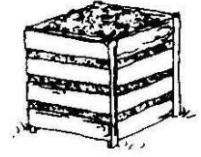


COMPOSTING



Tips for the Home Gardener

As a home gardener, composting is an inexpensive and environmentally-friendly method of recycling food and yard wastes while creating a product that improves soil structure and adds vital nutrients to your garden. You can use partially composted materials such as mulch, fully composted materials such as a soil or soil additive, and nutrient-rich compost tea as a fertilizer for your houseplants and garden beds.

About Composting

Composting is the process of using active, controlled decomposition to recycle waste organic matter into various finished products that are useful for growing plants and improving soil. Microbes and other living organisms, as well as oxygen and water transform organic matter into mulches and nutrient-rich soil-like products.

Starting a Compost Pile

Composting is relatively easy for any home gardener, requiring only a little routine maintenance. To start, all you need is a bin, a shovel or rake for turning the pile, organic waste materials, and a small amount of topsoil to inoculate the pile with microbes (optional).

Choose a compost bin (see the next page for a sampling of different options). The unit should measure about 3' x 3' x 3', which is the minimum critical mass for good heating. In units larger than this, it becomes difficult to turn the pile, and the compost tends to compact under its own weight.

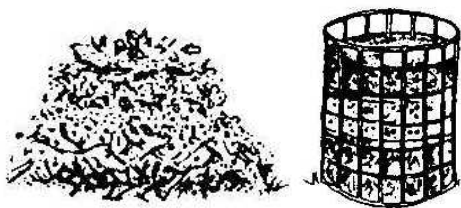
After acquiring a container, place it in an easily accessible area. To avoid attracting mice or other pests into your home, place it away from the house.

Begin building your pile by alternating layers of "green," moist materials (kitchen scraps, grass clippings, green yard waste) with "brown," dry materials (dry leaves/plants, wood chips, straw, hay). If you choose, sprinkle topsoil between the layers to help get the decomposition started. Finally, turn the pile with a rake or shovel.

As you continue building your compost pile, always incorporate equal amounts of dry and wet materials to preserve the balance of moisture and nutrients. See below for guidelines on what can and cannot be composted. For best results, turn the pile every few days.

<u>What you can compost :</u>	<u>What you should NOT compost:</u>
Grass clippings Leaves Fruit and vegetable scraps Egg shells Coffee grounds Unbleached coffee filters and unbleached napkins Yard and garden debris Potting soil Manure from herbivores (i.e. chickens and rabbits)	Meat scraps and bones Dairy products Fatty foods and oil products Human and pet wastes Diseased or pest-ridden plants Seeding weeds Materials treated with herbicides

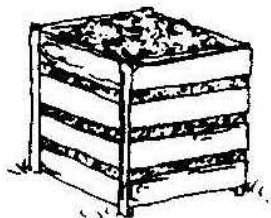
Compost Bin Options



No Bin / Wire Bin

The most inexpensive way to start composting is to use no bin at all. If you elect to compost without a bin, you may need to cover the pile with a dark tarp to conserve moisture and help keep the pile insulated.

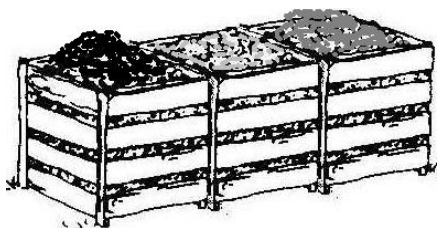
Surrounding your pile with chicken wire can help contain it to a smaller area. (Note that rodents can be a problem in open compost piles.)



Wooden Single Bin

If you elect to build your own compost bin, use pressure-treated wood. Start with a 3' × 3' × 3' frame, and fill it in with wooden slats, leaving gaps to permit air circulation. Picket fence slats are an attractive option; if you paint them, do so only on the outside.

Chicken wire can also be substituted for the wooden slats.



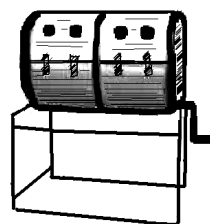
Wooden Three-Bin Unit

For a permanent, sturdy structure that allows you to efficiently handle large amounts of material and produce an ample amount of compost, you can build a wooden three-bin unit by attaching three single bins. The first bin can be used for holding brown materials, the second for green materials, and the third bin for mixing and composting the materials.



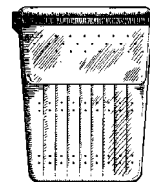
Garbage Can Bin

A garbage can or large plastic container with a lid works well for composting. Be sure to drill holes in the lid and sides to allow air to circulate.



Tumbler Unit

A tumbler unit is a bin that can be rotated with a handle, eliminating the need for turning the pile with a shovel. Look for them in various sizes and shapes at garden centers, recycling centers, or online from a compost supply store.



Other Pre-fabricated Bins

Pre-fabricated compost bins are available to fit all needs and spaces. Many are made to make finished compost readily accessible for home gardening needs. Shop for them at garden centers, recycling centers, or in online compost supply stores. Consider buying a container made from recycled materials to double your recycling efforts.

Tips for Successful Composting

- Balance wet and dry materials. Add green wastes (green leaves, weeds, grass clippings, kitchen scraps) and brown wastes (straw, dried leaves, old hay) in equal parts to the compost pile.
- Chop or shred materials. Smaller materials equal larger surface area and faster decomposition.
- Limit the size of the pile to 3' × 3' × 3'. This is the minimum critical mass for good heating. The warmer a pile is, the faster it will decompose.
- Aerate and mix the pile by turning it occasionally with a shovel or rake. This will increase the rate of decomposition and microbial activity, providing finished compost more quickly. If the pile develops an unpleasant odor, it might not be getting enough oxygen.
- Monitor the moisture levels. Compost should be moist and springy to the touch, but not dripping - excess water drives out oxygen and produces a bad odor. A lack of moisture significantly slows the decomposition process. Add green materials if a pile is too dry, and add brown materials if it is too wet.
- Keep the pile warm by situating it in an area that gets partial sun (though too much sun may dry out the pile). A pile may go dormant in cold winter weather; decomposition will resume in the spring. In the summer, composting will occur more rapidly, especially if you are diligent in turning the pile.
- Welcome beneficial creatures and insects. Earthworms, beetles, and similar decomposers will speed the breakdown of yard and kitchen waste.

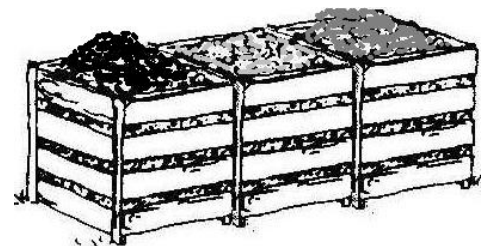
Harvesting Your Compost

Compost can take anywhere from a few weeks to a year to decompose to the proper stage. It all depends on what was added, how often it was turned, what typed of container it is in, and how cold the climate is. You will know it is ready for topsoil when it has a rich, coffee brown color, a crumbly, light texture, and an earthy smell. Partially decomposed compost can be used as mulch. Nutrient-rich compost “tea” (drippings from the pile that you can catch in a tray) can be poured on garden beds as a fertilizer.

Longwood Gardens Composting Demonstration Site

Visit Longwood’s composting demo site in the Idea Garden for a sampling of the different composting methods available to homeowners and home gardeners, and to view compost in various stages.

More information about compost at home can be found at Pennsylvania Department of Environmental Protection website <http://www.depweb.state.pa.us/> with a search for ‘Composting Homepage.’



About Longwood Gardens' Composting Operation



Longwood Gardens operates under the policy that no organic materials leave the property. While Longwood's operation includes many different recycling streams and techniques, most organic materials are recycled into compost and reincorporated into the gardens as finished compost or mulch.

Longwood staff and community sources deposit leaves, brush, woody materials, discarded plants, used soil and other garden debris into bins that are delivered to Longwood's six acre on-site composting facility. Staff also collects all food scraps and compostable containers and dishware from Longwood's Terrace restaurant. Leaf litter and woody materials from on-site and from the community are processed for mulch that is used on garden beds and unpaved pathways. Other organic items are mixed in with manure and wood chips obtained from local sources to create long, narrow compost piles called windrows. These windrows are monitored and mixed for ten to twelve weeks. When the compost is finally completed, the nutrient-rich product is mixed into custom soil blends, spread on turf and agricultural fields, and incorporated into some potting mixes.

Visit Longwood Gardens to see and appreciate the rich, compost products that fill the indoor and outdoor planting beds.