

Composting

THE ESSENTIALS OF COMPOSTING ...

with these principles in mind, everyone can make compost.

Biological Process

The compost pile is really a teeming microbial farm. Bacteria, the most numerous and effective composters, are the first to break down plant tissue. Fungi and protozoans soon join the bacteria and, somewhat later in the cycle, centipedes, millipedes, beetles and earthworms all do their parts.

Materials

Anything growing in your yard is potential food for these tiny decomposers. Microorganisms use the CARBON in leaves or woodier wastes as an energy source. NITROGEN from grass or green materials provides the microbes with the raw element of proteins needed to build their bodies and multiply. (The more decomposers there are, the faster the compost pile will break down.)

Materials with a higher carbon content include "brown" materials like dried leaves, dried weeds, straw, sawdust, wood chips, or sticks/branches. Materials that have a high nitrogen content include "green" items like fresh grass clippings, green weeds, cow or horse manures, and fruit and vegetable trimmings from the kitchen.

What's the "best" recipe for compost? It depends! But a good rule of thumb is to build a pile that has about 50% green materials and 50% brown materials.

Surface Area

The more surface area the microorganisms have to work on, the faster the materials will decompose. Chopping, shredding, or chipping garden wastes before adding them to your compost pile will help speed up the decomposition process.

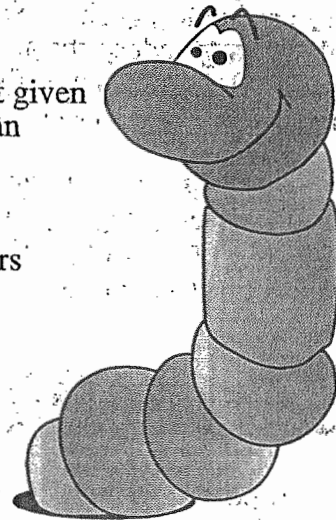
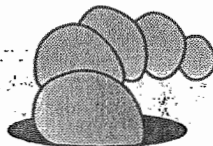
Moisture and Air

All living things on Earth, including the microbes in a compost pile, need a certain amount of water and air to sustain themselves. Microbes function best and composting happens the fastest when the compost heap is about as moist as a wrung out sponge. It is usually necessary to add water to the compost pile to keep the decomposition process going. The pile also needs to be turned periodically to get more air into the center of the pile.

Volume

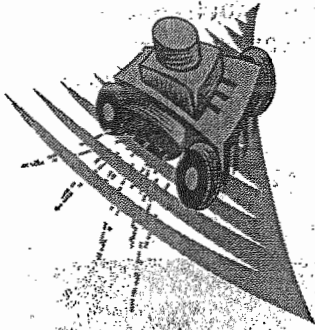
A large compost pile will insulate itself and hold the heat given off by decomposers. The pile's center will be warmer than its edges. The ideal compost pile size is 3' x 3' x 3' (one cubic yard). Piles smaller than this will have trouble holding this heat, while piles larger than 5 feet on a side don't allow enough air to reach the decomposers (microbes) at the center.

Note: These proportions are only important if your goal is to make compost quickly. Slower composting requires no exact proportions.



WHAT TO COMPOST

Just about anything that once grew in your yard can be composted.



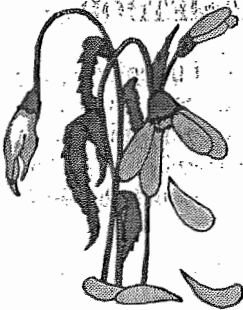
Green Materials:

- Fresh weeds
- Fresh plants and green prunings
- Grass clippings
- Manure or animal cage cleanings-horse, cow, rabbit, chicken (Note: Do not compost cat or dog droppings.)
- Fruit and vegetable trimmings from the kitchen or garden



Brown Materials:

- Fallen leaves
- Dry weeds, grass
- Chopped prunings, twigs
- Wood chips
- Hay or straw, saw dust
- Wood ashes (cold)

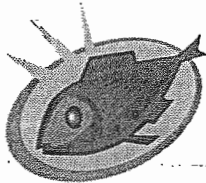


These Materials Can Also Be Composted:

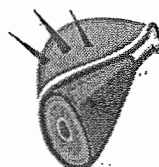
- Egg shells
- Old flower bouquets
- Coffee grounds (and filters), tea bags
- Excelsior from swamp cooler mats
- Paper towels, paper napkins

DO NOT COMPOST

To avoid problems with odors, pests, reseeding, or slowing down the compost process, don't put any of these items in your pile.

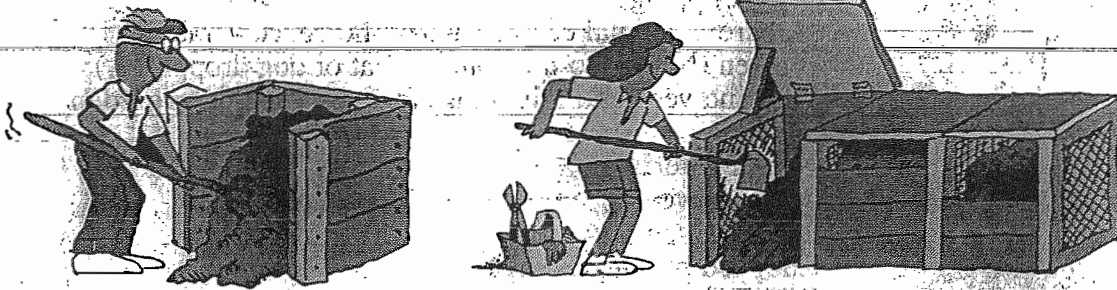


- Invasive weeds that spread by roots/runners — e.g. crabgrass, bamboo
- Meat, fish, dairy products, bones, fats, bread
- Large branches or pieces of wood
- Pressure treated woods
- Bar-b-que or coal ashes
- Dog or cat wastes
- Materials with thorns or spines-e.g. rose branches, cactus



HOW TO COMPOST

There are a number of different ways to compost — some take less time and effort, and some take more. The main things to consider are how much time you have to spend managing the pile, how much green waste your yard generates, and how quickly you want to have finished, usable compost. Here are two common methods.



HOLDING UNITS THE “NO FUSS” METHOD — Also known as “ADD AS YOU GO.”

This method uses one pile or bin — as a “holding unit” to contain garden wastes. This is also sometimes called the “static pile” method, because you don’t turn the pile very much.

Holding units, or static piles, are the least labor and least time-consuming way to compost.

HOW IT WORKS

- Build, or purchase, a bin—approximately three feet square. Or just start a pile.
- Fill it up, as materials are available.
Note: Take care not to add fresh grass clippings in large layers. Let clippings dry first, or mix with other materials.
- Water pile occasionally
- When bin is full, start a new pile
- To finish composting, it helps to remove bin and turn pile
- Or, just take material from the bottom of the pile

Advantages:

- Low maintenance, little turning required
- Doesn’t take much time or effort
- Good for lower volumes of material

Disadvantages:

- Slower method
- Not good if you have large volumes all year
- Hard to compost brushy, woody materials
- Seeds from weeds won’t be sterilized

TURNING UNITS THE “ACTIVE PILE” METHOD

Turning units are a series of three or more bins that allow garden wastes to be turned on a regular schedule. Turning units are appropriate for gardeners who have a larger volume of materials and/or want to produce compost faster.

HOW IT WORKS

- Get two or three bins ready. Each bin should be about one cubic yard in size.
- Fill one bin, layering green materials with brown. Try for 50% green, 50% brown.
- Water the pile as you add layers. Should be like a damp sponge.
- Pile will probably heat up. When it cools down—after a few days or a week, turn the pile into an empty bin and water again.
- Continue turning until pile no longer heats up and materials decomposed.

Advantages:

- Good for larger volumes of garden trimmings
- Produces compost quickly
- Sterilizes weed seeds and some plant diseases
- Better for woody materials

Disadvantages:

- Requires greater amount of time to manage—piles are turned and watered regularly
- Must accumulate about one cubic yard of material before building pile—in order

HELPFUL HINTS

When is it done? Finished compost is a dark brown, uniform, crumbly product with a pleasant, earthy aroma. There may be a few woody pieces that aren't completely composted—just toss them back into your new pile.

Location, location, location: Place your compost pile in a convenient place—close to a water source. Don't put piles under the eaves of your house—when it rains, you'll drown your pile.

Grass Clippings: Take care with fresh grass clippings. Add them in thin layers, or mix them with brown material when adding to the pile. Or dry them, before adding.

Feast and Famine? In the fall, homeowners have a lot of leaves (browns), but little green material. And in the summer, there is a lot of grass, but few brown materials. Many people start a pile for just leaves in the fall. They will start to decompose—but slowly. Then in the spring and summer months, the partly composted leaves are gradually mixed in with the grass clippings.

Chopping and chipping: It helps speed up the composting process if you can shred, chop, or chip materials—especially woody items, before adding to the pile.

Uses of compost: Compost can be used as a soil conditioner when dug into the soil in flower beds or vegetable gardens. It can also be used as a mulch on top of the soil.

TROUBLESHOOTING GUIDE FOR HOME COMPOSTING

Problem: Pile has a rotten or an ammonia-type odor.

Reason: Not enough air in center of pile, or too much moisture. An ammonia smell indicates that there is too much green material in the pile.

Solution: Turn the pile and add more dry (brown) material. Take care to add grass in thin layers.

Problem: Critters and/or fruit flies.

Reason: Fruit and vegetable trimmings are too close to the surface.

Solution: Make sure to bury these materials deep into the pile, and cover with other yard wastes.

Problem: Pile not decomposing.

Reason: Could be that the pile is too dry or doesn't have enough green materials.

Solution: Add water, if needed. Also may need to add more green materials, like grass or manures.

Problem: Pile is damp and earthy smelling, but won't heat up. (NOTE: This is not necessarily a problem! If the pile doesn't heat up, it is probably still decomposing — just not as quickly as possible.)

Reason: Pile could be too small—it needs to be at least one cubic yard in size. Or pile could need additional green material.

