

Start COMPOSTING Today!



**DELAWARE
RECYCLES**
It's second nature.



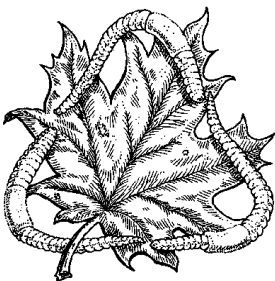
Why Should I Compost?

If you had a choice, which would you rather see grow - the modern day victory garden in your backyard, or that ever-expanding landfill down the highway? Probably, you would choose your garden. By composting your yard waste and kitchen scraps, 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 your money can buy.

What is so good about compost?

- 📌 Improves soil structure, texture, and aeration, which in turn enables plants to develop stronger, deeper root systems.
- 📌 Contains 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 reduce the need for watering your garden.
- 📌 Can reduce the volume of waste you send to the landfill by 20% or more.

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



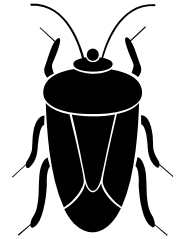
What, Exactly, Is Composting?

Composting is simply the natural decomposition of organic matter. It is a process that is occurring constantly all around us. Compost is produced through the activity of tiny organisms known as

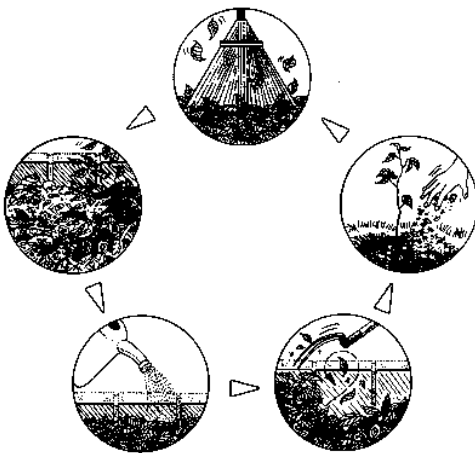
decomposers. Given a favorable environment, they will break down your yard wastes and kitchen scraps into a humus-like material that can serve as an excellent soil amendment for your yard and garden. Once you have established your compost pile, the decomposers go to work almost immediately. At one time or another, your pile will probably be populated by:

- fungi
- bacteria
- protozoa
- roundworms
- flatworms
- snails
- slugs
- insect larvae
- millipedes
- beetles
- mites
- centipedes

Different organisms prefer different organic materials and temperatures. 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 every week or two, or whenever it emits unpleasant odors.



How Do I Start Composting?



First, choose a location for your compost bin, whether you build your own bin or purchase one ready-made. Pick a location that is flat, well drained, and shady. Direct sunlight may cause your compost pile to become too hot and dry out. Place the bin at least 20 feet away from the nearest house. Make sure the bin is close to a source of water (e.g., within

reach of a garden hose). Avoid placing the bin against a tree or wooden building; the compost could cause the wood to decay. When your bin is in place, it is ready for yard wastes and kitchen scraps (see Table 1 for appropriate materials).

Table 1: What Goes in My Compost Pile?

Yes		No	
Weeds	Grass clippings	Bones	Vegetable oil
Bread	Wood ash	Lard	Peanut butter
Fruit	Vegetables	Chicken	Fish
Egg shells	Wood chips	Treated wood	Painted wood
Leaves	Pine needles	Oils	Mayonnaise
Straw	Yard wastes	Meat	Kitty litter
Sawdust	Tea leaves	Dog poop	Diseased plants
Paper	Coffee grounds	Dairy	Salad dressing
Old potting soil		Weeds gone to seed	

If you have been stockpiling materials such as leaves and wood chips, you can either add them all at once, or you can put a 4-6" layer in the composter and save the rest to add gradually and alternate it with layers of other materials. Alternating the types of materials will speed up the decomposition process, especially if you alternate high-carbon materials with high-nitrogen materials. See Table 2 for a listing of high-carbon ("brown") and high-nitrogen ("green") material. The ideal carbon to nitrogen ratio (C:N) for compost is 20-30 parts of carbon to 1 part of nitrogen (20-30:1). When first building your compost pile, mix in a small amount (no more than ½ shovelful) of rich garden soil or finished compost to spike your pile with decomposers. Remember to mix the contents of your compost bin regularly.

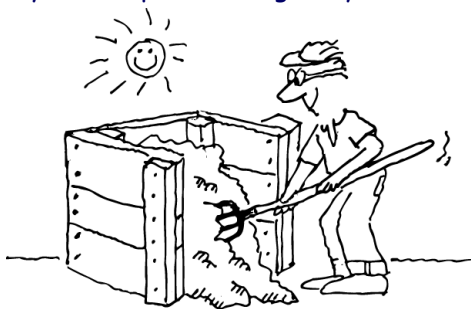


Table 2: C:N Ratios for Selected Materials (By Weight)

Material	C:N
Ideal Compost	20-30:1
Materials with High Carbon "Brown" Values	
Paper	150-200:1
Wood Chips & Sawdust	100-500:1
Bark	100-130:1
Corn Stalks	60:1
Straw	40-100:1
Foliage (Leaves)	30-80:1
Materials with High Nitrogen "Green" Values	
Horse Manure w/ Litter	30-60:1
Horse Manure	25:1
Coffee Grounds	20:1
Cow Manure	20:1
Poultry Manure (w/ Litter)	13-18:1
Grass Clippings	12-25:1
Vegetable Wastes	12-20:1
Poultry Manure (Fresh)	10:1
Pig Manure	5-7:1

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. Cut yard trimmings into short pieces. Chop up fruits and vegetables. Shred paper.



Keep the pile moist - about like a well wrung sponge.

Mix or turn the pile occasionally, especially during warm weather, or if you notice that the pile is hot. Turn every week or two, more often if odors develop.



Add nitrogen. Most backyard composters have an over-abundance of carbon, so the decomposition process is limited by the nitrogen available in the pile. Livestock manure is rich in nitrogen and is safe to add to your compost pile. Do not add manure from cats, dogs, or other meat eaters.




When Will My Compost Be Ready to Use?

Finished compost tends to accumulate in the bottom of your bin. It is ready to use when it is dark brown and crumbly, with an earthy aroma. 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.

How Do I Use the Finished Compost?

Make your own top dressing by sifting your compost through a fine screen. (You can build your own screen by stretching 3/8" or 1/2" hardware cloth over a wooden frame). Compost can also be used in a variety of ways to benefit your lawn and garden:

Gardening:

-  Spread a 3-4" layer on the surface, work it into the soil before planting (spring and late fall)
-  Apply as top dressing to shrubs and plants; either leave it on the surface or work it into the soil (any time)
-  When transplanting, add a handful to the transplant hole for smaller plants, or more for shrubs & trees

Lawn Maintenance:

- 📌 When building a new lawn, spread a 2" layer over the area, work it into the soil to a depth of 6"
- 📌 On an existing lawn, apply $\frac{1}{4}$ " top dressing using a fertilizer spreader, or broadcast by hand and rake lightly (fall)

House Plants:

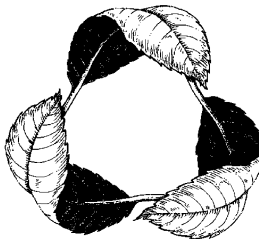
- 📌 Combine fine-textured compost with sand, bark, and vermiculite or perlite to make your own potting mix

Where Can I Learn More?

This pamphlet was developed to give you all the basic information you need to set up and conduct a backyard composting operation. If you are interested in obtaining more in-depth information, such as details about the decomposition process, things you can do to speed up the process or ways to alter the characteristics of your compost, there are a number of resources available.

There are many good books and pamphlets about backyard composting. Check your local libraries and bookstores in sections related to gardening, nature, or the environment. And don't forget the periodicals section, with its supply of magazines devoted to gardening and lawn care. The internet is also a great place to get lots of helpful information about composting. Some links are suggested on the back of this page.

Good luck and thank you for composting!



Please see the following for more information about composting:

Delaware DNREC

www.dnrec.delaware.gov/yardwaste/Pages/YardWasteHomeowners.aspx

Delaware Solid Waste Authority

www.dswa.com

Mid-Atlantic Composting Association

www.midatlanticcompost.org

University of Delaware's Cooperative Extension Office

<http://ag.udel.edu/extension>

The U of D Cooperative Extension has offices in each county which provide workshops, classes, and demonstration. For more information, contact your county co-op extension office:

New Castle: 831-COOP (2667)
Kent: 730-4000
Sussex: 856-7303

Locations with Compost Demonstration Sites:

- NCC Co-Op Extension Office, 461 Wyoming Road, Newark
- Bellevue State Park, Wilmington
- Children's House Montessori School, Grubb Road, Wilmington
- Killens Pond State Park, Felton, Kent County
- Trap Pond State Park, Laurel, Sussex County

For information or presentations on these Sites please contact Hetty Francke at hettyw@udel.edu.

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