

Preventing the Wasting of Food

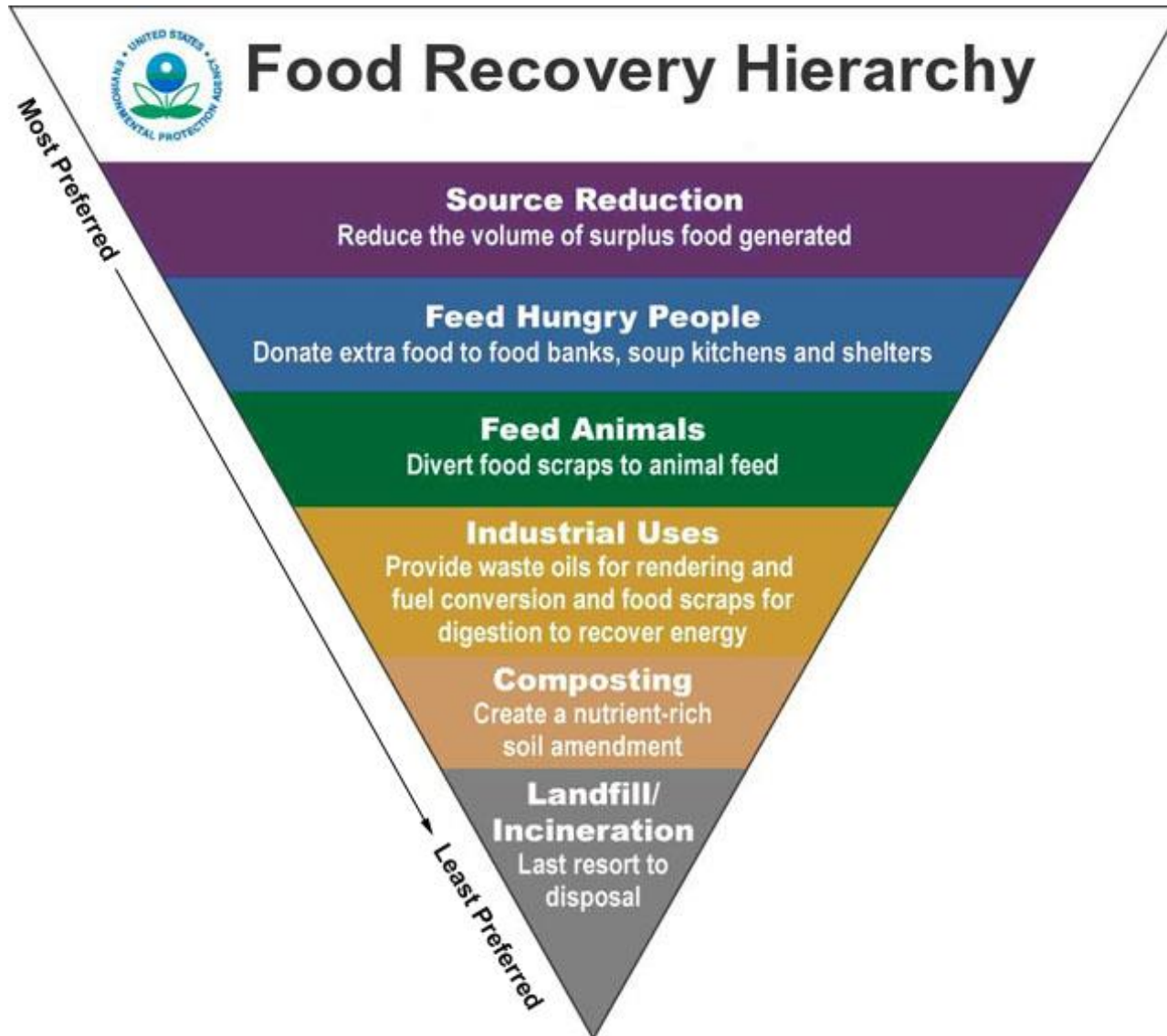


David Allaway
Oregon Department of Environmental Quality
November 16, 2017

“Wasted Food” or “Food Waste”?



EPA's Hierarchy



Why Wasted Food?

MORE THAN JUST FOOD

THE U.S. WASTES TONS OF RESOURCES WHEN WE WASTE FOOD

1,250 CALORIES PER PERSON PER DAY
THAT IS HALF OF THE RECOMMENDED DAILY INTAKE FOR ADULTS

19%
OF ALL
U.S.
CROPLANDS
THAT IS MORE
LAND THAN ALL
OF NEW MEXICO

21% OF U.S. LANDFILL
CONTENT



THE NO. 1 CONTRIBUTOR BY WEIGHT

18%
OF ALL
FARMING
FERTILIZER
WHICH CONTAINS
3.9 BILLION POUNDS
OF NUTRIENTS

2.6% OF ALL U.S. GREENHOUSE
GAS EMISSIONS ANUALLY



37 MILLION PASSENGER VEHICLES' WORTH

21% OF THE U.S. AGRICULTURAL
WATER USAGE



MORE THAN: TEXAS + CALIFORNIA + OHIO

\$218,000,000,000

WHICH IS EQUAL TO 1.3% OF THE U.S. GROSS DOMESTIC PRODUCT (GDP)

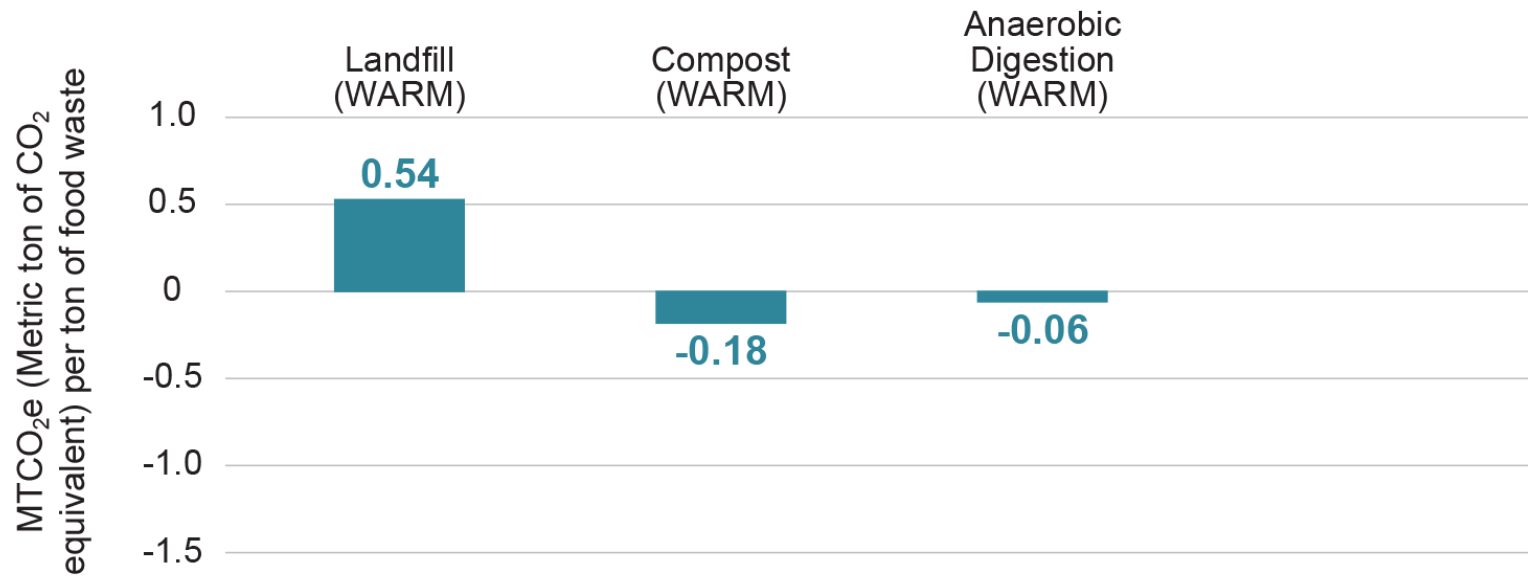
Relative GHG Impacts

Food Waste Management Activities



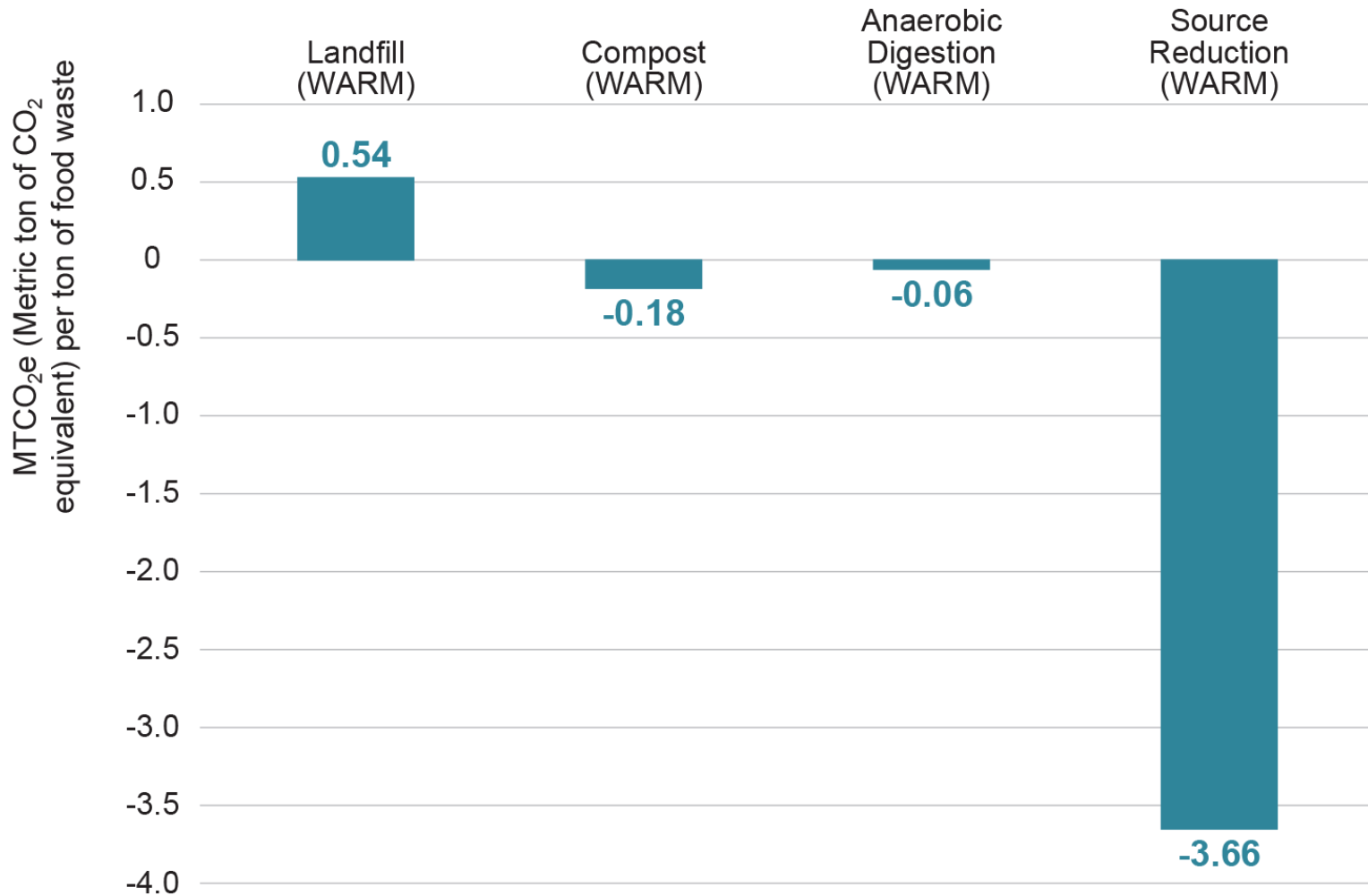
Relative GHG Impacts

Food Waste Management Activities

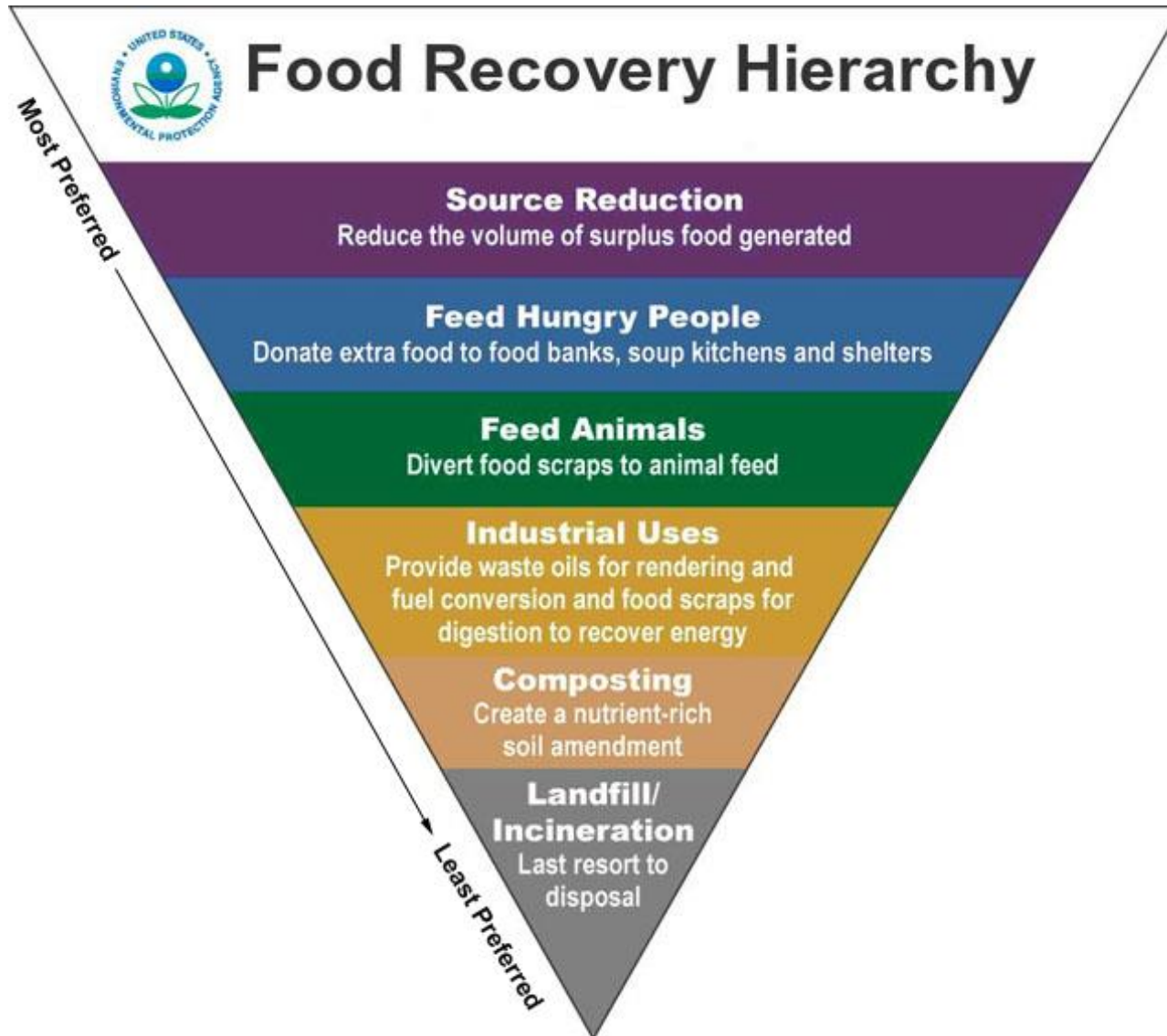


Relative GHG Impacts

Food Waste Management Activities



EPA's Hierarchy



Oregon's Strategic Plan

Oregon DEQ Strategic Plan for Preventing the Wasting of Food



Materials Management

700 NE Multnomah
Portland, OR 97232
Phone: 503-229-5096
800-452-4011
Fax: 503-229-6702
Contact: Elaine Blatt
www.oregon.gov/DEQ



State of Oregon
Department of
Environmental
Quality

<http://www.oregon.gov/deq/mm/Pages/foodwastestrategy.aspx>

Oregon Wasted Food Measurement Study



Oregon Wasted Food Measurement Study

Task 1 - Qualitative Interviews

- June 2017 Published Report

Task 2 – Statewide Residential Survey (urban and rural)

- Finalized in August 2017

Task 3 – Household Wasted Food Study (urban and rural)

- Finalized Design in August, recruiting now April 2018 Final Report

Task 4 – ICI Case Studies (fifteen total)

- Finalize Design in July. May 2018 Final Report

Task 5 – Overall Analysis and Report

- August 2018 Final Report and Protocols for States, Counties, Cities, and Businesses



Composting and Prevention



Conahan for Oregon Business The Wastrel

Role of Composting

- ✓ Composting alleviates guilt associated with trashing food, which may result in an increased generation of wasted food.
- ✓ Composting seen as separate from trash, so amount discarded may be “hidden”, resulting in inability to identify opportunities to prevent wasted food.

Commercial Campaign (SB 263)

- Toolkit for use by local governments:
www.oregon.gov/deq/mm/wpcampaigns
- Target audience: Consumer-facing food businesses – grocery, full and limited service restaurants, food service.
- Messaging focuses on making the “business case” for preventing the wasting of food:
 - ✓ Lost food is lost profit.
 - ✓ Simple steps can pay off.

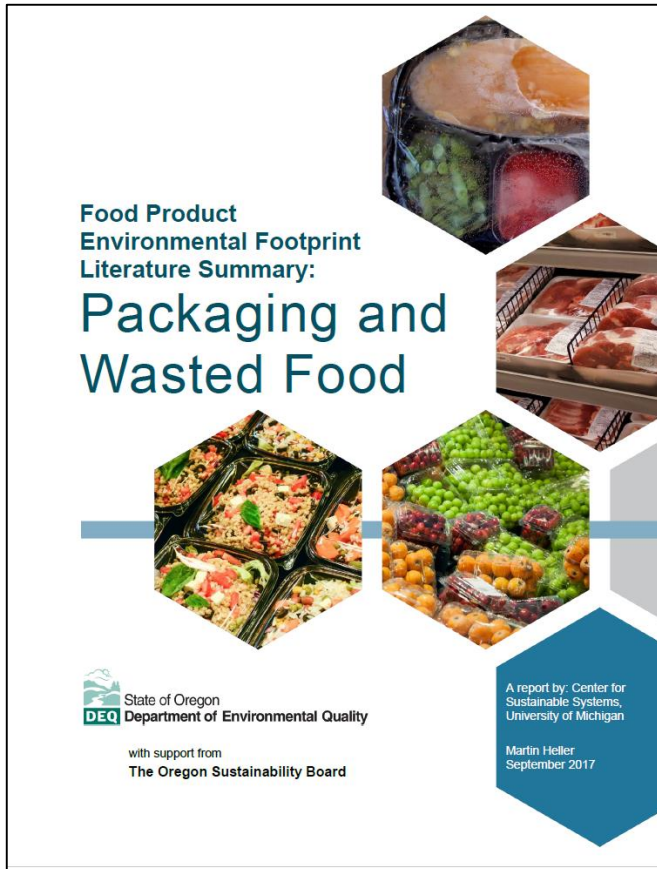


Grants

- 2017 focus on source reduction of wasted food:
 - ✓ Extra “focus points” in scoring
 - ✓ Broader eligibility (colleges, universities, schools)
- 7 applications this year for wasted food source reduction



Food Product Footprint Literature Reviews



**Food Product
Environmental Footprint
Literature Summary:
Packaging and
Wasted Food**

State of Oregon
DEQ Department of Environmental Quality

with support from
The Oregon Sustainability Board

A report by: Center for
Sustainable Systems,
University of Michigan

Marlin Heller
September 2017



www.oregon.gov/deq/mm/food/Pages/Product-Category-Level-Footprints.aspx

Pre-Consumer Food Waste

HOW MUCH OF THIS PROBLEM STEMS FROM U.S. FOODSERVICE OPERATIONS?

4–10% of food purchased is **THROWN OUT** before reaching a plate.



\$9–23 BILLION of pre-consumer waste generated by the U.S. out-of-home restaurant and foodservice industry every year.

aramark 2016 Case Study

Aramark implements daily tracking and a waste reduction program across top 500 accounts. **Results from the pilot program at 12 accounts showed a 50% overall reduction in food waste.**

Pre-Consumer Food Waste



City of Hillsboro



DEQ

August 2010

Food Waste Prevention Case Study: Intel Corporation's Cafés



LeanPath

BON APPÉTIT



City of Hillsboro

Oregon Department of
Environmental Quality



Printed on 100% recycled paper

- 47% reduction in pre-consumer food waste
- 13.2% reduction in per-meal food costs
- Greenhouse gas emissions reduction of ~100 MTCO₂e/year

Pre-Consumer Food Waste

baxterstorey



- 88% reduction in squash waste using a peeler rather than a knife

School Cafeterias



- Food choices and “offer versus serve”
- Recess *before* lunch

Food Manufacturing – Bakery Waste

OVERALL FOOD AND RESOURCE CONSERVATION OPPORTUNITIES

- \$191,000 in resource savings identified with an aggregate payback of 0.6 years (\$47,340 investment required)
- 110,500 kg of food waste (42%) can be reduced

- Provision Coalition’s “Food Loss and Waste Toolkit”.
- At Calgary Italian Bakery Ltd.:
 - Identified production processes resulting in ~265,000 kg of food waste per year
 - Investigating waste at bread slicer and bagger could result in a reduction of 50,000 kg or \$63,000 per year
 - Improving forming and conveyance of dough prior to proofing could save \$31,000 per year in misshaped English muffins.

“This project has provided us with valuable insight on how to improve our operations . . . We understand now that with a few relatively simple process changes and upgrades we can find significant production savings for the company and the environment.”

- Louis J. Bontorin, VP Sales and Administration, Calgary Italian Bakery Ltd.

Retail – Delhaize America/Hannaford

Delhaize America – Continuous measurement since 2008, including tons of waste per sales and a focus on more than zero waste to landfills.



- **Hannaford retail stores** found that **daily deliveries**, versus 3-4 times per week, and implementing **Computer Assisted Ordering (CAO)** helped them to reduce food waste (and save money) through improved real-time inventory management. For example, **Stores with CAO were able to reduce waste in bagged salads by 50%**



Thank you

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