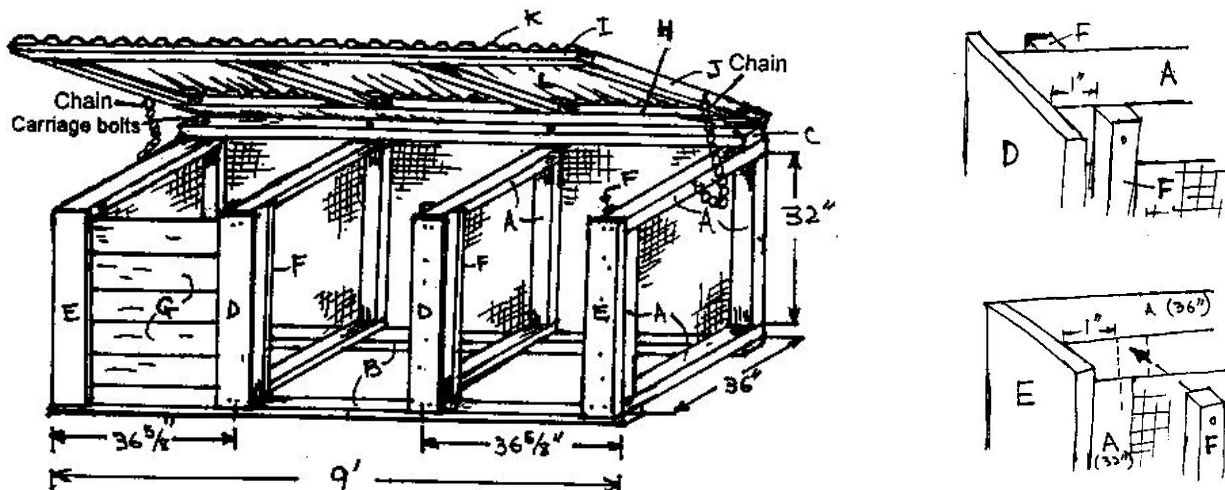


Wood 3-Bin Compost Unit

This 3-bin wooden unit is a sturdy system that can make a large volume of compost fast. Weekly turning is recommended to get finished compost quickly. However, the unit can be used as a holding unit for slow composting of yard materials.

There are two ways to use this system as a turning unit. One is to build a compost pile in one end section, transfer materials to the middle and then transfer again to third section. A second method is to build two compost piles, one in each end section. Transfer materials from one section to the middle section and back to original end section. Repeat process for the pile in the other end section. This bin system will require some carpentry skills to build.



Cost: <\$400 using new materials; less if using recycled materials

Capacity: 30-38 30 gal bags of yard materials

Materials:

3 bin unit (without lid)

2x4 cedar or non-arsenic pressure treated lumber

8 pieces 36" long for (A) divider (two 12' boards)
 8 pieces 32" long for (A) divider (two 12' boards)
 3 pieces 9' long for (C) top support and two (B) baseboards (three 10' boards)

1x6 cedar or non-arsenic pressure treated lumber

4 pieces 36" long for (D) inside and (E) outside front slat runners (one 12' board)
 1 piece 35" long for (F) back slat runners – rip cut into 1 1/4" wide strips
 18 pieces about 31" long for (G) slats (five 12' boards – includes F)

Lid (optional)

2x4 cedar or non-arsenic pressure treated lumber

1 piece 9' long for (H) lid back (one 10' board)

2x2 cedar or non-arsenic pressure treated lumber

1 piece 9' long for (I) lid front (one 10' board)
 4 pieces 32 1/2" long for (J) lid cross supports (one 12' board)
 2 pieces 9' long for (K) lid closure boards (two 10' boards)
 5 pieces corrugated fiberglass top (L) 36" long by 25" wide (one 12' & one 8' piece)

Hardware & Miscellaneous

3 bin unit (without lid)

21' of 36 " wide ½ " hardware cloth
3 lbs 16d hot galvanized nails
½ lb 8d hot galvanized casement nails
250 poultry wire staples
12 ½" stainless or hot galvanized carriage bolts

Lid (optional)

40 gasketed aluminum nails
4 4" galvanized hinges
8 flat corner braces with screws
4 flat T braces with screws
2 lengths #2 coil chain, 36" ea
2 stainless 3" long eyehook bolts w/ nuts
2 stainless 3" long eyehook lag bolts
4 quick links

Tools

- Circular saw
- Drill
- Hammer
- Level
- Pliers
- Square
- Tape measure
- Wire cutters

Construction Details:

1. Select bin site and level ground.
2. Build dividers (A). Butt end nail two 32" and two 36" pieces into a 35" x 36" square. Repeat process to make 4 identical dividers.
3. Cut four 35" sections of hardware cloth. Clip extra wire off ends. Stretch hardware cloth across one side of each frame; check frame for squareness. Staple cloth tightly into place every 4" around edge.
4. Cut three 2x4s to 9 foot lengths for two base boards (B) and one top support (C).
5. Set dividers (A) parallel to one another about 3 feet apart. Make sure dividers are positioned with the 36" pieces on top and bottom and the 32" pieces on the sides.
6. Lay two 9 foot base boards (B) on top of set up dividers. Position end dividers flush with ends of base boards. Center two inner dividers so the center of inner divider is 36 5/8" from the end of the base board (see illustration). Important: line up accurately so front slats (G) will fit correctly.
7. Attach base boards (B) to dividers using two carriage bolts per divider. Drill ½" hole first then insert bolts from base board (B) side through divider board (A). Secure with washers and nuts but don't tighten all the way down yet.
8. Turn unit right side up and attach 9 foot top support (C), again lining dividers up carefully, as in step 6, before drilling holes and installing four carriage bolts. Use carpenter's square or measure between opposing corners to check bin squareness, then tighten bolts.
9. Cut 9 foot length of hardware cloth and fasten to back side of bin with staples places 4" apart along frame.
10. Make front slat runners (D and E). Cut four 36" long pieces of 1x6. Take two boards and rip cut to 4 ¾" wide (E). Save excess for use later (F). Nail two 4 ¾" wide boards (E) to front of outside dividers making them flush on top and outside edges. Nail two 1x6" boards (D) to front of inner dividers. Line them up flush on top and overlap dividers equally on each side.
11. Create back side of slat runners (F), cut 35" long 1x6 and rip cut into 4 equal pieces, each about 1 ¼' by 35" (wider strips work fine too).
12. Nail back slat runner (F) into side of divider so back slat runner is parallel to and 1" behind front slat runner. Drill holes for nails to prevent splitting.
13. Cut front slats (G) from remaining 1x6 to be 31" long (measure clearance before cutting).

Lid (optional)

1. Cut 2x4 to 9 feet for back of lid (H). Cut 2x2 to 9 feet for front of lid (I). Cut remaining 2x2 into four pieces, each 32 ½" long, for lid cross supports (J).
2. Lay boards for lid out on ground and check for squareness. Screw in 4 corner braces and 4 T braces on bottom side of frame. Flip over and attach other 4 corner braces to other side.
3. Place lid frame, T brace side down, on bin and attach with hinges.
4. Cut closure board (K) to fit front and back 9 foot sections of lid frame. Predrill closure board with 1/8" drill bit (at top of the wooden humps) and nail to frame with 8d nails.
5. Trim width of fiberglass sheets (L) to make front and back edges flush with lid frame (use circular saw). Cut fiberglass into 5 lengths, approximately 36" each, being sure they overlay each other by at least one channel. Set fiberglass into place, then predrill top of every third fiberglass and closure board hump for each nail hole. Nail with gasketed nails.
6. Add chains to allow lid to lean back far enough to stay open but not so far as to fall back and break hinges. Mark location of stainless eyehook lag bolts on sides of end dividers (A) approximately 24" from corner where lid attaches. Predrill starter holes to avoid splitting wood. Screw bolts in place with pliers.
7. Mark location of stainless eyehook bolts on both sides of lid (J) approximately 24" from back corner of lid. Drill holes through side of lid frame. Insert stainless eye hook bolts and fasten with nuts.
8. Attach quick links to eye hook bolts on lid and end dividers. Connect one length to chain to quick links on each side of bin.

Revised 2/2004 by Kathy Powell, SHWEC Adjunct Faculty

Other References: The Community Composting Education Program, Seattle WA (Engineering Dept's Solid Waste Utility and Seattle Tilth Assoc.

For More Information, Contact Your County Extension Agent or SHWEC

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