A simple guide to

COMPOSTING

in your backyard

Recycle your yard trimmings and food scraps into nutrient-rich compost.

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BACKYARD COMPOSTING

Composting decreases the amount of garbage going to the landfill while transforming old food scraps and yard trimmings into dark, nutrient-rich compost.

Compost:

- loosens soil for better root penetration
- improves soil's capacity to hold water
- adds essential nutrients and microorganisms to the soil

By composting in your backyard, you reduce your household's environmental impact and reduce how much waste you send to the landfill.

COMPOSTING IS EASY

Composting can be as simple as throwing organic materials into a pile and letting nature do its work. Start with a mix of brown and green sources, such as leaves and grass, then turn the pile once every month or two to keep the process going. This form of composting is simple and requires little effort, but it will take you a year or longer to produce compost.

For faster results, you just need to put in a little more effort. By building a bin, turning the pile every two to four weeks, and getting a good mix of carbon (browns) and nitrogen (greens), a compost pile can decompose very quickly. People who actively manage their piles can break down organic material into compost in three months or less.

PICK A GOOD SPOT

Choose a composting site with plenty of room that is comfortable to work around and won't interfere with your family's lawn and garden activities. If you locate your compost pile near a tree or large shrub, make sure to move the pile at least once a year so the roots cannot establish in the pile.

CONSIDER A COMPOST BIN

A compost bin is not required; however, many people use one to compost more quickly or to maintain a neater backyard. A compost bin can hold in moisture and heat, speeding up the decomposition process. Several models of plastic compost bins are available or you can easily build your own compost bin with some readily available materials. When constructing your own compost bin, leave the bottom open to the soil underneath to allow micro-invertebrates, fungus, and other decomposers easy access to your compost pile.

WOVEN WIRE BIN

These bins are economical and easy to make. All you need is a length of woven galvanized wire (14-gauge wire). To determine the length needed, multiply the diameter of the bin desired by 3.2. Fasten the ends of the woven wire with four small chain snaps or plastic zip ties to make a circle. The ideal diameter is three to five feet.

SNOW FENCE BIN

Bins made with snow fences are simple to make, move, and store. To build this bin, buy the appropriate length of prefabricated fencing and fasten two-by-fours as corner posts to form a square.

BLOCK OR BRICK BIN

Compost bins can be made with bricks, cement blocks, and even rocks. These types of bins are sturdy, durable, and easily accessible. Just lay the blocks without mortar, leaving spaces between each block to permit aeration. Stack them to form three sides of a square container.

WOODEN BIN

Construct a wooden bin with a removable front so materials can be easily turned. Old wooden pallets work well as the walls of the bin and fasten together easily with wood screws. Substitute wire mesh for wooden sides to increase the airflow in the compost pile. Covered wooden bins protect the pile from pests and heavy rain.

TURNING BIN

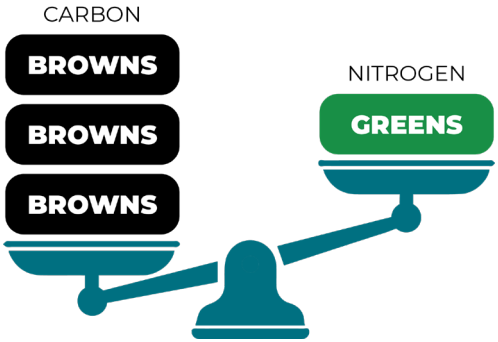
A turning bin is a series of two or three bins that allow you to make compost in a short time by turning the materials on a regular schedule. The first bin acts as a place to add new material. After a few weeks move the fresher material into the second bin and allow it to decompose while still adding new material to the first bin. This type of bin is perfect for people with lots of yard trimmings and kitchen scraps.

You can also turn material in your single compost bin by removing the bin from around the compost pile or organic material, setting the empty bin nearby, and shoveling the material back into the bin.

COMPOST RECIPE

Building a compost pile is similar to a pot of soup - collect a few ingredients, mix well, and allow it to simmer. When gathering materials to compost, remember that a good mix of carbon (“brown stuff”) and nitrogen (“green stuff”) is needed. Without a good mix, the pile will decompose slowly. For a typical backyard composter this means three times the amount of brown (by volume) than green.

For example, if a high-carbon material, like dry leaves, is being composted, you can add a high-nitrogen material like fruit and vegetable scraps to keep the pile decomposing quickly.



A properly made compost pile will reach a temperature of 90 – 140° F in four to five days after turning it. If you like, you can purchase a temperature probe or soil thermometer at a garden or hardware store. However, thermometers are not a necessity; you know it’s heating up when your compost starts to settle.

WHAT CAN BE COMPOSTED?

Almost all natural, organic material will compost but not everything belongs in a backyard compost pile.

BROWNS (CARBON)

- Brown Leaves & Dry Grass
- Dead Plants & Flowers
- Corn Stalks
- Straw & Pine Needles
- Shredded Newspaper
- Old Brush, Shrub, Trimmings, & Prunings
- Sawdust & Wood Chips

GREENS (NITROGEN)*

- Fruit Scraps
- Vegetable Scraps
- Coffee Grounds & Tea Bags
- Old Bread & Pasta
- Pizza Crusts
- Green Grass & Green Plants
- Manure From Animals (Herbivores Only: Cows, Horses, Rabbits, etc.)

Other Items To Think About

CAN COMPOST

- Egg Shells
- Paper Egg Cartons
- Paper Bags & Paper Plates
- Stale Crackers
- Stale Baked Goods
- Old Beer & Wine
- Spoiled Tofu
- Corks & Toothpicks
- Tissues
- Hair & Nail Clippings

CANNOT COMPOST

- Butter or Dairy Products
- Meat **
- Bones **
- Diseased Plants
- Weed Seeds
- Oil and Fats
- Grease
- Salad Dressing
- Dog or Cat Manure
- Briquettes Charcoal Ash

* Always place food waste in the middle of your compost pile covered with browns to avoid odors and pests. R3Source also recommends using a covered compost bin when composting food wastes to avoid pests.

** Meat and bones should not be composted. They can attract rodents and other pests and can cause odors in your compost pile. The manure of cats and dogs can contain harmful pathogens that are not always killed by the heat of the compost pile.

THE COMPOSTING BASICS: HERE'S WHAT YOU NEED

SPACE

A minimum of 3 ft. x 3 ft. x 3 ft. of space is needed to maintain the proper volume for an active compost pile.

BIN

Placing organic material in a bin is recommended but not essential. The bin provides a controlled environment to contain the material.

OXYGEN

Turn the pile and "fluff" to provide oxygen to the bacteria and other microorganisms doing the work.

WATER

The pile should be moist like a damp sponge. In an open bin, rain should keep the pile moist but during dry spells you may need to water the pile.

MATERIAL OR FOOD

The micro-organisms working to break down the pile need two types of food: carbon (for energy) and nitrogen (for reproduction).

HELPFUL TIPS!

1 - Add a few shovels of soil to further improve your compost pile's effectiveness. This will introduce additional microorganisms into the pile.

2 - The smaller the organics, the quicker they'll breakdown into compost, so chop away!

HARVESTING & USING FINISHED COMPOST

Compost is ready to harvest when it is dark, crumbly, and earthy smelling. For best results, let the compost stabilize a few extra days and sift it through a one-half inch screen. If there are large fragments remaining, throw them back into your compost pile to continue decomposing.

There are a variety of uses for your finished compost. Annual use of compost will eventually reduce the need for fertilizer. Compost produced through the organic processes of a compost pile is ideal for gardens, flower beds, household plants, and trees. Gardeners recommend using compost as a mulch or mixing it into topsoil as a soil amendment.

BENEFITS OF MULCHING WITH COMPOST

- Reduces moisture loss from the soil surface
- Helps control weeds
- Helps maintain soil temperatures
- Reduces soil erosion on slopes
- Beautifies planting area with dark material
- Adds micronutrients
- Reduces plants need for waster

BENEFITS OF MIXING COMPOST INTO SOIL

- Loosens heavy clay soils
- Aerates the rooting area
- Improves soil capacity to hold water and nutrients
- Attracts earthworms and microbes that benefit gardens and flower beds
- Provides valuable nutrients for plant growth
- Reduces soil compaction

COMMON PROBLEMS & SIMPLE SOLUTIONS

Anytime you try something new, problems can arise. Luckily, a compost pile is not too complicated and most problems can be easily remedied. Here are some of the usual trouble spots:

SYMPTOM	SITUATION	SOLUTION
Pile has a bad odor	Not enough air	Turn it more frequently
	Material too wet	Add dry material or leave off lid
	Too much nitrogen	Add carbon (leaves, newspaper, etc.)
Pile isn't decomposting quickly enough or isn't producing enough heat	Too small	Mix new ingredients into the pile (min. volume is 3 ft. x 3 ft. x 3 ft.)
	Material too dry	Moisten and turn the pile
	Lack of nitrogen	Add nitrogen source (fresh grass clippings or food scraps)
	Lack of oxygen	Turn the pile more frequently

* Like us, the microorganisms in your compost pile need winter shelter. Do not turn your pile in winter. Simply layer your food scraps and leaves until the spring thaw.

STILL HAVING PROBLEMS?

If problems persist, visit our website at HamiltonCountyR3Source.org or call the Recycling Hotline at 513-946-7766.

VERMI-COMPOSTING

WORMS IN MY KITCHEN

You may want to consider a special type of composting called vermicomposting or worm bin composting. With a worm bin you can compost kitchen scraps inside (many people keep them under the sink, in the basement, or in the garage). Worm castings, also known as vermicompost, are a super-charged, soil-boosting nutrient.

Special worms, *Eisenia fetida*, also called red wigglers, are the best type of worms for vermicomposting because they are disease free, reproduce rapidly, and quickly process large amounts of organic matter. These red worms normally live among organic matter and tolerate temperatures from 50-80° F. Hamilton County R3Source holds worm bin workshops for interested residents. To sign up for an upcoming workshop or to learn more on vermicomposting visit our website: HamiltonCountyR3Source.org.

HELPFUL TIP!

Do not use night crawlers in a worm bin. They require a large amount of soil and their bed temperature cannot exceed 50° F.

JUST MOW IT

Tired of bagging your grass clippings?
Then Just Mow It!
Just Mow It! is the simple practice of leaving your grass clippings on the lawn.
It's easy, fast, and good for your lawn.

BENEFITS OF JUST MOWING IT!

- Reduces work so you don't have to bag or rake and dispose of your grass clippings
- Reduces waste going to the landfill
- Feeds your lawn. Grass clippings contain nutrients that can generate up to ONE THIRD of your lawn's fertilizer
- Enhances soil microbe activity

LEAVING GRASS CLIPPINGS ON THE LAWN DOES NOT CREATE THATCH.

Thatch is a tightly intermingled layer of living and dead stems, leaves and grass roots that develops between the green grass and the soil surface. Grass clippings are 75 to 85 percent water and decompose rapidly. Thatch is formed from grass parts more resistant to decomposition like roots, stems, etc.

Content provided by Ohio State University Extension Fact Sheets: Lawn Care Plans and Mowers and Mowing and reviewed by Pamela J. Sherratt, Sports Turf Specialist, Department of Horticulture and Crop Science, The Ohio State University.

BEFORE YOU COMPOST

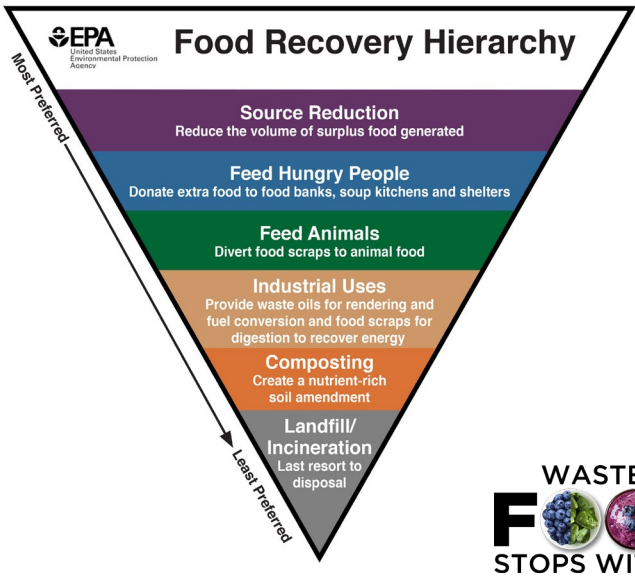
The US EPA Food Recovery Hierarchy prioritizes source reduction, feeding hungry people, feeding animals, and industrial uses before composting.

The latest statistics tell us that nearly 40% of all food produced in the United States is wasted.

As a savvy consumer, you know how important it is that you take the following steps to reduce food waste:

- Plan your menu
- Shop your pantry first
- Shop from a list
- Use proper food storage techniques
- Learn to use your freezer effectively

Visit WastedFoodStopsWithUs.org to access a food storage guide and to get more ideas about how to reduce food waste.



WASTED FOOD STOPS WITH US.

HAMILTON COUNTY

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