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Managing Organic Refuse: Options for Green Industry Professionals

*Gary L. Wade, Extension Horticulturist
Department of Horticulture, The University of Georgia*

On September 1, 1996, state legislation in Georgia banned organic plant materials (landscape trimmings, grass clippings, dead plants, etc.) from disposal facilities having liners and leachate collection systems requiring vertical expansion. Other landfills that continued to receive these materials were required to sort, grind, recycle or compost them. In other words, local municipalities were required to manage – not landfill or stockpile – organic materials. These increased management costs resulted in higher tipping fees for landscape wastes at many landfills, while others stopped accepting yard waste altogether.

Green Industry professionals either have to pay a tipping fee to the municipality to dispose of organic materials, or they have to manage and dispose of the materials themselves. In most municipalities, landscapers are prohibited from stockpiling organic materials for long periods. If they do, local and state authorities may consider the property a landfill and may apply laws and ordinances accordingly.

This publication explains some of the options available to Green Industry professionals for dealing with these organic materials.

Land Application

Applying degradable organic materials, such as chipped woody brush, leaves, grass clippings, dead plants and old potting soil, to the soil surface is perfectly acceptable. In many northern states, it is common practice for farmers to receive organic materials as land application and to disk these materials into the soil to improve soil tilth. Some landscape firms supply farmers with dolomitic lime, as needed, in return for helping them recycle these materials.

Mulch

Chipped woody brush and shredded leaves make an excellent mulch for adding back to the landscape. Although they may not be as visually attractive as pine bark or pine straw, shredded leaves and chipped wood provide all the benefits of mulch and are particularly useful in the less visible areas of a landscape. These materials may also be used as a base under more visually appealing mulches to reduce mulching costs.

Low-Tech Composting

The first step in composting is to grind woody brush. Some landscape companies have a tree service division and their own chipper. If not, hiring a tree-service company to grind woody brush periodically may be an option. Renting a chipper from a rent-all company and grinding woody materials on-site is another option, although it may pose a liability problem if untrained employees are required to operate the equipment.

Most landscape companies cannot afford tub grinders and do not have the volume of wood waste to justify having one. However, there are businesses with portable tub grinders that will travel to a site and grind wood waste for a daily fee. The law is not clear about how often wood wastes must be ground or what volume can be stock-piled before grinding. Grinding frequency depends on the volume of wood waste generated as well as local ordinances.

Passive Composting

Most landscape companies will do passive composting, which means the ground organic materials are placed in piles and turned once or twice a month with a front-end loader. Avoid building the pile higher than 10 feet because it will pack down and undergo anaerobic decomposition, which produces odors. An alternative to piling the materials in a haystack-like shape would be to expand the length of the pile to form a windrow. Windrows should be at least 3 feet high and 3 feet wide for adequate decomposition to occur.

The best mixture of organics for decomposition is a 30:1 carbon to nitrogen ratio. A simple way to achieve this is to combine four parts brown material, such as leaves and chipped brush, with one part green material, like fresh green trimmings and grass clippings. Livestock manure can be added as a nitrogen source when greens are not available (fall leaf season, for instance). Livestock manure also can be used to inoculate the pile with microorganisms to help speed up decomposition. Nitrogen fertilizer, such as ammonium nitrate, can also be used to increase the nitrogen content of the pile. Broadcast 2 cups of ammonium nitrate over each cubic yard of leaves.

Locate the pile near a water source so moisture can be added during dry periods. During decomposition, materials should have the consistency of a wrung-out sponge – not too wet or too dry.

Compost is an excellent soil amendment, provided it is well decomposed (meaning that most of the original organic materials are no longer recognizable). Three inches of compost applied to the soil surface and incorporated into the top 12 inches of soil will result in a 25 percent increase in organic matter, an ideal level for improving a soil's water and nutrient holding capacity.

Avoid using un-decomposed organic materials as soil amendments because microorganisms use nitrogen in the soil as their energy source to break down organic materials. As a result, lower levels of nitrogen in the soil may cause plants to appear pale green and nutrient deficient.

Recycling

Recycling organic materials into compost also has an economic benefit. Commercially available compost often costs between \$20 and \$30 per cubic yard.

The regulatory agency on composting is the Environmental Protection Division, Land Protection Branch of the Georgia Department of Natural Resources (toll free: 888-373-5947), http://www.gaepd.org/Documents/index_land.html. According to DNR officials, as long as the compost made is used on the property of the owner or on properties managed by the owner, the compost is not sold, and the composting operation presents no threat to surrounding groundwater via run-off, no permits or fees are required. However, be sure to check with your local county government to determine if there are any local ordinances that must be met before composting materials.