

# Composting at Home



## What is Compost?

You've heard about this stuff called "compost" that people make out of their lawn and kitchen scraps. You might have tried to make some, with varied results. But what exactly is compost, and how do you make it?

Compost is a dark brown, earthy, crumbly material consisting of decomposing organic matter. When added to soil, compost improves both porosity and water retention, and provides plants with essential nutrients in a form that they can readily absorb.

Composting is the human manipulation of the decomposition process. Inside every compost pile are thousands of microorganisms working to break down the organic material. By controlling the conditions of the compost pile, we can speed up the process and produce a valuable soil amendment, while reducing the amount of trash going to our landfills. It's a win-win situation, and here's the best part—anyone can do it! So let's get started.

## What Do I Need To Make Compost?

There are only three essential ingredients for making compost: water, air and organic stuff. Water and air are no-brainers, and a list of organic stuff can be found inside in the "What to Compost" section on page 2.

There are a few other tools you may want to have, depending on the materials you'll be composting, your compost pile's location, how quickly you want the materials in your compost pile to break down, and how you plan to use your finished compost. These include a compost bin, pitchfork or compost turner, probe thermometer, chipper/shredder, wheelbarrow for transporting finished compost, and a large bucket or barrel for making compost tea. Remember, these are optional—as long as you have the "basic three" you can start composting.

## How Do I Start My Compost Pile?

The first thing to do is to pick a location for your compost pile. When choosing a location, look for one that is:

- Well-drained and close to level, so that materials can be piled evenly and water doesn't pool.
- In partial shade, if possible, to help with water retention.
- At least a foot away from walls, fences, bushes or trees. The damp environment of the pile can cause wood to rot.
- Convenient to both the source of materials and where you plan to use the compost, so you don't spend too much time moving things back and forth.

Once you have chosen a location for the compost pile, it's a good idea to loosen the soil so that your compost will come into contact with the dirt. This will allow beneficial soil microorganisms to enter the pile easily. You may also want to start your pile with a 4" to 6" layer of twigs or small branches to encourage airflow at the bottom of the pile.

Gather your organic materials (see "What to Compost" on page 2), and have a shovel or pitchfork and a hose with a sprayer nearby so you can mix the materials and add moisture as you build the pile. Be sure you have a good mix of "greens" and "browns" (see the "What To Compost" section on page 2). Ideally you should have enough materials to build a pile that is 3' x 3' x 3' in size.

Starting with brown materials, layer greens and browns, mixing the materials and adding water as you go (the pile should be moist, like a really good blueberry muffin or a well-wrung sponge). Be sure to bury any food scraps in the center of the pile and finish with a brown layer. Congratulations! You've just built a compost pile.

# What to Compost

There are two basic components to making compost—"greens" and "browns". It is important to have a good mix of both types to make composting work.

"Greens" are typically materials that are green, wet, and stinky. These materials are high in nitrogen, which the decomposers living in the compost pile use to build tissue, much as our bodies use protein. If you don't have enough green materials, your compost critters will have a hard time reproducing, which slows the composting process down.

"Browns" are materials that are usually brown, dry and dusty. These materials contain high levels of carbon, which composting microorganisms use for energy, like our bodies use carbohydrates. Brown materials also act as bulking agents, and encourage airflow throughout the pile.

So what's a good green/brown mix? A good rule of thumb to start your compost pile is to add one part green materials for every 2 parts brown materials by volume. As your materials begin to compost, you will be able to tell if your green/brown balance is off and adjust them accordingly (see the "Troubleshooting" section on the next page).

The table below shows some common green and brown materials that are suitable for composting, as well as some materials you should keep out of your compost pile. Other materials are suitable as long as they are organic (i.e. once alive) and are not on the "Do Not Compost" list.

## "Greens"

- Fruit & vegetable scraps
- Houseplants
- Green plant trimmings
- Weeds that have not gone to seed
- Coffee grounds & filters or tea bags
- Bread, pasta, cereal
- Hair
- Grass clippings
- Wilted flowers

## "Browns"

- Dry leaves
- Hay or straw
- Wood chips
- Sawdust (use sparingly)
- Dryer lint
- Dried grass clippings
- Shredded cardboard or paper (mix in well or it will mat up)

## DO NOT COMPOST THESE MATERIALS

- **Meat, fish or dairy products.** These materials will stink when they decompose and attract animal pests like raccoons, skunks, rodents and dogs.
- **Fats, oils, peanut butter, mayonnaise or salad dressings.** These may cause an odor problem, and will coat the surfaces of other materials in the pile, slowing decomposition.
- **Dog or cat (or human) poop.** Pathogens that may be present in the feces could survive the composting process and make you sick if the resulting compost is used on a lawn or in a food garden.
- **Weeds that have gone to seed or diseased plants.** Most home composting piles will not reach a high enough temperature to kill weed seeds or diseases.
- **Wood or charcoal ash.** While these won't really hurt the composting process, ashes can contain high levels of various salts. These salts could change your soil's pH or mineral balances in a bad way.
- **Grass clippings from lawns treated with long-lasting herbicides.** Some persistent herbicides, such as clopyralid, do not break down during the composting process. When applied to the garden, the finished compost can kill ornamental and food plants.
- **Bones.** Will not break down in compost pile.
- **Glass, plastic, metal and other non-organic materials.**

# I've Built the Pile, Now What?

You've chosen the location for your compost pile, maybe built a bin, and have layered and mixed your materials. Composting is a natural process, so all you need to do at this point is wait. In six months to a year the materials will break down and you'll have compost. But what if you don't want to wait that long?

If you want your materials to turn into compost fast (2-3 months) you'll have to do some work. The first step is monitoring the compost pile. Check it in a day or two and see if it's heating up in the middle. If it doesn't feel warm, check the moisture. If the pile is damp, add a few green materials to the pile to increase the nitrogen content.

After a week or two, if the compost pile cools off, it's time to turn your compost. Grab a pitchfork and begin mixing and stirring the compost, turning the materials from the bottom to the top and from the inside to the outside. Add more water, if needed, and check it again in a couple days. The pile should start heating up again.

After a few rounds of turning, (anywhere from 6-12 weeks) the materials in your compost pile should be much harder to recognize, and beginning to look like peat moss—dark brown and crumbly. When you get to a point when, after turning the pile, it doesn't heat up anymore, your compost is probably finished and it's time to move on to the "curing" stage.

# Is It Finished Yet?

Compost is finished when it is uniformly dark brown, crumbly, and earthy smelling. When you turn the pile, it should not heat up anymore, and you should not be able to recognize the original materials.

There are a couple tests you can do to make sure your compost is finished. You can place a handful of compost in a zip-top bag, add a little extra water and seal it up. After a week, carefully open the bag and take a sniff. If it smells like wet potting soil, the compost is finished. If it stinks, it means your compost needs a little more time to finish decomposing.

You can also plant a few test seeds in a little of your compost and see if they germinate. If they do, and the seedlings look healthy, your compost is finished, and it's time to cure your compost.

# Curing

You may have heard that applying compost to your garden will burn plants or rob nitrogen from the soil. This is because sometimes, the microorganisms in the compost, when introduced to a fresh nitrogen source (such as a fertilized garden bed) will begin to rapidly reproduce and start the decomposition process again. Curing compost allows many of these microorganisms to move on and prevents compost burn. To cure your compost, simply move the finished compost to a corner of the yard and let it sit for about four weeks before using on your plants.

# What's Wrong? Troubleshooting Guide

<b>Problem</b>	<b>Possible Cause(s)</b>	<b>What to Do</b>
My compost pile stinks like ammonia	Too many green materials	Add brown materials and mix well.
My compost pile stinks like rotten eggs	Too much moisture/not enough air	Turn the pile daily until the smell disappears. You may also want to add some bulky brown materials such as wood chips to increase airflow.
My compost pile isn't composting	Too dry or not enough green materials	Check the moisture and add water if needed. If the pile is damp, mix in a few more green materials.
My compost pile is attracting flies/rodents/the neighbor's dog	Meat, fish or dairy in pile, or exposed food scraps	Remove any meat, fish or dairy. Make sure food scraps are buried in the center of the pile. Cover the pile with a layer of dry brown materials. If pests continue to be a problem, consider getting a compost bin with a lid.

# How to Use Finished Compost

Before you use your compost, you may want to screen it to remove any large chunks that did not completely break down, as well as to make sure there are no rocks or non-organics in the compost. Finished compost can be used in a variety of ways—here are a few.

- Work a 2-3 inch layer of compost into your garden beds before planting in spring.
- Use a fertilizer spreader to apply a thin layer of compost to your lawn.
- Topdress your houseplants or window boxes with a layer of compost.
- Use compost to mulch around your trees and shrubs—it will keep weeds down, retain moisture, and provide nutrients.
- Use compost instead of peat moss in potting mix.
- Place a layer of compost in the bottom of the hole when planting trees, shrubs, or bulbs.
- Make compost tea! Place some compost in an old sock and tie it off. Place the sock in a bucket of water and let it sit overnight. Remove the sock (use the wet compost on the garden) and use the “tea” as a liquid fertilizer.

## I'm Not Sure Traditional Composting Is For Me—Are There Alternatives?

Maybe you've decided that backyard composting is not for you. You might not have access to enough green or brown materials to achieve a good mix for composting. You might not have the space in your lawn to dedicate to a compost pile or bin. Or maybe you live in an apartment or condo, and don't have a lawn, but still want to recycle your kitchen waste. Here are a few alternative composting methods. More information on any of these methods can be obtained by contacting Southern Idaho Solid Waste at 208-432-9082.

- **Grasscycling.** Grasscycling is ideal for people who have little access to brown materials for a compost pile. This method simply leaves grass clippings on the lawn. The clippings, which are more than 90% water, quickly break down, providing nitrogen and water to the lawn.
- **Mulching.** Mulching is an option for people with a lot of woody lawn wastes and dry leaves but few green materials. Simply spread dry leaves or chipped branches around trees, shrubs and other plantings. You can also use mulch to make garden paths. Mulch helps soil retain water and keeps weeds down around plantings.
- **Soil Incorporation.** Soil incorporation involves simply burying your kitchen scraps in the garden and letting them decompose over time. Be sure to bury scraps under at least six inches of soil to avoid attracting pests, and do not plant over the places where you've buried scraps for at least a year.
- **Vermicomposting.** Vermicomposting, or composting with worms, is ideal for people who want to recycle food scraps only. Special worms, known as “red wigglers” are placed in a wooden or plastic bin, along with bedding (shredded paper, shredded cardboard, coir fiber and peat moss all work well) and food scraps. The worms eat the food scraps and produce “castings” which can be used to fertilize houseplants.

## Want to Learn More?

For more information on composting or any of the other methods described in this brochure, please contact Southern Idaho Solid waste at 208-432-9082 or visit our website at [www.sisw.org](http://www.sisw.org).

