

Massachusetts Master Gardener Association

FACT SHEET



Have Gardening Questions? The **Master Gardener Help Line Hours** are 10 a.m. – 2 p.m. on Fridays (all year) as well as Wednesdays (March-November) and Mondays (April-October).
Phone: 617-933-4929 Email: mghelpline@masshort.org.

Composting 101

Why compost?

By composting your organic wastes you transform material that would otherwise go down the disposal or into the garbage into your garden's best additive. The value of compost lies in the enzymes, carbon, microbes and fungi it adds to the soil, as well as its ability to absorb and hold water. Brown matter: carbon sources such as dried leaves, straw, shredded black and white newspaper – is mixed with green material: nitrogen sources such as fruit and vegetable wastes, garden trimmings, coffee grounds, eggshells. The microbes in the compost convert organic nitrogen into the inorganic nitrogen compounds that are easily used by plants.

The beneficial fungi in compost clump together pieces of soil into structures called aggregates. These aggregates keep minerals, carbon and essential nutrients near the plant roots. Aggregates are irregularly shaped, creating spaces between the clumps which allow air and water to be readily available to the plants roots. This is how compost adds structure and life to the soil. (Fig. 1)

Compost is not a strong fertilizer; usually its N-P-K (nitrogen, phosphorous and potassium) value is less than 2-1-2. This nitrogen conversion in compost occurs slowly and consistently over a long period of time eliminating excess nitrogen that may run off into ground water and streams.

How to Make Compost Composting is very simple, it's happening everywhere, everyday – in the leaf litter of our woodlands, in

the grass clippings of your lawn and the garden mulch that disappears from your beds each year.

Compost is made by adding one part green material (Nitrogen) to three parts brown material (Carbon). Layer or mix the parts, adding a shovelful of rich soil or completed compost to the pile. The soil or completed compost adds needed microorganisms and fungi. Add water to the pile only to keep it moist – wet as a well wrung out sponge.

Turn the pile to add oxygen because most microorganisms require oxygen and to mix in the unbroken down parts into the hot middle of the pile. If you choose not to turn the pile, it will take longer for the pile to break down into usable compost. Do not add weed seed heads or diseased plant material into the compost pile. Home compost piles seldom reach an internal temperature of 140-160°F needed to kill seeds and disease pathogens.

Green Materials: grass clippings, fresh leaves, seedless weeds, fruit and vegetables waste, egg shells, coffee grounds, tea bag and garden trimmings.

Brown Materials: dry leaves, shredded black and white newspaper, old bread, rice or pasta (but not with a meat sauce), paper towels and cardboard, sawdust, pine needles, chipped branches and brush.

Do Not Add oil, fat, meat, bones, dairy products, weeds gone to seed or diseased plants.



Fig 1

The Massachusetts Master Gardener Association is a non-profit organization whose mission is to share knowledge and experience with the public through outreach programs in education, horticulture and gardening; to provide the Master Gardener Training Program to interested members of the public; and to provide graduates of the Master Gardener Training Program with educational and practical opportunities to extend their knowledge and interests in gardening and related topics. <http://www.massmastergardeners.org/>

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Soil Testing

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