

HACCP Overview

MATT FREDERKING





HACCP Principles

1. Conduct a Hazard Analysis (HA)
2. Determine Critical Control Points (CCPs)
3. Establish Critical Limits (CLs)
4. Establish Monitoring Procedures



HACCP Principles

- 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

Hazard Assessment

Product or Process Name: Animal Food

Processing Category: XYZ Facility

Process/Step	Potential Hazards Introduced, controlled, enhanced or reduced at this step	Is this a significant hazard?		Justification for Decision to Determine Significance	Control Measure	Is this step a CCP?
		Animal	Human			
Bulk Ingredient Receiving	Biological RUPP (Cross contamination from previous load hauled)	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
	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		
	Non-ferrous Metal	Yes	No	Receiving Procedures (Visual inspection) & Ingredient and Supplier Approval in place at XYZ Feed Mill		
	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		



Hazard Analysis

Hazard Assessment

Product or Process Name: Animal Food

Processing Category: XYZ Facility

Process/Step	Potential Hazards Introduced, controlled, enhanced or reduced at this step	Is this a significant hazard? risk: severity		Justification for Decision to Determine Significance	Control Measure	Is this step a CCP?
		Animal	Human			
Bulk Ingredient Receiving Continued	Chemical					
	Aflatoxin	Yes	No	Ingredient Specifications Manual & Mycotoxin Testing Requirements in place at XYZ Facility		
	Vomitoxin	Yes	No	Ingredient Specifications Manual & Mycotoxin Testing Requirements in place at XYZ Facility		
	Fumonisin	Yes	No	Ingredient Specifications Manual & Mycotoxin Testing Requirements in place at XYZ Facility		
	Incorrect product received	Yes	No	Receiving Procedures in place at XYZ Facility		
	Cross-contamination from previous load hauled	Yes	No	Receiving Procedures in place at XYZ Facility		
	Receiving routing error	Yes	No	Receiving and routing procedures in place at XYZ Facility		



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

Process/Step CCP	Critical Limit	Monitoring Procedures	Corrective Action
Bulk Receiving CCP Bulk Ingredient Receiving 1. RUPP (Cross contamination from previous load hauled) 2. RUPP (Ruminant protein product delivered to mill)	Zero Tolerance for Restricted Use Protein Products (RUPP)	<p>What will be measured?</p> <ol style="list-style-type: none"> 1. Completion of <i>Bulk Truck Certification</i> form 2. Confirm absence of warning statement indicating ruminant protein inclusion on receiving documentation for ingredient <p>Where will the CL be measured?</p> <ol style="list-style-type: none"> 1. At bulk ingredient receiving 2. At bulk ingredient receiving <p>How will the CL be measured?</p> <ol style="list-style-type: none"> 1. Visual inspection of completion of <i>Bulk Truck Certification</i> form before ingredients are received 2. Visual inspection of receiving documentation for absence of warning statement indicating ruminant protein inclusion before unloading ingredient <p>Who will monitor the CL?</p> <ol style="list-style-type: none"> 1. Receiving operator or Designated Trained employee 2. Receiving operator or Designated Trained employee <p>How often will the CL be measured?</p> <ol style="list-style-type: none"> 1. Every individual load of bulk ingredient received 2. Every individual load of bulk ingredient received 	<ol style="list-style-type: none"> 1. What caused the deviation. 2. How will the process be corrected. 3. What measures will be implemented to prevent recurrence. 4. What will be the product disposition. <p>Complete these questions on the <i>Corrective Action Form</i> after each deviation, retain record in Corrective actions file</p>



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

Process/Step CCP	Records	Responsibility	CCP Verification
Bulk Receiving CCP Bulk Ingredient Receiving	Receiving Records Bulk Receiving Certification <i>Operator Training Record</i> Bulk Receiving SOP	Receiving operator or Designated Trained Employee & QA Supervisor	Short Term Daily review of receiving records and bulk receiving certification by Management Designee Long Term Annual self-audit and annual corporate audit of receiving records and employee training
Bagged Receiving CCP Bagged Ingredient Receiving	Receiving Records <i>Operator Training Record</i> Bagged Receiving SOP	Warehouse Operator or Designated Trained Employee & QA Supervisor	Short Term Daily review of receiving records by Management Designee Long Term Annual self-audit and annual corporate audit of receiving records and employee training
Hand add CCP Hand add	Hand Add Production sheet Drug Count Sheet Drug & Micro Monthly Inventory Receiving Records Batch Log <i>Operator Training Record</i> 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 Long Term Monthly inventory, annual self-audit and annual corporate audit, and employee training



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 the Feed or Food and its Distribution (Cont.)

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?



Example of Product Description Form

1. Product name (s)	
2. Product Safety Properties (Moist., Protein, etc.)	
3. How is the product to be used (intended use) & who is intended consumer?	
4. Type of packaging	
5. Shelf life	
6. Where will the product be sold?	
7. Labeling instructions	
8. Special distribution control	
Approved: _____ Date: _____	



List of Ingredients and Raw Materials

Example for Feed Products

Product Name:		
Bulk Ingredients	Bag or Hand Add Ingredients	Medications
Liquids	Packaging Materials	Other Additives
Approved: _____		
Date: _____		



Process Flow Diagram

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

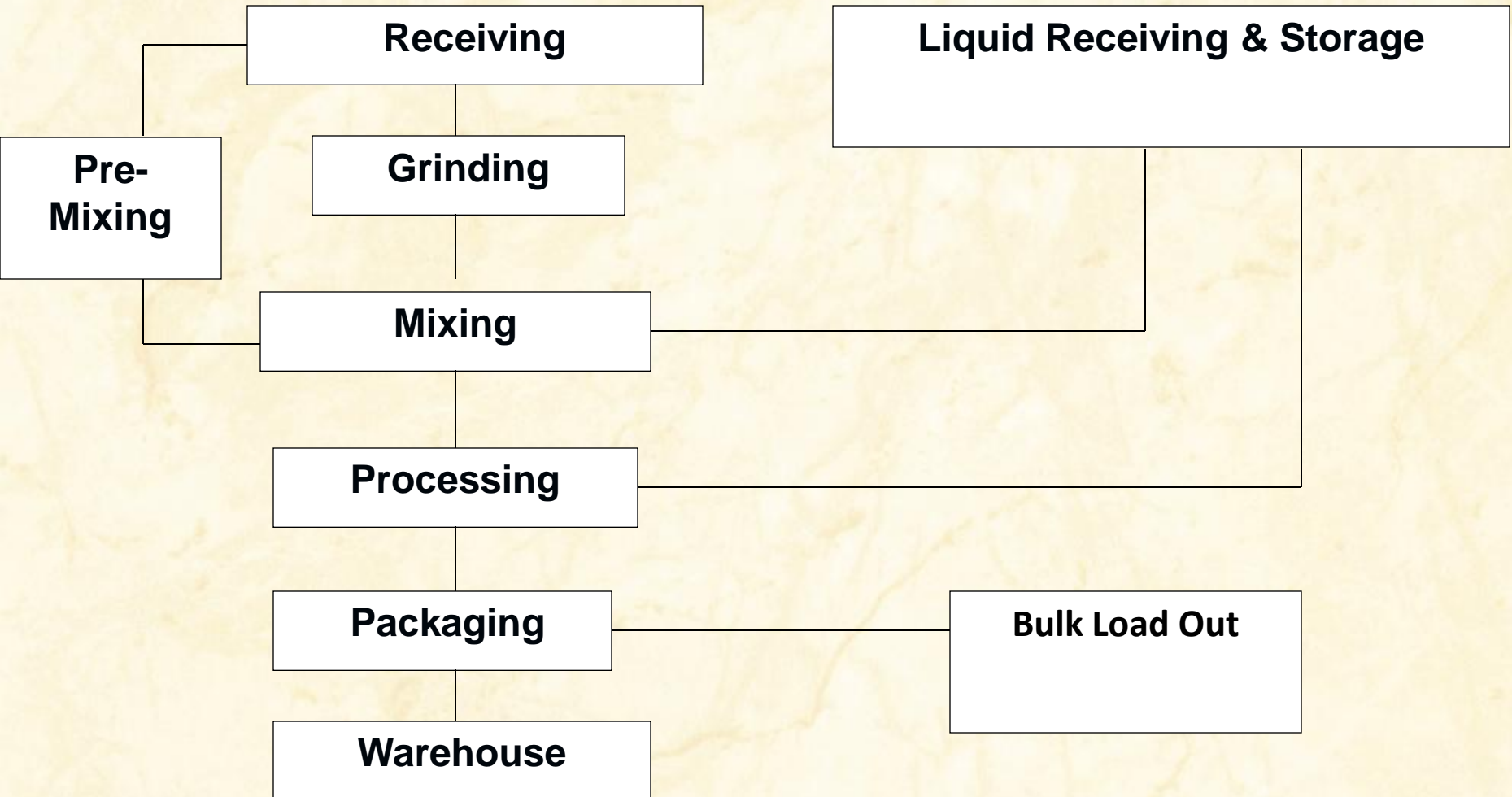


Process Flow Diagram (Cont.)

- Does not need to be complex
- Can use simple block flow diagrams
- Be Sure To:
 - Define Returned Product
 - Define Rework



Example Flow Diagram





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



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QUESTIONS

MATT FREDERKING

DIRECTOR REGULATORY AFFAIRS AND OPERATIONS

RALCO NUTRITION INC

MARSHALL MN

CELL PHONE# 1 605 553 0157

EMAIL MATT.FREDERKING@RALCONUTRITION.COM

