Creating food safety and recordkeeping plans for the Food Safety Modernization Act

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IMPACT ON GRAIN INDUSTRY
Farm to Fork Principle

- Spread the risk throughout the food chain
- Ability to eliminate to identify potential
  - Not farmers A→X, it could be Y and Z
- Reach back verification system
  - Multiple farmer suppliers verification
Sec. 103: Hazard analysis and risk-based preventive controls

- Requires human and animal food facilities to:
  - Evaluate hazards that could affect food safety;
  - Identify and implement preventive controls to prevent hazards;
  - Monitor controls and maintain monitoring records; and
  - Conduct verification activities.
How do I make Food Safety Plan?

1. Food Safety Team
2. Create a Flow Diagram
3. Identify your hazards
4. Create Written Documents on your Policies related to that Program
5. Record Keeping System
Food Safety Team

• Consisting of:
  – All areas of production (include suppliers and buyers)
  – Constant members (supervisors)
  – Rotating members (fresh eyes and energy)
Flow Diagrams

- Farm through the end user
- More details the better the chart works
- Includes all suppliers, flow throughout plant with possible deviations, trucking, suppliers
Traceability

• Method to trace the grain in each truck as it moves through your facility (cannot be perfect)
  – When it first enters what bin did it go in
  – If it is moved, where is the product now
  – If it is shipped, whose product is present in the shipment

**Ability to eliminate as many farmers if a recall occurs**
POTENTIAL HAZARDS
UNINTENTIONAL AND INTENTIONAL
Potential Hazards: Biological

- Mycotoxin
- Vector: The plant
- Related to the weather and environment
- Food-borne mycotoxins are acute, symptoms of severe illness appearing very quickly
- U.S. Food Law (FSMA) covers mycotoxin through the reportable food registry
Potential Hazards: Biological

- *Salmonella, E.coli* O157:H7
- Vectors: pest, environment, humans, facility, trucks
- Examples:
  1. Mice and bird dropping carry bacteria
  2. Crops can harbor bacteria
  3. Trucks and structure
Potential Hazards: Physical

- Glass
- Metal
- Wood
- Stone
- Structural parts
- Animals?

http://www.pandscorp.org/riverdebris.html
Potential Hazards: Chemical

- Mineral Oil
- Truck Oil
- Equipment Oil
- Feed Additives
Structure

- Leaks
- Broken Lights
- Farm Security
Transportation

• Important to know the previous loads
• Important to set standards for farmers and transportation companies
• Sanitation
  – Sweeping may not be enough in the future
  – Thorough cleaning of truck beds, trains, and bins is critical
Potential Hazards: Allergen

- Management is critical if you process multiple allergens
- Cross contamination is a cause for a recall
- Buyers want PURITY of product
  - Beyond grade standards

http://www.foodsafetymagazine.com/article.asp?id=2645&sub=sub1
RECORD KEEPING
Record Keeping System

• Easy to Use
• Easy to Monitor
• Easy to prove Control
• Someone has to evaluate results and use the results
• Traceability is the Key
Written Document

• Computer document (easy to edit)
• Write Standard Operating Procedures (SOP) for each program
• Identify purpose of the SOP
• Who will perform the task
• How frequent the task will occur
• How is the item checked
• How records are utilized
Example SOP

• PURPOSE: To prevent mice infestation
• WHO: Pest control officer or designee
• Frequency: Quarterly inspections
• Documentation: Record how many mice are caught
• INSTRUCTIONS
  1. Quarterly inspections will occur or as needed
  2. Employees will be vigilant of mice increases
  3. Doors to silos will be secured when not in use
  4. No loose or piles of grain will be placed around farm
  5. Caught will be recorded
What logs are you keeping?
<table>
<thead>
<tr>
<th>Feed Shipped</th>
<th>Amount</th>
<th>Customer</th>
<th>Finished Feed Lot #</th>
<th>Picked Up By</th>
<th>Operator Initials</th>
</tr>
</thead>
<tbody>
<tr>
<td>Feed 1</td>
<td>10</td>
<td>Customer 1</td>
<td>1A1234</td>
<td>Sales</td>
<td>S1</td>
</tr>
<tr>
<td>Feed 2</td>
<td>20</td>
<td>Customer 2</td>
<td>2A1234</td>
<td>Admin</td>
<td>A2</td>
</tr>
<tr>
<td>Feed 3</td>
<td>30</td>
<td>Customer 3</td>
<td>3A1234</td>
<td>Proc</td>
<td>P3</td>
</tr>
<tr>
<td>Feed 4</td>
<td>40</td>
<td>Customer 4</td>
<td>4A1234</td>
<td>Exp</td>
<td>E4</td>
</tr>
</tbody>
</table>

**DAILY BAGGING LOG**

| SEQUENCE | RUN NUMBER | PRODUCT NAME | QTY | BIN NO | NET WT | TAX CODE | CHECK NO | BINונים | BIN L | BIN R | STEM | STUNK | NET ADJ | RECEIVED |
|-----------|------------|--------------|-----|--------|--------|----------|----------|----------|-------|-------|------|-------|---------|----------|-----------|
| 1         | 1          | Feed 1       | 100 |        |        |          |          |          |       |       |      |       |         |          |
| 2         | 2          | Feed 2       | 200 |        |        |          |          |          |       |       |      |       |         |          |
| 3         | 3          | Feed 3       | 300 |        |        |          |          |          |       |       |      |       |         |          |
| 4         | 4          | Feed 4       | 400 |        |        |          |          |          |       |       |      |       |         |          |
• All the ingredients
• Sources
• Documentation log sheet to go along
Supplier verification

- In a recall, who is to blame
- Confidence that your food safety standards are being applied
  - What are your policies?
  - Audits? Record keeping?
  - Clean truck (example no meat products)?
  - If you had knowledge of a food safety threat then declaration?
Conclusion

• Traditionally grain industry has little concerns with food safety hazards but this has changed
• Food Safety is now priority for FDA and USDA
• Three Key Words
  – Risk Based Hazard Control (Food Safety Plan)
  – Traceability
  – Record Keeping

This will become part of a formal quality management system
Contact Information

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