

# How Compost Happens



*This fact sheet will help you create rich compost to use in the garden, on the lawn and as a soil builder around special shrubs and plants. We include answers to common compost questions and include a troubleshooting guide to common compost problems.*

## Q: What can I add to my compost pile?

**A:** Although almost all natural, organic material will compost, you shouldn't put everything in your pile. Some wastes, such as fish scraps, bones, butter and meat will attract pests and may smell. Other items, such as dog or cat manure, contain disease organisms that can survive the compost process and may attract other animals. Plants that are diseased or are infected with insects should not be added to your compost pile because they can cause future problems.

Some types of weeds and grasses (such as quack grass) may not be killed and can regrow. If you add weeds to the pile, be sure the pile heats up enough to kill them. Turning the pile regularly will help.

## Q: What are the benefits of making compost?

**A:** When you compost, you convert vegetable scraps, leaves, grass clippings and other organic materials into useful soil-building material. You can use compost in your garden and around shrubs or other plants. Composting reduces the amount of materials that go into landfills, which cuts down on the waste stream.

## Q: How long does it take to make compost?

**A:** Generally, you can create usable compost in two to six months. It depends on materials, temperature, aeration and management.

Woody materials, such as wood chips, branches and twigs, may take up to two years to break down, unless you finely chip or shred them. If you add these to your pile, the whole

### Easy to Compost

seaweed	leaves
bread	paper
coffee grounds	sawdust
egg shells	straw
pine needles	sod
fruit peels and rinds	tea bags
garden waste	vegetables
grass clippings	wood ash
	wood shavings

### Hard to Compost

butter	milk
bones	cooking oils
cheese	peanut butter
chicken	salad
fish scraps	dressing
lard	sour cream
mayonnaise	vegetable oil
meat	wood chips

### Slow Composters

wood chips, braches, twigs	<i>Cut these materials into small pieces and mix them with high-nitrogen materials (manure, fresh grass clippings) to make them decompose faster.</i>
corncoobs, husks, and stalks	
sawdust	
straw	
apple pulp	
nut shells	

pile may decompose more slowly. However, these materials will improve the pile structure and allow air to move through it. This is important if you add dense material, such as manure, to the pile.

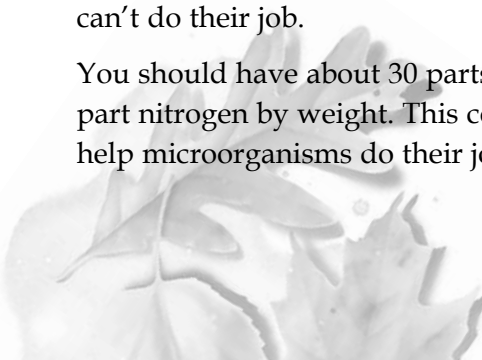
**Here are some other tips to aid the compost process:**

- Mix materials that break down slowly with materials that break down quickly (food scraps, garden waste, etc.). This allows your pile to heat up faster.
- Mix materials of different sizes and textures, too. This will make a structurally stable and well-drained pile.
- Maintain the right carbon-to-nitrogen ratio.

**Q: Why is the carbon-to-nitrogen ratio important? How can I be sure I have the right amounts of both?**

**A:** Microorganisms in the pile are what make the materials decompose. They use the carbon (C) for food and the nitrogen (N) to build proteins. Without carbon or nitrogen, microorganisms can't do their job.

You should have about 30 parts carbon to one part nitrogen by weight. This combination will help microorganisms do their job quickly.



This doesn't mean you have to weigh everything that goes into the pile. Even C and N ratios of 25:1 and 40:1 work well. Just be aware of how much carbon and nitrogen material you add to the pile. In general, coarse, woody material is very high in carbon. Moist, dense material is high in nitrogen (see chart below). If there is too much carbon, the pile won't decompose very fast. If there is too much nitrogen, it will start to form ammonia gas, which can cause odor problems.

**Q: Should I add sod to my compost pile?**

**A:** Yes, you may mix sod into your compost pile. Break up small amounts and combine it with other wastes. You can also compost it separately. Here's how:

- Put fresh strips of sod in a pile with the roots up and the grass down. Wet it well, and cover it with a tarp to keep the light out.
- A large pile may take one to three years to decompose.

**Q: What if some of the material I put into the compost has been treated with pesticides? Will this cause a problem?**

**A:** If yard waste has been composted at least one year, pesticides should not be a problem. They break down faster in a compost pile than they do in the soil.

**Compost Materials That Are High in Carbon and Nitrogen** (from highest to lowest)

**Nitrogen**

- horse manure with litter
- horse manure
- grass clippings
- cow manure
- coffee grounds
- vegetable waste
- poultry manure (with litter)
- poultry manure (fresh)
- pig manure

**Carbon**

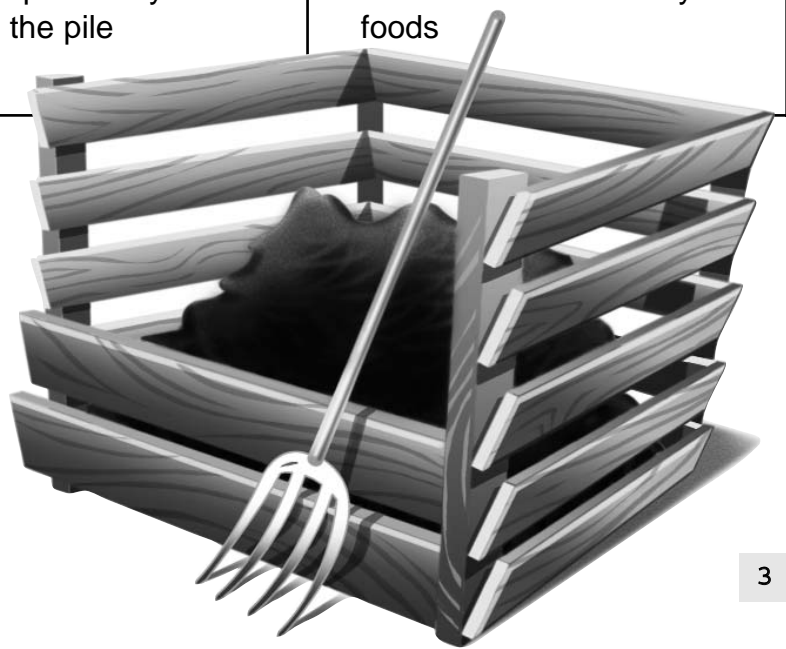
- wood chips and sawdust
- paper
- bark
- straw
- corn stalks
- foliage (leaves)

**Note:** These are listed based on estimates. The amount of nitrogen or carbon may vary depending on the material. For example, brown grass clippings from a dry lawn will have less nitrogen than lush, green grass clippings. If you fertilize your lawn, the clippings will have an even higher nitrogen content.

# Compost Troubleshooting Guide

Problem	Possible Cause	Solution
Rotten smell	<ul style="list-style-type: none"> <li>▶ Excessive moisture (anaerobic conditions)</li> <li>▶ Compaction (anaerobic conditions)</li> </ul>	<ul style="list-style-type: none"> <li>▶ Turn pile or add dry, porous material, such as sawdust, wood chips or straw</li> <li>▶ Turn pile or make the pile smaller</li> </ul>
Ammonia smell	<ul style="list-style-type: none"> <li>▶ Too much nitrogen; not enough carbon</li> </ul>	<ul style="list-style-type: none"> <li>▶ Add high-carbon material, such as sawdust, wood chips or straw</li> </ul>
Pile not heating up	<ul style="list-style-type: none"> <li>▶ Pile too small</li> <li>▶ Not enough moisture</li> <li>▶ Poor air circulation</li> <li>▶ Lack of nitrogen</li> <li>▶ Cold weather</li> </ul>	<ul style="list-style-type: none"> <li>▶ Make pile bigger or insulate with straw</li> <li>▶ Add water while turning pile</li> <li>▶ Turn pile</li> <li>▶ Mix in nitrogen sources, such as grass clippings or manure</li> <li>▶ Make the pile bigger or insulate the pile with a layer of straw</li> </ul>
Pile too hot	<ul style="list-style-type: none"> <li>▶ Pile too large</li> <li>▶ Not enough air</li> </ul>	<ul style="list-style-type: none"> <li>▶ Make smaller</li> <li>▶ Turn pile</li> </ul>
Pests (raccoons, rats, etc.)	<ul style="list-style-type: none"> <li>▶ Meat scraps or fatty food waste in the pile</li> </ul>	<ul style="list-style-type: none"> <li>▶ Remove meat and fatty foods</li> </ul>

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