

Discarding a half-eaten banana may seem harmless, but multiply it by 329 million people in the United States or 7.7 billion people around the world. Food waste and food loss is a global problem that affects the future and well-being of the environment and all people. While the problem is substantial, there is a lot we can do to solve it.

The State of Food Loss and Food Waste

In the United States, nearly 150,000 tons of food is wasted every day — about one pound per person. The Department of Agriculture's Economic Research Service estimated that in 2010, 31 percent of the food supply was lost or wasted: about 133 billion pounds or \$162 billion. In 2012, the National Resources Defense Council reported that up to 40 percent of U.S. food goes uneaten, an average of 400 pounds per person per year, worth \$218 billion — about \$1,800 per four-person household. Around the world, about 1.3 billion tons of food is wasted or lost each year.

Fruits and vegetables are the most wasted foods in the world, and the USDA estimates that fruits and vegetables account for 32.9 percent of food waste and loss in America. Yet only one in 10 U.S. adults meets the recommended intakes for fruits and vegetables.

In the U.S., most food is wasted in homes. ReFed, a multi-stakeholder nonprofit

fighting food waste in America, estimates that 43 percent of all food waste and loss comes from homes; 18 percent from restaurants; 16 percent from farms; 13 percent from grocery stores and distribution centers; 8 percent from institutional and foodservice facilities; and 2 percent from manufacturers.

Why It's Important

Reducing food waste could significantly affect the environment — it's the single largest component of municipal landfills, which account for 20 percent of total U.S. methane emissions.

Food waste also is a misuse of resources. According to NRDC, food waste in America represents the

misappropriation of 21 to 33 percent of all agricultural water use. Between 18 to 28 percent of U.S. croplands — about the size of New Mexico — produce food that ultimately goes uneaten. Uneaten food uses 19 to 27 percent of the fertilizer in the U.S. and accounts for 2.6 percent of all greenhouse gas emissions — the equivalent of more than 37 million passenger vehicles. As the population continues to grow, the demand for food will increase, as will food waste emissions.

In 2017, 15 million households were food-insecure, meaning they were unsure of having or unable to obtain enough food for all household members. Reducing food waste could

help reduce hunger and food insecurity.

What the U.S. Is Doing

Businesses, organizations and government bodies have recognized the problem and are working toward solutions. The USDA, Environmental Protection Agency and U.S. Food and Drug Administration recently announced the Winning on Reducing Food Waste initiative, a combined agreement to reduce loss and waste through joint and individual action.

In 2015, the USDA and EPA spearheaded the first domestic food loss and waste goal to reduce wasted food by 50 percent by 2030. The agencies created the U.S. Food Loss and Waste 2030 Champions, a compilation of organizations and businesses making commitments to reduce waste.

The Food Recovery Challenge is the EPA's way of encouraging businesses and organizations to improve sustainable food practices by making a pledge to follow its food hierarchy. The hierarchy ranks sustainable food practices from most to least preferred starting with a reduction in excess food and donating to food banks. Similarly, the USDA is encouraging companies, schools and organizations to sign up for its U.S. Food Waste Challenge, a one-time public pledge and disclosure of company initiatives to reduce food waste and loss.

The NRDC is working with cities through its Food Matters initiative, which strives for a 15-percent reduction in food



The state of food waste and ways to fix it

By Esther L. Ellis, MS, RDN, LDN

WASTE DEEP

waste and loss within five years. As of June, the organization is working with Nashville, Baltimore, New York City and Denver.

The Food Waste Reduction Alliance is comprised of the Grocery Manufacturers Association, Food Marketing Institute, or FMI, and National Restaurant Association, which represent food and beverage companies, food retailers and the foodservice sector, respectively. The alliance has three goals: to reduce food waste, increase the amount of food donated and recycle unavoidable food waste to keep it from landfills.

ReFed developed a Roadmap to Reduce U.S. Food Waste, which details the top methods for reducing food waste to make it easier to meet the 50-percent reduction goal by 2030. It's the first national economic study and action plan driven by a group of more than 50 businesses, nonprofits, foundations and government agencies. Roadmap items include initiatives such as standardized date labeling, consumer education programs, donation programs and packaging solutions.

Retailers and manufacturers are contributing to efforts by standardizing date labeling, which is used voluntarily, except in the case of infant formulas which require a "use by" date. Terms including "best by" or "sell by" have historically caused confusion, contributing to an estimated 20 percent of food waste in homes. FMI is encouraging retailers and manufacturers to standardize date language using two phrases: "BEST If Used By," which refers to

product quality, meaning the food may not taste as expected but is safe to eat; and "USE By," which would appear on perishable products to indicate safety and signify it should be consumed by the date listed and may not be safe afterward. However, at this time, the FDA is only supporting the industry's standardized use of a "Best if Used By" date label as it applies to quality, not safety.

Feeding America, the largest hunger-relief organization in the U.S., and its partners saved 3.5 billion pounds of food in 2018. The organization works closely with companies to salvage food before it's discarded. Feeding America's MealConnect program allows local businesses to alert nearby food banks of food ready for immediate pick-up.

The Academy of Nutrition and Dietetics is fighting food waste and loss through Further with Food: Center for Food Loss and Waste Solutions, an online platform for sharing information and answers to food waste. Further with Food provides resources for parties interested in learning more about reducing waste and utilizes input from groups such as Feeding America, FMI, GMA, the Innovation Center for U.S. Dairy, the National Consumers League, NRA, NRDC, USDA and EPA. In 2016, the Academy's Foundation published "The State of America's Wasted Food & Opportunities to Make a Difference" report, detailing opportunities to reduce wasted food along the food supply chain.

Help Reduce Food Waste

Since most food waste happens at home, consumers

can make a big impact. Proper food storage techniques are a simple yet effective way to reduce waste by keeping food fresh and safe for as long as possible. The Academy's website offers useful resources on proper storage tips, as does the FDA on its website. Created by the USDA's Food Safety and Inspection Service, Cornell University and FMI, the FoodKeeper App, lists foods with instructions on proper storage and shelf life.

Planning meals in advance is another technique to reduce food waste while also saving money. Weekly meal planning with a grocery list prevents buying more food than is needed. Be observant about what foods you are discarding and change purchasing habits to prevent tossing the same foods.

Repurposing food can be a fun and creative way to prevent waste. Before buying anything new, shop your fridge and eat the foods you already have on hand. Use leftovers within three to four days (or freeze for later use) to make new recipes such as smoothies, infused water or stock for soup.

Many organizations offer tips and information about reducing food waste. The EPA's website has a toolkit with dozens of tips to reduce waste. Further with Food offers waste reduction tips and educational resources, including meal preparation methods and local community events. The Academy's Foundation has an initiative, Future of Food, which offers toolkits on reducing food insecurity and food waste and loss.

Registered dietitian nutritionists can educate

FOOD LOSS VS. FOOD WASTE

Food loss: Food is lost along the supply chain from harvest to market before reaching consumers; usually unintentional; some reasons include pests and improper storage, packaging, transport or handling.

Food waste: Food is discarded or used for non-food purposes, such as a sugar facial scrub; can happen any time, before or after reaching consumers.

clients and patients on food label date language. Consumers should be aware of dates on food and beverages and consume the oldest items first, implementing a "first in, first out" method. When raw produce goes bad, composting at home can keep it from landfills. Learn more about composting on the EPA's and USDA's websites.

RDNs in institutional foodservice can consider implementing room service to reduce waste. A study published in February 2018 in the *Journal of the Academy of Nutrition and Dietetics* reported an increase in nutrition, improved satisfaction, and reduced plate waste and costs when room service was used compared to a traditional foodservice model. Additionally, work with local food banks to create a plan to donate surplus food, implement a composting program or donate appropriate food to animal farms.

Food waste and food loss affect us all. Fixing it must be an individual and global effort.

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