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Background

McCain Foods Limited is a worldwide frozen food company. The McCain Foods facility located in Grand Island, Nebraska specializes in onion rings. This facility runs year round, with 75 non production days spread throughout the year for holidays and preventative maintenance. McCain Foods is focusing attention on their onion ring lines to strengthen their hold on the market and increase profits.

Project Description

McCain Foods Limited is committed to safety and improvement in their manufacturing process. One of the main goals of this project was to analyze properties of onions used on the line to determine how to increase production output and reduce waste. More information on these recommendations are in the report of Kaellan Miller, another intern at the same facility. After properties of onions were analyzed, attention was turned towards the recycling habits of employees and the facility’s waste disposal policies. Data was collected from waste removal records and from the on-shift sanitation lead.

Pollution Prevention Benefits

A number of opportunities were identified to provide operators with more control over the line and find alternate uses for waste. A few of these recommendations have very little capital cost while providing McCain Foods with visible benefits. One recommendation requires a fair bit of capital but provides opportunities for significant future savings. Additionally, data collected allows the facility to be aware of areas in need of optimization. The pollution prevention benefits and results are summarized in Table 1 below.

Table 1. Pollution Prevention Benefits

Assessment Recommendation	Annual Cost Savings	Annual Usage Savings/Reduction	GHG Reduction (MTCO ₂ e/yr)
Provide Labeling on Recycling Containers	\$50	1.5 tons landfill waste	4.24
Increase End Cutter Fill Rate	Unquantified	15% increase in fill rate	-
Use Anaerobic Digestion to Create Biogas	\$265,000	Reduce Natural Gas Purchases by 24 percent	-
Total	\$265,050	-	4.24