



## Guide to Composting in Baltimore City

### What is Composting?

Composting is nature's way of recycling. Compost is the dark, rich organic material that results from microbes and bacteria breaking down organic materials. Adding compost to soil will help any garden grow stronger.

### Why Compost?

- **Saves you money** on garbage bills, water bills, fertilizers, and other garden products!
- **Helps plants grow stronger** by providing helpful nutrients
- **Saves water** by helping the soil hold moisture and reducing water runoff
- **And recycling your waste = Less garbage!** Compostable waste makes up 80% of our garbage.

### Who can compost?

You can compost in your *apartment* (link to *composting with worms*), *backyard* or *community garden* (link to *choose a compost bin*), at your *business* or *institution* (link)

Done correctly, composting is safe, low-odor, does not attract pests, and is legal within city limits.

### How to Compost

A) **Collect your food waste** - A convenient way to store kitchen scraps is to put them in a re-sealable container or a large zip-lock bag and place them in the refrigerator or freezer. Then...

B) **How does it work** – The secret to making successful compost is to keep the composting organisms happy! They want 1) Food: the organisms need a mixture of nitrogen-rich materials (called "Greens") like fruit and vegetable scraps, grass clippings, and young weeds; and carbon-rich materials (called "Browns") like sawdust, paper, straw, or leaves. 2) Water: Compost should be damp like a moist sponge. Regularly add your pasta or greens cooking water onto the pile. If the pile is dry, spray with water. 3) Air: turn the compost pile regularly. 4) Temperature: as the organisms get working, they create heat, which is necessary for quick work. The pile should be at least 120° F inside.

**C) What can be composted:**

Nitrogen-rich (Greens, mostly from the kitchen))		Carbon-rich (Browns, mostly from the yard)	
Yes	No	Yes	No
<ul style="list-style-type: none"> <li>• fruit waste</li> <li>• vegetable waste</li> <li>• coffee grounds</li> <li>• tea bags</li> <li>• egg and nut shells</li> <li>• bread</li> <li>• grains</li> <li>• pasta</li> <li>• legumes</li> <li>• spoiled vegetarian food</li> <li>• vegetarian leftovers</li> <li>• plants</li> <li>• flowers</li> <li>• untreated grass clippings</li> <li>• beer hops</li> <li>• aquarium water</li> <li>• old potting soil</li> </ul>	<ul style="list-style-type: none"> <li>• beef</li> <li>• poultry</li> <li>• fish</li> <li>• bones</li> <li>• grease</li> <li>• fat</li> <li>• oil</li> <li>• human and pet feces</li> <li>• compostable diapers</li> <li>• large amounts of dairy products</li> </ul>	<ul style="list-style-type: none"> <li>• most weeds</li> <li>• chopped twigs</li> <li>• tree leaves</li> <li>• small amounts of pine needles</li> <li>• prunings</li> <li>• hay</li> <li>• straw</li> <li>• sawdust</li> <li>• wood chips</li> <li>• newspaper</li> <li>• toilet paper tubes</li> <li>• white paper</li> <li>• paper towels</li> <li>• tissues</li> <li>• coffee filters</li> <li>• wood ash</li> <li>• hair</li> </ul>	<ul style="list-style-type: none"> <li>• invasive weeds</li> <li>• large branches</li> <li>• oyster/clam shells</li> <li>• Quack grass</li> <li>• Large amounts of pine needles or oak leaves</li> <li>• Diseased plants</li> </ul>

**D) Troubleshooting:**

Problem	Solution
Smells bad	There is too much nitrogen or it is too wet. Add absorbent, carbon-rich materials like straw or shredded paper. Turn the pile to introduce air.
Attracts animals	Securely close the container. Bury food scraps under carbon-rich material. Avoid adding fat, meat, or dairy products.
Soggy or slimy	There is too much moisture or poor aeration. Add fibrous materials like straw or corn cobs, and turn more regularly.
Damp or sweet-smelling but won't heat up	Needs nitrogen-rich materials.
Infested with insects	Some insects are normal, but if there are maggots or flies, try to raise the temperature by adding more nitrogen-rich materials (fruit and vegetable scraps), turning the pile, and covering with a thin layer of soil.

**E) When's it done?** When the compost is dark-colored, smells earthy, and is a bit crumbly, the microbes and worms have finished their work. How long will it take to make finished compost? That all depends on you! Some people want to make finished compost quickly and take extra steps to speed up the process, such as cutting up large pieces of material and more frequently turning and watering their pile. This more "intensive" method should produce finished compost in about three months. Other people simply add materials and let nature do the rest. Compost

is finished in about a year. For either method, you could have a “finishing bin” where you transfer your waste while waiting for it to finish, while still diverting your kitchen waste into an “active bin.”

F) **Using compost:** If you have ever bought and used peat moss, wood chips, manure, or topsoil, then you already know how to use compost. The nutrients in compost are released slowly over time, so there is no risk of “burning” plants.

- For amending soils: The specific amount of compost that soils need depends on what nutrients are lacking in the soil and the soil texture. Generally, incorporate a ½-¾” layer of compost into your soil. Test your soil (contact University of Maryland Extension, [www.hgic.umd.edu](http://www.hgic.umd.edu)).
- For flowers: In the spring, loosen the top few inches of annual and perennial beds and mix in a one-inch layer of compost. Or, apply a one-inch layer of compost as mulch to control weeds and conserve moisture.
- For vegetables: Using “unfinished,” or immature, compost in the garden can steal nitrogen from garden soils. In the fall, incorporate several inches of unfinished compost directly into the beds; it will mature over the winter and be ready to plant into in the spring. Put a handful of compost in each hole when you’re planting.
- Potting soil: ¼-1/3 of your potting soil mix can be compost. Twice a year add an inch of compost by working it into the top layer of the existing soil, removing some of the existing soil to accommodate the additions if necessary.
- Lawn/turf: Lay down one to 3 inches of compost. If possible, till to a depth of 5 to 8 inches before seeding. Treat bald spots by spreading an inch of compost over them. Work into the soil before reseeding. This will fight compaction and help keep soil diseases down. You can also topdress existing turf with a quarter- to half-inch layer of finely screened compost.
- Trees and shrubs: Compost can be used to amend the soil that is back-filled into the hole, but could also discourage the tree roots from expanding into surrounding soil. Once the root ball is planted and backfilled, use a 2-3”-layer of compost as a mulch. When spreading mulch or compost around the base of a tree, keep the area closest to the trunk open and free, to prevent the tree bark from rotting and becoming diseased.

### **Choosing a Compost bin**

Choose a compost bin based on the space you have available for composting, the materials you want to compost, your budget, and the amount of time you want to spend tending your pile.

- If you live in an apartment, *worms* are the way to go.
- If you have a yard or garden, your bin should be rodent proof with a lid, floor, and no holes larger than ¼ inch.
  - Add screens to areas where rats and other burrowing animals can get through.
  - If your bin is placed on the soil, lay a piece of screen between the soil and the bottom of the bin.
  - Be sure to keep your pile moist and turn material regularly to increase the temperature in order to prevent nesting by rodents.
  - In especially tough cases, you can add a screening barrier vertically 6 to 8 inches into the ground around the perimeter of the bin.
- **Materials**
  - Pressure treated wood leaches toxins into compost and soil; try untreated wood and seal annually with shellac, or use treated wood and paint it.

- Most hardware stores and lumber yards carry wire mesh cloth and other sturdy fencing material.
- Look for plastic bins with tight fitting lids.
- Reuse old 32- or 50-gallon drums or cans.
- **Types of bins:**
  - “Compost Tumbler Construction” document, created by Parks & People
  - “Wood Bin” directions by San Francisco League of Urban Gardeners
  - *Food Digester*: A food digester is a plastic cone-shaped unit with a collecting basket that aerobically decomposes food waste. Select a convenient, sunny, well-drained location. For a Green Cone ([www.greencone.com](http://www.greencone.com)), remove 4-6 inches of soil beneath the basket and replace with rocks or sand. Place the green cone basket in the hole and screw the cone section to the basket. Food scraps are added to the unit through a lid in the top. Add sawdust if odor or flies become a problem. To harvest the compost, unscrew the cone and take the compost out of the basket. Use two green cones to make composting even easier- use the first one until it is about half full, then switch to the second unit and let the first one sit idle to allow the food to decompose. For an Earth Machine ([www.earthmachine.com](http://www.earthmachine.com)), put food scraps into the top section, mix with previous material, and cover with leaves or sawdust. Lift the door and dig finished material out of the bottom.
  - To buy a compost tumbler or participate in a construction workshop, contact Ryan Patterson at the Parks & People Foundation, [ryan.patterson@parksandpeople.org](mailto:ryan.patterson@parksandpeople.org) or (410) 448-5663 x120.
  - To purchase an assortment of bins, visit [www.composters.com](http://www.composters.com) or [www.compostbins.com](http://www.compostbins.com).

### **More information**

- Baltimore City workshops, trainings, and events: [http://www.parksandpeople.org/programs\\_great\\_parks\\_greening\\_CGRN.html](http://www.parksandpeople.org/programs_great_parks_greening_CGRN.html)
- Soil Foodweb, Inc: <http://www.soilfoodweb.com/>
- Books:
  - Gershuny, G. Rodale Book of Composting. Saint Martin’s Press, New York, NY: 1992.
  - Appelhof, Mary. Worms Eat My Garbage. Flower Press, Kalamazoo, MI: 1982.
  - Harmonious Technologies. Backyard Composting, Harmonious Press, Ojai, CA: 1992.
  - Campbell, Stu. Let it Rot! Garden Way Publishing, Pownal, VT: 1975.
  - Hanson, Beth, ed. Easy Compost, Brooklyn Botanic Garden, Brooklyn, NY: 1997.
  - Trautmann, Nancy and Marianne Krasny. Composting in the Classroom. Kendall/Hunt Publishing Company, Dubuque, Iowa: 1998.
- University of Maryland Extension Service and the Master Gardeners can provide technical assistance for community gardens and beautification projects. They can also help with plant selection, and often with volunteers. The Home and Garden Info Center website is [www.hgic.umd.edu](http://www.hgic.umd.edu) and the phone number is 1-800-342-2507. To get in touch with the Master Gardeners program, call 410-856-1857x121.
- The Community Greening Resource Network, a joint program of the Parks & People Foundation and the University of Maryland Extension, provides community green spaces in Baltimore City with seeds, plants, tools, networking opportunities, and educational workshops. To join CGRN or learn more about it, visit

[http://www.parksandpeople.org/programs\\_great\\_parks\\_greening\\_CGRN.html](http://www.parksandpeople.org/programs_great_parks_greening_CGRN.html), or call Parks & People at 410-448-5663.

- Second Chance (1645 Warner St, 21230) has fencing, heavy duty outdoor planters, and outdoor art like sculptures and birdbaths. They also often have bricks, pavers, and lumber. 410-385-1101, [www.secondchanceinc.org](http://www.secondchanceinc.org).
- The Loading Dock (2 North Kresson Street, 21224) sells salvaged surplus building materials that are otherwise headed for landfills. You may be able to find lumber or fencing materials. 410-558-3625, [www.loadingdock.org](http://www.loadingdock.org).