

all decomposing organic matter, will require an abundance of nitrogen for complete decomposition (see note for "clippings").

Manures can be excellent components of compost, but go easy as some may have a high "salt" content. If there is an odor problem, applications of lime will generally remedy this situation.

Sawdust has limited plant nutrient value depending on the tree species. Sawdust may be obtained free of charge or at a reasonable cost. Decomposed sawdust is preferable to fresh sawdust. To speed decomposition, fertilizers high in nitrogen content should be applied to the sawdust at the rate of approximately 10 pounds of ammonium nitrate per 500 pounds of sawdust (one cup per bushel).

Peat moss is a source of organic matter usually free of weeds, insects, and diseases, and it has a high water-holding capacity. However, because of the expense, peat moss is not practical. It has no plant nutrient value and requires additional fertilizer and lime for proper decomposition.

Paper can be a source of organic matter. It should be shredded before use. The biggest disadvantage in using paper is that it is slow to decompose and requires large amounts of additional nitrogen. Do not use colored print.

Soil, preferably a dark loam topsoil material, is an essential component of any compost pile (see the section "Building the Pile").

NUTRIENTS

A mixed fertilizer containing nitrogen, phosphate, and potash (such as 5-10-10 or 10-10-10) should be applied to the compost at the rate of one pound per cubic foot of compost (one cup per bushel of compost). A compost pile 4 ft. x 6 ft. x 8 ft. contains about 200 cubic feet of compost and requires about 200 pounds of fertilizer. Apply the fertilizer on top of each layer of organic matter as described in the section on building a compost pile. Unprocessed fertilizers can be substituted.

Though most compost piles are only slightly acid to neutral in reaction after ripening, ground lime (preferably dolomitic) should be added at the rate of 40 pounds per 4 ft. x 6 ft. x 8 ft. compost pile to provide the necessary calcium and magnesium. The lime is applied at the same time as the fertilizer. Lime also aids in keeping unpleasant odors in check.

Nitrogen fertilizers are essential to decomposition, and the rate of decomposition may depend upon this factor, especially if paper or other coarse and woody materials comprises a large percent of the organic material.

DECOMPOSITION

The length of time required to complete decomposition and produce humus will vary with the materials used and the attendance it receives during the decomposition process.

Temperature is an important factor in decomposition and may be divided into two stages: the mesophilic stage and the thermophilic stage. When the compost pile is first constructed it is in the mesophilic stage, and the composting material is at ambient temperature, that is, the same as the surrounding air. At this point the pH of the material is slightly acid.

As the temperature begins to rise (within two or three days) decomposition begins, and when the temperature reaches 104° F. the second stage takes place and decomposition is accelerated. The pH of the mass then lowers to around 4.5 to 5.0. The temperature continues to