

Backyard Composting Basics

Compost Basics

Compost is prepared by managing the **aerobic decomposition of organic materials** like yard debris, grass, leaves, kitchen scraps, paper, manures, straw, hay, wood chips and sawdust.

A complex community of microorganisms feed on these inputs, breaking them down and releasing **valuable plant nutrients**. As the microorganisms feed, the temperature of the pile rises. Compost typically reaches temperatures of **130°F or higher** during peak decomposition. As more material breaks down, the temperature of the compost pile will decrease to ambient air temperatures. At this point, the pile cures and is ready for use as a soil amendment.

Building Blocks of Compost

Composting requires 4 basic elements:

1. **Water**
2. **Oxygen**
3. **Nitrogen**, and
4. **Carbon**

Water is necessary for sustaining the microbial life in the pile and **oxygen** maintains aerobic conditions.

Nitrogen-rich materials, commonly referred to as “greens,” are typically moist and contain a higher ratio of nitrogen to carbon. Greens are food wastes, grass, coffee grounds, and others.

Carbon-rich materials, or “browns,” help balance the green materials and are typically dry, brittle materials like leaves, straw, newspaper, and wood chips.

What Can Be Composted?

“Greens”

- Most food waste
- Coffee grounds/filters
- Vegetables and fruits
- Egg shells
- Manures
- Grass

“Browns”

- Soiled napkins & paper plates
- Newspaper
- Leaves and straw
- Wood chips
- Yard debris

NO

- Plastic
- Glass
- Metal
- Styrofoam
- Meat*
- Dairy*
- Oily products*
- Fatty products*

** These materials can be composted but they risk attracting pests and causing odors if not managed properly. Compost them only if you are experienced.*

Using Finished Compost

Finished compost is dark brown and crumbly. There will be no recognizable compostables left, and no foul odors. It may take a year or longer to generate finished compost depending on the materials added and how often the pile was turned (see reverse). Woody materials will take longer to break down. **Be patient; compost happens!**

Finished compost can be used to:

- mulch or “top dress” planted areas,
- amend soil prior to planting,
- enhance potting media.

Add about two inches (2”) of compost to new beds and about one inch (1”) of compost each year to existing beds. Incorporate the compost into the soil as much as possible.

To learn how to build your pile, see reverse.

Choosing a System

There is no one right way to compost. The various bins and systems available have different costs and benefits, but all can be successful. Probably the most common method for composting is an **open pile**. This works if you have some land and your proximity to neighbors is low, as open piles tend to be managed less, and pests and foul odors can occur. You can **build your own bin** from welded wire, wood pallets, chicken wire, cinder blocks, drums and trash cans. Welded wire bins are the most cost effective. You can also **purchase a pre-made bin** at your local gardening store or online.

When choosing a bin, keep volume in mind. We recommend something 3x3x3 feet or larger. This will minimize the surface-to-volume ratio and improve heat retention during composting.



Increase air flow and drainage by elevating your bin on a pallet

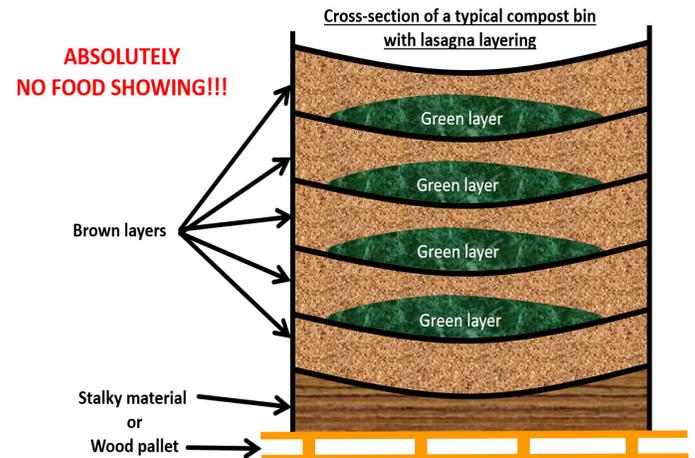
Preparing Scraps for the Pile

Keep a container in the kitchen to collect scraps as they're created. When the container is full, empty it into your compost pile. The size of the container will depend on your needs and the amount of waste you typically produce. Avoid sealing the container, as this creates anaerobic conditions which create foul odors. Instead, **partially seal the container or cover it with a cloth to keep odors in and fruit flies out.**

Cutting, chopping, and crunching food scraps will increase their surface area, accelerating decomposition. However, too much cutting creates excessive moisture. Aim for a diversity in size and shape when preparing food scraps.

Building & Managing the Pile

“Lasagna layering” is a simple and effective technique that prevents a number of issues. First, raise the pile off the ground using a wood pallet or add 6-12 inches of stinky, course material at the bottom of the bin. Next, create a thick nest of brown material inside the bin. Add your green waste to the center of the nest. Finally, add another layer of browns so that **no food is showing**. Continue to **alternate brown and green layers** as compostables are generated and added to the pile. Brown layers should be two or three times thicker than green layers.



Turn the pile at least once a year to accelerate decomposition. First, remove the outer layer of browns, and use a shovel or pitch fork to flip the remaining contents into a new bin. Alternatively, tumble or roll your bin. Continue to layer.

Troubleshooting

Issue	Solution
Not heating up	Add greens or larger volumes of browns and greens
Too dry	Add greens or water
Too wet	Add browns or decrease greens
Foul odors	Add more browns
Flies and other pests	Add more browns and no food showing