



## COMPOST

Problems that home gardeners share are maintaining the organic matter content of the soil and disposing of waste organic materials that accumulate on home grounds. Composting converts organic wastes into a form that is useful as an amendment to soil, enabling a gardener to conserve and recycle plant nutrients and organic matter that would otherwise be wasted.

The organic matter supplied by compost is valuable in improving the fertility and structure of soil. Compost supplies energy and nutrients to soil microorganisms that recycle the nutrients held in the compost and eventually make them available to plants. The compost itself will improve the physical condition of soils, making heavy, clay soils easier to work and increasing the water holding capacity of sandy soils. Compost also has the characteristic of holding plant nutrients in a form available to plants. Many soils in Massachusetts are very sandy, and nutrients are easily leached from the soil. These soils would certainly benefit from liberal applications of compost.

### What Materials Can Be Composted?

Almost any organic material that accumulates in home gardens and on grounds can be composted. Leaves and needles, lawn clippings, weeds, garden residue, hedge trimmings, vegetable and fruit garbage, and even shredded paper and sawdust can be readily composted. Woody waste materials, such as tree branches, should not be included in a compost pile unless they are first shredded. If not shredded and not included with some green succulent material or added nitrogen, woody materials take too long to decompose. Branches larger than one inch in diameter should not be used. Chopping leaves with a lawn mower and adding some nitrogen fertilizer will shorten the decomposition time considerably.

It is not advisable to include meat, bones, and fat in a compost heap since they attract dogs and vermin, thus creating a nuisance. Diseased plant material should be excluded.

### Building the Compost Pile

There is no special recipe for making compost. Procedures will vary according to the materials available and the needs of the individual. However, certain requirements must be met for the process to occur properly and within a practical period of time. A forgotten heap of garden trash and leaves is not a compost pile, although this material would eventually rot.

Ideally, the compost pile should be located in partial shade and near a supply of water. To ensure adequate bulk to sustain rapid decomposition, the pile should be at least 3' by 3' by 4'. It takes about 20 bushels of raw organic material to make a pile this size that will yield about 8 to 9 bushels of finished compost.

Start the pile with a 6" to 10" layer of loosely packed organic material, wet it thoroughly (do not saturate) and scatter about one cup of a complete (10-10-10, 5-10-10, 12-12-12, etc.) fertilizer over each 25 square feet of surface. Cover this with a 1" layer of soil. Continue making layers until a pile of 4' to 6' tall has been built. For



convenience, this height should not be exceeded, but the pile can be as long as necessary to accommodate the material at hand. The top of the pile should be concave to help catch water and to prevent runoff. It is not absolutely necessary to add fertilizer but the added nitrogen speeds up the process, and phosphorus gives the finished product a more balanced nutrient content.

### Care of the Pile

The type of the material used, the season of the year, and the frequency of turning the pile will affect the time required to achieve a useful product. Anywhere from 3 months to a year can be necessary.

It is important to keep the pile well moistened throughout and to turn at least every 30 days to aerate it and ensure even decomposition of the material. When turning, attempt to take material from the outside and have it end up on the inside and vice versa. By monitoring the temperature of the interior pile, you can tell the optimum time for turning. The interior will get almost too hot to touch (140-160 degrees) if the process is occurring properly. When it cools to the outside temperature, it is time to turn. Do not pack the material down any more than needed to keep the pile standing.

The compost is finished when it turns almost black and most of the original materials are no longer recognizable or when fibrous material breaks up readily when moved.

### Using Compost

Compost is sometimes referred to as “synthetic manure” and is an excellent substitute where animal manure is not available.

It is not a substitute for mineral fertilizer for it is lacking in phosphorus. Compost is easily worked into the ground and can be applied before tilling the garden, or it can be raked in after soil preparation. A moderate rate of application is about 2 to 4 bushels per 100 square feet. At this rate the compost will add a significant amount of organic matter to the soil and, if prepared as suggested, will supply about a half pound each of the major fertilizer elements (nitrogen, phosphorus and potassium).

Compost can be used as a substitute for peat moss. It is a beneficial amendment when mixed with soil for use in potting mixes or when transplanting shrubs and trees.

Roberta A. Clark, Extension Educator

Revised 8/10

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