



Home composting

Compost your food and yard waste to improve your soil

Composting is a natural process that converts waste from your kitchen and yard into a nutrient-rich soil amendment to improve soil health and supply essential nutrients for plant growth.

What to compost

Composting is a microbial process that will not decompose synthetic products such as plastics or glass. Home composting systems typically don't reach high enough temperatures to break down meat, dairy, grease and oil. These materials can also attract critters and cause foul odors. Feces from pets may carry pathogens that could cause health problems. Large pieces of wood take a lot of time and energy to decompose, so wood should be chipped or shredded and used minimally.



Compost:		DO NOT compost:	
✓	• Yard waste: grass, leaves, pine needles, plant trimmings, weeds without seeds	✗	• Meat and dairy: meat pieces, dairy products, bones, fish scraps, eggs
✓	• Kitchen waste: fruit and vegetable scraps, coffee grounds, egg shells	✗	• Fats: cooking oil, drippings and grease
✓	• Non-recyclable papers: paper towels, napkins, egg cartons	✗	• Synthetics: motor oil, glass, plastic, styrofoam, polyester
✓	• Small amounts of: sawdust, wood chips, small sticks	✗	• Feces: from dogs, cats, and humans
✓	• Wood ashes: add in small amounts. Ashes act as lime source and affect the pH of your compost.	✗	• Weeds with seeds and large pieces of wood

Tips for home composting

- Keep your compost pile at the right moisture level. If your compost pile has a bad odor, it lacks air circulation or it may be too wet. Try turning the pile and/or adding dry material to the pile.
- If your compost pile is not heating up, it may need more nitrogen or "green" material. Add more fruit/vegetable scraps or grass clippings and stir the pile.
- You can keep adding to your compost pile as it is composting; however, you may want to start a second pile if you have enough materials.



How to use compost

As a soil amendment:

Compost loosens and aerates soil and improves water and nutrient retention. Adding 1-2 inches of compost to the top 6-8 inches of your garden improves soil structure over time, making the soil easier to work and increasing plant growth. Compost improves drainage and aeration in heavy clay soils and increases the moisture-holding capacity of sandy soils.

As a mulch:

Adding 2-4 inches of compost to garden beds suppresses weeds and adds organic matter to the soil. Compost also reduces erosion by protecting the soil surface from wind and hard rain.

Top-dress your lawn with compost to conserve moisture and add organic matter. Use compost in window boxes and container gardens to reduce moisture loss. Compost may also keep soils cooler in the summer and warmer in the spring and fall.

Steps to backyard composting

✓ Get a bin:

Many lawn and garden stores sell compost bins that require minimal assembly. Additionally, you can search for options online to make a compost bin yourself with a few materials and tools.



✓ Find a place for your compost bin:

Choose a place in your yard where your bin is easily accessible year-round so you can continue composting in the winter. Some people incorporate their bin into the design of their landscape and plant their garden around the bin!

Your compost will break down in the sun or shade. The heat in your compost pile mostly comes from the organisms living in the pile.

Ensure your bin has good drainage, enough room to allow you to turn the compost, and a water source nearby.

Each city has its own ordinances about composting. Check with your city recycling coordinator for details concerning your local laws.

✓ Layer your materials:

Start your pile with a 6-inch layer of brown materials, such as twigs and dry leaves. This will help elevate your pile and allow air to circulate at the base. Then alternate layers of brown and green materials. Add a few handfuls of soil or finished compost, which contain the microorganisms required to speed up decomposition. Add a little water to dampen the pile, and you are on your way!

✓ Maintain your compost pile:

As your compost pile begins to decompose, the temperature of the pile will rise, especially in the center. A well-built pile may reach temperatures of 130°-160° F in just a few days. Use a garden fork and turn the outside of the pile inward. Steam may rise from the pile – this is a sign that the decomposition process is working! If the pile is dry, add a small amount of water. If it is too wet, add dry materials such as dry leaves or paper towels. Cover with a layer of brown materials, and it will start to re-heat.



Turning your pile on a regular basis will speed up the decomposition process. Turn your pile weekly or monthly to get finished compost sooner.

✓ Identify when your compost is finished:

Under warm conditions, a well-tended compost pile may be finished and ready for use in about 4-6 months. With minimal turning, a pile may take a year to decompose. A finished compost pile is about half its original size, is loose, dark and crumbly, and smells good – like fresh soil. Very few of the materials that went into the compost pile should be identifiable. Another sign that your pile is fully composted and ready for use is when it no longer heats up.

The recipe for a successful compost pile

There are four basic ingredients for good compost: carbon, nitrogen, oxygen and moisture.

Carbon and nitrogen: In the composting process, micro-organisms use carbon for energy and nitrogen to make proteins. For home composting, this translates to a proportion of three parts carbon (brown materials) to one part nitrogen (green materials).

Browns (carbon)

Dried grasses
Dry leaves
Paper towels
Straw
Sawdust
Twigs

3 to 1

Greens (nitrogen)

Coffee grounds
Fruit and vegetable scraps
Grass clippings
Green leaves
Plant trimmings

Oxygen and moisture are important for the health and activity of the microorganisms. An active compost pile where microorganisms are actively converting organic materials to compost has good air circulation and moisture consistency of a wrung-out sponge. If a pile is too dry, microorganisms will cease their work and the pile will become passive.

Air circulation can be accomplished though turning your pile with a garden fork. Compost piles that are too wet due to excess water from rain or too much green material usually lack oxygen and can have a foul smell. This can be corrected by adding carbon (brown) material and by turning the pile to increase the oxygen level.

What about cuttings treated with herbicides?

Low levels of herbicides are detectable even in well-decomposed yard trimmings, but these levels are less than 1 percent of the level found prior to composting and is not considered a risk for using in a garden. Ideally, grass clippings from lawns treated with herbicides should be left on the lawn to decompose, which allows the herbicides to degrade.

For more information:

- extension.umn.edu/managing-soil-and-nutrients/composting-home-gardens – Composting in Home Gardens, University of Minnesota Extension Service
- epa.gov/recycle/composting-home – Composting at home, US Environmental Protection Agency

Hennepin County
Environment and Energy

hennepin.us/composting
612-348-3777

