

Composting

Texas A&M Extension Service

Chapter 5, Utilization of Compost and Other Landscape Refuse

Recycling organic materials in the home landscape makes sense, not just because it helps save our valuable landfill space, but because it will actually improve our soils and growing conditions in our home environment.

With the exception of large woody brush and stumps, we can recycle most of the organic materials generated from our home grounds each year.

Fall leaves can be used as a major ingredient in compost, or they may be shredded and used as a mulch in the garden or landscape. A blanket of fall leaves can be used to insulate tender vegetation from winter freezes.

Compost is a wonderful soil amendment for the vegetable garden or landscape, improving soil structure and texture while adding valuable plant nutrients. It can also be used as an amendment in potting soils or as a top-dressing on lawn and ornamental areas.

Even grass clippings left on the lawn area have been shown to add valuable nutrients back to the turf without contributing harmful thatch as we once thought.

In this chapter, we'll discuss the utilization of finished compost as well as three additional recycling options: mulching, cold protection and grasscycling.

Compost: Black Gold for Soils

The end result of the composting process is a rich earthy-smelling humus. Most finished compost has a pH near neutral and contains low levels of nitrogen, phosphorus, potassium. When incorporated into the soil, compost acts like a slow-release fertilizer, releasing small amounts of plant nutrients slowly throughout the growing season. It also helps latch onto nutrients added in the form of fertilizer and prevents them from leaching out of the soil.

In addition to benefiting soil fertility, compost improves the structure and texture of our native soils. It helps clay soils drain and improves soil porosity, allowing plant roots to easily penetrate the soil. When added to sandy soils, compost helps hold water and plant nutrients, making them available to plant roots on demand.

Compost also attracts earthworms by serving as their food source. Earthworms enhance soil structure by burrowing and aerating the soil. Their tunneling also brings valuable minerals from the subsoil up to the

plant root zone.

Avoid Using Compost Before It Is Ready

You may be tempted to use compost as a soil conditioner before it is ready. If the organic materials have not completely decomposed, plants growing in the amended soil may turn yellow and appear stressed. As the decomposition process continues near plant roots, soil micro-organisms compete with plants for nitrogen. Organic acids in undecomposed compost may also be harmful to plant roots.

Compost is finished when the original organic materials are no longer recognizable and are no longer generating a significant amount of heat. Finished compost should have a dark, crumbly appearance and an earthy odor.

Using Compost

Compost is best used as a soil conditioner in the vegetable garden and when planting ornamental plants. Broadcast compost one to two inches deep over the planting area and incorporate it into the top six to eight inches of soil.

It requires about 1/2 cubic yard of compost (6 bushels) to cover 100 square feet to a 1-inch depth.

Avoid placing compost and other organic amendments in individual planting holes because research has shown that it results in a significant structural difference in the soil within the planting hole and the surrounding native soil. Fine-textured organic materials, like compost, added to the planting hole, may act like a sponge in a bathtub, holding excess moisture while discouraging plant roots from growing outward and exploring the native soil. Therefore, it's best to amend the entire bed when possible instead of an individual hole.

A thin layer of compost (1/2 to 1 inch) can also be applied as a mulch around established ornamental plants or directly beneath mulches. Compost will slowly release nutrients to the plants while protecting roots from temperature extremes and erosion. However, avoid disturbing or injuring the roots of established ornamental plants when adding compost.

Compost can also be incorporated into the soil for new turf areas or used as a top-dressing on established lawn areas. On established lawns, verticutting or aerating will help improve the infiltration of compost to the root area. Then use a rake to help distribute the compost into the crevices.

Still another use for compost is as a potting soil for container plants. For best results, mix it 1/3 by volume with other amendments, such as milled pine bark and sand. Avoid using pure compost as a potting soil because organic salts leaching from the material may damage roots.

Mulching with Fall Leaves

An excellent way of utilizing fall leaves, in addition to composting them, is to use them as a mulch in the vegetable garden or around ornamental plantings. Mother Nature has been mulching with leaves for millions of years, and it's time we followed her example.

Mulches help hold moisture in our soils and prevent wet/dry fluctuations in soil moisture. They also help insulate the soil and protect the roots of plants from severe winter cold and intense summer heat. Mulches also help prevent certain soil-borne diseases and some weeds.

Shredded leaves stay seated better on the soil surface than whole leaves that tend to blow around. If you don't have a shredder, an easy way to shred leaves is to place them in small windrows, approximately three feet wide and one foot high. Then, with the lawnmower set in the highest wheel setting, run over the row. A bagger attached to the mower or a tarp laid along side the windrow will help collect the leaves efficiently.

Place leaves three inches deep under trees and shrubs, and extend the mulch two to three times the canopy spread if possible. A thick layer of mulch (> 3 inches) is not recommended because it will encourage roots to grow out of the native soil into the mulch layer where they will become more susceptible to damage from winter freezes and intense summer heat.

Shredding will also accelerate the decomposition of leaves added to the compost pile.

Save Some Leaves for Cold Protection in Winter

Fall leaves provide a better insulation from winter freezes than sheets or blankets that are commonly used, so save a few bags of fall leaves for this purpose.

A good way to protect tender vegetation is to shape a cylinder of chicken wire large enough to fit over the plant, then fill it with leaves. The cylinder will help hold leaves in place and prevent them from blowing off if strong winds accompany the cold.

Grasscycling

Grasscycling is the newest concept in landscape recycling and one of the easiest to do. It simply involves letting the clippings fall back onto the lawn area when mowing (Don't Bag It™).

Research has shown that grass clippings do not contribute to thatch build up. Instead, they recycle valuable plant nutrients back to the grass while helping enhance the topsoil.

Successful grasscycling also involves mowing often enough so that no more than 1/3 of length of the grass blades are removed at each mowing. That's because small clippings decompose more quickly and can more easily sift downward through the grass than long clippings.

Other Uses For Grass Clippings

If clippings are too long to grasscycle, or if you bag your clippings, they make an excellent green nitrogen source for mixing with "browns" in the compost pile. If the turf area is weedy, the heat of composting will also help destroy certain noxious weeds.

Grassclippings can also be used for mulch, but it's best to mix them with leaves or other organic materials. Pure grass clippings tend to mat down on the soil surface and inhibit oxygen penetration to plant roots.

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