Instructions for Vermicompost Bin

Our vermicompost bin which we show you how to make in episode 622 (air date of 11/28/15) is easy to build and works great. It can be modified any number of ways to suit your needs or your materials.

The bin as shown includes the top bin (currently empty). Until the bottom bin is full of worm castings, there's no need to add the top box. Just the cover is needed with the top box stored elsewhere until then.
We used untreated new cedar from the lumber yard, but you could easily use scrap wood you already have, leftover exterior siding, or pallet wood. We suggest you avoid the use of pressure treated lumber, as the waterproofing chemicals in the wood may leach into your compost.

To build this two-box bin, you’ll need:

<table>
<thead>
<tr>
<th>QTY</th>
<th>SIZE</th>
<th>LENGTH</th>
<th>PURPOSE</th>
</tr>
</thead>
<tbody>
<tr>
<td>12</td>
<td>4x4</td>
<td>7.25”</td>
<td>blocking for inside bin corners</td>
</tr>
<tr>
<td>8</td>
<td>1x4</td>
<td>11”</td>
<td>bottom bin legs</td>
</tr>
<tr>
<td>16</td>
<td>1x4</td>
<td>7”</td>
<td>upper bin legs</td>
</tr>
<tr>
<td>2</td>
<td>1x4</td>
<td>12”</td>
<td>inner cross-pieces for lid</td>
</tr>
<tr>
<td>3</td>
<td>1x4</td>
<td>21.75”</td>
<td>outer cross-pieces for lid</td>
</tr>
<tr>
<td>12</td>
<td>1x8</td>
<td>48”</td>
<td>floor, lid, and long bin sidewalls</td>
</tr>
<tr>
<td>6</td>
<td>1x8</td>
<td>20.25”</td>
<td>short bin sidewalls</td>
</tr>
</tbody>
</table>

-nails for bin assembly
-a pair of small hinges (and included hardware)
-drawer pulls/handles/knobs (and included hardware)
-2 pieces of hardware cloth/wire mesh approximately 48”x22” to become the underside of the upper bins
-screws and large fender washers to attach hardware cloth to bins
-2 hinges and a handle or scrap wood
-3 aluminum baking pans or other container to capture the leachate in the bottom compartment
Here's the worm bin with all boxes stacked and lid in place. When the bottom bin is full, the top bin is used to add food scraps and draw worms from lower bin so that harvesting the castings is easy.

1. Measure, mark, and cut all of the lumber using the dimensions above.
2. Build three four-sided bins. Each bin is comprised of (2) 48-inch sidewalls and (2) 20.25-inch sidewalls. The ends of the long 48-inch sidewalls should be exposed and “sandwich” the ends of the shorter sidewalls. Use 4x4 blocking standing on end at each inside corner to give yourself something to nail into. Make sure all three boxes are the exact same size by test-stacking them on top of one another.
3. Add a floor to one box by nailing (3) 48-inch boards to the underside of the bin frame. Along the outer edge of one long side, do not fasten the floor to the sidewall in between the 4x4 blocking pieces (leave this edge area nail-free). This will allow you to create an access panel for drip pans. Mark your panel’s desired outline on the sidewall at a length and height that allows your drip pans to be inserted and removed easily. Use a jigsaw to cut away this panel. Now re-attach the panel to the sidewall with hinges. You may need to sand or trim the panel to allow it to open and close freely. If your drip pans allow, you may choose to add some extra cross-pieces on the inside to help hold the floorboards together. This is now the bottom box of the worm bin.
4. Attach legs to the bottom bin using (8) 11-inch boards. Pair two boards at the outside of each bin corner for each leg. Position each leg so that there is a roughly 4-inch gap
between the top of the bin and the top of the leg. This will allow the upper bins to be stacked on top with no space in between the bins.

5. Attach legs to the upper bins in the same way using (16) 7-inch boards. Leave the same 4-inch spacing between the top of the bin and the top of the leg. The exact size of this gap is not terribly important; they key is that the legs of one bin must slip over the top of another bin and that the bins stack tightly without interference from the legs. Adjust your legs accordingly by repositioning them as you fasten or by trimming them shorter. It may help to attach the legs with the bins stacked on top of one another to ensure this spacing works.

6. Piece together (3) 48-inch boards to create the lid. Fasten them together by nailing down through (3) 21.75-inch cross-pieces at the ends and in the center. (Make sure your nails don’t go all the way through both boards!) Fasten (2) 12-inch pieces on the underside as interior cross-pieces, but be sure that these cross-pieces will clear the sidewalls and 4x4 blocking in the corners. If positioned properly, these inner cross-pieces become “stops” for the lid that lock it in place and keep it from sliding around when the bin is closed. Add handles to the lid if and where desired.

7. Position hardware cloth along the bottom sides of the upper bins. Trim the mesh if needed. Fasten it to the bin frame and 4x4 blocking with screws through the grid squares and fender washers larger than the squares. The two upper bins should look identical and be interchangeable with one another.
Once your bin is finished, load the lower box with food scraps from the kitchen and garden, even shredded paper products. Keep adding new scraps as the worms consume what's there. Eventually you'll add the top box with new food scraps to draw the worms up through the wire mesh. Then harvest the castings and exchange the top box to the lower position and repeat the cycle.

The final step in the process is cutting an opening in the bottom front to make a small hinged door. This is used to access and store the pans or containers that capture the liquid worm leachate. This is black gold and the best organic liquid fertilizer you can get. You won't want to waste a drop!
It doesn't take long for the liquid worm leachate to fill the pans in the bottom compartment. Check them often so you don't waste a drop of this concentrated liquid organic fertilizer.

Copyright© 2015, GrowingAGreenerWorld®