

Leveraging Employee Engagement to Reduce Food Waste and Build a Lasting Culture of Sustainability at Kozy Shack



Executive Summary

Land O'Lakes collaborated with the Pacific Coast Food Waste Commitment and TripleWin Advisory to implement a food waste employee engagement initiative at one of the company's Kozy Shack pudding facilities. The goal was to drive measurable reductions in food waste and build a lasting culture of sustainability to support Land O'Lakes' goal of 30% food waste reduction by 2030.¹

The project ran over a four-month period (July to October 2023) and included several company-wide interactive elements:

- An educational training video on food waste produced in [Spanish](#) and [English](#).
- A four-week employee engagement competition to build awareness and excitement around identifying food waste ideas.
- A Food Waste Opportunity Register to aggregate, categorize, and prioritize food waste reduction initiatives.
- A month-long audit of one employee-identified "Quick Win" food waste reduction idea.

The project yielded impactful results:

- 78% of Kozy Shack plant employees received food waste education and training by watching the [food waste video](#) through the company's cloud-based enterprise management system software, Workday.
- 77% of plant employees submitted food waste reduction ideas.
- A total of 277 food waste ideas were added to the Food Waste Opportunity Register.
- Implementing a "Quick Win" employee idea reduced food waste of a particular product by 74% and is projected to save the company \$3,500 annually.

Key insights from the project:

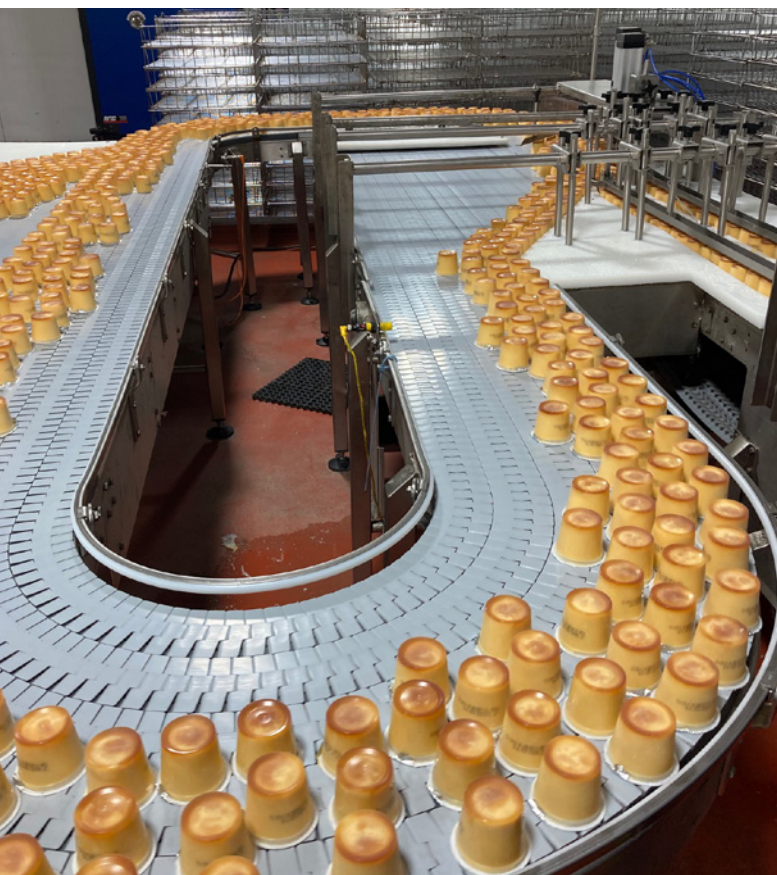
- Plant [GEMBA](#) walks helped transform employees from passive doers to active solution-seekers and resulted in a large number of employee ideas submitted.
- Employees reported that the video was the most impactful educational tool used.
- Utilizing bilingual materials was critical to success.
- Many more employee responses were submitted in physical paper format than digital.
- Physical, in-person employee engagement should be emphasized in a manufacturing environment.

¹ From 2020 baseline year.

Introduction

Land O'Lakes, Inc., one of America's premier agribusiness and food companies, is a member-owned cooperative with industry-leading operations that span the spectrum from agricultural production to consumer foods. With 2023 annual sales of \$17 billion, Land O'Lakes is one of the nation's largest cooperatives, ranking 213 on the Fortune 500. Building on a legacy of more than 100 years of operation, Land O'Lakes today operates some of the most respected brands in agribusiness and food production, including Land O'Lakes Dairy Foods, Animal Nutrition, WinField United, and Truterra. The company does business in all 50 states and more than 60 countries. Land O'Lakes, Inc. corporate headquarters are located in Arden Hills, Minnesota.

Kozy Shack, a leading manufacturer and marketer of premium dessert products with production facilities located in Hicksville, NY and Turlock, CA, was acquired by Land O'Lakes in 2012. This project took place at their Turlock Kozy Shack facility where there are 125 employees.



Kozy Shack Facility in Turlock, CA.

Project Background

Land O'Lakes has set the following waste and climate goals:

- Reduce food waste in standard operational practices by 30% by 2030 (SDG 12).
- Achieve a 50% reduction in waste to landfill from operations by 2030 (SDG 12).
- Reduce Scope 3 emissions by 25% by 2030 (SDG 13).

In order to achieve these goals, Land O'Lakes recognized the need to engage employees at every level of their operations. Employees who work on production often are aware of issues or opportunities that are not always known by leadership. Their engagement around reducing waste is critical for making progress toward a company's food waste reduction and diversion goals. Land O'Lakes was inspired by [a similar PCFWC project implemented at a Bob's Red Mill manufacturing facility in Oregon in 2022](#), which resulted in a 70% reduction in food waste from a "Quick Win," employee-identified initiative implemented on one of its manufacturing lines.

Project Elements

Education & Awareness

To initiate employee awareness around food waste, a 14-minute educational video was developed for Land O'Lakes. This video covered all aspects of food production—from farm to consumer—and explained the important issues linked to food loss and waste, such as climate change, greenhouse gas emissions, global hunger, and wasted resources. It was imperative to Land O'Lakes that the video be bilingual to ensure the broadest reach across its majority Spanish-speaking employees at the Kozy Shack Turlock plant.

The video was shown at a Kozy Shack Turlock “State of the Plant” meeting held over a two-day period to accommodate all plant employees and shift schedules. Additionally, both language versions of the training video were “tagged” as a mandatory watch through the company’s cloud enterprise management system.



Two employees on a GEMBA walk.

Employee Engagement

Next, “GEMBA” walks (a continuous improvement strategy used in manufacturing) were conducted over multiple days at the Turlock plant. This allowed TripleWin Advisory, Land O'Lakes, and Kozy Shack to speak with employees during food production and to see firsthand where food loss and waste typically occur. All ideas and thoughts were captured and entered into a Food Waste Opportunity Register.

Simultaneously, a custom-developed, detective-themed “Solve the Mystery of the Lost Food” employee engagement challenge was held over a four-week period to make the process of identifying and submitting food waste reduction ideas into a fun competition for employees. Just like the training video, the engagement materials of the competition were bilingual, ensuring broad reach and inclusive participation. The competition employed gamification elements such as giving away weekly prizes, honoring best “detectives of the week,” team huddles, real-time signage updates, and an aspirational goal to be reached of bringing in a taco truck to serve lunch to all plant employees.

A total of 97 employees (77.6%) at Kozy Shack Turlock participated in the month-long engagement competition.



Bilingual food waste video.

“Solve the Mystery of the Lost Food” Employee Engagement Challenge



A weekly poster featuring the top detective with reminders of competition milestones placed throughout the plant and displayed as slides on the internal TV system.



Bilingual English and Spanish signage for the detective-themed competition: a six-foot “detective evidence board” showing the progression of clues throughout the four-week competition.



A briefcase box used to collect food waste “clues.”

Food Waste Opportunity Register

Through the GEMBA walks and the employee engagement competition, 277 food waste reduction ideas were identified. All were inputted into the Food Waste Opportunity Register and categorized across multiple dimensions:

- Speed of impact (Quick Win, Gem, Strategic or Capital Investment, Don't Pursue)
- Degree of food savings (Low, Medium, High)
- Degree of resources (cost and effort) required to implement (Low, Medium, High)

The thrust of the project was to hone in on and test one employee-submitted “Quick Win” food waste solution idea in order to measure how much material yield loss could be avoided in operations through its implementation. Ideas in the Quick Win category had to meet certain criteria:

- Are “do it now” opportunities
- Yield substantive food waste savings
- Require little-to-no cost to implement
- Need minimal effort to deploy

Reducing Food Waste

Food waste opportunity #13—optimize utilization of condensed milk in flan production, which was employee-identified during one of the GEMBA walks—was selected to be tested and measured for how much it would help reduce material yield loss. In the last phase of the pilot, over the course of several weeks, a pre-adjustment and a post-adjustment waste analysis on condensed milk utilization were conducted.

During the pre-adjustment, business-as-usual (BAU) phase of the audit, employees measured condensed milk that remained in the pails after the product was evacuated during the mixing phase of production. Between 60 to 80 measurements were recorded by employees over each production cycle.

During the post-adjustment phase, a spatula was introduced to scrape out as much condensed milk material that remained in the pails used in production. The spatula-scraped pails were weighed for material loss and those measurements were recorded, just as in the BAU-phase of the waste audit.

The project team analyzed the weights from both the BAU and spatula-use phases of the waste audit to determine how much material yield savings were realized.



Waste audit signage used on production floor during BAU phase of the audit.



Waste audit signage used on production floor during post-adjustment phase of audit.



Condensed milk pails.

Project Findings

The “Quick Win” waste audit and spatula solution for condensed milk utilization was a categorical success. With the introduction of a silicone rubber spatula to scrape remnant material out of pails and into the ingredient mixing batch for flan production, the Kozy Shack Turlock plant realized a 74% material yield savings that translated into a nearly \$60 cost savings per production run (see below table for details).

Condensed Milk Waste Audit Analysis			
Waste Audit Phase	Amount of Condensed Milk Per Pail (lbs)	Average Material Loss of Condensed Milk Per Pail (lbs)	Percent Food Wasted
Pre-adjustment, BAU (No spatula)	50	0.85	1.69%
Post-adjustment (Spatula)	50	0.22	0.43%
Delta (Spatula-BAU)		0.63	-1.26%
% Difference of Food Waste between BAU and Spatula implementation			-74.1%

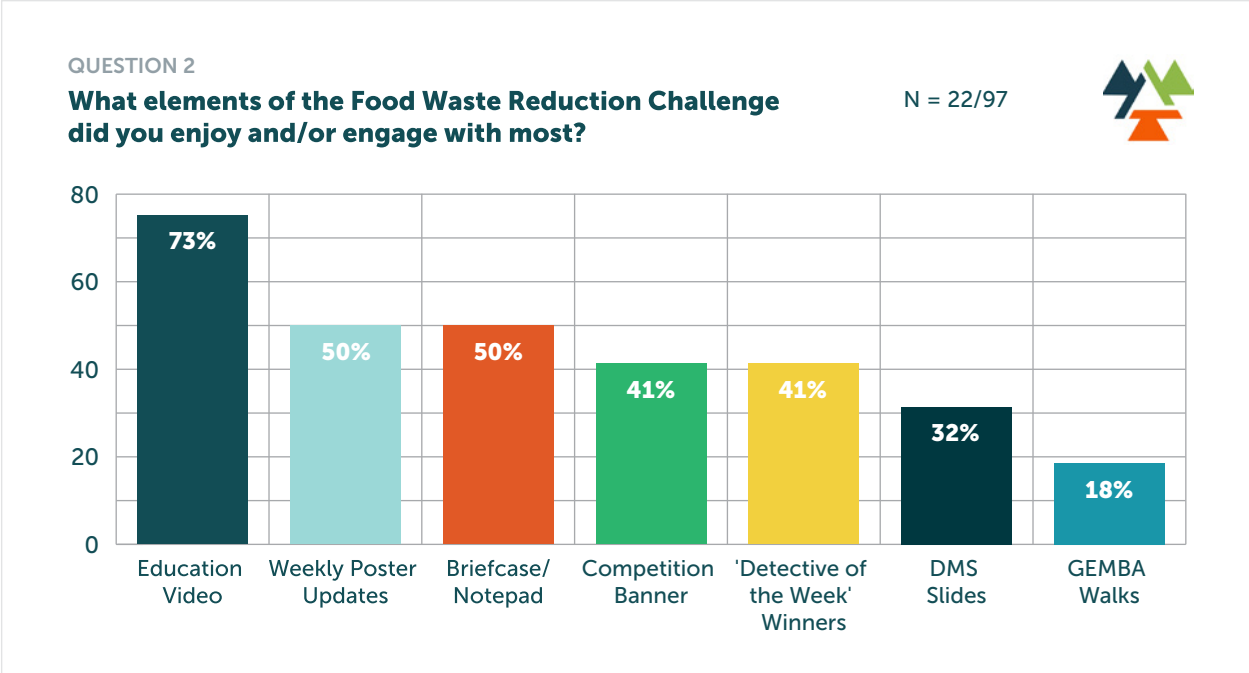
Raw ingredients used in production are priced by unit of purchase. Kozy Shack purchases condensed milk in 50-pound pails. Using an average number of condensed milk pails utilized in Kozy Shack Turlock’s flan production weekly (76 pails), anticipated cost savings to be realized from continuing to use a spatula in the ingredient mixing phase was calculated at \$70 weekly, \$280 monthly, nearly \$910 quarterly, and almost \$3,500 annually (see below table). Employee-identified food waste reduction solutions can be powerful in their simplicity and effectiveness.

Estimated Savings from Spatula Use				
Timeframe	Average # Pails Used in Production	Cost of Material Loss		
		BAU (No Spatula) 1.69% Waste	Spatula Use 0.43% Waste	Savings (BAU - Spatula)
Average Cost of Material Loss per Container (\$)		\$1.24	\$0.32	\$0.92
Weekly	76*	\$94.24	\$24.32	\$69.92
Monthly (4 weeks)	304	\$376.96	\$97.28	\$279.68
Quarterly (13 weeks)	988	\$1,225.12	\$316.16	\$908.96
Annually (50 weeks)	3,800	\$4,712.00	\$1,216.00	\$3,496.00

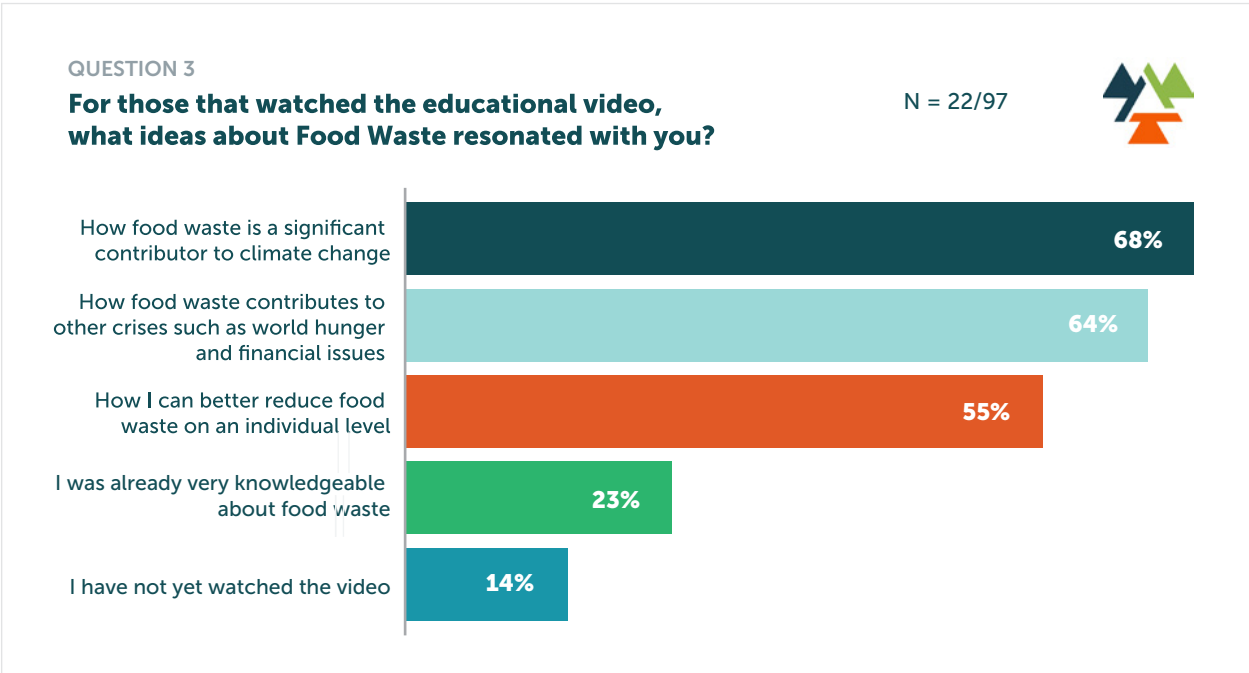
*Estimate provided by Kozy Shack Turlock Plant Managers

Employee Survey Feedback

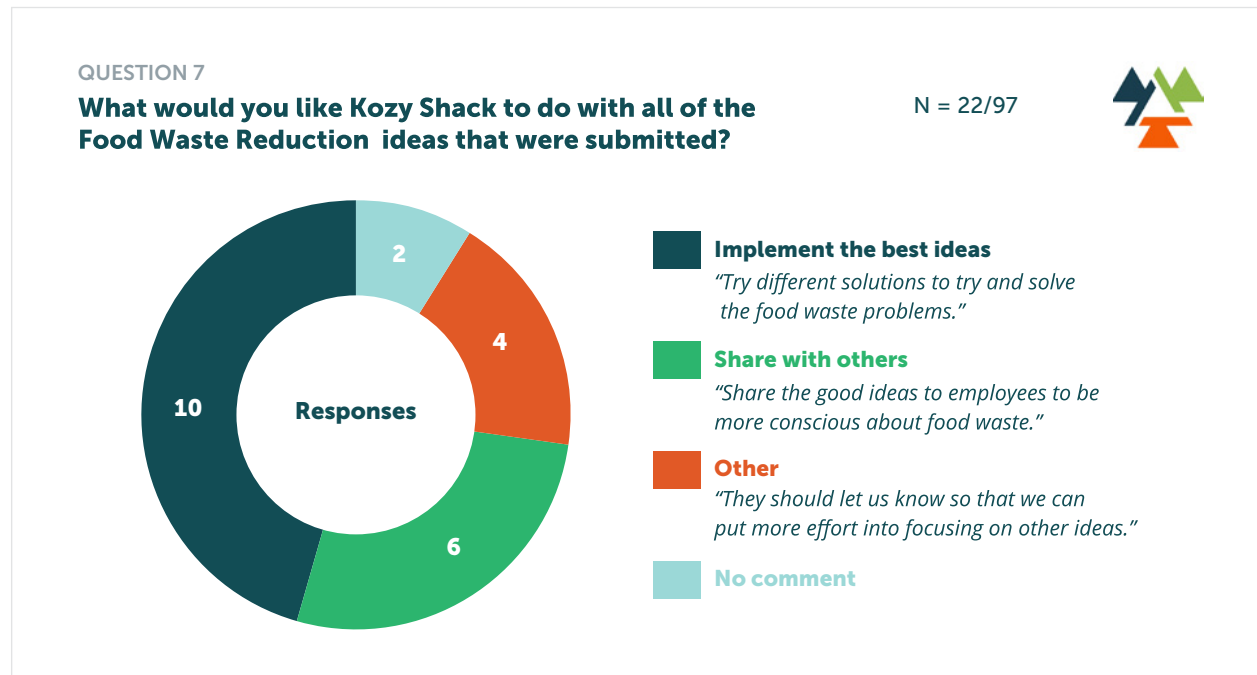
From the post-engagement survey, 73% of employees said that the food waste educational training video was the project element they enjoyed and/or engaged with most (see Question 2 chart).



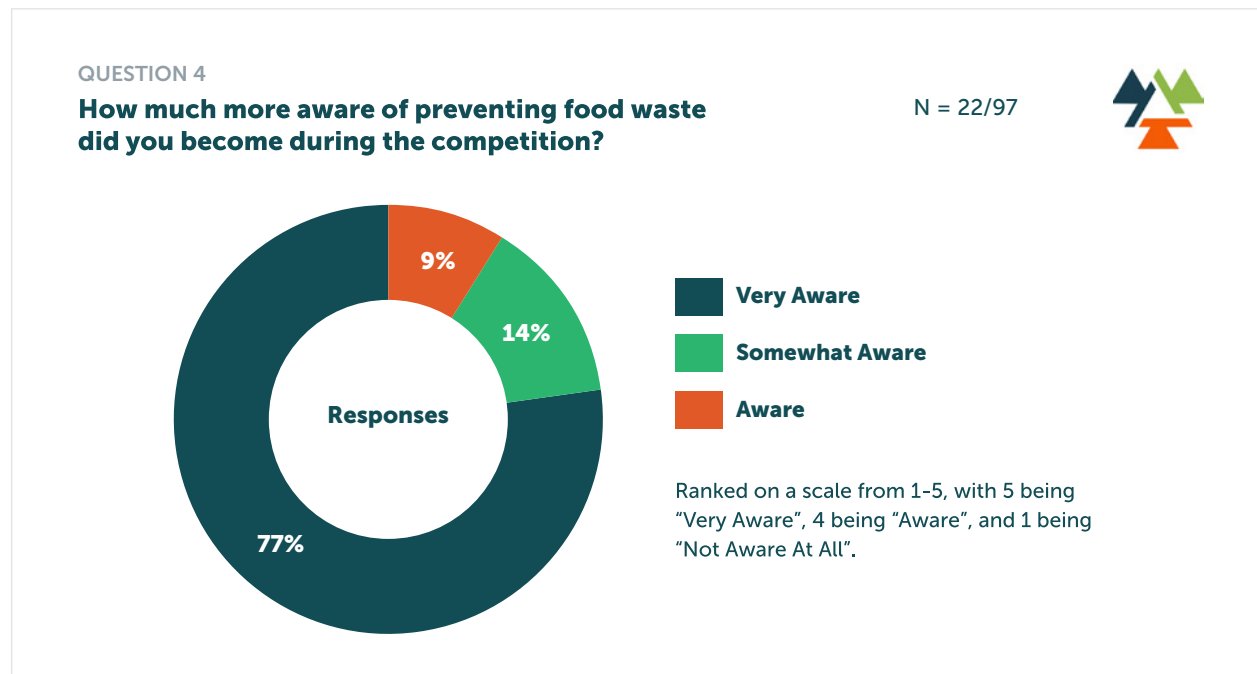
Of the ideas discussed in the training video, 68% and 64% of employees, respectively, said that learning how food waste is a significant contributor to climate change and how it contributes to other crises such as world hunger resonated most with them (see Question 3 chart).



Of the employees who provided feedback on the engagement survey, 45% gave statements that reinforced their desire to have Kozy Shack and Land O'Lakes implement the best food waste ideas from all those that were submitted during the project (see Question 7 chart).



The challenge was very effective at building awareness around food waste. As seen in the Question 4 chart, 77% of employees expressed being much more aware of food waste and food waste prevention after the competition.



Key Findings and Best Practices

One of the key drivers of this project's success was the active involvement of plant managers. Leading by example proved to have a positive effect on employee participation rates. Other major takeaways and best practices to note include:

- The plant GEMBA walks catalyzed employee involvement in generating meaningful and impactful food waste prevention ideas. Employees became active participants instead of passive observers throughout the process.
- Bilingual training and engagement assets strongly supported increased participation and employee inclusiveness. Of the 277 ideas submitted, 32% were written in Spanish.
- Although the world grows increasingly digital, analog means of communication, participation, and distribution of assets played a critical role in this project. Only nine (9) ideas, about 3% of all ideas generated by employees, were submitted electronically (via QR code); the rest were physically written submissions.
- Training and educational assets played a vital role in building employee understanding of the importance of food waste reduction efforts. Making the learning mandatory supported collective understanding and focused solution-development around a key company goal.
- Collecting pre- and post-implementation data of the "Quick Win" idea was instrumental for measuring impact and demonstrating the return on investment.
- It was important to include the rapid implementation of an employee idea to (a) show employees that their ideas were taken seriously and would be acted upon, thereby reinforcing a culture of continuous improvement and sustainability and (b) demonstrate to leadership and employees the profit and savings to be made from implementing their ideas, motivating more extensive action on additional food waste reduction ideas.



A plant worker at the Kozy Shack Facility.

Next Steps

Following this project, Land O'Lakes has some potential next steps to take around their food waste reduction initiatives, including:



Kozy Shack Facility in Turlock, CA.

- Developing standard operating procedures and quality assurance measures to implement the spatula solution full-time at the Kozy Shack Turlock plant.
- Exploring the potential to expand the project to Turlock's New York sister plant.
- Developing an evergreen course for the Land O'Lakes learning platform that upholds and reinforces the company's food waste reduction goals. The course would educate and build understanding among the workforce of what can and needs to be done around food waste.
- Implementing additional food waste reduction ideas identified during the project, housed in the Food Waste Opportunity Register. While this project only had time to implement a "Quick Win" solution, there were nearly 50 "gem" ideas identified that were categorized as small-to-medium cost and effort initiatives with potentially even higher reductions in food waste.

Acknowledgments

The PCFWC would like to thank Land O'Lakes, Kozy Shack Turlock, and TripleWin Advisory for their contributions to this case study.

About Land O'Lakes

Land O'Lakes, Inc., one of America's premier agribusiness and food companies, is a member-owned cooperative with industry-leading operations that span the spectrum from agricultural production to consumer foods. Kozy Shack, a leading manufacturer and marketer of premium dessert products with production facilities located in Hicksville, NY and Turlock, CA, was acquired by Land O'Lakes in 2012. This project took place at their Turlock Kozy Shack facility where there are 125 employees.



About TripleWin Advisory

TripleWin Advisory is a CDP Accredited Solutions Provider focused on progressing circularity solutions for industry. The company is a woman-owned, public benefit company and certified Women Enterprise Business (WEB) in the state of Oregon.



About the Pacific Coast Food Waste Commitment

The Pacific Coast Food Waste Commitment (PCFWC) arose out of the [Pacific Coast Collaborative](https://pacificcoastcollaborative.org) in 2016 and is an innovative public-private partnership made up of West Coast jurisdictions, U.S. food industry leaders, and nonprofit resource partners that together seek to eliminate food waste in the region by 50% by 2030. Learn more about the initiative and its members at pacificcoastcollaborative.org/food-waste.



Business Signatories

(As of Spring 2024)

Retailers



Hospitality and Foodservice



Distributors



Manufacturers



Growers



Resource Partners

