

COMPOSTING BASICS: BRINGING ORGANICS TOGETHER

By J. Howard Garrett

The word compost comes from two Latin words meaning "bring together." The best composts are those that are made from several ingredients.

There are many acceptable ways to build compost piles, but the simplest systems are usually the best. I just pile the material on the ground or on a concrete slab. If you choose to use a container, you can use hog wire, lumber, wooden pallets, cinder blocks or any materials that will hold a volume of about 4 by 4 feet with a height of 3 feet.

Many materials can be used to make compost. Some include grass clippings, leaves of all kinds, sawdust, spent plants, weeds, tree chips and pine needles. The materials should be chipped or shredded in various sizes and thoroughly mixed together. Compost piles that contain nothing but one particle size will not breathe properly.

Layering the ingredients, as most books recommend, is unnecessary unless it will help get the proportions right (about 75 percent carbon, which is woody waste, to 25 percent nitrogen, such as grass clippings). After the first turning, the layers won't be there anymore.

It's a good idea to add some native soil (a couple of shovels full) to each pile to inoculate the pile with native-soil microorganisms. To thrive, microorganisms need:

1. An energy source, which is any carbon material such as leaves or wood.
2. A nitrogen source, such as manure, green foliage, or fertilizer.
3. Vitamins, which are stored in most living tissue.
4. Moisture.

Watering the pile thoroughly is important and best done while mixing the original ingredients together. The proper moisture level is between 40 to 50 percent, similar to the wetness of a squeezed-out sponge. Piles that are too wet will be anaerobic and not decay properly. Piles that are too dry won't compost properly or fast enough. Once the pile is evenly moist, it's easy to keep it there. Give it a little water during dry periods. If you have ants in your compost pile, it's too dry.

Turning the pile is important. Turning keeps the mixture aerobic by helping oxygen penetrate the material. Turning also ensures that all the ingredients are exposed to the beneficial fungi, bacteria and other microorganisms that work to break the raw material

down into humus. In a properly "cooking" compost pile, the heat of approximately 150 degrees kills the weed seed and harmful pathogens but stimulates the beneficial microorganisms.

The entire process takes anywhere from two months to a year, depending on how often the pile is turned. If the ingredients contain a high percentage of wood chips, the process may take even longer. It's interesting that softwood sawdust and chips break down more slowly than hardwood.

Editor's note: This article was adapted with permission from J. Howard Garrett's "Organic Manual," published by The Summit Group, Fort Worth, TX.



"Greenwaste" can be processed and used as mulch or composted to make a valuable soil amendment. Photo courtesy: Romer Brothers Tree Service

SOURCE REDUCTION BEGINS WITH PROPER PRACTICES

In the recycling industry, "source reduction" has become a major buzzword, similar to "IPM" in the landscape profession. "The most practical and economically feasible way to reduce greenwaste is by lessening its production at the source," says Tom Larson, president of Integrated Urban Forestry in Laguna Hills, CA.

"Proper source reduction techniques can prevent remove up to 30 percent of potential greenwaste from entering the solid waste stream," Larson explains. "With source reduction, landscape maintenance costs are reduced without compromising landscape performance."

As a horticultural professional, there are several ways you can reduce green waste at the source. Appropriate plant selection, proper irrigation, precise fertilization, grasscycling and sound pruning techniques all will help you minimize biomass, growth that needs to be pruned, mowed, hauled, composted or discarded.

Overstimulating growth occurs after fertilizing with soluble sources of nitrogen, such as sulfate of ammonia and ammonium nitrate. Soluble nitrogen, while appropriate for a quick green-up during cool weather, should be used judiciously.

Slow-release fertilizers, such as sulfur-coated urea and many of the newer polymer-coated fertilizers, offer an even release of nitrogen without excessive growth. Organic fertilizers, based on substances such as animal manures, sewage sludges and compost, are a "natural" way to get a slow release of nitrogen, sometimes throughout the entire growing season.

Grasscycling is becoming an option for more and more companies that offer lawn maintenance services. Although early mulching mowers had problems with clumping and uneven distribution, new technology has made the mulching mower a viable way to reduce green waste at the source.

"Our company first began using mulching mowers three or four years ago," says Bob Thompson, manager at BLT Landscape in Dallas, TX. Headed by Texas Association of Landscape Contractors Past President Larry Brinkley, the installation/maintenance company "saw the writing on the wall."

"We had to sneak the mowers in with our first accounts," laughs Thompson. "But last year, we converted totally to mulching mowers. We still have clients that say they don't do as good of a job, but the vast majority can't tell the difference."

Proper pruning is a major step in reducing green waste at its source. Although selectively pruning back individual branches to a growth bud initially can take more time, your investment will be rewarded with less greenery generated on a regular basis and a healthier shrub in the long run. If you have shrubs that *must* be sheared, plant growth regulators can help slow down new growth and resultant biomass.

"Certainly, there is a tremendous reduction in biomass using proper pruning practices," says Eric Ulrich, manager of forestry for the Metropolitan Edison Company in Reading, PA. Ulrich points out that utility arborists are now "sold" on directional pruning, target pruning, and natural pruning, as opposed to the "rounding" and topping practices of the past. Directional pruning simply means removing major branches (to a crotch or another branch) instead of simply leaving a stub at a certain height.

Greenwaste is estimated to be anywhere from 15 to 30 percent of total landfill space. If source reduction can reduce green waste by 30 percent, landscape professionals can decrease the pressure on our existing landfills by almost 10 percent. This can be accomplished painlessly, cost-effectively and easily, merely by following proper landscape maintenance practices.