Don't Bag It - Leaf Management Plan

During the year, at least 20 percent of the solid waste generated comes from grass clippings, tree leaves and other landscape wastes. Bagging these materials and placing them into the curbside garbage collection system uses valuable landfill space, removes nutrients from the environment, and costs cities and residents more in increased taxes and service fees.

Of the landscape waste, approximately half is composed of tree leaves. The "Don't Bag It" Leaf Management Plan is an ecologically sound program designed to significantly reduce the volume of leaves entering community landfills, thereby extending their life and saving tax dollars.

Managing Leaves

The tree leaves that accumulate in and around your landscape represent a valuable natural resource that can be used to provide a good source of organic matter and nutrients for use in your landscape. It is an established fact that the trees in one acre of forest shed as much as two tons of leaves each fall. You may complain, as you lean wearily on a leaf rake, that your neighborhood outdoes any forest, but be thankful. Hang on to your leaves. And if your neighbors don't want them, hang on to theirs. It makes no sense to send valuable treasure to the dump.

In forests, pastures and other natural settings, tree leaves and other organic wastes form a natural carpet over the soil surface which conserves moisture, modifies temperatures and prevents soil erosion and crusting. In time bacteria, fungi and other natural occurring organisms decompose or compost the leaves and other organic material, supplying the existing plants with a natural, slow release form of nutrients. You can, and should, take advantage of this same concept.

Options for Managing and Using Leaves

Leaves are truly a valuable natural resource! They contain 50 to 80 percent of the nutrients a plant extracts from the soil and air during the season. Therefore, leaves should be managed and used rather than bagged and placed at curbside to be picked up and hauled to landfills. There are four basic ways in which leaves can be managed and used in the landscape.

Leaf Management - Mowing
A light covering of leaves can be mowed, simply leaving the shredded leaves in place on the lawn. This technique is most effective when a mulching mower is used. In fact, during times of light leaf drop or if there are only a few small trees in your landscape, this technique is probably the most efficient and easiest way to manage leaf accumulation.

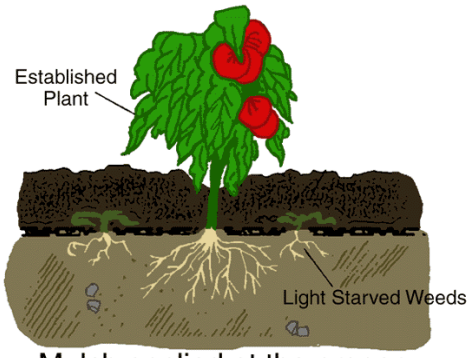
Leaf Management - Mulching
Mulching is a simple and effective way to recycle leaves and improve your landscape. Mulches reduce evaporation from the soil surface, inhibit weed growth, moderates soil temperatures, keep soils from eroding and crusting, and prevent soil compaction. As organic mulches decompose,

they release valuable nutrients for use by your landscape plants.
Leaves can be used as a mulch in vegetable gardens, flower beds and around shrubs and trees. As an option to raking, a lawn mower with a bagging attachment provides a fast and easy way to shred and collect the leaves. Leaves that have been mowed or run through some other type of shredder will decompose faster and are much more likely to remain in place than unshredded leaves.

Apply a 3 to 6 inch layer of shredded leaves around the base of trees and shrubs. In annual and perennial flower beds, a 2 to 3 inch mulch of shredded leaves is ideal. For vegetable gardens, a thick layer of leaves placed between the rows function as a mulch and an all-weather walkway that will allow you to work in your garden during wet periods. Mulches are especially beneficial when used around newly established landscape plants, greatly increasing the likelihood of their survival.

Leaf Management - Soil Improvement

Leaves may be collected and worked directly into garden and flower bed soils. A 6 to 8 inch layer of leaves tilled into a heavy, clay soil will improve aeration and drainage. The same amount tilled into a light, sandy soil, will improve water and nutrient holding capacity.
A recommended strategy for using leaves to improve soil in vegetable gardens and annual planting beds is to collect and work them into the soil during the fall. This allows sufficient time for the leaves to decompose prior to spring planting. Adding a little fertilizer to the soil after working in the leaves will hasten their decomposition.

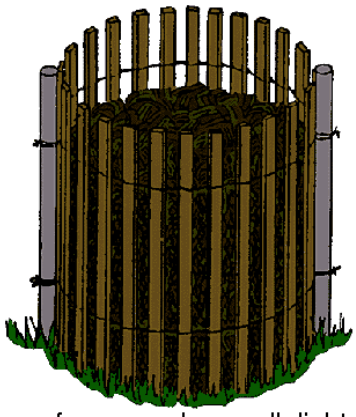


Mulch applied at the proper depth eliminate cultivation

Leaf Management – Composting

Please call City Hall for regulations regarding compost bin placement on your property.

Knowledge of composting dates back to the early Greeks and Romans. The Arabs kept the science of composting alive during the Dark Ages, and it continued throughout the Renaissance. From Shakespeare's Hamlet comes the line "spread the compost on the weeds, to make them ranker!" In America, the value of composting was recognized by George Washington, Thomas Jefferson and George Washington Carver. Today, knowledge and interest in the science of composting is increasing dramatically. Whether an ancient art or a modern science, composting is a useful and environmentally sound gardening practice for you.


Snow fences make small, light bins that look good. To turn compost, take down the bin, then set it up again a few feet away and turn the compost into it.

What is compost?

Compost is a dark, crumbly and earth-smelling form of organic matter that has gone through a natural decomposition process.

Compost can be used to:

- enrich the soil by adding a natural source of nutrients.
- loosen tight, heavy soils.
- help sandy soils retain moisture and nutrients.
- add to potting soils for container grown plants.
- mulch around landscape plants.

If you have a garden, lawn, trees, shrubs, or even planter boxes or house plants, you have a use for compost.

What can be composted?

In addition to leaves, other yard wastes such as grass clippings, pine needles, weeds, small or chipped prunings and spent garden plants can be composted. Avoid composting diseased or insect infested plant materials, noxious weeds, meat, dairy products, cooking oil, or grease.

Essentials of Composting

To prepare compost, organic material, microorganisms, air, water and a small amount of nitrogenare needed. Microorganisms such as fungi and bacteria break down the organic material. A small amount of garden soil or compost can provide sufficient microorganisms. The nitrogen, air and water provide a favorable environment for the microorganisms to decompose the organic materials and make compost. Air is the only ingredient which cannot be added in excess. A lack of nitrogen to "feed" the microorganisms will greatly slow the process, while an excessive amount is wasteful and can kill the microorganisms. Too much water limits the amount of air (oxygen) available to the microorganisms, greatly inhibiting their activity. As composting occurs, heat is generated, often causing temperatures to rise to 140 degrees F.

Methods of Composting

The process of composting can be carried out in traditional compost piles or bins, trenches, bags or barrels.

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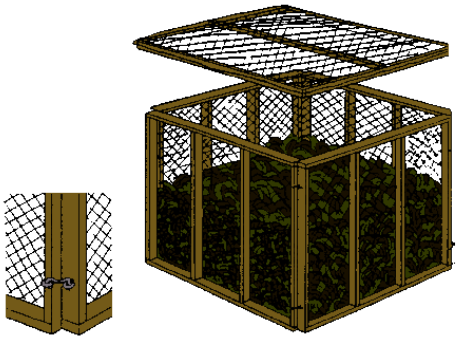


This bin with rain cover is very light and easy to store. The four side panels are connected with hooks and eyes

Piles or Bins - You can compost in almost any type of bin or suitable container. Or you can stack the leaves in a loose pile for composting, although available space is used more efficiently if you use some type of bin or enclosure.

Locate the compost pile or bin in a convenient but out of the way location. Since the compost needs to be kept moist, a convenient source of water is desirable.

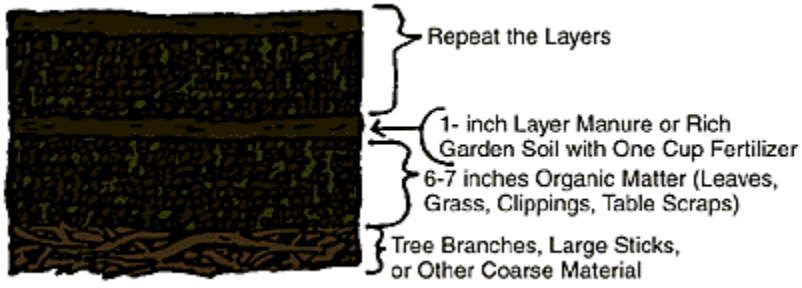
If you choose to use a bin for composting, it can be constructed from any number of different materials, including wire fencing, concrete reinforcing wire, wood slates, cement blocks, bricks or scrap lumber. Regardless of what you use, the sides should be open enough to provide for good air movement through the bin. One side should be able to be opened to allow for easy turning and removal of the finished compost.

The truth is that compost bins help people, not the composition process. You can make excellent compost in any type of bin or no bin at all. So as you design your composting facility, let the human factors, neatness, ease of turning, economy, performance and good looks, take high priorities.

The most common method of building a compost pile or bin is in layers. For each 6 to 8 inch layer of leaves (and other suitable organic materials), add 1 inch of compost or rich garden soil. Next, add about 1 inch of manure or 1 cup of nitrogen rich fertilizer for each 20 to 25 square feet of surface area and then repeat the layers. Moisten each layer as it is constructed. Mix the pile weekly during the summer and monthly during the winter, providing moisture as needed. Remember, avoid keeping the compost pile too wet! Ideally, your compost pile or bin should be 3 to 5 feet in diameter and several layers deep to encourage rapid, effective decomposition.

Types of Structures

Trenching Composting **-** Trench composting involves decomposing the leaves "in place" where the organic matter is needed. Although this form of composting can be done in other suitable areas, it is extremely well adapted for use in small vegetable gardens, especially if you do not have room for a compost pile or bin.



Trench composting involves digging trenches at least 8 to 10 inches wide and one foot or more deep. In a vegetable garden, the pathways between the rows are ideal locations for trenches. Backfill the trenches with shredded leaves and other forms of organic matter, along with about five shovel-fulls of manure or a cup of fertilizer for each 25 feet of trench. Soil from the trenches can be used to form raised planting beds or utilized in other areas of your landscape.

For your next garden, locate your raised planting beds or rows over the trenched areas. The compost will provide greatly improved soil conditions for your vegetables and supply them with some of their needed nutrients. By continuing the trench composting process each gardening season, all of your garden soil will eventually be improved - as well as your results at harvest time.

Bag Composting **-** Bag composting is one of the easiest composting methods. However, the quality of the compost produced may not be as high as that made by more traditional methods.

To produce compost in a bag, simply collect the leaves and place them in heavy-duty, plastic trash bags. As with other methods or composting, shredded leaves work best. Into each bag full of leaves, put one to two shovel fulls of garden soil and either two shovel-fulls of manure or about one-half cup of a high nitrogen fertilizer. Apply enough water to thoroughly moisten the leaves. Punch 10 to 15 holes in the plastic bag to allow for air circulation through the leaves. Turn the bag once or twice and add water, if needed, to keep the leaves moist. Store your bags of composting leaves in an out-of-sight place. After about 2 weeks open the bags to check on the composting process. Under most circumstances, the compost will be ready for use in about 6 to 8 weeks.

Commercial Composting Devices **-** Garden catalogs and retail outlets offer numerous different types of commercial composting devices, such as boxes, bins and barrels. The devices are usually constructed of plastic, wood and/or metal. They provide a quick way to start composting for the gardener who isn't a "build-it-yourselfer". Prices vary and range from reasonable to expensive. Commercial composting devices will do a fine job, as long as you follow the basic essentials of composting.

SYMPTOMS	PROBLEMS	SOLUTION
The compost has a bad odor.	Not enough air, pile too wet.	Turn it; add coarse dry materials such as straw, corn stalks, etc.
The center of the pile is dry.	Not enough water, too much woody, coarse material.	Turn and moisten materials; add fresh green wastes, chop or shred coarse wastes.
The compost is damp and warm in the middle, but nowhere else.	Too small.	Collect more materials and mix the old ingredients into a new pile.
The heap is damp and sweet smelling but still will not heat up.	Lack of nitrogen.	Mix in a nitrogen source like fresh grass clippings, fresh manure, or ammonium sulfate.