

## Food Waste Facts in the U.S.

- 40% of all the food produced in the United States goes uneaten.<sup>1</sup>
- Americans throw away an estimated 25% of the food they bring home - that is more than 20 pounds of food per person every month.<sup>2</sup> Enough to fill the Rose Bowl, a 90,000 seat stadium, *every day*.
- The U.S. Department of Agriculture reports that a typical American throws out 40 percent of fresh fish, 23 percent of eggs, and 20 percent of milk.<sup>3</sup>
- Consider these cost estimates of all the food that never gets eaten in the U.S., and imagine just how much we can save by wasting less food:
  - 25 percent of all freshwater used in U.S.<sup>4</sup>
  - 4 percent of total U.S. oil consumption<sup>5</sup>
  - \$165 billion per year<sup>6</sup> (more than \$40 billion from households)<sup>7</sup>
  - \$750 million per year just to dispose of the food<sup>8</sup>
  - 33 million tons of landfill waste (leading to greenhouse gas emissions)<sup>9</sup>

## Environmental Impacts

- Each time food is wasted all the resources that went into producing, processing, packaging, and transporting that food is wasted too. This means huge amounts of chemicals, energy, fertilizer, land and 25% of all freshwater in the U.S. is used to produce food that is thrown away.<sup>10</sup>
- Additionally, most uneaten food rots in landfills where it accounts for almost 25% of U.S. methane emissions.<sup>11</sup> Methane is a powerful greenhouse gas that is 21 times more harmful to the environment than CO<sub>2</sub>.<sup>12</sup>

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<sup>1</sup> K.D. Hall, J. Guo, M. Dore, C.C. Chow, National Institute of Diabetes and Digestive and Kidney Diseases, "The Progressive Increase of Food Waste in America and Its Environmental Impact," PLoS ONE 4(11):e7940,2009.

<sup>2</sup> J. Buzby, and J. Hyman. "Total and per capita value of food loss in the United States", Food Policy, 37(2012):561-570.

<sup>3</sup> <http://www.ers.usda.gov/Publications/TB1927/TB1927.pdf>.

<sup>4</sup> K.D. Hall, J. Guo, M. Dore, C.C. Chow, National Institute of Diabetes and Digestive and Kidney Diseases, "The Progressive Increase of Food Waste in America and Its Environmental Impact," PLoS ONE 4(11):e7940,2009.

<sup>5</sup> K.D. Hall, J. Guo, M. Dore, C.C. Chow, National Institute of Diabetes and Digestive and Kidney Diseases, "The Progressive Increase of Food Waste in America and Its Environmental Impact," PLoS ONE 4(11):e7940,2009.

<sup>6</sup> J. Buzby, and J. Hyman. "Total and per capita value of food loss in the United States", Food Policy, 37(2012):561-570.

<sup>7</sup> Jones, Timothy. Corner on Food Loss. Biocycle, July 2005. p25.

<sup>8</sup> USDA and US EPA. Waste Not, Want Not. Feeding the Hungry and Reducing Solid Waste Through Food Recovery. EPA 530-R-99-040.

<sup>9</sup> <http://www.epa.gov/osw/conserves/materials/organics/food/fd-basic.htm>.

<sup>10</sup> K.D. Hall, J. Guo, M. Dore, C.C. Chow, National Institute of Diabetes and Digestive and Kidney Diseases, "The Progressive Increase of Food Waste in America and Its Environmental Impact," PLoS ONE 4(11):e7940,2009.

<sup>11</sup> K.D. Hall, J. Guo, M. Dore, C.C. Chow, National Institute of Diabetes and Digestive and Kidney Diseases, "The Progressive Increase of Food Waste in America and Its Environmental Impact," PLoS ONE 4(11):e7940,2009.

<sup>12</sup> IPCC Second Assessment Report: Climate Change 1995 (SAR).

[http://www.ipcc.ch/publications\\_and\\_data/publications\\_and\\_data\\_reports.shtml#ULVVKIcs5yK](http://www.ipcc.ch/publications_and_data/publications_and_data_reports.shtml#ULVVKIcs5yK)

- Getting food to our tables uses 10 percent of the total U.S. energy budget<sup>13</sup>, uses 50 percent of U.S. land,<sup>14</sup> and swallows 80 percent of freshwater consumed in the United States.<sup>15</sup>
- Only about 3% of food scraps in the U.S. are composted.<sup>16</sup>
- About 2/3 of household waste is due to food spoilage from not being used in time, whereas the other 1/3 is caused by people cooking or serving too much.<sup>17</sup>
- 14 percent of greenhouse gases in the United States are associated with growing, manufacturing, transporting, and disposing of food.<sup>18</sup>

### Social Implications

- Nutrition is also lost in the mix—food saved by reducing losses by just 15% could feed more than 25 million Americans every year<sup>19</sup> at a time when one in six Americans lack a secure supply of food to their tables.<sup>20</sup>
- Feeding the planet is already a struggle, and will only become more difficult with 9 to 10 billion people expected on the planet in 2050.<sup>21</sup> This makes food conservation all the more important. The United Nations has predicted that we'll need up to 70 percent more food to feed that projected population.<sup>22</sup> Developing habits to save food now could dramatically reduce the need for increased food production in the future.
- The average American consumer wastes 10 times as much food as someone in Southeast Asia,<sup>23</sup> up 50 percent from Americans in the 1970s<sup>24</sup>

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<sup>13</sup> M. Webber, "How to Make the Food System More Energy Efficient," *Scientific American*, December 29, 2011

<sup>14</sup> USDA Economic Research Service, "Major Uses of Land in the United States," Pub. 2002/EIB-14, 2002, <http://www.ers.usda.gov/publications/EIB14/eib14a.pdf>.

<sup>15</sup> United States Department of Agriculture (USDA), Economic Research Service, Economic Bulletin No. (EIB-16), "Agricultural Resources and Environmental Indicators," Chapter 2.1, July 2006, <http://www.ers.usda.gov/publications/arei/eib16/>.

<sup>16</sup> <http://www.epa.gov/region9/waste/features/foodtoenergy/>

<sup>17</sup> [http://www.wrap.org.uk/downloads/Household\\_Food\\_and\\_Drink\\_Waste\\_in\\_the\\_UK\\_Nov\\_2011.da3b238f.8048.pdf](http://www.wrap.org.uk/downloads/Household_Food_and_Drink_Waste_in_the_UK_Nov_2011.da3b238f.8048.pdf) p27.

<sup>18</sup> <http://www.epa.gov/foodrecovery/>

<sup>19</sup> This calculation assumes 2,500 kcal/capita/day and an annual total of 150 trillion calories in losses, as reported in K.D. Hall, J. Guo, M. Dore, C.C. Chow, National Institute of Diabetes and Digestive and Kidney Diseases, "The Progressive Increase of Food Waste in America and Its Environmental Impact," *PLoS ONE* 4(11):e7940, 2009.

<sup>20</sup> A. Coleman-Jensen, M. Nord, M. Andrews, and S. Carlson, United States Department of Agriculture, "Household Food Security in the United States in 2010," September 2011.

<sup>21</sup> United Nations Department of Economic and Social Affairs. "World Population Prospects: The 2008 Revision". *Population Newsletter No.87*.

[http://www.un.org/esa/population/publications/popnews/Newsltr\\_87.pdf](http://www.un.org/esa/population/publications/popnews/Newsltr_87.pdf)

<sup>22</sup> Food and Agriculture Organization (FAO)

[http://www.fao.org/fileadmin/templates/wsfs/docs/expert\\_paper/How\\_to\\_Feed\\_the\\_World\\_in\\_2050.pdf](http://www.fao.org/fileadmin/templates/wsfs/docs/expert_paper/How_to_Feed_the_World_in_2050.pdf).

<sup>23</sup> U.N. FAO, "Global Food Losses and Food Waste," 2011, [www.fao.org/ag/ags/ags-division/publications/publication/en/?dyna\\_fef%5Buid%5D=74045](http://www.fao.org/ag/ags/ags-division/publications/publication/en/?dyna_fef%5Buid%5D=74045).

<sup>24</sup> K.D. Hall, J. Guo, M. Dore, C.C. Chow, National Institute of Diabetes and Digestive and Kidney Diseases, "The Progressive Increase of Food Waste in America and Its environmental Impact," *PLoS ONE* 4(11):e7940, 2009.

## Global Food Waste

- About one third of *all* food produced for human consumption goes to waste.<sup>25</sup>
- Consumers in rich countries waste almost as much food, 222 million tonnes, as the entire net food production of sub-Saharan Africa.<sup>26</sup>
- Industrialised countries waste 670 million tonnes. Developing countries lose 630 million tonnes. Total lost or wasted globally: 2.3 billion tonnes.<sup>27</sup>
- The United States is the number one country in the world that wastes food. Close behind are Australia and Denmark, followed by Switzerland and Canada.<sup>28</sup>

## Water Usage Comparisons

Freshwater is a global resource that is depleting whenever food is wasted. Have a look at these facts about water usage in the production of commonly bought -and in many cases wasted- food items.

- It takes over 12,000 gallons of water to produce one pound of beef.<sup>29</sup> Meanwhile, the largest percentage of food waste from the average American consists of meat products, and 33% ends up in a landfill.<sup>30</sup>
- The production of one glass of orange juice requires 45 gallons of water.<sup>31</sup> 15% of wasted food from the average American consists of fruit.<sup>32</sup>
- Wheat consumes about 12 % of the global water use for crop production.<sup>33</sup> Americans waste about 18% of grains.<sup>34</sup>

## Financial Impacts

- Americans are throwing out the equivalent of \$165 billion each year,<sup>35</sup> and its costing 750 million

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<sup>25</sup> The Swedish Institute for Food and Biotechnology (SIK) on request from the Food and Agriculture Organization of the United Nations (FAO).

[http://www.fao.org/ag/ags/ags-division/publications/publication/en/?dyna\\_fef%5Buid%5D=74045](http://www.fao.org/ag/ags/ags-division/publications/publication/en/?dyna_fef%5Buid%5D=74045)

<sup>26</sup> The Swedish Institute for Food and Biotechnology (SIK) on request from the Food and Agriculture Organization of the United Nations (FAO).

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<sup>27</sup> The Swedish Institute for Food and Biotechnology (SIK) on request from the Food and Agriculture Organization of the United Nations (FAO).

[http://www.fao.org/ag/ags/ags-division/publications/publication/en/?dyna\\_fef%5Buid%5D=74045](http://www.fao.org/ag/ags/ags-division/publications/publication/en/?dyna_fef%5Buid%5D=74045)

<sup>28</sup> OECD Environmental Data Compendium.

<http://www.oecd.org/env/environmentalindicatorsmodellingandoutlooks/oecdenvironmentaldatacompendium.htm>

<sup>29</sup> Pimentel, David. *Ecological Integrity: Integrating Environment, Conservation and Health* (Island Press, Washington DC, 2001). [http://www.vegsource.com/articles/pimentel\\_water.htm](http://www.vegsource.com/articles/pimentel_water.htm)

<sup>30</sup> Buzby, et al. The Value of Retail- and Consumer-Level Fruit and Vegetable Losses in the United States. *Journal of Consumer Affairs*, Fall 2011: 492-515.

<sup>31</sup> <http://www.waterfootprint.org/?page=files/productgallery&product=bread>

<sup>32</sup> Buzby, et al. The Value of Retail- and Consumer-Level Fruit and Vegetable Losses in the United States. *Journal of Consumer Affairs*, Fall 2011: 492-515.

<sup>33</sup> The World's Water 2008-2009, Peter Gleick, The Pacific Institute <http://www.worldwater.org/data.html>

<sup>34</sup> Buzby, et al. The Value of Retail- and Consumer-Level Fruit and Vegetable Losses in the United States. *Journal of Consumer Affairs*, Fall 2011: 492-515.

<sup>35</sup> J. Buzby, and J. Hyman. "Total and per capita value of food loss in the United States", *Food Policy*,

just for the disposal.<sup>36</sup>

- Supermarkets lose an estimated \$15 billion annually through discarded produce.<sup>37</sup>
- An American family of four ends up throwing away an average of \$1,600 annually in food.<sup>38</sup>

**Special thanks to Dana Gunders**, Food and Agriculture Project Scientist from the National Resources Defense Council, for compiling statistics and references. Check out Dana's issue paper: [“Wasted: How America Is Losing Up to 40 Percent of Its Food from Farm to Fork to Landfill.”](#) for more information.

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37(2012):561-570.

<sup>36</sup> USDA and US EPA. Waste Not, Want Not. Feeding the Hungry and Reducing Solid Waste Through Food Recovery. EPA 530-R-99-040.

<sup>37</sup> J.C. Buzby et al., “The Value of Retail- and Consumer-Level Fruit and Vegetable Losses in the United States,” *The Journal of Consumer Affairs*, Fall (2011):492-515

<sup>38</sup> Clean Metrics, “The Climate Change and Economic Impacts of Food Waste in the United States,” <http://www.cleanmetrics.com/pages/ClimateChangeImpactofUSFoodWaste.pdf>.