

## **Organic Composting Basics: Methods, How to Make at Home**

Compost is a black and crumbly substance made from organic materials such as leaves, garden scraps, and food leftovers that decompose naturally. Bacteria, fungus, and other microorganisms feed on organic materials during the composting process. In the composting pile, these helpful microorganisms consume carbon and nitrogen to develop and reproduce. Let's check out a few organic composting basics below.

### **How does composting work?**

Compost is composed of organic elements that decompose in the soil, enriching the structure and providing vital nutrients. It's helpful to look at the biological process of decomposition in nature to understand the composting process. For example, trees, leaves, and other organic elements are abundant in forested places.

With the aid of microorganisms and earthworms, these materials progressively degrade or break down over time. Once the materials have decomposed, humus is formed, which is an important component in the development of rich, fertile soil as well as healthy plants. Composting in the garden is comparable to this procedure. When the compost pile has decomposed, the product should resemble humus, with a black, crumbly, soil-like substance.

### **What are the benefits of composting?**

Compost enriches the soil, preserves the environment, and strengthens communities. A compost that is mature, stable, and of excellent quality will improve the biological, chemical, and physical aspects of the soil. Compost improves soil structure, boosts water retention, and improves soil fertility by increasing microbial activity, suppressing plant disease, and improving the cation exchange capacity of the soil, allowing it to hold on to critical nutrients better.

Chemical fertilizers and insecticides are less necessary when using compost. Composting also helps to safeguard the environment. When decomposing items, such as moist food scraps, they contribute to methane emissions, which are 84 times more powerful than carbon dioxide in the short run.

When the same food waste is composted and fed to the soil, the soil's potential to store carbon is increased. The organic stuff is abundant in compost. Soil organic matter serves as a carbon sink. Compost enhances carbon sequestration by promoting plant growth. Composting is a task that may be completed at home. It's also an activity that the whole family can participate in.

## **Types of composting**

### **Cold composting**

Collecting green waste or removing organic items from your garbage, such as fruit and vegetable peels, coffee grinds and filters, and eggshells, and gathering them in a container, are required for starting cold composting. The substance will disintegrate over a year or so.

### **Hot composting**

Hot composting necessitates a greater level of involvement on your part, but the payoff is a speedier process: you'll get compost in just one to three months during hot weather. Nitrogen, carbon, air, and water are the four elements needed for a fast-cooking hot compost. When these elements are mixed, they feed bacteria, speeding up the decomposition process. When there is a lot of yard waste in the spring or autumn, you can make a huge batch of compost and afterward start another one while the first is in process.

### **Vermicomposting**

Worms are used to create Vermicompost. When these worms eat your food scraps, they make castings, that are high in nitrogen. You can't just use any worms for this, redworms are required. Worms for composting may be found for a reasonable price online or at a garden supply store.

## **What is the significance of carbon and nitrogen in composting?**

Microorganisms that cause decay need carbon as a food supply and nitrogen to proliferate. These components can be found in a variety of places across nature and serve as some of life's most fundamental building blocks. Several natural processes allow carbon and nitrogen to be released for usage.

This is done by the soil creatures in composting. As with all things dirt, you want to nurture and support the animals that are busy generating magic undergrounds, such as actinomycetes, fungus, and bacteria. Composting is the same way. Take care of the creatures, and the rest will fall into place.

## **What is C: N ratio?**

When it comes to composting, the ideal carbon to nitrogen ratio, or C: N ratio, is 25:1. In other words, for every part of nitrogen, you add to your compost pile, you want 25 parts carbon. A pile with too much carbon will be sluggish, dry, and chilly. Because the animals have too much food but not enough nitrogen to procreate, their number declines, and their activity is restricted.

A stinky, hot, wet compost pile is the result of too much nitrogen. This is because the organisms demand nitrogen to reproduce, and excess nitrogen causes cyclical population increases. Because there isn't enough carbon to feed the animals' expanding numbers, they die off quickly.

## **How to compost at home?**

There are many various ways to construct a compost pile. Pitchforks, shovels, machetes, and water hoses are also useful equipment. Regular mixing or stirring of the compost, as well as some water, can assist keep the compost in good shape.

## **What materials are needed to compost?**

Start with fresh vegetable and fruit waste as your greens if you're a beginner. You should not include meat, dairy, oily, or cooked meals in your diet. Proteins attract rodents, and fatty or oily meals can produce scents. Also, don't put unhealthy plants in your compost pile. If you are using eggshells, crush them first.

## **Backyard composting**

Regarding your compost pile or bin, choose a dry, shaded location near a water supply. As you collect brown and green materials, make sure the larger portions are chopped or shredded. As dry items are added, moisten them. Mix grass cuttings and organic waste into your compost heap after it's developed, and bury fruit and vegetable trash under 10 inches of compost material.

Cover the top of the compost with a sheet if you want to keep it wet. Your compost is ready to use when the bottom substance is black and rich in color. This might take anything from 2 months to 2 years in most cases.

## **Indoor composting**

If you don't have enough space for an outdoor compost pile, you may compost things indoors using a specific type of container that you can buy or create yourself at a local store or online. Keep note of what you toss in and tend to your pile. Pests and rodents will not be attracted to a well-kept compost bin, and it will not stink. In two to five weeks, your compost should be ready.

## **Organic composting basics and detailed procedure for creating compost**

### **Collecting green and brown materials**

Take time to collect enough materials to build a 3-foot-deep mound before starting your hot-compost pile. Combining moist, green goods with dry, brown ones is a good idea. Dried plant debris, fallen leaves, broken tree shreds, cardboard, newspaper, hay, and carbon-rich wood shavings are all examples of brown materials. Kitchen trash and

leftovers while filtering coffee, animal manures, fresh plant and grass cuttings are all nitrogen-rich green materials.

Start by combining three parts brown and one part green materials in your compost pile for the greatest results. If your compost pile appears to be overly damp and stinky, add more brown things or aerate it more frequently. You must maintain the balance between green and brown materials.

### **Watering for the compost**

Sprinkle or spray water on the pile regularly until it resembles a moist sponge. If you water excessively, your pile's microorganisms will become saturated and drown. This leads to the rotting of pile instead of producing compost.

The moisture level of the initial compost pile should be between 50 and 60%. This is a lot more than the majority of people understand. Microbial activity will slow or stop if the pile is too dry. If it's too moist, water will fill in the air spaces that microorganisms require to survive, resulting in stinky, anaerobic conditions. Try the "hand squeeze" moisture test to make sure your compost pile has adequate water.

Your food scraps will provide some moisture, but if more is required, water as you mix and grow your pile. Using a compost thermometer, check the temperature of your pile to ensure the components are decomposing appropriately. Alternatively, simply stretch your hand into the pile's center. The compost pile must be warm when touched.

### **Stirring the pile**

Using a garden fork, flip the pile once a week throughout the growing season to feed it with oxygen. When the core of the pile feels warm or a thermometer registers a reading between 130 and 150°F, it's time to flip the compost. Stirring the pile helps it cook faster and avoids the material from getting matted and odor-producing.

At this point, the layers should have spread equal amounts of green and brown components throughout the pile, so mix thoroughly. To speed the process up, slice and shred raw components into smaller pieces in addition to aerating them regularly.

### **Feeding compost to your garden**

The compost is fully cooked when it no longer emits heat and turns dry, brown, and crumbled, and is ready to be fed to the garden. At the start of each planting season, add roughly 4 to 6 inches of compost onto your raised beds and containers. Compost tea is a liquid produced by some gardeners from completed compost. Allowing completely formed compost to "soak" in water for a few days, then filtering it for use as DIY liquid fertilizer, is how this is done.

Every gardener is unique, so you must choose which composting method best suits your needs. Compost is simple to manufacture and ecologically good, regardless of which

approach you to use. It's also beneficial to your garden. You can have the loveliest garden imaginable with only a few food scraps and a little patience.

### **Tips for producing effective compost**

Choose a location for your compost pile that is far from your home and not too close to a brook or any other water body. Old wooden palettes, chicken wire, and other things can be used to create a pile enclosure. This will prevent hungry raccoons or dogs away from your compost pile. Seaweed can aid in the activation of your pile. Seaweed may be added to your compost by spray treatments or real seaweed additions. To encourage aeration for the creatures, make sure your pile contains both shredded and complete debris.

Depending on your timetable, turning might happen every few days to many weeks. Keep in mind that the more you spin, the faster the breakdown process will occur. When all of the components are evenly black and crumbly, and the compost smells earthy and fresh, it's finished. Use a pitchfork, rake, or your hands to spread your compost! Even if you don't have much, a layer of a dime's thickness over the top of your garden bed will help your soil and plants.

Worm castings, often known as vermicompost or worm compost, are beneficial to your plants. Vermicompost is rich in soil organisms and critical nutrients that plants appreciate. You can simply make your worm compost.