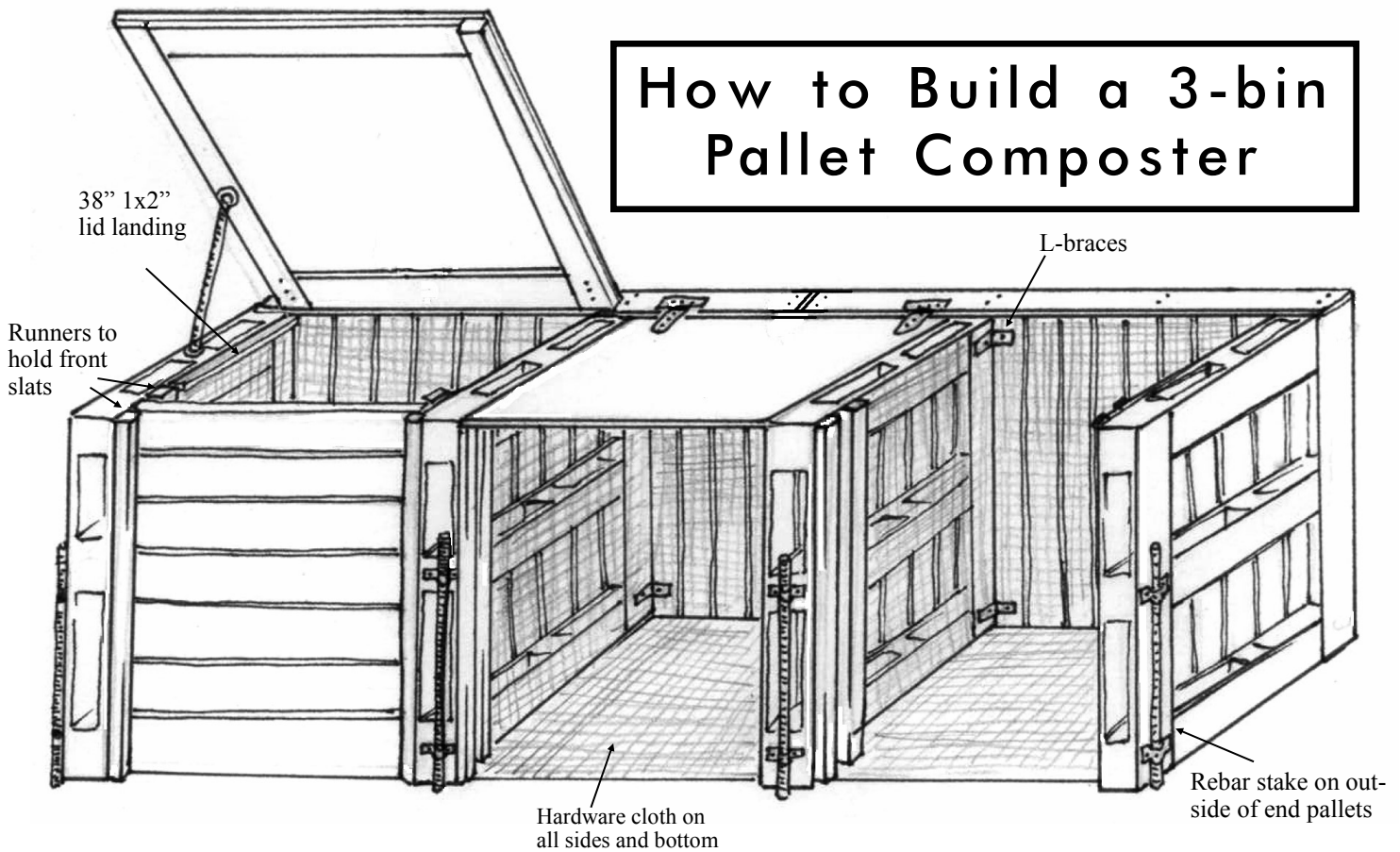


How to Build a 3-bin Pallet Composter



INSTRUCTIONS

1. Dig down 2" and level the ground where your composter will be. You will need an area approx. 13'4" by 4' dug out if using 40 x 48" pallets.
2. Make an "L" shape with two of the pallets with the longer (48") edges along the ground. Fasten together along the top and bottom using two 4" flat L-brackets for the inside corner, and two 6" lengths of galvanized strapping along the outside corner. Place the structure into one corner of the dugout area so that the 48" arm of "L" fits snugly against the 4' side of the dugout area.
3. Add another pallet, making a "U" shape. This will be a dividing wall between your first and second bin. Attach as in step 2, with strips of strapping on the outside corner and L-bracket on the inside.
4. Add another pallet along the back. Using three 6" lengths of galvanized strapping, attach this pallet to the divider pallet along the top, middle, and bottom of the outside wall. Use two L-brackets to fasten the top and bottom of the inside corner.
5. Repeat step 3, step 4, and then step 3 again until there are 3 bins.
6. Using a square, ensure all corners are at a 90° angle. At the unattached ends of the two dividing pallets, drive in a 5' length of rebar at least 2' deep in the ground flush up against the end of each pallet. Anchor the rebar to the pallet with several 3" strips of galvanized strapping (or 1/2" u-brackets). For the two outside arms of the composter, instead of driving the rebar in directly in front of the end, drive it in on the outer side of the end to prevent the pallets from bowing outward when full.

Tools Needed

- * Mallet (for driving in rebar)
- * Saw
- * Screwdriver
- * Measuring tape
- * Level
- * Shovel
- * Staple gun
- * Hammer
- * Large square
- * Tinsnips
- * Extension cord
- * Paintbrush

Amt.

Materials

7	40 x 48" wooden pallets
6	12' 2x6" lumber
1	12' 2x4" lumber
1	12' 1x4" lumber
2	8' 2x4" lumber
6	10' 1x2" lumber
3	10' 1x4" lumber
1.5	1/2" plywood (4x8')
2	10' 1/2" Rebar
58 ft.	1/4" or 1/2" hardware cloth (36" wide)
1 lb.	2" deck screws
0.5 lb.	3.5" deck screws
1 pkg.	3/8" heavy duty staples
0.5	1/2 lb. u-nails
6	4" galvanized T-hinges
12	4" corner L-bracket
8	10" mending plate
1	10' roll of 3/4" galv. strapping
1 L.	Non-toxic wood preservative



Design by: Kim Watt
Compost Education Centre
www.compost.bc.ca

Phone: 250-386-9676 Email: info@compost.bc.ca

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7. Along the outer side of the back wall, there are four major intersections where multiple pallets connect. At each junction, reinforce the connection between pallets using two 10" mending plates. For the two middle junctions, ensure the plate spans and attaches into all three pallets.
8. Line the inside of all three bins, including the bottom, with $\frac{1}{4}$ " or $\frac{1}{2}$ " hardware cloth (wire mesh) Half-inch cloth will keep rats out, while quarter-inch eliminates both mice and rats. All seams between pieces should overlap at least 3 inches. Hammer in u-nails to fasten the hardware cloth along all edges and seams, and staples to keep it flat against the pallets. One staple or nail every 2 inches along edges and seams will increase the durability of the cloth and rodents from sneaking through gaps. Any excess mesh can be used to double-layer the corners, seams, and the front edge of the bottom of the bin.
9. Cut twelve 40" pieces from the 10' 1x2" lumber. These will be the runners to hold the removable front slats in place. Attach two on the front inside edge of each arm, leaving a 2" gap between them for the slats.
10. Cut eighteen 48" pieces of the 2x6" lumber, and three 48" pieces of the 2x4" lumber. Place these pieces between the runners along the front of the bins to become the front slats, with one 2x4" piece per bin.
11. Take the two 8' lengths of 2x4" lumber and cut them down to 6'9" each, or to half of the length of the whole 3-bin. Attach along top (skyward) side of the back wall, so that the two pieces span all three of the back pallets and the ends of the four divider pallets. This will be the attachment point for your lids.
12. Take two 10' lengths of 1x2" and cut into six 38" pieces. Attach these onto the top edge of the inside side walls (not back wall) of each bin, so that the lid will rest on these pieces of wood when closed.
13. For this example, we use plywood lids because they are fairly durable, cheap, and easy to put together. Using fiberglass, wooden slats, corrugated plastic or other impermeable materials are alternatives. Cut your plywood into three 48" x 44" pieces. Take one 10' and one 12' length of 1x4" lumber and cut into six 44" lengths. Take two 10' lengths of 1x4" and cut into six 40" lengths. Arrange in a square on each lid so that the 44" lengths line up with the 44" side of the plywood, and the 40" pieces fit in between. Screw into place using two 2" screws (or nails) every 8". Flip the lid so these reinforcements are face down.
14. Take the six 4" T-hinges and space out two per plywood lid along the 48"-wide edge of the lid. Place (do not yet screw in) hinges with the stem of the "T" on the lid and the top cross piece hanging off. Screw the stem portion of the T-hinges onto the lids. Place the lids on the bins so that they sit on the 1x2" pieces of wood along the top of each wall, and so they are flush with the 1x4" pieces along the top of the back wall. For each hinge, attach the top portion of the "T" to the 1x4" using 3.5" screws.
15. The final requirement of the bin is something to prop open the lids. Using scrap 2' lengths of metal, strong sticks, or pieces of lumber work well. Just ensure there is a place inside the lid and along the top of the dividers for the prop to rest (drilling or chiseling out a small divot can help) so that the prop doesn't slip and drop the lid on the poor person shoveling compost. Another option is to install a length of chain between the lid and the bin frame, so that the lid can be opened beyond 90° but not fall all the way back (however, this won't prevent the wind from blowing it shut).
16. The last step is to coat all exterior areas of the lid, pallets, and front slats with a non-toxic wood preservative such as Lifetime Wood treatment or similar product.

