RECALL & TRACEABILITY
PROJECT PLANNING
“FROM MILK TO FINISHED PRODUCT”

Susan Zucker, Director Supply Chain
Agri-Mark Dairy Cooperative

#CheeseSociety12
Who is Agri-mark?
FARMS & MILK
PLANTS
PEOPLE
This session will examine Agri-mark’s initiative to improve traceability within the supply chain, including business process changes as well as technology improvements.

Although Agri-mark will present what they have learned from a mid-size dairy cooperative perspective, these findings can easily be scaled to smaller dairy and manufacturing facilities.
What is Traceability?
It’s a big issue......

Third-deadliest U.S. food outbreak was preventable, experts say

“CNN has found serious gaps in the federal food safety net meant to protect American consumers of fresh produce, a system that results in few or no government inspections of farms...”

“The federal Food Safety Modernization Act became law last year, and the FDA is currently writing new regulations to increase food inspections and push for better audits. But even under the new law, officials said, farms might only be inspected once every seven to 10 years....”

By Scott Bronstein and Drew Griffin, CNN Special Investigations Unit, Thu May 3, 2012.
Legislation

Prevention
- Comprehensive preventive controls for food and feed facilities
- Produce safety standards
- Intentional adulteration standards
- Transportation

Inspection, Compliance, and Response
- Mandated inspection frequency
- Expanded records access
- Enhanced product tracing
- Third party laboratory testing

Imported Food Safety
- Certification of Imported Food
- Foreign Supplier Verification
- Authority to deny entry

Enhanced Partnerships
- State and local capacity building
- Foreign capacity building
- Inspection Agencies
Traceability Concerns Keep Us Up at Night...

- Financial Cost 28%
- Brand Reputation 24%
- Consumer Liability 18%
- Government Oversight 12%
- Loss of Market Share 11%
Study Findings:

- 48% can find product within hours
- 54% are fully compliant with gov’t regulations
- 19% of processes are fully automated
- 87% of consumers believe recall performance reflects on “honesty and responsibility” of the company
- Average recall costs $10 million dollars
What did we do & what did we learn?
Where to start??

Development of a “Core Team”:

- Risk Analyst – Leader
- Supply Chain
- Operations
- IT
- Lab (Manufactured products side & Milk side)

Determine the areas of vulnerability

- Business Impact Analysis
- Sr. Management Support
Core Team Project

Step 1
• Announce project and distribute *Business Impact Analysis Questionnaire* to each plant

Step 2
• Location Meetings – review *Business Impact Analysis Questionnaire* and tour plant based on HACCP flow charts

Step 3
• Analyze potential threats, probability of threats causing disruption, business impact of disruptions

Step 4
• Consolidate notes and risk report comments by location

Step 5
• Prepare and prioritize risk assessment and recommendations and present to Senior Management
Results

- Top 5 Projects were recommended to Sr. Mgmt
- Some findings were immediately actionable
  - these “non-projects” had easy implementation and were process issues only
- Scaleable projects that consider move from paperless over time
  - Green Zone
  - Bar codes and bulk product
- Tracking ingredients is crucial
How are data standards helping us?
Who is the GS1

GS1 is a non-profit organization dedicated to the design and implementation of global standards, technologies and solutions to improve the efficiency of supply and demand chains by adding useful information to any exchange of goods or services (www.gs1.org).

- Barcodes
- eCom
- GDSN – Global data synchronization
- EPCglobal – RFID
- Rapid Recall (Publix, Kroger, Wakefern)
Enabling Industry to Respond to the Food Safety Modernization Act (FSMA)

Food Safety Modernization Act (FSMA)
- Preventive Controls, Inspections, Compliance and Response, Imported Food Safety, Enhanced Partnerships
- 50 new rules, guidance documents, reports in 3 years

Food & Drug Administration (FDA)
- Pilots to be conducted by Spring 2012
- Actively watching industry initiatives
- Final report due to Congress July 2012

Institute of Food Technologists (IFT)
- Conducting pilots for FDA: Produce and Processed Food
  - P1: Current systems used to identify, capture, store and share data
  - P2: Supply chain data used to determine if interfaces between existing systems are sufficient for product tracing
- Partners with Government, Associations and Academia

GS1 Standards and GS1 US Community
CTE and KDE

GS1 Standards recommends determining

- Critical Tracking Events (CTE) – Events that identify those core business processes where traceability data capture is vital to a successful traceability process.

- Key Data Elements (KDE) – The data captured during a CTE to support a successful traceability process.

These are concepts similar to HACCP (Hazard Analysis and Critical Control Points)!!!
1. What is the flow of the product in your organization?
2. Where are there gaps in data capture?
3. What is in your control?
   - Data
   - Processes
4. Define the CTE’s in the flow
5. Determine the KDEs to support the defined CTEs
6. Identify how to store this data
7. Define process for sharing this data
8. Document process steps along with functional responsibility requirements
#1 Where is the flow in organization?
INTERNAL TRACEABILITY:

All data is captured on paper, but this is not as accurate and quickly retrievable as we need.

A FEW EXAMPLES:

Manual Systems

- Ingredients are manually entered by item code in the inventory system with the expiration date in the lot field
- Packaging and ingredients could be scanned in on receipt or utilization
- All ingredients and packaging used are manually tracked on a “make sheet” but released from inventory manually FIFO
- Paper “make sheets” are stored in manager’s office and referred to if we need to trace a specific ingredient to specific finished good
- Currently no internal electronic PO system for purchasing
- Bulk cheese does not have a bar code and the lot/vat/make date is hand written on a piece of paper attached to the wooden boxes.
EXTERNAL TRACEABILITY:

Retailers are in the process of determining how to capture relevant information and what systems to use – no commonly used standard yet.

A FEW EXAMPLES

• Customer bar code request/requirements for variation on our GS-128 bar code.

• Standard items would require separate inventory or relabeling (higher costs) in order to store this data in the customer’s database.

• Lack of interoperability between various systems.
#3 What is in your control?

Â The way we capture data:
- Attributes for ingredients, bulk product, packaging,
- Using bar code scanning to capture the data rather than manual paper tracking.

Â The way we manage business processes:
- Labeling bulk lot/date with bar code rather than manual paper
- Scan in ingredients and packaging on receipt that have bar codes also – opportunity for cut and wrap to select from inventory the exact lot using.
#4 Define the CTE’s in the flow

CTE: **Receive**: Receiving ingredients and packaging

CTE: **Transformation**: Releasing silo milk into vat to make cheese or cultured products/yogurt

CTE: **Transformation**: Mixing ingredients to make bulk commodity

CTE: **Transformation**: Receiving bulk commodity product to package into finished product

CTE: **Commission**: Bar coding product and cases and recording unique data for traceability (serialized number)

CTE: **Put away**: Storing in warehouse in WMS (or other database) system

CTE: **Ship**: Releasing product to ship to customer
#5 Determine the KDEs to support the defined CTEs

**Receive**

Milk - Farm data, silo record, vat record

Bulk Cheese - Vat/Lot data, make date

**Transform**

Vat data, production date, sell by date, lot information

Unique Serialized number generated on bar code

Customer information and items purchase
Commission
Sprayed on details on packaging: sell by date, vat and production date, time stamp on 8 oz bars
GS1-128 bar code on cases
LPN on pallets

Put away
Bar code scan LPN at warehouse to track location in WMS

Ship
Release from WMS and Inventory system

Track customer shipped to and RW items by weight
#6 Identify how to store this data

**Internal**

PO system to store supplier data and link to packaging bar code

Bar codes bulk product would include make date, lot and vat to scan when bulk is converted to finished good.

Line computers to record bulk data and ingredients/packaging on use

**External**

Case labels would include details such as GLN for customer information

Improved flexibility on bar coders would allow for customer data format

**Future GS1 Vision**

Traceability data could be shared by electronic record (EPCIS type of EDI system)

Standardized and compatible system.
#7 Define process for sharing this data

Customer

Currently data is shared only via case label and shipping manifest or BOL documentation to the customer

Customers often store sell by date with the associated item number in their inventory system for traceability

Consumer

is able to view finished product information inked sprayed on unit package with sell by date.

Sharing complete traceable data with customer would require a download of vat and lot information – perhaps through an EDI download or an EPCIS transaction
SOP (Standard Operating Procedure) for receiving ingredients:

1. Scan in ingredient on receipt (Receiving Team)
2. Store data in inventory system (Purchasing)
3. Release ingredient inventory to finished product linking manufacturer lot/vat of ingredient (Production)

All of the screen shots etc. that you would need to have to accomplish this process
Issues still in industry

• How do we share traceability data between partners?
• How do we structure data in the bar code?
• What if bar codes don’t meet customer mandates for their own system?
• Retailers are doing their own thing....
• Keeping up on legislative and customer requirements!!!
Involved more than just traceability!

- Impact on employees and members – HR
- Spokesperson coordination and timing
- Reporting on FDA website
- Picking product up
- Isolating affected product
- Sales coordination with the buyer – customer
- Consumer notification
Questions?

E-mail:

szucker@cabotcheese.com
Thank you!

- Food Safety Modernization Act
  - [http://www.fda.gov/Food/FoodSafety/FSMA/default.htm](http://www.fda.gov/Food/FoodSafety/FSMA/default.htm)

- GS1 (Standards)
  - [http://www.gs1.org](http://www.gs1.org)

- IFT (Institute of Food Technologists)

- Commerce in Motion - study