Backyard Composting

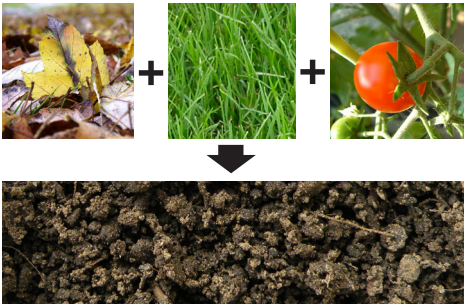
Why Compost • How-To • Bin Designs • Techniques • Lawncare Tips

What is Compost?

Every minute of every day, the decomposition of organic materials is taking place right under your feet. Fallen leaves, grass and twigs decay slowly and the nutrients are then absorbed into the soil and used by microorganisms and plants.

It's Mother Nature's way of feeding the earth, but it's a slow process. Composting in your backyard allows you to control the decomposition of these materials and create the same nutrient-rich product to use in your garden—only much faster!

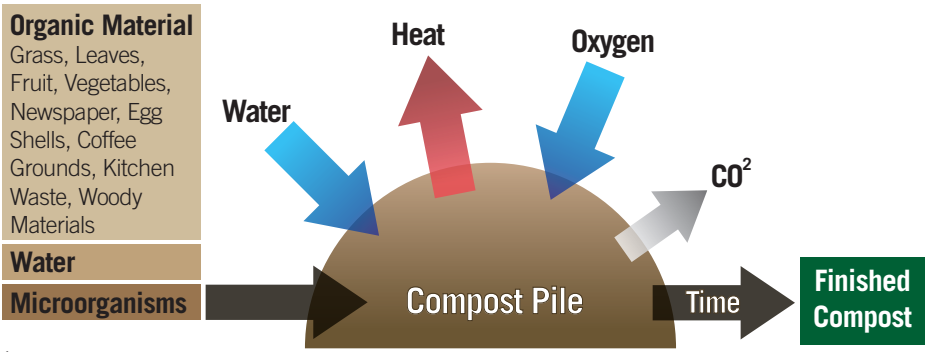
Combining organic material such as leaves, grass clippings and kitchen waste, with water and air, results in a dark, crumbly substance that can be used in every application from potted plants to raised beds. It is a natural fertilizer that improves soil, among other things.



Why Compost?

Composting can reduce the amount of waste you send to landfills by up to 35%, improves the soil in your lawn and gardens, promotes healthy plant growth, helps soil retain water, and is a natural fertilizer, saving you money on lawncare while improving the value of your home.

Gardeners have long used compost to grow the best flowers and vegetables.Now is a great time to start taking advantage of its benefits. Never buy fertilizers or bags for leaves and grass again!



Benefits of Being a Dirt Farmer

Compost occurs naturally when leaves, twigs and other natural debris decay. Earth is like an apple, with just a thin layer of skin–the crust–that is easily impacted by compression, erosion and over-planting. When you add compost to a lawn or garden, you are adding a valuable layer of protection to our earth. Compost increases soil fertility, water retention and plant health, reduces compaction, prevents erosion, and saves money on water, fertilizer, potting soil and plastic bags for leaves and grass.

Common Uses

There are several uses for compost. It is beneficial to lawns, bedding plants, potted plants and vegetable gardens. Even if you don't have a yard, chances are that your relatives or neighbors can use it.

You can work compost into the soil in planting areas to improve soil quality, or use it as a mulch around trees and shrubs to retain moisture. Many people mix compost with potting soil for indoor and outdoor plants. Applied as a thin layer on lawns, it promotes healthier grass. You can even make a mild fertilizer, known as compost tea, by steeping a shovel-full of compost in a five-gallon bucket of water for a day or two. Add the tea to a spray bottle to fertilize your plants.

How Hot?

Think of a compost pile as an oven. If a pile is too big, it will be cold on the edges; if it is too small, it won't get hot enough. For high-quality compost, the pile should reach at least 140 degrees. This keeps weed seeds from germinating. Lower temperatures will grow grass and weeds.

Use a thermometer to check the temperature occasionally. The more you turn or "fluff" and water the pile, the higher the temperature will be. A cold pile, from not working with it, will still work. You'll eventually get compost, but you'll have to wait longer for the finished product. However, cold compost is more susceptible to odors, can attract pests and does not kill weed seeds and diseases.

Types of Bins

There are many options for backyard composting containers. You can build a bin from items you have around your home like wood pallets or old metal fencing, or if you don't want to build your own, you can buy them in stores, catalogs and online.

When choosing a bin, look for features such as portability, size, a door to remove finished compost, vents and a lid to keep pests out. The best size to reach the optimal composting temperature is about 3'x3'x3'. Choose a single- or multi-bin system depending on the amount of waste you plan to compost.

Ask yourself these questions before selecting a bin:

- How much waste will I compost?
- How much room does it take up?
- Is the finished compost easy to remove?
- Is there room in the yard to expand my bin in the future?
- Is it animal-proof?
- Is there enough ventilation?

Wood

Scrap wood or pallets can be used to construct your own bin. The bins work very well, and can be as simple as pallets on three sides and open in the front, or more complicated, with removable slats on the front to help remove finished compost from the bottom.

Slats or a front will also let you build the pile higher, increasing the temperature and speed you can compost. Incorporating wire or wood lattice on the sides can help greatly with aeration.

Because wood is biodegradable, these bins will eventually have to be replaced. Depending on how actively it is used and other factors, most need to be replaced in about five or six years.

Plastic

Typically made from recycled plastic, these are easily assembled and fit easily into smaller yards. Items enter the bin through the top and the finished product can be removed through a door on the bottom.

You can even make your own out of a trash can. Just drill holes in the sides and bottom for ventilation. Keep the lid on to easily add more materials or turn it. Lids also help keep animals out.

Tumblers

Tumblers make it easier to turn the compost–no aerator or pitchfork required. Turning the compost more often can help speed up the composting process. Some tumblers sit on the ground, and some are raised and have handles.

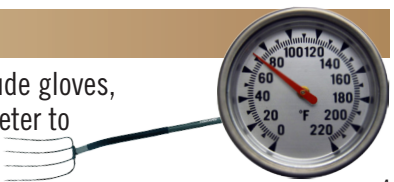
Wire

Use old fencing, chicken wire or a heavy gauge wire and attach it to sturdy posts set in the ground. The wire is lightweight, easy to move, and lets in the maximum amount of air. You can also incorporate wire into the sides of a wood compost bin to help them breathe.

Concrete Block

For a more permanent structre, Build a U-shaped bin out of stacked concrete blocks. Leave at least a half-inch gap between each block in a layer to allow proper ventilation.

Accessories



In addition to a bin, other items you may need include gloves, an aerator or pitch fork for turning, and a thermometer to test the temperature of your compost pile.

Where Should It Go?

Once you decide what kind of bin you want to use, you need to find the best location for it. Here are a few factors you should consider:

Ease of Access

Put your bin in a place that is convenient for the whole family, like near your back door or in a garden area. Create a pathway to your compost area using mulch or stone

Sun/Shade

Place it directly on the ground in partial shade but away from large trees. Tree roots compete with compost for nutrients. If the bin is placed in full sun, it's possible for it to get too hot, causing it to lose water too quickly and slow down the process.

Available Water

Make sure the compost bin is within easy reach of a water hose or other water source so it doesn't get too dry or cumbersome to water.

Air Circulation

Good airflow around the bin is important. Avoid areas with wind blocks, including corners of privacy fences or places with large shrubs and trees.

Plan Ahead

Once you start composting, you may find that you need additional space, so give yourself plenty of room for future expansion.

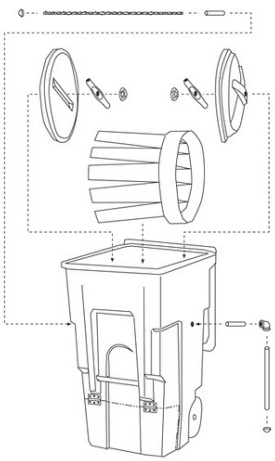
Food Waste

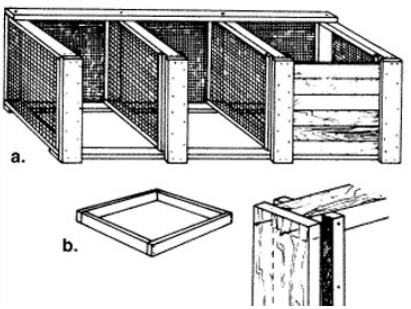
Place a small bucket under your kitchen sink or near your back door for food scraps. When it is full, empty it into your compost bin. This will eliminate several trips to the big bin. Make sure it has a tight lid.

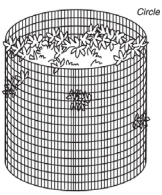
Do-It-Yourself Compost Bins

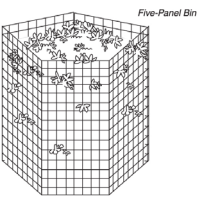
These plans show the wide variety in bin designs. For more detailed plans, search the internet for terms like “DIY compost bin” or “compost bin plans” and visit sites like **lowescreativeideas.com** or **diynetwork.com.** There are also instructional videos on YouTube, and the University of Missouri and the University of Wisconsin have several plans available on their websites.

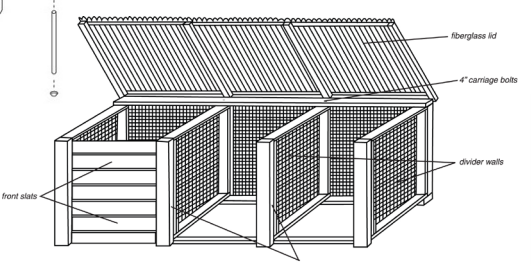
http://extension.missouri.edu/publications/DisplayPub.aspx?P=G6957
http://www3.uwm.edu/Dept/shwec/publications/cabinet/html/compost/Bin%20Plans.htm

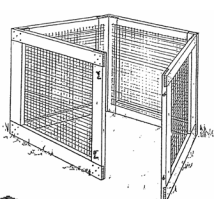


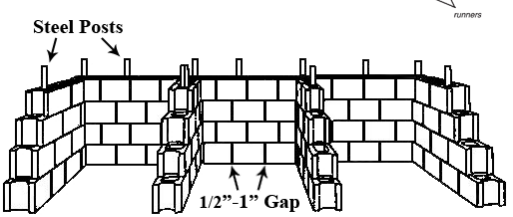


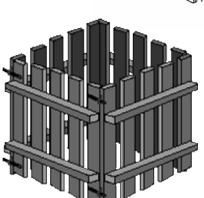












Creating Compost

Think of your compost heap as a living thing. The organisms that call it home require a balanced diet of air, water, heat and time. Together, these ingredients will produce a community of hardworking composting microorganisms that will reduce your waste into a fertile soil additive.

The best ingredients to add to your bin or pile are a combination of high nitrogen "greens" and high carbon "browns." Examples of both are found in the diagram below. You can even put shredded newspaper, cardboard and other paper into your composter.

To prevent smells and to speed up the process, make layers of browns and greens, and lightly water each layer to moisten. Water is an important factor in making compost; make sure your compost pile stays a little wet by watering it regularly. The hotter the pile, the more often you'll need to water it.

Remember to turn, or "fluff", the compost pile once a week. You can use a pitch fork, a compost aerator, or even put on a pair of gloves and turn it by hand. Frequent fluffing helps speed up the process, but even if you never do it, you'll still end up with compost. It will just take much, much longer.

Do not add pet or human feces, meat, barbecue ashes or diseased plant material. A good rule of thumb to follow is when in doubt, leave it out.

browns \ nitrogen
- leaves
- sawdust
- hay/straw
- wood mulch
- pine needles
- small tree branches

greens \ carbon
- grass
- tea bags
- egg shells
- coffee grounds
- pet/human hair
- fruit/vegetable scraps

don't add
- meat
- dairy products
- diseased plants
- invasive weeds
- fire ashes
- feces

Grasscycling

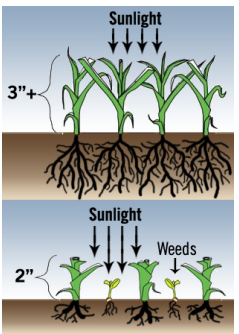
There are simple things you can do to save time and money while creating a beautiful lawn. The tips on this page can help you fertilize your lawn, grow stronger roots, healthier grass, and save money. Grass clippings make up approximately 50% of residential trash in the summer. Grass clippings are too valuable to send to the landfill!
Don't bag it—cut it high and let it lie.

Mulching

Mulching your grass reduces waste and provides important nutrients to your lawn. Use a mulching mower or add a mulching blade to your mower. Mulching cuts grass into small pieces then puts the clippings back onto the lawn. Grass, which is 75-80% water, decomposes quickly, releasing valuable nutrients like nitrogen back into your lawn, fertilizing your lawn naturally.

Blade Height

Keep grass at about 3 inches tall and remove only 1/3 of the growth each time you mow. The grass will be healthier and it can prevent weeds by blocking the sun and growing stronger roots, keeping weed seeds from germinating. You'll save on your water bill too, because stronger, deeper roots are able to collect and hold water more easily and resist drought.



Composting

Grass is also great for your compost pile. Add it in small layers, between leaves and other 'browns'. If it is just piled on top, it can cause odors, especially when wet. The nitrogen in grass and carbon in browns work together to prevent odors. Letting the grass dry before composting will also help control odor.

Go Green for a Green Lawn! Consider buying a reel mower—they require no gas or oil, produce no emissions or noise, cut beautifully and provide exercise time.

One Mower Tip: The key to a quality cut with any style mower is to use a sharp blade. Dull blades tear rather than cut the grass, giving the lawn a frayed, brownish look and provide a ready site for disease.

Vermiculture

Did you know Americans throw away 30% of their food? Worm composting, or vermiculture, is an efficient way of turning kitchen scraps into a high quality fertilizer to use on your plants and garden vegetables.

To get started, buy a pound of red wiggler worms from a worm farm like **wackyworldsof.com** or **windsweptwormfarm.com**. Worms are shipped to you in peat moss and should be placed in a bin and fed soon after their arrival.

To build a worm bin, start with a shallow, plastic container with a lid or purchase a commercial bin online. Drill 1/8-inch diameter holes (or smaller on the bottom) in the bottom and sides for ventilation and drainage, then line the bottom with landscape fabric.

For bedding material, tear black and white newspaper into one-inch strips and moisten them with a spray bottle. They should feel like a wet sponge, but not soaking. If they are too wet or too dry, it is harmful to the worms. Try to use newspapers that print with soy ink instead of chemicals. You can also use hay or leaves.

Place a handful of crushed egg shells or coffee grounds on the bottom of the bin to aid the worms' digestion. Add worms and top with dampened newspaper strips. Place the bin in a cool, shady location. You can even place bins indoors because there is no odor if maintained properly.

Worms eat vegetable scraps, fruit peels, coffee grounds and filters, tea bags, egg shells and other kitchen waste. They prefer scraps chopped into small pieces, but they will eat larger pieces, as well. It just takes them longer. Feed them no more than they can eat in a few days. As the number of worms increase, they will require more food. To feed them, lift the newspaper and spread your peels and scraps on bottom of bin.

Your leftovers will quickly turn into the best fertilizer available. It's natural and free!

Compost Q&A

Q: Do I have to buy or build a special bin to compost?
A: No. You can compost by simply piling up the green and brown layers in the corner of your yard.

Q: What should I avoid putting in my compost pile?
A: Do not add pet waste, seed heads or diseased plants. You may also want to avoid leaves high in acid such as bay laurel, walnut, cypress and juniper. Fibrous leaves like those of the magnolia take a long time to break down. Chop into small pieces before composting.

Q: Will my compost pile attract rodents?
A: If you add food waste or animal fats, meats or pet waste. To avoid attracting rats and mice, use a rodent-proof bin, keep a lid on it and put wire mesh on the bottom and sides. Air vent holes should be less than half inch in diameter. Turn the compost pile with a rake or shovel more frequently to raise the temperature.

Q: Why do I need to water my compost pile?
A: Moisture aids in the breakdown of the ingredients in your compost pile. When adding a new layer of greens or browns, sprinkle it lightly with water. If your compost pile has a bad odor, it is probably too wet. Mix in dry ingredients to help get rid of the problem.

Q: I have a lot of fall leaves. Is it possible to add too many?
A: Yes and No. Fall leaves are perfect for composting, but they are also beneficial as a top dressing for flower beds during the cold winter months. Run over leaves with a mower to chop them into smaller pieces that will break down faster. It is also important to make sure you have 'greens' like grass clippings mixed in with the leaves to speed up the process and prevent smells. The nitrogen and carbon cancel each other out and prevent odors.

Q: When is my compost finished?
A: There is no one determining factor, but if it is dark, crumbly and smells like dirt, not rotten, you have compost.

Composting Resources

OSU Extension Office: www.oces.tulsacounty.org
The MET: www.metrecycle.com

www.compostguide.com
www.composting101.com
www.gardengourmet.com
www.composters.com

Metropolitan Environmental Trust
Williams Tower 1 • 1 W 3rd St, Ste. 110 • Tulsa, Ok 74103
918.584.0584 • metrecycle.com