



Slash your trash! Compost!

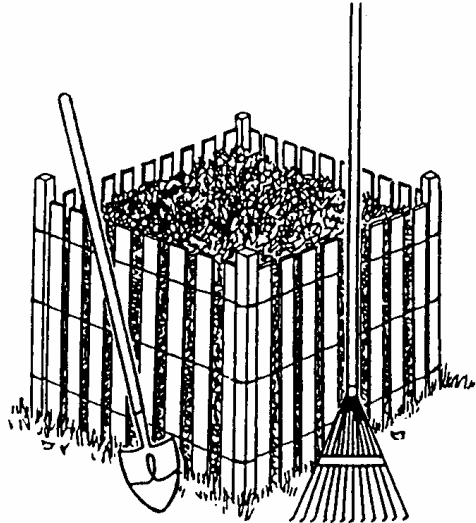
Volume 1, Issue 1

HOME COMPOSTING

A Guide to Small Scale Food & Yard Waste Composting

Why Should I Compost?

Composting is a practical, convenient and inexpensive way to turn your yard trimmings and food scraps into a valuable soil amendment. Composting is easier and cheaper than bagging up and carrying these wastes to the landfill, and by using compost you are recycling organic matter from plants back to the soil in a usable form. If you have a garden, lawn, trees, or house plants - you have a use for compost!



On a nationwide basis, yard waste makes up approximately 20% of the residential waste stream. Food waste adds another 100 pounds per person per year. Composting at home saves transportation and disposal costs, and provides an environmentally sound way to manage food and yard wastes. Composting offers everyone an opportunity to contribute to, and benefit from, part of the solid waste solution.

Compost is a dark crumbly and earthy-smelling form of decomposing organic matter. It can be applied as a mulch around trees and shrubs, used as a soil amendment in vegetable and flower beds, or it can be spread lightly over established lawns to help reduce thatch build-up. For maximum benefit to your soil, compost should be tilled into the soil before planting so it will be available to the plant roots.

Compost improves your soil and the plants growing in it. Healthy, vigorous plants are better able to tolerate stress, diseases and insect pests. Compost adds many nutrients to the soil and helps reduce erosion. It increases the water-holding capacity of sandy soil, and makes heavy clay soil easier to work by increasing aeration and reducing soil compaction. Earthworms love soil high in organic matter and you will notice a definite increase in their populations as you use compost. Many experienced gardeners refer to compost as "brown gold".

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How Is Compost Made?

Compost is a form of decomposing organic matter. Organic materials have many different qualities and uses, but all organic materials have a common trait that sets them apart from other materials: organic materials naturally break down, over time, into a rich, soil-like material called compost. Decomposition is inevitable. Compost happens. It's a process that has been going on for millions of years.

Composting speeds natural decomposition under controlled conditions. Raw organic matter is converted into compost by the action of microorganisms (fungi and bacteria). As decomposition takes place, heat is generated within the pile, up to 140 - 160 degrees F, a sign that the organic matter is composting properly, or "cooking". Microorganisms require two basic things to keep them active: air and water. There also needs to be a mix of carbon (fall leaves, hay, chipped brush/wood) and nitrogen (grass clippings, garden waste, food scraps, manure) materials. The more care that you take to provide air, water, carbon and nitrogen materials the faster the pile will compost. Ignoring a compost pile will not stop the composting process, it just slows it down.



What Can Be Composted?

Almost anything that was once alive can be composted. A balanced mix of carbon and nitrogen materials will speed the composting process and will result in a more fertile end product. Materials high in carbon include: fallen leaves, hay, pine needles, sawdust, wood ashes, cardboard/paper (torn into small pieces), and chipped brush/wood. Woody materials should be shredded first to speed decomposition. Materials high in nitrogen include: horse, cow, sheep and chicken manure, weeds (without seeds), grass clippings, plant refuse from the garden, and kitchen scraps (fruit and vegetable scraps, coffee grounds and filters, tea bags, egg shells, bread crusts, plain pasta).

Materials which should not be composted include meat, bones, fatty foods, dairy products, grease, oil, cat litter, dog feces, human waste, charcoal ashes, plywood, painted or pressure-treated wood, diseased or infested plants.

The Basic Principles of Composting

The greater the surface area of the material added to the pile; the quicker the decomposition. Smaller sized particles have more surface area than larger particles, so shred or chop the material as much as possible.

A larger pile will hold the heat better and the hotter the pile the faster the decomposition. An ideal pile is 3'x3'x3' to 5'x5'x5'.

Microorganisms need both air and water to work. The compost should remain as damp as a squeezed out sponge.

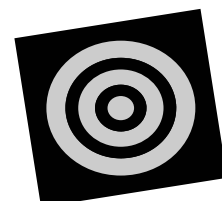
A mix of carbon materials and nitrogen materials in the compost pile speeds the decomposition process and decreases odors.

Turning or mixing will speed up the composting process. Turning brings materials from the cooler edges of the pile into the hotter center for more thorough decomposing.



How Can I Use It?

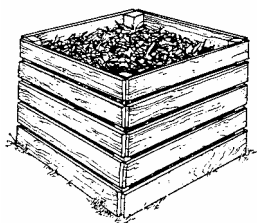
Gardens & Landscaping	Till 1" - 3" of compost into existing soil.
Potting Soil Mix	Mix compost with peat moss, sand, vermiculite, perlite and/or bone meal to make soil for houseplants and germinating seeds.
Lawns	Apply 1/2" of compost over existing sod and gently rake in.
Mulch	Place a 3" layer of compost around shrubs and trees to retain water and discourage weeds.



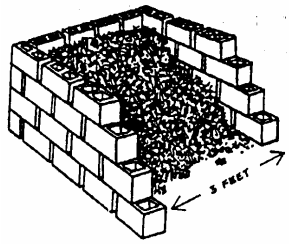
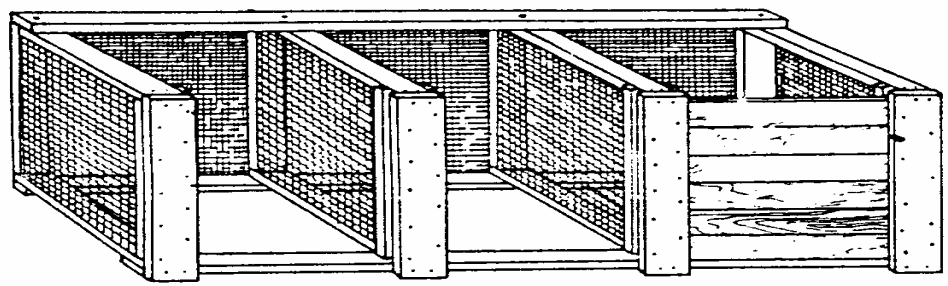
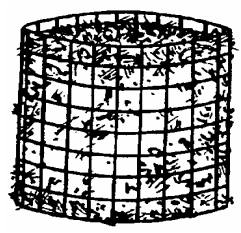
Choosing a Compost Container and Selecting a Site

A compost pile doesn't have to be complicated to be effective. It can be as simple as a heap on the ground, but success will be better if it is contained. If your household generates little yard waste a bin may not be necessary. Non-fatty food scraps can be buried directly into the soil at least 8" deep.

Compost bins may be purchased at home and garden supply stores. They can also be constructed from inexpensive materials such as snow fencing, hardware cloth, chicken wire, wooden pallets or cinder blocks. Ideally the container should be about one cubic yard in volume (3'x3'x3'). Smaller piles will take much longer to compost. A **composting site** should be convenient for use and maintenance. A properly maintained compost pile will be odor-free; nevertheless, be considerate by not placing it where may be considered a nuisance by neighbors. Avoid property lines or an area near patios and decks.



A **holding unit** is easily made from a length of snow fence or hardware cloth rolled into a cylinder. Wooden pallets or a wood and chicken wire frame can also be used. With this method, the organic matter sits in the holding unit until it's finished compost, anywhere from 6 months to two years.



A **turning unit** is a series of two or more bins that allow the materials to be turned on a regular schedule which speeds up the composting process. One bin contains fresh refuse which is later turned into the second bin. A third bin can be provided for finished compost, ready for the garden. Air is essential to the compost pile so any bin should have spaces between the boards or bricks to let the air circulate.



Building and Maintaining a Compost Pile

A compost pile is a series of 4" - 6" layers of "green" (nitrogen) organic materials (grass clippings, plant trimmings, kitchen scraps, manure) and "brown" (carbon) organic materials (leaves, pine needles, wood scraps, wood ashes, shredded paper) repeated over and over. Sprinkle soil, fresh manure or a handful of fertilizer on every few layers to accelerate the composting process. Moisten each layer with water.

Smaller materials compost faster. Bulky or woody pieces should be shredded or chopped up before being added to the pile. Continue adding new materials to the pile as long as desired (or as space allows). To discourage animals from invading your pile, keep all food scraps covered. At some point, stop adding new materials to allow the pile to finish composting.

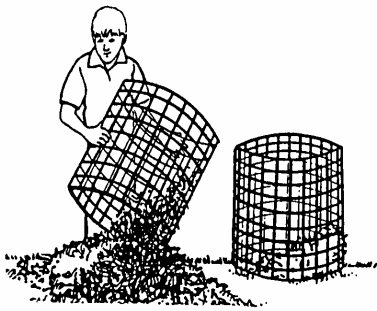
The compost pile should be kept as wet as a wrung out sponge. If it's too dry, add water; too wet, add dry materials.

Turning the pile is the most efficient way to provide air to the center of the pile. Simply break apart the pile with a shovel or pitchfork and mix the layers. Turning the pile weekly should result in finished compost in 2-3 months.

Composting happens naturally; it's just a matter of time. The more the pile is turned and the moisture level adjusted, the sooner the compost is ready to be harvested.

WHEN IS IT READY?

You'll know when your compost is ready when it is dark and rich and crumbles in your hand. The organic materials will be barely recognizable. Lumpy pieces are easily removed by sifting the compost through a garden sieve or milk crate. Return lumpy pieces to the new compost pile to decay further.



Troubleshooting Composting Problems

SYMPTOMS	PROBLEM	SOLUTION
The compost has a bad odor	Not enough air or not enough carbon materials	Turn it and add carbon materials
The center of the pile is dry	Not enough water	Moisten materials while turning the pile
The compost is damp and warm in the middle, but nowhere else	Pile is too small	Collect more dry carbon material and mix the older ingredients into a new pile
The heap is damp and sweet-smelling but will not heat up	Lack of nitrogen	Mix in a nitrogen source like fresh grass clippings, fresh manure, blood meal or fertilizer

For more information on composting and other topics, call your county's **Cornell Cooperative Extension Office!**

Clinton County
6064 State Route 22
Plattsburgh, NY 12901
518-561-7450

Essex County
P.O. Box 388
Westport, NY 12993
518-962-4810

The Master Gardeners of Clinton and Essex Counties have begun a Master Composter Program, coordinated by Bunny Goodwin. Both programs are run by Cornell Cooperative Extension under the supervision of Amy Ivy, Extension Educator and involve training volunteers to teach others. They can give you advice on getting started composting at home or troubleshooting your existing compost situation, as well as just about anything else related to your yard or garden. Office numbers are listed to the left. *Remember... Composting doesn't need to be complicated to be successful!*

Don't Treat Your Soil Like Dirt...FEED IT WITH COMPOST!

Resources: The Community Composting Project of Seattle, WA; "Composting to Reduce the Waste Stream", Northeast Regional Agricultural Engineering Services; "Master Composter Program Implementation Guide", Cornell Waste Management Institute, Cornell University, Ithaca, NY.