



Wasted Food and Food Solutions: Costs and Opportunities

PRESENTED BY
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APRIL 18, 2025



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WHO WE ARE

ReFED is a national nonprofit working to catalyze the food system toward evidence-based action to stop wasting food.

OUR VISION

A sustainable, resilient, and inclusive food system that optimizes environmental resources, minimizes climate impacts, and makes the best use of the food we grow.



DATA & INSIGHTS

Leveraging data and insights to highlight supply chain inefficiencies and economic opportunities



CAPITAL & INNOVATION

Catalyzing capital to spur innovation and scale high-impact initiatives



BUSINESS INITIATIVES

Enabling waste generator adoption of viable solutions through measurement, advisory, and internal capacity building



COLLECTIVE ACTION

Mobilizing and connecting stakeholders to learn, share, and collaborate on targeted action



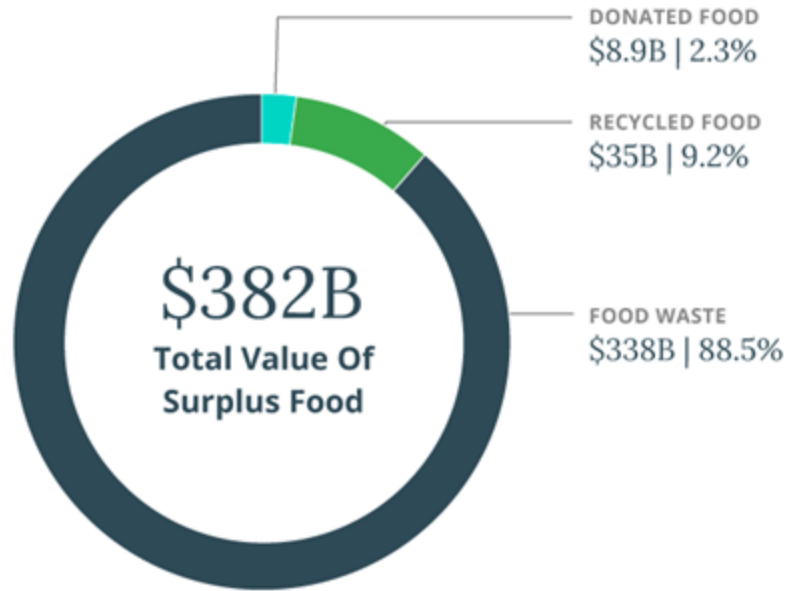
ReFED

Rethink Food Waste
Through Economics and Data



Source: ReFED/2023 Data (Published Feb 2025)

31% of all food
went unsold or
uneaten in 2023.



Source: ReFED/2023 Data (Published Feb 2025)

That surplus food was valued at \$382 billion—roughly 1.4% of U.S. GDP.

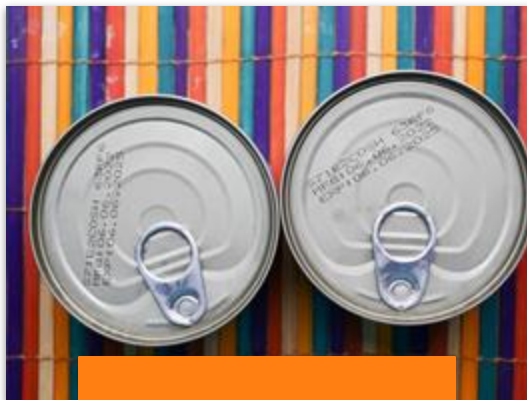
\$782

Annual amount spent per person
on food that is never eaten





**HIGH
FOOD PRICES**



**DATE
LABELS**



**TAKING
LEFTOVERS**

Action Areas



OPTIMIZE THE HARVEST

Avoid over-production, then harvest as much as possible. For wild-caught products, source only what is needed.



ENHANCE PRODUCT DISTRIBUTION

Leverage technology to create smart systems that help efficiently move products to maximize freshness and selling time.



REFINE PRODUCT MANAGEMENT

Align purchases with sales as closely as possible and find secondary outlets for surplus. Build out systems and processes for optimal on-site handling.



MAXIMIZE PRODUCT UTILIZATION

Design facilities, operations, and menus to use as much of each product as possible. Upcycle surplus and byproducts into food products.



RESHAPE CONSUMER ENVIRONMENTS

Drive consumers towards better food management and less waste by creating shopping, cooking, and eating environments that promote these behaviors. Shift culture to place more value on food and reduce waste.



STRENGTHEN FOOD RESCUE

Further the rescue of high-quality, nutritious food by increasing capacity, addressing bottlenecks, and improving communication flow.



RECYCLE ANYTHING REMAINING

Find the highest and best use for any remaining food or food scraps in order to capture nutrients, energy, or other residual value.

Modeled Solutions

Unmodeled Solutions

Best Practices



OPTIMIZE THE HARVEST

Buyer Spec Expansion

Gleaning

Imperfect & Surplus Produce Channels

Partial Order Acceptance

Field Cooling Units

In-Field Sanitation Monitoring

Innovative Grower Contracts

Labor Matching

Smaller Harvest Lots

Improved Communication for Planting Schedules

Sanitation Practices & Monitoring

Optimized Harvesting Schedules

On-Farm / Near-Farm Processing

Local Food Systems

Clear Product Ownership



ENHANCE PRODUCT DISTRIBUTION

Decreased Transit Time

First Expired First Out

Intelligent Routing

Temperature Monitoring (Pallet Transport)

Reduced Warehouse Handling

Advanced Shipment Notifications

Early Spoilage Detection (Hyperspectral Imaging)

Inventory Traceability

Modified Atmosphere Packaging System

Vibration & Drops Tracking

Optimized Truck Packing, Loading & Unloading (e.g., Cross-Docking)

Enforcing Cold Chain SOPs

Regular Maintenance on Refrigerated Trucks

Cross-Docking



REFINE PRODUCT MANAGEMENT

Assisted Distressed Sales

Decreased Minimum Order Quantity

Dynamic Pricing

Enhanced Demand Planning

Increased Delivery Frequency

Markdown Alert Applications

Minimized On-Hand Inventory

Temperature Monitoring (Foodservice)

Waste Tracking (Foodservice)

Low Waste Event Contracts

Direct to Consumer Channels

Online Marketplace Platform

Online, Advanced Grocery Sales

Precision Event Attendance

Repackaging Partially Damaged Products

Retail Automated Order Fulfillment

SKU Rationalization

Markdowns

Optimal Storage

Reduced Displays

Optimized Walk-In Layouts



MAXIMIZE PRODUCT UTILIZATION

Active & Intelligent Packaging

Manufacturing Byproduct Utilization (Upcycling)

Manufacturing Line Optimization

Edible Coatings

Improved Recipe Planning

In-House Repurposing

Precision Food Safety

Discount Meal Plates

Employee Meals

Larger Quantities for Take Home

Small and Versatile Menus

Sous-Vide Cooking



RESHAPE CONSUMER ENVIRONMENTS

Meal Kits

Buffet Signage

Consumer Education Campaigns

K-12 Lunch Improvements

Package Design

Portion Sizes

Small Plates

Standardized Date Labels

K-12 Education Campaigns

Trayless

Home Shelf-life Extension Technologies

Smart Home Devices

Waste Conscious Promotions

Frozen Value-Added Processing of Fresh Produce

Customizable Menus/Options

To-Go Offerings

Free Items Offered Upon Request (e.g., bread, chips)

Storytelling (e.g., product impact, source, upcycled ingredient components)



STRENGTHEN FOOD RESCUE

Donation Coordination & Matching

Donation Education

Donation Storage Handling & Capacity

Donation Transportation

Donation Value-Added Processing

Blast Chilling to Enable Donations

Donation Reverse Logistics

High-Frequency Reliable Pickups

Established Relationships with Businesses

Culling SOPs



RECYCLE ANYTHING REMAINING

Centralized Anaerobic Digestion

Community Composting

Centralized Composting

Co-digestion at Wastewater Treatment Plants

Home Composting

Livestock Feed

Waste-Derived Agricultural Inputs

Insect Farming

Rendering

Waste-Derived Processed Animal Feed

Waste-Derived Bioplastics

Waste-Derived Biomaterials

Enabling Technologies (e.g., depackaging and pre-treatment)

Separation & Measurement

Relationships with Waste Haulers

Waste Audits by Waste Haulers

Triple Bottom Line Impacts

SOLUTIONS



ReFED Insights Engine: Driving Systems Change



Understand the Problem

[Visit the Food Waste Monitor](#) ►



Explore the Solutions

[Visit the Solutions Database](#) ►



Find Solution Providers

[Visit the Solution Provider Directory](#) ►



Calculate Impact

[Visit the Impact Calculator](#) ►



Track Capital

[Visit the Capital Tracker](#) ►



Review Policies

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[Launch Insights Engine](#)

 **190,000**
users

 **6** countries
requested
international IE



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