

Make the **MOST** of your

Organic materials, such as yard and kitchen wastes, will decompose using the process of composting. By establishing a backyard or small compost pile, this biological process can be sped up by managing temperature, oxygen, and moisture content. The result will be rich, earthy, sweet-smelling humus that can be mixed into garden beds, added to flower pots, or used as mulch.

Advantages of composting

There are many benefits to small-scale composting:

- Composting reduces dependency on manufactured fertilizers while adding many nutrients necessary for plant growth. It is also inexpensive.
- Soil pH is altered by compost addition. Ideal pH for growing most fruits, vegetables, and herbaceous ornamentals is usually between 6.0 and 7.5. If the soil is too alkaline (over pH 7.5), compost may help lower it. If soil is too acidic (which is not common in Wyoming), compost may help raise it.
- Composting recycles organic waste materials. By putting fruit, vegetable, and yard waste in a compost pile, the need for additional landfill space is reduced.
- Compost improves soil structure. Wyoming soils tend to be either heavy clay or sandy. When organic matter, such as compost, is added, soil structure is enhanced leading to better nutrient- and moisture-holding capacity.

How to get started

Composting doesn't necessarily take a lot of time nor does it require state-of-the-art equipment. Some important aspects to consider are:

- Location – The pile should be in a warm spot but out of the wind, otherwise it will dry out quickly.
- Size – An ideal size is one cubic yard (3 feet by 3 feet by 3 feet). If the pile is too small it won't heat up enough to kill weed seeds and other pests. If the pile is too tall, aeration may not be adequate.
- Water – Consistent moisture is important. The pile should contain enough water to feel like a wrung-out sponge. If the pile is too wet, it may give off an unpleasant odor. If it is too dry, it will not decompose.
- Microorganisms – Periodically add a little native soil to the compost pile to incorporate natural, beneficial microbes. These microbes are the ones that actually do the decomposing.



Drum composters and black composters have advantages and disadvantages. The color of the black composter holds heat, and the doors slide for easy removal of the finished compost. Turning the composter may be difficult, and the plastic may crack in the Wyoming climate. Drum composters are easy to load, keep the compost moist, and the dark green color holds heat well but, because the drum is off the ground, temperatures inside can change fast, and the compost may dry quickly.

COMPOST



No matter what type of equipment used, composting reduces fertilizer demand, can improve soil pH, recycles organic waste, and improves soil structure.

- Air – Air is essential for the decomposition process to work. Turn the pile frequently, poke deep holes in it, or position the pile a foot or so off the ground to allow air to circulate freely.

The process

The first point to remember is the smaller the pieces of waste are when they are added to the compost pile, the quicker they will decompose. In Wyoming's climate, this is probably the most important factor in a working compost pile.

Fresh "green" materials (such as green leaves, fresh grass clippings, green plant wastes from gardens, fruit and vegetable waste from the kitchen, and manure) will be nitrogen-rich while "brown" components (such as dried leaves, straw, sawdust and dried grass clippings) are carbon-rich. Both are essential for a compost pile to work.

The best carbon to nitrogen ratio for compost is about 25 to 30 parts carbon to one part nitrogen. If there is too much carbon ("brown" material) in the pile, decomposition will be slowed. If there is too much nitrogen ("green" material), nitrogen may be lost, and the pile may smell like ammonia. The best thing to do is to layer high-nitrogen materials, high-carbon materials, and thin layers of native soil.

What to compost

Any type of organic kitchen waste can be used in a compost pile. Things like vegetable waste, fruit rinds or peels, etc., can be added. Avoid anything of animal origin as these don't break down readily. Often, materials of animal origin will rot or turn rancid instead of decomposing. They may attract unwanted animal pests. There is the danger of bacterial contamination as well.

Yard waste can be used, too, if it is chopped into small pieces; however, avoid grass clippings if any type of herbicide has been applied. Also, avoid putting diseased or insect-infested yard waste into the compost bin. Temperatures may not get high enough in the pile to kill them.

Backyard Composting: Simple, small-scale methods (B-974R) is available on the UW CES Web site at http://www.uwyo.edu/ces/pubs/horticulture/horticulture_publications_main.htm

Karen L. Panter is a UW CES horticulture specialist in the College of Agriculture's Department of Plant Sciences. She can be reached at (307) 766-5117 or by e-mail at kpanter@uwyo.edu.