

Growing Your Own

A beginner's guide to gardening

Composting

Composting can be a great way to improve the soil in your garden. You can turn your yard waste and food scraps into a valued addition to your soil.

What is composting?

Composting is the controlled breakdown of materials such as leaves, grass clippings, and food scraps, also called *organic matter*. During composting, tiny *microorganisms* feed on these leftovers. Once the microorganisms are done eating, compost will be all that remains.

Why compost?

Adding finished compost to your garden helps the soil and gives nutrients to the plants. Compost helps you grow more fruitful plants and use less store-bought fertilizers. Also, materials you compost will not go to landfills. Less trash in landfills saves money and reduces air pollution.

Compost care

You can think of your compost pile as a living thing; it needs food, oxygen, and water. If you give the microorganisms what they need to break down the materials, they will make compost more quickly.

Compost "food"

Compost ingredients can be divided into browns and greens. *Brown materials* add bulk to the pile and have lots of carbon. *Green materials* add energy and moisture to the compost and are rich in nitrogen. Keeping a balance of three parts of brown material for every one part of green material can help your compost break down more quickly.

If you use food scraps in your pile, it can be helpful to bury them in the middle of the pile to discourage pests from visiting your compost pile.



Composting food scraps reduces waste going to landfills.

Image via Unsplash.com

Compost Ingredients

Browns

- Dry leaves
- Straw and hay
- Shredded paper
- Shredded cardboard
- Wood chips

Greens

- Fresh grass clippings
- Leafy plant clippings
- Fruit and vegetable scraps
- Eggshells
- Coffee grounds and paper filters
- Tea bags
- Feathers

Don't Add

- Diseased plant material
- Weeds with seeds
- Meat, bones, whole eggs, or dairy products

Manure

Some animal manures can be added to your compost, but it must be done safely. You don't want to introduce harmful microorganisms to the garden. Your home compost does not need animal manures to be helpful for your garden. If you want to compost animal manures, please refer to the University of Kentucky Cooperative Extension publication *Home Composting: A Guide to Managing Yard Waste* (HO-75) and contact your county agent for more information.

Ingredient size

Chop materials into half-inch to one-and-a-half-inch pieces to speed up the process. Shred leaves with your lawnmower or quickly chop fruit peels with a knife or the blender. Crush eggshells to slash the time it takes to break them down.

Turning to add oxygen

Just as oxygen fuels a fire, oxygen also speeds up the breakdown of your compost. Turning compost gives it oxygen and lets the compost breathe.

Turn compost with a shovel or pitchfork. Move the contents from side to side and from inside to outside. Alternatively, move it from one pile or bin to another.

Turn a new compost pile weekly for the first month to speed up the process. After that, turn it once every two to four weeks.

Any bad smells are a sign that there may not be enough oxygen in the compost pile. It probably needs to be turned.

Water

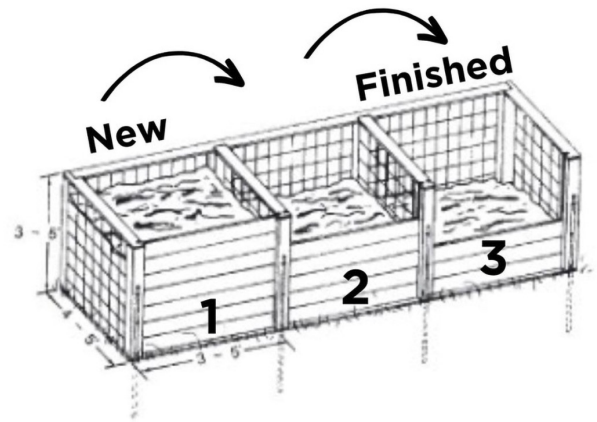
The compost process needs water to quickly break down the materials. If you add large amounts of dry browns, like fallen leaves, you may need to add water. Food scraps, fresh plant parts, and coffee grounds already contain water.

While turning your compost pile, look for dry spots and add more water if needed. Each section should be fully damp but not wet. If you squeeze a handful, it should feel damp, but no drops of water should come out.

Three-stage composting

To compost larger amounts, you can use three bins or piles, side by side.

Add new material to Bin 1. When Bin 1 is full, move the contents to Bin 2 to continue its breakdown. When the Bin 2 compost is ready to use, move it to Bin 3.



A three-bin compost system:

1. New pile
2. Partly broken-down compost
3. Finished compost

Adapted from *Home Composting: A Guide to Managing Yard Waste* (HO-75), University of Kentucky Cooperative Extension Service

Compost containers

There are many ways to store compost. You can simply choose a spot to mound your compost. Try to build a pile at least a cubic yard in size (three feet in height, width, and depth).

Compost bins discourage animal pests and keep the yard tidy. Wooden slat or wire bins are simple and cheap to build. Tumbling bins cost more but simplify turning your compost.

Building a compost pile

You can add materials in layers:

1. Six to 12 inches of *browns*, such as dry leaves, straw, etc.
2. Two to four inches of *greens*, such as food scraps or grass clippings
3. A shovelful of *garden soil* or *finished compost*

Next, mix the compost, and add a little water if it is dry. Repeat this process until the pile is three to five feet high.

Using your compost

Your compost is ready when it is reduced to almost half of its original volume. Finished compost is dark brown or black and crumbly, with an earthy smell. There should not be large pieces of food, yard waste, or other organic matter in the finished compost.

Compost can be a great addition to any garden. It is a useful *soil amendment*. Mixing in compost makes clay soils lighter and helps sandy soils hold more water.

Mix one to two inches of compost into the top four to six inches of soil as a good start for your garden beds. Compost serves as a source of slow-release nutrients for growing plants. Even if you use compost, you may still need to add fertilizer. Your county Extension agent can give guidance on testing your soil to see if you need to add fertilizer.

Compost is also great as mulch, both in the garden and around landscaping plants.

If you are looking for more information about home composting, see *Home Composting: A Guide to Managing Yard Waste* (HO-75) at <http://www2.ca.uky.edu/agcomm/pubs/ho/ho75/ho75.pdf>. If you have more questions about composting, contact your local county Extension office.

Simple compost containers



Wooden pallet bin.

Image by Ciaran Mooney, flickr.com



Chicken wire bin.

Image by waldopics, flickr.com



Tumbling compost bin.

Image by Rachel Rudolph, University of Kentucky



Finished compost. Sift out larger pieces of wood, or try to break up some of the bigger pieces by hand.

Image by Rachel Rudolph, University of Kentucky

Glossary

Composting — using microorganisms to break up living matter to improve soil.

Microorganisms — single-cell or multicell organisms too small to see, such as bacteria or fungi.

Organic matter — dead animal and plant material.

Soil amendment — a material added to soil that improves both the health of the soil and plant growth.

Summary

What is composting?

Composting is the controlled breakdown of matter like leaves, branches, and food scraps.

Why compost?

Adding compost to your garden can help the quality of your soil.

Building a compost pile

Layer a mix of browns, greens, and garden soil in a mound or simple bin. Add water as needed.

Compost care

You can think of your compost pile as a living thing; it needs food, oxygen, and water to work the right way. The best compost piles are turned often.

Using your compost

Mix one to two inches of compost into the top four to six inches of soil as a good start for your garden beds. Use compost to mulch around garden and landscaping plants.

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