

## Compost All Your Yard Wastes

Grass clippings and fall leaves are abundant compost materials for most homeowners. Weeds free of seed-heads and crop residues, such as vines and leaves, are other sources. Never include weed seed or perennial roots or stems that might become established. Collect vegetable and fruit peelings, coffee grounds, crushed eggshells, and similar kitchen waste for your compost pile. Don't use meat waste; it attracts animals. Acquire additional materials, such as sawdust, manure, hay, or straw, from sources such as stables and carpenter shops.

### Benefits of Composting

- Compost improves the structure of soil. With the addition of compost, sandy soils hold water better, and clay soils drain faster.
- Compost reduces soil erosion and water run-off. Plant roots penetrate compost-rich soil easier and hold the soil in place. Water can run down into lower soil layers, rather than puddle on top of the ground and run off.
- Compost provides food for earthworms, soil insects, and beneficial microorganisms.
- Compost assists the soil in holding nutrients, thus lessening the need for chemical fertilizers and preventing the leaching of nitrogen into water.
- Compost promotes healthy plants which are less susceptible to diseases and insect pests, reducing the need for pesticides.
- Composting in your backyard recycles wastes which might otherwise fill up landfills. Leaves, grass, and debris - often raked into the street for collection - tend to clog storm drains and street gutters and are costly to collect, but make excellent compost materials.



For more information on selection, planting, cultural practices, and environmental quality, contact your local Virginia Cooperative Extension Office. If you want to learn more about horticulture through training and volunteer work, ask your Extension agent about becoming an Extension Master Gardener. For monthly gardening information, subscribe to *The Virginia Gardener Newsletter* by sending your name and address and a check for \$5.00 made out to "Treasurer, Va. Tech" to The Virginia Gardener, Department of Horticulture, Virginia Tech, Blacksburg, VA 24061-0349. Horticultural information is also now available on the Internet by connecting with Virginia Cooperative Extension's server at <http://www.ext.vt.edu>

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### Why Make Compost?

*Virginia is rapidly running out of land-fill space. Consequently, we must make our old landfills last longer. One way to do this is to compost yard and kitchen wastes, which comprise an estimated 20 percent of the refuse going into our landfills. Homeowners who compost not only extend the lives of our landfills, but also reduce costs for collecting organic debris. Also, composting recycles waste to create valuable soil amendment.*

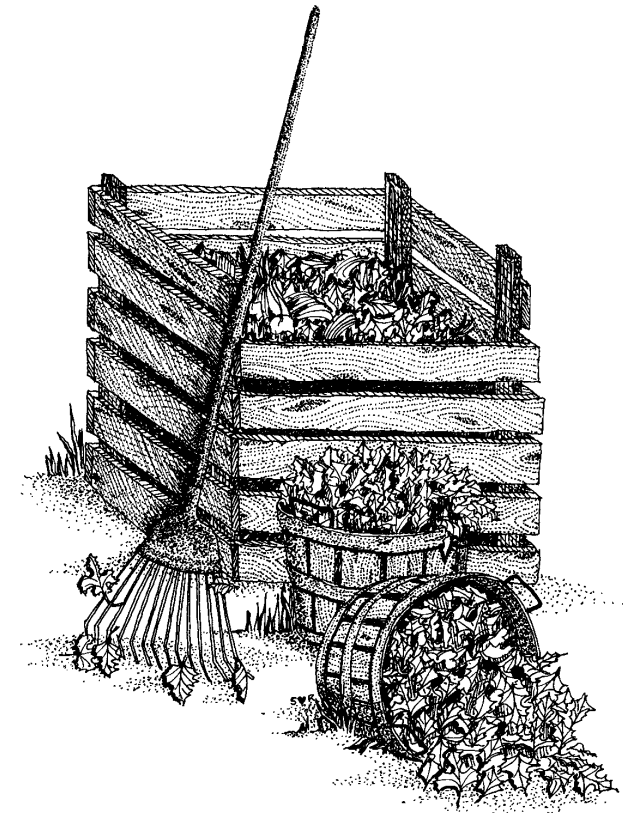
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# Making Compost from Yard Waste



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## What Is Compost?

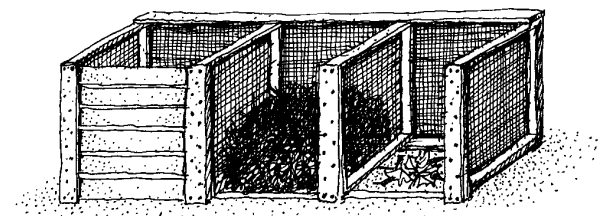
Compost is one of the most valuable resources for beautifying your landscape, and it is virtually free. The leaves you rake, the grass you mow, and the branches you trim are some of the ingredients you can use to make compost. Finished compost is dark and has a pleasant smell. It is produced when organic matter, such as garden, lawn, and kitchen waste, is broken down by bacteria and fungi.

Use it throughout your landscape – till it into gardens and flower beds, add it to the soil when renovating your lawn, Or sieve it and use it in potting soil.

## The Compost Bin

A compost pile can be as plain or fancy as you want – you don't even need a bin to make compost. But if you plan to produce compost regularly, consider a permanent compost bin. For convenience and aesthetics, you can choose from numerous commercial composters or construct your own from wooden planks, concrete blocks, used freight pallets, hardware cloth, or chicken-wire.

Before purchasing a commercial composter, determine if it will work effectively in your landscape. It should be well built, economical according to your needs, easy to assemble, and have easy access for turning the compost. It should also be large enough to handle all the leaves in your yard.



Some gardeners build separate bins for each stage of the compost process - one for fresh plant refuse, another for the actively composting pile, and a third for the finished compost. When building your own bin, keep one side open for easy access. Also, leave spaces between blocks or planks for aeration - air is essential to the rapid decay of organic materials.

The size of the compost pile determines how effective it will be; piles smaller than 27 cubic feet (3 X 3 X 3) do not hold sufficient heat for the composting to be effective, and piles larger than 125 cubic feet (5 X 5 X 5) do not allow sufficient oxygen to reach the center. Be sure your compost pile is a manageable size.

## Keys to Good Composting

- The carbon/nitrogen ratio: A mixture of dry leaves, sawdust, or other sources of carbon combined with manure, green plants, or fertilizer for nitrogen (approximately 4:1 by volume).
- The presence of microorganisms: A few shovels full of rich garden soil or compost will supply these.
- The moisture level: The pile should have the moisture of a well-squeezed sponge. Add water as needed.
- The oxygen level: A compost pile should be turned periodically to promote decay of its contents. Turning the pile adds oxygen, so the more you turn it, the faster it breaks down. (Turning heavy, rotting leaves and grass is vigorous exercise!)
- The particle size: The finer the particle size, the more surface there is for microorganisms to work. Shredding leaves and larger materials generates compost faster.

## Making Compost

Locate your compost pile on a well-drained site which would benefit from nutrients running off the pile. Your pile can be built gradually in layers and then turned to mix. Or if you have sufficient material, it can be mixed and blended at one time.

- To ensure good aeration and drainage, put down a 3-inch layer of coarse plant material, such as small twigs or chopped corn stalks, or a wooden pallet.
- Next, add about 8 to 10 inches of leaves or other dry organic wastes from your landscape and/or kitchen.
- Provide nitrogen for compost-promoting microorganisms by adding 2 to 3 inches of fresh grass clippings or fresh manure. If fresh nitrogen sources are unavail-

able, add about one-third cup synthetic fertilizer (36-0-0) per 25 square feet of surface area.

- If no soil is included in your compost material, add a sprinkling of soil or a compost starter to each layer to inoculate the pile with microorganisms.
- Moisten the pile as you add leaves and other dry material.

Mix the materials thoroughly. Shape the pile so its center is lower than its sides, to help water flow into the pile. Keep the pile moist, but not soaking wet. Within a few days, it should heat up. If not, it may lack nitrogen or moisture. If the pile emits an ammonia smell, it is too wet or too tightly packed for oxygen circulation; turn the heap and add coarse material to increase air space. Once a month, turn the pile with a pitch fork, putting the outside materials on the inside and vice versa.

The plant materials should decompose into compost within five months in warm weather, longer under cool or dry conditions. The center of the pile should reach 160°F. to kill most weed seed, insects and eggs, and disease organisms. Composting may be completed in one or two months if the materials are shredded, kept moist, and turned several times to provide good aeration. Spread it in the garden and dig or till it under to offer your soil and plants renewed vigor.

