

COMPOSTING SYSTEM INFORMATION...



Compiled from information provided by:
Texas Commission on Environmental Quality (TCEQ)
Texas Agricultural Extension Service

Typical Composting Systems

Pros and cons of the compost systems described below are summarized in Figure 2.

Whichever system you adopt, place the pile in an area where it is unlikely to be washed out by rainfall runoff.

Piles: Open or Covered

Approximate Cost:

\$0–\$10 (for optional tarp, black plastic, burlap, or other covering).

Basic Design:

Arrange your materials in a compact mound with a minimum 3-foot height and diameter. Use a covering if desired to help contain moisture and heat.

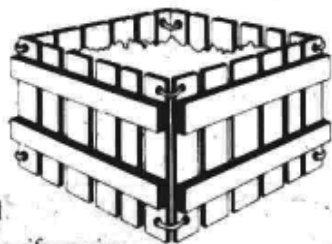
Homemade Bins: Pallet Bin

Approximate Cost:

\$0–\$10.

Basic Design:

Arrange four used pallets of uniform size and shape to form an open-top box. Usually it works best to set them with the short ends up. Avoid pallets with wide gaps between the boards. Use spare wire or coat hangers, nylon or poly rope, or strapping to lash them together near the top and bottom of each corner. Be sure that the lashing on at least one corner of the bin can easily be undone (if you use rope or strap, use a slip-loop knot, top and



bottom) so you can open the bin readily by unfastening one corner and swinging one of the pallets out like a door.

Homemade Bins: Perforated Garbage Can with Lid

Approximate Cost:

\$0–\$30.

Basic Design:

A metal or plastic trash container, if aerated with about 50 evenly-spaced 1/4-inch holes in its sides (five rows of 10 holes each), or about 30 evenly-spaced 1/2-inch holes (three rows of 10 holes each).

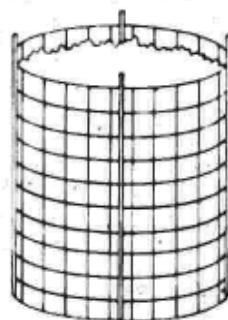
Homemade Bins: Circle Bins of Wire Fence or Hardware Cloth

Approximate Cost:

\$0–\$50.

Basic Design:

A 12-foot length of wire fence or hardware cloth (at least 3 feet high or higher), available at building materials and hardware stores, can be looped around so that its ends meet, making a ring (cylinder) between 3 and 4 feet in diameter. Fasten ends together with metal



clips or wire ties. For safety and ease of opening, roll back and flatten the sharp cut ends of

the fencing or hardware cloth before fastening together. Bins

made with poultry wire will bulge and collapse unless supported by a sturdy frame.

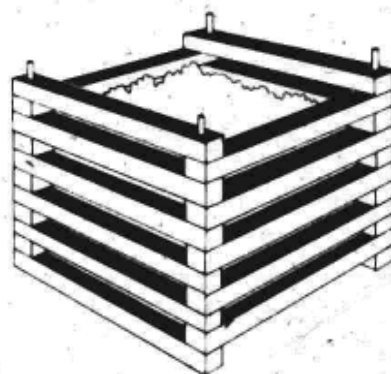
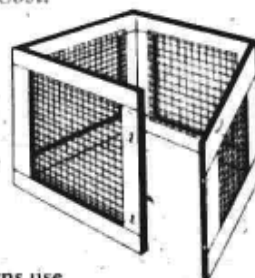
Homemade Bins: Wooden or Wood-Frame with Wire Mesh

Approximate Cost:

\$0–\$100.

Basic Design:

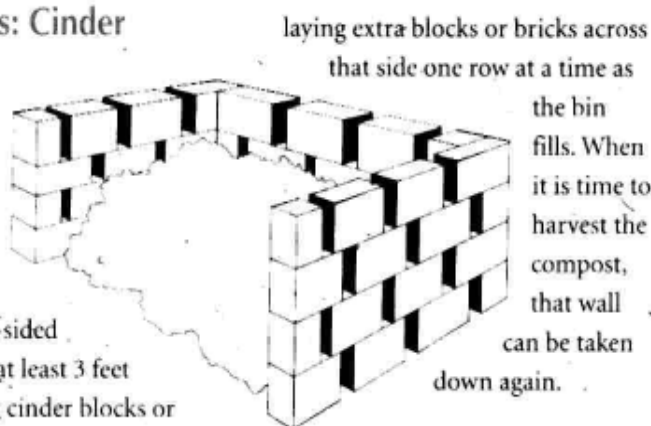
Any number of designs are possible. Several designs use wood-framed panels of wire mesh for the sides. Another design is a cube-shaped frame of two-by-fours, about 4 feet on each side, with three fixed plywood or board sides, one side a hinged door, and possibly a lid on hinges. Do not use treated or creosoted wood—it can leach toxins into your soil and compost.



Approximate Cost:
\$0-\$100.

Basic Design:

Construct a three-sided square enclosure (at least 3 feet to a side) by laying cinder blocks or bricks in a staggered pattern without mortar. Leave gaps between the blocks for as much aeration as desired. The corners can be braced, if necessary, with fenceposts inserted through the blocks if they are lined up properly. When compost begins spilling out of the open side, it can be contained by propping up boards or



Manufactured Bins

Approximate Cost:
\$10–\$150.

Basic Design:

Manufactured bins come in a wide variety of designs, including

- ◆ hook-together panels of heavy-duty plastic-coated wire fencing or wood-framed wire mesh
- ◆ wooden slats stacked "Lincoln Log" fashion on metal corner rods
- ◆ flexible sheet-plastic rectangles that loop around to form cylinder-shaped bins
- ◆ molded plastic units with latching lids and harvesting doors

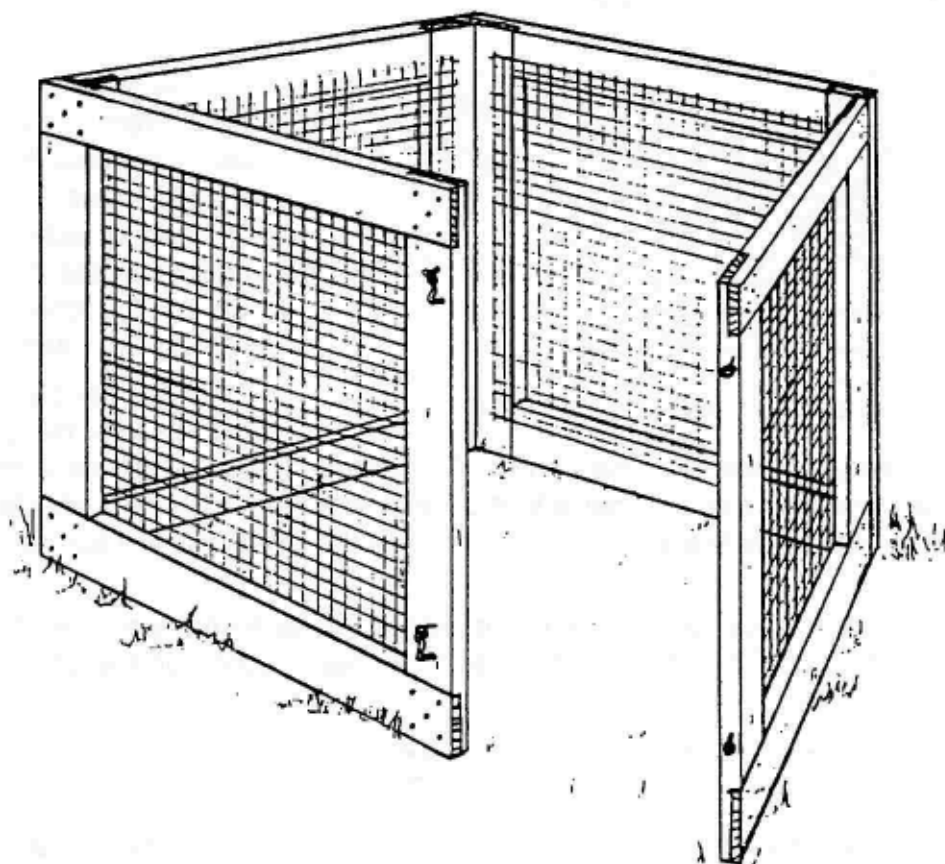
(For a Texas study comparing user satisfaction and performance ratings of 10 different manufactured and homemade bin designs, call 512/239-6750 and ask for "Bins, Bins, Bins: Selecting a Backyard Compost Bin" by Cecile Carson, city of Denton; Proceedings of Options for Texas '94, Volume 2.) *

Figure 2.
Composting Bins
Pros and Cons

Type	Durable—infrequent replacement	Moisture & heat retention	Compact and neat	Flexible size/shape—adjustable	Deters Rodents	Termite resistant	Easy to assemble	Easy to turn/add materials	Easy to move	Cost range (approx.)
Piles—open or covered	+	-	-	+	-	+	+	+	+	\$0 - \$10
Pallet bins	-	-	+	-	-	+	0	0		\$0 - \$10
Perforated garbage can	+	0	+	-	+	+	+	+	+	\$0 - \$30
Circle bins of wire mesh	+	-	+	+	-	+	+	+	+	\$0 - \$50
Wooden bin	0	+	+	+	-	-	-	0	-	\$0 - \$100
Cinder block or brick bins	+	0	+	+	-	+	0	0		\$0 - \$50
Molded plastic	+	+	+	-	+	+	+	+	+	\$35 - \$100

+ = good 0 = average - = poor

Portable Wood & Wire Composting Bin

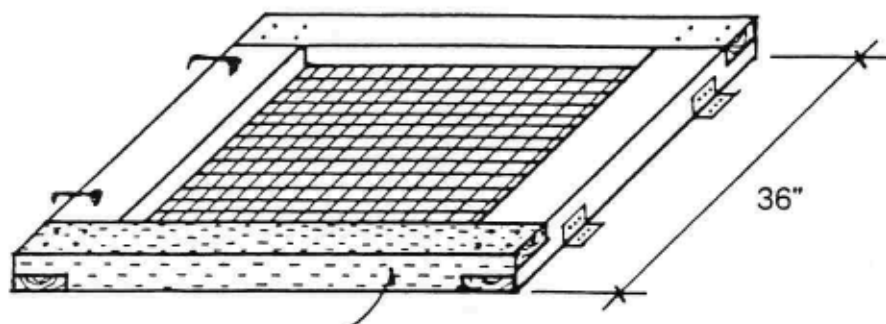
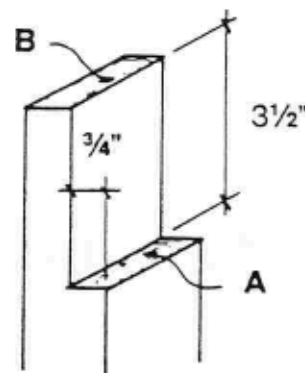


This portable bin provides a convenient way to compost moderate volumes of yard wastes with minimal labor. Yard wastes are simply added to the bin as they are generated. With no effort aside from occasional moistening, compost will be ready in 6 months to 2 years. Chopping or shredding the materials, maintaining adequate moisture by watering and covering with plastic or heavy fabric, and occasional turning of the materials will speed up the process of producing finished compost. Mixing fresh greens with brown yard wastes will produce the best results.

This bin is very versatile. It fits well in small spaces, and may be used as either a yard waste holding bin or as a portable turning unit. The bin can be easily moved to turn piles or to harvest finished compost and begin building a new pile: Simply undo the latches, pull the sides apart and move it. Compost can then be turned into the bin at its new location, and finished compost can be removed from the bottom. It costs approximately \$50 to build using new materials, or less if recycled materials are used.

CONSTRUCTION DETAILS

Cut each 12-foot 2x4 into four 3-foot-long pieces. Cut a $\frac{3}{4}$ "-deep and $3\frac{1}{2}$ "-wide section out of each end (a total of 32 lap cuts). If using handsaw and chisel, cut $\frac{3}{4}$ " down at the $3\frac{1}{2}$ " line (at **A** in accompanying diagram). Then cut a $\frac{1}{2}$ "-deep groove into the end of the board (at **B** in the diagram). Place a thick wood chisel in the end groove and split the wood with a hammer to the $3\frac{1}{2}$ " cut. If using a radial arm saw, circular saw or table saw, set blade depth to $\frac{3}{4}$ " and make multiple passes until the whole section is removed. Use wood chisel to create a smooth surface.



PRESSURE TREATED LUMBER ON BOTTOM

Make four 3-foot-square frames from the lap-jointed 2x4s. Use one pressure-treated 2x4 on each frame. Use enough construction adhesive to fill the gaps when the lap joints are screwed together. Fasten each joint with four screws.

Cut the hardware cloth with tin snips into four 3-foot-square sections. Bend the edges of the cloth back over 1" for strength. Lay one piece onto each of the four frames. Center and tack each corner with a poultry wire staple. Place a staple every 4" along all four edges of the hardware cloth. Try to tension the cloth so it will not sag when filled with compost.

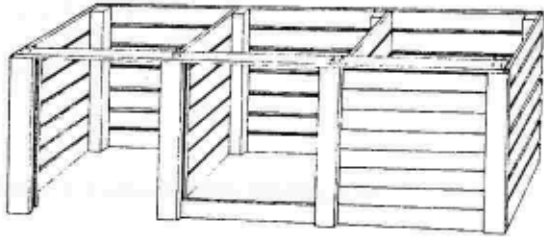
Connect each pair of frames together with two hinges. Make sure each panel has a pressure-treated piece on the bottom. Then put the hook-and-eye gate latches on the other ends so that the sections latch together.

MATERIALS

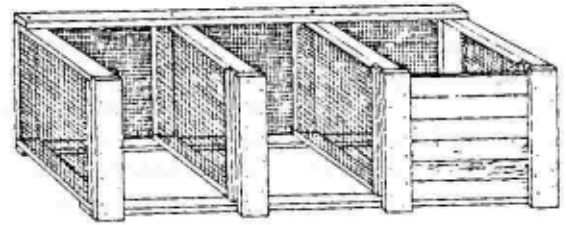
- 1 12-foot pressure-treated 2x4
- 3 12-foot fir 2x4s
- 12 ft of 36" wide $\frac{1}{2}$ " hardware cloth
- 100 $1\frac{1}{2}$ " galvanized No. 8 wood screws
- 4 3" galvanized butt door hinges
- 150 poultry wire staples or power stapler
- 1 10 oz. tube exterior wood adhesive
- 6 large hook-&-eye gate latches

TOOLS REQUIRED

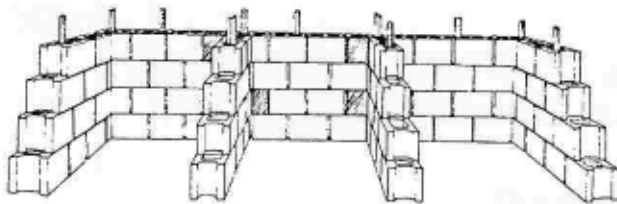
Hand saw and chisel, or radial arm saw with dado blade, or circular saw, or table saw. Hammer, screwdriver, tin snips, caulking gun, pencil and small carpenter's square. **Remember to use eye and ear protection.**



Redwood slat three-bin composting unit.



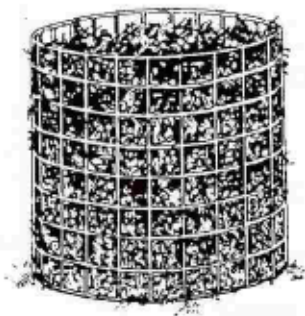
Redwood slat hardware screen three-bin composting unit.



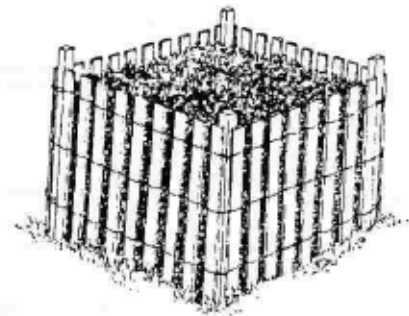
Cement block three-bin composting unit.



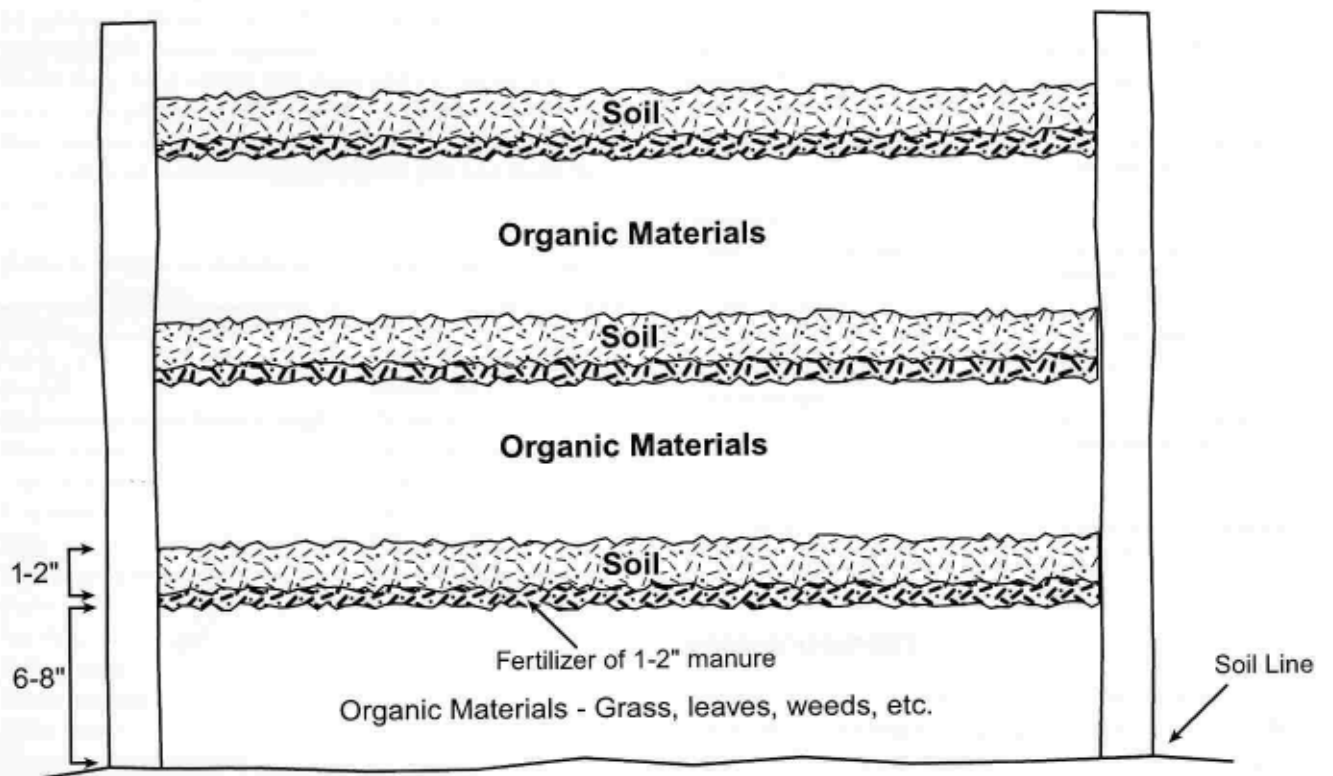
Redwood slat holding unit.



Wire-fencing holding unit.



Snow-fence holding unit.



Cross section of layering in compost bin