Love Food, Stop Waste Fact Sheet (August 2018)

1. 40% of food in the United States goes uneaten.

The following sources provide data for the edible portions of food only.

Source:

"…food waste has progressively increased from about 30% of the available food supply in 1974 to almost 40% in recent years…" Kevin D. Hall, et al., *The Progressive Increase of Food Waste in America and Its Environmental Impact*, National Institute of Diabetes and Digestive and Kidney Disease, *PLoS ONE* (2009) 4(11): e7940, https://doi.org/10.1371/journal.pone.0007940.

The estimate is based on the energy content (calories) of food that is available for human consumption. This excludes waste that occurs at the farm level.

Additional Food Waste Estimates:

"In the United States, 31 percent—or 133 billion pounds—of the 430 billion pounds of the available food supply at the retail and consumer levels in 2010 went uneaten." Jean C. Buzby, Hodan F. Wells, and Jeffrey Hyman, *The Estimated Amount, Value, and Calories of Postharvest Food Losses at the Retail and Consumer Levels in the United States*, U.S. Department of Agriculture (USDA) Economic Research Service Economic Information Bulletin No. EIB-121, (February 2014), https://www.ers.usda.gov/webdocs/publications/43833/43680_eib121.pdf.

The estimate is based on the weight of food for waste that occurs at the retail and consumer levels only. The percent would be higher if it included data on waste that occurs at the farm, processing, and distribution levels.

"…roughly one-third of food produced for human consumption is lost or wasted globally, which amounts to about 1.3 billion tons per year…Overall, on a per-capita basis, much more food is wasted in the industrialized world than in developing countries. We estimate that the per capita food waste by consumers in Europe and North-America is 95-115 kg/year, while this figure in Sub-Saharan Africa and South/Southeast Asia is only 6-11 kg/year." Jenny Gustavsson, et al., *Global food losses and food waste – Extent, causes and prevention,* Food and Agriculture Organization (FAO) of the United Nations, (2011), http://www.fao.org/docrep/014/mb060e/mb060e00.pdf.

The estimate is based on the weight of food that occurs across the entire food system, from farm to fork. The amount wasted in the U.S. is likely higher than the global amount since industrialized countries waste significantly higher amounts of food.

2. We throw away $160 billion worth of food a year in the U.S. By reducing food waste, a family of four could save as much as $1500 a year!

Source:

"The estimated total value of food loss at the retail and consumer levels in the United States was $161.6 billion in 2010…Per capita, food loss in 2010 totaled $522 per year at retail prices: $151 per year at the retail level and $371 at the consumer level." Jean C. Buzby, Hodan F. Wells, and Jeffrey Hyman, *The Estimated Amount, Value, and Calories of Postharvest Food Losses at the Retail and Consumer Levels in the United States*, U.S. Department of Agriculture (USDA) Economic Research Service Economic Information Bulletin No. EIB-121, (February 2014), https://www.ers.usda.gov/webdocs/publications/43833/43680_eib121.pdf.

The data does not estimate the cost of food that is wasted at the farm, processing, and distribution levels. The consumer level includes food purchased and wasted in homes, restaurants, and cafeterias. $371 x 4 people = $1484. For simplicity, SPU rounded to $1500 and $160 billion.

3. We waste more than 20% of all the freshwater used in the U.S. to grow food that is never eaten.

Sources:

"Food waste consumes: 21% of all fresh water." Rethink Food Waste through Economics and Data (ReFED), *A Roadmap to Reduce US Food Waste by 20 Percent,* (2016), https://www.refed.com.

"Food waste now accounts for more than one quarter of the total freshwater consumption…" Kevin D. Hall, et al., *The Progressive Increase of Food Waste in America and Its Environmental Impact*, National Institute of Diabetes and Digestive and Kidney Disease, *PLoS ONE* (2009) 4(11): e7940, https://doi.org/10.1371/journal.pone.0007940.

4. If all the wasted food in the world was grown on one farm, that farm would be larger than Canada.

Source:

"At world level, the total amount of food wastage in 2007 occupied almost 1.4 billion hectares, equal to about 28 percent of the world's agricultural land area. This figure can be compared to the surface of the largest countries, where land surface occupied by food produced and not consumed is second to the total land area occupied by the Russian Federation." Food and Agriculture Organization (FAO) of the United Nations, *Food wastage footprint Impacts on natural resources,* (2013), http://www.fao.org/nr/sustainability/food-loss-and-waste/en.

The figure provided in the report further shows food wastage taking up more land area than Canada, which is the second largest country behind the Russian Federation.

5. We use about 5% of all U.S. energy to grow food that is wasted.

Source:

"As a share of the national energy budget, food-related energy use grew from 12.2 percent in 1997 to 14.4 percent in 2002…A projection of food-related energy use based on 2007 total U.S. energy consumption and food expenditure data and the benchmark 2002 input-output accounts suggests that food-related energy use as a share of the national energy budget grew from 14.4 percent in 2002 to an estimated 15.7 percent in 2007." Patrick Canning, et. al., *Energy Use in the U.S. Food System*, U.S. Department of Agriculture (USDA) Economic Research Service, ERR-94, (March 2010), https://www.ers.usda.gov/publications/pub-details/?pubid=46377.

Assuming 40% of food is wasted in the U.S. each year, then 40% of 14.4% (total 2002 food-related energy use) = 5.76% of the national energy budget used on food that is wasted. This increases to 6.28% of the national energy budget based on 2007 energy use projections. SPU chose to state "about 5%" since there's not necessarily a one-to-one relationship between the % of food wasted and the % of energy wasted.

6. Wasted food is responsible for about 8% of greenhouse gas emissions in the world. If wasted food were its own country, it would cause more greenhouse gas emissions than any other country except for China and the U.S.

Source:

"Global food loss and waste generate annually 4.4 $GtCO_2$, eq, or about 8% of total anthropogenic GHG emissions…If food wastage were a country, it would be the third largest emitting country in the world." Food and Agriculture Organization (FAO) of the United Nations, *Food wastage footprint & Climate Change*, (2015), http://www.fao.org/nr/sustainability/food-loss-and-waste/en. org/documents/card/en/c/7338e109-45e8-42da-92f3-ceb8d92002b0.

According to the World Resources Institute, China is responsible for 26.83% of global greenhouse gas emissions and the United States for 14.36% of global greenhouse gas emissions. Next is the European Union at 9.66% and India at 6.65%. If food wastage is 8% of emissions, then it ranks third behind China and the U.S. since the European Union is made up of 28 countries. Greenhouse gas emissions by country can be found here: https://www.wri.org/blog/2017/04/interactive-chart-explains-worlds-top-10-emitters-and-how-theyve-changed

7. In the U.S., agriculture is the main source of pollution in rivers and streams, and one of the top three sources of pollution in lakes, reservoirs, ponds, and wetlands.

Source:

U.S. Environmental Protection Agency (EPA), *National Probable Sources Contributing to Impairments* (table), Water Quality Assessment and TMDL Information, (2016), https://ofmpub.epa.gov/waters10/attains_nation_cy.control#prob_source.

Additional Sources Showing the Contribution of Agriculture to Water Pollution:

Javier Mateo-Sagasta, et. al, *Water pollution from agriculture: a global review (Executive Summary),* Food and Agriculture Organization (FAO) of the United Nations and the International Water Management Institute, (2017), http://www.fao.org/3/a-i7754e.pdf.

United Nations World Water Assessment Programme (WWAP), *The United Nations World Water Development Report 2017, Wastewater: The Untapped Resource,* UNESCO, http://unesdoc.unesco.org/images/0024/002471/247153e.pdf.

United Nations Environment Programme (UNEP), *A Snapshot of the World's Water Quality: Towards a global assessment,* (2016), https://uneplive.unep.org/media/docs/assessments/unep_wwqa_report_web.pdf.

8. 1 in 8 households in the U.S. don't have enough to eat.

Source:

"An estimated 87.7 percent of American households were food secure throughout the entire year in 2016, meaning they had access at all times to enough food for an active, healthy life for all household members. The remaining households (12.3 percent) were food insecure at least some time during the year, including 4.9 percent with very low food security, meaning that at times the food intake of one or more household members was reduced and their eating patterns were disrupted because the household lacked money and other resources for obtaining food." Alisha Coleman-Jensen, et. al., *Household Food Security in the United States in 2016*, U.S. Department of Agriculture (USDA) Economic Research Service, ERR-237, (2017), https://www.ers.usda.gov/webdocs/publications/84973/err-237.pdf?v=42979.

12.3% = 1 in 8 households.

9. The percent of food brought into U.S. homes that is wasted, by commodity group.

Commodity Group	Percent Wasted in Homes
Fish and seafood	33%
Roots and tubers	30%
Fruits and vegetables	28%
Cereals	27%
Milk	15%
Meat	11%
Oilseeds and pulses	4%

Source:

"Estimated/assumed waste percentages for each commodity group in each step of the FSC for **North America and Oceania**." Food and Agricultural Organization (FAO), *Global Food Losses and Food Waste*, (2011), http://www.fao.org/docrep/014/mb060e/mb060e.pdf.

The report defines "consumption" as losses and waste at the household level. The percentages are based on weight.