

rise and stabilizes around 158°F. (70°C) followed by a gradual cooling to the temperature of the surrounding air. When the temperature reaches its peak, the pH becomes ore alkaline (7.5 to 8.5), and when the process is completed, the pH is generally neutral to very slightly alkaline. Temperatures should not be allowed to remain over 158°F or 20°C for any prolonged length of time as beneficial bacteria and fungi may be destroyed. This is why frequent turning of the pile during the second stage is essential to allow aeration.

Water is important to composting. Each layer of compost and soil should be watered thoroughly before the next layer is applied. The top of the pile should be dish-shaped to hold rain water and prevent leaching of valuable nutrients. Water also hastens decomposition. A compost pile should always be damp but not soggy. If the water content is below 40 percent (wet weight), organic matter will not decompose rapidly. If it is above 60 percent, decomposition becomes anaerobic causing the bacteria to run short of oxygen which will produce a foul odor and a yellow-slimy mass.

Grinding or chipping organic matter to be composted speeds decomposition by increasing its exposed surface. This also provides more air space between the particles enhancing their exposure to microbial action. If a grinding machine is not available, the organic matter may be spread on the ground and run through with a rotary mower that has been set as high as possible.

CONSTRUCTING THE COMPOST PILE

There are many different ways to build compost heaps, and each has its advantages or disadvantages. The composition of the materials used and the procedures followed will determine the quality of the compost and the length of time required for it to ripen.

Composting should not be approached in a haphazard manner if the desired results are to be obtained. Properly constructed compost piles decompose, contain a maximum of plant nutrients, and are free of weeds, insects and diseases. Some nutrients are present in compost, but the quantity is generally not sufficient for the nutrient requirements of most garden plants; therefore, the addition of fertilizer minerals (especially nitrogen) will make the compost a more beneficial product. The advantage of mixing fertilizer with compost is that the plant nutrients will be more readily available to garden crops than when the same fertilizer is applied directly to the soil.

When to Begin: Constructing a compost pile may be a year-round project because organic matter accumulates continually. But fall is the best time of the year to begin. First, larger quantities of organic materials are available, and it is best to build the compost pile all at one time to insure a more even decomposition. Second, weed seed become sufficiently moist to swell, freeze, and be destroyed during winter months.

Many gardeners maintain two or even three compost heaps at the same time. One pile is begun in the fall and the other in the spring as a place to deposit debris which collects during winter months. They provide a place to put lawn clippings and other prunings. The third compost pile may be started if the first pile has been completely used and the second pile has not completed ripening. By working in this manner compost is available at all times.

Size of Compost Piles: The size of each pile will vary with the amount of compost desired, amount of organic matter available, and space. Generally a