

# COMPOSTING

## Guidelines for Backyard Composting



### WHAT IS COMPOSTING?

Composting is the controlled, aerobic process that converts organic materials into a nutrient-rich soil amendment or mulch, called humus, through natural decomposition. Like nature's recycling!

### WHY COMPOST?

**REDUCE** the amount of material that gets buried or burned in a trash facility, and prevent greenhouse gas emissions from those materials from entering the atmosphere

**IMPROVE** soil quality in your yard to prevent erosion, save water, and boost plant growth in your garden



# How to MAKE COMPOST

## INGREDIENTS FOR COMPOSTING



A Compost Bin



Water and Oxygen



1 Part Green Materials



2 Parts Brown Materials

## GREEN MATERIALS NITROGEN



Fruit and vegetable scraps



Houseplants and dying flowers



Coffee grounds and filters



Weeds and grass clippings



Crushed shells of eggs and nuts



Tea bags with the staples removed

## BROWN MATERIALS CARBON



Dead leaves, hay, and straw



Newspaper and junk mail



Sticks and untreated woodchips



Paper bags and cardboard



Sawdust and wood shavings

## AVOID COMPOSTING:

Meat

Bones

Dairy

Pet Waste or Cat Litter

Fat or Oil

“Compostable” Food Service Bags or Containers – These require industrial composting facilities to break down



## GETTING STARTED

### STEP 1: LOCATION

Find a well-drained location in sun or shade that is accessible all year round.

### STEP 2: BIN

Buy or build your own compost bin to fit your preferences.

### STEP 3: BUILD YOUR PILE

Build your compost pile by adding 2-3 parts “brown” materials and 1 part “green” materials by volume. Layer the browns and greens like lasagna, starting with brown at the bottom to absorb any extra moisture. If necessary, add water to dampen the compost pile.

### STEP 4: AERATE

Turn your compost pile monthly to improve air circulation. This will be easier with a compost tumbler but can be done by hand in a typical compost pile. After 3-6 months, dark humus should be ready to use.



# Types of COMPOST BINS



*Typical Compost Bin*



*Compost Tumbler*



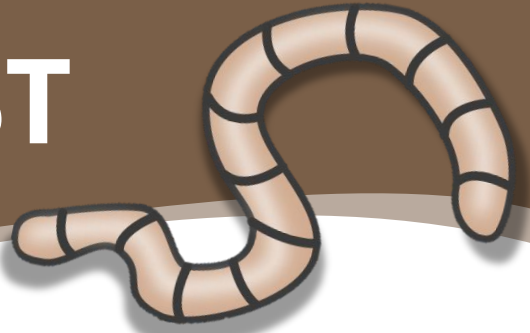
*Worm Compost Bin*

**TYPICAL COMPOST BIN:** These bins can be a repurposed container, purchased from a store, or built by hand. They are usually made of wood or plastic. They will usually hold a greater volume of compost than tumblers, but are not made for easy aeration. Since they do not hold the weight of the compost like tumblers, they may be less durable and, if made of plastic, may become brittle in the cold. Accessing the finished humus with a shovel may also be a challenge.

**COMPOST TUMBLER:** These bins can be purchased or hand made from items like barrels. They are usually smaller in size than a typical compost bin, but they are made for easier aeration. However, larger models can still be difficult to turn when full. Since they hold the compost up off the ground, they are typically built more durably. Removing finished compost is usually easier as it can be dumped directly from the drum. Additionally, tumblers speed up the decomposition process by entrapping the heat within.

**WORM COMPOST BIN (VERMICOMPOST BIN):** Composting with worms is another option. These bins can be purchased or built of wood or Styrofoam. They must be well-ventilated and raised off the ground for better air flow, as well as kept in a certain temperature range for the worms to survive. Typically, vermicomposting is a faster process than regular composting because the worms can quickly break down the added materials. However, the start up costs could be greater and the process is slightly different than that of regular composting.

# How to VERMICOMPOST



Vermicomposting is similar to regular composting, but there are a few differences.

## **STEP 1: LOCATION**

Unlike regular composting, vermicomposting can be done outside or inside. Inside locations include under your sink or in a closet. Make sure to choose a location that will stay between 32 and 95 degrees Fahrenheit. Ideally, the temperature should be between 55 and 80 degrees.



## **STEP 2: BIN**

Bins for vermicomposting can be purchased or built from wood or Styrofoam.

## **STEP 3: BUILD YOUR PILE**

Begin by filling the bin halfway with moist, shredded “brown material” for bedding. Newspaper is a great option. Next, add a couple handfuls of dirt from your garden. The worms will use the sand in the dirt to grind food.

## **STEP 3: ADD THE WORMS**

The worms in a vermicomposting bin are not just any you find in your yard. They have to be one of a handful of species. The most recommended worm for vermicomposting is the Red Wiggler.

## **STEP 4: MAINTAIN**

Feed your worms fruit and vegetable scraps, along with other kitchen waste, at least once a week by tucking it underneath the shredded newspaper. Avoid feeding them all the same materials as you would with regular composting. Open the lid of the bin as little as possible to avoid exposing the worms to light and causing them to seek shelter. Take note of what foods they do and don't prefer so you can adjust feedings. After 3-5 months, when the bin has very little bedding and is full of dark compost, it is ready to sort and harvest. You will want to sort out your worms and refill the bin with new bedding and food to start the process over again.

## USING YOUR COMPOST

Once the compost has turned to humus and is uniform rich, dark soil, it is ready to use!

**MIX** compost into your potting soil to give your indoor plants an extra boost for healthy growth.

**SPREAD** compost on the ground around your plants before watering to allow the nutrients to be carried into the ground by the water.

**TILL** a few inches of compost into your lawn or garden to improve the biological, physical, and chemical characteristics of your soil.

**MULCH** your garden bed using a few inches of compost over loosened soil.



## DON'T HAVE A COMPOST BIN?

Don't worry! The City of Ames offers a Food Waste Diversion program for those who don't have the space, time, or know-how to compost food. The FWD program allows participants to use their own containers or purchase a starter kit to use for organic waste collection. When your bucket is full, dispose of your organic waste at Resource Recovery at no charge.

Visit [cityofames.org](http://cityofames.org) for more information!



U.S. DEPARTMENT OF AGRICULTURE

<https://www.usda.gov/peoples-garden/food-access-food-waste/composting>



<https://www.epa.gov/recycle/composting-home>