HACCP Overview

MATT FREDERKING
1. Conduct a Hazard Analysis (HA)
2. Determine Critical Control Points (CCPs)
3. Establish Critical Limits (CLs)
4. Establish Monitoring Procedures
5. Establish Corrective Actions (CA)
6. Establish Verification Procedures
7. Establish Record-Keeping Procedures
Hazard Analysis and Preventive Controls (Section 103)

• Covered facilities will be required to:
  – Implement a written preventive control plan to prevent or minimize hazards so that food products are not adulterated or misbranded
    • Plans are to utilize “risk-based and reasonably appropriate” controls to “significantly minimize or prevent” hazards
    • Plans are to include monitoring and verification that indicates controls are working, corrective actions, as necessary, and recordkeeping
  – Maintain records for at least two years that document monitoring activities (i.e. testing, etc.), instances of any nonconformance and corrective actions taken
HACCP Principle 1: Conduct a Hazard Analysis

• The process of collecting and evaluating information on hazards associated with the product under consideration to decide which are significant and must be addressed in the HACCP plan

• The HACCP team conducts a hazard analysis and identifies appropriate control measures
Purpose of HACCP Principle 1: Conduct Hazard Analysis

• To develop a list of hazards which are of such significance that they are reasonably likely to cause injury or illness if not effectively controlled.
HACCP Principle 2: Determine Critical Control Points

• A step at which control can be applied and is essential to prevent or eliminate a feed or food safety hazard or reduce it to an acceptable level
HACCP Principle 2: Identify Critical Control Points

- Potential hazards that are reasonably likely to cause illness or injury in the absence of their control must be addressed to determine if they are CCP’s.

- Performed by the HACCP Team
# Hazard Analysis

**Product or Process Name:** Animal Food  
**Processing Category:** XYZ Facility

<table>
<thead>
<tr>
<th>Process/Step</th>
<th>Potential Hazards Introduced, controlled, enhanced or reduced at this step</th>
<th>Is this a significant hazard? Animal Human</th>
<th>Justification for Decision to Determine Significance</th>
<th>Control Measure</th>
<th>Is this step a CCP?</th>
</tr>
</thead>
</table>
| Bulk Ingredient Receiving | Biological  
RUPP (Cross contamination from previous load hauled)  
RUPP (Products that contain Ruminant warning statement) | Yes Yes | Bovine Spongiform Encephalopathy is thought to infect these species and be transmitted to the end consumer | Receiving Procedure & Ingredient and Supplier Approval in place at XYZ facility | Bulk Receiving CCP |
| | Physical  
Ferrous Metal | Yes No | Ingredient and Supplier Approval, Receiving Procedures, Magnet located throughout product flow, Preventative maintenance & equipment checks in place at XYZ Feed Mill | Receiving Procedures (Visual inspection) & Ingredient and Supplier Approval in place at XYZ Feed Mill | |
| | Non-ferrous Metal | Yes No | | Receiving Procedures (Visual inspection) & Ingredient and Supplier Approval in place at XYZ facility | |
| | Glass | Yes No | Receiving Procedures (Visual inspection) & Ingredient and Supplier Approval in place at XYZ facility | | |
| | Stones | Yes No | Receiving Procedures (Visual inspection) & Ingredient and Supplier Approval in place at XYZ facility | | |

KSU HACCP 1995---Revised 2000

Approved:  
Date: ____________________
## Hazard Analysis

### Product or Process Name: Animal Food

**Processing Category:** XYZ Facility

<table>
<thead>
<tr>
<th>Process/Step</th>
<th>Potential Hazards</th>
<th>Is this a significant hazard?</th>
<th>Justification for Decision to Determine Significance</th>
<th>Control Measure</th>
<th>Is this step a CCP?</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bulk Ingredient Receiving Continued</td>
<td>Chemical</td>
<td>Aflatoxin</td>
<td>Yes</td>
<td>No</td>
<td>Ingredient Specifications Manual &amp; Mycotoxin Testing Requirements in place at XYZ Facility</td>
</tr>
<tr>
<td></td>
<td>Vomitoxin</td>
<td>Yes</td>
<td>No</td>
<td>Ingredient Specifications Manual &amp; Mycotoxin Testing Requirements in place at XYZ Facility</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Fumonisin</td>
<td>Yes</td>
<td>No</td>
<td>Ingredient Specifications Manual &amp; Mycotoxin Testing Requirements in place at XYZ Facility</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Incorrect product received</td>
<td>Yes</td>
<td>No</td>
<td>Receiving Procedures in place at XYZ Facility</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Cross-contamination from previous load hauled</td>
<td>Yes</td>
<td>No</td>
<td>Receiving Procedures in place at XYZ Facility</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Receiving routing error</td>
<td>Yes</td>
<td>No</td>
<td>Receiving and routing procedures in place at XYZ Facility</td>
<td></td>
</tr>
</tbody>
</table>
HACCP Principle 3: Establish Critical Limits

• A maximum and/or minimum value to which a biological, chemical or physical parameter must be controlled at a CCP to prevent, eliminate or reduce to an acceptable level the occurrence of a feed or food safety hazard

• CL’s are used to distinguish between safe and unsafe operating conditions at a CCP.
HACCP Principle 4: Establish Monitoring Procedures

• To conduct a planned sequence of observations or measurements to assess whether a CCP is under control and to produce an accurate record for future use in verification
HACCP Principle 4: Establish Monitoring Procedures

- Purpose of monitoring
  - Essential for facilitating tracking of the operation
  - Used to determine if there is a loss of control and a deviation occurs at a CCP
  - Provides written documentation for use in verification
HACCP Principle 5: Establish Corrective Actions

- Corrective Action:
  - Procedures followed when a deviation occurs

- Deviation:
  - Failure to meet a critical limit

- Purpose: To prevent feed or foods which may be hazardous from reaching animals or consumers
### Hazard Analysis/Preventive Controls

**Identifying Critical Limits, Monitoring and Corrective Actions**

**Product or Process Name:** Animal Food

**Processing Category:** XYZ Facility

<table>
<thead>
<tr>
<th>Process/Step CCP</th>
<th>Critical Limit</th>
<th>Monitoring Procedures</th>
<th>Corrective Action</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bulk Receiving CCP</td>
<td><strong>Zero Tolerance for Restricted Use Protein Products (RUPP)</strong></td>
<td><strong>What will be measured?</strong>&lt;br&gt;1. Completion of <em>Bulk Truck Certification</em> form&lt;br&gt;2. Confirm absence of warning statement indicating ruminant protein inclusion on receiving documentation for ingredient</td>
<td>1. What caused the deviation.</td>
</tr>
<tr>
<td>Bulk Ingredient Receiving</td>
<td></td>
<td><strong>Where will the CL be measured?</strong>&lt;br&gt;1. At bulk ingredient receiving&lt;br&gt;2. At bulk ingredient receiving</td>
<td>2. How will the process be corrected.</td>
</tr>
<tr>
<td></td>
<td></td>
<td><strong>How will the CL be measured?</strong>&lt;br&gt;1. Visual inspection of completion of <em>Bulk Truck Certification</em> form before ingredients are received&lt;br&gt;2. Visual inspection of receiving documentation for absence of warning statement indicating ruminant protein inclusion before unloading ingredient</td>
<td>3. What measures will be implemented to prevent recurrence.</td>
</tr>
<tr>
<td></td>
<td></td>
<td><strong>Who will monitor the CL?</strong>&lt;br&gt;1. Receiving operator or Designated Trained employee&lt;br&gt;2. Receiving operator or Designated Trained employee</td>
<td>4. What will be the product disposition.</td>
</tr>
<tr>
<td></td>
<td></td>
<td><strong>How often will the CL be measured?</strong>&lt;br&gt;1. Every individual load of bulk ingredient received&lt;br&gt;2. Every individual load of bulk ingredient received</td>
<td>Complete these questions on the Corrective Action Form after each deviation, retain record in Corrective actions file</td>
</tr>
</tbody>
</table>

KSU HACCP 1995, revised 2000

---

Approved _____________________ Date ____________________
HACCP Principle 6: Establish Verification Procedures

- Those activities, other than monitoring, that determine the validity of the HACCP plan and that the system is operating according to the plan
HACCP Principle 7:
Establish Record-Keeping and Documentation Procedures

• The HACCP team sets up a record-keeping program which provides written documentation that the HACCP plan is being carried out as described in the written HACCP plan
# Hazard Analysis/Preventive Controls

## Identifying Recordkeeping and Verification Procedures

**Product or Process Name:** Animal Food  
**Processing Category:** XYZ Facility

<table>
<thead>
<tr>
<th>Process/Step CCP</th>
<th>Records</th>
<th>Responsibility</th>
<th>CCP Verification</th>
</tr>
</thead>
</table>
| **Bulk Receiving CCP** | Receiving Records  
Receiving operator or Designated Trained Employee  
& QA Supervisor | **Short Term**  
Daily review of receiving records and bulk receiving certification by Management Designee |  |
| Bulk Ingredient Receiving | Bulk Receiving Certification  
Operator Training Record  
Bulk Receiving SOP | **Long Term**  
Annual self-audit and annual corporate audit of receiving records and employee training |  |
| **Bagged Receiving CCP** | Receiving Records  
Operator Training Record  
Bagged Receiving SOP | Warehouse Operator or Designated Trained Employee  
& QA Supervisor | **Short Term**  
Daily review of receiving records by Management Designee |  |
| Bagged Ingredient Receiving |  |
| **Hand add CCP** | Hand Add Production sheet  
Hand Add SOP  
Drug Count Sheet  
Drug & Micro Monthly Inventory Receiving Records  
Batch Log  
Operator Training Record  
XYZ Facility Hand Add SOP | Drug Floor Operator or Designated Trained Employee  
& QA Supervisor | **Short Term**  
Daily review of drug count sheet, batch log, hand add production sheet by Management Designee |  |
| Hand add |  |

Approved:  
Date:____________________
HACCP Plan?

• The written document which is based upon the principles of HACCP and which delineates the procedures to be followed
Preliminary HACCP Steps

1. Assemble the HACCP Team
2. Describe the food and its distribution
3. Describe the intended use and consumers of the food
4. Develop a process flow diagram
5. Verify the flow diagram
1. Assemble HACCP Team

- Responsible for planning, developing and implementing the HACCP plan
- Select people with specific knowledge and expertise about the process and product
  - Multi-disciplinary
  - Line personnel, quality assurance, engineering, product development, management
Assemble HACCP Team (cont.)

• May include assistance from consultants and/or other outside experts

• Identify a HACCP Coordinator
  – Overall responsibility for HACCP program
  – Good communicator, interpersonal skills
2. Describe the Feed or Food and its Distribution

• Identify product(s) the plan will encompass

• Possible Process Categories
  – Poultry/Swine
  – Beef/Dairy
  – Equine/Speciality
Describe the Feed or Food and its Distribution (Cont.)

• General description of:
  – Feed
  – Ingredients
  – Processing

• Describe the nature of the product (e.g. meal, pellet, sacked, or bulk…)

• Method of storage and distribution
Describe/Determine

– Ingredient List (Formula)
– Shelf life
– Packaging
– Properties that will influence safety
3. Describe the Intended Use and Consumers of the Food

- What is the intended use?

- Who are the normal end users?
<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Product name (s)</td>
<td></td>
</tr>
<tr>
<td>2. Product Safety Properties (Moist., Protein, etc.)</td>
<td></td>
</tr>
<tr>
<td>3. How is the product to be used (intended use) &amp; who is intended consumer?</td>
<td></td>
</tr>
<tr>
<td>4. Type of packaging</td>
<td></td>
</tr>
<tr>
<td>5. Shelf life</td>
<td></td>
</tr>
<tr>
<td>6. Where will the product be sold?</td>
<td></td>
</tr>
<tr>
<td>7. Labeling instructions</td>
<td></td>
</tr>
<tr>
<td>8. Special distribution control</td>
<td></td>
</tr>
</tbody>
</table>

Approved: ________________________________________
Date:___________________
List of Ingredients and Raw Materials
Example for Feed Products

<table>
<thead>
<tr>
<th>Product Name:</th>
<th>Bulk Ingredients</th>
<th>Bag or Hand Add Ingredients</th>
<th>Medications</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Liquids</th>
<th>Packaging Materials</th>
<th>Other Additives</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Approved: ___________________________________________________
Date: __________
Process Flow Diagram

- Provide a clear, simple outline of the steps involved in the process

- Must include all steps in the process which are under control of the feed mill
  - Receiving to Distribution
    - The end point is where your facility transfers ownership of the product
Process Flow Diagram (Cont.)

• Does not need to be complex
• Can use simple block flow diagrams
• Be Sure To:
  – Define Returned Product
  – Define Rework
Example Flow Diagram

- Pre-Mixing
  - Grinding
  - Mixing
    - Processing
      - Packaging
      - Warehouse
  - Liquid Receiving & Storage
    - Bulk Load Out
Verifying Flow Diagram

• On-site review of operation to verify accuracy and completeness of diagram
• Modify flow diagram if needed
• Dynamic document that must be updated to reflect current process
Preliminary HACCP Steps

1. Assemble the HACCP Team
2. Describe the food and its method of distribution
3. Describe the intended use and consumers of the food
4. Develop a process flow diagram
5. Verify the flow diagram
HACCP Principles

1. Conduct a Hazard Analysis (HA)
2. Determine Critical Control Points (CCPs)
3. Establish Critical Limits (CLs)
4. Establish Monitoring Procedures
5. Establish Corrective Actions (CA’s)
6. Establish Verification Procedures
7. Establish Record-Keeping Procedures
QUESTIONS

MATT FREDERKING
DIRECTOR REGULATORY AFFAIRS AND OPERATIONS
RALCO NUTRITION INC
MARSHALL MN
CELL PHONE# 1 605 553 0157
EMAIL MATT.FREDERKING@RALCONUTRITION.COM