GARDENING WITH PHS

COMPOSTING

Known to experienced gardeners as "black gold," compost is a rich source of nutrients and supports a robust ecosystem in the soil that helps plants to grow healthy and strong. Compost is the most effective fertilizer and readily available soil conditioner. Mixed into soil, it balances the pH level, prevents plant diseases, and helps disperse moisture to plants.

You can make compost, yourself by using raw materials from your kitchen and garden—including organic material such as dead leaves and food scraps that might otherwise end up in a landfill. By composting, you can add to the fertility of your garden while also reducing environmental waste. It's easy, fun, fascinating, and rewarding.

What's Happening

As dead plant material decays, it is broken down by earthworms, fungi, bacteria, and other microorganisms. The by-products of this process are nutrients such as nitrogen, potassium, phosphorus, and other minerals—the same compounds that are sold in bags of fertilizer, but in this case in a form that plants are adapted to using right away. In nature, decomposition can take many months. By building a balanced compost pile, you speed up the process and make it easy to gather the finished product for use in your garden.

How-To

Composting can be practiced at a wide range of scales.

If you live in a small space and are looking for an indoor option or have access to a small deck or patio, you can choose from one of two methods for disposing of kitchen waste: You can feed food scraps to worms you keep in a bin or you can use the Bokashi method of mixing scraps with coconut coir (a renewable resource made from coconut husks) and hardwood ashes, which absorb odors and act as a medium for microbes that decompose the waste.

If you are gardening in a larger outdoor space, choose a spot that's about 3 feet wide by 3 feet long (you can adapt this size to fit your situation) You can enclose the space with a cylinder of chicken wire or build a bin by tying together wooden pallets. Some municipalities give away plastic compost bins or you can buy one at a local garden center or online supplier. You also can skip the bin altogether, containing the compost helps to concentrate the process.

Make a base with a few larger sticks and branches to allow airflow and drainage under the pile. Pile green and brown ingredients on top, in alternating layers, if possible. For fastest action, add three parts brown matter to one part green matter. You don't have to measure this—just be aware of this goal as you add ingredients. Too much green and your pile may become soggy and smell a bit like ammonia. Piles with too much brown take a long time to break down.

Ingredients

A healthy compost pile includes high-nitrogen "greens" and high-carbon "browns."

GREENS

Fruit and vegetable scraps, grass clippings, spent garden plants, and manure from herbivores *(such as cows, chickens, and rabbits)*.

BROWNS

Fall leaves, straw, wood shavings, fireplace ash, and shredded paper and cardboard.

EXTRAS

Egg shells, coffee grounds and filters, stale bread and cereal, corks, seaweed, hair *(people or pet)*.

NEVER

Meat scraps, dairy products, vegetable oil, waste from dogs and cats, cat litter.

COMPOSTING *continued*

Care

Keep layering on ingredients as you get them. When the pile reaches 3 feet tall, it begins to heat up in the center *(it can reach up to 160 degrees F or higher)* and you may even see a little steam coming off it. This is a sign the pile is "cooking." Once it heats up, use a garden fork or shovel to move the decomposed material in the center of the pile to the outside and put the fresh stuff in the center. Turn the pile like this about every other week to keep the process going steadily.

The compost is ready to use when the center no longer heats up and all of the ingredients are unidentifiable—it looks like dark chocolate cake crumbs and smells earthy. If you're diligent about turning, your compost will be ready in about 90 days during the warm weather months. The process slows down a bit when air temperatures stay below 40 degrees F, but be patient as the pile will heat up again when the growing season starts again in the spring.

Using Compost

- **Mix** with garden soil when planting vegetables, flowers, shrubs, and trees, using up to one part compost for four parts soil.
- **Apply** ¼ to ½ inch evenly to existing lawns.
- **Spread** an inch or two on top of garden beds to fertilize during the growing season.
- **Add** up to 25% compost to potting soil for container plants.
- **Blend** with coconut coir to make seed-starting mix.

Pro Tips

- **Chop or shred** ingredients to speed up decomposition.
- **Moisten** *(but don't soak)* the pile during dry spells.
- The **more diverse** your ingredients are, the wider the variety of decomposers your pile will nurture.

Advocacy

Compostable waste makes up about 40 percent of the volume in landfills, according to the U.S. Environmental Protection Agency. Many cities in the U.S. have instituted city-wide composting programs. Become an advocate for municipal composting in your region.

FURTHER RESOURCES

Compost Subject Guides