use the compost at the bottom of the pile, you can remove the wire holding unit and place it next to the pile. Then, use a pitchfork to move the compost back into the moved holding unit, adding the material from the top of the pile first. Continue until you have replaced all the compost. Now the compost at the top of the bin is ready to use.

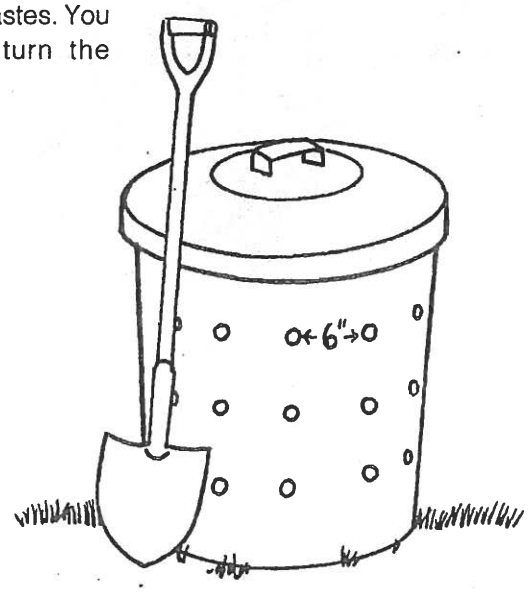
You also can scoop finished compost from the bottom of the pile by lifting one side of the unit.

Although you do not need to turn this pile, make sure it is moist during dry spells. Compost should be finished in about one year.



Garbage Can Composter

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



What You Need

Materials

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

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 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.

Adding Wastes

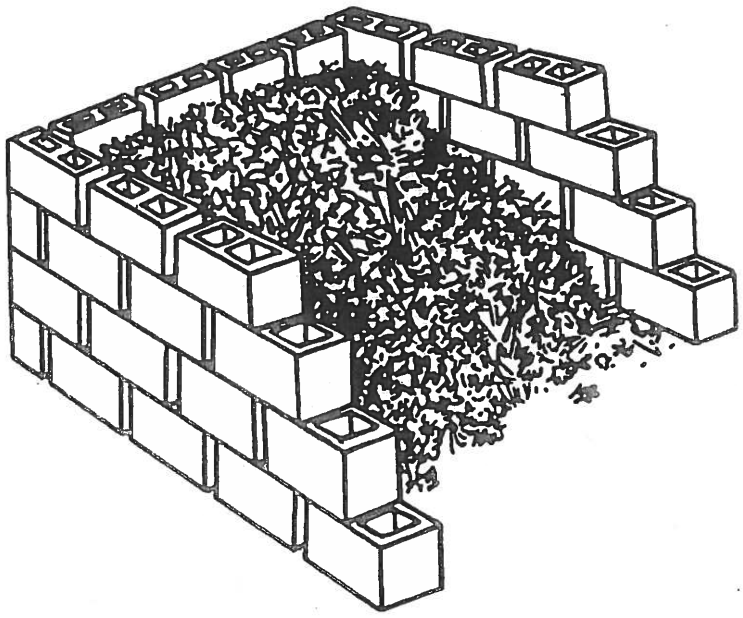
Add fruit, vegetable, and garden wastes. Make sure not to add too much of any one waste at a time.

Maintaining Your Compost Pile

Regularly mix or turn the compost with a pitch fork, shovel, or compost turner and keep it covered. This adds air and mixes up the different wastes, preventing the compost from getting smelly. A smelly compost pile may attract animals and cause neighbors to complain.

Cinder Block Bin

A cinder block bin is sturdy, durable, and easily accessible. If you have to buy the cinder blocks, it is slightly more expensive to build than the wire mesh or snow fence bins.



What You Need

- about 46 cinder blocks for the first bin
- optional: about 32 blocks for a second bin
- work gloves

Building a Cinder Block Bin

1. Place 5 cinder blocks in a row along the ground at your composting site, leaving about 1/2 inch between each block to let in air.
2. Place 4 cinder blocks in another row along the ground perpendicular to and at one end of the first row, forming a square corner; leave about 1/2 inch between each block.
3. In the same way, place 4 cinder blocks at the opposite end of the first row to form a three-sided enclosure.
4. Add a second layer of blocks, staggering them to increase stability and leaving about 1/2 inch between each block. There should be a layer of 4 cinder blocks on each of the three walls of the enclosure.
5. Add a third layer of blocks, again staggering them to increase stability, with 5 blocks across the back of the enclosure and 3 on each side.
6. The last and top layer should have 4 blocks across the back and 3 on each side.
7. Optional: If you wish to decrease your composting time, build a second bin next to the first so the wastes in one can mature while you add wastes to the other. Use one side wall of the first bin so you only need to build two additional walls.

Adding Wastes

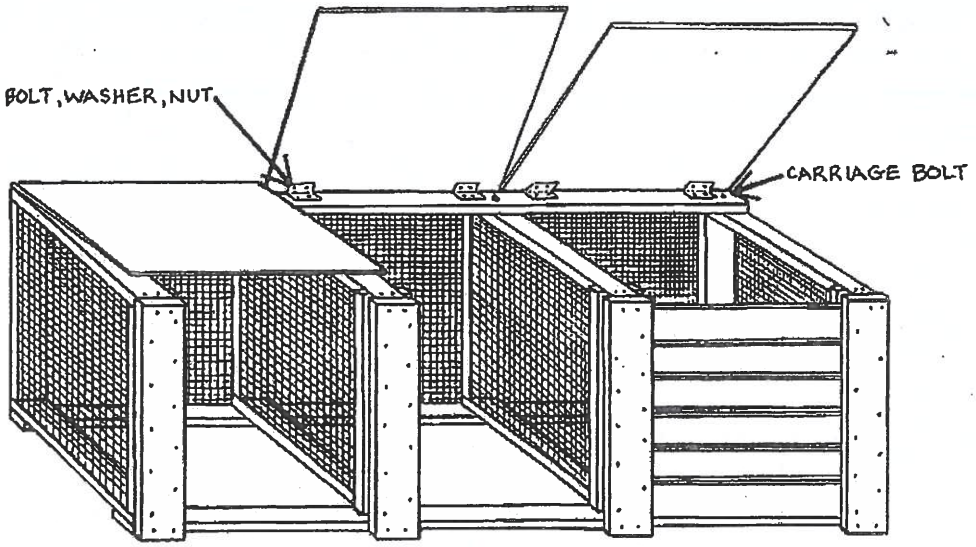
Add wastes as they become available. Nonwood materials such as grass clippings and garden weeds work best. You can speed up the process by chopping or shredding the wastes. If you have two units, when the first unit is full let the compost mature and add wastes to the second unit.

Maintaining Your Compost Pile

Although you do not need to turn this pile, make sure that it is moist during dry spells. Compost should be ready in about one year or more.

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.



What You Need

Materials

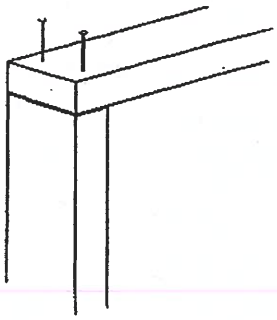
- 4 12-foot (or 8 6-foot) lengths of pressure-treated 2 x 4 lumber
- 2 10-foot lengths of pressure-treated 2 x 4 lumber
- 1 10-foot length of construction grade 2 x 4 lumber
- 1 16-foot length of 2 x 6 lumber
- 6 8-foot lengths of 1 x 6 lumber
- 1 4-x-8-foot sheet of 1/2-inch exterior plywood
- 1 4-x-4-foot sheet of 1/2-inch exterior plywood
- 22 feet of 36-inch-wide 1/2-inch hardware cloth
- 2 pounds of 16d galvanized nails
- 250 poultry wire staples (or a power stapler with 1-inch galvanized staples)
- 12 1/2-inch carriage bolts 4 inches long
- 12 washers and 12 nuts for the bolts
- 6 3-inch zinc-plated hinges
- 24 washers and 24 nuts for the hinges
- 1 quart wood preservative or stain

Tools

- tape measure
- hand saw or circular power saw
- hammer
- tin snips
- carpenter's square
- optional: power stapler with 1-inch galvanized staples
- drill with 1/2-inch bit
- screwdriver
- 3/4-inch socket or open-ended wrench
- pencil
- safety glasses
- ear protection
- dust mask
- work gloves

Building a Wood and Wire Three-Bin System

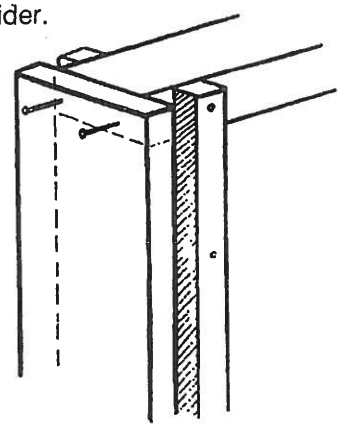
1. Cut two 31 1/2-inch and two 36-inch pieces from a 12-foot length of pressure-treated 2 x 4 lumber. Butt joint and nail the four pieces into a 35-inch x 36-inch "square." Repeat, building three more frames with the remaining 12-foot lengths of 2 x 4 lumber.



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.

continued on next page

3. Set two dividers on end 9 feet apart and parallel to one another. Position the other two dividers so they are parallel to and evenly spaced between the end dividers. The 36-inch edges should be 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 pressure-treated 2 x 4 lumber. Place the two treated boards across the tops of the dividers so 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 in from the edge. Secure the boards with carriage bolts, but do not tighten them yet. Turn the unit so the treated boards are on the bottom.
6. Cut one 9-foot piece from the 10-foot length of construction grade 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 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 8 to 34 inches. Nail each 34-inch strip to the insides of the dividers so 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 6 8-foot lengths of 1 x 6 lumber into 18 slats, each 31 1/4 inches long. Insert the horizontal slats, 6 per bin, between the dividers into the vertical slots.
12. 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. Center each 3-x-3-foot piece on one of the three bins and attach each to the back top board with two hinges.
13. Stain all untreated wood.

Adding Wastes

Do not add wastes as they become available with this system. Collect enough wastes to fill one of the three bins at one time. You can collect woody as well as nonwood wastes. Add thin layers of different kinds of organic materials or mix the wastes together.

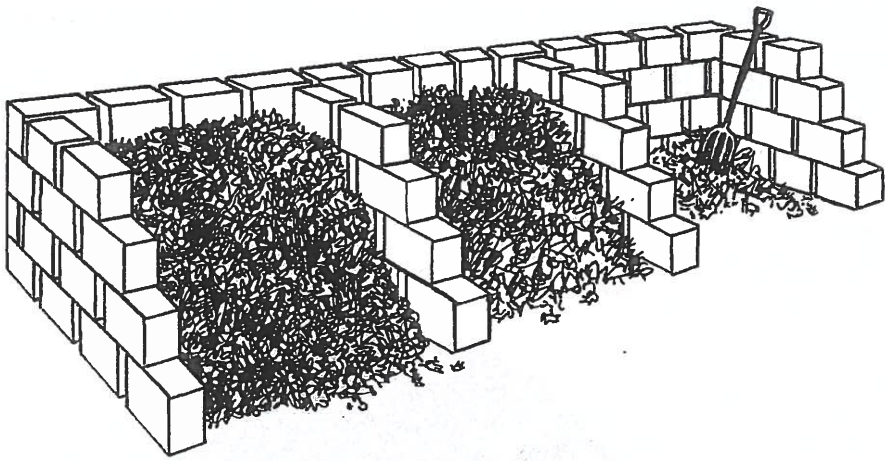
Before adding new wastes to an empty bin, collect enough to fill the entire bin.

Maintaining Your Compost Pile

Take the temperature of your pile every day. After a few days, the temperature should reach between 130° and 140°F (54° to 60°C). If your pile gets very hot, turn it before the temperature gets above 155°F (68°C). In a few days, the temperature will start to drop. When the temperature starts going down, turn your compost pile into the next bin with a pitchfork. The temperature of your compost pile will increase again and then, in about four to seven days, start to drop. Turn your compost pile into the third bin. The total time for composting should be less than one month.

Cinder Block Turning Unit

A cinder block turning unit looks like three cinder block holding units in a row. It is sturdy, and if you can find used cinder blocks, it is inexpensive to build.



What You Need

- about 98 cinder blocks
- work gloves

Building a Cinder Block Turning Unit

1. Place 12 cinder blocks in a row along the ground at your composting site, leaving about 1/2 inch between each block to let in air.
2. Place 4 cinder blocks in another row along the ground perpendicular to and at one end of the first row, forming a square corner; leave about 1/2 inch between each block.
3. In the same way, place 4 cinder blocks at the opposite end of the first row to form a three-sided enclosure.
4. Place two more rows—4 cinder blocks each—along the ground, parallel to the ends and evenly spaced within the enclosure. This divides the enclosure into three separate bins.
5. Add a second layer of blocks, staggering them to increase stability and leaving about 1/2 inch between each block. There should be a layer of 13 cinder blocks across the back and 3 cinder blocks on the sides of each bin.
6. Add a third layer of blocks, again staggering them to increase stability, with 12 blocks across the back of the enclosure and 3 on each side.
7. The last and top layer should have 13 blocks across the back and 2 on each side.

Adding Wastes

Do not add wastes as they become available with this system. Collect enough wastes to fill one of the three bins at one time. You can collect woody as well as nonwood wastes. Add thin layers of different kinds of organic materials or mix the wastes together.

Before adding new wastes to an empty bin, collect enough to fill the entire bin.

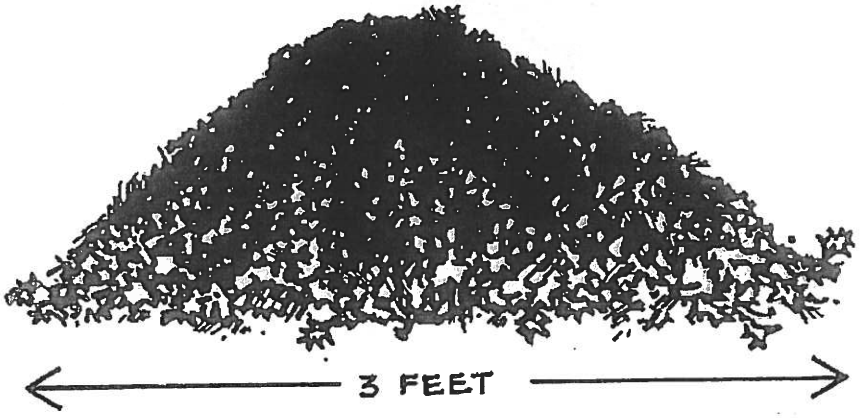
Maintaining Your Compost Pile

Take the temperature of your pile every day. After a few days, the temperature should reach between 130° and 140°F (54° to 60°C). If your pile gets very hot, turn it before the temperature gets above 155°F (68°C). In a few days, the temperature will start to drop. When the temperature starts going down, turn your compost pile into the next bin with a pitchfork. The temperature of your compost pile will increase again and then, in about four to seven days, start to drop. Turn your compost pile into the third bin. Continue to take the temperature and turn the compost pile until the compost is ready. The compost should be ready in about one or two months.

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Compost Mound

Yard wastes can be composted without a bin if you don't mind the appearance of an uncontained compost mound in your yard. The only costs are your time and work.



What You Need

- shovel or pitchfork
- work gloves

Building a Compost Mound

Find a good location and pile your yard waste in a mound about 3 feet x 3 feet x 3 feet (1 meter x 1 meter x 1 meter). If you cover the pile with a layer of soil, it will keep in moisture for the microorganisms and soil animals working to make compost.

Adding Wastes

Add wastes as they become available. Nonwood materials such as grass clippings and garden wastes work best.

Maintaining Your Compost Pile

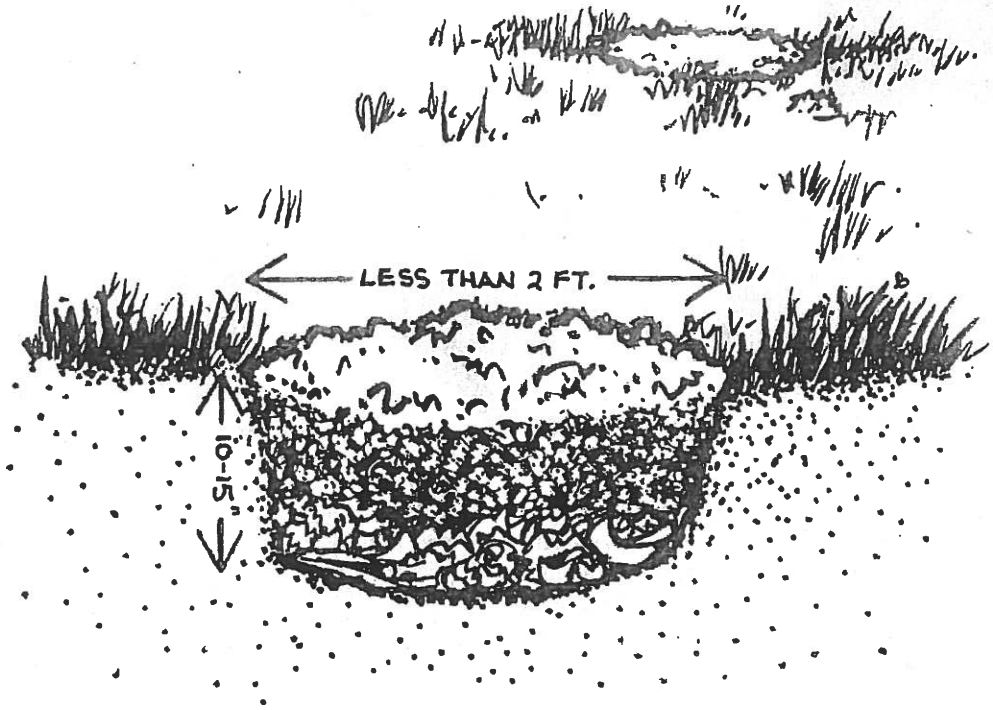
It is best to have two piles. After the first pile is large enough, stop adding organic material and let it work. In the meantime, add your wastes to the second pile.

Make sure the pile is moist, especially if it is not covered with soil.

You can turn the pile to speed up composting. Compost should be ready in three to four months if you turn the pile, or in about one year if you don't turn the pile.

Compost Pockets

This is an easy composting shortcut. You bury your fruit and vegetable wastes in small pockets in your garden, and let the microorganisms and soil animals do the work. Store your kitchen scraps in a plastic container until you are ready to compost them.



What You Need

Materials

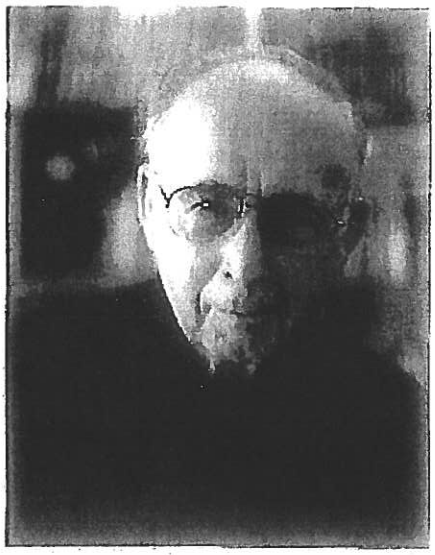
- food wastes, collected in a plastic container or bucket

Tools

- shovel
- work gloves

What to Do

1. Dig holes 10 to 15 inches deep and less than 2 feet across.
2. Place food wastes in the holes and cover with soil. Make sure the soil cover is at least 8 inches deep so the buried materials do not attract animals.

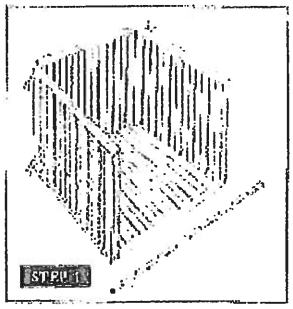


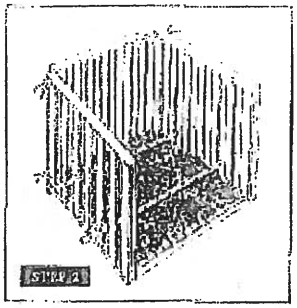
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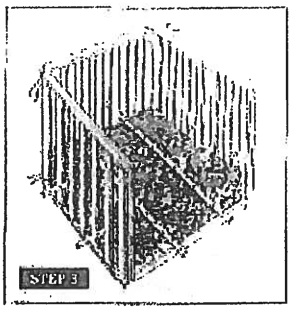
How Do You Build a Compost Bin?

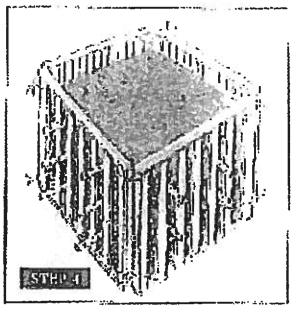
A Maine gardener discovers how to make rich, nutrient-filled humus the easy way.

BY IAN ALDRICH









Fred Davis knows the value of good compost. For 24 years, he and his wife, Linda, have owned and operated a nursery, Hill Gardens of Maine, at their home in Palermo, about 15 miles northeast of Augusta. Early on in the venture, Davis discovered two important things about himself: He disliked paying for compost, and he didn't care for the work required to make his own. So, in 1987, sparked by a magazine ad for a hassle-free, no-turn compost bin, he created his own container out of wood pallets and plastic drain pipe. The result: a rich, ready-to-use cubic yard of compost in weeks, not months.

Cost:

$60 for piping, pallets, and clothesline; plus compost thermometer, $24.95 at Johnny's Selected Seeds, Winslow, ME. *877-564-6697; johnnyseeds.com*

Process:

STEP 1: Davis uses four salvaged wooden pallets for the box frame and one as a base to provide air flow to the bottom and deter any tree roots fishing for nutrients and water. For the sides, he stands the pallets up, keeping the slats vertical and lashing them together with plastic clothesline cord tied in square knots at the top and bottom corners.

STEP 2: From there, Davis creates a shredded mix of browns (leaves and pine needles) and greens (grass clippings), kitchen waste, and a pailful of horse manure. But unlike other composting methods, this one doesn't require that he shovel it in all at once. Instead, he adds the material in six-inch layers, each topped with a sprinkling of bone meal for added phosphorous and enough water to moisten the layer to the consistency of a wrung-out kitchen sponge, all to help the bacteria move and consume.

STEP 3: Then atop and across each section, Davis also lays out two 4.5-foot pieces of plastic drainpipe that he's perforated with half-inch drill holes every 3 to 4 inches all around. The tubing, measuring 1.25 to 1.5 inches in diameter and spaced 16 inches in from the bin's sides, is long enough to stick out of the box a good 6 inches. Why the perforated pipe? "Hot-rot biological composting requires air," he explains, "to support the aerobic bacteria that digest organic matter into compost."

STEP 4: To finish the job, Davis builds more layers and positions more pipe, each set laid out at right angles to the previous one. At the top of the bin, he adds a 4- to 5-inch insulating bed of pine needles and whole leaves. Within four days, the center of the pile reaches 155 to 160 degrees, more than hot enough to kill weed seeds and most plant diseases. To be sure that those hot temperatures circulate to the material near the perforations, where cool air is constantly pouring into the mix, Davis plugs the ends with newspaper or leaves for just a single 24-hour period three days into the composting.

Then he waits. After three weeks, when the pile is half its original size and its core temperature equals the ambient air temperature, Davis has new compost. He gives the pile another week or two to settle and stabilize; then he's ready to garden. "If you put two of these bins side by side," he says, "you can have new compost nearly every other week."

What do you like most?

After more than 20 years of composting this way, the proof is in the dirt, Davis says. "Normal soil is 10 percent organic matter," he notes. "A typical home gardener's is 15. Most of my two acres of garden soil is 75."

For gardening advice, FAQs, and a composting recipe, visit: hillgardens.com

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