Make your own compost

A guide to backyard composting and composting with worms.

Metro

Composting

Instead of tossing your yard trimmings and vegetable scraps, compost them in your own backyard. Composting is easy and fun and will help you grow a strong, beautiful garden.

Compost can improve the quality of your soil if you add it to your garden beds before planting, mix it into potting soil or spread it out as mulch.

Using compost reduces water and fertilizer needs which prevents runoff and pollution of our local waterways.

Even new gardeners can make quality compost. Use these guidelines to get started.

What is compost?

Compost is a dark, crumbly mixture of decomposed organic materials such as grass clippings, leaves, twigs and branches. It is a community teeming with microorganisms that decompose organic material and helps the soil generate its own fertilizers. Compost contains nutrients, and holds those nutrients in the soil until plants can use them. Compost loosens and aerates clay soils and retains water in sandy soils.

Anything that was once alive will naturally decompose. However, some organic wastes – **meat, dairy, grains, bread, and greasy foods or pet wastes – should not be composted at home**.

Recipe for success

To make compost, mix one to two parts carbon-rich materials ("browns") with one part nitrogen-rich materials ("greens"). Introduce air by including lots of brown materials and turning your compost pile every few weeks. Finally, add enough water to make your compost as moist as a wrung-out sponge.

What are browns and greens?

Carbon-rich brown materials:

- woody prunings and twigs
- dried leaves
- straw
- wood chips
- old potting soil
- shredded newspaper

Nitrogen-rich green materials:

- fresh grass clippings
- green leaves and plant stalks
- vegetable and fruit scraps
- coffee grounds, filters and tea bags
- herbivore manure, such as horse, cow and poultry manures

Avoid rodents:
compost fruit and vegetable trimmings with care

If you add kitchen scraps to compost, use a rodent-resistant composting system to prevent problems. Bins need a lid, a floor and no holes or gaps larger than a quarter inch.

How composting works

Biology 101

Composting is done by a wide variety of organisms found naturally in organic matter. They work together, feeding on your pile to break down materials. Bacteria are the first microorganisms to go to work in your compost pile, followed by fungi and protozoa. Then centipedes, millipedes, beetles and worms move in to finish the job.

Composting tips

Chop it small

Chop, shred or mulch your materials into 6-inch pieces or smaller for faster decomposition.

Use the right size space

A 3-foot-by-3-foot-by-3-foot pile is considered an ideal size for most homes.

Make sure you have enough air and water

Microorganisms in the compost pile work best when the pile is damp and has many air passages.

Maintain an ideal temperature

The most efficient decomposing bacteria thrive in temperatures between 110 and 160 degrees. The hotter the pile, the faster the pile will compost. It takes several days for the pile to reach the right temperature, compost needs the right balance of browns and greens, lots of surface area for the material and adequate moisture and aeration.

Composting methods

Which one is right for you?

No-fuss and worm composting can produce great compost for your garden while helping you reduce waste at home.

No-fuss composting

This is the easiest method for composting yard trimmings alone or mixed with fruit and vegetable trimmings and requires a small amount of garden space (about 3 feet by 3 feet) in sun or shade.

For yard trimmings only, you can use an open pile or a simple holding bin made of wire mesh or salvaged lumber. If adding fruit and vegetable trimmings, use a rodent-resistant bin.

Add chopped browns and greens to the bin or pile as you generate them. Be sure to mix moist green materials such as fruits, vegetables and grass clippings into the dryer materials so you don't attract pests. In four to 12 months you should have soil-like compost to harvest at the bottom of the pile.

Worm composting

Worm composting is a fun way to process fruit and vegetable trimmings in a small amount of space indoors or out.

Hot composting and yard debris service

While hot composting provides the fastest means for turning yard debris and food scraps into compost, most household yards don't have the space to effectively use this method. Check with your local hauler to see if they allow food scraps in your yard debris bin; otherwise, meat, dairy, and oily foods go in your trash.

Troubleshooting for basic compost bins

Pile not composting

First, check your mix of brown and green materials and add what you are missing. If your pile is too dry, add water until compost is as moist as a wrung-out sponge, then turn or mix your pile.

Pile smells rotten or attracts flies

The compost pile might have too many food scraps or it might be too wet, in either case, turn or mix in more brown (carbon-rich) materials. If you have no brown materials, try dry soil or potting mix.

Food scraps or lawn clippings exposed

Bury or mix food scraps into the pile and/or cover green materials with a layer of brown materials. Always mix moist green materials well.

Rodents in bin

Repair or replace bin so it is rodent resistant. The bin needs a lid, a floor and no holes or gaps larger than a quarter inch.

Compost with worms

Turn kitchen scraps into compost using red worms. A worm bin provides the perfect habitat for worms to thrive, eat leftover vegetable and fruit scraps and transform it into rich vermicompost.

A good worm bin should be between eight and 16 inches deep with quarter-inch holes in the sides and bottom. Elevate your bin on bricks or blocks for air circulation. Cover the bin to conserve moisture, provide darkness and prevent rodents. If keeping your bin indoors, place a tray underneath to capture excess moisture.

Four steps to a worm bin

1 Set up your bin and add worms

Worm bins can be set up indoors or outdoors, the most important thing to maintain a temperature inside the bin between 55 to 77 degrees. Keep the bin out of direct sun in summer and move indoors or insulate if temperatures drop below freezing.

You can get worms from a friend's compost pile or worm bin, or purchase them from a supplier. Generally, 1 pound of worms is needed per bin. Red worms – also called "red wigglers" or "manure worms" – are recommended because they quickly process food waste into worm compost.

2 Add bedding

Fill the bin three-fourths full with bedding like shredded newspaper, cardboard, brown leaves, straw or sawdust from untreated wood. Dampen the bedding and add a handful of dirt, which will help the worms digest. Add more bedding as needed to keep a 4-inch layer at all times.

3 Feed your worms

Feed your worms vegetable and fruit scraps, including peels and pulp, as well as tea bags and coffee grounds and filters. When adding food, pull aside the bedding and bury the food. Use a different location in the bin each time you add scraps.

4 Harvest your compost and clean out the bin

After several months, you'll see a compost layer at the bottom of the bin. This means it's time to remove some compost and add new bedding.

Begin by feeding the worms on only one side of the bin. Wait a few weeks until the worms have migrated to that side, then move the bedding from the whole bin to that side. Remove the finished compost from the other side of the bin.

Add new moistened bedding to the empty side of the bin. The next time you add food, place it under the new bedding.

After several more months, repeat the procedure and remove the finished compost from the other side of the bin.

Worm bin troubleshooting

Unpleasant odor or flies

Your bin is too wet or food scraps are exposed. Add a 4 – 6 inch layer of dry bedding and stop feeding for a couple of weeks.

Worms are dying

Harvest the finished compost and add fresh bedding and food.

Too dry

Add water until bedding is as moist as a wrung-out sponge. You may need to move your bin to maintain an internal temperature is between 55 and 77 degrees.

Rodents in bin

Repair or replace bin so it is rodent resistant. The bin needs a lid, a floor and no holes or gaps larger than a quarter inch.

Grasscycling

Grasscycling is the practice of leaving grass clippings on the lawn. To grasscycle, use a good mower with sharp blades and set your height about two and half to three inches high. When you grasscycle regularly, clippings will decompose quickly and release nutrients back into your lawn.

For gardening solutions, contact Oregon State University Metro Region Master Gardeners, visit **extension.oregonstate.edu/mg** or call 503-821-1115.

For more tips on composting and natural gardening, visit **oregonmetro.gov/compost** or call 503-234-3000.

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