ENRI-308

UK COOPERATIVE EXTENSION SERVICE
UNIVERSITY OF KENTUCKY — COLLEGE OF AGRICULTURE

Constructing a Wooden-Pallet Compost Bin

A compost bin can be built inexpensively using either wooden pallets or lumber. Costs will vary depending upon the availability of pallets and the price of lumber, and whether the items are purchased new. This fact sheet details materials and instructions for constructing a structure using either type of materials. These basic instructions will allow you to build a singe-compartment composting bin. If you wish to decrease the amount of time required to obtain usable compost, consider building two separate bins. With two bins, the waste in one can mature while you add new material to the second.

Figure 1 - Wooden-Pallet Composter

Materials

- ☑ Four (or five) wooden pallets* (The fifth would be needed if you want a bottom for your bin. - Be sure that the pallets have not been previously used for toxic chemicals.)

or

- ☑ Two eight-foot lengths of 2x4 lumber*
- ☑ Five 12-foot lengths of 1x6 lumber*
- ☑ One pound galvanized 8d nails

Tools

- ☑ Saw
- ☑ Sledge hammer
- ☑ Claw hammer
- ☑ Work gloves

Building a Compost Bin Using Wooden Pallets

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

2. If you wish to have a bottom for your bin, place the fifth unit on the ground to serve as the base. This can allow more air to get into the pile and add to the stability of the bin.

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LEXINGTON, KY 40546

Building a Compost Bin Using Lumber

1. Saw the 8-foot lengths of 2x4 lumber into four pieces, each 4 feet long, and use as corner posts.

2. Choose a 3-foot square site for your bin. Use the sledge hammer to 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. Use five 3-foot boards to construct each side of the container by nailing the boards to the posts, starting at the bottom. Leave approximately 2 inches between the boards as you move up the posts on each side. This will allow air flow through the bin.

Composting Basics

1. Be sure that your compost pile receives a balanced diet. You will need to include materials that are high in carbon as well as materials that are high in nitrogen. High carbon materials include paper, sawdust, wood chips, straw and leaves. High nitrogen materials include food scraps, grass clippings, and manure. Nitrogen fertilizer may also be added if necessary.

2. Maintain proper particle size. Items like leaves, limbs and newspaper work best if shredded or chopped into 1/4 inch pieces. Food scraps should also be cut into small-sized particles.

3. Make sure that your compost receives a proper amount of air. Turning or mixing every week or so will help insure proper air flow.

4. Check the moisture level in the compost. Performing the "squeeze test" will tell you if the moisture level is correct. Compost should be damp to touch, but drops should not come out when you squeeze it. Add dry straw or sawdust if too damp and add water if too dry.

5. Monitor the temperature of the compost. Temperatures between 90° and 140°F are ideal. Compost bins at 3 feet x 3 feet x 3 feet size maintain temperature better.

*Regarding use of wood products in gardening and composting projects: The University of Minnesota conducted a study on a raised bed garden made from Chromated Copper Arsenate (CCA) *pressure-treated* wood. Results showed that the vegetables grown can accumulate arsenic from the CCA pressure-treated wood, however, based on U.S. Public Health Standards, these vegetables would be safe for human consumption. Alternative building materials are currently available. This information is provided so that consumers are aware of the potential issues related to treated wood. If using scrap lumber or other used materials make sure you know if the lumber/materials are treated and what they have been used for in the past. Consumers should use their own judgment when constructing garden or compost units. For more information on wood products contact the University of Kentucky Forestry Department at 859-257-7597 or foresty.extension@uky.edu.

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Original 1996, Revised March 2007 by Ashley Osborne, Extension Associate for Environmental and Natural Resource Issues.