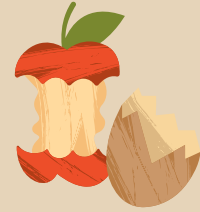


COMPOSTING 101



WHAT IS IT?

Most people are at least loosely familiar with the concept of composting. It's just sticking food scraps in a bucket and waiting for it to rot, right? But there's actually a lot more to composting than that.

Composting is a controlled, aerobic process (in other words, it requires oxygen) that converts organic, biodegradable materials into a nutrient-dense soil amendment through decomposition. Microorganisms in a compost pile feed on the materials, consuming carbon, nitrogen, and oxygen as they go. What results is compost, an earth-like substance that can be used as fertilizer.

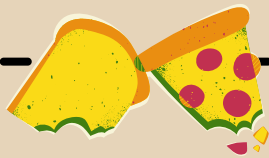
Aside from being rich in nutrients, compost has the added benefit of "good" organisms like bacteria, protozoa, and fungi which can enhance soil health and even serve as deterrents for pests.

Vermicomposting, a specific composting subset, uses worms to speed up the biodegradation process.



WHY IS IT IMPORTANT?

According to the EPA, over 30% of the waste that ends up in landfills is compostable. This might not seem like a big issue--compostable is compostable, after all--but it's crucial to remember that composting is an aerobic process: it needs oxygen in order to happen. Landfills in contrast are vastly anaerobic, so tightly compacted that little oxygen is able to penetrate through the layers of waste. This means that organic materials buried in landfills take much longer to decompose than they normally would, sometimes to the tune of several decades. In addition, the anaerobic decomposition that occurs in landfills results in methane, rather than the CO₂ produced during aerobic decomposition. Considering that methane is a greenhouse gas 21 times more effective at trapping heat than CO₂, this can have devastating consequences where climate change is concerned.



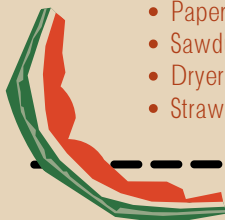
WHAT CAN BE COMPOSTED?

Greens

- Vegetable scraps
- Fruit scraps
- Coffee grounds
- Tea leaves and bags
- Egg shells
- Yard trimmings

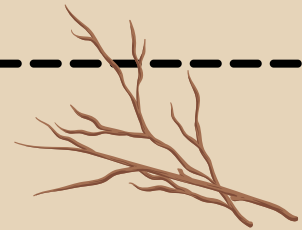
Browns

- Leaves, pine needles, and twigs
- Paper
- Sawdust
- Dryer lint
- Straw or hay



Things to avoid

- Meats
- Large bones
- Dairy
- Cooking oils
- Treated wood
- Plastic coated products (e.g., paper plates)
- Colored print paper



Not sure if something is a green or a brown? An easy tell is that green materials are typically wet, whereas browns are usually dry.

COMPOSTING SAVES WATER!
Soil with compost added to it can hold 2.5 times the amount of water of traditional soil.

Source: MSU Extension

GETTING STARTED

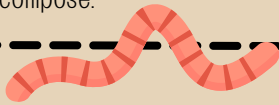
The first step to composting is deciding the right type of setup for you. Some of the common options include:

Buckets: Relatively small and portable, buckets such as the five-gallon paint buckets you can buy at most hardware stores tend to be the preferred option for those living in urban settings.

Piles: Back to basics! If you have room to throw your waste into a heap, this is by far the simplest method.

Wood or Wire Bins: Build your own outdoor bin out of recycled pallets or chicken wire. This method isn't as portable as a bucket, but it does provide a larger space and better aeration.

Tumblers: Tumblers are similar in resemblance to a bucket, but they're made specifically for composting. Most consist of a plastic drum built into a frame with a center axis point that allows the drum to be rolled, improving the mixing of the organic materials as they decompose.



As soon as your setup is complete, the real fun can begin! It might be easiest to just throw whatever organic matter you have on hand into your compost pile, but try to plan ahead. Green materials tend to be high in nitrogen, whereas browns are higher in carbon. Microorganisms need both to survive, so mixing greens and browns will yield the best results. Although wisdom surrounding the best ratio varies, a good general rule of thumb is to aim for one part green to two parts brown.

Stir/turn your mixture regularly (once every few weeks) to help speed things up.

Moisture is another important part of the decomposition process. Check to see if you need to add any water by taking a handful of your mixture and squeezing; a few drops should come out between your fingers.

And that's it! Your compost should be ready in anywhere from six months to a year, depending on factors like temperature, materials added, and the size of your pile. Typically, the bigger your pile, the faster the composting process.

Add it to your garden soil or sprinkle it on your lawn for homegrown fertilizer!



TROUBLESHOOTING COMMON PROBLEMS

Symptom	Problem	Solution
Pile is wet and smells like a mix of rancid butter, vinegar, and rotten eggs	Not enough air, too much nitrogen, or too wet	Turn pile. Mix in straw, sawdust, or wood chips. Provide drainage.
Pile does not heat up	Pile is too small or too dry	Make pile larger. Add insulation. Add water and turn.
Pile is damp and sweet-smelling but will not heat up	Not enough nitrogen	Mix in grass clippings, food scraps, or other sources of nitrogen.
Pile is attracting animals	Meat or dairy products have been added or food scraps aren't well covered	Enclose pile in 1/4" hardware cloth. Cover food with brown materials or finished compost.

Source: Cornell Waste Management Institute



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