

Healthy soil is the key to a Productive garden, and compost is an important addition that can help keep your garden productive. The composting process is relatively simple. The natural process starts with plants combining energy from the sun, carbon dioxide from the atmosphere and mineral nutrients from the earth to produce nourishment for all living things. Whenever plants die their matter is mixed into the soil, when organisms such as bacteria, fungi and earthworms consume the matter. As the cycle of organisms breaking down these residues repeats itself, a small amount of new, healthy soil is produced.

Composting is essentially the replication of this process in a concentrated area. We combine kitchen waste and garden scraps for the purpose of producing a nutrient-rich substance that adds to your soil's health in more ways than one.

Benefits-

Increased Water Holding Capacity

Compost is like a sponge. It has the ability to hold six times its weight in water. Adding compost to your garden means you'll conserve water by watering your garden less.

Improved Soil Structure

Organic matter helps break up clay soil that compacts easily; this allows for better root growth, water penetration and nutrient movement throughout the soil.

Increased Nutrient-Holding Capacity

Stable organic matter, humus, acts like a magnet- grabbing and holding onto nutrients such as magnesium, calcium, and potassium- ensuring that these nutrients are available when your plants need them.

Increased Microbial Population

Microorganisms, which thrive in organic matter, are essential to plant health because of their ability to break down mineral nutrients into forms that plants can use. This contributes to plant health and means that you don't have to fertilize as often.

Composting Saves You Money

Producing your own compost saves water, reduces fertilizer needs and saves on the cost of purchasing compost. t

Composting is good for the Environment

Composting keeps valuable organic matter out of the landfill where it could rot and emit methane gas.

How to get started

Composting can be as simple or as complicated as you have the time or energy to make it. If you've ever researched composting, you've probably noticed that everyone has a different method for producing compost. So to help you wade through the information we think it would be helpful to think through the questions below.

- 1) How quickly do you want your compost finished?
- 2) How much time and labor do you want to devote to your compost pile?
- 3) How much space do you have to devote to your compost pile?
- 4) Are there any aesthetic qualities that you want to maintain?
- 5) What compost materials and how much of each do you have available?

Hot vs. Cold Piles

The two basic methods of composting are hot piles and cold piles. With the above questions in mind, take a look at the comparison list below. Which method seems best for you?

Hot (FAST!) Compost Piles

Can produce finished compost in as little as six weeks or as long as one year.

Requires more time, labor and attention, must be turned every one-two weeks.

Materials must be shredded to speed up the process.

All materials must be available at the time you build the pile to increase the speed of composting.

Produces slightly less compost than a cold pile.

Temperatures can destroy weed seeds and disease spores if they rise above 140 degrees F.

You have to water and turn your compost pile.

Green and brown materials need to be balanced.

Cold (SLOW) Compost Piles

Can produce compost in one-two years.

Pile does not have to be turned regularly (though it may benefit from being turned once a season).

Materials can be added whole or shredded. Shredding speeds up the process.

Materials can be added, as they become available, to the pile.

Produces slightly more compost than a hot pile.

Temperatures do not get hot enough to kill weed seeds or disease spores.

Pile should be watered.



Size of your pile

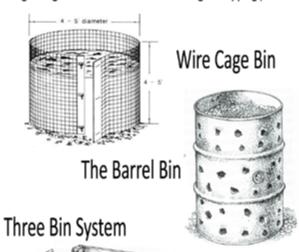
Your compost pile should be at least three feet wide, by three feet long, by three feet tall. Your pile can be larger than this,

but not smaller. Piles decompose from the inside out, so a large pile insulates the center keeping the heat and moisture consistent, which benefits the hard-working microorganisms within.



Structures

While not essential, building bins can keep your composting project more manageable and organized. If you have a problem with rodents, bins can be designed to keep the rodents out. Bins can also be built using salvaged materials such as old fencing or shipping pallets.





What Goes in the Pile

- Most organic materials can be used for making compost.
 Grass clippings, leaves, hay, weeds, straw, manure and plant refuse from the garden are all great additions to your compost pile.
- When adding weeds to your compost, make sure that they have not already formed seed heads, as spreading the finished compost could spread weed seeds as well. To avoid this, pull weeds before seed heads form.
- Kitchen scraps and rotten fruits and vegetables are a great addition to your compost, but they can also attract rodents. If you are using kitchen scraps, it is advisable to build a compost structure to keep rodents out.
- To help prevent the spread of diseases in your garden, disease-infected plants, such as tomatoes, should be composted separately. Leave this pile to sit for several years before using, or use this compost in non-vegetable garden settings- such as around trees and shrubs.

More ideas to think about

- Build your compost pile on top of a growing area. Compost piles leach liquids that contain valuable nutrients. If you build your pile on an area that you want to let rest for a season, that bed will capture all those nutrients.
- To save time and energy, build your compost bin in a centralized location.
 That way you won't have to drag compost material very far when building your pile.
- Make sure you have access to water to keep your pile moist.
- Green (nitrogen-rich) material is often less available than brown (carbon-rich) material. Some growers collect and then store up brown material such as: leaves, wood chips, dry grass clippings, corn stalks, cardboard, paper and straw. When it comes time to weed or pull up a row of plants you'll have all the materials you need to build your pile.
- Try to incorporate as many varieties of compostable materials as possible into your pile. Plants and vegetables specialize in the storage of different nutrients depending on the plant. So when you add a variety of compostable materials into your pile, your finished product will have a good balance of nutrients.

Get Started

Anyone can compost- you do not need to wait until you know everything about composting to begin. Building a simple wire cage bin is one of the easiest ways to get started. As you work in your garden, add vegetable scraps, grass clippings, leaves and plant refuse. Keep piling your materials up in layers. When your pile gets four to five feet tall, let it sit for a couple of years, letting nature do the hard work. As you get more comfortable with composting, you can research, build and develop a composting method that works best for your garden.

Want to go deeper?

We want to help you become a successful composter. Call us or e-mail us any of your questions. You can also explore the resources below for more information on the vast world of composting.

- Check out "The Rodale Book of Composting"
- Visit the MU Extension Guide for Making and Using Compost at: http://extension.missouri.edu/p/G6956
- Visit the MU Extension Guide for How to Build a Compost Bin at: http://extension.missouri.edu/p/G6957
- Visit Youtube for two videos on building a compost pile at:

http://www.youtube.com/watch?v=W6cEUoN3NgI

http://www.youtube.com/watch?v=lhctlSqYJls

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