Leveraging Data to Reduce Food Waste

Alex Antonucci

FARMER'S FRIDGE

*"In the United States, food waste is estimated at between **30-40 percent** of the food supply."*

USDA.gov

Overview

1) Creating data sets designed to solve a food waste problem
2) Waste data in operations
3) Using Point of Sale data to control waste

FARMER'S FRIDGE

Create datasets designed to solve a food waste problem

Effective data should be:

Easy to collect: Can it be automated (e.g., via sensors or tablet inputs)?

Consistent: e.g., always in pounds, not mixing ounces and pounds

Ingestible: Can the data be integrated into a single system?

Digestible: Can the data be understood and used by the operations team to take action?

Pragmatic: Does the dataset fit the financial and technical capabilities of the organization?

FARMER'S FRIDGE

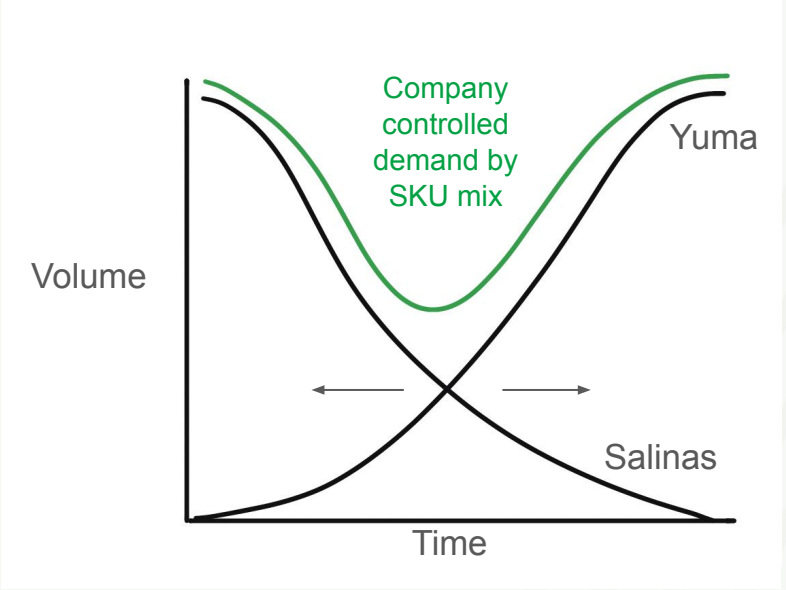
Using data to design waste out of the product

Seasonality is a critical component of fresh food manufacturing. Minimizing the impact of seasonality can help reduce inbound rejections, processing waste and poor quality – **all helping to reduce total waste**.

Using historical and intra-season seasonality data can help companies to predict and hedge against tough markets.

Companies can leverage their product mix during poor markets to reduce dependency on seasonal SKUs and drive improved quality, waste and price.

Lettuce order volume during shoulder season



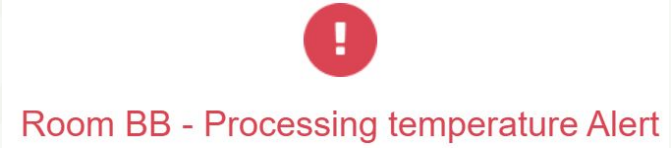
FARMER'S FRIDGE

Waste data in manufacturing

Creating control points in your manufacturing process for waste makes it easier to identify root cause and drive action to reduce waste.

The most mature data collection systems in the food system are in the manufacturing environment.

New hardware and software technologies, coupled with the principles of lean manufacturing, help to create robust waste management systems.



IoT temp sensor push notification

Areas to Monitor for Waste

Overproduction → Production Signaling

Poor Handling → Correct Equipment

Spoilage → WMS/FIFO/FEFO

Inefficient Equipment→ OEE/IoT Data*

Poor Quality → Inbound Inspection

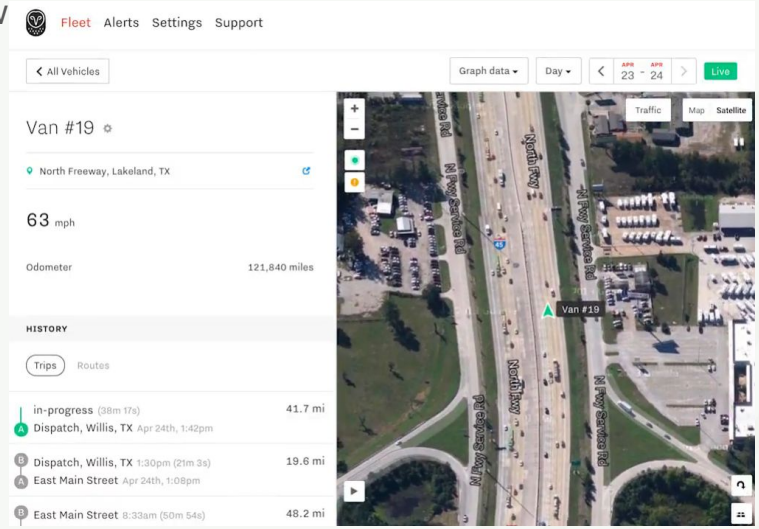
FARMER'S FRIDGE

Logistics data creating new visibility into the supply chain

The advancement of time and temperature technology in recent years has made cold chains more efficient and effective at reducing waste.

Through data and analytics, modern cold chains can now

1) **Remotely monitor and diagnose** temperature deviations in route and alert drivers
2) **Evaluate the impact on quality** of temperature fluctuations throughout the supply chain
3) **Create full transparency** between carriers, shippers and receivers
4) **Improve energy efficiency**
5) **Create condition specific packaging** to overcome cold chain challenges



Samsara fleet management software

Tech enabled Point of Sale creating a new view on waste

Advances in tech at the Point of Sale are creating new ways to understand customer demand and manage inventory which is helping to reduce waste.

Real time data from the *Point of Sale* allows us to:

1) Create a **proprietary restocking algorithm**
2) Create **tailored products** for regional preference
3) **Discount** unsold product
4) **Monitor quality and food safety** measurements like temperature
5) Use **customer surveys** to eliminate unwanted products driving waste

Farmer's Fridge fridge face

FARMER'S FRIDGE

Thanks!