




Before the Workshop:

- Add presenter's name and affiliation; date of workshop; and logos of pilot partners to slide 1.
- Print handouts for attendees (Suggest three slides to a page in black/white for taking notes and printing double sided.)

Opening the Workshop and Overview of the Pilot: 2 minutes

Welcome people and thank them for coming.

The Food Too Good to Waste Campaign is a collaborative effort of [your organization], [the EPA], and [other organizations] concerned about the impacts of wasted food. Our role is to engage households in efforts to reduce wasted food through workshops such as this one. We do this in part by utilizing the tools available to us in the Food: Too Good To Waste Toolkit.



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Disclaimer language

Workshop Purpose

Examine the problem of wasted food including:

- **How much goes to waste**
- **Why waste happens**
- **Why waste matters**
- **Strategies to reduce waste**

3

Less than 1 minute

Today we will be discussing the issue of wasted food including ...

Purpose

By making small shifts in how we shop, store and prepare food, we can toss less, eat well, simplify our lives, save money and keep the valuable resources used to produce and distribute food from going to waste.

4

1 minute

The premise behind the FTGTW campaign is that by making small changes in our food management behaviors, we can have a large impact, both for ourselves and for the environment and our communities.

Introductions

Introduce yourself by:

- **Giving your name**
- **Telling a short story that illustrates why you care about wasted food**

5

15 to 20 minutes

Depending on whether you have a small or larger number of people attending the workshop, there are two options for introductions.

8 people or less:

Let everyone introduce themselves to the group as a whole. Keep introductions to 2 minutes or less.

8 or more:

Have people pair off to introduce themselves to each other. Give each person 2 to 3 minutes each. After they finish, have a few people share their stories with the group as a whole.

HOW MUCH FOOD IS WASTED?

6

Less than 1 minute

Let's start by looking at how much food is wasted.

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.

The estimated total value of food loss at the retail and consumer levels in the United States was \$161.6 billion in 2010. The top three food groups in terms of share of total value of food loss were meat, poultry, and fish (30 percent, \$48 billion); vegetables (19 percent, \$30 billion); and dairy products (17 percent, \$27 billion).

Food accounts for 21% of the American waste stream



7

3 minutes

Currently, in the United States it is estimated that more than 30% of edible food goes to waste.

In 2013, 37 million tons of food waste were generated, of which only 1.84 million tons (5%) was recovered, resulting in 35 million tons going into the nation's landfills and incinerators. Food is the largest stream of municipal solid waste (MSW) materials going to discard, accounting for 21% of the American waste stream.

Wasted Food occurs all along the food value chain - from farm to fork.

- For example, food is sometimes left in the fields because it costs more to harvest than what it could be sold for.
- Food that travels long distances is more likely to perish in route.
- At the retail level, food is wasted when grocery stores or restaurants buy more of a perishable food item than they can sell.

In this workshop, we will focus on wasted food in the household.

Sources:

Buzby, Jean, Wells, Hodan and Jeffrey Hyman. "The Estimated Amount, Value, and Calories of Postharvest Food Losses at the Retail and Consumer Levels in the United States." USDA, Economic Research Service. Economic Information Bulletin Number 121. February 2014

U.S. EPA. Advancing Sustainable Materials Management: 2013 Fact Sheet. Assessing Trends in Material Generation, Recycling and Disposal in the United States. June 2015

Gustavsson, Jenny, Christel Cederberg, and Ulf Sonesson. 2011. *Global Food Losses and Food Waste: Extent, Causes and Prevention*. Report for Swedish Institute for Food and Biotechnology. http://www.fao.org/fileadmin/user_upload/ags/publications/GFL_web.pdf.

Economic Research Service. 2010. Loss-Adjusted Food Availability: Spreadsheets. <http://ers.usda.gov/Data/FoodConsumption/FoodGuideSpreadsheets.htm>.

WHY WASTE HAPPENS

8

Less than 1 min

Next we look at ...

In one month, a family of 4 wastes ...



Bill Marsh and Kari Haskell/The New York Times; Photograph by Tony Cenicola/The New York Times

9

2 minutes

Looking at the amount of wasted food by household:

The photo shows a depiction of a family of 4's monthly share of wasted food in eight food groups.

Estimates for the various food types from a 1997 USDA article are shown in this picture. This includes both retail- and consumer-level losses and is equivalent to about a # per person per day.

Fresh fruit and vegetables account for the largest percentage of household waste by weight. Meat is the most expensive portion.

Some experts estimate that this wasted food costs a family of four \$1600 a year.

Sources:

Martin, Andrew. *One Country's Table Scraps, Another Country's Meal*. New York Times, May 18, 2008. (http://www.nytimes.com/2008/05/18/weekinreview/18martin.html?_r=0)
PHOTO: <http://www.nytimes.com/imagepages/2008/05/18/weekinreview/18martin-popup.html>

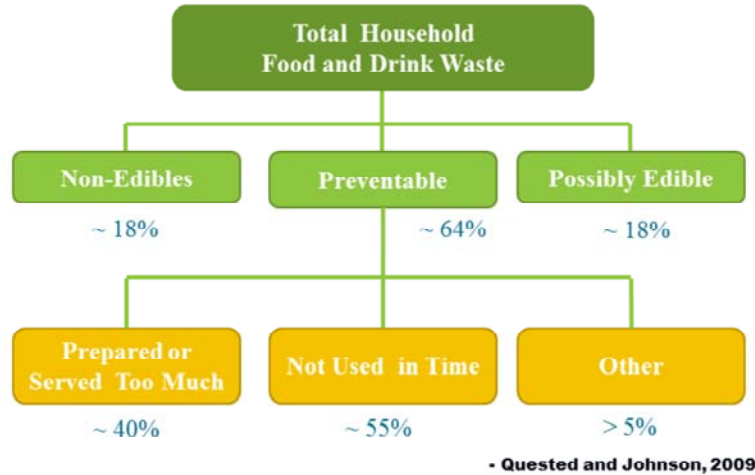
Hall et al, 2009, The Progressive Increase of Food Waste in America and Its Environmental Impact, Plos ONE

Kantor, Linda Scott., Lipton, Kathryn., Manchester, Aiden, Oliveira. *Estimating and Addressing America's Food Losses*. USDA 1997. <http://webarchives.cdlib.org/sw1tx36512/http://www.ers.usda.gov/publications/foodreview/jan1997/jan97a.pdf>

Buzby, Jean C., 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, EIB-121*, U.S. Department of Agriculture, Economic Research Service, February 2014.

Venkat,Kumar. *The Climate Change and Economic Impacts of Food Waste in the United States. Int. J. Food System Dynamics 2 (4), 2011, 431-446, April 2012.*

Research shows that...



10

3 minutes

Previous research done in the U.K. shows that:

- preventable food waste (that portion of waste that could have eaten at one time) is about 64% of all consumer-level waste
- And the rest was split between non-edibles such as bones, egg shells, carrot tops and possible edibles (food that is sometimes not eaten but could be with the right preparation, for example, beet greens).

Of the 64% that is preventable food waste:

- Just over 40% was attributed to having cooked or served too much (think of the waste left on kids' plates). This also includes food that was burnt or otherwise spoilt during preparation.
- But most of it was food that was not used in time. Of this, the largest percentage was vegetables and salad.

Of the food not use in time, the UK researchers also found that much of the food not used in time had never been opened.

Additional Notes

- Other category constitutes things like fruit that won't ripen or losses during cooking.
- What people think of as edible can vary a great deal

Source: Quested and Johnson, 2009, Household Food and Drink Waste in the U.K., WRAP Report

Yet ... we all hate waste



11

1 minute

The mystery is why we waste so much especially since recent brain research shows that we really dislike waste, especially when it is something that we consider ours. There is even a term for it: loss aversion. Essentially, we are wired to hate losing the resources we have in hand.

The good news here is that we have an in-built motivation to waste less.

Explanation of loss aversion: Losses are more powerful behavioral motivators than gains. Owning something increases its value. Losing \$100 worth of food has a greater impact on how satisfied you are than saving \$100 on food.

Source: Thaler and Sunstein, 2008, Nudge: Improving Decisions about Health, Wealth and Happiness; Kahneman, 2011, Thinking, Fast and Slow

Brain on automatic



12

2 minutes

Still, there must be other things at play. One is we often act automatically instead of reflecting on what we are doing.

For example, you are likely to serve yourself more if your plate is bigger or if the color contrast between the plate and the food is low. In this picture, the green plate has more beans than the orange plate. Serving more food can lead to not finishing what's on our plates and plate waste.

Our brains are often on automatic when we do routine tasks such as shopping and clean-up after meals, so we might forget what leftovers we have in the refrigerator or that we still have tomatoes in the refrigerator from the last time we went to the store.

Source: Cornell University Food and Brand Lab

Dynamic lifestyles



Artist: Beverly Naidus

13

2 minute

Another big culprit in wasted food is our dynamic lifestyles.

Planning is one thing and following through on plans is another. We want to eat nearby or have work commitments. Both of these may take precedence over going home to cook that meal you planned on.

A study by the [Cornell University](#) Food and Brand Lab found that [93 percent of respondents](#) acknowledged buying foods they never used.

Artist: Beverly Naidus

Complexity of Change

Additional Barriers:

- **Not enough information**
- **Time needed to learn new skills**
- **Time needed to prepare fresh food**
- **Preference for one food type versus another**

14

2 minutes

While researchers can point to some general behaviors leading to wasting food, for different families there will be different barriers to reducing food waste. Feeding a household is a complex series of activities. There's meal planning, shopping, storing, preparing and cooking food as well as choosing what to eat at any given moment. Some of the barriers to making changes in how we carry out these activities are: not having enough information to make a change, a lack of time, and food preferences. Children especially can favor one type of food over another and though you try to get them to eat food that is good for them, it seems that just as often it's still on the plate at the end of the meal.

WHY WASTING FOOD MATTERS

15

Less than 1 min

Notwithstanding these barriers to reducing wasted food, there are significant benefits to be gained.

By Keeping Good Food from Going to Waste ...

We can:

- Toss less
- Eat well
- Simplify our lives
- Save money



JBloom, Fight Food Waste in the Home, January 17, 2008, Via Flickr, Creative Commons

16

3 min

As this WWII poster suggests, the benefits of keeping good food from going to waste include saving money. As mentioned earlier in the presentation, some experts estimate the cost of wasted food for a family of 4 to be \$1600/year.

Buzby, Jean C., 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*, EIB-121, U.S. Department of Agriculture, Economic Research Service, February 2014.

Venkat, Kumar. *The Climate Change and Economic Impacts of Food Waste in the United States*. *Int. J. Food System Dynamics* 2 (4), 2011, 431-446, April 2012.

Other benefits include:

Keeping fruit and vegetables fresh for longer periods of time may help to increase their consumption.

By trying different ways to buy and prep food, we can simplify our lives.

And there is the basic satisfaction that comes from wasting less.

What it costs us in \$

The estimated total value of food loss at the retail and consumer levels in United States:

- **\$161.6 BILLION in 2010**

- Buzby, Hyman and Wells

17

1 min

Sources:

Buzby, Hyman and Wells; **The Estimated Amount, Value, and Calories of Postharvest Food Losses at the Retail and Consumer Levels in the United States**, (2014)

Wasted Food = Wasted Resources

U.S. food production accounts for:

- 50% of land use
- 80% of water use
- 10% of total energy use

18

2 minutes

But that's not all it costs us! U.S. food production accounts for ...

Source:

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

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>.

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/>.

Climate Consequences

- **Food is the largest stream of materials in our landfills, accounting for 21% of the American waste stream.**
- **This large volume of disposed food is a main contributor to the roughly 18% of total U.S. methane emissions that come from landfills**

19

2 minutes

It should also be noted that when food is landfilled, it generates methane, a gas 25 times more powerful than carbon dioxide. By contrast, properly managed composting is not a major source of methane.

Sources:

U.S. EPA. Overview of Greenhouse Gases: Methane Emissions.

<http://epa.gov/climatechange/ghgemissions/gases/ch4.html> August 2015

Discussion

What would keeping food from going to waste:

- **Do for you?**
- **Do for the environment?**
- **Do for your community?**

20

12 minutes

Have workshop participants group in pairs and give each 4 minutes to share the discussion questions.

After everyone has had a chance to discuss, reconvene the group and ask for a few people to share their insights from the discussion.

STRATEGIES TO REDUCE WASTED FOOD

21

1 minute

In developing the pilot, a workgroup of researchers and practitioners evaluated different strategies to prevent wasted food. The next slides present the top strategies in terms of the workgroup's evaluation criteria.

The strategies cover the range of activities we undertake as households to feed ourselves from planning meals, to buying, storing, prepping and making choices about what to eat when.

Choosing all the presented strategies to focus on is not to say that there are not other great strategies. One of the efforts in the [small or large-scale campaign] is to test how effective these strategies are.

SMART SHOPPING: BUY WHAT YOU NEED

SMART STRATEGY:

Make a Shopping List with Meals in Mind

- Think about how many meals you'll eat at home this week and how long before your next shopping trip.
- Next to fresh items on the list, note the quantity you need or number of meals you're buying for.
- Shop your kitchen first and note items you already have.

FOOD ITEM AMOUNT NEEDED ALREADY HAVE

Salad greens Lunch for a week Enough for one lunch

2% milk Gallon None

22

2 minutes

The first of the four strategies is making a food shopping list with meals in mind. This strategy is a little simpler than all-out meal planning and it leaves flexibility for buying what is local and seasonal, say if you go to the farmers market and find an abundance of summer squash.

The object in making a shopping list with meals in mind is both to check what you already have on hand, what we call “shopping your kitchen first” but also to consider how many meals you will be likely to eat at home before you next go shopping and buy accordingly.

By making a list with meals in mind, you will waste less, eat better, and save time and money.

This strategy also focuses on buying only the quantities you need until your next shopping trip. The effort here is to be aware when you are shopping how much you are putting in your cart rather than being on autopilot when shopping. By buying no more than what you expect to use, you will be more likely to use it up and keep it fresh.

SMART STORAGE: KEEP FRUITS AND VEGETABLES FRESH

FRUIT AND VEGETABLE STORAGE GUIDE

INSIDE THE FRIDGE

- Apples, berries, and cherries
- Grapes, kiwi, lemons, and oranges
- Melons, nectarines, apricots, peaches, and plums (after ripening at room temperature)
- Avocados, pears, tomatoes (after ripening at room temperature)
- Almost all vegetables and herbs

OUTSIDE THE FRIDGE

- Bananas, mango, papayas, and pineapples: store in a cool place
- Potatoes / onions: store in a cool, dark place
- Graft and winter squashes: store at room temperature—once cut, store squashes in fridge

MORE STORAGE TIPS

- If you like your fruit at room temperature, take what you will eat for the day out of the fridge in the morning.
- Many fruits give off natural gases that hasten the spoilage of other nearby produce. Store bananas, apples, and tomatoes by themselves and store fruits and vegetables in different bins.
- Consider storage bags and containers designed to help extend the life of your produce.
- To prevent mold, wash berries just before eating.

23

2 minutes

The second strategy is perhaps the easiest of all – storing fruits and vegetables for maximum freshness, especially knowing which fruits and vegetables last longer inside or outside the fridge. We've developed a storage guide to help out with this strategy.

By storing fruits and vegetables for maximum freshness, they will taste better and last longer, helping you eat more of them.

SMART PREP: PREP NOW, EAT LATER



Image courtesy of Grant Cochrane/FreeDigitalPhotos.net

24

2 minutes

The third strategy is to prep your perishables as soon as possible and, if possible, when you return from your grocery shopping trip. This strategy helps with busy lifestyles, those times when you get home and only have a half hour or so to fix that dinner with fresh vegetables. By preparing perishable foods post-shopping, you'll make it easier to whip up meals later in the week, saving time, effort and money. Many people also prepare meals in batch up front.

SMART SAVING: EAT WHAT YOU BUY



25

1 minute

The final strategy is to eat what needs eating first. By being mindful of old ingredients and leftovers you need to use up, you'll waste less and may even find a new favorite dish in the process.

One way to do this is to move food that's likely to spoil soon to the front of the shelf or a designated "eat now" area. Another is to learn flexible recipes. Casseroles, frittatas, soups and smoothies are great ways to use leftovers, and odds and ends.

Discussion

What other strategies can you recommend?

26

10 minutes

Solicit other strategies from group as a whole.

FOOD: TOO GOOD TO WASTE CHALLENGE

27

Less than 1 minute

One way to succeed in making these shifts is to make a record of what you are doing. The workgroup developed a challenge to engage households in reducing wasted food by raising awareness on how much food is going to waste.

A second purpose of the challenge collect data that will help in the design of future programs to reduce wasted food.

Take the Challenge

Record the amount of household wasted food before and after adopting one (or more) of the four strategies



28

3 minutes

Record the amount of household food going to waste before and after trying one of the suggested strategies. This strategy takes place over four weeks. In Week 1, you will be measuring how much food currently goes to waste in your household. Weeks 2 and 3 are for trying out a strategy to prevent waste. In Week 4, you will measure the impact of the strategies.



Take the Food: Too Good to Waste Challenge

I would like to take the Challenge!

Name: _____

Email: _____

Today's date: _____

Distribute challenge cards and thank people for coming.