

COMPOSTING

WHY COMPOST?

- A compost pile is an ideal way to recycle organic wastes from your home and community. Composting turning kitchen garbage, garden residues, weeds, wood products, animal wastes and many other normally unused materials into a dark, sweet-smelling, garden fertilizer.
- If properly managed, a compost pile will kill pathogens and weed seeds.
- Compost will provide nutrients to your plants - not only nitrogen, potassium and phosphorus, but also the secondary and trace elements.
- Compost is a good way to improve the physical properties of your soil, such as drainage, aeration, ability to retain nutrients and water, both on sandy and clay soils.

HOW TO COMPOST

- Composting is a simple procedure, very similar to baking a cake. You have to have the right ingredients in the right proportion under the proper conditions, but there are only a few basic rules to follow. After a little practice, you should have no major problems with your compost pile.
- The rapidity of the composting process depends on:
 - Whether the material is shredded, and how finely. For a fast-working compost pile, all materials should be less than 1.5 inches long, but shredding is not necessary.
 - Humidity of the pile. The material should be about as damp as a squeezed-out sponge.
 - Size of the pile. Normally, the pile should be at least 3 feet high, 3 feet wide, and as long as you like. If it is smaller, the material will eventually decompose, but it will not heat up sufficiently to kill weed seeds and pathogens.
 - Presence of microorganisms. A good way to make sure that there is an adequate supply of microorganisms in the pile is to add good garden soil, rotted manure, or old compost.
- The carbon/nitrogen ratio. Materials with high levels of carbon relative to nitrogen include paper, straw, sawdust, and old leaves. Some food wastes, green plants, and grass clippings tend to be relatively high in nitrogen. The microorganisms in the soil that decompose organic matter need nitrogen for their bodies; when they are supplied with a high carbon source, they will use the nitrogen that is available in your garden soil. Therefore, it is not a good idea to add carbonaceous material to your garden unless you add some nitrogen with it, particularly during the growing season. Similarly, when making the compost pile, it is important to provide enough nitrogen to the microorganisms to enable them to decompose the carbonaceous material. The carbon/nitrogen ratio in the material about to be composted should be roughly 30:1, and should have reached 10:1 in the finished product. It is difficult to estimate exactly how much green matter or carbonaceous material to add; this is a matter of experience.

- How well the pile is insulated. It is important in cool regions to cover the pile or to compost in a container of some sort, especially during the fall and spring. The pile can be covered with a layer of soil, leaves, straw, or plastic.
- Frequency of turning. Usually the more frequently the pile is turned, the faster is the composting process. When making a fast, two-week compost, the pile is turned every 3 days, but it can be turned less frequently depending on the amount of time you have to spend and how fast you want to compost. If the pile does not seem to be working, it is a good idea to turn and remake the pile, perhaps adding some green matter or wetting it down if it seems too dry.
- The more frequent the turning, and the faster the composting process, the greater is the tendency to lose nitrogen, although other nutrients will tend to be conserved.
- Nettles, comfrey, or horsetail added to the compost or put in the blender with some water and poured onto the pile can significantly speed up the composting process.

SOURCES OF N, P, K

Nitrogen Feathers, hair, blood meal, tea leaves, wool, manure, green plants, and urine (A good source of nitrogen and potassium, it's sterile when it leaves the body, so is safe to use. It can be collected in a bucket and poured on the compost pile or garden after being diluted.)

Potassium Urine (see above), banana peels, oak and fruit tree leaves, wood ash (add when compost is turned; if it is added with fresh nitrogenous material, the alkali in the ash will lead to nitrogen loss).

Phosphorus Rock phosphate, fish wastes, bone meal.

ABOUT CONTAINERS

- Useful for protection of the heap against the cold and rain; this is important for small piles or those made during the spring, fall, or winter.
- May be necessary in exposed backyards for aesthetic purposes.
- Some support is helpful when turning or constructing the heap so that the material piles up neatly.
- A box of rough boards, with the front panel hooked or hinged on so that it can be taken off for easy turning of the pile. Or, a three-sided bin of brick or stone can be used. For very small amounts of compost, a bottomless garbage can with aeration holes in the top is often used.

CONSTRUCTING THE COMPOST PILE

The best location for a compost pile is a well-drained site sheltered from the wind and sun, and where it is most convenient to take organic materials.

Insulate pile with a layer of soil, straw, boards or plastic to retain heat and cut out smells.

The pile can be constructed either by alternating thin layers of high-carbon material, high-nitrogen material, soil, and fertilizer. Or, the materials can be mixed together as you go along.

Make sure you wet each layer of carbonaceous material so that it is as damp as a squeezed-out sponge.

Alkaline materials such as lime or wood ash, when mixed with undecomposed nitrogenous material, will lead to loss of nitrogen.

Adding phosphorus will tend to conserve nitrogen in the pile.

A layer of spaced stones or sticks laid crossways on the ground will encourage aeration of the pile. Leave space between the stones for earthworms to pass from the soil into the pile. You may find it difficult to turn the bottom layer of the pile if the sticks are too small. Another way to provide aeration is to loosen up the soil before laying the pile.

