



Turning Colorful Leaves Into Black Gold

by Sussex County Master Gardener Carol Kinsley

Autumn brings falling leaves and, for many people, a lot of raking. Then what do you do? Don't send leaves to the landfill! At minimum, you can leave them in a pile, and eventually they'll turn to leaf mould, which makes great mulch. If you have the right tools, you might shred the leaves in the pile, making them less likely to blow back onto your lawn. Better still, compost your leaves by mixing them with other organic materials to turn them into a valuable substance that gardeners consider "black gold."

Composting is the natural decomposition of organic matter — anything that began as a plant. From inside the house, think vegetable and fruit scraps (minus grocery store stickers), coffee grounds, tea bags (non-synthetic) and their paper tags, newspaper, cardboard (preferably torn), shredded paper, paper towels (and the rolls inside), dryer lint, pet hair, old herbs, stale bread, popcorn, Jack O'Lanterns. Do not include meat, fats, bone or dairy products which could attract unwanted animals. Remember, they were never plants!



Carol Kinsley, Sussex County Master Gardener Photo

Three-bin compost structure with removable front panels is in the Sussex County Master Gardeners' Demonstration Garden. Multiple bins contain compost in various stages of decomposition. As one bin is emptied of finished compost, decomposing materials from the other bins can be flipped into a different bin, mixing and aerating the material. The newly emptied bin is ready to start another pile.

How To Use Compost

Spread a 3- to 4-inch layer on top of the garden and work it into the soil before planting or apply as a top dressing to shrubs and plants. You can also put a handful into each transplant hole when adding new annuals or perennials and several handfuls for shrubs and trees.

When building a new lawn, spread a 2-inch layer of compost over the area and work it into the soil to a depth of 6 inches. On an existing lawn, use as a top dressing by applying it about ¼-inch thick. The best time to top dress is in the fall.

Numerous Benefits

- Compost improves the structure, texture and aeration of soil, enabling your plants to develop a stronger, deeper root system. It helps the soil hold moisture, thus decreasing the amount of watering your garden needs.

- Compost contains nutrients and trace elements that are essential to plant growth, releasing these substances slowly over time so they are available to the plants throughout the growing season.

- Compost also adds beneficial organisms to the soil and reduces

If you are fortunate enough to have access to manure, use these: rabbit, chicken, horse, cow or goat. Never use cat or dog feces as they may harbor diseases humans can get. Grass clippings are great unless your lawn has been chemically treated. Be sure to spread the clippings around in your compost pile, mixing with dry materials, since a mass of grass will clump together and smell bad.

A good compost "recipe" calls for a carbon-to-nitrogen ratio ranging between 25:1 and 30:1. Think of carbon as the brown, dry materials such as leaves, straw and paper. Nitrogen materials, which tend to be wet and green, include fresh grass clippings and vegetable waste. Manure is a nitrogen source. Cover each addition from the kitchen with a layer of carbon materials to keep odors down and unwanted insects and animals out.



Master gardener Carol Kinsley photo

Compost area of the Demonstration Garden in Georgetown, contains several compost structures. From left, clockwise, are a large tumbler, a four-pallet bin held together with bungie cords, a permanent three-bin structure with removable front panels, an upright plastic bin, a smaller tumbler with crank handle, a rectangular upright panel and a manually turned tumbler. In the center are circles of plastic and wire fencing (an old umbrella stand). Except for the area under the three-bin system, the area is covered with black plastic groundcloth to keep weeds down

How does it work?

Tiny organisms known as decomposers go to work on all these materials to break down and/or digest them. Decomposers range from microorganisms such as bacteria and fungi to macroorganisms which include mites, centipedes, millipedes, spiders, beetles, ants and earthworms. Given a favorable environment, these little workers will break down yard waste and

the need for chemical fertilizers and mulches, thus saving you money and reducing run off of chemicals into streams and rivers.

- Composting can reduce by 20% or more the quantity of material you send to landfills, making something useful out of a waste product.

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kitchen scraps into a humus-like material that can serve as an excellent soil amendment. As these materials decompose, the compost pile heats up. Ideally, the center will reach 110 to 140 degrees, which is high enough to kill most disease pathogens and weed seeds. The outer areas, however, won't get this hot, so you will want to mix up or "turn" the pile. If you don't have time, strength or energy to flip the pile with a pitchfork, smaller amounts can be composted in a tumbler. Or, you can be careful not to include diseased materials or weeds in the pile and patiently let nature take its course.

To begin composting you should pick a spot that is flat and well drained, out of direct sunlight, close to a source of water and close to your garden. A good size is 4 feet by 4 feet by 4 feet. The pile can be enclosed by wire or wood fencing, wood pallets, cinder blocks or just piled! You don't need a fancy container, although there are all sorts of commercially available tumblers. Make your own tumbler from a trash can with a tight-fitting lid by drilling holes to let air in. Roll it around the yard to mix the materials.

Chopping or shredding materials before adding to the pile is recommended, since small particles decompose quicker than large ones. But grinding them to a pulp on your kitchen counter is absolutely not necessary. The pile should be kept moist but not wet — never so wet that you can squeeze water out of it. If the pile is too wet, there is not enough oxygen for aerobic decomposition and anaerobic microorganisms take over. This can make the compost smelly and, in some cases, toxic to plants. If it's too wet, add dry matter. Mix or turn the pile occasionally, especially during warm weather.

Compost is ready for use when it's dark brown and crumbly, with an earthy aroma and you can no longer tell what the original material was, except for an occasional piece of egg shell. If you use these techniques, you could have compost in two to three months, depending on how often you are willing to turn the pile.

For questions on this subject or any gardening topic call the Master Gardener Helpline: In New Castle County, (302) 831-8862; in Kent County, (302) 730-4000; and in Sussex County, (302) 856-2585 x 535. The Master Gardeners monitor the Helpline in the winter but it may take a few days to get back to you.

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Questions

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