



EBOOK

# A Beginner's Guide to Food Waste

Everything you need to know about food waste  
to improve profitability while helping people and  
the planet



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# Foreword

I've always been passionate about sustainability, so it's been an absolute pleasure to contribute to not only HelloFresh, but also to partner up with organizations such as Spoiler Alert, who are also paving the way to a waste-free economy.



**Jeff Yorzyk PE, CEM, SEP**  
Director of Sustainability  
HelloFresh

Food waste is a relatively new problem we as humans are faced with; over the past 50 years, food waste has tripled in America, leading to about 30-40% of our food supply being wasted today.

It wasn't until after events such as the Great Depression, Dust Bowl, and both World Wars, that chemical fertilizers and advancements in both processing and packaging led to the problem of excess food and the rise of consumerism in the 1950s.

Climate change can very well be the most serious and challenging problem that humanity faces today, with repercussions extending beyond our generation's lifetime. According to Project Drawdown, the #1 solution to climate change is food waste reduction. This is due to the fact that since roughly 33% of food is wasted globally, all of the resources that went into making that food is also wasted

and could've been avoided, whether it's land use, water use, greenhouse gasses emitted, transportation, etc. To make matters worse, it creates even more emissions when it rots in a landfill! This problem is imminently solvable.

In my role as the Director of Sustainability at HelloFresh, one of the ways we combat climate change is by ensuring that all aspects of our supply chain are effective, efficient, and most importantly - contributing to ending food waste and food insecurity.

At HelloFresh, preventing unnecessary food waste has been a central part of our ethos since day one. As the global leader in the meal kit category, we feel that it's our responsibility to pave the way for how similar companies can provide fresh meals to households while supporting the planet. By using HelloFresh, in-home food waste is reduced by as much as 25% and carbon emissions by up to 31% relative to supermarket meals. We believe in making our supply chain processes efficient and effective to ensure we're not wasting any unnecessary resources or food waste. By skipping the manufacturing and retail steps of the supply chain, we reduce transportation emissions and can ensure our food is fresh for enjoyment.



We teamed up with Spoiler Alert in 2017 to reduce landfill-bound organic waste while increasing food access for food-insecure families in its communities. Spoiler Alert's platform allows us to seamlessly take our excess inventory of fresh food, whether it's close to the expiration date or we have a surplus amount, and donate it to alternative outlets such as hunger relief organizations. This also lets us leverage data and analytics to inform our purchasing decisions and drive additional waste reductions.

Since 2017, in partnership with Spoiler Alert, HelloFresh has donated more than 21 million meals comprised of fresh ingredients to its local communities, based on USDA's calculation of 1.2 pounds per meal!

This is why our partnership with Spoiler Alert in writing this eBook was a seamless decision on our part - after all, the first step to making a real change is understanding the foundation of the problem.

The problems and solutions listed by the co-authors, Ricky Ashenfelter and Emily Malina, the co-founders of Spoiler Alert, provide an accurate representation of where our country is today in terms of food waste. Ricky and Emily's passion for sustainability translates to their company, where they've built their company's mission and culture around solving some of the most important social challenges of our time.

In The Beginner's Guide to Food Waste eBook, Ricky and Emily take you through everything you need to understand about food waste - from statistics to legislation in place, public awareness campaigns to innovative solutions, and even additional resources you can use to learn more.

In my view, this eBook is important not only to those who are interested in learning about the basics of food waste, but also to those interested in implementing solutions at home or at your workplace, and continuing dialogue on a matter critically important to the health of our planet and all its inhabitants. With that said, I extend a thank you to Ricky and Emily for welcoming me on this journey to help educate others on a matter that is so treasured to both of us and both of our organizations.

As I write this in Spring of 2022, we've come such a long way in terms of legislation, business innovations, and public awareness campaigns, but know there is still a lot of work to be done in the food waste space.



**Jeff Yorzyk PE, CEM, SEP**  
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## About the authors

### Ricky Ashenfelter

#### CEO AND CO-FOUNDER

Ricky Ashenfelter is the Co-Founder and CEO of Spoiler Alert. Before co-founding Spoiler Alert in 2015, Ricky was a key member of Deloitte's Sustainability practice, where he led energy and supply chain analyses for major food, retail, and CPG companies. Prior to joining Deloitte, he was an early employee at ClearCarbon Inc. (a fast-growing sustainability and software startup acquired by Deloitte in 2010) and worked with the U.S. EPA's Climate Protection Partnerships Division. Ricky holds a bachelor's in Finance and Environmental Studies from Georgetown University, earned his MBA from the MIT Sloan School of Management, and was named to Forbes 30 Under 30 in 2017.

### Emily Malina

#### PRESIDENT AND CO-FOUNDER

Emily Malina is the Co-Founder and President of Spoiler Alert. Emily started Spoiler Alert to help the food industry sell more, waste less, and solve some of the most pressing environmental and social challenges of our time. Before co-founding Spoiler Alert, Emily worked at Deloitte Consulting, where she specialized in technology adoption and supply chain transformation. Emily also has held a variety of product marketing, customer success, and sales roles at Yammer (acquired by Microsoft) and the Corporate Executive Board (acquired by Gartner). Originally from New York, Emily has an MBA from MIT Sloan School of Management and a BA from Emory University.



# Introduction

Food waste is an environmental, social, and financial problem. Organic waste as a whole—and especially food waste—impacts multiple aspects of our society, from the climate to the economy. The Covid-19 pandemic exacerbated many of those impacts, and the United States continues to struggle to get waste under control. So just how bad is it? What kind of impacts are we talking about here?



## Environmental

- Approximately 30-40% of food is wasted in the United States.<sup>1</sup>
- If wasted food were a country, it would be the third-largest producer of greenhouse gasses (GHGs) in the world, after China and the United States.



## Social

- Meanwhile, 42 million Americans lived in food-insecure households in 2021.<sup>2</sup>
- Reducing food losses by only 15 percent would be enough food to feed more than 25 million Americans each year.



## Financial

- \$408 billion worth of food is never eaten. 70% of that (\$285B) is wasted, while 28% is recycled and only 2% is donated.<sup>3</sup>
- Food and money is lost at every step in the supply chain – across farms, manufacturers, restaurants, and homes.<sup>4</sup>





Let's take a brief look at the current food waste landscape - where does it come from and where are we today?

Food—and everything used to produce the food—is lost throughout the supply chain, starting at farms and manufacturing and trickling down to consumer-facing businesses and homes.

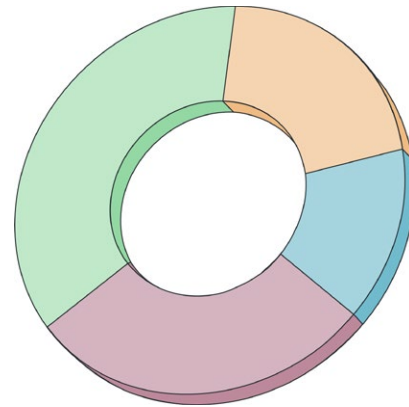
There are various causes that generate food waste at each of the steps in the supply chain, resulting in where we're at today.

## The United States is the #1 food-wasting country in the world.<sup>5</sup>

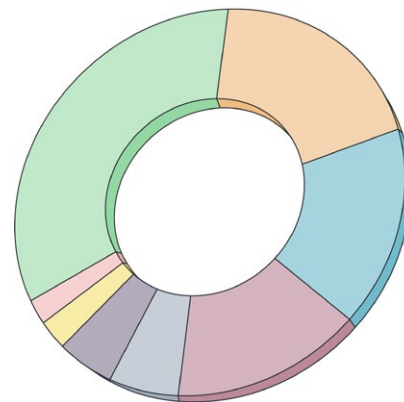
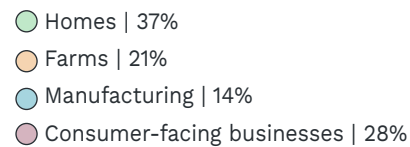
Causes of food waste include confusion about food date labels, spoiled food, buyer rejection, mistakes and malfunctions, safety concerns, lack of policy and funding, and many more.

Perishable items contribute the most to food waste, as they go bad quicker than pantry staples and processed foods.<sup>6</sup>

The fact that over \$400 billion worth of food is wasted while 42 million Americans are food insecure reveals a harsh truth: food insecurity is not caused by a lack of food, but rather is the result of a flawed distribution system that could be improved by prevention and redistribution.



Food Waste throughout the Supply Chain



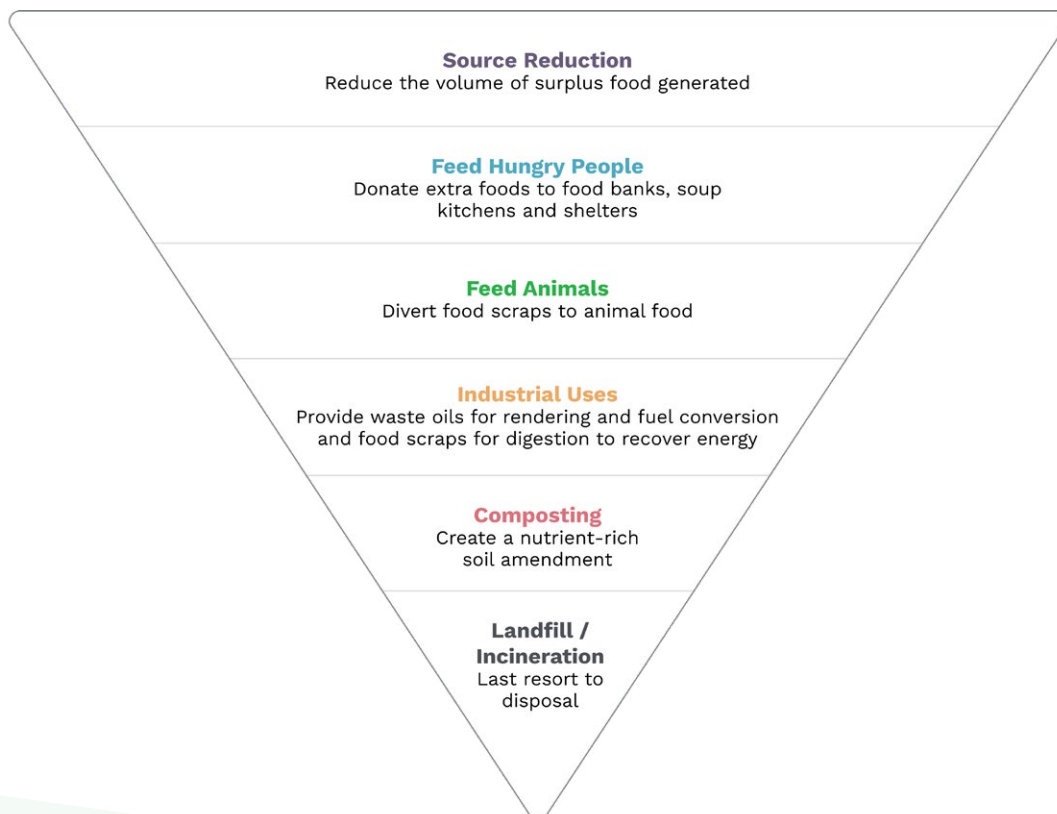
Food Categories Contributing to Food Waste



## Food Recovery Hierarchy

At the forefront of all food waste reduction efforts is the Food Recovery Hierarchy, which was created by the EPA as part of the national food waste reduction goal, which we'll discuss in the first chapter. The inverted pyramid serves as a resource for understanding how organizations can identify landfill alternatives for wasted food. The hierarchy ranks food waste and diversion channels from most preferred to least preferred. The most preferred solutions, such as Source Reduction and Feed Hungry People, are at the top of the pyramid as they have the most impactful socio-economic benefits.

Whether you're concerned about hunger and greenhouse gasses or trying to impact your bottom line, there's plenty of reason to get involved in minimizing food waste. We hope this guide will serve as a quick introduction for those interested in making change at every level, from coalition calls to action and governmental legislation, public awareness campaigns, individual habits, and innovative business solutions looking to either tackle food waste at the source (prevention) or at the symptom (redistributing food).





# Collective action against food waste

Federal government policies and initiatives play an influential part in navigating our way out of food waste. Let's review the efforts the U.S. federal government and other organizations have implemented in the last decade.

## National and global efforts

### National food waste reduction goal

In September 2015, the USDA and EPA announced the first-ever national food waste reduction goal. The organizations called for a 50% reduction in food waste by 2030. The announcement propelled the topic into the national conversation, eventually leading to *Food & Wine* magazine naming food waste as “the most discussed food-related topic of the year.”<sup>7</sup>

More recently, the USDA and EPA announced a change to their measurement standards of “food waste,” stating that they would now qualify composting as a form of food waste. Previously, they had only measured food that was sent to landfills.<sup>8</sup>

Applying this new standard shifts the 2015 baseline, which was originally set at 236 pounds of waste per person. The goal is now to reduce annual food waste from 328 pounds per person to 164 pounds per person by 2030. Unfortunately, there's still a lot of work to do; a November 2021 report from the EPA indicated that “the nation has not yet made significant progress.”<sup>9</sup>

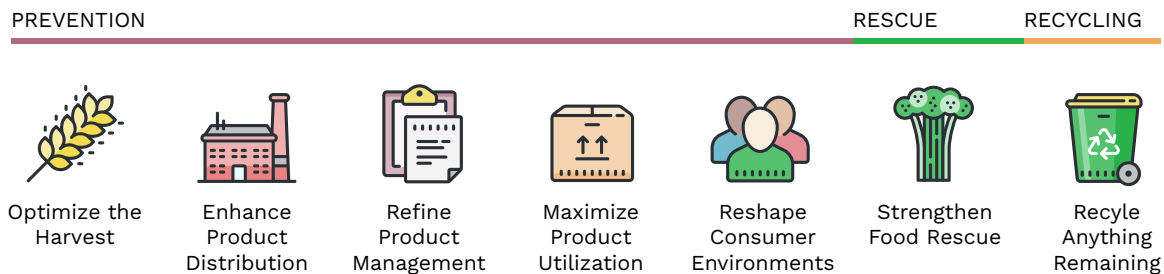
### ReFED's Roadmap

ReFED (Rethink Food Waste Through Economics and Data) is a multi-stakeholder non-profit committed to reducing U.S. food waste through data-driven solutions. The organization leverages its expertise in data and insights to collaborate with the Winning on Reducing Food Initiative, which we'll discuss more in the next section.

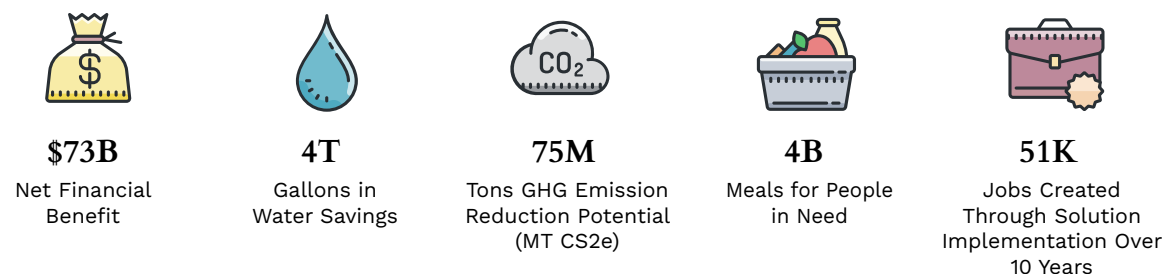
- **2015**  
USDA & EPA announce national food reduction goal
- **2015**  
EPA releases the food recovery hierarchy
- **2016**  
ReFED releases first ever waste reduction roadmap
- **2018**  
Winning on Reducing Food Waste Coalition is formed
- **2021**  
ReFED releases updated roadmap
- **2021**  
USDA & EPA update the definition of food waste to include composting



In March 2016, ReFED released its roadmap of actionable solutions to reducing food waste. It was the first data-driven guide for businesses, governments, funders, and nonprofits to collectively reduce food waste at scale. It's been updated several times since, most recently in February of 2021. You can check out ReFED's Roadmap to 2030, an in-depth guide to how we can reach the national goal of 50% reduction in food waste by 2030, [here](#).



ReFED estimates that with an annual investment of \$14 billion in food waste solutions, along with policy changes, innovation, and public engagement, the United States can achieve our 2030 reduction goal with the following yearly benefits:



## Winning on Reducing Food Waste Initiative

In 2018, the USDA, EPA, and FDA signed a formal agreement as part of their commitment to the national goal of a 50% reduction in food waste by 2030.<sup>10</sup>

The strategy consists of six different areas:

1. Enhancing interagency coordination
2. Increasing consumer education and outreach efforts
3. Improving coordination and guidance on food loss and waste measurement
4. Clarifying and communicating information on food safety, food date labels, and food donations
5. Collaborating with private industry to reduce food loss and waste across the supply chain
6. Encouraging food waste reduction by federal agencies in their respective facilities.

This multi-pronged approach targets waste at every level, engaging manufacturers and consumers alike. In 2020, the agencies renewed the agreement and reaffirmed their commitment to the 2030 goal.



The joint agency also signed an agreement with ReFED and the Food Waste Reduction Alliance, which are helping develop measurement criteria to evaluate the success of the program.

## Champions 12.3

Champions 12.3 is a coalition of businesses, government leaders, non-profit organizations, farmers' groups, and more, aimed at accelerating action to hit key climate goals. The organization is named for the U.N.'s Sustainable Development Goal 12.3 – food loss and waste, which matched the USDA and EPA goal of reducing food waste by 50% by 2030.<sup>11</sup> Champions 12.3 reaches beyond the borders of the United States and is a truly global network.

The organization regularly publishes reports on the state of food loss and waste, as well as resources for restaurants, caterers, farmers, hotels, retailers, and more. They also host frequent webinars and events covering a variety of food waste topics.

## Legislation in action

In addition to the various efforts by organizations, coalitions, and the USDA and EPA, our federal and state governments are implementing additional acts and policies to support the national goal.

## Date labeling

Maine Congresswoman Chellie Pingree and Connecticut Senator Richard Blumenthal introduced the Food Date Labeling Act in May of 2016 in an effort to standardize date labels such as “use by,” “sell by,” and “best by.” However, the bill gained little traction amid a national election cycle and the change of administrations.

In December of 2021, Senator Blumenthal introduced another version of the bill in the Senate. Meanwhile, Rep. Pingree and Representative Dan Newhouse (WA) introduced a companion bill in the House of Representatives. However, neither bill has moved forward as of this writing.

Confusing date labels contribute to 90% of Americans throwing out perfectly good food, according to the ReFED report.<sup>12</sup> There are currently no national regulations on date labeling for safety on food and beverage products aside from infant formula.



Implementing policies around the standardization of date labels can influence behaviors at the home level by allowing a clearer understanding of when a product is actually expired or not. As 37% of US food waste happens in homes, standardization and education of date labels can be crucial in bringing down waste at home, and therefore waste overall.<sup>13</sup>

## Organic waste bans

In 2021, Maryland and New Jersey joined six other states in passing legislation that imposes financial penalties for food producers that dump food into landfills. Intended to encourage food donation, recycling, and composting, these laws penalize the dumping of organic materials. In the first half of 2021 alone, 52 bills were proposed in 18 states aiming to reduce food waste.<sup>14</sup>

Among these is California's S.B. 1383, which took effect on January 1, 2022. Unlike many of the other state-level food waste laws that are being proposed, California's encompasses individual consumers. The bill requires state residents to recycle or compost organic waste, while also requiring cities and counties to reduce the amount of organic materials sent to landfills by 75% by the year 2025. This is one of the most aggressive food waste bills the country has seen so far.<sup>15</sup>



We can see the real impact of these types of bans by looking at Vermont's Universal Recycling Law, which aims to divert recyclables and organic waste from landfills. Vermont implemented this law in 2012 as one of the first states to do so, following Connecticut and Massachusetts. Due to the law, Vermont experienced a 40% increase in donations between 2015 and 2016, which not only reduces the environmental impact of food waste but also helps the socioeconomic impact of food insecurity. Additionally, it's estimated that by this year, the law would have reduced GHG emissions in Vermont by 37%.<sup>16</sup>

You can view organic waste bans by state [here](#).

## Tax incentives

In December 2015, Congress passed a permanent extension of enhanced tax deductions for food donations. When donating inventory of wholesome food to charity, Section 170(e)(3) of the U.S. Tax Code stipulates that businesses are eligible for enhanced tax deductions, up to 15% of their taxable income. This limit was increased to 25% under the CARES Act for 2020 through 2021, but that increase has not yet been renewed for 2022.





These incentives allow businesses to make a positive impact on people and the planet, all while maximizing value recovery by receiving incentives instead of paying disposal fees.

## Liability protection

Passed in 1996, the Bill Emerson Good Samaritan Food Donation Act — commonly referred to as just the Good Samaritan Act — provides liability protection for food donations made in good faith. Good faith donors, including individuals, wholesalers, distributors, non-profits, farmers, gleaners, and restaurants are protected, except in cases of gross negligence (intentionally donating food that is known to cause harm to the recipient).

By removing potential liability for well-intentioned donations, the Act makes it easier for businesses and individuals to donate food without fear of retribution.



## Awareness campaigns

The first step to solving a problem is to first be aware of the problem. Whether the campaigns are led by influencers, media, government, or non-profit organizations, they all play a part in educating the public, engaging in discourse, and acting on solutions.

### Project Drawdown

Founded in 2014, Project Drawdown is a nonprofit organization making impactful efforts in the fight against climate change. Through creating compelling media communications, partnering with other organizations and conducting reviews and assessments of climate solutions, Project Drawdown is revered as a top resource by governments, universities, corporations, and more when looking to advance effective climate actions.

Project Drawdown has created a [Table of Solutions](#) which assesses the different types of climate solutions in place and rates them by their projected emissions impact globally. Notably, Project Drawdown listed [Reduced Food Waste](#) as the #1 opportunity to address the climate crisis.

### International Day of Awareness of Food Loss and Waste

Since 2020, September 29 has marked the [International Day of Awareness of Food Loss and Waste](#). Organized by the [U.N.'s Food and Agriculture Organization](#), the annual holiday aims to raise awareness of the impacts of food waste. The day's programming includes social media awareness campaigns, easy-to-digest resources on how to reduce waste at the individual and organization levels, and presentations from global leaders in food waste reduction.

### NYC Food Waste Fair

In 2017, New York City hosted its first [Food Waste Fair](#). Hosted by the [Sanitation Foundation](#), the event brings together innovators, policymakers, thought leaders, and community members to increase efforts and ideas aimed at reducing food waste. The fair was originally developed to help local food producers, restaurants and grocers identify ways to reduce their waste impact, but has since expanded to everyday members of the NYC community.

### NRDC's Save the Food campaign

The ["Save the Food" ad campaign](#) by the creators of Smokey the Bear ([Ad Council](#)) and the National Resources Defense Council ([NRDC](#)) brings consumer attention to the



issue of food waste, aiming to change household behavior. NRDC scientist and zero-waste advocate [Dana Gunders](#) revealed the campaign at the [2016 Food Tank Summit](#) in Washington, D.C. in April 2016.

Meal planning tips, shopping guidelines, and information on deciphering “best by” and “use by” dates on products can be found at [savethefood.com](#), along with a comprehensive food storage directory. The campaign also includes digital media, outdoor (billboard), print and web advertising, and a TV PSA.

## Food waste in film

As food waste becomes a more commonly known issue, various documentaries, short films, and TV segments explore the issue to bring more awareness in a different medium.

### Just Eat It

The [Just Eat It](#) documentary features Canadian filmmakers Grant Baldwin and Jenny Rustemeyer who aim to survive for six months solely on food that would have otherwise gone to waste. The team behind the film also hosts community screenings to raise awareness as much as possible.

### Expired

[EXPIRED](#) is a short film that explores how misleading date labels on food products contribute to food waste in America. Spearheaded by the [Harvard Food Law and Policy Clinic](#), EXPIRED aims to show how date label reform can create a large impact in reducing the amount of wasted food.

### Last Week Tonight

The [Last Week Tonight with John Oliver: Food Waste segment](#) brought the food waste issue to national attention. Oliver communicated various solutions, such as eating ugly produce, providing tax breaks and liability protections for food donations, and standardizing a system of expiration dates.

### Wasted!

[Wasted! The Story of Food Waste](#) explores food waste through how we buy, cook, eat, and dispose of food through the lens of food celebrities such as Anthony Bourdain, Dan Barber, Mario Batali, Massimo Bottura, and Danny Bowien.



## Social media food waste champions

Social media continues to play a large role in spreading information and is a great resource to learn from experts in an engaging manner or to share what you've learned with your own social community. Here are a few of our favorite social media accounts you can follow to learn more about food waste:

### Ugly Fruits and Veg

Ugly Fruits and Veg has become a star on Twitter, with anti-food waste advocate Jordan Figueiredo running the account and featuring ugly fruits and vegetables sent in by fans. At the start of 2022, Figueiredo had over 78,000 followers and continues to highlight the beauty in “ugly” produce.

### Zero Waste Chef

Zero Waste Chef, or Anne-Marie Bonneau, is a cookbook author who wrote the 30 Days of Climate Action newsletter, which you can read [here](#). Follow Anne-Marie to get inspired to cook zero or low waste!

### Dan Barber

Dan Barber is the author of *The Third Plate* and the chef and co-owner of Blue Hill. Follow [Chef Dan Barber](#) if you're interested in the local food movement and farm-to-table food culture.

### Food Recovery Network

Follow along with the [Food Recovery Network](#), the largest student-led movement to reduce food waste and end hunger.

### Edible Schoolyard NYC

[Edible Schoolyard NYC](#) educates children through hands-on cooking and gardening education to transform their relationship with food.





### UN's World Food Program USA

The UN's World Food Program USA has been at the forefront of the global hunger crisis since 1962, so be sure to check out their account to see what they're up to!

### No Kid Hungry

No Kid Hungry's mission is to ensure all children get access to nutritious food and to end child hunger in America.

### Good Food Jobs

If you're on the search for an impactful job in the food sector, look no further than Good Food Jobs' account to be updated on new job postings.

### Food and Water Watch

Food and Water Watch is an NGO mobilizing everyday people to take action when it comes to food, water, and climate policy.

### Max La Manna

Max La Manna is a sustainable YouTuber who focuses on creating no-waste recipes. Check out his videos for delicious recipes and tips and tricks on how to stay low-waste in your kitchen!



Following some of these accounts can bring daily information and inspiration into your feeds!



## Innovative solutions

There are a lot of opportunities for businesses to create profitable solutions to the food waste crisis, for consumers to save money themselves, and for non-profit organizations to help redistribute surplus food to food-insecure communities. With government policies in place and the public becoming increasingly aware of the problem, the demand is here.

Let's take a look at some innovations and practices that you can use at home or at your business to reduce waste.

For a more comprehensive list of solutions, check out [ReFED's Solution Provider Directory](#), a database of 850+ organizations providing products and services to help you reduce food waste.

### Home solutions

While it may seem that as an individual you don't have as much of an impact on the fight against food waste, there are various solutions and practices you can implement effortlessly at home. As we mentioned earlier, 37% of food waste is generated at the home level, so every little bit that you can contribute to fighting food waste can help bring that percentage down.

#### Practicing conscious eating habits

To start off with, there are many practices you can implement at home at no cost - it just takes a little bit of [mindfulness and planning](#). For instance, planning recipes and what you'll be cooking before you head to the grocery store can save food from being wasted. By avoiding impulse purchases, you can ensure that every item you purchased is accounted for and will be incorporated into a meal. If it's possible for you, it's also helpful to do smaller trips to the grocery store more often as this can prevent perishables from going bad in between your trips.

As you're cooking food that you've planned for, you'll most likely run into some sort of food waste.



A great way to combat this type of waste is to make broth out of your vegetable scraps and bones, compost scraps if you are able to, or even upcycle scraps such as lemon peels into a tea or an all-purpose cleaner.

When it comes to food that's close to going bad, you can freeze what you won't eat soon and rely on your senses to see if food has gone bad instead of misleading date labels.

It's important to stay aware of what food you're eating when you're on the go, too. If you know you won't be home or be able to put leftovers in the refrigerator for a long period of time, it may be best to order only what you know you'll finish at that moment. When you're at a restaurant and have leftovers, opt to take them home and incorporate them into a new recipe or as a snack for later!

After all, when you save food from being wasted, you're also saving money!

## Composting

Composting is a wonderful way to reduce food and yard waste and turn it into decayed organic matter, which has a number of benefits such as increased water retention, reduced landfill waste and GHG emissions, and enriched soil.

If you have a yard or a community garden, you can start your very own compost pile with a mixture of brown matter, green matter, water, and a mixing device.

Composting can prove to be time-intensive and difficult, especially if you live in an urban area. The good news is there are various apartment-friendly solutions.

If you prefer storing your food scraps instead of using a bin in your apartment, FindAComposter.com offers a comprehensive database of compost services and drop-off centers across North America.

## Storage solutions

Optimizing how you store food at home can go a long way to prevent food from going bad and ultimately being wasted. In addition to freezing food that may be going bad soon, you can also learn what produce should be kept in the refrigerator versus the countertop.

As some produce emits more ethylene than others, it's smart to keep them separate from your other produce as the ethylene is a natural gas that accelerates ripening. Bananas, apples, tomatoes, avocados, and melons are good examples of high emitters of ethylene. To further prevent ethylene from ripening your produce too fast, you can place a Bluapple in your refrigerator, which absorbs the ethylene gas.



Additionally, you can purchase products for your home that can keep your food fresher for longer. Using non-toxic silicone bags or opting for beeswax wrap are great alternatives that also save you from wasting single-use plastic.

There are also plenty of solutions for tracking the food in your fridge, from smart fridges to cameras and scales. They help you identify what food is the oldest and should be eaten first and let you know what you already have at home so you don't overbuy during your shopping trips.

For more kitchen products to help preserve your food, check out [this article](#)!

## Upcycled food

Opting for upcycled and rescued food is a great way to vote with your dollar by purchasing products that are made from surplus food.

[The Upcycled Food Association](#) is a great way to get started if you're interested in this topic. The UFA works with hundreds of companies globally to prevent climate change through the products consumers purchase by attracting more investment to the upcycled industry, improving the upcycled business network and supply chain, and increasing consumer demand for upcycled products. For a comprehensive list of Upcycled Certified Products check out [their database](#).

## Consumer discounting

Trying to adopt a more sustainable lifestyle doesn't have to come at a price. In fact, there are a variety of businesses you can check out that help to save food from being wasted at a discount!

One example is businesses that rescue produce and pantry items that would otherwise be sent to the landfill because there is a surplus or because the produce *may* look a little different than the "standard," which doesn't mean it's any less delicious and nutritious. That's why choosing to buy from companies such as Misfits Market is a great way to save time by skipping the grocery store and having fresh food delivered straight to your door!

Other companies, such as Flashfood and TooGoodToGo, work with restaurants and grocery stores to provide discounted foods that are available for purchase through their apps and can be picked up at your convenience.





## Business solutions

Earlier, we discussed how 37% of US food waste occurs in homes. That means the remaining 63% of food waste comes from farms, manufacturers, and consumer-facing businesses such as restaurants and retailers. So what are some innovative solutions businesses can look to in order to reduce their impact?

### Restaurant solutions

Restaurants and foodservice can have a difficult time approaching food waste, as it's not always possible to demand plan accurately, which we saw with the start of the Covid-19 pandemic. Additionally, there are limited options restaurants have for food left on customers' plates.

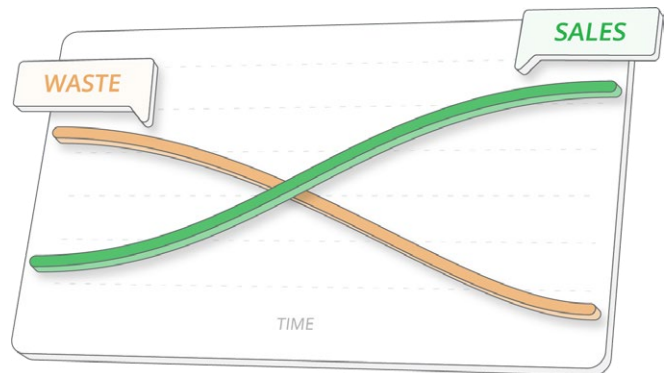
However, there are now various solutions such as Leanpath and Phood that can prevent food waste in the foodservice industry by tracking food waste and providing insights and methods to reduce the waste.

### Shelf life extension

Another category of solutions has emerged that focuses on extending the shelf life of produce before it even reaches our homes, and can also greatly reduce food waste in both the business sector and the home level. A growing sector of companies such as Mori and Apeel produce organic and plant-based protective layers or inserts to slow down oxidation, keeping produce fresh longer.

### Excess inventory management

Many brands and manufacturers contribute to food waste due to their excess inventory (which is caused by a number of factors) that their regular buyers do not want to purchase. With no one to purchase these items, many manufacturers turn to send them to the landfill. Spoiler Alert sits in a category of solutions that help these food and CPG companies reduce waste through innovative software that digitizes the liquidation process, allowing food manufacturers and brands to seamlessly sell their excess inventory instead of letting it go to waste.



### Retail solutions

Technology plays a big role in reducing waste in grocery stores. Combining AI with human-powered insights and predictive models, many companies are embracing the era of big data, building software platforms that can help forecast demand and handle the complexities that come with inventory and ordering.



## Non-profit solutions

Food recovery innovation requires a community wide approach, and there are highly impactful and innovative nonprofits doing everything they can to ensure good food gets to those who need it.

### Food banks

Food banks, which are non-profit organizations distributing food typically through food pantries, homeless shelters and soup kitchens, are a critical aspect in reducing hunger by reallocating food to food-insecure communities throughout the world.

Food is typically donated to or purchased by food banks - from a number of sources, including farmers and manufacturers who have overproduced, retailers who ordered a surplus of food, or the public community through food drives.

For a comprehensive list of local food banks in the United States, check out [Feeding America's searchable database](#).

### Food rescue organizations

Food rescue organizations, such as our friends at Food for Free and Lovin' Spoonfuls, pick up food from local donors and deliver it directly to community organizations that help feed the food insecure. These differ from food banks, which act more as a "distribution hub" where other organizations can pick up or get donated food delivered.

Find a food rescue organization near you through the [Food Rescue Locator](#).

### App-based solutions

A growing number of app-based solutions are helping communities and municipalities throughout the country activate a more digitized food rescue program - by connecting food rescue organizations with surplus food from businesses and organizing the logistics. Volunteers and businesses alike can use the app to transfer the surplus food directly to the service agencies that need it.



## Additional resources

The number of organizations committed to food waste innovation continues to grow, and there's only so much we can highlight in this ebook! Below are some great organizations and resources that offer added perspective and inspiration.

### Government

- [EPA's Sustainable Management of Food](#)
- [NYC Food Waste Toolkit](#)
- [Organic Waste Bans ToolKit](#)
- [USDA Food Product Dating](#)

### NGOs

- [FAO Food Loss and Food Waste](#)
- [FAO Food Waste Index Report](#)
- [Save Food: Global Initiative on Food Loss and Waste Reduction](#)
- [Harvard Food Law and Policy Clinic](#)

### Non-Profits

- [Food Recovery Network](#)
- [ReFED: A Roadmap to 2030](#)
- [ReFED's Food Waste Policy Finder](#)
- [WRAP's Food Waste Reduction](#)

### Coalitions

- [Champions 12.3](#)
- [Food Loss + Waste Protocol](#)
- [Food Waste Reduction Alliance](#)
- [Further with Food](#)



# Conclusion

As you can see, it's clear that the government, public, and business sectors need to work together in order to combat the issue of food waste, which has an impact on our planet and socioeconomic status. Let's see if we can take everything we've learned and put it into action.

## Checklists for individuals

- ☐ **Plan ahead** - Before heading out to buy groceries, take stock of what you already have at home and make a grocery list based on meals you plan to make throughout the week.
- ☐ **Don't forget to factor your calendar into the mix** - If you have soccer practice on Tuesday, are you going to cook a full meal, or stop for something on the way home?
- ☐ **Understand date labels** - By understanding that date labels don't necessarily mean your product has gone bad, you can decrease the amount of food waste at home by trusting your nose and eyes over misleading labels.
- ☐ **Store perishable items efficiently** - Some produce emits more ethylene gas than others, therefore ripening your other produce quicker. Check out [this article](#) to see which fruits and vegetables you should be storing separately.
- ☐ **Invest in food preserving products** - As mentioned in our Food Storage section in Chapter 3, consider purchasing products that will keep your food fresher longer, therefore saving you money in the long run.
- ☐ **Give scraps a new life** - Create new recipes from leftovers, use scraps for soup broths, or give leftovers to a neighbor or community organization.
- ☐ **Compost** - If you've exhausted your creativity when it comes to your scraps and still have some leftovers, think about composting. If you live in a city, check out composting drop-off or pick-up organizations.
- ☐ **Get involved and share your knowledge** - Use your voice on social media, with your friends, family, and neighbors to discuss the importance of reducing food waste. Try volunteering at farms or non-profit organizations to get a deeper understanding of food waste impact firsthand.





## Checklist for businesses

- ☐ **Learn and understand the laws** - Not only on the federal level but the state laws that apply to your business as well. Explore food waste policies by state [here](#).
- ☐ **Understand where in your business generates the most food waste** - Is it your excess inventory, your supply chain, or even in your breakroom? If it's your inventory, what product category is creating the most waste?
- ☐ **Ask questions** - "What happens to our excess inventory and who manages it?", "Who is our waste hauler, and do they provide additional sustainable options?", "Where can we improve efficiency?"
- ☐ **Implement small steps** - Consider creating a dedicated team to handle excess inventory, using a 3rd party to conduct a waste audit, donating leftovers to your community non-profits, or implementing composting in your breakroom and at team events.
- ☐ **Take advantage of tax incentives** - These incentives allow you to increase your bottom line by donating instead of paying disposal fees while making a positive impact on people and the planet.
- ☐ **Upgrade your systems** - Kick it up a notch by implementing software like [Spoiler Alert](#) to digitize your liquidation events to maximize value recovery. Check out [ReFED's database](#) to find additional food waste solution providers.
- ☐ **Expand your sustainability initiatives** - Can you reduce single-use plastics in your business? Can you create educational content or events to help share what you know with your co-workers? Can you partner or collaborate with sustainable companies or organizations? Can you opt for environmentally-friendly 401(k) fund options?

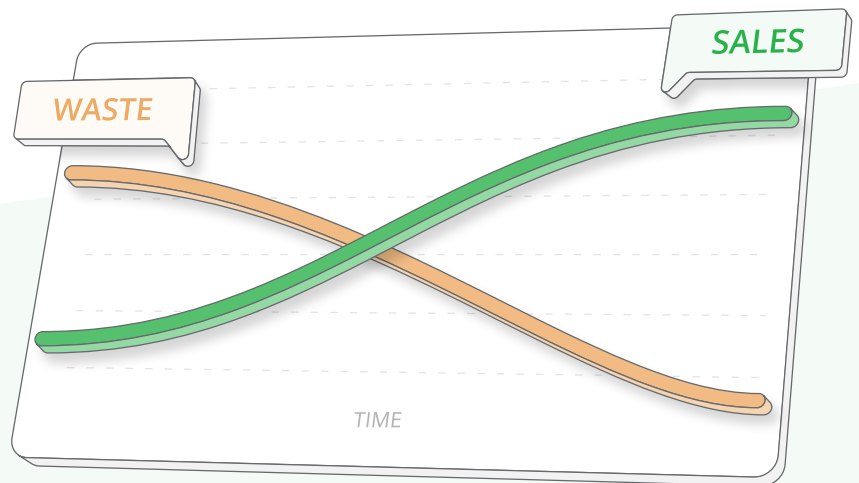
We all have a part to play in reducing the harmful effects of food waste. Whether you're looking for business solutions or just improving things in your own home, every small step makes a big impact.





Spoiler Alert is a Boston-based software company helping perishable CPG brands manage excess and slow-moving inventory. Working exclusively at the manufacturing plant or distribution center level, Spoiler Alert offers a best-in-class B2B sales platform that enables CPG brands to manage their liquidation processes across a private network of discount retailers and nonprofit channels - with a heavy focus on maximizing value recovery, strengthening customer

relationships, and increasing the effectiveness of supply chain managers tasked with handling these typically manual sales processes. Founded by alumni of MIT, Spoiler Alert works with some of the world's largest brands, including Campbell's, Danone, HelloFresh, KeHE Distributors, Mondelez, Nestle, and Kraft Heinz, along with a growing network of discount channels committed to increasing affordable food access.



## Get in touch

### Sales team

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Visit us on:



# Endnotes

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- <sup>2</sup> [https://www.feedingamerica.org/sites/default/files/2021-03/National%20Projections%20Brief\\_3.9.2021\\_0.pdf](https://www.feedingamerica.org/sites/default/files/2021-03/National%20Projections%20Brief_3.9.2021_0.pdf)
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- <sup>14</sup> <https://www.pewtrusts.org/en/research-and-analysis/blogs/stateline/2021/07/08/waste-not-some-states-are-sending-less-food-to-landfills>
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- <sup>16</sup> <https://www.nrdc.org/resources/vermonts-universal-recycling-law>

