

Trouble Shooting

<u>Symptom</u>	<u>Problem</u>	<u>Solution</u>
Pile has odor	Not enough air Excess moisture	Turn pile Add dry material like leaves/straw
Pile has ammonia odor	Too many greens	Add brown materials like leaves/straw
Pile is dry	Not enough water; too much woody material	Turn and moisten; add fresh greens
Low pile temperature (pile not composting)	Pile is too small	Add new materials
	Insufficient moisture	Add water
	Poor aeration	Turn pile
	Lack of nitrogen	Mix in greens like grass or food scraps
Cold weather		Insulate pile with layer of straw or cover with tarp
Pests (rats, raccoons, insects)	Presence of meat or fatty food scraps	Remove from pile
Too many flies or ants	Food waste on/ or near top	Bury deeper in pile Cover with 2" layer of soil

Take A Closer Look



Nature has its own very effective composting program using millions of microscopically small organisms (bacteria and fungi). Were it not for everyday decay, we would be walking on mile-high piles of debris. Even earthworms and grubs assist in reducing this material into basic elements such as nitrogen, phosphorus and potassium. These are the very things contained in commercial fertilizers. By composting at home we speed up the process that nature accomplishes in a much slower way.

In order to live and work within a compost pile, microorganisms must have oxygen, water, nitrogen and carbon. Woody and dry materials are high in carbon, and supply the microorganisms with an energy source. Moist, green materials are rich with nitrogen, and supply protein. When these materials are properly put together, the organisms work and reproduce in such an energetic way that heat is produced. The faster these workers eat and reproduce, the hotter the pile becomes. A compost bin is, in effect, a factory where organic materials are taken apart and then put together to make a new product called humus, or compost.

There are many combinations of materials and volumes that will work at varying speeds. With experience, various methods can be tried to achieve a faster or less work intensive system. It is recommended that you explore additional resources for further information.



Food Waste Composting For Small Spaces

Garbage Soup - Chop kitchen wastes in your blender or food processor with equal amounts of water. Bury this "soup" around the outer edges of plants, or place directly into a garden trench. fill with soil and water well. Seeds or transplants can be added immediately.

Worm Boxes - Can be kept in the house, on a shaded balcony or garage. Use a wooden or plastic box with small drainage holes in the bottom and a tight fitting lid if possible. As an example, a 2' x 2' x 8" box will compost kitchen scraps from 2 people, assuming 4 pounds of garbage per week. The box must be filled with moistened bedding made from a mixture of shredded cardboard, newspaper, dried leaves and/or peat moss. Add a pound or more of red worms. Rotate the burial of food wastes throughout the bin. Every 3-6 month push the old bedding to one side of the bin, rebed the empty side, and start burying food wastes in the fresh bedding. Allow composted wastes to cure for a month before harvesting.

This is an efficient way to convert food wastes into high-quality soil for general garden use. The worms themselves can be used for fishing bait. However worm composting is more expensive and complicated than soil incorporation for dealing with food wastes. The worms must not be left outside in freezing temperatures.

Additional Resources

Backyard Composting, Harmonious Technologies, PO Box 1865-100, Ojai, CA 93024

How to Grow More Vegetables, John Jeavons, Ecology Action, 5798 Ridgewood Rd., Willits, CA 95490

Let it Rot, Stu Campbell, Storey Communications, Inc., Schoolhouse Rd., RD#1, Box 105 Pownal, VT 05261

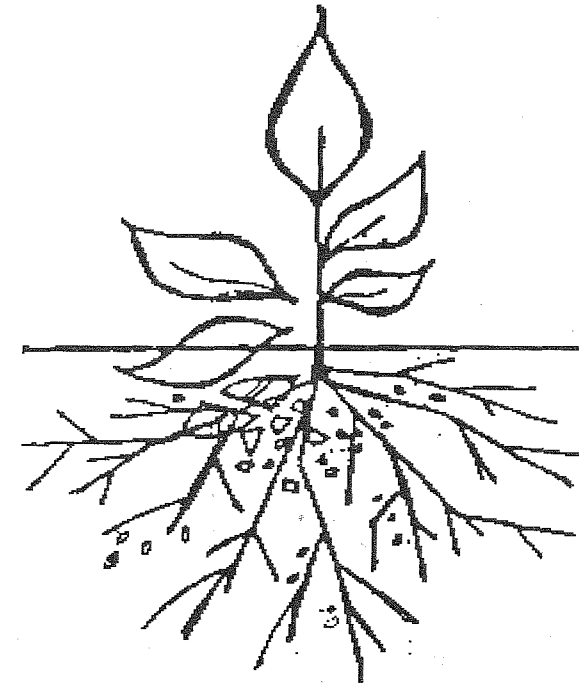
The Rodale Guide to Composting, R.A. Simpson, Rodale Press, 33 E. Miner St., Emmaus, PA 18098

Worms Eat My Garbage, Mary Appelhof, Flower Press, 10322 Shaver Rd., Kalamazoo, MI 49002

Prepared and distributed by:
Watchung Environmental
Commission
Composting Committee
15 Mountain Boulevard
Watchung, NJ 07060



Home Composting In Watchung



Reducing
Reusing
Renewing

Trouble Shooting

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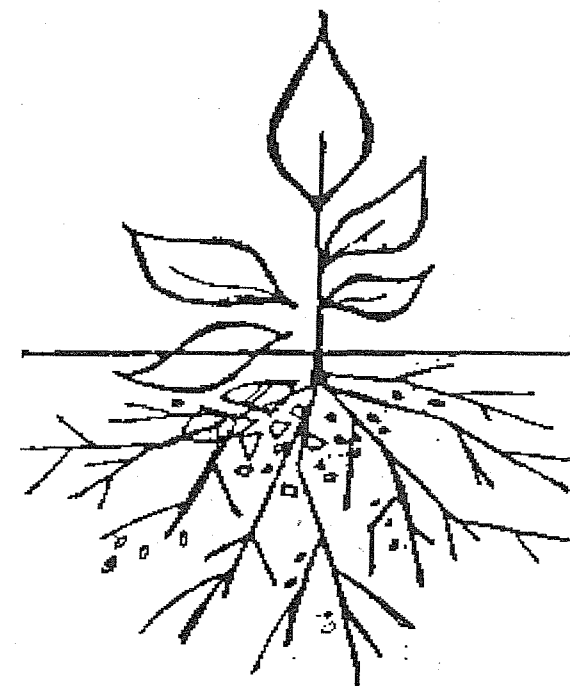
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Home Composting In Watchung



Reducing
Reusing
Renewing

What is Compost?

Compost is a dark, crumbly, earthy-smelling form of decomposing organic matter that can be easily made at home.

Why Compost?

- Composting can save money!
 - On fertilizer and water costs
 - On garbage collection and landfill fees
 - On soil and plant conditioners/additives
- Composting is easy
 - 5 minutes a day for high quality compost
 - Save time bagging grass and leaves
 - Quick and fun way to do your part for the environment
- Composting benefits your soil and plants
 - Improves soil structure and texture
 - Increases aeration and water holding capacity
 - Promotes soil fertility
 - Stimulates healthy root development
 - Aids in erosion control
 - Reduces chemical inputs
- Composting helps the environment
 - Reduces the volume of garbage going to landfills



How Can I Use Compost?

- As a soil enrichment for flower and vegetable gardens, trees and house plants.
- As a part of a seed-starting mix.
- As a liquid fertilizer by soaking a handful of compost in warm water for a few hours.
- Larger woody pieces can be used as a mulch.

What Can I Compost?

Anything that was once a growing plant can be composted. The key to successful composting is to use both carbon-rich material and nitrogen-rich material.

Carbon-Rich (brown and dry)

- Leaves
- Straw
- Sawdust
- Pine needles
- Small branches
- Dryer lint
- Dry grass clippings
- Dried plant materials (trimmings, leaves, vines)

Nitrogen-Rich (green and moist)

- Wet grass clippings
- Fresh plant clippings
- Vegetable and fruit wastes
- Barnyard manure and bedding
- Spoiled food
- Tea bags
- Coffee grounds
- Hair, fur, and feathers

Other

- Fireplace ashes

Materials Which Should Not Be Composted

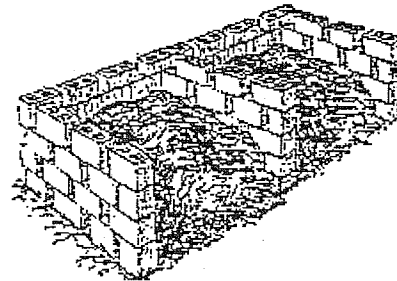
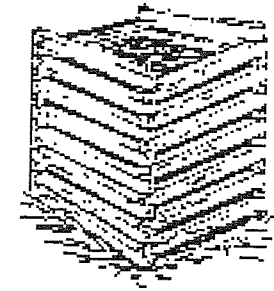
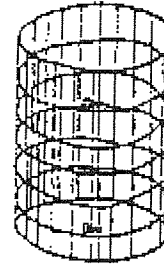
- Any kind of meat, grease, fats, and oils. Any dairy products, especially cheese
- Egg shells
- Dog and cat feces
- Diseased or invasive plants.

Any plant materials treated with herbicides or pesticides will prove to be troublesome unless the compost is aged at least a year.

How Do I Start?

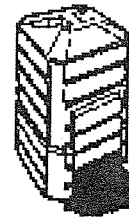
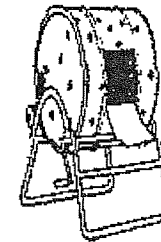
1. First select a place in the yard, preferably in the shade, out of the wind, and within reach of water.
2. Decide if you want to use the open heap or pile passive (slow) system or a bin /container, more actively managed (fast) system.
3. If you have a larger lot, piles or heaps of grass clippings and leaves, plus additives, are acceptable if maintained so that insects and animals are not a problem. This is the most widely used system.

4. Recommended bin or heap size is 5'x5'x5'. If only a small space is available, a minimum of 30" is needed if using a self-built or purchased container. A bin can be made from a circle of heavy mesh wire, old wooden pallets, or concrete blocks. They may also be purchased.



Store Bought:

Compost Tumbler



Durable Plastic Bin

Ten Steps To Success

Once the bin or space is prepared, stockpile dry organic materials and follow these ten simple steps:

1. Materials can be added in their original size, but for faster results, they can be chopped into smaller pieces to have more surface area for the microorganisms to work on.
 2. Dig up two inches of soil where the bin will stand. Add a small layer of finger-sized branches to allow air to enter from below.
 3. Provide a mixture by volume of about one part dry or woody material (carbon-rich) to one part wet material (nitrogen-rich).
 4. Layer wet and dry material alternately, each layer being no more than four inches thick. Occasionally sprinkle in soil and/or manure. If using food waste, be sure it is buried under other layers to avoid flies.
 5. As each layer is added, sprinkle lightly with water, ensuring moisture throughout the pile. The interior should be moist, not wet. During periods of heavy rain, an actively managed pile can be covered with a tarp.
 6. Once your container is full, top off the pile with two inches of soil.
 7. As decomposition takes place, the pile will begin to heat up. Interior heat can reach 160 degrees F and can be checked by inserting a metal or wooden rod, long-stemmed thermometer or your hand into the pile.
 8. Before the pile has cooled down to outside air temperatures, reactivate it by allowing more oxygen to penetrate the pile by turning it over or into a second bin. A special metal turning rod may also be purchased to thoroughly mix the pile and avoid the labor of turning when using the slow method.
 9. Turn pile twice a week for compost in 5-15 weeks or not at all for compost from the lower part of the pile in 12-18 months.
 10. Repeat these steps as needed until the mixture is soft, dark and crumbly.
- To use the finished compost, sift on a 1/2 inch mesh screen to remove large, semi-decomposed pieces. Return these to the bin for further breakdown or use to start a new pile.