



BACKYARD



COMPOSTING



Why Should I Compost?

If you had a choice, which would you rather see grow: vegetable and flower gardens in your yard or that ever-expanding landfill down the road? You would probably choose your garden. By composting your food scraps with yard waste you can reduce the amount of waste that you are "feeding" to the landfill and at the same time produce a "food" for your yard and garden that is as good as any soil conditioner you can buy.

What Is So Good About Compost?

- Improves soil structure, texture, aeration and quality, and stimulates healthy root development
- Provides nutrients and trace elements essential to growth and releases them slowly throughout the growing season
- Adds beneficial organisms to the soil
- Reduces the need for chemical fertilizers, which can save you money and reduce chemical run-off into streams and rivers
- Increases moisture retention in soils to reduce erosion and the need for watering
- Reduces the amount of organic waste you send to the landfill by recycling it into a valuable resource
- Reduces the amount of greenhouse gasses produced during decomposition (as compared to landfill disposal)

Producing and working with compost can fulfill your need to "get back to nature." Composting is good for the soil – and good for the soul.



What Exactly Is Composting?

Composting is simply the controlled process of natural decomposition of organic matter. It is a process that is occurring constantly all around us. Compost is produced through the activity of naturally occurring soil microbes known as decomposers. Given a favorable environment with the right

conditions of food, air, water and temperature, the decomposers will break down your food scraps and yard waste and recycle them into a material that can serve as an excellent soil amendment for your yard and garden. Once you have established your compost pile, a food web – bacteria, fungi, molds, snails, millipedes, beetles, worms, and others – soon develops and works to break down the organic matter and convert the nutrients into a form plants can use. Different organisms prefer different organic materials and temperatures. Organic materials provide carbon and nitrogen as nourishment for the tiny organisms in the compost. As conditions in the pile change, the mix of organisms will change too. Organisms will become dormant, die, or move to more hospitable parts of the pile. The most desirable decomposers require oxygen to survive. You can make sure your compost remains oxygen-rich by turning or mixing regularly. If your pile becomes oxygen deficient, these desirable decomposing organisms will die, and anaerobic decomposers (those not requiring oxygen) will take over. Anaerobic decomposers generate bad odors, as well as acids and alcohols that can harm plants.

How Do I Start Composting?

First, decide what type of compost system you want. Options include: an open pile, a tumbler, a wire collector, or a bin. A pile or wire collector work great for yard waste, but if you want to compost food scraps, it's best to use a tumbler or a bin with a lid. You can construct your own with scrap lumber, wire, blocks or pallets, or purchase a bin made with rot-resistant wood or recycled rigid plastic, or a turning style tumbler unit. Choose a suitable location that is flat, well-drained, and ideally shady. Avoid placing the bin against a tree or wooden building and make sure the bin is close to a source of water such as a garden hose or rain barrel.



For information about opportunities to purchase compost bins and rain barrels, follow us on [Facebook](#).

Table 1: What Goes in My Compost Pile?

YES		NO	
Weeds (no seeds)	Bread	Vegetable oil	Lard
Grass clippings	Wood ash	Mayonnaise	Dairy
Fruit	Wood chips	Nut butters	Fish
Egg shells	Yard waste	Treated wood	Oils
Leaves	Tea bags	Diseased plants	Bones
Vegetables	Sawdust	Kitty litter	Meat
Old potting soil	Paper towels	Painted wood	Chicken
Shredded paper		Dog and cat feces	
Horse manure with straw		Weeds gone to seed	
Coffee grounds and filters		Coal or charcoal ash	

Getting Started

- Start with a base of coarse twigs or wood chips to aid in aeration.
- Layer other materials 2 to 6" deep in the composter.
- Alternating the types of materials will speed up the decomposition process, especially if you alternate high-carbon (browns) materials with high-nitrogen (greens) materials (See Table 2).
- Mix 75% "brown" organic materials with 25% "green" organic materials, by volume.
- When first building your compost pile, mix in a small amount of rich garden soil or finished compost to spike your pile with decomposers.
- Mix alternating layers of materials to form a pile of at least 1 cubic yard in size. This size provides enough food and insulation to keep the organisms in the compost warm, happy, and working hard.

Table 2: Brown and Greens

High carbon values "Browns"	High nitrogen values "Greens"
Shredded paper	Fruit peels and cores
Fallen leaves	Vegetable scraps
Sawdust	Grass clippings
Twigs and bark	Coffee grounds
Straw	Hair and fur
Livestock bedding	Horse, chicken and rabbit manures

Compost Pile Maintenance

You can choose how much effort to put into maintaining your compost pile. If you are not able or inclined to work on your pile regularly, it will still turn into compost – it will simply take longer.

Tips to Speed Up Decomposition:

- Small particles decompose faster than large ones. Chop or shred materials before adding them to the bin. Run over leaves with the lawn mower and cut yard trimmings into short pieces. Chop up fruit and vegetable scraps and mix fresh materials into the pile as they are generated. Be sure to turn and aerate the pile to incorporate the new materials into the “hotter” sections of the pile, where decomposition activity is highest.
- Keep the compost pile as damp as a wrung-out sponge. Remember to mix the contents of your bin or pile regularly with a pitch fork or compost turning tool to aid the composting process and reduce the potential for odor. The proper blending of carbon and nitrogen rich materials helps ensure the pile reaches the temperature needed to promote the composting process.

Suggestion:

A series of three or more bins allows you to make compost in a short time by turning the materials from bin to bin or for storing extra “browns” and “greens” like leaves or grass clippings for later use.



When Will My Compost Be Ready to Use?

Finished compost tends to accumulate in the bottom of the pile or bin. It is ready to use when it is a dark brown, crumbly, soil-like material with a sweet or musty smell. If you have observed the techniques listed above, you may have usable compost in two to three months. If not, it may require as much as a year or two to completely decompose. Screen the compost for large particles or for materials not yet decomposed and throw them back into the pile.

How Do I Use the Finished Compost?

Compost can be used in a variety of ways that benefit your lawn and garden.

In the Garden

- Spread a 1 to 2" layer on the surface and work it into the soil before planting.
- Apply as top dressing to shrubs and plants either on the surface or work it into the soil.
- When transplanting, add finished compost to the transplant hole for smaller plants, shrubs, and trees.

Around the Yard

- When building or reseeding lawns, spread a 1/2" layer over the area, work it into the soil to a depth of 4 to 6" about one month before planting.
- On an existing lawn, apply 1/4" top dressing in the fall using a fertilizer spreader, or broadcast by hand and rake lightly.



On House Plants

- Add a thin layer of compost over house plant soil to provide nutrients.
- Combine finished and screened compost with equal parts sand and loam to make your own potting mix.

Table 3: Troubleshooting Your Compost

Symptom	Problem	Solution
Material not heating up or decomposing slowly	Pile too small	Add more organic matter
	Insufficient moisture	Turn pile and add water
	Lack of nitrogen	Incorporate “greens” into the pile
	Not enough air	Turn pile more often
	Cold weather	Increase pile size or insulate with straw bales or tarp
Rotten egg smell	Insufficient air	Turn pile more often
	Too much moisture	Incorporate coarse brown materials
Ammonia smell	Too much nitrogen materials (“greens”)	Incorporate coarse brown materials
Rodents attracted to compost	Meat, dairy, fatty or uncovered foods	Keep these items out of the pile
		Cover food scraps with browns
Flies and gnats	Uncovered food items in pile	Mix and cover food scraps with brown materials

Yard Waste Management Options

Yard waste cannot be placed in your household trash.

- Manage your yard waste on your own property: Grasscycle by using a mulching lawn mower and leave grass clippings on your lawn.
- Utilize curbside yard waste services provided by some municipalities and/or your trash hauler.
- Hire a collection service to pick up your excess yard waste.
- Take your yard waste to a drop-off facility. Visit de.gov/yardwaste for a list of sites.

Additional Information



DELAWARE DEPARTMENT OF
**NATURAL RESOURCES AND
ENVIRONMENTAL CONTROL**

**Delaware Department of Natural
Resources and Environmental Control
Division of Waste and Hazardous Substances**

89 Kings Highway, Dover, Delaware 19901
302-739-9403

Delaware Recycles Program
de.gov/recycling



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University of Delaware's Cooperative Extension Offices

New Castle 302-831-2506
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extension.udel.edu/

Delaware Solid Waste Authority

dswa.com/programs