

SLOW ROAD TO ZERO

*A Report Card on U.S. Supermarkets' Path to
Zero Food Waste*



SLOW ROAD TO ZERO: A REPORT CARD ON U.S. SUPERMARKETS' PATH TO ZERO FOOD WASTE

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Jennifer Molidor, PhD
Stephanie Feldstein
The Center for Biological Diversity



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EXECUTIVE SUMMARY

Food waste remains a critical issue in the United States — some 40 percent of all produced food goes uneaten. That waste has large-scale, negative effects for wildlife, habitat, clean air and water, and the climate. Grocery stores are gatekeepers in the food system, often determining what makes it from farm to shelf and what happens to food that goes unsold. The largest grocery chains are in a unique position to curb food waste, which can improve corporate sustainability, save money and help address social issues.

In 2018 the Center for Biological Diversity released *Checked Out: How U.S. Supermarkets Fail to Make the Grade in Reducing Food Waste*. That report examined 26 different points of analysis — from transparency to tracking and prevention to recycling — to rank the performance of the top grocery chains in America.

For this follow-up report we closely analyzed common gaps and trends from the past year to focus on the most critical aspects of reducing food waste in the grocery sector. We identified three key areas that must be addressed across the industry:

- A time-bound commitment to achieving zero food waste;
- Comprehensive prevention programs to stop waste upstream, before it reaches store shelves, rather than primarily relying on donating and recycling surplus food;
- Tracking food-waste volume and publicly reporting on food-waste reduction efforts to ensure accountability and transparency.

We looked at company websites, corporate sustainability reports, news reports, promotional materials and other publicly available data. We also reached out to each supermarket directly to gather more information from company representatives. Some companies were responsive to request for more information, others were not. We made every effort to include all available, relevant information.

Key finding: Seven of the 10 largest grocery chains still have not taken the first step of making a commitment to zero waste, and while there have been some advances in tracking how much food is donated, the total volume of wasted food across the grocery sector remains untracked.

Using the three main categories outlined above, we scored each of the companies to determine the following overall grades:

A: Kroger, Walmart and Ahold Delhaize USA are the only three grocery chains to publicly commit to zero food waste by 2025, and all have prioritized tracking food waste and prevention.

B: Aldi, Target and Whole Foods have made commitments that are less ambitious than zero waste by 2025 and have begun implementing prevention strategies and tracking that are not yet company-wide or publicly reported.

C: Albertsons has some food-waste reduction strategies in place but has yet to make a clear, company-wide commitment to zero waste by 2025, publicly report food waste data or implement more effective prevention measures.

D: Costco, Publix and Trader Joe's lag behind much of the grocery industry by lacking public commitments, transparent data tracking and comprehensive prevention strategies.

Recommendation: While there has been some important progress in addressing food waste over the past year, the grocery sector needs to fully and publicly embrace solutions that include concrete, measurable deadlines for zero waste and comprehensive prevention programs. Those programs should involve better ordering practices, clearer date labels, improved tracking and distribution technology, promotion of imperfect produce, and minimizing daily waste of meat and dairy.

INTRODUCTION

The volume of food waste in America is hard to comprehend. It has been estimated that on a daily basis the country's waste could fill a 90,000-seat college stadium (Bloom, 2011). Businesses that serve or sell food are responsible for 40 percent of food waste in the United States, with retailers accounting for more waste than restaurants or food-service providers (ReFED, 2018).

Our current food system is unsustainable — and wasted food also wastes the resources that went into producing it (ReFED, 2016). Food production uses 25 percent of all fresh water consumed in the United States, requires 80 million acres of farmland, and accounts for 13 percent of total carbon emissions. About 40 percent of the food produced in the United States goes uneaten — costing more than \$200 billion annually (ReFED, 2016). Wasting food on this scale has unsustainable impacts on water, air, climate and wildlife (ReFED, 2016).

Food waste in the grocery sector starts with what's left on farms, in part due to cosmetic standards set by supermarkets, unutilized seasonal bumper crops, or misdirected ordering and purchasing practices. In the past it has been reported that 7 percent of food produced is wasted at the farm level (Plumer, 2012). A recent report suggests that up to 33.7 percent of crops may be left at the farm level (Baker, 2019).

In stores companies stock shelves full of perishable, difficult to transport, and out-of-season food to feed the unsustainable perception of endless abundance. This leads to unnecessary spoilage due to overstocking (Erikson, 2015). Using misleading labels instead of standard date labels also increases food waste (Neff, 2019). In addition, perceptions about demand for aesthetically perfect food result in “ugly” but edible produce being discarded.

This wasteful model is then shifted to customers with promotional practices that encourage over-purchasing. The effect of this waste moves through the supply chain, with land, water, energy and other resources wasted on growing food that will never be eaten.

The grocery industry still needs greater accountability, commitment to specific, time-based policies to reduce food waste upstream and throughout the supply chain, and detailed strategies across sectors to make zero food waste a realistic goal. To effectively mitigate the environmental impacts of food waste, grocery companies must shift their focus to reducing supply chain and in-store waste. Maintaining the status quo by focusing on donation and recycling programs, instead of prevention and zero-waste commitments, diverts attention from the environmental costs of wasted food and the systemic change needed to address them.

As leaders in the grocery sector, the 10 companies surveyed for this report have an opportunity to make the food sector more sustainable. This begins by committing to zero waste and focusing on prevention strategies to reduce and eliminate food loss and waste. Companies were ranked based on public, time-based commitments to waste elimination and deployment of transparent, trackable strategies to prevent food loss and waste.

The companies leading the way in reducing food waste share some key principles among their successes over the past year. They started with ambitious, time-bound commitments to stop the waste in its tracks. They have also been more transparent with data and policies, thus increasing their accountability and trust-building among stakeholders and the public.

They've focused on preventing food waste instead of just donating it, and they have begun to address key issues that lead to that waste, like seafood bycatch, confusing date labels, tracking and distribution technology, improved ordering practices, supplier collaboration, promoting imperfect produce and minimizing waste of the heaviest-footprint items, specifically meat and dairy.

COMPANY RANKINGS

While the grocery industry has made progress over the past year, many companies have still not taken some of the most basic, essential steps for effective food-waste reduction. This year's report focuses on three key areas that are needed for the industry to move in the right direction: commitments, transparency and prevention.

Companies may earn a total score of up to 15 points and were graded as follows:

- A = 13-15 points
- B = 10-12 points
- C = 7-9 points
- D = 4-6 points
- F = 0-3 points

Rank	Company	Commitments	Tracking/ Transparency	Prevention	Total	Grade
1	Kroger	5	5	5	15	A
2	AD USA	5	5	5	15	A
3	Walmart	5	4	5	14	A
4	Whole Foods	3	3	4	10	B
5	Target	4	3	3	10	B
6	ALDI	4	3	3	10	B
7	Albertsons	3	3	3	9	C
8	Trader Joe's	2	1	2	5	D
9	Costco	2	1	2	5	D
10	Publix	1	1	2	4	D

COMMITMENT TO ZERO FOOD WASTE

Corporate commitments to zero waste are crucial in fighting food waste in the retail food sector. Specific, time-bound commitments are key to measuring progress and creating accountability. This can set the tone for store practices, public policy, customer support and investments in sustainability.

While many companies and government agencies have called for a 50 percent reduction in food waste by 2030, reports on the urgency of the climate crisis demand more ambitious action. A recent Intergovernmental Panel on Climate Change report warned that we must urgently address food loss and waste as a key strategy for avoiding the worst impacts of climate change (IPCC, 2019). The report also warned that climate disruption can reduce yields and the nutritional quality of crops, which makes mitigation strategies like minimizing

food loss and waste necessary to protect food security (IPCC, 2019).

Similarly, the Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services report this year found that 1 million animal and plant species are threatened with impending extinction, more than ever before in human history (IPBES, 2019). These crises demand transformative change in our food systems and beyond, starting immediately.

Since many of the solutions to preventing food waste have minimal cost or policy barriers and can be quickly implemented, companies have a responsibility to commit to zero waste. With the climate crisis looming large, systemic commitment to zero food waste in the next few years is a tangible action toward mitigating the impact of food production on the climate.

All U.S. supermarkets must publicly commit to zero food waste by 2025 across their company. The only way to meaningfully meet that goal is for companies to reduce food waste in supply chains and stores and provide transparent reporting on their progress as outlined in this report.



COMMITMENT TO ZERO FOOD WASTE: SCORECARD

Company	Commitments	Grade
Walmart	Zero Food Waste by 2025 (5 points)	A
Kroger	Zero Food Waste by 2025 (5 points)	A
Ahold Delhaize USA	Zero Food Waste by 2020 (5 points)	A
Target	50 percent reduction by 2025 (4 points)	B
ALDI	50 percent reduction by 2030 (4 points)	B
Whole Foods	Aspiring Zero Waste pilots (3 points)	C
Albertsons	Zero Food Waste in manufacturing facilities (3 points)	C
Trader Joe's	Unclear public commitments	F
Costco	Unclear public commitments	F
Publix	Unclear public commitments	F

(Table 1) Methodology:

- A (a commitment to zero food waste by 2025 and makes food waste prevention efforts across all stores and brands) — 5 points
- B (a time-bound, specific, but less ambitious commitment that makes food waste prevention efforts across all stores and brands) — 4 points
- C (a commitment that is not company-wide or time-bound but makes food waste prevention efforts across all stores and brands) — 3 points
- D (no public commitments but some food-waste prevention efforts across all stores and brands) — 2 points
- F (unclear public commitments and food-waste prevention efforts or efforts in some locations or for some brands only) — 1 point

Three of the biggest grocery companies in the United States — Kroger, Walmart and Ahold Delhaize — have recognized the urgency of the food-waste problem and committed to achieving zero waste by 2025.

Walmart has made significant improvements by committing to zero waste by 2025, not just in the United States but also in Canada, Japan and the United Kingdom.

All of Ahold Delhaize's U.S. brands are committed to the company's target of 90 percent food recycling by 2020 (Ahold Delhaize, 2019a). In 2018, Giant Food Stores, a Pennsylvania-based grocer under the sister company of Ahold Delhaize USA, became the first to attain EPA "zero waste" status with more than

90 percent of the store's total waste diverted from landfills (Redman, 2018). While Ahold Delhaize was one of the first companies to make an ambitious commitment, it still focuses on diverting surplus food from landfills and can improve by focusing further upstream.

Kroger is also collaborating to find on-the-ground solutions, such as partnering with Apeel Sciences to bring avocados to market with an extended shelf life. Apeel avocados maintain optimal quality and ripeness twice as long, without requiring the use of refrigeration or preservatives, stopping food waste before it happens and making it possible for premium quality avocados to reach more people across the country.

Further, Kroger's plan includes advocating for public policy solutions to help communities end hunger and eliminate waste.

ALDI and Target have made time-bound, specific commitments to fight food waste that are less ambitious than zero waste by 2025 or not yet company-wide.

Target adopted the Food Waste Resolution in 2018 as a member of the Consumer Goods Forum to halve food waste within operations by 2025 (Target, 2019a). The company is tackling this commitment through investments across operations and within the supply chain. Target's pilot of a zero-waste certification at the Highland Park Target store in St. Paul, Minnesota in May 2018 helped the company achieve an average of 90 percent or greater overall diversion from landfill, incineration, and the environment for solid, non-hazardous wastes over a 12-month timeframe (Target, 2019b). To become a leader, the company could apply these same principles company-wide to its food waste reduction commitments.

ALDI's commitment to a 50 percent reduction by 2030 is a notable improvement over 2018. The company is "aspiring" to zero waste business

practices according to its sustainability reports and correspondence; but it would do well to make a public, time-bound commitment to zero food waste (ALDI, 2019a)

Whole Foods and Albertsons have made limited zero-waste commitments that need to be time-bound and applied company-wide.

Whole Foods Market has piloted a zero-waste event in some stores and is exploring the expansion of this pilot to additional stores and regions (Whole Foods, 2019ab).

Albertsons has expressed continued commitment to its policy of zero waste in manufacturing facilities but has yet to commit to food-waste reduction targets in its stores (Albertsons, 2018).

Costco, Publix and Trader Joe's have no clear commitments to fighting food waste.

Lagging behind the industry are Costco, Trader Joe's and Publix that have not publicly made any specific, time-based commitments to reduce and prevent food waste in their companies, facilities, brands or stores. (Costco, 2019; Trader Joe's, 2018; Publix, 2019).

SPOTLIGHT: KROGER'S ZERO HUNGER/ZERO WASTE

Kroger is leading the industry with its fresh Zero Hunger/Zero Waste program to eliminate waste across the entire company by 2025. This program has been fully implemented since its 2018 report (Kroger, 2018).

Since announcing Zero Hunger/Zero Waste, Kroger has completed and publicly disclosed the results of its food waste analysis using the World Resources Institute Food Loss and Waste Standard (World Resources Institute, 2017).

In 2017 Kroger and World Wildlife Fund began work to establish measurement metrics and a baseline footprint in business operations. Using the Food Loss and Waste Standard, Kroger evaluated and outlined where waste occurs within retail operations, and how waste is disposed or recycled.

Additionally, the company publicly reported its total 2018 food loss and waste. It diverted 76 percent of its in-house waste that year, doubling its success from the previous year. This amounts to the diversion of 2 million tons of waste from landfills across the company's stores in 35 states. The company also achieved zero waste in 34 of its 36 manufacturing plants and increased overall recycling by nearly 20 percent last year.

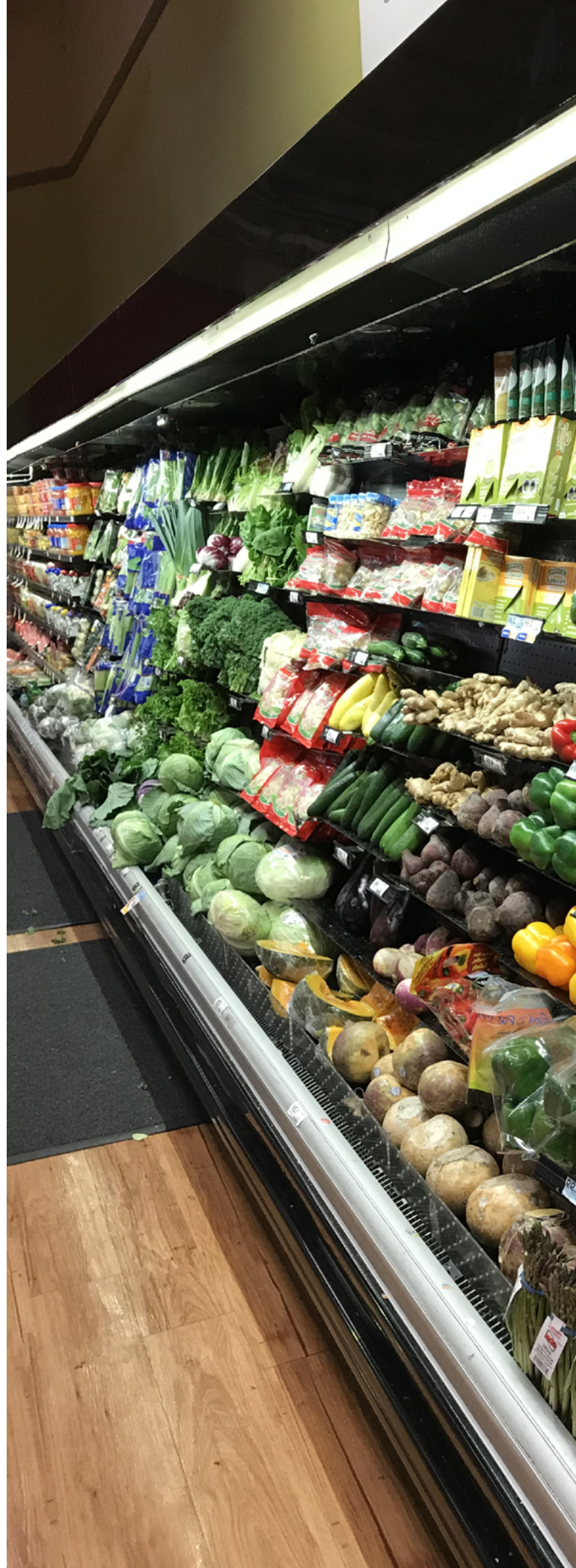
TRACKING AND TRANSPARENCY

To meet food-waste reduction goals and effectively mitigate the impacts of food waste, it is important that U.S. grocers track total volume of food waste and report that data publicly. Doing so increases public accountability, improves metrics, identifies problem-solving opportunities and aids in better collaboration across the sector.

While several companies share donation and recycling data, only two shared total volume that reflected what stores are doing to prevent food waste throughout their operations in the first place. The amount of food donated to hunger relief efforts may sound impressive, but without the context of total food waste volume and prevention data, there's no way for the public or the company to track the effectiveness of waste-reduction programs.

The ability to track and report the food waste that is donated indicates that stores may be able to track and report the total volume of food waste. Committing to zero food waste must be combined with tracking and transparency of total volume of food-waste data for the commitment to have real teeth.

There has been some improvement in this area over the past year, with some companies tracking data but not sharing it, and other companies, like ALDI, working hard to improve its tracking technology. As the industry advances its food-waste prevention efforts, tracking and reporting total volume is crucial. We hope to see the entire grocery sector commit to doing so over the next few years, which can radically expand opportunities for accountability, collaboration and prevention efforts.



TRACKING AND TRANSPARENCY: SCORECARD

Company	Tracking/Transparency	Grade
Kroger	Publicly reports total volume of food waste (5 points)	A
Ahold Delhaize USA	Publicly reports total volume of food waste (5 points)	A
Walmart	Publicly reports limited volume of food waste. (4 points)	B
Target	Does not publicly report total volume of food waste (3 points)	C
ALDI	Does not publicly report total volume of food waste(3 points)	C
Whole Foods	Does not publicly report total volume of food waste (3 points)	C
Albertsons	Does not publicly report total volume of food waste (3 points)	C
Costco	Does not publicly report food waste data (1 point)	F
Trader Joe's	Does not publicly report food waste data (1 point)	F
Publix	Does not publicly report food waste data (1 point)	F

(Table 2) Methodology:

- A (companies that track and report total volume of food waste across all stores) — 5 points
- B (companies that track and report total volume of food waste in manufacturing facilities and/or some stores) — 4 points
- C (companies that track total volume of food waste and share donation or recycling data but do not share total volume of food waste) — 3 points
- D (companies share donation or recycling data but do not track or report total volume of food waste) — 2 points
- F (companies not sharing any data) — 1 point

Only 2 of the top 10 companies — Kroger and Ahold Delhaize — publicly report total food-waste volume.

Last year we reported that Ahold Delhaize USA was the only company to publicly report its total volume of food waste (Center for Biological Diversity, 2018). This year the company is joined by Kroger, whose major overhaul of its food-waste prevention efforts brings the company into leadership in tracking and transparency, as well, by reporting its total volume of food waste for 2018.

Walmart appears to have a robust tracking system, but total volume of food waste isn't readily accessible to the public.

Given the company's size, tracking and reporting for all company stores, nationally and internationally, is a behemoth task. However, Walmart's commitment to zero waste comes along with its global, integrated data-management system (Walmart, 2019). This platform should allow the company to monitor available data in real-time in order to increase its public transparency and report its total volume of food waste data in the United States.

The most common practice is for stores — including Whole Foods, ALDI, Target and Albertsons — to track food-waste data but only report on donation or recycling, without sharing prevention or total volume numbers.

Whole Foods historically focused on organic foods and donations, but the company's third-party vendor, Elytus, ensures all material streams are tracked and provides diversion reports for the company's baseline

and benchmarking. This points in a good direction for starting to prioritize prevention over donation (Whole Foods, 2019ab).

ALDI has been working to refine data systems to better track food waste. Food-waste data is used with other metrics, including organic diversion, donation, recycling and landfill data, to determine total company diversion and recovery rates. (ALDI, 2019b).

For Target, tracking trash, donations, recycling and organics programs at the store level continues to be a focus in minimizing waste (Target, 2019b).

Albertsons reports its volume of food waste donations as well as overall waste diversion.

Three companies — Costco, Publix and Trader Joe's — lack transparency and accountability for their food waste by failing to report any data.

The public materials for Costco neither share data for total volume of food waste nor address prevention strategies. As a company founded on bulk items, it is perhaps the company most in need of being transparent with this data and incorporating prevention strategies (Costco, 2019).

Although Publix has published some of its effort to reduce food waste, like Costco Publix is similarly not publicly tracking and reporting public data on total volume of food waste (Publix, 2019). Likewise, Trader Joe's is hurt by its lack of transparency, despite efforts its stores make to sell more sustainable products (Trader Joe's, 2018).



PRIORITIZING PREVENTION

Focusing on prevention with on-the-ground strategies throughout the supply chain and in stores can significantly reduce supermarket food waste and be the key to reducing the environmental impact of wasted food.

Our analysis found that the grocery sector continues to focus on donation programs as a food-waste-reduction strategy, but these plans have many shortcomings. Food-donation programs do not mitigate the environmental damage of overproduction and are not a long-term solution for hunger and inequity in the food system, (Fisher, 2017) and it is unclear how many programs track whether donated food has reached food-insecure communities. Further, many stores track donation data without tracking the total volume of food waste, so it's impossible to understand the impact of donation programs.

Focusing on donation and diversion data alone also distracts from unsustainable practices such as over-ordering and over-stocking that result in food surplus. This is why prevention must be the priority to reduce the environmental and social costs of waste.

A new study shows up to 33.7 percent — more than previously thought — of crops remain rotting in the fields (Baker, 2019). These findings may mean overall U.S. food waste is even higher than reported (Baker, 2019). It is vital that the grocery industry integrate better supply chain and purchasing policies, such as purchasing whole crops, to stop waste before it begins.

Preventing the waste of meat and dairy carries the highest environmental impact (ReFED, 2016). These items take more resources to produce than plant-based products and have substantially higher “food-prints” (Center for Biological Diversity, 2018).

Half the companies we analyzed pointed out in private correspondence and in public materials that they were following the EPA's Food Recovery

Hierarchy, as we urged companies to do in our 2018 report. This hierarchy prioritizes source reduction (prevention), followed by feeding the hungry (donation), feeding animals and industrial uses (recycling) over composting and landfill (EPA, 2017a). So, while many companies are following the lower end of the hierarchy, few are making it to the top, where prevention is the priority.



Four companies surveyed indicated that they are part of the Food Waste Reduction Alliance, which holds a similar list of priorities to the Food Recovery Hierarchy (Food Waste Reduction Alliance, 2013). While membership in the alliance shows interest in food-waste reduction, the general lack of activity by the alliance and varying levels of commitment and programs among members point toward a lack of those higher standards. Member companies are not held accountable for prioritizing the top levels of the hierarchy and focus on the lower end in donation and diversion. Ahold Delhaize, Albertsons, Publix and Target are members of the alliance for example, but each company's strategies and effort vary greatly.

Aligning with the Food Recovery Hierarchy, leadership in fighting food waste must prioritize effective prevention strategies. Prevention strategies should be employed in all stores, and at every level of the supply chain, beginning upstream. This includes purchasing, supplier contracts, forecasting, stocking and in-store shopper support (and online where available).

PRIORITIZING PREVENTION: SCORECARD

Company	Prevention Over Donation	Grade
Kroger	Employs consistent prevention strategies levels (5 points)	A
Walmart	Employs consistent prevention strategies at all levels (5 points)	A
Ahold Delhaize USA	Employs consistent prevention strategies at all levels (5 points)	A
Whole Foods	Employs consistent prevention strategies. A leader for seafood (4 points)	B
Target	Employs some prevention strategies (3 points)	C
ALDI	Employs some prevention strategies (3 points)	C
Albertsons	Employs some prevention strategies (3 points)	C
Costco	Focus on donation and recycling (1 point)	F
Trader Joe's	Focus on donation and recycling (1 point)	F
Publix	Focus on donation and recycling (1 point)	F

(Table 3) Methodology:

- A (companies with effective strategies in purchasing, supply chain, stocking and in-store shopper support to prevent food waste at all levels of the supply chain and across all company stores) — 5 points
- B (companies with effective strategies in purchasing, supply chain, stocking and in-store shopper support to prevent food waste across all stores) — 4 points
- C (companies with strategies at some stores or facilities to prevent food waste in addition to donation or recycling) — 3 points
- D (companies with food waste programs that mostly focus on food waste donation and recycling) — 2 points
- F (companies with food waste programs that mostly focus on food waste donation or recycling) — 1 point

Three companies — Kroger, Walmart and Ahold Delhaize — have demonstrated a commitment to preventing food waste with comprehensive strategies addressing all levels of the supply chain and operations.

Kroger has made widespread improvement to its food-waste prevention strategies across the board. The company worked with the World Wildlife Fund and the World Resources Institute to improve its policies, commitments and transparency (Kroger, 2019).

Walmart points to working with its suppliers to improve forecasting and ordering tools. In the United States, for example, Walmart strengthened these tools to improve inventory flow and in FY2019 had 90 million fewer wasted units in fresh departments in the United States as compared with the previous year (Walmart, 2019). Walmart also created a customized field-to-store network for perishable products, which reduces days in transit. While decreasing inventory and waste, produce moves through the company's Speed Fresh Supply Chain up to 1.8 days faster (Walmart, 2019). And Walmart's Project Gigaton encourages suppliers to measure and report food waste; introduce reprocessing, donation and recycling practices; and standardize date labeling to

eliminate customer confusion (Walmart, 2019).

Ahold Delhaize USA consistently demonstrates a focus on prevention over donation in its stores, warehouses and transports. It points to improved efforts in purchasing, tracking and stocking, as well as packaging and transportation. (Ahold Delhaize, 2019ab). The company could improve the public availability of some of its data and strategies. Additionally, utilizing imperfect produce across all its brands is a missed opportunity.

Target, ALDI and Albertsons have taken steps to prevent food waste but have yet to apply prevention strategies across the supply chain.

Companies with more room to grow include those that employ waste-reduction strategies in some, but not all, levels of the supply chain.

At the supply chain level, ALDI has integrated improved methods of reducing loss of produce inventory. Its system calculates product orders for the freezer, cooler and grocery areas of stores. A separate program is used for ordering perishable items, such as bread, meat and produce, to optimize product amounts to reduce potential waste caused by over-ordering and to control costs (ALDI, 2019b).

SPOTLIGHT: WHOLE FOODS

Whole Foods has made significant improvements overall from last year's analysis, particularly in its commitment to prevent food waste.

The company is very willing to engage in dialogue regarding forward progress in prevention strategies (Whole Foods, 2019b). Whole Foods Market has one of the most sustainable policies in the industry to source seafood from responsibly managed fish farms and wild-capture fisheries (see addendum to this report, Roadmap to Sustainability). The company uses Seafood Watch, the Monterey Bay Aquarium's certification standards for sustainable seafood, which includes minimizing bycatch (Whole Foods, 2019a).

Whole Foods has recently begun improving buyers' training, tracking tools and other technology-enabled initiatives to only bring in products that are needed, when they are needed, and to ensure sales of those items to minimize extra inventory (Whole Foods, 2019b)

Several pilot programs are being tested regarding in-store food waste solutions as well, including zero waste. The data from these improvements, as well as the strategies themselves, could be made available publicly in effort to aid in collaboration with the industry.

This is a big improvement over last year and has the potential to make ALDI a leader once its data systems and programs are fully implemented, prevention strategies are employed in all stores and at every level of the supply chain, with detailed information available to the public.

Target is working toward greater sustainability and has been willing to engage with us about forward progress. Though much of its sustainability focus is on non-food waste, food waste has a recognized role in the company's overall waste strategy (Target, 2019a).

Target also has several other initiatives underway to minimize the time from field to store floor to expand the shelf time food has in stores for guest purchase prior to spoiling (Target, 2019b). The company also uses the Monterey Bay Aquarium's Seafood Watch certifications for sustainable seafood, which includes standards for minimizing bycatch and similar eco-certifications (Target, 2019a).

Albertsons remains in a similar position as in last year's report (Center for Biological Diversity, 2018). Much of its attention is on non-food waste-reduction, including plastics. The company also includes Seafood Watch certifications for some seafood items. The company has a great deal of room to grow, in terms of its transparency as well as execution of prevention strategies (Albertsons, 2019). Albertsons should implement an imperfect produce program, strive for more ambitious commitments to fighting food waste, and share more information about its prevention efforts.

Costco, Publix and Trader Joe's focus primarily on donation and recycling and provided no clear information on prevention efforts.

The companies falling behind are those that do not share data on clear and consistent food-waste prevention strategies. Their public food-waste-reduction efforts primarily focus on donation and recycling.

Costco did not respond to requests for information and needs to publicly give clarity and specificity about its food-waste prevention strategies beyond donations.

Although Trader Joe's may have a food-waste prevention strategy, it is not readily available to the public. The company, like the other supermarkets, promotes its donation policy. But our review and outreach to the company were unable to discover additional data or descriptions of its food waste-prevention efforts (Trader Joe's, 2018).

Publix also fails to publicly demonstrate any specific data beyond mentioning its recycling and donation efforts and seafood policies. Some improvements have been made regarding seafood, but there is plenty of room to grow. For example, though it does mention efforts to reduce bycatch with one marine species, there is no data available on these efforts or commitments to reducing and eliminating bycatch across its brands (Publix, 2019). Publix could address these issues by publicly employing the leading prevention strategies used across the industry.



CONCLUSION

The U.S. grocery sector must commit to zero food waste. Making these public, time-bound commitments and publicly reporting total food-waste data is a real first step toward a more sustainable grocery industry. For each company to claim food-waste reduction successes, they must not only commit to zero waste and report on these successes but show that they are focusing on prevention over donation.

Among the top 10 supermarket companies, there are clear leaders that have made tremendous strides in zero-waste commitments and food-waste prevention strategies, while improving their use of technology, incorporating standardized date labeling, improving seafood sustainability and showcasing imperfect produce. Ahold Delhaize USA, Kroger and Walmart are taking ambitious steps to reduce food waste that will ultimately reduce their environmental food-prints.

Although Ahold Delhaize and Kroger received 15 out of 15 points in this report, it's important to note that this assessment focused on specific foundational areas of food-waste reduction and that there's room for improvement across the grocery sector. It does not replace the in-depth analysis found in *Checked Out*, except where specific updated efforts have been noted (Center for Biological Diversity, 2018).

For example, most sustainable-seafood policies in the sector aren't stringent enough in setting standards to eliminate bycatch. Companies must also be willing to evolve as technological advances offer new opportunities for more effective waste prevention and monitoring. And while some companies have made strides in reporting on their food-waste reduction efforts, in most cases that information is difficult for customers to find.

Given the urgency of the impact of food production on the planet, the pace of the grocery industry as a whole in addressing food waste and loss is far too slow, too secretive, and too focused on donations and diversion instead of prevention.

The climate of collaboration among and between stores also seems lacking. In fact, many companies expressed concern with sharing even high-level data on food-waste volume. Some mentioned concerns about creating misperceptions around the magnitude of food

waste, but others cited proprietary reasons for not publicly reporting data.

A 2018 report from the Food Marketing Institute argued that collaboration between U.S. grocers continues to be an area of missed opportunity of growth in the industry (Food Marketing Institute, 2018). Without sacrificing the competitive edge, European grocers, in contrast, have been able to incentivize collaboration by including it as a metric, prioritizing food-waste reduction specifically, along with sharing data and benefits (Food Marketing Institute).

As a representative of Whole Foods noted, "Reducing waste is a win-win for all stakeholders involved, it's beneficial for our employees, customers, communities, and the environment" (Whole Foods, 2019b).

Yet data on food-waste reduction efforts is difficult for stakeholders to find across the industry. For customers seeking to better understand a company's food-waste policies and progress, weeding through corporate sustainability reports and vague or buried information on websites presents a challenge. This can influence what stores shoppers choose to support. Food waste is a deciding factor for one-third of Americans who make more sustainable food choices, and 75 percent of those participating in a 2018 Pulse survey indicated that business food-waste practices are important to them (Shelton, 2018).

To effectively reduce food waste, companies must invest at every level. While solutions like shopper-support strategies or the repurposing of food scraps into baked goods, salad, or smoothie-bar ingredients are cost-effective and relatively easy to implement, others will take a bit more effort. Companies need to think systemically about how their business model can work to reduce food waste. This includes an investment in staff training, integrating technology, working with suppliers to streamline the supply chain and improve forecasting, improving shopper support and focusing on prevention strategies over donations.

From company commitments to purchasing to promotion, packaging to stocking, it is grocery stores who are the major player in reducing wasted food. U.S. supermarkets have a responsibility to more seriously mitigate their environmental impact on the food system in this time of global climate crisis and limited ecological resources.

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All company correspondence occurred between September 2017 and June 2019. For additional information, contact Jennifer Molidor at jmolidor@biologicaldiversity.org.