Caring for Creation Challenge – Saving Landfills

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This series is a small effort to encourage readers to learn more and think about ways that we each can contribute to caring for creation, God's gift to us.

One Way You Can Care for Creation: Keep food out of landfills

Melina Wallins (AP, 11/01/23), referencing two recent EPA reports, writes that more than one-third of the food produced in the U.S. is never eaten. Much of it ends up in landfills, where it generates tons of methane that hastens climate change.

Tackling food waste is a daunting challenge that the U.S. has taken on before. In 2015, the U.S. Department of Agriculture and the EPA set a goal of cutting food waste in half by 2030, but the country has made little progress.

One of the recent EPA reports found that 58% of methane emissions from landfills come from food waste, a major issue because methane is responsible for about a quarter of global warming and has significantly more warming potential than carbon dioxide.

Keeping food out of landfills by composting can help fight climate change. Composting allows your organic waste to decompose with the help of oxygen-breathing aerobic microbes. Though aerobic decomposition produces some CO2, it still releases fewer greenhouse gas emissions than landfilling, even when methane capture systems are in place, says composting consultant Brian Jerose, co-owner of Waste Not Resource Solutions.

Some local governments have been working on this issue for a while. California began requiring every jurisdiction to provide organic waste collection services starting in 2022. But others don't have as much of a head start. Chicago, for instance, just launched a city-wide composting pilot program that set up free food waste drop-off points around the city. But prospective users have to transport their food scraps themselves.

Mandatory composting programs have thrived over the past decade in cities such as San Francisco; Portland, Oregon; and Seattle. (Seattleites send 125,000 tons of food and yard waste to composting facilities each year, turning those scraps into compost for local parks and gardens.) Pilot programs are underway in Boston, Pittsburgh and Jacksonville, Florida.

States also are getting into composting. Nine states — California, Connecticut, Maryland, Massachusetts, New Jersey, New York, Rhode Island, Vermont and Washington — have enacted laws over the past decade that divert organic waste from landfills to composting facilities.

Many communities in states such as Kansas, Ohio and Texas offer food waste composting services for residents, but those programs are mostly voluntary. Across the country, 510 communities in 25 states, representing more than 10 million households, have municipal food scrap collection, according to a 2021 study from BioCycle, a compost-focused news service.

Absent any community or state composting programs, you can still keep food out of landfills by doing your own composting using one of the following methods.

Hot (or Active) Composting – A hot pile requires enough high-nitrogen materials to get the pile to heat up. The ratio by volume should be 2 parts carbon (includes "brown" items like autumn leaves, wood chips or shredded paper) to 1 part nitrogen (includes "green" items like grass clippings, fruit and vegetable waste, or animal manure (but no pet or human waste)) . To aid in decomposition, keep the mixture as damp as a wrung-out sponge but not sopping wet. A variety of different-size materials (like twigs, stalks, straw, or hay) creates air pockets. You also increase the air/oxygen exchange every time you turn the pile.

If the pile is built correctly, it will heat up within 24 to 36 hours to the ideal temperature of 141°F to 155°F (weed seeds and disease pathogens die at these temperatures) and will maintain its temperature for several days to a week or longer. Use a compost thermometer to monitor the temperature. If the temperature starts to drop or if it gets hotter than 160°F, turn the pile again and add water. This should be done several times. A hot pile takes more effort but will produce compost more quickly—in several weeks to several months.

Cold (or Inactive) Composting – A cold pile requires minimal effort but may take a year or two before it produces compost you can use in your garden. This method of composting has two steps: Put your waste in a pile, and wait. You can think of cold composting as the add-as-you-have-materials pile. The time needed to have finished compost is hard to estimate because it depends on the materials in your pile and the size of the particles. The smaller the particles, the faster they will break down. Do not put in weeds that have gone to seed or diseased plants. Without high temperatures to kill off weed seeds or disease pathogens, you will be spreading these bad guys around your landscape.

- Compost Pile – you simply throw your organic yard and kitchen waste into a pile in your yard and let it decompose, no turning required. It might take anywhere from six months to two years, but eventually, all of that waste will turn into compost. This method won't work for households that don't generate yard waste, as a pile of only green waste will attract pests. To make your pile more pleasing to the eye, you can enclose it on three sides with fencing, chicken wire, or concrete blocks. Compost piles are great for households of any size, because they can be as small or large as you need them to be. About once a year, you can dig out the finished compost from the bottom.
- Holding Bin – you can make your own holding bin out of wood, or you can purchase ready-made plastic compost bins. Holding bins come in all sizes, with the largest able to hold 75 gallons or more. Holding bins offer some flexibility in terms of how closely you manage your compost—you can turn your compost for quicker results, but waste will also decompose on its own inside. Since these bins tend to be large, you shouldn't have overflow problems. Most holding bins have a small door at the bottom so you can access the finished compost. If your bin has insulated sides, your compost may keep cooking even in winter, though the process will be slower. Stacking straw bales along the sides and putting it in the sun can help, too.

Worm Composting (Vermicomposting) – For everyone who has wanted to compost but feels they can't because of lack of yard space, a five- or ten-gallon bucket and a packet of red worms are the answer to your waste woes. Worm composting, or vermicomposting, is one of the fastest composting methods—each pound of worms will process half a pound of food scraps daily. And

it’s so compact, you can put your bin under your kitchen sink. Since red worms are so efficient, you don’t need to aerate your compost, and your bin won’t smell or attract pests.

Two Websites to Explore:

Composting 101: What, Why & How to Compost at Home: https://homesteadandchill.com/how-to-compost-101/

Carbon Footprint Calculator: https://environmental-impact-calculator.climatehero.org/?source=GoogleKeywords&gad_source=1&gclid=CjwKCAiAqY6tBhAtEiwAHeRopf71whePGfU-ep0tcRYKZUzmGFV3Us5PuBs-K1osizO55duGcBgJoRoCM0UQAvD_BwE