WASHINGTON STATE UNIVERSITY
PIERCE COUNTY EXTENSION
Master Gardener Program
RS 010-2010

Composting

Recycling waste products into dark, rich organic matter is very easy and has many benefits. Compost has an ability to improve soil structure. It makes sandy soil hold water and nutrients better. Clay soil becomes more porous and workable. Compost contains nutrients and can assist with mobilizing additional nutrients. However, additional fertilization is usually needed for best plant growth. Compost is an organic matter amendment, not a fertilizer.

What Can Be Composted?

Almost all organic wastes can be composted, including grass clippings, leaves, weeds, non-food parts of crops (pea vines, corn stalks, carrot tops, etc.), spent flowers, straw, manure, sawdust and shredded newspaper. Wood ashes can be added, but do not overdo it. Sod is best composted by piling moist sod chunks upside down in a separate pile and covering the whole thing with black plastic. It will break down in about two years. Kitchen waste can be composted in worm bins along with bedding such as shredded paper or leaves.

Animal products including meat, dairy, dog and cat wastes should not be added to a compost pile. Do not compost any herbicide treated grass clippings, mulch, or plant material.

As the microorganisms decompose the material in your pile, the center will heat up to 140-160°. This may kill some weeds, weed seeds and disease organisms, but many make it through the process. For this reason, gardeners should avoid composting diseased plant parts, perennial weeds that reproduce vegetatively (such as morning glory), and weeds that have gone to seed.

Purchased compost starters or activators are unnecessary. Nor is it necessary to add soil to your compost. It reduces the temperature and slows down the break-down of materials.

Soil can be added, but it is also unnecessary and makes the compost heavier.
The ideal compost area is easily accessible from the garden but screened from view from windows and outdoor living areas. If it is in a shady area, your bin should be open enough to allow air circulation through the pile.

Compost Bins

Compost can be made by stacking the material in a loose pile. It is usually more efficient and aesthetically more pleasing to use an enclosure. Almost any material can be used to build the bin. It should be at least 3 feet in width, depth, and height. A smaller volume may not compost properly. Make certain one side of your bin can be removed so that you can easily add and turn your compost.

Making the Pile

Start with a layer of coarse material. Undecomposed sticks from a previous pile work well, as do heavy stalks. Next, layer various materials in certain depths and order. In practice, you will add what you have, as it is available. For the best compost follow these four laws of composting.

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Particle Size: Chop up the materials before you add them to the pile. Smaller particles decompose faster. Shredders are great for leaves, stalks, twigs and branches. A rotary lawn mower does a good job on a pile of large leaves.

Air/Moisture Balance: Add water as you build your pile, so the material is moist but not soggy. If you squeeze the material a few drops should come out of your hand. Firm down each layer, but allow it to be loose enough that air can pass through it. A dry pile will compost very slowly; a too-wet or too-compact one will get smelly.

Carbon/Nitrogen Ratio: All organic wastes have a ratio of carbon to nitrogen (C:N). Grass clippings and fresh manure are about 20:1. Sawdust is at the extreme opposite end of the scale at 500:1. Fall leaves run about 60:1. Generally, dead, brown ingredients have less nitrogen than green ones. The ideal ratio for compost microbes is 30:1. Since many available materials are heavy on the carbon side, gardeners often add a sprinkle of nitrogen fertilizer, such as blood meal, cottonseed meal, or ammonium nitrate over each high-carbon layer. Remember that 30:1 is a goal, not a necessity. Composting may be slower, but it will work with wide deviations from this ideal.

Mixing: Compost microbes are most active at the center of the pile. Periodically turning edge materials into the center creates finished compost more quickly. Although the material can be mixed within a bin, it is easiest to have more than one bin and to mix while shifting the compost between bins. Turning allows you to add moisture or nitrogen, if needed, and keeps the pile loose and aerated. The compost can be turned as soon as the pile cools down after each rebuilding. Turn immediately if offensive odors are noticed.

When Is It Ready to Use?

If you follow all the suggestions above, you can make usable compost in just a few weeks in the summer. If you are a little more haphazard, six months is more realistic. Even if you break all the laws, the center of your pile will probably be beautiful compost within a year! Finished compost is crumbly and smells earthy. You should not be able to identify most of the parent material. The pile will have shrunk to less than half of its original volume.

Using Compost

Flower and vegetable beds should get 1 to 3 inches of compost annually in the spring or fall. Spade or till it into the soil. Add a bucket of compost to renew the soil between plantings of successive crops. Compost can be used as a top dressing in and around already-planted vegetables, flowers and woody plants.

For additional information on composting and building compost bins, go to
Pierce County Composting
http://www.piercecountywa.org/pc/services/home/environ/waste/recycle/compost/compost2.htm

Prepared by WSU-Pierce County Master Gardeners
For similar information, go on-line to www.pierce.wsu.edu/mg/