

A First Look At Food Waste

Food waste is a massive problem of multiple dimensions – both domestically and across the globe – and it impacts both developed countries *and* developing countries.

Estimates of the level of food waste are staggering. Globally, a recent report by the Institution of Mechanical Engineers estimates that 30-50% of all food produced (between 1.2 and 2 billion tons) is lost before being consumed by humans.ⁱ

In the U.S., a recent report by the Natural Resources Defense Council estimates that up to 40% of our food is wasted.ⁱⁱ Of further concern, the percentage estimates of U.S. food waste have been on the rise since the 1970s. Thus, despite the fact that our society has become incredibly more efficient through knowledge and technology gains over the last 50 years -- we are wasting ever more food.

It's important to put these percentages in meaningful context to properly grasp their significance. As Jonathan Bloom notes, every day in the U.S. we waste enough food to fill the Rose Bowl in California.ⁱⁱⁱ Or, as John Mandyck of United Technologies notes, since a healthy elephant weighs about 1 metric ton, stack 1.3 *billion* elephants on top of one another – that's the amount of food wastage that occurs across the globe annually.

The problem of food waste should concern all Americans on a number of levels. At the same time, it should also be viewed as a tremendous *opportunity* to improve our well-being.

First, food waste is a serious social problem. According to a recent USDA study, more than 130 *billion* pounds of food (31% of the available food supply at the retail and consumer levels) went uneaten in 2010.^{iv} Yet hunger remains a serious issue, with roughly 50 million Americans (roughly one in six) experiencing food insecurity (many of them children and seniors).^v Discarding so much food when much of it could be redirected to feed the hungry is a cruel paradox.

Second, while hunger is still typically thought of in terms of lacking *enough* food, it is increasingly an issue of nutrition (i.e. the *quality* of food). Food insecure individuals cannot get enough of the high-quality calories (such as fresh fruits and vegetables) needed to maintain a healthy lifestyle. As a result, we are seeing a sharp rise in obesity and diet-related illness. More than one-third of the U.S. adult population is now obese, along with 17% of children between the age of two and nineteen.^{vi} Fresh produce and dairy items, due to their perishable nature, are a significant component of the food waste stream. Yet by discarding fruits, vegetables, dairy products, and meat proteins, we miss the opportunity to provide the nutritious food items that much of our population so desperately needs.

There is a larger social issue at play, too. Combined, hunger and nutrition concerns perpetuate a division between the “haves” and the “have nots” in our society. Adequate food and nutrition are basic human needs, they *have to be* satisfied. When they are lacking, we have frustration and resentment among that segment of the population. We have dissension, rather than community. Excessive food

waste exacerbates the discord. It is a missed opportunity to mitigate hunger and improve nutrition, and thereby strengthen communities. As such, it is quite simply an issue of security.

Food waste has serious negative consequences for the environment, most notably in terms of air pollution. Food that decays in landfills produces methane gas, which has more than twenty times the global warming potential of carbon dioxide.^{vii} Amazingly, if food waste were a country, it would be the third largest emitter of greenhouse gases behind the U.S. and China.^{viii} It is also a source of water pollution through runoff. Food waste also represents a waste of all of the water, energy, and resource inputs (fertilizers, pesticides, and human capital) that went into producing it. The issue of wasted water is especially critical as agriculture consumes more than 70% of fresh water, and we are currently experiencing severe drought and depletion of reservoirs in key food production areas of the U.S. As the second largest component of the municipal solid waste stream (30 million tons annually), food waste consumes limited landfill space.^{ix} Further, by wasting food, we contribute to soil erosion by unnecessarily using acreage for production.

All of the above consequences involve significant financial costs as well. The value of wasted food alone in 2010 was estimated to be \$160 billion^x, and some reports indicate that we spend another \$1 billion annually to haul it away. Regarding health care costs, a recent study estimated the annual medical costs of obesity to be \$147 billion (in 2008 dollars).^{xi}

Perhaps most importantly, beyond the many alarming statistics, food waste has a moral dimension. How can we waste so much food, so easily, when 50 million citizens are hungry? How can we deprive so many citizens of needed nutrition, and harm the environment in the process? We've quickly moved from a culture of responsibility in the War years, when food was truly valued out of necessity, to a culture of abundance which allows us to waste 30-40% of all food produced with seemingly little concern. We're surrounded by vast quantities of food everywhere we go. It is available at all hours, and it is perfect in size, shape, freshness, and appearance. We skip over items with the slightest imperfection, even though those items are still perfectly good and full of nutrition. Retailers continually cull items from shelves, while consumers, confused by the meaning of date labels, are quick to discard items they "think" may have gone bad. Large amounts of fruits and vegetables never leave the farm, as growers sort out items that don't meet exacting retail specifications.

Food is abundant, and relatively inexpensive, and trash is cheap. That combination has led to excessive food waste in the U.S. and in other developed countries around the world; and that level of waste can no longer be deemed acceptable.

Urgent change is needed at all levels – local, regional, national, and global – to reduce food waste.

All stakeholders in the food system must play a role – consumers, growers, manufacturers, retailers, and governments.

Such change can be expected to yield extensive social, environmental, and financial benefits – and as such should be readily undertaken. More important, however, is the *moral imperative* – reducing food

waste and redirecting those resources to feed our neighbors, improve health, and build community is simply *the right thing to do*.

References:

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- ^v Feeding America. Hunger and Poverty Facts and Statistics. 2016. Available at: <http://www.feedingamerica.org/hunger-in-america/impact-of-hunger/hunger-and-poverty/hunger-and-poverty-fact-sheet.html?referrer=https://www.google.com/>
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- ^x Buzby, et al. The Estimated Amount, Value, and Calories of Postharvest Food Losses at the Retail and Consumer Levels in the United States. USDA Economic Information Bulletin Number 121. February 2014.
- ^{xi} Centers for Disease Control and Prevention. Adult Obesity Facts. 2016. Available at: <https://www.cdc.gov/obesity/data/adult.html>