

## TIPS FOR COMPOST SUCCESS

People who pile up oak leaves, grass clippings and other landscape debris in the backyard are frequently disappointed by how slowly the pile decomposes. What they don't understand is that creating the pile is only half the battle. Rapid decomposition, true composting, requires frequently manipulating the pile by turning it and keeping it moist. The following tips are important or useful things to remember when creating or maintaining a compost pile.

1. **Aeration** An un-turned compost pile will usually take three to four times longer to compost. A turned pile reaches higher temperatures which in turn destroys weed seeds and disease pathogens. Turn when the temperature in the center begins to cool below 104 degrees F. This introduces oxygen and un-decomposed material into the center and subsequently regenerates heat.
2. **Size** The volume of a compost pile (the combined depth, width and height of a pile) plays an important role in sustaining higher temperatures in a pile. It should be a minimum of 3 feet high by 3 feet wide.
3. **Moisture** A compost pile should remain 40-60% moist--compost should feel moist, but water cannot be squeezed out of it. Dry materials will not decompose efficiently. Excessive moisture forces out air and the pile becomes anaerobic and smelly.
4. **Particle Size** The smaller the size of the materials added to a compost pile, the faster decomposition will occur. Cut up big chunky stuff with a shredder or lawn mower. However, some bulky materials such as leaves, pine needles, chipped twigs and straw keep the compost pile from settling and allow air to enter.
5. **Nitrogen** Microbial activity is affected by the carbon to nitrogen ratio (C/N ratio) of the organic material. The ideal C/N ratio for compost microbes is 30/1. One example of a balanced compost "recipe" is mixing two parts grass clippings (C/N = 20/1) with one part leaves (C/N = 60/1). Because the microbes require a certain amount of nitrogen for their own metabolism and growth, a shortage of nitrogen will slow down the composting process considerably.

A nitrogen fertilizer can be substituted if an adequate supply of "green" organic materials is not available.

Amount of Nitrogen for 10 sq feet of compost, 6 inches deep

5 cups	6-6-6 fertilizer (6% nitrogen)
1 cup	Ammonium nitrate (33% nitrogen)
2 cups	Nitrate of soda (16% nitrogen)
3 cups	Blood Meal (12% nitrogen)
1 1/2 cups	Ammonium sulfate (21% nitrogen)

(Note: Sawdust is very high in carbon; add 6 cups of ammonium nitrate (or the equivalent) for every 100 pounds of dry sawdust.)

6. **Lime** During the initial stages of decomposition, organic acids are produced and the pH of the compost becomes acidic. However, as the process continues the acidity of the pile naturally decreases and the pH becomes neutral or slightly alkaline. Adding lime to the pile is therefore unnecessary unless large amounts of fruit wastes or pine needles are composted. High rates of lime convert ammonium nitrogen to ammonia gas, which leads to the loss of nitrogen from the pile. Wood ashes are a source of lime and should be added to a compost pile only in small amounts if at all.
7. **Location** Place compost unit or pile where it will be used and not interfere: near the garden or kitchen. Locate the pile near a water source and if possible, locate it where it will receive a little shade during the day. This is for your benefit. Building or turning a compost pile can be hard work!
8. **Inoculation** Studies have shown that there is no advantage in purchasing a commercial compost starter or inoculum. Yard trimmings contain enough microorganisms to get the process going. However, adding 1 inch of finished compost or leaf mold to every 12-18 inches of yard wastes will help "jump-start" the pile.
9. **Cover** If you are using an open bin or pile, a cover is optional. It will allow you a bit more control over temperature and moisture. You can use a piece of fiberglass or plastic tarp. Place the cover, so that it is supported above the pile, and not resting on top of the pile (or it will cut off the flow of oxygen). A cover can also help keep unwanted critters out of the pile.
10. **Kitchen Scraps** Anything that was once a plant (e.g. vegetable and fruit peelings, coffee grounds, tea bags, etc) can be added to a compost pile, but to avoid odors and rodents, don't use animal products. Egg shells (a source of calcium and lime) are fine, but not eggs. Moldy kitchen scraps are not a problem. Bury kitchen scraps at least 6 inches deep in the pile. Kitchen scraps contain enough moisture that extra watering will probably not be needed.
11. **Manures** Use manures from any barnyard animal, i.e. those that do not eat meat. Do not use feces from cats and dogs, as these often contain harmful organisms. Either rotted manures (ones that have started to decompose) or fresh manure can be used.
12. **Weeds** Weeds with immature seedheads can be added to a compost pile without a problem. It is not advisable to add large amounts of seed-laden weeds or diseased plants to the compost pile if the resulting compost is to be used in the garden. It is usually impossible to mix a pile well enough to bring all wastes to the center and assure complete destruction of seeds and disease organisms.
13. **Moss** Spanish Moss is compostable, but will probably be slow to decompose. Shredding or chopping it up in some fashion will make it (like everything else) compost faster. Some gardeners claim it makes a good mulch.