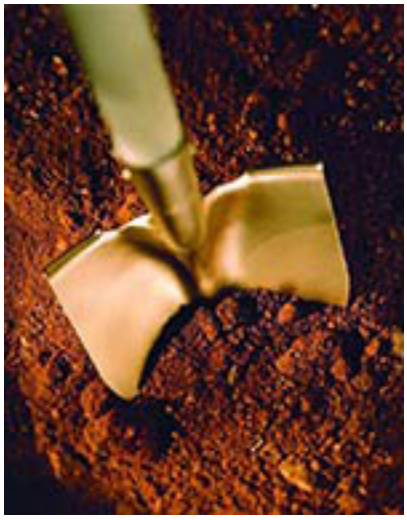
Earth-Kind®
Texas AgriLife Extension Service

Composting:



Each year millions of tons of leaves, grass clippings, tree limbs, weeds, organic debris and other yard wastes end up in Texas landfills. This volume represents about 20 percent of all trash placed in landfills. It costs Texans over $300 million a year to collect and dispose of yard wastes. Putting these materials to use instead of throwing them away can save money and preserve and protect the environment for all Texans. Composting is an important Earth Kind practice that can help address this critical issue.

What is Compost?

Compost is a part of the natural process of decomposition. Leaves drop from trees. Grass clippings are left on the lawn after mowing. Living plants die and over time, all of these organic materials break down or decompose. The rich, dark-brown, crumbly, soil-like material that results is called compost.

Why Compost?

Organic wastes put back into the landscape in the form of compost can assist in reducing fertilizer applications, conserve water, and decrease the volume of wastes entering landfills. Compost can be used by other living things in the landscape and instead of going to a landfill, these wastes become a valuable resource.

The Composting Process:

Compost can be made out of leaves, grass clippings, vegetable and fruit scraps, coffee grounds and filters, tea bags, wood chips, straw, small twigs and similar materials. Tiny microorganisms do most of the work of breaking down organic materials to form compost. These microorganisms include a wide range of bacteria and fungi. Animals living in the soil also help microorganisms break down organic materials. Worms and pill bugs are examples of soil animals that help change organic waste into compost.

Earth-Kind uses research-proven techniques to provide maximum gardening and landscape enjoyment while preserving and protecting our environment.

The objective of Earth-Kind is to combine the best of organic and traditional gardening and landscaping principles to create a new horticultural system based on real-world effectiveness and environmental responsibility.

The principal goals of Earth-Kind include:

- ☑ Water conservation
- ☑ The safe use and handling of fertilizers & pesticides
- ☑ Reduction of yard wastes entering urban landfills
- ☑ Landscaping for Energy Conservation

As your interest and knowledge in these areas grows you will have an increased awareness of the many programs, practices and activities that are Earth-Kind. Working together we can make a difference in conserving and protecting our valuable natural resources.

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For more information see our Web site:

EarthKind.tamu.edu

The microorganisms and soil animals that turn organic matter into compost require many of the same nutrients that plants need for growth (particularly nitrogen). Most of these nutrients are derived from the decomposing organic matter. Eventually, these nutrients are returned to the soil, to be used again by trees, grass, and other plants. This is nature's way of recycling.

Landscape Uses of Compost:

Compost can be used as a mulch or mixed into the soil. Compost provides an almost constant source of free fertilizer and is an excellent soil conditioner. The organic materials in compost help plants grow by loosening the soil and providing improved aeration and drainage. The composition of compost also improves the soils ability to hold water and can reduce the frequency of landscape irrigation. Compost has most of the nutrients plants require for growth and through regular use can greatly reduce the need for chemical fertilizers. This can help limit the potential risk of environmental contamination.

Making Compost:

The Earth Kind composting methods described here help the process of decomposition work even better than it does in nature.

Choose a structure and location for making compost. Any type of composting bin will do. Visit our Web site for more information on types of composting structures.

Place kitchen and yard wastes in the composting bin. Chop or shred these organic materials for faster decomposition.

Spread soil or "already done" compost over the compost pile. This layer contains microorganisms and soil animals that do the work of composting. It also helps keep the surface from drying out.

Adjust the moisture of the compost pile. Add dry grass clippings or sawdust to soggy materials, or add water to a pile that is too dry. The materials should be damp to the touch, but not so wet that drops come out when squeezed.

Allow the pile to "bake". It should heat quickly and reach the desired temperature of 90 to 140 degrees Fahrenheit (32 to 60 degrees Celsius) in four to five days.

Stir or turn the compost as it bakes to speed the decomposition process.

The pile will settle down from its original height. This is a good sign that the organic matter is actively decomposing.

Mix or turning the compost pile every week will speed up the process. Under normal conditions it should be "done," or ready 1-2 months. Compost piles that are not turned generally require 6-12 months to complete the process.

Thoroughly decomposed compost should look like dark crumbly soil mixed with small pieces of organic material, with a sweet "earthy" smell.

Table 1. Compost Trouble Shooting Guide.

Symptom	Problem	How to Fix It
Pile is wet and smells like mixture of rancid butter, vinegar and rotten eggs	Compost needs more air, it has too much “fresh” material (too wet or too much nitrogen)	Turn the pile and add dry material such as wood shavings, wood chips, or dry leaves. If pile is very wet provide drainage. If the odor must be stopped fast don’t turn it. Bury it in soil or finished compost for a few months and start, another pile.
Pile is not breaking down	Pile is dry	Turn pile and add water until the pile is moist
	Pile is damp and sweet-smelling	Add higher-nitrogen materials like green grass clippings or manure
Pile is not warm enough or is warm only deep in the center of the pile (it should heat up to over 130 Fahrenheit)	Pile is to small	Incorporate materials into a bigger pile or put them into a container
Pile contains insects and larvae	Meat,other animal products, and food have been added	Minimize pests burying food materials deep in the pile and keep the temperature of the pile high and it should have the dampness of a wrung-out sponge
		Any other insect in your pile is probably a harmless compositor.
Fire Ants	Pile is dry	Turn it and add water
		A low-toxicity bait formulation can be used near but not in the pile

See the Earth Kind Web site for more ways to preserve and protect the environment...

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