

Backyard Composting









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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? Probably, you would choose your garden. By composting your food scraps with *yard wastes** 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. (**yard wastes should not be disposed in your household trash or at Delaware landfills. See additional information for management options*).

What is so good about compost?

-  Improves soil structure, texture, aeration, and quality, and stimulates healthy root development in plants
-  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
-  Can increase moisture retention in soils to reduce erosion and the need for watering
-  Can reduce the amount of organic waste you send to the landfill by recycling it into a valuable resource

In addition, the act of producing and working with compost can help fulfill your need to "get back to nature." You might say that composting is good for the soil and good for the soul.

What exactly is composting?

Composting is simply the controlled process of the 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 wastes and recycle them into a humus-like 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 work 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. It is important to know that the most desirable decomposers require oxygen to survive. 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. Make sure your compost remains oxygen rich by turning or mixing regularly or every week or two.



How do I start composting?

First, decide what type of compost system you want. Options may



include: an open pile, a tumbler, a wire collector, or a bin. A pile or wire collector work great for yard wastes, 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.

Table 1: What goes in my compost pile?

<u>Put it in</u>		<u>Leave it out</u>	
Weeds	Grass clippings	Bones	Vegetable oil
Bread	Wood ash	Lard	Nut butters
Fruit	Vegetables	Chicken	Fish
Egg shells	Wood chips	Treated wood	Painted wood
Leaves	Yard wastes	Oils	Mayonnaise
Straw	Tea bags	Meat	Kitty litter
Old potting soil	Sawdust	Dairy	Diseased plants
Shredded paper	Paper towels	Dog and cat feces	
Horse manure with straw		Weeds gone to seed	
Coffee grounds and filters		Coal or charcoal ash	

Start with a base of coarse twigs or wood chips to aid in aeration. Layer other materials 2–6” 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: Browns 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. Here are some tips for speeding up the process:

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.

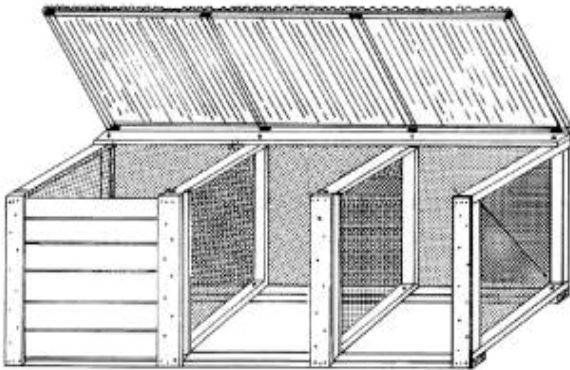


Keep the compost pile as damp as a wrung-out sponge. Remember to mix the contents of your bin or pile regularly with a pitch fork or compost turning tool to aid the composting process and reduce the potential for odor. The proper blending of carbon and nitrogen rich materials helps ensure the pile reaches the temperature needed to promote the composting process.



Turning bins

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 2 to 3 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 also be used in a variety of ways to benefit your lawn and garden.

In the garden

-  Spread a 1-2" layer on the surface, 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 - 6" about one month before planting
-  On an existing lawn, apply ¼" 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

Symptoms	Problems	Solutions
Material not heating up or decomposes 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 regularly
	Cold weather	Increase pile size or insulate with straw bales or tarp
Rotten egg smell	Insufficient air or too much moisture	Turn pile and incorporate coarse brown materials
Ammonia smell	Too much nitrogen materials	Incorporate coarse brown materials
Rodents attracted to compost	Meat, dairy, fatty or uncovered foods	Keep these items out of the pile or cover food scraps with browns
Flies and gnats	Uncovered food items in pile	Mix and cover food scraps with brown materials

Additional information

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

www.de.gov/recycling

**Compost Bins are available through pre-order on-line sales.
Call (302) 739-9403 for more information.**

University of Delaware's Cooperative Extension Offices

For more information see: extension.udel.edu/
Contact: New Castle (302) 831-2667/ Kent (302) 730-4000/
Sussex (302) 856-7303

Delaware Solid Waste Authority

www.dswa.com

***Yard waste management options**

- 1) Manage your yard waste on your own property.
 - Grasscycle by using a mulching lawn mower and leave grass clippings on your lawn.
- 2) Take your yard waste to a drop-off facility.
- 3) Hire a collection service to pick up your yard waste.



Thank you for composting!

Source of Graphics:

Heart of Texas Master Composters
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