



**EPA's
Sustainable
Management
of Food**

May 11, 2023

U.S. Environmental Protection Agency

Office of Land and Emergency Management

Office of Resource Conservation & Recovery

Presentation Outline

- **Background**
 - Food waste in the U.S.
 - Why reduce food waste?
- **U.S. Food Loss and Waste 2030 Goal**
- **EPA's Approach and Actions**
- **Donating Food**



**30-40% OF ALL
AVAILABLE FOOD
IN THE U.S. IS
WASTED**

**Do your part. Join your federal partners
in reducing food waste.**

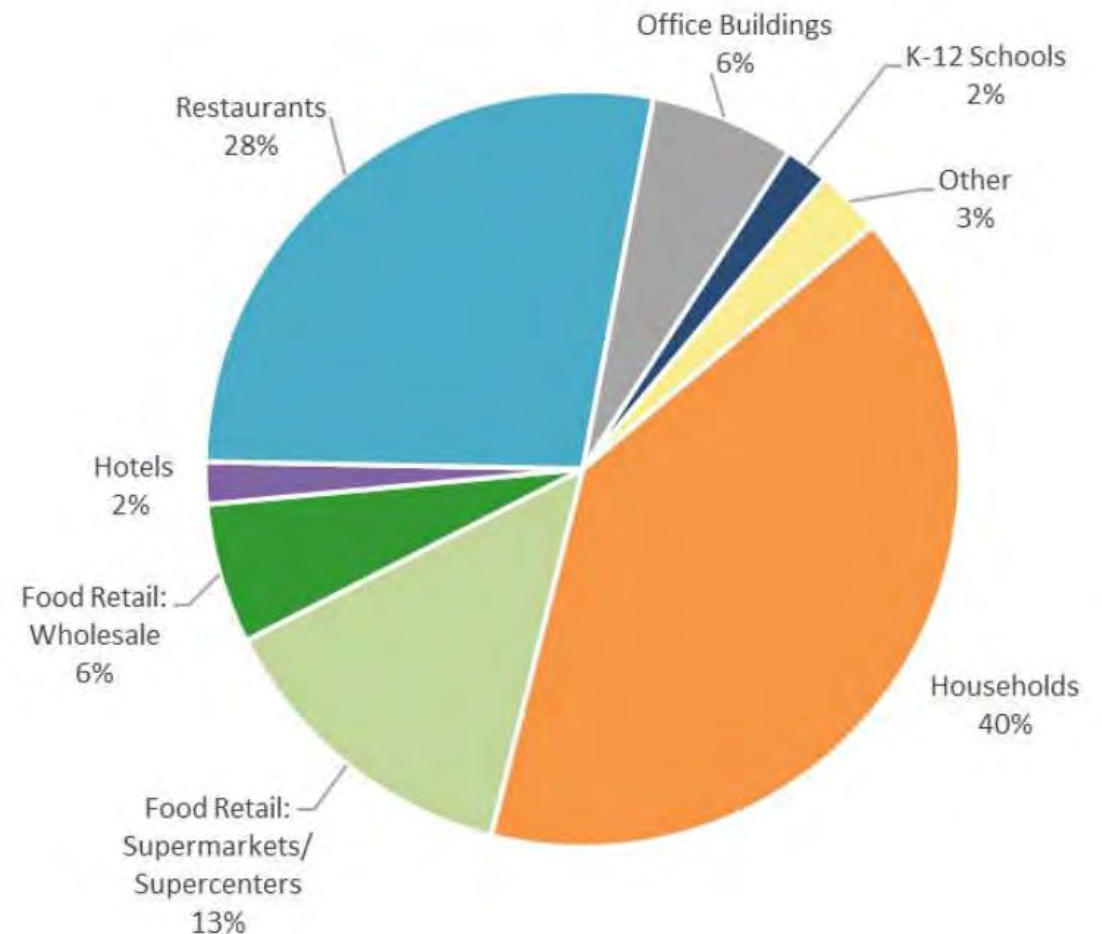
#NoWastedFood



Food Waste in the U.S.

- **66 million tons** of wasted food was generated in the food retail, food service, and residential sectors.
- **Most of this waste (about 60%) was sent to landfills.**
- USDA estimates that in 2010, **31% of food** available at the retail and consumer levels was **not eaten.**
- At the same time, **10.2% of American households were food insecure** at some point in 2021.

Distribution of Wasted Food Generation from the Food Retail, Food Service, and Residential Sectors (2019)



Why Reduce Food Waste?

People



Feed People



Create Jobs



Build Cleaner Communities

Planet



Conserve Resources



Reduce Greenhouse Gas Emissions



Improve Soil Health

Profits



Save Money



Enhance Your Brand



Earn Tax Benefits

U.S. 2030 Food Loss and Waste Reduction Goal



In 2015, EPA and USDA announced a goal to “reduce food loss and waste by 50% by 2030.”

<https://www.epa.gov/sustainable-management-food/united-states-2030-food-loss-and-waste-reduction-goal>



EPA's Approach:

1. **Prevent** the loss and waste of food and increasing access to healthy, nutritious food, where possible.
2. **Increase** the recycling of organic materials, including food, yard and tree trimming waste, and other organic (carbon-based) waste.
3. **Enhance** policies to support food loss and waste prevention and organics recycling.

EPA's Actions

Consumer education

Partnering with private sector

Funding for organics infrastructure and recycling

Data collection and research

Collaborating with local, national, and international partners



Efforts to Prevent Consumer Food Waste



- Blueprint development for a national consumer campaign
- *Preventing Wasted Food in Your Community: A Social Marketing Toolkit*
- *Food: Too Good to Waste* Peer Network
- \$1.5 million in grants to develop & test interventions to reduce household FW

Partnering with Private Sector



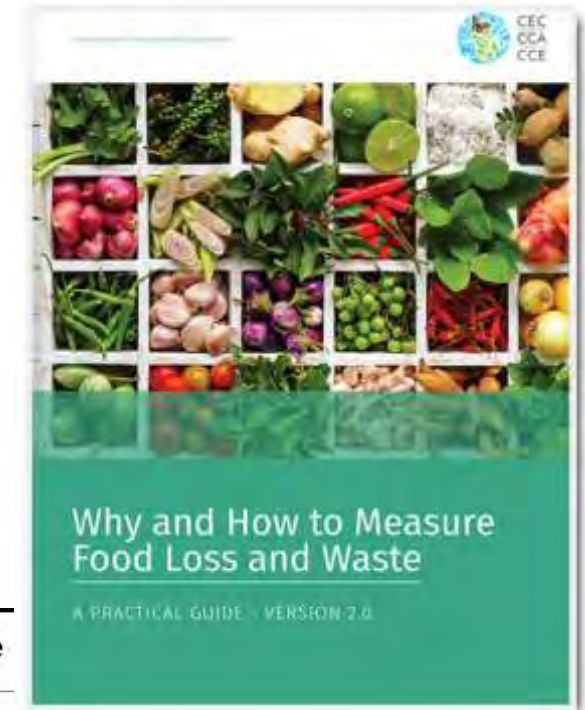
U.S. Food Loss and Waste 2030 Champions

Retailer, Supplier, and Distributor Pilots

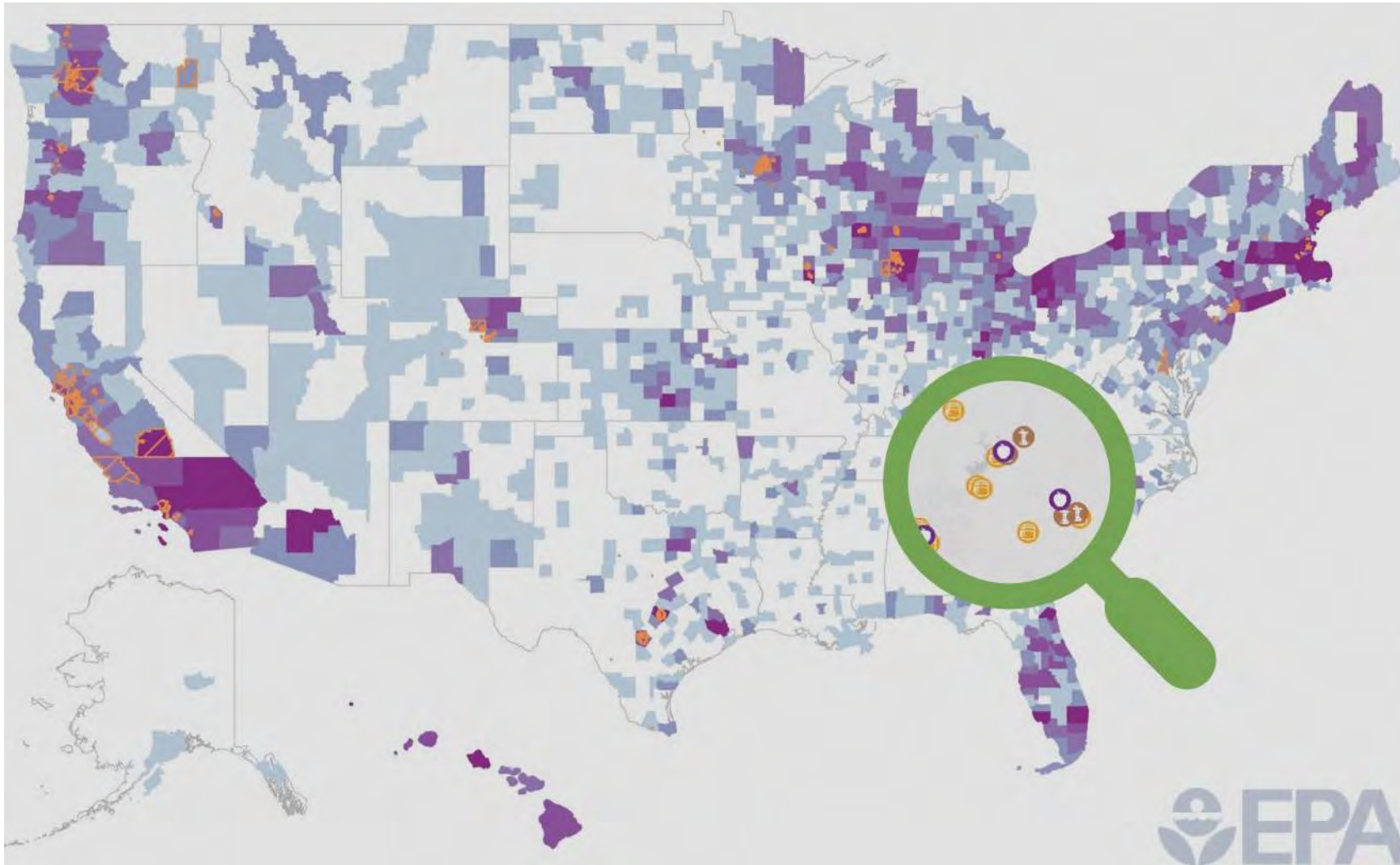


Assessing Wasted Food

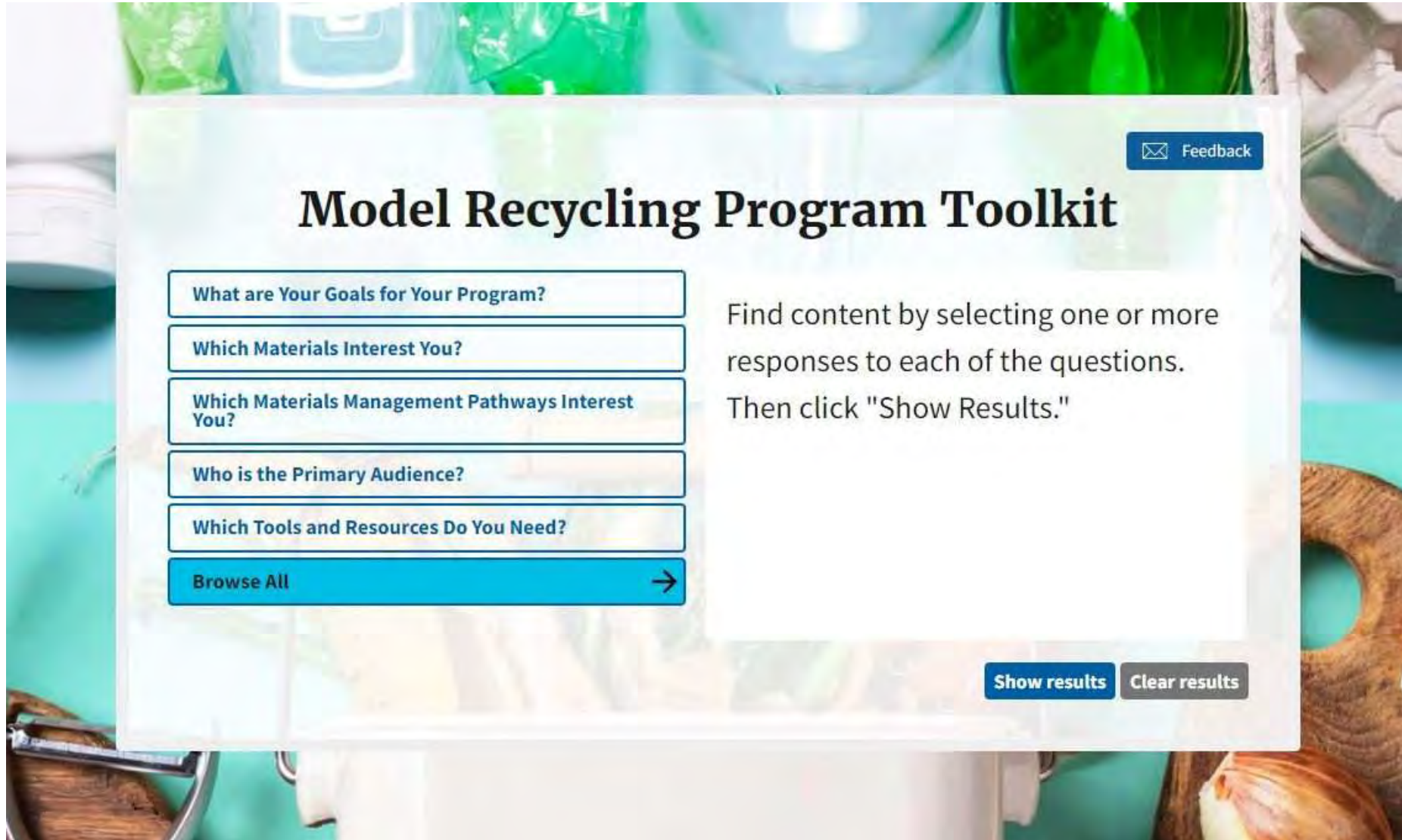
- Why and How to Measure Food Loss and Waste: A Practical Guide 2.0
- Food Waste Assessment Guidebook
- Toolkit for Reducing Wasted Food & Packaging
- A Step-by-Step Guide to Conducting a Wasted Food Assessment (*webinar series*)



Excess Food Opportunities Map



New Tool



The image shows a screenshot of a web application titled "Model Recycling Program Toolkit". The interface is set against a background of various recycling materials like plastic bottles and cardboard. On the left, there is a vertical list of six selection buttons: "What are Your Goals for Your Program?", "Which Materials Interest You?", "Which Materials Management Pathways Interest You?", "Who is the Primary Audience?", "Which Tools and Resources Do You Need?", and "Browse All" (which is highlighted in blue and has a right-pointing arrow). On the right, there is a text box with instructions: "Find content by selecting one or more responses to each of the questions. Then click 'Show Results.'" At the top right of the interface is a "Feedback" button with an envelope icon. At the bottom right are two buttons: "Show results" (in blue) and "Clear results" (in grey).

Feedback

Model Recycling Program Toolkit

What are Your Goals for Your Program?

Which Materials Interest You?

Which Materials Management Pathways Interest You?

Who is the Primary Audience?

Which Tools and Resources Do You Need?

Browse All →

Find content by selecting one or more responses to each of the questions. Then click "Show Results."

Show results

Clear results



Donating Food

Who can donate?

Businesses are legally protected from liability for the donation of apparently wholesome food or apparently fit grocery products to a nonprofit organization for ultimate distribution to needy individuals.

- [Bill Emerson Good Samaritan Food Donation Act \(and recent updates\)](#)
- [USDA FAQs on the Bill Emerson Act](#)

Where to donate?

- [EPA's Excess Food Opportunities Map](#)
- [Food Rescue Locator](#)
- Hunger Free America's "[Find Food](#)"
- [Feeding America](#)

Check with your local food bank or food rescue operation to find out what items they will accept.

More Information

- EPA Reducing Wasted Food by Feeding Hungry People: <https://www.epa.gov/sustainable-management-food/reduce-wasted-food-feeding-hungry-people>
- Harvard's overview of state food safety regulations and donation guidance: https://chlpi.org/wp-content/uploads/2013/12/50-State-Food-Regs_March-2018_V2.pdf
- USDA's FAQs on the Bill Emerson Act: <https://www.usda.gov/sites/default/files/documents/usda-good-samaritan-faqs.pdf>
- Updated FDA Food Code with food donation guidance: <https://www.fda.gov/food/cfsan-constituent-updates/new-fda-food-code-reduces-barriers-food-donations>
- Federal tax incentives for food donation: <https://policyfinder.refed.org/federal-policy/federal-tax-incentives>



THANK YOU!

EPA Sustainable Management of Food Team
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Current USDA Programs, Policies, and Guidance on Food Loss and Waste Reduction

Jean C. Buzby, PhD

USDA Food Loss and Waste Liaison

Office of the Chief Economist

U.S. Department of Agriculture (USDA)

Presentation at the “Reducing Food Loss and Waste (FLW): Understanding How Food Donation, Supply Chain, and Other Initiatives Can Impact Communities” session at the Food Safety Summit, Rosemont, Illinois.

May 11, 2023





Overview

- ▶ Many USDA efforts touch on or relate to FLW as part of normal operating business.
- ▶ USDA addresses FLW across the entire food supply chain:
 - ▶ Program Funding
 - ▶ Research and Research Funding
 - ▶ Outreach
 - ▶ Regulatory Guidance

Global Food Loss and Waste (FLW) Adds Up

- Roughly 1/3 of food produced or roughly 1.3 billion tonnes/year.
 - Up to 14% between the post-harvest and retail stages
 - Around 17% at the retail, foodservice, and consumer stages
- Costs \$936 billion each year
- Around 8-10% of GHG emissions from human activity including 800 million tons CO₂e annually from food decomposing in landfills
- About 1/4 of freshwater used by agriculture for crop production each year is associated with FLW



Information for Businesses Interested in Donating Food



Donation Laws

Donations from businesses helps to put food on the table for many Americans. Some laws are designed to make such donations easier (e.g., Federal Food Donation Act of 2008).

Tax benefits

The federal government provides enhanced tax deductions to businesses (including C-corporations, S-corporations, limited liability corporations (LLCs), partnerships, and sole proprietorships) to encourage donations of fit and wholesome food to qualified nonprofits.

Business Case for Reducing FLW

- For companies, the return on investment in FLW reduction can be high.
- WRI analyzed almost 1,200 business sites across 17 countries and more than 700 companies, representing a range of sectors including food manufacturing, food retail (e.g., grocery stores), hospitality (e.g., hotels, leisure), and food service (e.g., canteens, restaurants).
- WRI found that 99% of sites earned a positive return on investment.
 - The median benefit-cost ratio—where half of the sites achieved a higher ratio while half achieved a lower ratio—was 14:1.
 - Company sites with the highest returns tended to be restaurants.
 - Hotels, food service companies, and food retailers tended to have ratios between 5:1 and 10:1.

Source: WRI. Business Case for Reducing Food Loss and Waste (2017).
<https://champions123.org/sites/default/files/2020-08/business-case-for-reducing-food-loss-and-waste.pdf>





Program Funding

- Several USDA agencies manage competitive funding programs and/or administer credit and loan programs and/or relevant to FLW reduction.

Examples:

- Office of Urban Agriculture and Innovative Production's Composting and Food Waste Reduction (CFWR) cooperative agreements assist local and municipal governments with municipal composting and food waste reduction plans. CFWR was expanded by \$30M over three years. *Open call for applications now through June 15, 2023!*
- Rural Development (RD) supports anaerobic digesters.
- Farm Service Agency (FSA) funds cold and other types of storage.

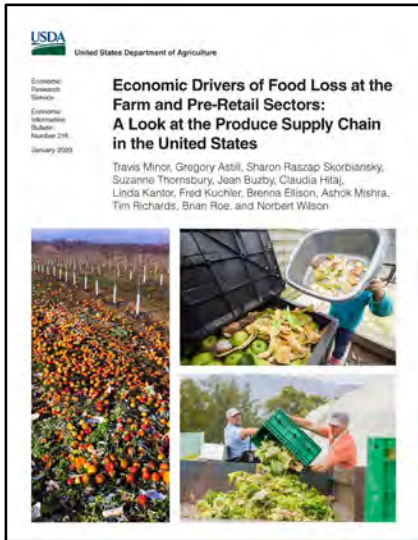


Research and Research Funding

Agricultural Research Service (ARS) is USDA's chief scientific in-house research agency.

National Institute of Food and Agriculture (NIFA) is USDA's extramural funding agency to advance agriculture-related sciences.

Economic Research Service (ERS) conducts high-quality, objective economic research to inform and enhance public and private decision making.





Outreach

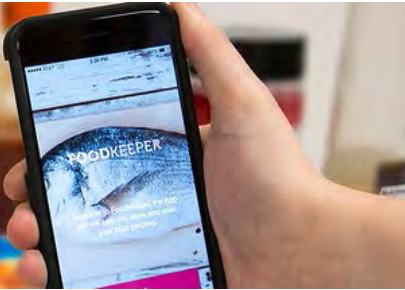
- ▶ Wide array of stakeholder engagement and outreach, such as:
 - U.S. Food Loss and Waste 2030 Champions (OCE with EPA)
 - USDA's Food Loss and Waste Innovation Fairs (OCE) ([Register](#), free on demand through Sept. 1, 2023)
 - Roundtables (OCE)
 - ▶ [Food Loss and Waste Successes from the U.S. and Canada](#)
 - ▶ [Food Loss and Waste Activities from Around the World](#)
 - ▶ [Exploring Food Waste Solutions: Success Stories from the U.S. and Beyond](#)
- ▶ Some USDA agencies conduct FLW outreach as part of their mission, including FAS for international sharing of FLW-reducing practices.



FoodKeeper App

"Are these leftovers still good?"
There's an app for that.

FOODKEEPER



- FoodKeeper provides guidance on safe handling, preparation, and storage of more than 650 food and beverage items.
- With the app, you can track storage times for different foods, learn cooking tips, watch helpful videos, and get information on food recalls.
- Users can set up calendar reminders for when products are nearing their recommended storage date.
- The USDA, the Food Marketing Institute, and Cornell University jointly created FoodKeeper, which is available free at the [Google Play](#) or [iTunes](#) stores, or via desktop at [FoodSafety.gov](#).





Liability Protection for Donating Food

► Businesses that wish to donate food have protections under the [Bill Emerson Good Samaritan Food Donation Act of 1996](#). The Act removes liability for “persons and gleaners” who make good faith donations to nonprofits that feed the hungry. Here, the term “person” includes farmers, grocers, wholesalers, hotels, manufacturers, restaurants, caterers, and more.

► *Resources:*

► [Frequently Asked Questions about the Bill Emerson Good Samaritan Food Donation Act](#)

► [USDA Blog](#) “Good Samaritan Act Provides Liability Protection For Food Donations”

► New [handout](#) to encourage donations

Regulatory Guidance



- Food Safety and Inspection Service (FSIS) provides guidance on food product date labeling. Studies have shown that consumer confusion about food date labels has led to food being discarded prematurely.
- FSIS is also updating its guidance on the donation of eligible meat and poultry products to non-profit organizations.

Summary

- FLW is complex and will take many different solutions from farm to table by both the public and private sectors to reach our national 2030 goal.
- USDA helps address FLW through its programs, policies, and guidance.
- USDA is increasing its investments in FLW, for example:
 - 1) The 2022 announcement of \$90M to reduce FLW,
 - 2) The establishment of a full time USDA FLW Liaison,
 - 3) The formation of a USDA internal FLW working group, and
 - 4) Continued participation in the Federal interagency FLW collaboration (currently USDA, EPA, and FDA).



For more information, contact:

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<https://www.usda.gov/foodlossandwaste>



Reducing Food Loss and Waste

May 11, 2023

Food Safety Summit

Presented by Priya Kadam, Ph.D.

Mission

- FDA's mission is to protect the public health by ensuring that foods are safe, wholesome, sanitary, and properly labeled.
- FDA regulates:
 - certain food products (the U.S. Department of Agriculture regulates aspects of some meat, poultry, and egg products)
 - dietary supplements
 - bottled water
 - food additives

Federal Interagency Food Loss and Waste & ReFED

- October 2018 – FDA signed a formal agreement with USDA and EPA
 - December 2020 – Renewed for 3 years
- April 2019 – FDA, USDA and EPA signed a formal agreement with [ReFED](#) (national nonprofit)
 - September 2021–Renewed for 3 years



Food Safety Policies and Food Waste Reduction

- FSMA: Shifting focus from responding to foodborne illnesses to preventing it
- Surplus
 - Food Donation - Food Code
 - Diversion to animal food
- Reprocessing
 - Rework
 - Diversion to animal food

FDA Food Code and Donation

- December 2022: released [Food Code](#)
- February 2023: released an [announcement](#) encouraging food donations as long as proper food safety practices are followed

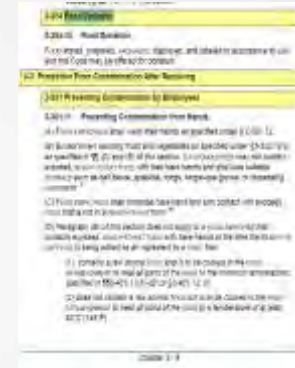
FDA Food Donation & Food Code

What is FDA [Food Code](#)?

- Model code that provides state, local, tribal, and territorial with a technical and legal basis for regulating retail and food service (restaurants, grocery stores, etc.)
- FDA's purpose is to assist SLTT regulators to develop or update their own food safety rules and to be consistent with national food regulatory policy

Food Donation

- State, Local, Tribal and Territorial regulators could adopt this language to encourage food donation
- Supports the President's recently announced [National Strategy for Hunger, Nutrition and Health](#)
 - Introduced in September 2022
 - Improve food access and affordability
 - Reduce barriers to food recovery



Food Donation Sections of Food Code

- New Subpart 3-204 Food Donation
- New §3-204.10 titled Food Donation
- Amended paragraph 8-101.10(A) to include “or donated” in the application of this Code in public health protection
- Amended Annex 2- added new references
- Amended Annex 3- new section on public health reasons to food donation compliance with LAW and Code applicability

Food Recovery Diversion to animal food

- [Guidance](#) on the safe use of human food by-products for animal food
- [Process for diversion](#) of adulterated human or animal food to an acceptable animal feed use
- [Reconditioning Foods](#) by Diversion for Animal Feed
- Working on a guidance on the Diversion or Reconditioning of Damaged, Contaminated, or Adulterated Food for Use as Animal Food

Improving Food Traceability

- November 2022: Published the [Food Traceability Final Rule](#)
- Facilitate faster identification and rapid removal of contaminated food from commerce
- End-to-end traceability throughout the food system, with firms voluntarily adopting tracing technologies



Improving Food Traceability

- Food Traceability List (FTL): Foods subject to additional recordkeeping requirements
- Critical Tracking Events (CTEs): key activities along the supply chain e.g. harvesting, cooling, shipping
- Key Data Elements (KDEs): set of metrics along CTEs have to be created, maintained and shared
 - include lot codes

Improving Food Traceability

- FDA will use harmonized key data elements (KDEs) to
 - Promote voluntary participation in end-to-end traceability
 - Promote interoperability
 - Encourage low and no –cost solutions

Improving Food Traceability

- Assist food manufacturers, farmers, distributors and retailers to
 - Optimize handling, routing, and storage
 - improve inventory and supply chain management
 - expedite initiation and completion of recalls

Food Contact Safety Assessment

Food Packaging

- Food packaging vital for preserving the nutritional value and freshness of food
- FDA: Mandatory pre-market Food Contact Notification (FCN) program
 - Reviews the safety of materials used in food packaging
- FDA updating guidance
 - Food contact substance: [Chemistry Recommendations](#)
 - Recycled material: [Chemistry considerations](#)

Food Contact Safety

Antimicrobials

- Antimicrobials vital in reducing cross contamination
- FDA: Mandatory pre-market Food Contact Notification (FCN) program
 - Reviews antimicrobials used in food processing
- FDA has several guidance on antimicrobials
 - [Microbiological](#) considerations
 - [Antimicrobial food additives](#)

Education Resources for Consumers

Confused about what the date labels on food packages mean?

Here's what you should know:

Best if Used By

- You'll see a date on the label of most packaged foods.
- Labels that include phrases like "Use by" or "Best if used by" are not required by federal law on packaged foods.
- Manufacturers often apply a date to labels to indicate when the food was produced or packed.

Best Before

- Don't just rely on the date label that appears on a package. Look at and smell the food for signs of spoilage to know if it is safe to eat. Taste it if the color, consistency, or texture has changed.
- If the label recommends eating the food within a certain number of days after opening the package, eat it before that window closes.

Use By

- Freezing is a good option for extending the shelf life of many packaged foods, but the FDA's FoodKeeper App has information on how to safely store different foods to maximize freshness and quality.

If you have questions about the shelf life, quality or safety of a packaged food you have purchased, contact the manufacturer.

For more information and resources about food waste visit: www.fda.gov/food/consumers/food-loss-and-waste

What YOU Can Do – Tips to Reduce Food Waste

At the Store or When Eating Out

Start practicing habits that are good for your health, your wallet, and the environment!

Check your fridge, preplan meals, and write a shopping list before going to the store.

Buy only what you need and think twice when buying in bulk.

FOOD WASTE FACTS

30-40% of the food supply in the U.S. is wasted

That's approximately **\$161 BILLION** and **133 BILLION POUNDS** of uneaten food every year

42.2 MILLION AMERICANS live in food insecure households with limited access to enough food for a healthy lifestyle

Each year food waste cost a **FAMILY OF FOUR** about **\$1,500**

Wasted food results in a **WASTE OF RESOURCES** such as:

- Water
- Energy
- Labor

When food decomposes in a landfill, methane, a potent greenhouse gas is released, which contributes to the climate footprint associated with wasting food.

By reducing food waste and keeping food out of landfills, we can **save money and protect the environment.**

FOOD FACTS

How to Cut Food Waste and Maintain Food Safety

Food safety is a major concern. The Centers for Disease Control and Prevention (CDC) estimates that there are about 48 million cases of foodborne illness annually – the equivalent of someone 1 in 6 Americans each year. And each year these illnesses result in an estimated 135,000 hospitalizations and 3,000 deaths.

Food waste is also a major concern. Wasted food is a huge challenge to our natural resources, our environment, and our pocketbooks.

Our resources? Each year getting food to U.S. tables requires:

- 10 percent of our freshwater,
- 10 percent of our available energy, and
- Half of our land.

The environment? Organic waste, mostly food, is the second biggest component of landfills, and landfills are the third largest source of methane emissions. Methane is a major factor in global warming because it is so effective at absorbing the sun's heat, which warms the atmosphere.

And, finally, our pocketbooks: Between 30 and 40 percent of food in the United States goes uneaten – as much as 20 pounds of food per person per month. That means Americans are throwing out the equivalent of \$105 billion in food each year.

How Food Waste and Food Safety Are Connected

The major sources of food waste in the United States are the food industry and consumers. Within the food industry, waste occurs at every

Practice habits that are good for your health, your wallet, and the environment!



Education Resources for Consumers

Tips to Reduce Waste

What YOU Can Do – Tips to Reduce Food Waste
In the Kitchen - Storage and Prep

Start practicing habits that are good for your health, your wallet, and the environment!

Set the temperature of your fridge to 40° F or below and your freezer to 0° F.

Use the FoodKeeper App for information on how to safely store different foods to maintain freshness and quality.

What YOU Can Do – Tips to Reduce Food Waste
At Home - Cooking and Serving

Start practicing habits that are good for your health, your wallet, and the environment!

Use "ugly" fruits and vegetables to whip up healthy smoothies and soups.

Have a cook off to see who can come up with the best dish with leftovers or foods that you think will go bad if not eaten soon.

What YOU Can Do – Tips to Reduce Food Waste
At the Store or When Eating Out

Start practicing habits that are good for your health, your wallet, and the environment!

Check your fridge, preplan meals, and write a shopping list before going to the store.

Buy only what you need and think twice when buying in bulk.

Date Labels

- Confusion over date labeling accounts for an estimated 20 % of consumer food waste
- FDA supports “Best if Used By” the standard phrase to indicate the date when a product will be at its best flavor and quality
- May 2019, published a [letter](#) to the industry supporting the voluntary industry efforts to use quality-based date label “Best if Used By”



Date Labeling

- Working with Congressional staff on improving bill text- “[Food Date Labeling Act of 2021](#)”
- No Federal law or regulation to place quality-based date labels on packaged food

Food Safety and Food Waste

- 48 million cases of foodborne illness annually
- Incorporate food safety messages in food waste materials
 - Proper storage of food/freezing
 - Following the 2-hr rule
 - Checking fridge temperature
 - Refrigerating peeled or cut veggies





**U.S. FOOD & DRUG
ADMINISTRATION**

Thank you

Please contact

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with any questions



Waste (FLW):
Understanding How Food
Donation, Supply Chain,
and other Initiatives can
Impact Communities



CEO - Abound Food Care

Our Vision

A world in which hunger and food waste are eliminated

Our Mission

We provide solutions and facilitate collaboration with public, private, and non- to guide and support the implementation of regional food care programs that optimize the supply chain to end hunger and food waste.



Abound Food Care

1 in 9

Americans are food insecure

Source: United States Department of Agriculture



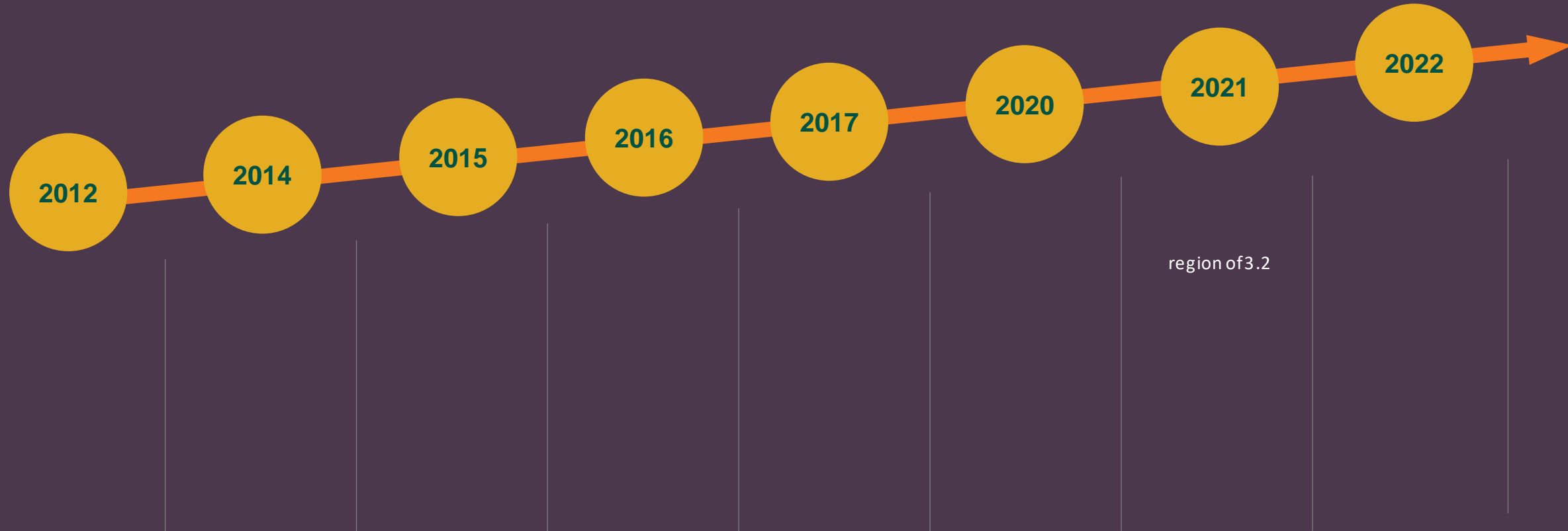
Abound Food Care

30-40%

of all food produced ends up
in being wasted

Source: United States Department of Agriculture

An innovator in food recovery

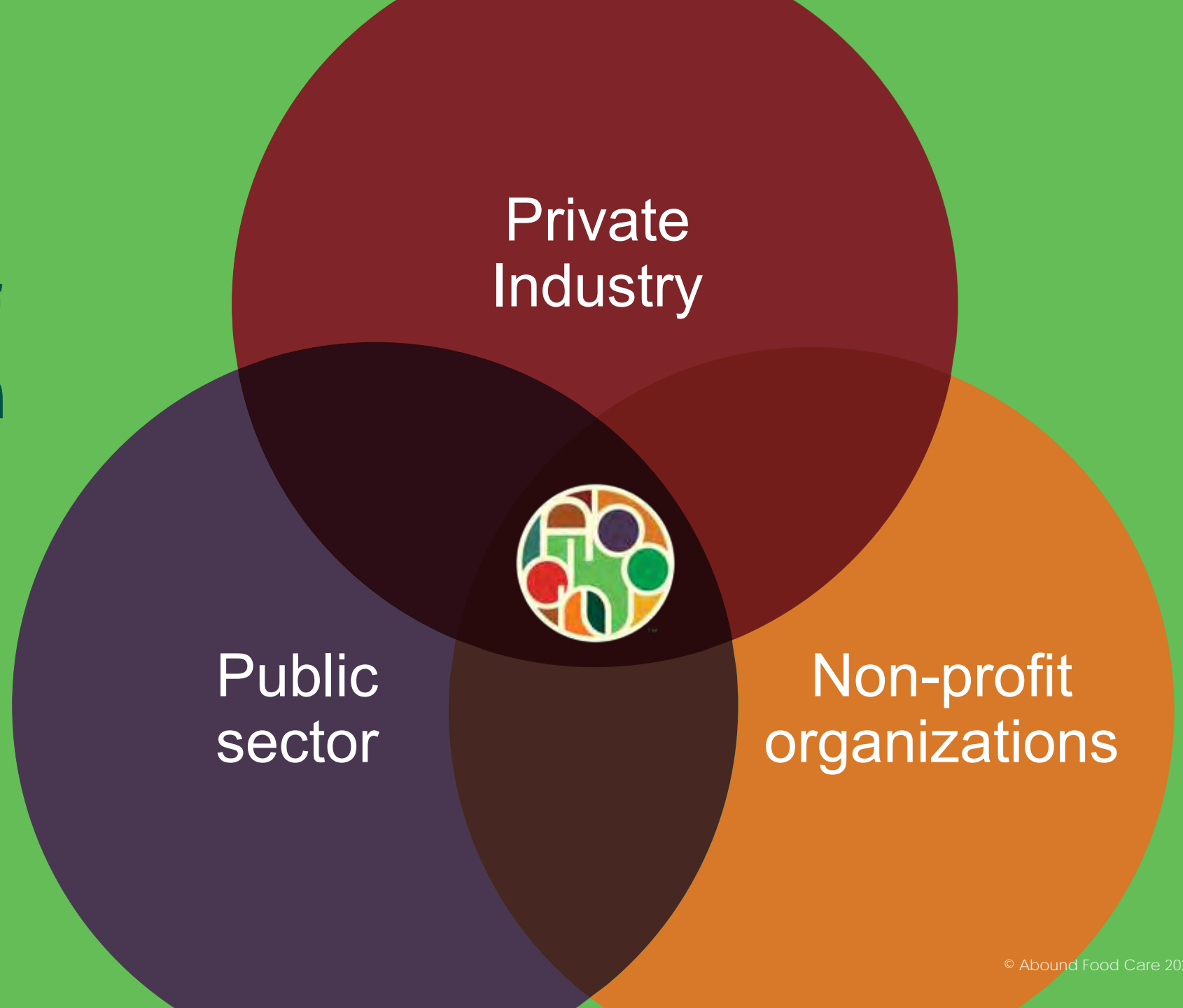


Abound Food Care



of food, its process, cost,
and impact.

The power of collaboration



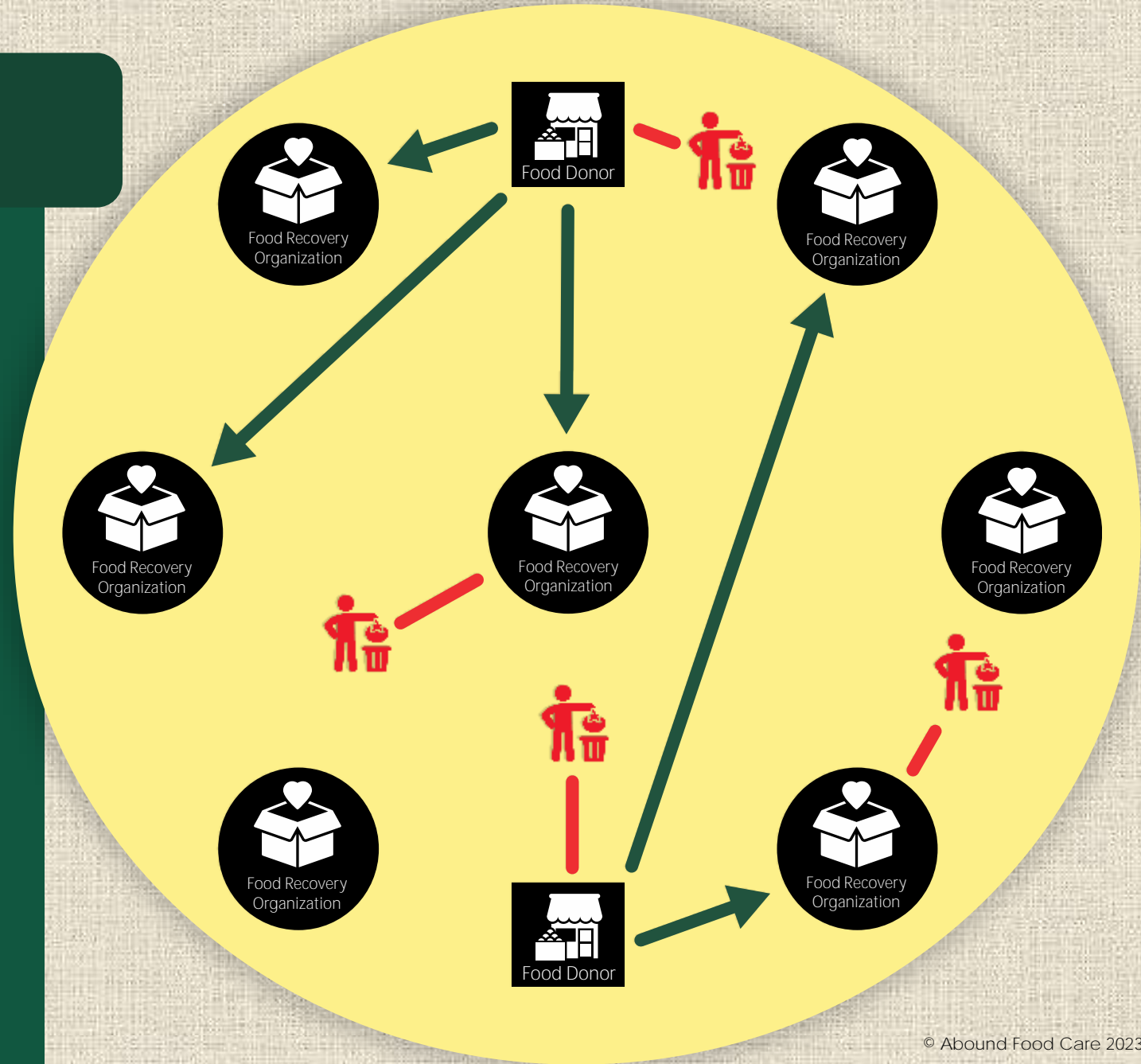
Abound Food Care™

Food Care solutions



Abound Food Care™

- Lack of efficient logistics
- Inconsistent tracking/reporting
- Limited FRO capacity leads to continued food waste
- Brand Protection





Food Care Oversight

- Program Administration
- Education
- Audit



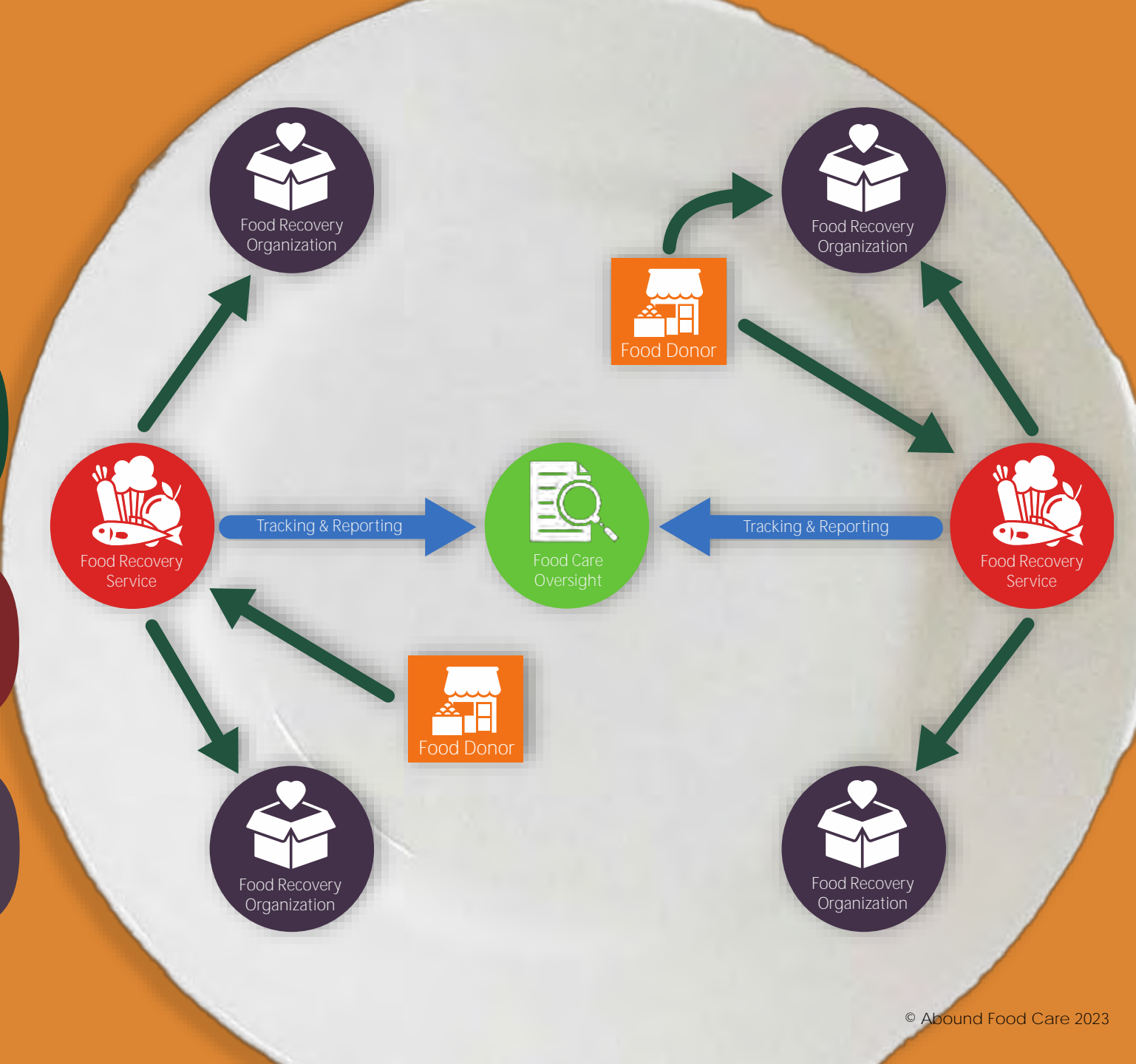
Food Recovery Service

- Transportation
- Storage
- Food Administration



Food Recovery Organization

- Food Distribution
- Community Outreach
- Social Services





Abound Food Care



- ✓ Capacity Development
- ✓ Data Aggregation
- ✓ Food Safety Training & Auditing
- ✓ Navigating Complexities of Food Recovery
- ✓ Maximum Community Impact
- ✓ Brand Protection





Brand
Protection



Cost & Tax
Benefits



Community
Impact



Abound Food Care



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