

# A Guide to Composting at Home

## What Is Compost?

**Compost** is a nutrient-rich, soil-like material comprised of decomposing organic matter most often made up of your own fallen leaves, grass clipping, plant debris, vegetable scraps, and yard waste. The key idea behind composting is that the materials and waste that you might normally throw away can actually be recycled to help plants grow, delivering better harvests and flower blooms.

## Why do we compost

- i. To fix soil problems
- ii. To improve soil productivity
- iii. To add nutrients to the soil
- iv. To encourage plant anchorage
- v. To provide nutrients to plants
- vi. To utilize available waste materials

## Where to Compost

You can make your own compost in a space as small as a patio or balcony. It is not necessary to have a large outdoor space that may provide series of bins that usually filled with organic matter.

## Are Compost Bins Necessary?

At its most basic, a composting system doesn't need to consist of anything more than a pile in the corner of your yard. As long as the pile ends up being about 4 feet high, 4 feet wide, and 4 feet deep, it should be successful at decomposing everything you throw at it.

## What Can Be Composted?

Most organic materials can be composted. As mentioned above, this includes things like fallen leaves, grass clippings, shredded newspaper, wood chips, vegetable scraps, and so on.

In addition to the ingredients mentioned above, any of these items may be added to a compost pile:

- Coffee grounds and loose tea or compostable tea bags (note that most tea bags are not fully compostable, so tear or shred them before adding to compost)
- Dry goods (crackers, flour, spices)
- Eggshells
- Hair
- Nutshells

- Pasta (cooked or uncooked)
- Seaweed
- Shredded paper/newspaper
- Cardboard (non-glossy)
- Bedding from chicken coops or from small mammal pets (guinea pigs, rabbits, hamsters, etc.)

### **What CAN'T Be Composted?**

Materials that you should NOT put in your compost pile include

- i. inorganic materials (rock, glass, metal, plastic, etc.) and
- ii. Animal products: like bones, seafood, meat scraps, dairy products, and grease. (Eggshells are an exception, since they break down easily and are a good source of calcium!) Additionally,
- iii. Don't add dog or cat waste to your compost pile, as these may contain parasites or other nasty things that may not get completely decomposed.
- iv. Also, if you're collecting grass clippings from the neighbors, make sure they don't use weed killers on their lawns. Those chemicals take forever to break down and will negatively impact any plants you use your finished compost on.

### **Essential Ingredients of a Healthy Compost Pile**

A productive compost pile needs four things:

- i. **Brown matter ("browns"):** This is carbon-rich material such as straw, wood chippings, shredded brown cardboard, or fallen leaves.
- ii. **Green matter ("greens"):** These are nitrogen-rich materials like grass clippings, weeds, manure, or kitchen scraps. Greens should have carbon-to-nitrogen ratio of about 30:1.
- iii. **Water:** The pile should be kept consistently moist, especially important if you add lots of dry leaves or hay.
- iv. **Air:** Oxygen is necessary for aerobic micro-organisms to survive. They are the ones doing all the work of turning your garden waste into black gold.

### **Composting Methods: Hot vs. Cold Composting**

#### **1. Hot (or "Active") Composting:**

The most effective way to produce rich garden compost is to create a hot, or active, compost pile. It's called "hot" because it can reach an internal temperature of up to 160°F (71°C) and "active" because it destroys—essentially by cooking—weed seeds and disease-causing organisms. A

temperature of about 140°F (60°C) is what you should aim for in a hot, active compost pile. (The size of the pile, the ingredients, and their arrangements in layers are key to reaching that desired outcome.)

### **Use the Right Ratio:**

2 to 3 times more brown materials than greens

### **How Big Should the Compost Pile Be?**

A hot compost pile should be at least 3 feet in diameter, though slightly larger (4 feet) is ideal.

### **Making a Hot Compost Pile**

1. Cutting up or shredding materials helps speed up the process.
2. Pile the ingredients like a layer cake, with carbon-rich materials (browns) on the bottom. Placing twigs and woody stems here will help air circulate into the pile.
3. Next, cover the layer with soil.
4. Add nitrogen-rich materials (greens), followed by soil. Repeat the alternating layers of greens and browns until the pile reaches 2 to 3 feet high.
5. Soak the pile at its start and water periodically; its consistency should be that of a damp (not wet) sponge.
6. Add air to the interior of the pile by punching holes in its sides or by pushing 1- to 2-foot lengths of hollow pipe into it.

## **2. Cold (or “Passive”) Composting**

Cold, or passive, composting requires less effort than hot composting. You essentially let a pile of organic matter build and decompose, using the same types of ingredients as you would in a hot compost pile. The difference is that you don't spend time turning the pile or carefully managing the ratio of greens to browns.

Cold composting requires less effort from the gardener, but the decomposition takes substantially longer—a year or more!

### **Making a Cold Compost Pile**

To cold compost, simply create a pile of organic materials that you add to as you find or accumulate them. If possible, alternate layers of browns and greens, mixing in a few shovelfuls of garden soil, too. Since they'll take longer to break down, bury kitchen scraps in the pile's center to deter curious insect and animal pests.

**NOTE:** Avoid adding weeds or diseased plant materials to a cold compost pile, as the pile will not reach the high temperatures capable of killing weed seeds and diseases. (In fact, weeds may germinate in a cold pile.)

## **Composting Problems and Solutions**

### **What Should I Do If My Compost is Too Wet?**

Too much green matter can result in slimy, wet compost piles.

- i. Avoid soggy piles by alternating wetter ingredients (such as fresh grass clippings) with drier and more fibrous ingredients (such as dry leaves, cardboard, and woodier crop residue).
- ii. The resulting mix should be damp but not sodden.
- iii. You can also sprinkle wood ash onto your heap but, importantly, it must be wood ash and not coal ash.

### **Why Does My Compost Smell Bad?**

- i. If a foul odor emanates from your compost bin or pile, flip the compost to introduce more air.
- ii. Mixing the compost not only gives it plenty of air but results in a finer end product that is easier to spread. A good compost heap has a slightly sweet compost-y smell.
- iii. If it smells sour or rotten, then it either has too many greens or is too wet.

### **How Do I Keep Pests Away From My Compost Pile?**

- i. Avoid cooked food waste and animal products like meat and dairy, which attract rats and other pests.
- ii. Try burying veggie scraps or other food waste in the center of your pile so that it's not as accessible to pests.
- iii. If rodents are a problem, ease off adding potato peelings, which are a favorite snack.

### **Can I Compost Weeds?**

Composting weeds is fine as long as the weeds haven't yet set seed. A hot compost pile should be able to cook the seeds to make them inert, but it's still a risk. In any case, avoid invasive perennial weeds such as bindweed and black swallow-wort—these are better off disposed of in the trash!