



# A Quick Guide to Backyard Composting

Compost Food and Yard Waste Into Superfood for Your Soil



# Compost: Superfood for Soil

Food scraps and yard waste breaking down in a compost pile with oxygen makes nutrient-rich compost to feed plants.

## Why does compost help soil?

Compost gives soil life.

One teaspoon of soil can hold as much as billion live bacteria.

How much bacteria it has affects:

- How much nutrition it gives plants.
- How much carbon plants pull from the air and store in the soil.
- How deeply plant roots can grow.



### Compost Helps Plants

- Sprout successfully .
- Grow deeper roots.
- Flower and fruit more.



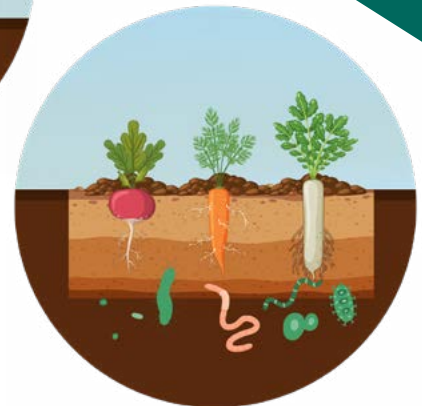
### Nourishes Plants

Earthworms, bacteria and fungi break down organics into nutrients plants need.



### Saves Water

Compost helps soil hold water like a sponge.



### Fuels Healthy Plants

Gardens need less:

- Fertilizer.
- Pesticides.

## How Compost Helps Your Garden

## Methane Pollution Worsens Climate Change

Food and yard waste in landfills rots without oxygen, releasing methane gas, a climate super pollutant.



Methane heats the climate  
**84 times more**  
than carbon dioxide  
over 20 years.

California's climate crisis includes:

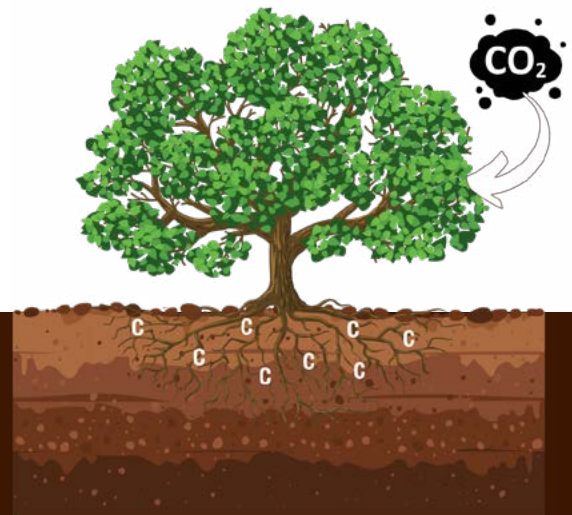
- Record-Breaking heat.
- 7 of the 10 biggest fire years since 2007.
- Greatly depleted groundwater.

## 2 Ways Compost Fights Climate Change



### 1. Cuts Methane Climate Pollution

Composting organics with oxygen reduces methane pollution.



### 2. Cuts Carbon Climate Pollution

Compost helps plants:

- Pull carbon climate pollution from the air and store it in the soil.

## Step 1: Choose a Compost System

You can:

- Build open compost pile or bin system.
- Buy a compost tumbler.

*Backyard tumblers are great for small spaces.*



*A three-bin system provides extra room to make and store compost.*



## Step 2: Find a Location

Position your compost pile:

- With a cover to protect it from pests and weather.
- In shade, so sun does not dry it.

# Home Compost Recipe

$\frac{2}{3}$  Browns +  $\frac{1}{3}$  Greens + Water + Air = Compost

## 70% "Browns"

Brown, Carbon-Rich Materials Include:



Dry branches and twigs



Dry Leaves



Dry untreated woodchips



Shredded paper without color or gloss coating



Dry shredded cardboard without color, tape, glue or wax

## 30% "Greens"

Green, Nitrogen-Rich Materials Include:



Moist grass clippings and yard trimmings



Fruit and vegetable scraps



Crushed egg shells



Coffee grounds and paper filters and tea bags



## Directions for Compost

1. Blend 2/3 brown material with 1/3 green material.
2. Add water to keep the pile moist but not soggy.
3. Turn the pile about once every 3 weeks to add oxygen.
4. Then let microorganisms break down material over time.
5. Turn pile every week for finished compost in 3-6 months.

Finished compost should look like dark and crumbly soil with an earthy scent.

## Don't Add These to Your Compost Pile:

- Meat, fish, and bones
- Cheese and dairy products
- Pet waste and cat litter
- Produce stickers
- Fats, oils, and greases
- Glossy paper
- Treated or painted wood
- Aggressive weeds and weeds with seeds
- Diseased and pest-infected plants
- Dryer lint
- Compostable food containers, utensils, and bags
- Cooked food (small amounts are fine)
- Herbicide treated plants



*A well-built compost pile with a base of woody material will drain excess water and not become soggy.*

## **Controlling Moisture Level**

Compost pile should be as damp as a wrung-out sponge.

To check moisture level squeeze a handful of the pile. A few drops of water means it's damp enough.

If your pile is dry, add water with either:

- A sprinkler on low atop the pile for a short time.
- A hose placed into the pile, then moved to water all sections.

In hot weather, you can water more often. When it rains, you can cover the pile.

## Turning Pile to Add Oxygen

Bacteria and fungi that break down organics into compost need oxygen to live.

A pile too dense or wet keeps air out, killing beneficial organisms.

Materials breaking down with no oxygen emit foul odors.

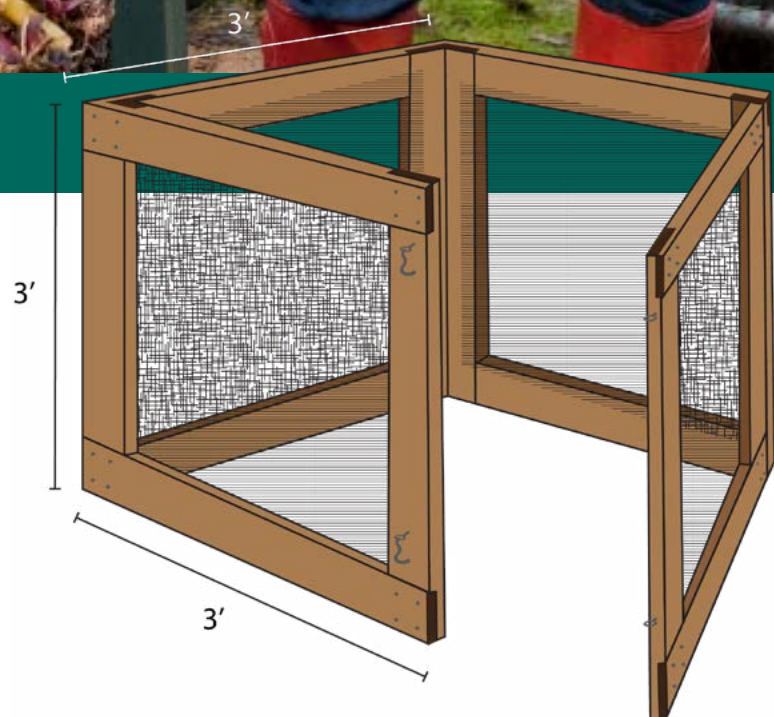
To avoid this, turn and fluff the pile weekly with a pitchfork or shovel.



## Size

To protect beneficial organisms, the pile should be at least 1 cubic yard: 3 feet wide, deep, and tall.

- Smaller piles may not get hot enough to kill bad organisms and weed seeds.
- Larger piles get hotter. Turn them more often to add air throughout the pile.





## Temperature

Compost must get to 131° F or hotter to kill:

- Weed seeds.
- Harmful germs like E. coli and salmonella.

Turn the pile often so all parts get hotter in the center.

## Measure the Temperature

Compost thermometers with long stems measure up to 4 feet deep to confirm the pile gets hot enough to kill pathogens.

If your compost pile stops decomposing:

1. Turn it.
2. Water it.

Water and air support composting microorganisms that eat organic material and heat the pile.



*Long thermometers are best so they reach the inside of the pile.*

## You will know your compost is finished when:

- It stops heating up after you turn it.
- It's as cool as the outside temperature.
- It is dark and crumbly with a pleasant earthy scent.



# Troubleshooting Compost Piles

## Problem

## Possible Causes

## What You Can Do

### Flies

Attracted by food remains, especially meat and fatty foods.

Too many maggots in pile.



Don't add meat or fatty scraps.  
Bury food in 5-8" of brown materials like wood chips.  
Turn pile often to heat it and kill larvae.

### Animals

Attracted by food remains, especially meat and fatty foods.



Don't add meat or fatty scraps.  
Bury food remains in 5-8" of browns or compost.  
Use bin with <2" openings.  
To avoid rodents: Use bin with hardware cloth with 1/4" openings to cover all sides.

### Low Pile Temperature (Below 90°F)

Too little air in pile.  
Too little moisture.  
Lack of green waste (low nitrogen).  
Cold weather.  
Small pile (<1 cubic yard).  
Composting process is complete.

Turn pile more often.  
Mix in greens and a little water.  
In cold, insulate pile with 4-5" straw/hay.  
Build a 1-cubic-yard pile.

### High Pile Temperature (Above 150°F)

Too little air added.  
Too much green materials (too much nitrogen).

Aerate the pile.  
Reduce the size if needed (to 1 cubic yard).  
Mix in browns (carbon) to balance nitrogen.

### Nothing Happening

Too much moisture.  
Too dry.  
Not enough green materials (nitrogen).  
Pile too small (<1 cubic yard.)

Turn pile to aerate, add dry material.  
Add a little water with a pitcher.  
Mix in green materials.  
Build pile to 1 cubic yard.  
Never put unfinished compost on plants because it can spread garden disease!

### Ammonia and Rotten Odor

An overabundance of green materials (nitrogen).  
Too much moisture.  
Overly compacted.  
Food scraps on top of pile.

Mix in brown material (carbon) to balance the nitrogen.  
Mix in dry materials to absorb moisture.  
Turn the pile to aerate it.  
Mix in wood ash to absorb odor and moisture.  
Bury food remains in 8-12" of compost.  
Cover pile in rain or snow.

# Resources for Backyard Composting

## [Intro to Composting at Home: Hot & Warm Composting by Institute for Local Self-Reliance](#)

The Institute of Local Self-Reliance provides YouTube tutorials on how to create, manage, and harvest a backyard compost pile.



## [Composting Is Way Easier Than You Think by Natural Resources Defense Council \(NRDC\)](#)

NRDC breaks down the composting steps to turn banana peels and apple cores into gold for your garden.



## [Compost Guide by LA Compost](#)

Download a quick guide in English and Spanish to start composting today.



## [Composting 101: Hooray for the Black, Brown, and Green by the Sierra Club](#)

Learn a little bit of gardening wisdom: if you feed the soil, the soil will feed the plants.



## [How to Compost by MakeSoil](#)

MakeSoil matches "Soil Makers" (people who compost) with nearby "Soil Supporters" (people who contribute scraps).

Learn more about composting at the MakeSoil community of climate change fighters.

