Climate Curious

A third of all food in the U.S. gets wasted. Fixing that could help fight climate change.

The carbon footprint of food waste is greater than that of the airline industry

By

Sarah Kaplan

Feb. 25, 2021 at 10:33 a.m. PST

I have a gross confession: Last week, when I cleaned out my fridge for the first time in I'd-rather-not-say-how-long, I found some slimy spinach, a jar of salsa gone moldy, the soured dregs of a pint of yogurt and a ball of leftover cookie dough I forgot to bake. All of it went in the trash.

I felt awful, because I've reported on how food waste contributes to climate change. More than a third of all food grown for human consumption in the United States never makes it to someone's stomach, according to the nonprofit ReFED. That's about $408 billion worth of food, grown on 18 percent of U.S. farmland with 4 trillion tons of water.

The carbon footprint of U.S. food waste is greater than that of the airline industry. Globally, wasted food accounts for about 8 percent of all greenhouse gas emissions. The environmental consequences of producing food that no one eats are massive.

Meanwhile, a staggering 26 million American adults told the Census Bureau last fall that they hadn't had enough to eat in the previous week. The problem was even worse in households with children.

The world produces more than enough to feed everybody; we just need to do a better job ensuring the food reaches those who are hungry. So I reached out to food-waste experts to find out how an ordinary consumer like me can help fight the problem.

The biggest proportion of food waste — about 37 percent, according to ReFED — happens in the home. People aspirationally buy ingredients they aren't able to cook. (I've done that.) Food gets lost in the crowded abyss of the refrigerator. (Been there.) Perishables go bad quickly if improperly stored, and misunderstanding date labels causes people to throw away foods prematurely. (Guilty as charged.)

These mistakes are easy to make but pretty simple to fix, too, said Susan Miller-Davis, principal at the food and climate consulting firm Infinite Table. Make a list before you go shopping and buy only ingredients you plan to use. Consider getting perishable goods from farmers markets or local greengrocers; food produced locally is usually fresher and won't go bad as fast.

At home, keep a list of what food you have on hand, and organize the refrigerator so you can keep track of what's inside. Some people find it helpful to label things with the date they were purchased or cooked. Others have a system in which the oldest items go on the top shelf, so they will reach for those items first.

When it comes time to prepare a meal, "I don't cook what I'm in the mood for," Miller-Davis said. "I open my refrigerator, and I assess what needs to be cooked."

Her upcoming cookbook, "What's for Dinner," offers tips for making use of whatever's available. Carrot tops can be turned into pesto. Wilting greens can be thrown into soup. Fruit on its last legs can be chopped and frozen to later become a smoothie.

If there's absolutely no way to rescue an item (for example, my slimy spinach), composting can limit the environmental impact of tossing it. When food rots in a landfill, it produces huge amounts of methane — a greenhouse gas at least 28 times as potent as carbon dioxide. But in compost bins, microbes convert that organic matter into nutrient-rich soil, keeping the carbon out of the atmosphere and producing valuable fertilizer. Project Drawdown, a nonprofit researching the best ways to reduce planet-warming emissions, reports that increasing composting around the globe could generate carbon savings equivalent to taking roughly 15 million passenger vehicles off the road for 30 years.

Miller-Davis acknowledged that her approach to food-waste reduction "is tough when everyone's busy." Many people are already juggling full-time work with child care, remote school and the stress of living through a pandemic. Others are searching for jobs, caring for sick family members or simply struggling to get by.

But a 2020 study of dietary data from more than 40,000 adults found that the average American spends about $1,300 a year on food that doesn't get eaten. That's more than the average annual spending on clothing, gasoline, and household heat and electricity. Investing a relatively small amount of time in averting waste can lead to significant savings.

Our power to tackle this problem isn't limited to our own kitchens. About 28 percent of waste happens in such businesses as restaurants and grocery stores. By banding together with fellow diners and shoppers, we can push for policies that limit waste and redirect uneaten food to where it's needed.

If your school or workplace has a cafeteria, ask whether it can sell half portions of meals, allowing people who want to eat less to avoid having to throw out leftovers. Removing trays can discourage people from taking more than they will eat, and eliminating self-serve buffets makes it easier to safely reuse food left over at the end of the day.

Ask local restaurants and grocery stores to participate in food recovery programs, which direct surplus food to shelters, soup kitchens and other places where it can be used. Since these programs are often run by nonprofits and volunteers, donating can help boost their operations. Shop at grocery stores that have made substantive commitments to reduce food waste and are transparent about their progress (the Center for Biological Diversity publishes an annual report card on 10 of the biggest companies).

You can also write to local officials and vote for laws that support food recovery and prevent waste from ending up in landfills.

In Vermont, which adopted a universal recycling law in 2012, the state food bank saw donations triple after big waste generators were barred from throwing out uneaten food.

"They don't attribute all of that to the universal recycling program, but some of it definitely is," said Josh Kelly, materials management section chief for the Vermont Department of Environmental Conservation.

Last summer, the program expanded to cover all residents, making Vermont the first state in the country to mandate that food waste be separated from other trash. Waste haulers are required to provide pickup services for those who aren't able to compost at home. Some towns and cities also sell food waste to anaerobic digesters, which turn organic matter into biogas that can fuel power plants as well as solid byproducts that can be turned into fertilizer, construction material and animal bedding. Meanwhile, major food manufacturers have inked contracts to turn materials that don't meet standards and leftover fry oil into high-energy animal feed.

Some Vermont jurisdictions have adopted pay-as-you-throw programs, in which users are charged for the amount of waste they generate rather than paying a flat rate. "What we know about human behavior is when you see the bill, you reduce the waste," Kelly said.

One 2005 study found that these programs can reduce residential waste by as much as 38 percent and increase the amount recycled by up to 40 percent.

If food waste is halved in the next 30 years, according to Project Drawdown, the world will avoid emitting at least 10 gigatons of carbon dioxide — equivalent to taking 2,570 coal-fired power plants offline. By avoiding deforestation for additional farmland, these measures will also prevent more than 70 gigatons of additional emissions.

Reducing food waste is one of a few climate solutions that cost almost nothing but deliver massive financial as well as environmental benefits, said Miller-Davis, who is also a fellow at Project Drawdown. "You'd think it would be a no-brainer," she said.

Miller-Davis might be overestimating how much brain power it takes me to put together my grocery list. But after our conversation, I'm excited to do the work.