

29TH ANNUAL BUSINESS & INDUSTRY'S

Sustainability & Environmental, Health and Safety



S Y M P O S I U M

Workshop G

Corporate Sustainability Best Practices ... Kroger's Zero Hunger | Zero Waste Social Impact Plan and Sustainability Commitments

**Tuesday, March 24, 2020
11:15 a.m. to 12:30 p.m.**

Biographical Information

Lisa Zwack, Head of Sustainability, The Kroger Co.
1014 Vine St., Cincinnati, OH 45202-1100
513-762-4142 lisa.zwack@kroger.com

Lisa Zwack has served as Head of Sustainability at The Kroger Co., the country's largest grocery retailer, since 2017. In this role, she leads and executes on Kroger's sustainability strategy, including the company's progress towards its 2020 sustainability goals and Zero Hunger | Zero Waste social impact plan. Previously, Lisa served as Sustainability Manager for Staples, Inc. for nearly five years, where she played a key role in implementing and communicating the company's global sustainability vision. She earned her MBA from the Ross School of Business and her MS and BS degrees from the School for Environment and Sustainability, all at the University of Michigan, during which time she worked with several leading companies on sustainability-related projects.

Aaron Leow, Utility Engineer, The Kroger Co.
1014 Vine St., Cincinnati, OH 45202-1100
aaron.leow@kroger.com

Aaron Leow joined the Kroger Co. as a Utility Engineer in 2015. Since then he has worked on the testing, development, and implementation of various energy and water reduction projects. Aaron works with facility engineering teams across Kroger's 22 grocery divisions to implement these utility saving technologies and programs and validate the savings for the company. Since beginning with Kroger, Aaron has helped to achieve the 40% avoided electricity usage goal using 2000 as a baseline year, and is on track to realize a 5% water reduction in the grocery stores since 2015. Aaron received his B.S. in Civil Engineering and M.S. in Environmental Engineering from the University of Cincinnati.

Ramiro Carrion, Mechanical Engineer, The Kroger Co.
1014 Vine St., Cincinnati, OH 45202-1100
513-762-1149 ramiro.carrion@kroger.com

Ramiro Carrion is a bilingual Mechanical Engineer with 21 years of experience in the food industry with an emphasis on providing strategic solutions to technically optimize the performance of the production process while maintaining the highest emphasis on the parameters of quality, safety and sustainability. For the last nine years, Ramiro has served as Mechanical Systems Manager and Sustainability Leader for the manufacturing division of The Kroger Co. In this role, he leads the Sustainability Program and oversees mechanical systems projects worth over \$1 million dollars. Under his purview, 34 Kroger manufacturing plants have achieved zero waste status, diverting 90 percent of more of waste from landfills, and the Energy Star Program has been implemented in all facilities. Previously, Ramiro worked in similar engineering roles for Tyson Foods, Inc. and Nestlé.



EH&S Symposium

March 24, 2020

Introductions

- Lisa Zwack, Head of Sustainability
- Aaron Leow, Utility Engineer—Retail
- Ramiro Carrion, Mechanical Engineer—Manufacturing

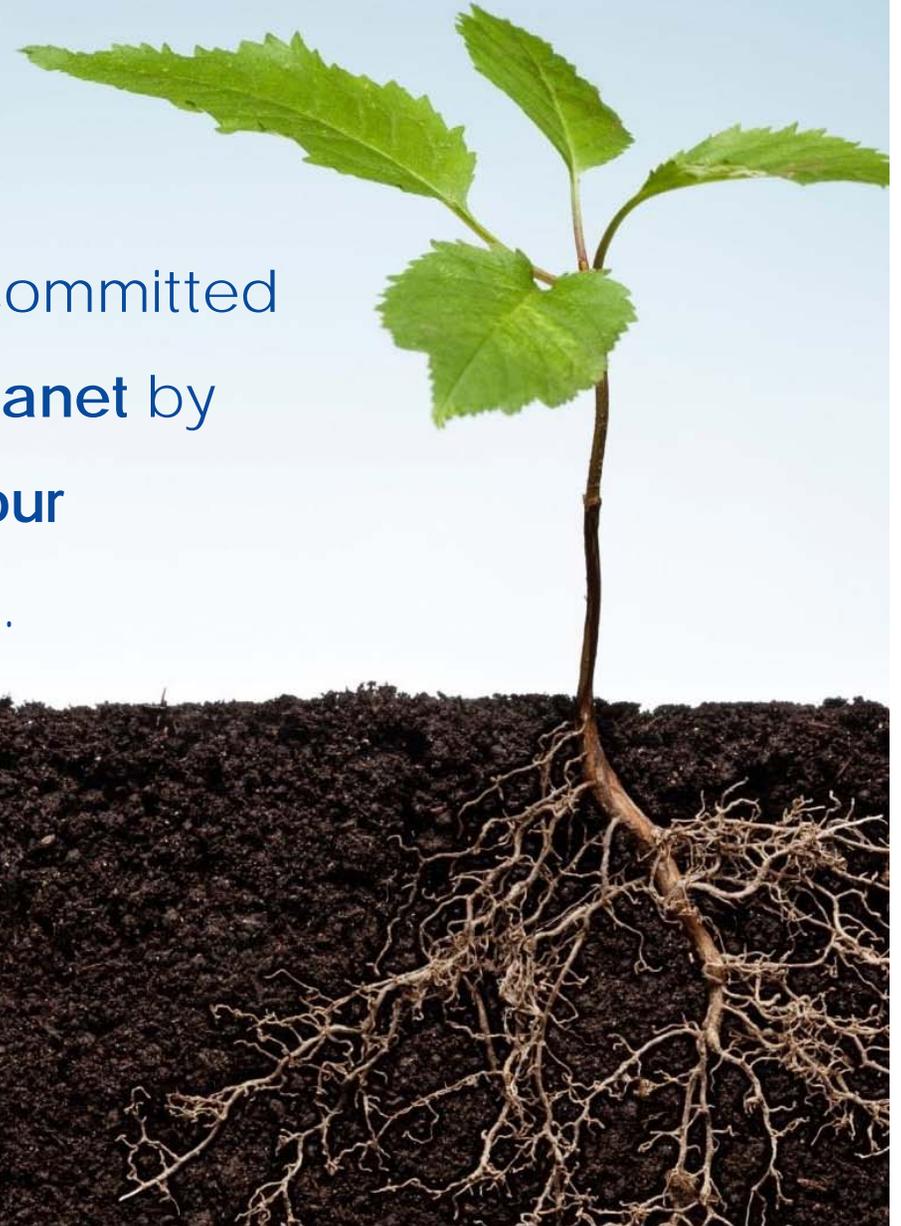
Agenda

- **Introductions**
- **Sustainability at Kroger**
- **Waste, Energy & Water**
 - Retail
 - Manufacturing
- **Key Takeaways**
- **Q&A**

About Kroger

- Nation's largest grocery chain
- \$122.3 B in sales
- 35 states + District of Columbia
 - 2,800 stores
 - 35 manufacturing plants
 - 45 distribution centers

As America's grocer, Kroger is committed to **protecting people and our planet** by advancing **positive change** in our **company and our communities.**



ZERO
HUNGER
ZERO
WASTE

by Kroger®

Kroger's plan to end hunger in our communities and eliminate waste in our company by 2025



Establish a \$10 million innovation fund through The Kroger Co. Foundation

Accelerate food donations to give 3 billion meals by 2025

Donate not just more food, more balanced meals

Advocate for public policy solutions to address hunger and help communities divert food waste from landfills

Achieve prior goal to be a Zero Waste company by 2020, plus achieve Zero Food Waste by 2025 in all stores and across the country

Join forces with new and long-standing partners—including Feeding America and the World Wildlife Fund

Transform Kroger communities and improve health for millions of Americans by 2025



INNOVATION  FUND
INAUGURAL
COHORT

CREATING COMMUNITIES
FREE OF HUNGER AND WASTE

THE KROGER CO.
ZERO
HUNGER
ZERO
WASTE
FOUNDATION

 FOOD FOREST


IMPERFECT
produce

 mobius

 replate

 ripe
revival

 seal ^{the}
seasons

 winnow

Sustainability highlights



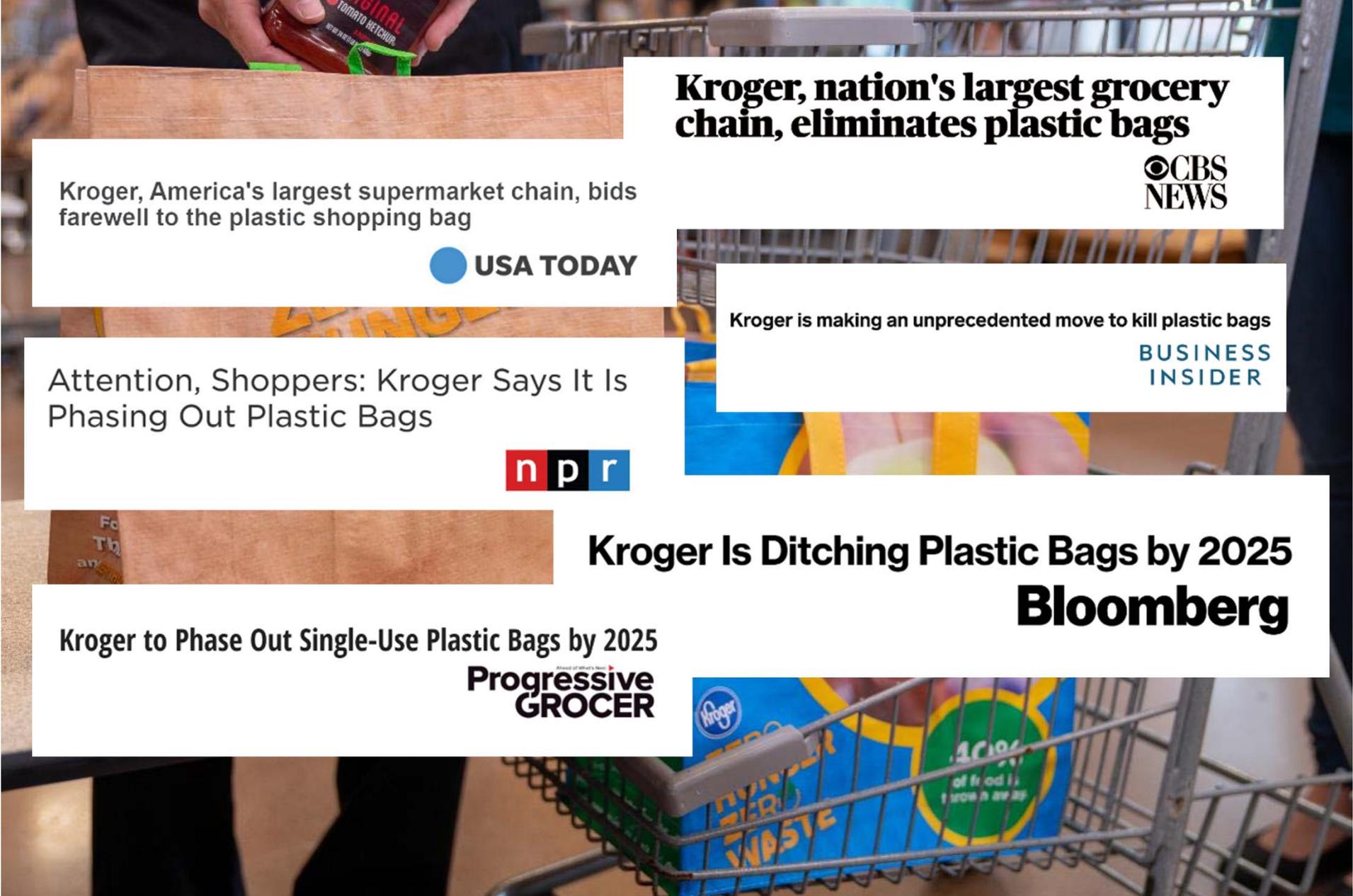
- 44.9%+ electricity savings in Retail since 2000
- Solar and wind installations produced 14.59 M kwh in 2018
- New solar array in Paramount, CA
- Decreasing normalized CO2

- 76% landfill diversion rate in 2018
- 160M+ reusable plastic containers shipped in Kroger network
- 52.15+ M pounds of plastic recycled
- 1.48+ pounds of cardboard recycled





10.1 M pounds of plastic saved in packaging used in Kroger Manufacturing



Kroger, nation's largest grocery chain, eliminates plastic bags

CBS NEWS

Kroger, America's largest supermarket chain, bids farewell to the plastic shopping bag

USA TODAY

Attention, Shoppers: Kroger Says It Is Phasing Out Plastic Bags

npr

Kroger is making an unprecedented move to kill plastic bags

BUSINESS INSIDER

Kroger Is Ditching Plastic Bags by 2025

Bloomberg

Kroger to Phase Out Single-Use Plastic Bags by 2025

Progressive GROCER





KROGER'S 2019 ENVIRONMENTAL, SOCIAL
& GOVERNANCE (ESG) REPORT

A Sustainable Future



**ZERO
HUNGER
ZERO
WASTE**



[Sustainability.Kroger.com](https://www.sustainability.kroger.com)

We imagine a better future for
people and the planet – a world
with Zero Hunger | Zero Waste.

2019
SUSTAINABILITY
REPORT



FRESH FOR EVERYONE™
Kroger®

Retail

Management of surplus food



Recycle it!  **ZERO HUNGER ZERO WASTE**

Follow these waste guidelines to help eliminate waste across our company. Thanks for being a Zero Hero.

DELI

Yes: Recycle These



- Cheese & Specialty Cheese Department
- Salad Bar
- Deli/Pasta Salads
- De-Packaged dips
- Olive bar items
- Fresh Kitchen
- Cut fruits
- Prepared foods and hot bar foods with no meat

No:

- MEAT*
- PLASTIC OR PAPER PACKAGING

* Please check with your store management to see if you are able to recycle meat.

Wait: Donate First

SELL

MARK DOWN

DONATE

RECYCLE

*Refer to the hauler's acceptable item listing for recycling

Recycling Company Name: _____

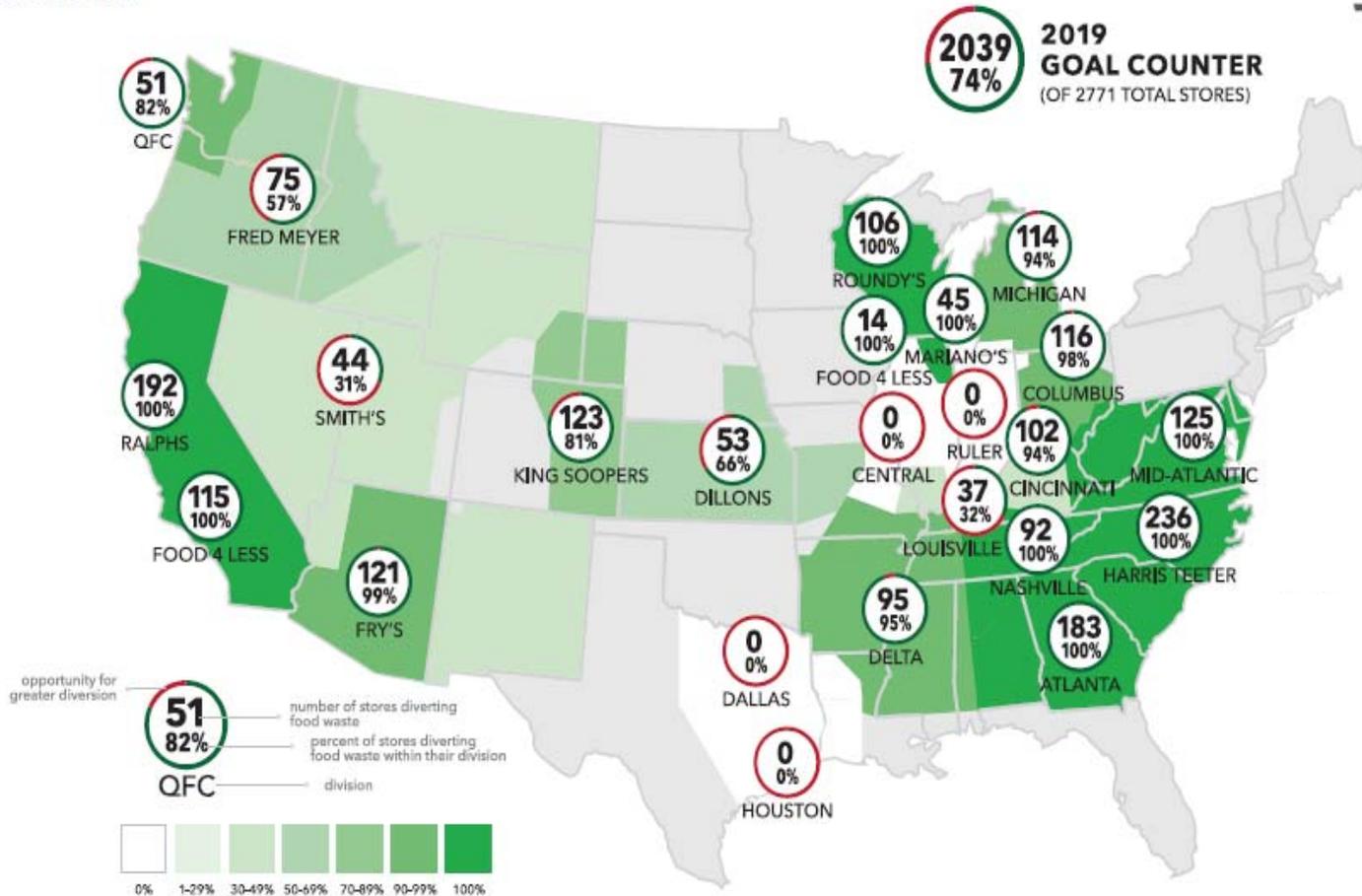
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Food waste recycling in stores

Food Waste Diversion

Status at end of December 2018

2019
SUSTAINABILITY
REPORT



Food waste reduction & recycling progress

Retail Food Waste: Company-Wide

BASELINE | 2017



PROGRESS | 2018

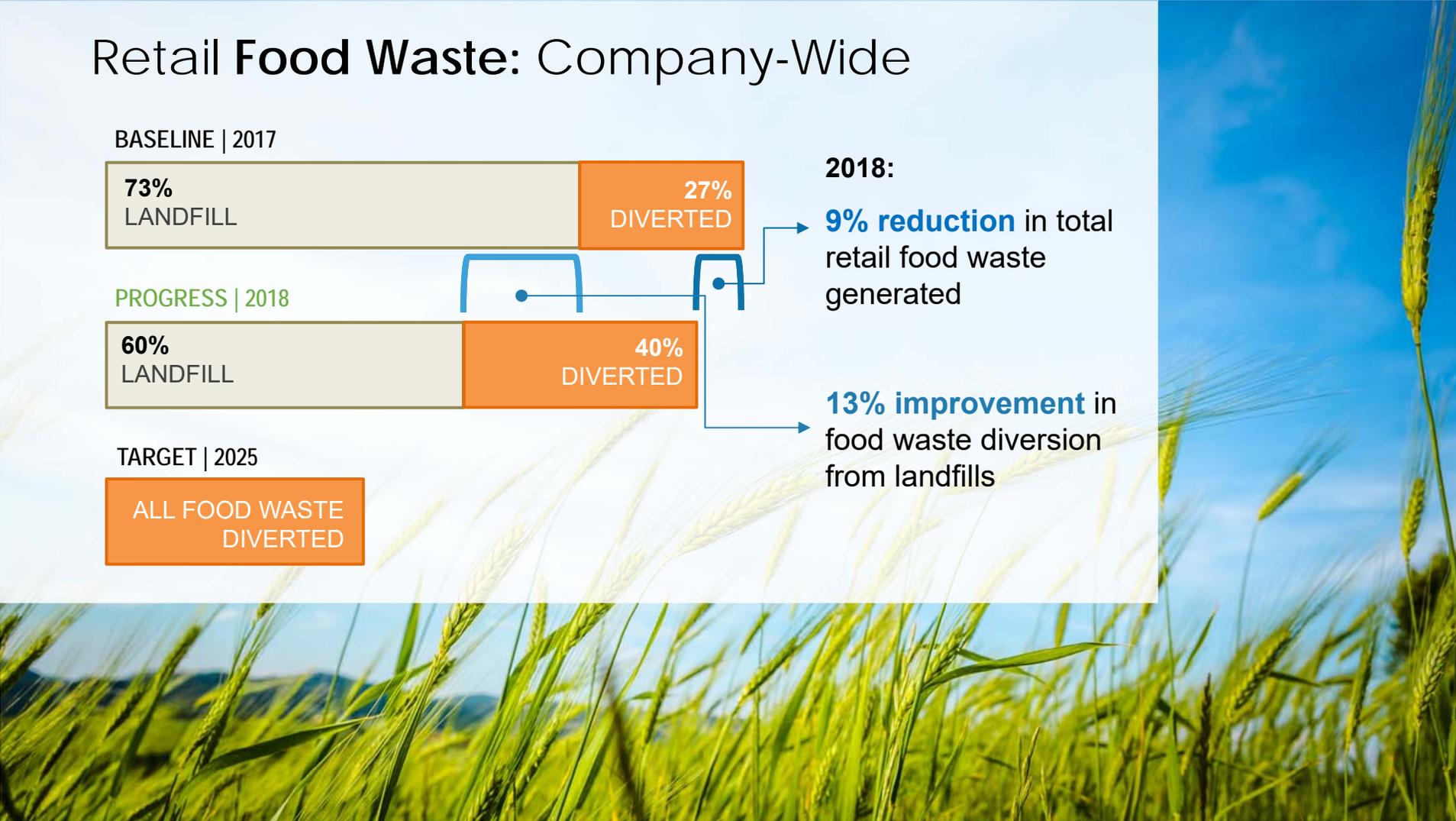


TARGET | 2025



2018:
9% reduction in total retail food waste generated

13% improvement in food waste diversion from landfills



Latest projects: LED retrofit

Replaced T8 fluorescent lamps with T8 LED lamps

- 350 million kWh annually saved across enterprise
- 150,000 kWh per store annually
- ~10% reduction in total electricity use



Latest projects: Glass door replacement

Adding glass doors onto open refrigerated cases

- Saves 200,000 kWh annually
- Saves 17,000 Therms annually
- ~15% reduction in total energy use



THE DOOR TO
SUSTAINABILITY

THIS DOOR HELPS
REDUCE OUR STORE'S
ENERGY USE BY **15%**

U.S. EPA ENERGY STAR program

- Average ENERGY STAR score of 71.5
- 809 stores ENERGY STAR certified
- Manufacturing team also uses ENERGY STAR principles



Latest projects: Adiabatic Condensers

Retrofitting an evaporative condenser with a “hybrid” solution

- No water treatment is needed, avoiding costly chemical additions
- Improvement in efficiency of fans and refrigeration means energy is net neutral
- Reduces store water use by 60%





FRESH FOR EVERYONE™
Kroger®

Manufacturing

Waste priorities

'Zero Waste' imperative in Manufacturing plants since 2010

- 90%+ waste diverted from landfill
- Opportunity to reduce landfill costs and produce recycling revenues
- Point of pride for company
- 31 zero waste facilities



Energy priorities

Energy efficiency focus

- ENERGY STAR principles applied in all plants
- Identify cost-effective opportunities to reduce energy & emissions
 - Energy audits
 - Energy management systems
 - LED retrofits
 - Lower GWP refrigerants
- First solar array in 2021



Water priorities

Finding water reductions in plant production processes, like at Winchester Farms, KY

- Reduced amount of water used to clean vats between cottage cheese processing cycles
 - Reduced water levels by 6 inches
 - Still met food quality and sanitation standards
- Achieved water savings:
 - 4,800 g per day
 - 1.273 M g per year



Water priorities

Adopting innovative wastewater management technologies at KB Specialty Foods, Ind.

- Installed anaerobic wastewater treatment system
 - Turns food production byproducts into energy through the anaerobic digestion process
- In 2018, the system:
 - Processed more than 52 M g wastewater
 - Reduced electricity demand by ~30%





Thank you!