

## Reducing Food Waste in the Home



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## Let's talk about.....

- Food waste:
  - Trends
  - Sources
  - Contributing factors
- Why we should be concerned about food waste
- Tips for reducing food waste in the home



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## Food Waste or Wasted Food?

- **Edible food** that is lost, discarded, or uneaten.



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## How much food is going to waste in the US?

Up to 40% of food in the US is lost.

Other published estimates have ranged from 25 to 30% (postharvest).



Source: Natural Resources Defense Council, August 2012

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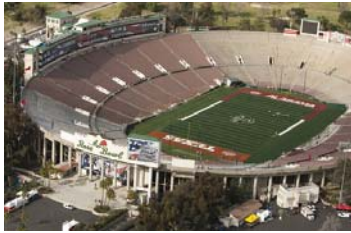
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## How much food is going to waste in the US?



Enough food to fill the Rose Bowl [every day](#).

Source: Bloom, J. American Wasteland: How America Throws Away Nearly Half of Its Food (and What we Can Do About It).

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## How much food is going to waste in the US?

~20 pounds of food per person per month



Source: Natural Resources Defense Council, August 2012; Buzby, Wells, and Hyman, USDA ERS, *The Estimated Amount, Value and Calories of Postharvest Food Losses at the Retail and Consumer Levels in the US, 2014*; Hoover, D. *Estimating Quantities and Types of Food Waste at the City Level*, NRDC, 2017.

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**Let's talk about it.....  
How much food do you throw away?**




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**Three Types of Food Waste**

- **Avoidable:** Edible foods and beverages that were thrown away.
  - Crust cut off of a sandwich
- **Possibly avoidable:** Edible foods and beverages consumed by some but not others.
  - Peel of a carrot; skin of a baked potato
- **Unavoidable:** Waste that comes from foods and beverages but is not edible under normal circumstances.
  - Chicken bones
  - Egg shells
  - Tea bags
  - Rind of a cantaloupe
  - Others??



Source: Kelleher and Robbins, BioCycle, August 2013

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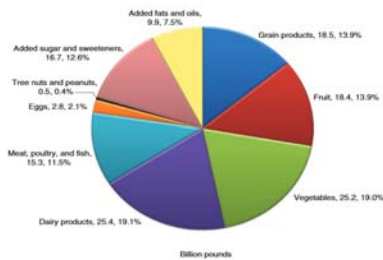
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**What types of foods/beverages are wasted?**



**Top 3**  
Dairy (19.1%)  
Vegetables (19%)  
Grain (13.9%)  
Fruit (13.9%)

Source: Buzby, Wells, and Hyman, USDA ERS; *The Estimated Amount, Value and Calories of Postharvest Food Losses at the Retail and Consumer Levels in the US, 2014* (2010 data)

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### Let's talk about it.....

What types of food did you dispose of most often?

Avoidable, Possibly Avoidable or Unavoidable?



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### 3-city study of food waste

#### Kitchen diaries

- 69% was edible
- Most common foods wasted were
  - Fruits and vegetables
  - Leftovers

29% of the trash thrown out by consumers was food



Source: Hoover D. *Estimating Quantities and Types of Food Waste at the City Level*, NRDC, 2017.

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### Why should we care about food waste?



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# 1. Wasted resources

- Food produced in the US uses
  - 10% energy (3% is estimated lost)
  - 50% of land
  - 80% of freshwater (25% is estimated lost)



Sources: EPA, 2011; USDA, Natural Resources Defense Council, 2012; Levis et al., *Waste Management*, 2010; Busby and Hyman, *Food Policy*, 2012.

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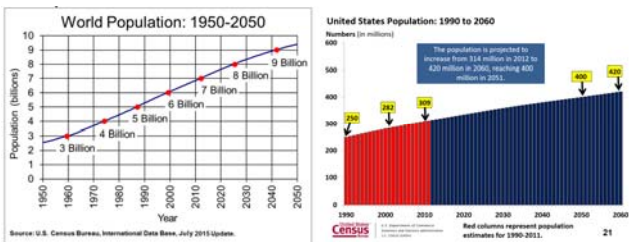
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# 2. More people to feed.....




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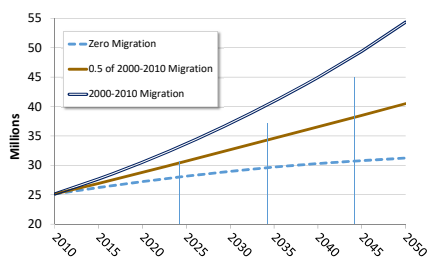
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# Projected Population Growth in Texas



Source: Dr. Lloyd Potter, State Demographer, TDC, UTSA, July 2016

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### 3. Wasted food = wasted opportunity to feed people

46.5 million people receive food and other services through food banks every year.

14% of Texas households experience food insecurity

Reducing food losses by **15%** alone could feed more than 25 million Americans every year.



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### 4. Wasted food contributes to landfills

• Largest component of municipal solid waste; more than plastics, metals, wood or yard waste.

- 97% of food waste ends up in a landfill
- Production of methane gas → impact on the environment?



Sources: EPA, 2011; USDA, Natural Resources Defense Council, 2012; Levis et al., *Waste Management*, 2010; Buzby and Hyman, *Food Policy*, 2012.

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### 5. Wasted food = money lost

- The value of food lost in the US was estimated at \$165 billion
- Per **household**, this is estimated at \$936 a year or \$2.56/day.
- Per **person** estimates range from \$371 to \$400 annually



Sources: EPA, 2011; USDA, Natural Resources Defense Council, 2012; Levis et al., *Waste Management*, 2010; Buzby and Hyman, *Food Policy*, 2012; USDA ERS, *The Estimated Amount, Value, and Calories of Postharvest Food Losses at the Retail and Consumer Levels in the United States.*, Feb. 2014.

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## Let's talk about it.....

Think about the foods that you have disposed of in your home. What were the factors that led to the disposal of those foods?

Date	Food	Quantity	Reason	Location

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## How Can We Reduce Food Waste/Loss?

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## We Can't Save All of It.....

1. Technical factors
  - \* Most foods are perishable; safety and storage considerations
2. Time and space factors
  - \* United States is a big country; getting unwanted food across the country and to other processing plants/locations is a challenge
3. Economic factors
  - \* Cost to recovery food; transportation cost (plus factors #1 and #2)
4. Consumer factors
  - \* Individual tastes, preferences; food habits

Source: Buzby, Wells, and Hyman, USDA ERS; *The Estimated Amount, Value and Calories of Postharvest Food Losses at the Retail and Consumer Levels in the US, 2014*

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## USDA – Let's Talk Trash


<http://www.choosemyplate.gov/lets-talk-trash>

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## Environmental Protection Agency - Sustainable Management of Food

**Food Recovery Hierarchy**

- Source Reduction**: Reduce the volume of surplus food generated.
- Feed Hungry People**: Donate extra food to food banks, soup kitchens and shelters.
- Feed Animals**: Donate extra to animal feed.
- Industrial Uses**: Produce and use for processing and for conversion into fuel energy for electricity or other energy.
- Composting**: Create compost.
- Landfill/Incineration**: Last resort disposal.

Goal: Reduce food waste by 50% in the next 15 years.

Source: <https://www.epa.gov/sustainable-management-food>

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## How can we reduce food waste in the home?

**YOU WOULDN'T DEPRIVE YOUR FAMILY OF FOOD!**

**Be Patriotic**  
sign your country's pledge to save the food

**food**  
1- buy it with thought  
2- cook it with care  
3- use less wheat & meat  
4- buy local foods  
5- serve just enough  
6- use what is left  
**don't waste it**

**FOOD IS A WEAPON**  
**DON'T WASTE IT!**  
DON'T WASTE - CHASE CARROT TOPS & ALL  
CALLER: THE NATIONAL NUTRITION EDUCATION PROGRAM

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## Why do we waste food?

- Lack of awareness (food is cheap; don't realize how much food is wasted)
- Desire for eating only the freshest food
- Concern about foodborne illness
- Confusion over label dates
- Spoilage
  - Improper storage; forgotten in the refrigerator; partially used ingredients
- Impulse and bulk purchases
- Poor planning
- Over-preparation



Source: Natural Resources Defense Council, 2012; Neff et al. Wasted Food: U.S. Consumer's Reported Awareness, Attitudes, and Behaviors, June 2015

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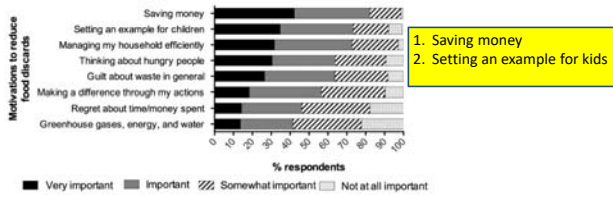
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## What motivates consumers to reduce food waste?



1. Saving money
2. Setting an example for kids

Source: Neff et al. Wasted Food: U.S. Consumer's Reported Awareness, Attitudes, and Behaviors, June 2015

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## AgriLife Extension Hierarchy for Reducing Food Waste in the Home




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### Plan Your Meals – Be Realistic

- Are there any ingredients in the refrigerator or freezer that you need to use first?
- Think about how many times you will be eating away from home.



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### Shop Smart

- Shop your refrigerator and freezer first.
- Stick to your list...unless there is a good reason.
- Have a plan for each ingredient you put in the cart
- Buy only what you need (and will use)
  - Bulk items – do you really save??
  - Sale items – is it a sale if it goes to waste?
  - Bundled items (“buy a rotisserie chicken and get potato salad free!”)
- Don’t shop on an empty stomach



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### Store Foods Properly

- Produce
  - Store it right.
  - Use fresh produce within 2-3 days for best quality
- Preserve surplus produce – but only if you will use it!
- Date your prepared foods (leftovers)
  - Use within 2-3 days for best quality/safety
- Keep an inventory of what is in your freezer



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## Home Composting

- Need the right mixture of “green” and “brown”
- Helps improve soil
- Keeps uneaten food out of the trash/landfill



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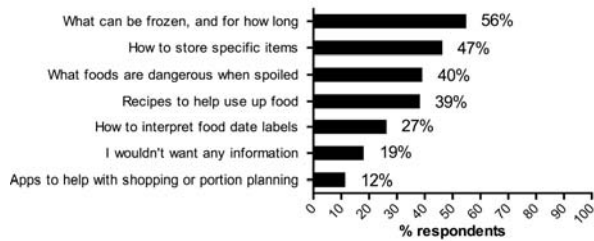
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## Educational Opportunities for Addressing Food Waste at the Consumer Level



Source: Neff et al. Wasted Food: U.S. Consumer's Reported Awareness, Attitudes, and Behaviors, June 2015

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## Educational Opportunities for Addressing Food Waste at the Consumer Level



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## Did you know?

With the exception of infant formula, the FDA does not require food manufacturers to place “expired by” “use by” or “best before” dates on food products.



Source: Natural Resources Defense Council, *The Dating Game: How Confusing Food Date Labels Lead to Food Waste in America*, 2013.

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## What does the date mean?

- Best-by
- Pull-by
- Freshness or Best-If-Used-By
- Pack date
- Sell-by
- Use-by
- Best if used by
- Use-by
- Expiration




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## Did you know?

91% Americans report they “occasionally” throw away food after the “sell-by” date because they are worried about food safety.

25% of Americans surveyed do this “all the time”



Source: Food Marketing Institute, 2011

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## Consumers are confused!

- No federal regulation of sell-by dates.
- State laws exist, vary, and are constantly updated.
- Some cities have laws prohibiting the sale of perishable foods after the expiration date.
- Manufacturers determine the shelf life of their product.
- Consumers falsely believe that date labels are indicators of safety.



Source: Natural Resources Defense Council, *The Dating Game: How Confusing Food Date Labels Lead to Food Waste in America*, 2013.

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## There is an app for that!



Food Keeper  
(USDA)



Is My Food Safe?  
(Academy of Nutrition and Dietetics)

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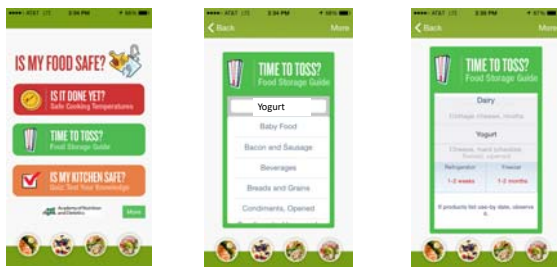
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## Is My Food Safe? App




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## Communities are Getting On Board



Your Fruit at Whole Foods Is Going to Get a Little Uglier



San Francisco – Imperfect Produce



Whole foods selling “ugly fruit”

Recycling food and teaching culinary skills to unemployed adults  
DC Central Kitchen



Trayless dining on college campuses

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## New educational program coming on reducing home food waste

- *Get a Taste for Reducing Food Waste*
  - Problem with food waste
  - Meal planning to reduce food waste
  - Understanding the dates on food labels
  - Home composting
- Participants complete a food diary pre (and hopefully post)
- Pre- and post-survey to assess impact
- Ready to pilot this month!

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## Final thoughts.....

- Lots of food is being wasted that could be put to better use.
- Food waste has economic, environmental, and other consequences.
- When talking about food waste, you have to know your audience.
- The desire for “fresh” and “perfect” foods fuel food waste.
- Date stamps on labels and fear of foodborne illness are also big contributors to food waste.

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**Necessity is the mother of invention.  
Meet Mike Yurosek – father of the “baby carrot”**

- Carrot grower; was losing up to 70% of his crop due to their shape
- Some of the culled carrots were fed to animals; others were discarded



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**TEXAS A&M  
AGRI LIFE  
EXTENSION**

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Food 	Amount 	Method of Disposal 	Why it was Disposed 	Estimated Value 
Total estimated value of the food that was disposed:				