



Kitchen Composting





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About composting



WHAT IS COMPOSTING ?

Composting is a natural process of recycling organic matter, such as leaves and food scraps, into a valuable fertilizer that can enrich the soil and plants.

Anything that grows decomposes eventually; composting simply speeds up the process by providing a more conducive environment for bacteria, fungi, and other decomposing organisms to do their work.

HOW COMPOSTING IMPACTS THE ENVIRONMENT



COMPOSTING REDUCES WASTE

On an average, organic material forms 30-40% of total household waste. This waste is dumped in landfills and is disregarded. Diverting it to composting bins reduces the total waste being sent to landfills.

COMPOSTING REDUCES METHANE EMISSION

Organic material decomposing in landfills releases harmful methane, a gas 20 times more effective at trapping heat in the atmosphere than carbon dioxide. When the food in your trash goes to a landfill, it emits methane, a greenhouse gas that contributes to climate change. Composting is a way to minimize these methane emissions.





COMPOSTING IMPROVES SOIL HEALTH

Because compost produces fertilizer, it reduces the need for chemical options, which are harsh on the earth. Thus, composting helps improve soil health and reduces erosion.

COMPOSTING CONSERVES WATER

One of the most important benefits of composting is that it allows the soil to retain more water. This provides a steady source of moisture and nutrients to plants in your garden and also reduces the need for constant watering.

Adding compost to the soil also increases the amount of water that is able to penetrate the soil.



COMPOSTING REDUCES POLLUTION OF GROUNDWATER

Chemical fertilizers added to the soil percolate in the ground, affecting underground water quality. Using organic compost helps avoid this and saves this precious resource.



Kitchen Composting

Begin composting in your kitchen. The waste doesn't leave your kitchen, it stays there and turns into organic soil, ready to plant.

With the aim to encourage more people to adopt composting, we provide details on the concept of 'Kitchen Composting'. This is not so different from other methods, but the points mentioned below are prepared keeping in mind how an individual can compost in his/her home itself. No need of big setups or huge efforts, just collect a few things and you are ready to compost.



What can be composted?

Almost anything that comes from the ground can be composted. Cucumber ends, apple cores, carrot peels, cantaloupe rinds, avocado pits, an old pumpkin leftover— any vegetable or fruit scrap – are part of "greens". Coffee grounds and filters, tea leaves, herbs, spices, and nut and egg shells are all acceptable ingredients. You can also include cut flowers or plant trimmings, as long as they aren't diseased.



Note :

"Browns" are things like leaves, straw, mulch, wood products, sawdust, newspaper, tissues, paper cups, cartons & shredded paper. These are also important and should be added in the compost pit together with "greens."

FACTORS AFFECTING ORGANIC DECOMPOSITION

FACTOR 1: OXYGEN

Composting is an aerobic process, which means that oxygen is needed for the organic material to decompose. Compost piles need to be turned to create airflow.

FACTOR 2: ORGANIC MATERIALS

Compost piles should contain a mix of nitrogen-rich materials (greens) & carbon-rich materials (browns). A healthy compost pile is generally 50/50 greens to browns, but the ratio depends on what you put in, and your composting method of choice. Chopping your food scraps into smaller pieces speeds up the composting process. Larger pieces will still decompose, but take longer.

FACTOR 3: TEMPERATURE

Organic matter decomposes faster at higher temperatures, meaning that an active compost pile is warm, even when it's cold out. Turning your compost will generate more heat.



What you require to begin?

01

'Greens'
for Nitrogen

02

'Browns'
for Carbon

03

'Soil'
Avoid clay soil

04

'Compost Bin'
(terracotta pots, nursery pots, paint buckets, water buckets, tubs, broken dustbins, unused pots, etc. can all be used)

05

'Oxygen'
4-5 holes in the container for proper air circulation

06

'Location'
Indoors, no sunlight required

07

'Trays'
for covering the bottom and top

Start composting at home

As you collect items in your compost, aim for a mix of nitrogen-rich "green" material and carbon-heavy "brown" material. Green materials tend to be wet, whereas brown materials are drier.

Steps to follow :

01

Take any container that you want to use for composting (as mentioned above)

02

Make 4-5 holes for proper air circulation

03

Begin by adding soil at the bottom that is your first layer. Add around 15% soil (as per pot / container size)

04

Next add 35% browns

05

Add a thin layer of soil, enough to cover the browns but not too much.

06

Now add 35% green waste

07

Add around 15% soil at the top to cover the last layer, to prevent maggots or flies from escaping your compost pile.

08

Now cover the container with a plate / lid. It should just be a cover and not pack your container tightly. Flow of air is important.

09

Do not add any water.





10

Place the container in any corner and let it sit for 15 days.



11

Open it after 15 days and turn your compost with a stick, mix it properly to ease flow of air. This will also heat up the temperature inside.



12

You need to turn the compost pile again after a month and add soil. This would be the last process, after another 15-20 days your compost should be ready to use.



13

In total it takes 2 months for your heap of kitchen scraps to morph into rich organic soil, but you should notice change within just a few weeks.

A simple way to test finished compost is to take a handful and put it in a sealed plastic bag. After 3 days, open the bag and smell. Does it smell sour? If so, the compost is not finished curing and still has microorganisms at work. If it smells pleasant and earthy, it's ready to use.

Types of Composting

AEROBIC



Aerobes are bacteria that require oxygen levels of at least 5 percent to survive and are the most important and efficient composting microorganisms. Aerobes consume the organic waste and excrete chemicals such as nitrogen, phosphorus and magnesium, which are nutrients that plants need to thrive. This method is best for home composting.

ANAEROBIC

Anaerobic composting occurs when biodegradable material is starved of oxygen. With this process, microorganisms break down organic matter, such as food scraps, in an airtight container, over a relatively longer time.

Anaerobic organisms live and thrive in an environment with little or no oxygen. These organisms work at a much slower rate than their air-breathing aerobic counterparts, making the process of decomposition and composting a much slower process.





VERMICOMPOSTING

This is the process of using red worms to break down organic material into high-value compost. Vermicomposting operations can range from a small bin to large systems. Worms are sensitive to temperature, and prefer an environment that is 55 to 77 degrees (° F). The worms will eat almost any type of organic material other than compostable plastics.

BOKASHI - "fermented organic matter" in Japanese

Bokashi is the process of breaking down food scraps via anaerobic fermentation. A type of composting, bokashi does not use oxygen, fermenting the organics instead. It requires special equipment's and arrangements, a Bokashi kit can be purchased from a nursery.



COMPOST TROUBLESHOOTING

Compost can get a bad reputation because people think it creates odour and attracts rats and insects. But when maintained properly, compost should not have a bad smell or attract pests.

1. BAD ODOUR LIKE ROTTEN EGGS

Cause - Too much moisture, anaerobic conditions.

Solution - Turn your materials frequently. Add dry brown material such as fallen leaves, woodchips, or straw.

2. BAD ODOUR LIKE ROTTEN FOOD

Cause - Exposed or inappropriate food scraps.

Solution - Remove meat, dairy, or other inappropriate material. Cover food scraps with a thick layer of browns.

3. BAD ODOUR LIKE AMMONIA

Cause - Too much nitrogen (greens), not enough carbon (browns).

Solution - Add browns to the pile. If needed, remove some greens, allow them to lie out, then reincorporate them into the pile in a few days.

4. PILE NOT BREAKING DOWN

Cause - Poor aeration.

Solution - Turn the pile more frequently to get oxygen to the decomposing organics.

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