

Food Waste:

How Leftovers are Choking the Planet

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<https://doi.org/10.4079/pp.v28i0.11>

This previously appeared on Brief Policy Perspectives in December 2020 and was not subject to the same review process as our peer-reviewed journal articles.

It is that time of year when families and food come together: holiday season. Grocery stores across the country will be swarming with people looking to stock up for family gatherings to celebrate the passing of another year. One topic that families will most likely not discuss at their dinner tables is how much of their holiday feast will end up at the local landfill. Roughly 40 percent of all food available to American households gets thrown out (US Food and Drug Administration n.d.[a]). Of the many problems associated with food waste, one that is usually overlooked is its impact on the environment. The Environmental Protection Agency (EPA) estimates that 75 billion pounds of food ends up in landfills across the United States (US) each year (2019).

FOOD WASTE AND THE ENVIRONMENT

In the US, food waste accounts for the largest portion of solid waste in municipal landfills (US EPA 2012). In 2018 alone, Americans wasted and disposed nearly 35 million tons of food in municipal landfills (US FDA n.d.[b]). When food waste decomposes it releases methane, a major contributor to greenhouse gases, into the atmosphere. The amount of methane released from municipal landfills accounts for 16 percent of U.S methane emissions annually, which equates to about 148 million metric tons of pollution (Gunders 2012; Gies 2016). Measured over a 100-year period, methane's ability to capture solar radiation in the atmosphere is roughly 28 to 36 times more efficient than carbon dioxide, trapping exponentially more heat (US EPA n.d.[a]). As a result, the likelihood of increasing average global temperatures is greater. Climate change phenomena, such as intense storms and severe droughts, will likely increase and occur more frequently due to methane emissions. In other words, food waste is having an outsized impact on the environment.

STRAIN ON RESOURCES

Food waste puts a serious strain on resources. In particular, agricultural production uses an enormous amount of land and water. Fifty percent of the land in the US is dedicated to growing crops or raising livestock while 80 percent of freshwater is required to ensure production (Gunders 2012). This does not include the sheer amount of energy expended in the

food supply chain. Everything from operating farming machinery, using pesticides and fertilizers, transporting goods, to maintaining storage requires an enormous amount of fossil fuels. Emissions from US agriculture contributed over six million metric tons of carbon dioxide, roughly ten percent of the total emissions output in 2018 to keep up with consumer demand (US EPA n.d.[b]).

Increasing global demand is further straining resources. US food suppliers don't only feed Americans as 20 percent of US agriculture is exported, making it the largest exporter of agricultural products (USDA 2018; World Integrated Trade Solution n.d.). With global food demand expected to increase by 56 percent by 2050, suppliers will need to revamp current farming practices in order to reduce the strain on resources (Waite 2020). Comparing the total amount of energy needed for food production to the 40 percent of food that is wasted highlights the need for food waste mitigation. If food waste was its own country, it would rank third in greenhouse gas contributions, behind only the US and China (Move for Hunger n.d.).

STATES STICK A FORK IN FOOD WASTE

Fortunately, there are numerous solutions to reduce food waste with some states leading the way. In 2012, Vermont enacted a universal recycling law that included a restriction on food waste being thrown into trash and recycling bins (Vermont Agency of Natural Resources 2019a). State officials put restrictions in place in increments over an eight-year period starting with large contributors of food waste such as food producers and restaurants. Over time, the amount of acceptable food waste continued to decrease, resulting in a larger portion of the state's population having to abide by the law. In July of 2020, Vermont banned all food waste from being thrown into either trash or recycling bins. As part of the program's success, the state's food banks experienced triple the amount of food rescue donations between 2014 to 2017 (Vermont Agency of Natural Resources 2019b). Since the enactment of Vermont's universal recycling law, many states have enacted similar laws in places such as California, Connecticut, Massachusetts, and Rhode Island.

FEDERAL ACTION PUT IN MOTION

Following the states lead, federal policymakers have enacted a series of federal policies to target food waste through prevention and recovery. In 2015, the U.S Congress passed the Food Recovery Act (ReFed 2021a). The comprehensive bill aimed to provide funding to educate the public about food waste through a national campaign and provide grants to food producers and farmers who could reduce waste during production. The bill also established the Office of Food Recovery – run by the US Department of Agriculture (USDA)—to coordinate federal response among agencies to monitor and reduce government food waste. The agency works in collaboration with food waste nonprofit, ReFed, to identify policy solutions that may tackle food waste. Together they determined education campaigns ranked as the most effective measure in food waste prevention with estimates of up to 584 thousand tons of food diverted from landfills per year due to effective investments in food waste education campaigns (ReFed 2016).

The Bill Emerson Good Samaritan Act provides protection for food donors and nonprofit organizations that receive and distribute donations to individuals in need. There are four criteria

that must be met: (1) food must be donated to a nonprofit organization, (2) food must meet federal labeling requirements as well as state and local requirements, depending on where the donation occurs, (3) donated food must be distributed to needy individuals, (4) receiving food recipients must not be charged for donated food (ReFed 2021b). Clearer guidance on what citizens can donate has helped contribute to the 3.6 billion pounds of food that was rescued and delivered to food banks in 2019 (Feeding America 2019).

The Protecting Americans from Tax Hikes Act (PATH) allows for all businesses to receive tax deductions for food donations that meet eligible criteria. To receive tax deductions, businesses must ensure their donations are used for charitable purposes, food is used to care for the ill, needy, or infants, and that food satisfies the requirements of the Federal Food, Drug, and Cosmetic Act (FDCA) at the time of the donation and for the preceding 180 days (ReFed 2021c). Requirements of the FDCA include minimum quality standards of all food types and establishing definitions of specific foods sold to consumers (USC § 341). These tax incentives have had a lasting impact on the amount of donations received. Once enacted in 2006, food donations increased 137 percent nationwide (ReFed 2021c).

2020 AND BEYOND

The future of food waste mitigation is promising, as it is one of the few areas that has bipartisan support in Congress. Current projects in place by the federal government include the USDA and EPA's Food Recovery challenge, which targets food waste reduction by setting a goal to reduce food waste in half by 2030 (US EPA n.d.[c]). Private organizations such as ReFED are developing policies to address food waste as well. Thinking about how our food impacts the environment is an important piece to solving the climate crisis. A little food for thought as we approach the end of the year: think about the food choices you make this holiday season and how it impacts your community. Serving up leftovers is always better than throwing them away.

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