

2013 Case Study

Dillons

Intern: Kara Hall
Major: Civil Engineering
School: University of Kansas

Wichita, Kansas



Company background

Dillons is a grocery chain owned and operated under Kroger, a national company based in Cincinnati, Ohio. The company operates 2,424 grocery retail stores, 791 convenience stores, and 348 jewelry stores in 31 states. Kroger employs 343,000 associates nationwide in its stores as well as 34 distribution centers, and 37 food processing plants. The Dillons division operates 88 stores in the Midwest region, 66 of which are located in communities across Kansas. Dillons strives to provide their customers with the freshest and highest quality products in its stores.

Project background

The objective of the summer 2013 internship was to reduce the amount of excess food and food-related product being sent to the landfill from two stores in Wichita. Through observation, data collection, and analysis areas of opportunity for both source reduction and food diversion were identified in each store.

Incentives to change

According to the EPA, "In 2011 alone, more than 36 million tons of food waste were generated, with only four percent diverted from landfills and incinerators for composting." When food decomposes in landfills it generates methane, a potent greenhouse gas. It is well documented that grocery stores nationwide account for a portion of that food being thrown into landfills. Kroger and the local Dillons division are seeking ways to reduce and divert excess food waste nationwide. According to its 2013 Sustainability Report, Kroger has donated 200 million meals to local food banks nationwide. Dillons' stores actively participate in these donations. However, in an effort to improve and quantify the process for source reduction

and food diversion, they partnered with K-State's pollution prevention (P2) intern program to host a program titled "Food Recovery Challenge Feeds Sedgwick County Hungry." The project was modeled after The Food Recovery Challenge (FRC), a national EPA program aimed at reducing the amount of food being sent to landfills. Although the Wichita Dillons stores have not formally joined FRC, their parent company has.

Projects reviewed for P2 potential

1. Bakery

In the bakery departments, two sources of excess product were identified. In both stores, bulk case donuts that did not sell were being thrown away, creating large amounts of product being sent to the landfill. It was recommended the donuts in the bulk case be boxed up at night rather than left out, making them eligible to be sold at marked down prices. This process extended the opportunity for sales and made the product eligible for donation.

In both stores studied, bolilo rolls were produced in quantities to meet Dillons production standards; however, in one store approximately 40 percent of the bolilo rolls did not sell and were then donated. It was recommended that the store reduced this loss by adjusting their production numbers and times. This allowed the store to produce bolilos on demand, ensuring that the product was always available.

The recommendation regarding donuts has been partially implemented and the recommendation regarding bolilo rolls has been implemented. Based on loss averages, implementing these recommendations will reduce approximately 4.6 tons of waste annually, and save approximately \$20,810 annually based on retail loss and landfill fees.

2. Produce

Based on store observations and data collected by the intern, produce was responsible for the largest portion of weight being sent to the landfill. This was generated through expired product or product that was no longer fresh enough to meet Dillons standards.

In order to reduce this waste, Dillons kicked off a Perishable Donation Partnership with The Kansas Food Bank in June 2013. Over the first 36 days of the program, the stores donated 2,870 pounds of produce to The Kansas Food Bank. It was also recommended that store 16 donate the remaining outdated produce to Tanganyika Wildlife Park in Wichita. One store was donating an average of about 100 pounds a day of outdated product to Tanganyika Wildlife park at the end of the project. Implementing these recommendations will reduce landfill waste by an estimated 36 tons over the course of a year. Both programs have been implemented in the stores.

3. Deli

Deli rotisserie chickens were the primary source of excess food in this department. Based on data collected during the internship, an excess of 78 pounds of chicken was produced for the two stores each week. Some of the excess chickens were chilled and sent to the store's refrigerated case for sale through a program called the Second Chance Program (SCP). The intern worked with staff to decrease production and increase use of SCP.

Implementing these recommendations could reduce annual impacts by approximately 5.4 tons of waste and save nearly \$30,000 based on retail loss and landfill costs.

4 .Grocery

The main source of product being thrown away in the grocery department, which included frozen, dairy, and perishables, was from the dairy department. Broken eggs accounted for most landfill weight in this department. It was observed that breakage due to shipping problems accounted for 60-90% of the damaged eggs. As a result of this documented loss, Dillons plans to implement a new shipping method region-wide, incorporating sturdier crates into shipping and stocking of eggs in all stores.

The improved shipping method is scheduled to be implemented at the end of the summer. Implementing new shipping practices at these two stores should reduce annual impacts by 2.7 tons of waste and save more than \$10,000.

Recommendations without quantifiable savings

- ◆ Increased use of markdowns in produce
- ◆ Donations in deli and seafood at east store
- ◆ Utilize CAP and CAO in bakery at west store
- ◆ Fully utilize bone barrel in meat department

Summary of 2013 intern recommendations for Dillons

Project description	Annual estimated environmental impact	Annual estimated cost savings	Status
Grocery	2.7 tons	\$2,058	Planned
Produce	36 tons	\$2,863	Implemented
Bakery			
Bolilo Rolls	2.5 tons	\$14,202	Implemented
Donuts	2.1 tons	\$9,079	Partially Implemented
Deli	5.4 tons.	\$29,955	Recommended
Total savings *	48.7 tons	\$58,157	
GHG reductions *	33 metric tons CO2e		

*Does not include projects that are "not recommended" or "further research is needed."
GHG reductions calculated using the WARM model