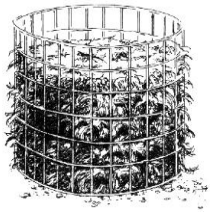
K-STATE Research and Extension Master Gardener Johnson County

Composting Made Easy



There's just no downside to composting.

- It's easy to do. Your plants love it. Compost is the ultimate soil amendment. It provides nutrients plants require and increases the water holding ability and workability of the soil. Compost is often called "black gold" because of its value in improving garden soil.
- It's a practical and easy way to handle yard waste. It keeps useful materials from being disposed in landfills.
- It's enjoyable and interesting to watch.

What Exactly Is Compost?

Compost is a mixture of soil and rotted, decomposed organic matter that has been transformed into rich and crumbly organic matter by "The Decomposers:" bacteria, fungi, microorganisms, air and water. Compost is nature's recycling plan. It returns organic matter to the soil in a usable form.

A Basic Compost Recipe

Greens and browns. Both "greens" and "browns" are needed to make great compost (see side bar). The greens (nitrogen) and the browns (carbon) fuel the activity of The Decomposers. A good rule of thumb is a 2:1 mix, two parts browns mixed with one part greens.

When starting your compost pile, think lasagna when adding materials. Layer them on, alternating greens, browns, and a thin layer of soil. (The soil acts like yeast in bread, providing the microorganisms to get things happening.) Add enough water to keep the material moist but not soggy, similar to a wrung-out sponge.

What Can Be Composted?

Greens (nitrogen)
- Grass clippings that haven't been treated with chemicals
- Yard trimmings
- Lawn and garden weeds without seeds
- Fruit and vegetable scraps
- Kitchen waste (such as egg shells, peelings and plant residues)
- Flowers
- Coffee grounds
- Farm animal manure (cow, horse, goat, sheep and pig)
- Hair

Browns (carbon)
- Leaves
- Straw
- Paper
- Shredded branches, stalks, twigs and bark
- Saw dust
- Pine needles
- Nut shells
- Dryer lint

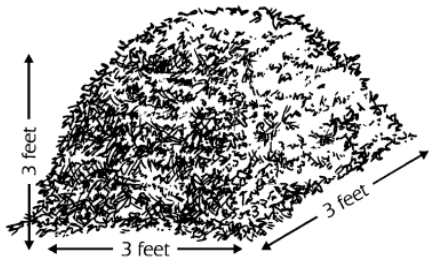
What Not to Add

- Diseased or insect-infected plants
- Pet waste
- Meat and animal products
- Plants that spread by rhizomes or roots
- Weeds with seeds on them
- Poisonous plants
- Fat, grease or oils
- Dairy products

Continue to add material as you go along. Cover new material with a layer of soil and keep the pile moist.

Here's the good news: If you want, you can take the no-fuss-no-muss approach. Add all your organic ingredients without worrying about greens, browns, soil, layering and watering. They will still mature into compost. The difference is a 2:1 mix, or even a 1:1 mix, will help the compost mature faster.

Size. As for the size of your compost pile, the rule of thumb is 3 by 3 feet. This is big enough for the pile to heat up and small enough to easily turn. Compost piles bigger than 5 by 5 feet don't allow enough air to reach the center of the pile.

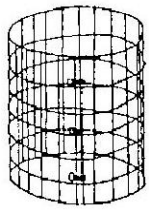


Simple pile with no structure around it

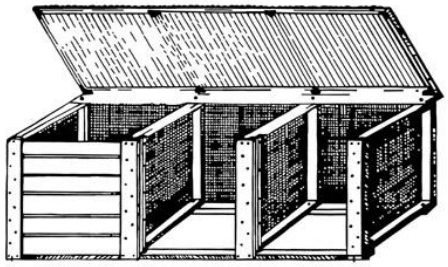
Compost Pile Options

Your compost pile can be as simple as a pile with no structure around it. Or it can be in a bin, which many people opt for. As the following illustrations show, bin options range from homespun structures to more "designer" looks.

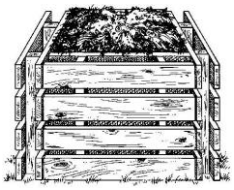
Hard plastic



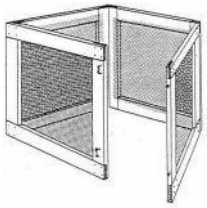
Chicken wire



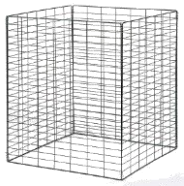
Three-chambered wood bin



Wooden pallets



Wood and screening



Coated steel mesh

Tumbler

Selecting a Location

Place the pile in a level, well-drained area that is easy to get to. Personal taste determines where that is. Some people like to keep their compost pile a secret, so to speak, and hide it in a remote corner of the yard. While others believe in locating the compost pile as close as possible to where the materials are generated or where the finished compost will be used. Food for thought: A compost pile or bin does not have to be ugly. Use your creativity to blend it into a shady background.

How Long Does It Take?

Compost is ready to use when it is a dark brown, soil-like substance with a good earthy smell. How long does that take? The answer is, it depends.

If you shred or chop the materials into small pieces, build the pile the correct size (3 by 3 feet), see that moisture is adequate, and turn the pile every two to four weeks, the compost pile will be hot. A hot pile can produce compost in three to four months. Less attention to detail will produce a cooler pile, which can take from six months to a year to complete the composting process.

Uses for Finished Compost

When using your finished compost, think "feed the soil, not the plants." As beneficial microorganisms in the soil break down the compost, they release nutrients into the soil that plant roots can easily absorb.

The four most common uses for compost are the following:

A soil amendment	For new flower and vegetable gardens, add a 4 to 6-inch layer of compost before planting and work it into the soil to a depth of 1 foot. For established flower and vegetable gardens, add a 2 to 4-inch layer and mix it in with the upper 4 inches of the soil. For perennials, add compost to the planting hole before planting.
A mulch	Do exactly what you would do with any mulch. Spread it around plants, trees and shrubs to a depth of 2 to 3 inches. Take care to keep it from touching the truck of the plant.
A compost tea	Fill an old pillowcase with compost and place it in a 5 gallon bucket of water for a couple days. Agitate the bag now and then, just like a tea bag. When it's ready, use it to water transplants, garden flowers, vegetables, container plants and indoor plants. Just like a tea bag, you can use the filled pillowcase again for another batch.
A lawn top dressing	In the early spring or late fall, sprinkle a thin layer of compost—about ½ to 1 inch—on top of your grass, where it will work its way into the soil as the grass grows. Water it in. It won't take long for it to settle into the soil. Your grass will be healthier, hold water better, greener, and need less fertilizer or no fertilizer at all.

Tips

- Shredding or chopping your garden waste with a shovel or running it through a lawnmower will speed up composting because it creates more surface areas for the microorganisms to work on.
- When you add kitchen waste, always cover it with something else to avoid flies.
- Turning the pile often will speed up the composting process.
- Some gardeners use two composters, one for new materials and one for ingredients that are already cooking.

Troubleshooting Problems in Your Compost Pile

The Northeast Regional Agricultural Engineering Service (Cooperative Extension in Ithaca, New York) provides the following troubleshooting tips in their publication "Composting to Reduce the Waste Stream."

Problem	Possible Cause	Solution
Rotten or stinky odor	Pile is too moist	Turn the pile or add dry, porous material such as sawdust, wood chips or straw
	Pile is too compact	Turn the pile or make it smaller
Ammonia odor	Too much nitrogen (lack of carbon materials)	Add high carbon materials such as sawdust, wood chips or straw
High temperature in the pile (more than 140°F)	Pile is too large	Reduce the pile size
	Insufficient ventilation	Turn the pile

Problem	Possible Cause	Solution
Low temperature in the pile	Pile is too small	Make the pile bigger or insulate the sides
	Insufficient moisture	Add water while turning the pile
	Poor aeration	Turn the pile
	Lack of nitrogen	Add nitrogen sources such as grass clippings or manure
	Cold weather	Increase the size of the pile, or insulate the pile with an extra layer of material such as straw
Pests (rats, raccoons, insects)	Presence of meat scraps or fatty food waste	Remove the meat and fatty foods from the pile. Cover the pile with a layer of soil or sawdust. Build an animal-proof compost bin. Turn the pile to increase the temperature.

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