Zero Food Waste: Why It Matters, And How You Can Help

Sue Barns, May 12, 2019
UU Church Forum: “Different Sciences Help Solve Global Problems”
Why Care about Food Waste?
Globally, 1/3 of food grown is wasted

North America and Oceania have the highest per capita food loss and waste, primarily occurring at consumption.

Kcal/capita/day

1.3 Billion tons/yr
$1 Trillion USD
FOOD WASTE IN THE U.S. IS...

EXCESSIVE

40% OF ALL FOOD PRODUCED IN THE U.S. IS WASTED

EXPENSIVE

$161 BILLION UNEATEN FOOD AT RETAILERS, RESTAURANTS, AND HOMES COSTS $161 BILLION ANNUALLY

$1,500 PER CAPITA, THIS AMOUNTS TO OVER $1,500 FOR A FAMILY OF FOUR
In 2018, Los Alamos residents sent 1,740,000 pounds of food waste to the landfill.

This included over 1 TON of edible food per day, 435 tons per year.

In 2018, LAC spent $1.2 million on a methane extraction system for our closed landfill.

Food waste in landfills is a major source of methane, a toxic greenhouse gas.

Food waste in Los Alamos
Yep, we waste food too.
Food Waste: Personal

- 25% of food purchased is thrown away
- 300-400# per person/year; 1#/person/day
- $1350-$2275 /family/year
Impact: Resources

- Food waste squanders everything that goes into food production:
  - Labor, time, capital
  - Habitat destruction due to deforestation, mining, petroleum production, chemical run-off (fertilizers, manure, pesticides, herbicides)
  - Species extinction (habitat loss, fishing by-catch)
  - Agricultural materials (fertilizers, pesticides, herbicides)
  - Processing, transport and sales (fuel, packaging, refrigeration)
Impact: Energy Use

Food Waste = Energy Waste

In the US, we waste 39.7 million tons of food each year.

The energy used to produce all that food could power all of Switzerland each year.

Sources:
- University of Texas at Austin, Cockrell School of Engineering: [www.engr.utexas.edu/features/research-45293/wastedfood](http://www.engr.utexas.edu/features/research-45293/wastedfood)

www.wastezero.com
Impact: Land Use

How much land is used to produce food that never gets eaten?

Learn more at climate.universityofcalifornia.edu

Food waste consumes about 80 million acres in U.S.
Impact: Water

Throwing out 1 pound of beef wastes as much water as taking a 5 hour shower.

25% of our freshwater use goes to produce food that isn’t eaten.
Impact: Climate Change

- China: 10.7
- United States: 5.8
- Food loss and waste: 4.4
- India: 2.9
- Russia: 2.3
Reducing wasted food ranks 3rd out of 100 for GHG reductions.

<table>
<thead>
<tr>
<th>Rank</th>
<th>Solution</th>
<th>Sector</th>
<th>Total Atmospheric CO2-Eq Reduction (GT)</th>
<th>Net Cost (Billions US $)</th>
<th>Savings (Billions US $)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Refrigerant Management</td>
<td>Materials</td>
<td>89.74</td>
<td>N/A</td>
<td>$-902.77</td>
</tr>
<tr>
<td>2</td>
<td>Wind Turbines (Onshore)</td>
<td>Electricity Generation</td>
<td>84.60</td>
<td>$1,225.37</td>
<td>$7,425.00</td>
</tr>
<tr>
<td>3</td>
<td>Reduced Food Waste</td>
<td>Food</td>
<td>70.53</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td>4</td>
<td>Plant-Rich Diet</td>
<td>Food</td>
<td>66.11</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td>5</td>
<td>Tropical Forests</td>
<td>Land Use</td>
<td>61.23</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td>6</td>
<td>Educating Girls</td>
<td>Women and Girls</td>
<td>59.60</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td>7</td>
<td>Family Planning</td>
<td>Women and Girls</td>
<td>59.60</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td>8</td>
<td>Solar Farms</td>
<td>Electricity Generation</td>
<td>36.90</td>
<td>$-30.60</td>
<td>$5,023.84</td>
</tr>
<tr>
<td>9</td>
<td>Silvopasture</td>
<td>Food</td>
<td>31.19</td>
<td>$41.59</td>
<td>$699.37</td>
</tr>
<tr>
<td>10</td>
<td>Rooftop Solar</td>
<td>Electricity Generation</td>
<td>24.60</td>
<td>$453.14</td>
<td>$3,457.63</td>
</tr>
</tbody>
</table>

Project Drawdown.org
International Campaigns

12.3 “By 2030, halve per capita global food waste at the retail and consumer levels and reduce food losses along production and supply chains, including post-harvest losses”
PREVENTION of food waste is #1 priority
US interagency goal:
Reduce food loss & waste by 50% by 2030

Statement & Releases
Presidential Message for Winning on Reducing Food Waste Month

Issued on: April 1, 2019
ZWLA Campaign

- Residents
- Restaurants
- Grocers/retail
- K-12
- Food Banks
- Composting
What can YOU do?

- **Be aware!**
- Plan
- Shop
- Store
- Cook & Serve
- Eat Leftovers
- Donate
- Compost
Plan

- See what you have on hand
- Plan meals, prioritizing using what you already have, esp. perishables
- Make a list of ingredients and quantities you need
- When eating out, only order what you will eat OR share with someone OR plan to take home leftovers
Shop to your plan!

- Stick to your list
  - Don’t shop hungry!
- Buy loose fruits and veggies
- Avoid BOGO trap
- Buy the wonky produce!
- Use smaller cart
Store food correctly

- Freeze for long-term storage and easy meals
- Make a sign/shelf for things in your fridge that spoil soonest
The Dating Game
Cook and Serve

- Plan portions, don’t make too much
  - Beware holidays!
- Use up perishables early in the week
- Cook “roots to shoots”
- Find recipes to use scraps (stock, etc.)
- Use smaller plates and serving dishes!
Love your Leftovers

- “Bonus Food”– saves time and $$
- Freeze, or keep in front of fridge
- Give to neighbors, take to work
- Find recipes to re-use food
- Bring a container to restaurants to take home leftovers
Donate Edible Food

- Famine to Feast
- LA Cares food drives
- bins at Aquatic Center
- others?
- OLIO app
Feed Animals or Compost

- Chickens! Pigs! Goats! Oh My!

- So many ways to compost!
  - Outdoor
  - Indoor
  - Piles
  - Bins
  - Tumblers
  - Worms
  - Neighbors
  - Anaerobic digesters
You CAN Help!

Don’t be a Consumer Zombie!
THANK YOU!

- For listening, for caring, for taking action to reduce wasted food!
- See losalamosnm.us/gogreen for more info and ideas!
### Thirty Behavioral Solutions for Climate Mitigation

Table 1. Thirty solutions to reduce emissions from human consumption across major economic sectors and solutions adoption scenarios. Numbered rankings were determined from the Optimum scenario emissions reduction estimates.

Note: Emissions potentials are based on varying assumptions about global levels of adoption.

<table>
<thead>
<tr>
<th>Sector</th>
<th>Solution</th>
<th>Description</th>
<th>Plausible-Optimum Scenario Emissions Reduction (GtCO₂-eq)</th>
</tr>
</thead>
<tbody>
<tr>
<td>FOOD</td>
<td>Reduced food waste</td>
<td>Minimizing food loss and wastage throughout the food supply chain from harvest to consumption</td>
<td>70.5-93.7</td>
</tr>
<tr>
<td>FOOD</td>
<td>Plant-rich diets</td>
<td>Eating more plant-based foods and fewer animal proteins and products (e.g., meat, dairy)</td>
<td>66.1-87.0</td>
</tr>
<tr>
<td>FOOD</td>
<td>Clean cookstoves</td>
<td>Using cookstoves that burn fuel more efficiently</td>
<td>15.8-24.3</td>
</tr>
<tr>
<td>FOOD</td>
<td>Composting</td>
<td>Converting biodegradable waste into a useful soil fertilizer instead of sending it to the landfill</td>
<td>2.3-3.6</td>
</tr>
</tbody>
</table>

Food waste reduction is the #1 behavioral solution to reduce global warming

 equitable. Do this too!
Impact: Social Justice

- Globally, wasted food can feed every hungry person 3X
- Avg. U.S. person wastes 1250 cals/day
- 41 million food insecure in U.S.