



BLOSSOM Organic Garden Store



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Organic Growing Supplies for the Maritime Northwest

Gardening Information Leaflet (GIL) No. 3

\$5.00

**“DOING IT RIGHT”
THE MINERAL-AUGMENTED ORGANIC WAY
*The Only Way to Grow!***

COMPOST MAKING BY THE S.P.A.M. SANDWICH METHOD

Composting is a human-assisted, natural process. Properly made compost requires certain conditions and ingredients. Composting is much like baking a layer cake and can easily flop. To compost means “to put together” *diverse* materials (as with making a good salad) and thus to “compose” them for subsequent de-composing. **“Hot” (aerobic or oxygenated) composting produces the best product for growing healthy, properly nourished plants having the highest built-in pest and disease resistance.**

The making of quality, humanized humus requires reaching a certain stage of decomposition through “cooking” diverse ingredients in a “biological fire.” This “fire” is generated by feverishly working and rapidly reproducing microorganisms under optimal temperature, moisture, aeration, nutrient and fuel (food) conditions. A minimal pile size (one cubic yard, or 3 ft by 3 ft by 3 ft) is needed to insulate the succession of working organisms and allow heat build-up to about 130 to 160 degrees. A temperature of 140 degrees Fahrenheit is optimal. This heat build-up cannot occur in sheet composting, low piles, or poorly constructed piles using a low diversity of materials such as leaves or all grass clippings. The best initial composition will include animal manures or animal by-products and rapid construction of a complete pile over a period of a few days or less.

Almost anything that “once lived” (original definition of organic) can be composted, except meat and fats and diseased plants; although these too can be buried deeply within a properly built “hot” pile and composted without harmful consequences. A properly heated and turned pile will pasteurize the materials and kill weed seeds. Ideally the various materials would be chopped and all mixed together. However, this is unnecessary because mixing is accomplished by slicing and turning the initially layered or sandwiched ingredients. Turning adds air which speeds up the “cooking” process. The more turning, the quicker the “finished” product, but also the more work.

Usually only a few turnings are needed (perhaps weekly?). In turning and mixing, attempt to cycle all exterior parts to the center of the pile for adequate heating and complete decomposition to a point where the original materials are unrecognizable. This is most easily done using a circular wire bin that can be removed for access to all sides of the pile. Composting proceeds more rapidly in warm weather. More time is needed for overwintering piles to decompose.

The S.P.A.M. Sandwich Method

A simple and memorable formula for layering the compostable materials has been devised at BLOSSOM Organic Garden Store as a result of much reading, thinking, consulting and experimenting to produce a method that allows you to easily keep track of the proper sequencing and thickness as you make the compost pile. Generally this formula applies only to construction of the initial pile. Ideally, you need a carbon to nitrogen (or carbohydrate to protein) ratio of about 25 or 30 to 1 for micro-organisms to thrive and quickly breakdown the compostable materials. The term compost applies to essentially the finished product as opposed to the various materials going into the pile. The carbon to nitrogen (or C:N) ratio of the finished product (stable humus) will be approximately 10 or 12 parts carbon to 1 part nitrogen. Air or oxygen content is critical to the aerobic decomposition process and will usually go down in an unturned pile with time.

In part this will be due to the smaller particles nestling together and the weight of the upper materials compacting downward. The amount and percentage of moisture, which is likely to change with conditions, is a big factor in aeration. Microbes must have water to function. High moisture content squeezes out air; whereas, evaporation or drainage increasingly allows some air to filter into the pile even as it collapses from weight or increasing density. Moisture content of the pile is very important for beneficial microbe survival and activity. The pile should stay at sponge-damp wetness and be protected in winter from excessive rains that will drown out the “fire” and partially leach out precious nutrients. Water is best applied to the dry or brown layer which can soak it up. Brown materials should be at least as much as green materials or up to twice as much if there is little or no litter included with any manure applied.

Constructing the S.P.A.M. Sandwich - Layer I is **soil (S)** which inoculates the pile with lots of microbes, reduces nitrogen losses, and dampens too high temperatures. Layer II is **plant (P)** material which is 50 to 65% dry or dead and 35 to 50% fresh or soft matter. Layer III is **animal (A)** material, such as livestock manure or animal and fish by-products that are nitrogen rich. Layer IV is **mineral (M)**, such as rock phosphate, greensand, glacial rock dust, lime, etc. These minerals are best applied by mixing them into the soil applied as the next (S) layer. Our **Compost Fortifier Mix** (see GIL #2) is a convenient way to add all these ingredients together. Wood ashes contribute potassium, but don't overdo them. Once the first Sandwich of S.P.A.M. is built, repeat the sandwich layers 4 or 5 more times to a height of 4 or 5 ft. The pile will sink and cook down to about half its original size.

