Food Waste Prevention

Examples of source reduction from Minnesota food processors

Midwest Food Recovery Summit 2018

UNIVERSITY OF MINNESOTA

Driven to Discover℠

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MnTAP

UNIVERSITY OF MINNESOTA

What is MnTAP?
The Minnesota Technical Assistance Program

Based at the University of Minnesota

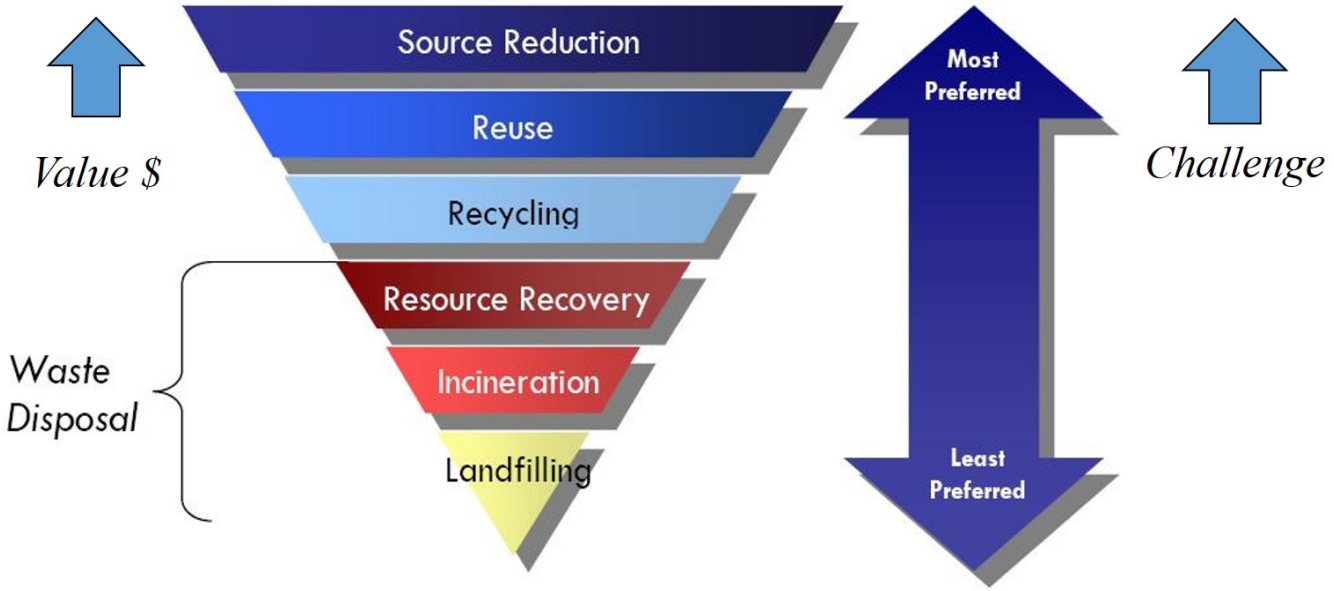
Our mission involves helping industries in MN find **cost-effective solutions that reduce waste, conserve water, save energy, and prevent pollution**

Some of the places we work:

- Manufacturing facilities
- Food processing facilities
- Wastewater treatment plants
- Power facilities
- Hospitals
- Hotels
- Schools
- Restaurants
- Other small to medium sized businesses

Today's focus:
Source Reduction of food waste in food processing

- **Why do we seek source reduction solutions?**
- **Examples and associated savings**



The "Why?"

Less food waste in processing, saves value-added product and the associated inputs, energy, labor, and more

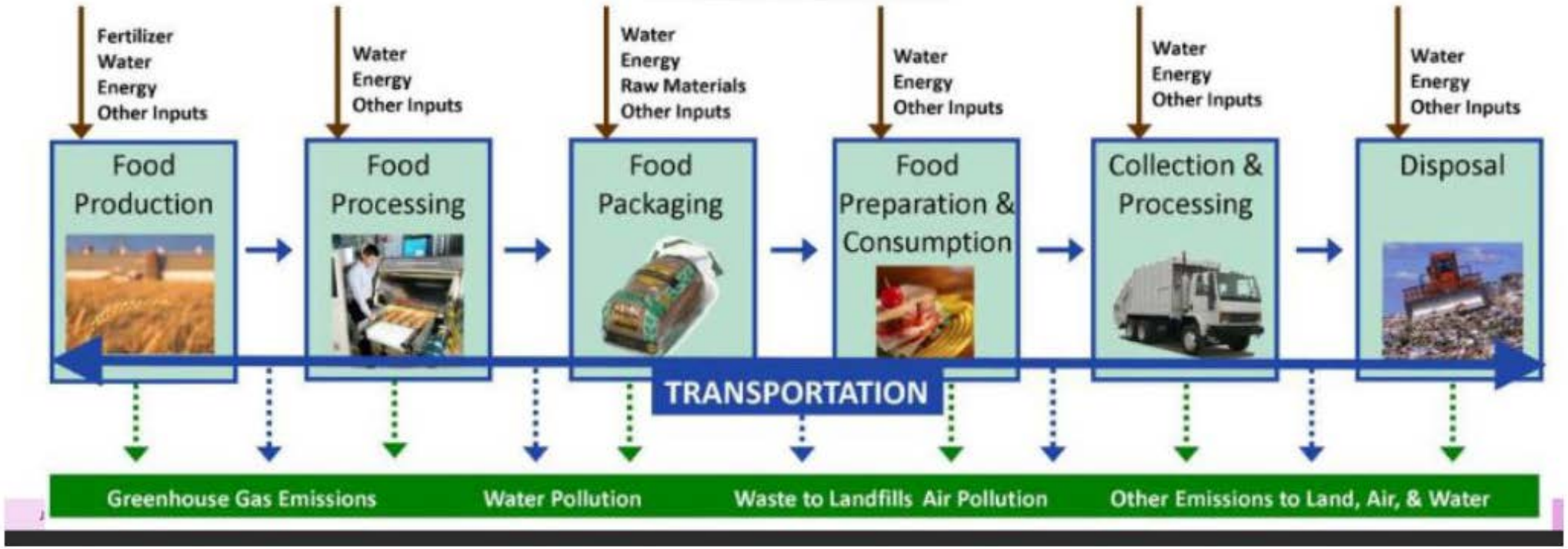
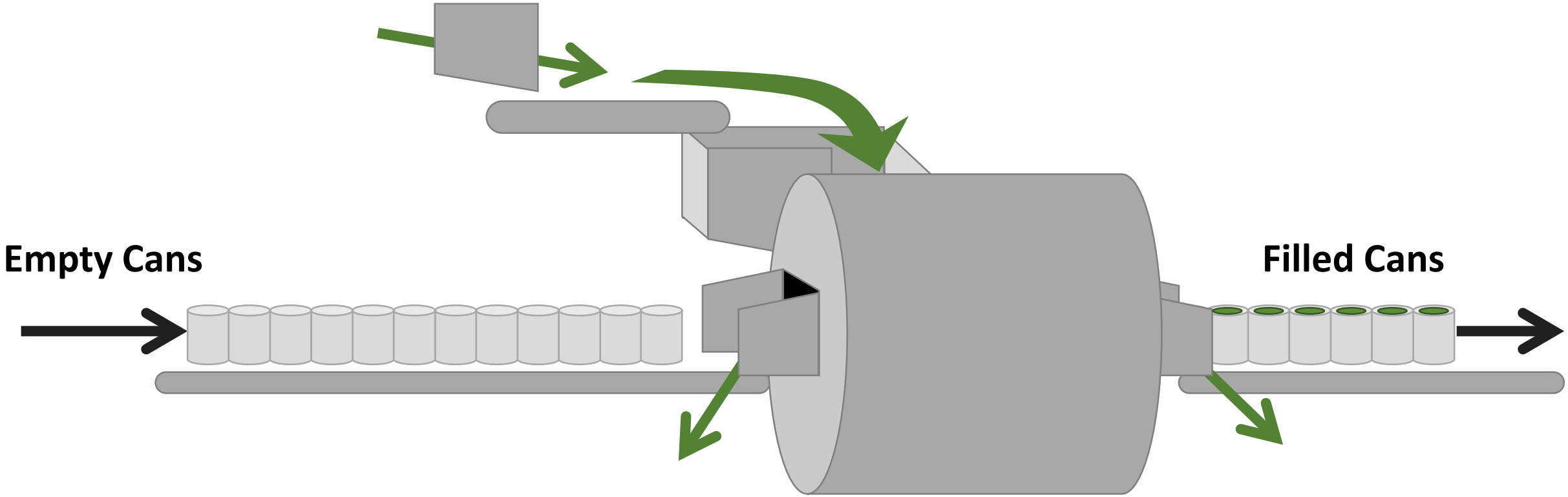


Image credit & source: EPA's Toolkit for Reducing Wasted Food and Packaging A Guide for Food Services and Restaurants

Examples

Pea processing: Fill & Close stage



Pea Processor – Southern MN

Solution:

- **Adjustments to fill line equipment**
  - Conveyor upgrades
  - Filling chute fabrication
- **Defect sorting sensitivity adjustment**
  - (not discussed today)

Savings:

- **Fill line**
  - 17,000 lbs.
  - $8,500
- **Sorter adjustment**
  - 36,000 lbs.
  - $18,000

Cheese making – block forming/packaging

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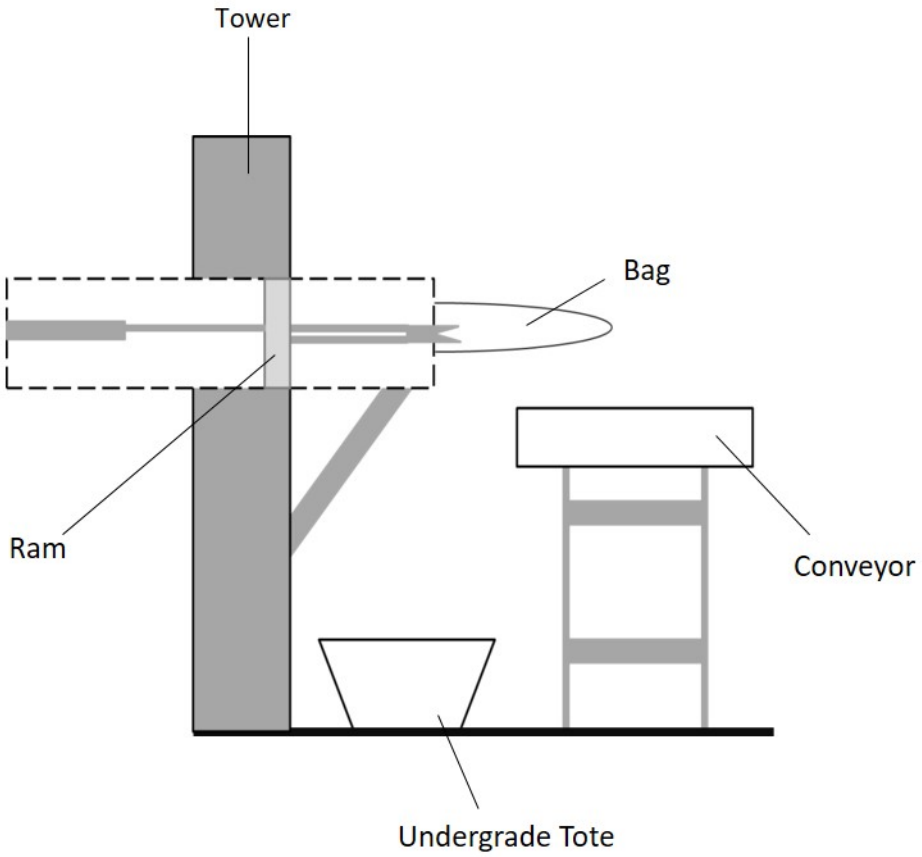
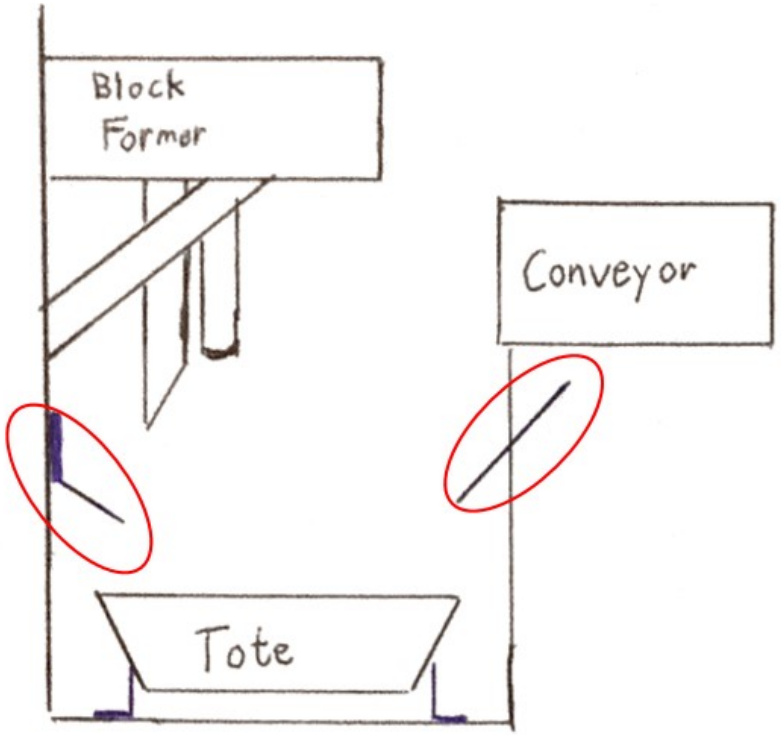
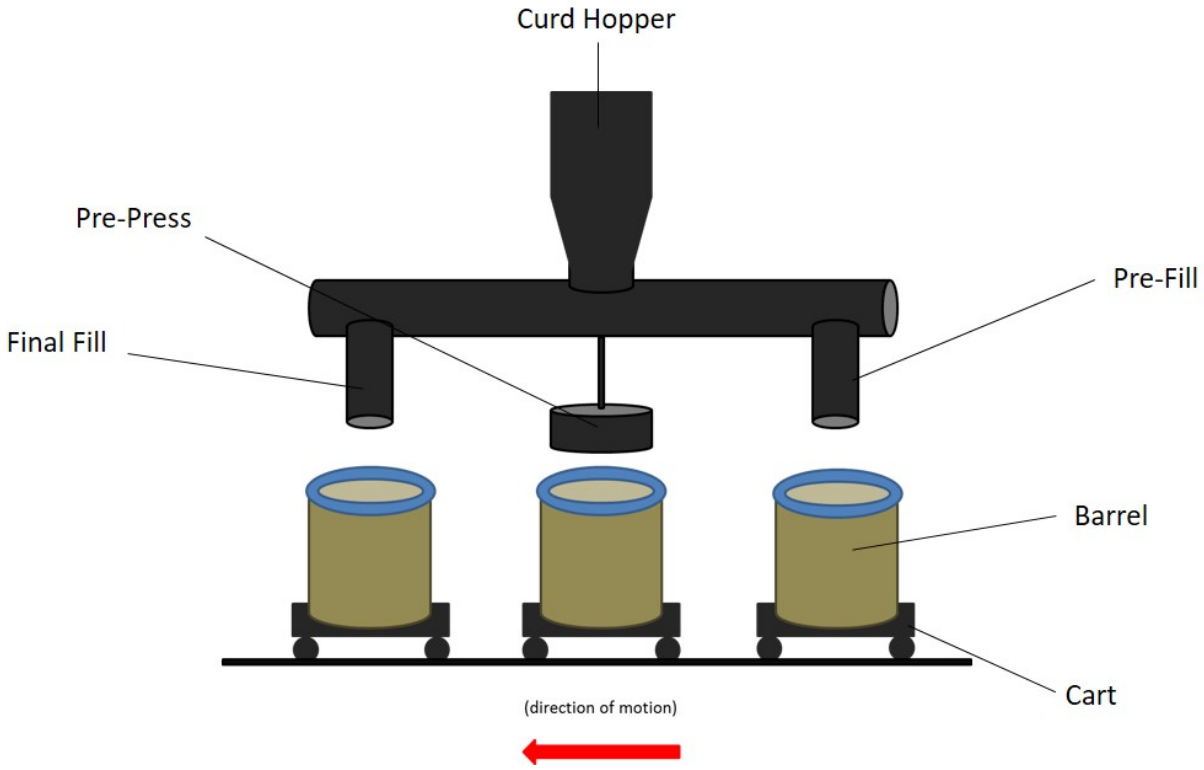
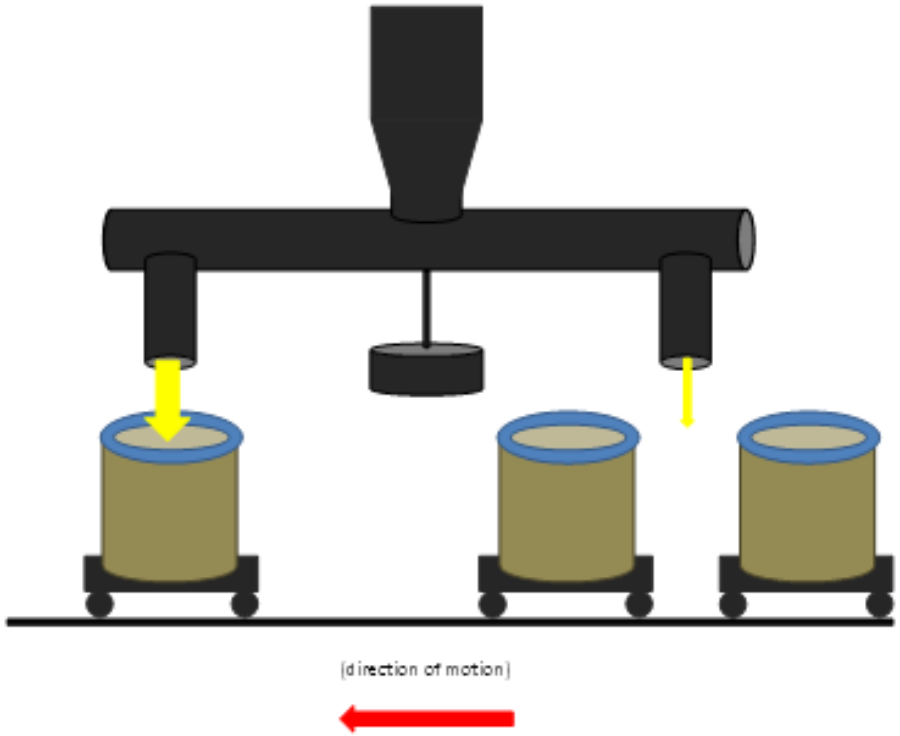




Packaging – cheese barrel fill





Cheese facility – Southern MN

Solution:

- **Block fill modifications**
  - Standardize tote location
  - Deflecting chute fabrication and catch pans
- **Barrel fill modifications**
  - Re-program timing/shut-off for curd dispensing
  - Increase the height of barrel extenders (not discussed)

Savings:

- **Cheese forming/packaging**
  - 9,000 lbs.
  - $7,000

BBQ meats facility – Mendota Heights, MN

BBQ meats facility – Mendota Heights, MN

Solution:

- **Standardized set points for fill equipment, new employee training**
- **Modification to include fill automation device**

Savings:

- **Packaging line**
  - 6,000 lbs.
  - $20,000
- **Added safety for employees!**

Dairy Facility - Rochester, MN

Dairy Facility - Rochester, MN

Solution:

- **Utilize compressed air pulses to redirect leftover product in fill lines**

Savings:

- **Fill line**
  - 416,000 lbs.
  - $100,000
- **Does not include avoided wastewater violations!**

Ideally, we can reduce waste at the source!

However - recovery, reuse and recycling are still very important!

Thank you!

I want to hear your ideas for reducing waste

Contact me with any comments, questions, and ideas:

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