



Food Waste Overview 2015

Why Food Waste?

In the United States today one in six Americans lack a safe secure supply of food while 40% of the food goes uneaten. Americans are wasting an equivalent of \$165 billion each year in food waste, and the decomposition of these uneaten foods account for 23% of the U.S. total methane emissions. Reducing food waste is a means to save money, reduce GHG emissions, and feed hungry people.

Reducing food waste represents a significant economic opportunity

Reducing food waste is an economic opportunity for retailers and foodservice providers. Buying only what is needed will decrease purchasing costs, donating edible food to charities can increase tax deductions, and selling compost made up of food scraps will increase revenue.

Reducing food waste is part of the solution to climate change

Decomposition of all uneaten foods in the U.S. account for 23% of the country's total methane emissions. Discarded food accounts for 21% of the volume that goes into landfills. The portion of this wasted food that ends up in landfills as organic matter accounts for 16% of U.S. methane emissions. If food waste were its own country it would be the third largest emitter of greenhouse gases behind only China and the United States. Getting food from the farm to our fork eats up 10% of total U.S. energy budget, 50% of U.S. land, and 80% of all freshwater consumed in the U.S.

Reducing food waste is a means for a company to be more socially responsible

The U.S. Department of Agriculture estimates that nearly 50 million Americans, including 16 million children, are food insecure. A WRI report shows calories wasted in the North American and Oceanian regions per day indicate we could feed nearly double our population if we eliminated food waste.

Food waste is a hot topic right now - People care

This upcoming fall the Ad Council will be releasing a consumer focused food waste campaign. In November of this year a Deloitte report will strengthen the economic argument behind reducing food waste. Starting in October, Massachusetts has banned any establishment that generates over a ton of food per week from sending it to a landfill. This will promote the reduction of food waste as well as composting food scraps. The Consumer Goods Forum recently committed to halving food waste by 2025. Additionally, there is talk of possible national goals from the EPA. France is leading the way by releasing the first national comprehensive set of proposals to fight against food waste.

Companies have experienced positive results by reducing food waste

Stop & Shop was able to save an estimated \$100 mil annually after an analysis of freshness, shrink, and customer satisfaction in their perishables department.



Key Facts about Problem:

- 40% of the food in the U.S. today goes uneaten¹
- Americans are wasting an equivalent of \$165 billion each year²
- Organic matter in landfills accounts for 16% of U.S. methane emissions³
- Decomposition of uneaten food accounts for 23% of all methane emissions in the U.S.⁴
- One third of food produced for human consumption is lost or wasted globally which amount to about 1.3 billion tons per year⁵
- Getting food from the farm to our fork eats up 10% of total US energy budget, 50% of U.S. land, and 80% of all freshwater consumed in the U.S.⁶
- The U.S. Department of Agriculture estimates that nearly 50 million Americans, including 16 million children, are food insecure⁷
- 1 in 6 Americans lack a safe secure supply of food⁸
- If food waste was a country it's emissions would be 3rd.
- Discarded food accounts for 21% of volume that goes into landfills⁹
- WRI report shows calories wasted per day indicate we could feed nearly double our population if we eliminated food waste¹⁰

Goals:

- Take accurate measurements of the amount of food waste generated
- Reduce the amount of food waste generated
- Increase the amount of safe, nutritious food donated to those in need
- Recycle unavoidable food waste, diverting it from landfills
 - Examples include: converting waste oil to biofuels, anaerobic digestion or composting scraps
- Compost food waste and thereby reduce methane emissions.
- Set goals to reduce food waste through source reduction and then diverting from landfills

Asks:

- Disclose amount of food wasted (comprehensively)
 - Conduct regular food waste audits
- Set targets / goals to reduce waste generated
- Adopt practices to meet food waste reduction goals
- Optimally manage food waste by diverting to the best use
 - we recommend consideration of EPA's food waste hierarchy (see below)

¹ <http://www.nrdc.org/food/files/wasted-food-ip.pdf> pg. 1

² <http://www.nrdc.org/food/files/wasted-food-ip.pdf> pg.1

³ <http://www.nrdc.org/food/files/wasted-food-ip.pdf> pg. 4

⁴ <http://www.nrdc.org/food/files/wasted-food-ip.pdf> pg. 14

⁵ <http://www.fao.org/docrep/018/i3347e/i3347e.pdf> pg 6

⁶ <http://www.nrdc.org/food/files/wasted-food-ip.pdf> pg. 4

⁷ http://www.foodwastealliance.org/wp-content/uploads/2014/04/FWRA_Toolkit_FINAL_0415141.pdf p.6

⁸ http://www.safsf.org/wp-content/uploads/2014/07/2014Forum_FoodWaste_BJFFOnePgr.pdf

⁹ http://www.epa.gov/foodrecovery/docs/reducing_wasted_food_pkg_tool.pdf pg.2

¹⁰ http://pdf.wri.org/reducing_food_loss_and_waste.pdf

U.S. EPA Food Recovery Hierarchy

From most preferred to least preferred:

- Source Reduction
- Feeding Hungry people
- Feeding Animals
- Industrial Use
- Composting
- Incineration or Landfill

Ask: Adopt a policy to disclose, reduce and optimally manage food loss and waste

Food losses and waste refers to a decrease, at all stages of the food chain from harvest to consumption, in mass, of food that was originally intended for human consumption, regardless of the cause.

Food loss refers to a decrease, at all stages of the food chain prior to the consumer level, in mass, of food that was originally intended for human consumption, regardless of the cause

Food waste refers to food appropriate for human consumption being discarded or left to spoil at consumer level, regardless of the cause¹¹

Business Case:

- Financial Savings
 - decreasing disposal fees
 - food banks often provide free pick-up for excess food, and composting fees can be less than landfill/incineration tipping fees
 - decreasing purchasing costs because only buying what is needed
 - increasing revenue from selling compost made from food scraps
- Combating food insecurity
 - Moral imperative, helping communities
 - Increasing tax deductions for food donations to charities
- Reputation/ Positive Press

General Solutions for all sectors:

- Managing food waste starts with measuring and tracking
- Conduct regular food waste audits and set targets
- Disseminate and encourage adoption of best practices by businesses
- Encourage innovation in online solutions and new technologies to better keep track of food waste generated, examples:
 - smartphone applications that help consumers to know how long food has been in refrigerator, plan portions, make shopping lists
 - LeanPath software weighs and track discarded food in restaurants
<http://www.leanpath.com/>

¹¹ http://www.fao.org/fileadmin/user_upload/hlpe/hlpe_documents/HLPE_Reports/HLPE-Report-8_EN.pdf
pg.22



- FareShare <http://www.fareshare.org.uk/> and FoodCloud App <http://foodcloud.net/> and Spoiler Alert <http://foodspoileralert.com/> to make donating food from grocery stores to those in need an easy process
- websites such as Ample Harvest to connect those with surplus food with those in need <http://www.ampleharvest.org/>
- specialized distribution pallets that protect and extend product life are being tested <http://www.nrdc.org/food/files/wasted-food-ip.pdf> pg 16
- Compass Group's CarbonFOODprint <http://compass-usa.com/Pages/CarbonFoodprint.aspx>
- Source reduction- efficient planning
- Donate to feed hungry people
 - Feeding America
 - Food Donation Connection
 - Local hunger relief programs
 - Food Pantries, Soup Kitchens
- Animal Feed
- Recovering energy from waste materials- industrial uses
 - anaerobic digestion
 - biofuels
 - fermentation→ ethanol/ compost
- Composting
 - on site composting if available
 - compost pick-up programs

Food Service/ Restaurant Solutions:

- Adapt menus, flexible portioning
- Improve planning and management training
- Audit waste and engage staff- daily attention to waste
- Encourage guests to take food home- preferably with a reusable or compostable container
- Learn about donation benefits
- Compost kitchen scraps

Retail Solutions:

- Conduct waste audits
- Analyzing sales by item- this can reveal low performing stock-keeping units, and fewer SKUs means higher turnover per SKU, reducing both shrinkage and inventory costs, this type of analysis can improve forecasting and inventory management, bringing significant savings
- Use discount shelves for items near expiration dates
- Redesign product displays to make bins appear fuller without causing spill or too much piling
- Allow prepared foods to run out close to closing
- Donate to local food banks and charity organizations



- Recover energy through anaerobic digestion from food that cannot be donated, or compost

Best Practices Examples:

- Retail
 - **Tesco**
 - Try to minimize surplus by leaving foods close to expiration date on shelves longer, rather than replacing with items with further off expiration dates
 - Ended buy-one-get-one-free for produce to reduce consumer waste
 - All surplus fresh food is donated, communication with charitable organizations and food banks is supported through FareShare and FoodCloud Apps
 - All bakery waste converted into animal feed for livestock
 - Chicken fat and cooking oil converted to biodiesel
 - If these options are unavailable then recover energy from food waste through anaerobic digestion or incineration, meat waste is collected from all stores and brought to one of Tesco's 11 regional recycling units where PDM collects it and it is then recycled at one of four facilities in the UK http://www.saria.co.uk/news/2009/pdm_group_helps_tesco_recycle_waste_meat_renewable_energy.html
 - Zero waste direct to landfill since 2009
 - First UK retailer to publish data about food waste for a full financial year
 - Whole Foods
 - Every store has community food donation programs
 - Trained and committed staff and leadership
 - Hope to achieve zero waste to landfill in 2016 (>90%), currently divert 83% of waste through store-wide composting program, recycling efforts and food bank partnerships
 - Some stores using Waste to Water machine that uses microbes to break down food waste into greywater which can safely be disposed of down the drain on site rather than trucks needing to pick up residual food waste
 - Others using worm composting bins in employee break rooms
 - **Kroger**
 - Source reduction through closely managing “shrink” to understand where improvement areas exist
 - “Donate all” model & Perishable Donations Partnership- donates meat and produce
 - Goal of zero-waste in all stores. Waste includes everything from packaging to food. Ultimate goal of diverting 90% of waste from landfills, by 2015 their goal is to divert 70%, by the end of 2013 the diversion rate for stores was 59%



- In 2013, 27 of 32 of Kroger's corporately managed manufacturing plants were designated as "zero waste" facilities, in 2013 manufacturing plants reduced the amount of waste sent to landfill by 3.5 million pounds, a 27.5% reduction from 2012
- Has two large scale waste to fuel projects, Compton, CA they utilize anaerobic digestion to transform food waste into renewable biogas which is then turned into power for on-site operations
- Several stores in remote areas without relationships with local food banks partner with local hog farmers to help feed livestock
- Perishable foods and flowers not fit for donation are picked up by local composting companies
- Price Chopper
 - Recycle vegetable oil into biodiesel, tallow, protein meal and feeding fats
 - Donates safe foods to a variety of organizations such as food banks and canine units
 - Bio-hydration process carried out in anaerobic digesters located at many stores allows food waste to be broken down into greywater or compost
- Restaurants/ Food Establishments
 - Yum! Brands
 - Food Establishments: Pizza Hut, KFC, Taco Bell
 - World Hunger Relief Effort - one of the world's largest hunger relief initiatives
 - Harvest Program
 - donates food from restaurants to food banks and other charitable organizations
 - partners with Food Donation Connection
 - Goal to minimize waste within our stores through increased efforts in oil and corrugate recycling and food donation
 - Some locations recycling oil into biodiesel
 - KFC closed-loop oil distribution system in all of its 163 restaurants, which eliminates plastic and cardboard packaging, reduces oil waste and increases used oil recycling yields
 - Darden
 - Restaurants: Red Lobster, Olive Garden, LongHorn Steakhouse, The Capital Grille, Bahama Breeze, Seasons 52
 - Darden Harvest food donation program
 - Recycles cooking oil into biodiesel, animal feed, and soap
 - Key issue is availability of composting, piloting organics recycling projects in select restaurants in Orlando, Florida
 - Burgerville
 - Recycling and composting program
 - Food waste from the kitchens are turned into nutrient rich compost sold at local retailers for home and business gardens



- Compostable soda cups and lids
- Converts cooking oil to biodiesel
- Hannaford Supermarkets
 - 2011 move toward zero waste pilot program
 - http://www.epa.gov/epawaste/conservation/foodwaste/success/case_hannafo rd.pdf
- New Seasons
 - <http://www.newseasonsmarket.com/assets/files/New%20Seasons%20Market%20Sustainability%20Report%20V2.pdf>
- Food Service Management
 - **Bon Appetit**
 - Prepare food from scratch in small batches to order to minimize food waste
 - Trayless
 - Imperfectly Delicious Produce Program working with farmers, suppliers and chefs to source cosmetically challenged produce
 - Work with food banks and nonprofit organizations to take edible excess food
 - At some locations send scraps to Farm to Fork partners for animal feed or composting, and waste fryer oil to biofuel processors
 - Compost waste on site and through municipal programs where available
 - **Compass Group Chartwells**
 - Trayless Dining- reduce food waste, promotes portion control, reduces water and energy consumption for washing trays
 - Project Clean Plate- amount of food waste each day is recorded and posted to educate students how much wasted food is thrown out every day
 - TrimTrax- measure and reduce the amount of food waste in kitchen facilities on campuses
 - Project Green Thumb- recycling and composting program where materials from campus dining facilities are composted into soil and used on campus or donated throughout local communities
 - CarbonFOODprint

Food Waste Focus List Research 2016 Season:

https://docs.google.com/spreadsheets/d/1VoC6k_oNLhDnookyjLWEyRlscmxDMRSnCzywdbSHwOo/edit#gid=0

Top Companies on Focus List:



- Burger King
- ARAMARK Corp
- SuperValu Inc
- Brinker International Inc.
- Panera Bread (Donates)
- Target

Sources:

http://pdf.wri.org/reducing_food_loss_and_waste.pdf

http://www.wri.org/sites/default/files/wri13_report_4c_wrr_online.pdf

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