

Generic HACCP* Model for Swine Slaughter

*Hazard Analysis
and Critical Control
Point (HACCP)

United States
Department
of Agriculture

**Food Safety
and Inspection
Service**

March 1994

Introduction

HACCP Generic Model for Swine Slaughter

Hazard Analysis and Critical Control Points (HACCP) is a system of process control. It is designed to prevent the occurrence of problems by ensuring that controls are applied at any point in a food production system where hazardous or critical situations could occur. Hazards could include microbiological, chemical, or physical adulteration of food products.

In late May 1993, U.S. Department of Agriculture (USDA) Secretary Mike Espy directed USDA's Food Safety and Inspection Service (FSIS) to provide him with a plan for implementing mandatory HACCP in the nation's meat and poultry establishments. The Secretary recognized that such a system, which has been under study by FSIS, was a necessary building block of the inspection system of the future.

In workshops held in 1991 and 1992, five generic HACCP models were developed and are being published for public information. The models should be useful for companies developing individualized plans.

The five generic HACCP models are:

- Refrigerated Foods
- Cooked Sausage
- Poultry Slaughter
- Fresh Ground Beef
- Swine Slaughter

The workshop for Pork Slaughter (Market Hogs) was held in Minneapolis, Minnesota, from March 31-April 2, 1992. Over 40 technical and subject matter experts from industry and government collaborated in the generic model development. Participants identified 10 critical control points (CCP's) for pork slaughter, including: receiving/holding, scalding, dehairing, trimming, neck breaker/head dropping/brisket opening, splitting, trim rail/final rail inspection for trimming, cooler, operational sanitation, and pre-op sanitation. This is the generic HACCP model for Pork Slaughter (Market Hogs).

Information on the other four workshops follows:

The workshop for Cooked Sausage was held in Fort Worth, Texas, from May 21-23, 1991. Over 40 technical and subject matter experts from industry and government collaborated in the generic model development. Participants identified 9 critical control points (CCP's) for cooked sausage, including: receiving, meat preparation, non-meat ingredient compounding, pre-blend/formulation/staging (re-work), cooking/smoking, chilling/storage, peeling, packaging, and storage. This is the generic HACCP model for Cooked Sausage.

The workshop for Refrigerated Foods was held in Baltimore, Maryland, from February 26-28, 1991. Over 40 technical and subject matter experts from industry and government collaborated in the generic model development. Participants identified 12 critical control points (CCP's) for refrigerated foods, including: preparation, cooking, chilling, assembling components into packages, flushing with gas atmosphere, package inspection, labeling and code dating, chilling, and storage. This is the generic HACCP model for Refrigerated Foods.

The workshop for Poultry Slaughter was held in Atlanta, Georgia, from August 27-29, 1991. Over 40 technical and subject matter experts from industry and government collaborated in the generic model development. Participants identified 10 critical control points (CCP's) for poultry slaughter, including: receiving, scalding, venting/opening/eviscerating, off-line procedures, neck and giblet chilling, final wash, carcass chilling, packaging/labeling, and storage/distribution. This is the generic HACCP model for Poultry Slaughter.

The workshop for Fresh Ground Beef was held in Phoenix, Arizona, from December 3-5, 1991. Over 40 technical and subject matter experts from industry and government collaborated in the generic model development. Participants identified 10 critical control points (CCP's) for fresh ground beef, including: Sanitation, receiving, storage, assembly/pre-weigh/pre-grind (re-work), final grind, packaging/labeling, storage, and shipping. This is the generic HACCP model for Fresh Ground Beef.

PRODUCT CATEGORY DESCRIPTION

PRODUCT CATEGORY : PORK SLAUGHTER MARKET HOGS

WORKSHOP LOCATION : MINNEAPOLIS, MN

THE FOLLOWING QUESTIONS NEED TO BE ANSWERED WHEN DEVELOPING THE PRODUCT CATEGORY DESCRIPTION:

- | | | |
|----|---|---|
| 1. | COMMON NAME? | PORK SLAUGHTER MARKET HOGS |
| 2. | HOW IS IT TO BE USED? | WHOLE CARCASS FOR FURTHER PROCESSING |
| 3. | STORAGE TEMPERATURE? | TIME/TEMPERATURE TO LIMIT MICROORGANISM GROWTH DURING THE CHILLING PROCESS TO BE DETERMINED BY EACH PROCESSOR |
| 4. | LABELING/BRANDING? | LEGIBLE BRAND |
| 5. | IS SPECIAL DISTRIBUTION CONTROL NEEDED? | N/A |

NOTE: THIS IS A DOCUMENT DEVELOPED AT THE INDUSTRY HACCP WORKSHOP FOR SWINE SLAUGHTER (MARKET HOGS). IT DEMONSTRATES THE METHODOLOGY USED TO DEVELOP THE GENERIC INDUSTRY HACCP MODEL. MARCH 31 - APRIL 2, 1992

| HAZARD ANALYSIS/PREVENTIVE MEASURES | | | |
|---|--|--|-----|
| PRODUCT CATEGORY : PORK SLAUGHTER (MARKET HOGS) | | | |
| WORKSHOP LOCATION : MINNEAPOLIS, MN | | | |
| Process Step | Chemical Physical Biological Hazards | Preventive Measures | CCP |
| RECEIVING/HOLDING | CHEMICAL SULFAMETHAZINE, OTHER ANTIBIOTICS & RESIDUES | (REFER TO REMOVE BLADDER STEP) | NO |
| | PHYSICAL EAR TAGS; NOSE TAGS | (REFER TO TRIMMING STEP) | NO |
| | BIOLOGICAL PATHOLOGICAL CONDITIONS | | NO |
| STUNNING | NONE | | |
| SHACKLING | NONE | | |
| STICKING/BLEEDING | NONE | | |
| SCALDING | CHEMICAL ANTI- FOAMING AGENTS | IDENTIFI- CATION; CONCENTRA- TION | YES |
| | BIOLOGICAL MICRO | TIME AND TEMPERATURE | YES |
| DEHAIRING | BIOLOGICAL MICRO | RINSE AND EQUIPMENT | YES |
| GAMBRELLING | NONE | | |
| SINGEING/ POLISHING/WASH | BIOLOGICAL MICRO | RINSE AND EQUIPMENT | YES |
| SHAVING | NONE | | |
| PRE-EVISCERATION WASH | NONE | | |

NOTE: THIS IS A DOCUMENT DEVELOPED FOR THE HACCP SPECIAL TEAM. IT HAS BEEN USED AS A TRAINING TOOL IN THE METHODOLOGY USED TO ASSIST INDUSTRY IN DEVELOPING A WORKSHOP HACCP MODEL.

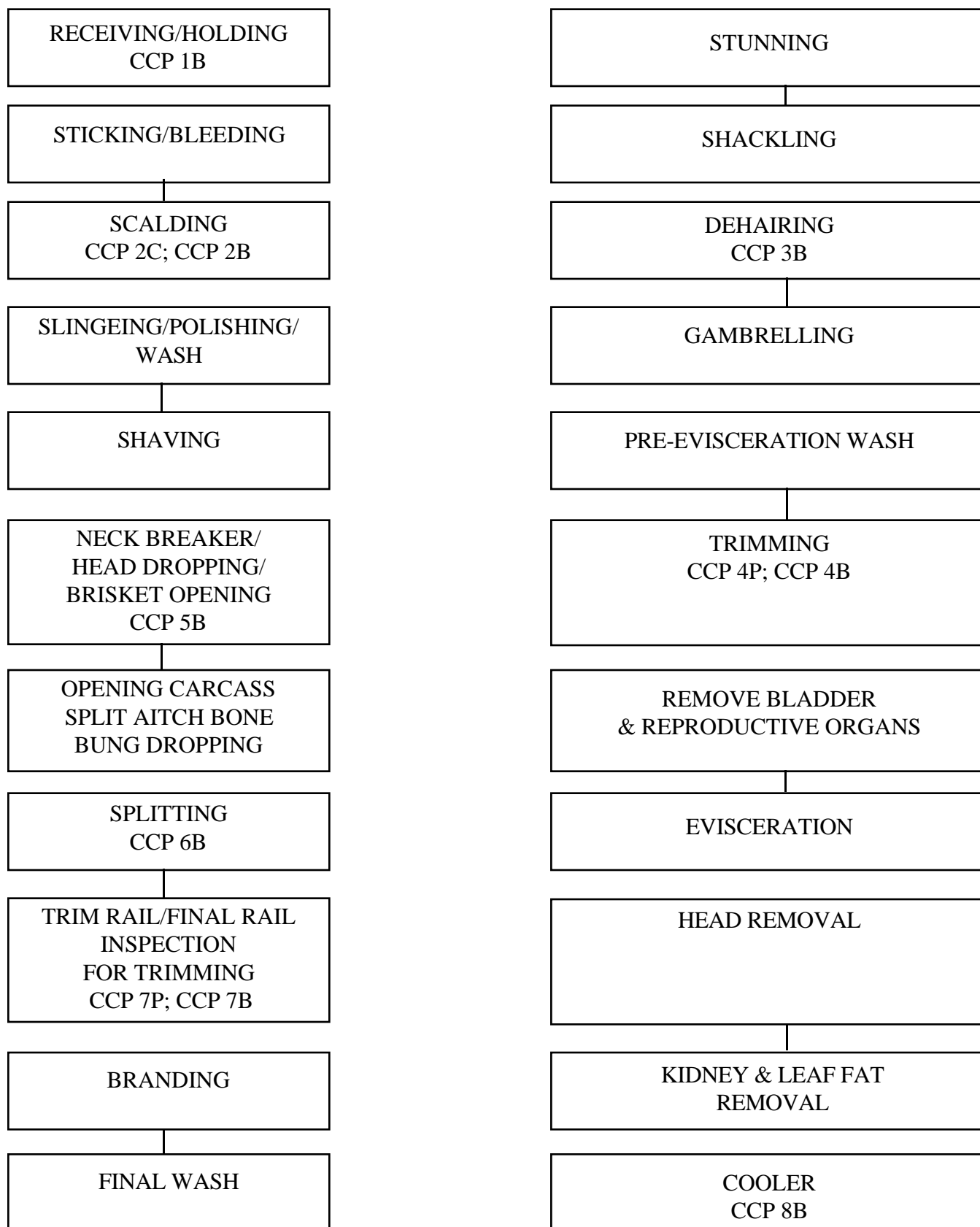
| PORK SLAUGHTER (MARKET HOGS) | | | |
|---|---|---|-----|
| PRODUCT CATEGORY : PORK SLAUGHTER (MARKET HOGS) | | | |
| WORKSHOP LOCATION : MINNEAPOLIS, MN | | | |
| Process Step | Chemical Physical Biological Hazards | Preventive Measure | CCP |
| TRIMMING | PHYSICAL EAR TAGS; NOSE TAGS | REMOVAL | YES |
| | BIOLOGICAL MICRO | REMOVAL OF VISUAL CONTAMINANTS/PUNCTURE IN SKIN | YES |
| NECK BREAKER | BIOLOGICAL MICRO | SANITIZING OF NECK BREAKER AFTER EACH CARCASS | YES |
| HEAD DROPPING | BIOLOGICAL MICRO | SANITIZING OF KNIVES AFTER EACH HEAD DROP | YES |
| BRISKET OPENING | BIOLOGICAL MICRO | SANITIZING OF SAWS OR SPLITTERS AFTER EACH CARCASS | YES |
| REMOVE BLADDER & REPRODUCTIVE ORGANS | BIOLOGICAL MICRO | SANITARY DRESSING PROCEDURES; STERILIZING OF EQUIPMENT AFTER EACH CARCASS | YES |
| SPLIT AITCH BONE/BUNG DROPPING | BIOLOGICAL MICRO | SANITARY DRESSING PROCEDURES | YES |
| EVISCKERATION | BIOLOGICAL MICRO | REMOVAL OF DEFECTS | YES |
| RAIL FOR ADDITIONAL TRIMMING | BIOLOGICAL MICRO | REMOVAL OF DEFECTS | YES |
| SPLITTING | BIOLOGICAL MICRO | SANITIZING OF EQUIPMENT AFTER EACH INCIDENCE OF CONTAMINATION | YES |

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| HAZARD ANALYSIS/PREVENTIVE MEASURES | | | |
|--|---|--|------------|
| PRODUCT CATEGORY : PORK SLAUGHTER (MARKET HOGS) | | | |
| WORKSHOP LOCATION : MINNEAPOLIS, MN | | | |
| Process Step | Chemical Physical Biological Hazards | Preventive Measures | CCP |
| TRIMMING | BIOLOGICAL MICRO | REMOVAL OF DEFECTS | YES |
| HEAD REMOVAL | NONE | | |
| KIDNEY & LEAF FAT REMOVAL | NONE | | |
| BRANDING | NONE | | |
| FINAL WASH | BIOLOGICAL MICRO | | NO |
| COOLER | BIOLOGICAL MICRO | COOLER TIME AND TEMPERATURE; CONTROL PROPER AIRFLOW | YES |

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PORK SLAUGHTER MARKET HOGS



OPERATIONAL SANITATION CCP 9B
 PRE-OP SANITATION CCP 10C; 10B
REVISED 04/04/92

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| HAZARD ANALYSIS/PREVENTIVE MEASURES | | | | | | | | |
|---|---|--|-----------|--|---|--|---|---|
| PRODUCT CATEGORY : PORK SLAUGHTER MARKET HOGS | | | | | | | | |
| WORKSHOP LOCATION : MINNEAPOLIS, MN | | | | | | | | |
| Process Step | Chemical Physical Biological Hazards | Preventive Measures | CCP | Critical Limits for Preventive Measures | Monitoring Procedures/ Frequency/ Person Responsible | Corrective/ Preventive Action/ Person Responsible | HACCP Records | Verification Procedure/ Person Responsible |
| RECEIVING/ HOLDING | CHEMICAL - PESTICIDES & ANTIBIOTIC RESIDUES; | | NO | | | | | |
| | PHYSICAL - HYPODERMIC NEEDLES; BB SHOT | | NO | | | | | |
| | PHYSICAL - EAR TAGS & NOSE RINGS | SEE TRIMMING STATION PRIOR TO HEAD DROPPING | NO | | | | | |
| | BIOLOGICAL - MICROBIAL CONTAMINATION; | | NO | | | | | |
| | BIOLOGICAL- PATHOLOGICAL DEFECTS | ANTEMORTEM | CCP 1B | NO VISIBLE ABNORMALITIES | VISUAL INSPECTION OF ALL HOGS. BY DESIGNED, QUALIFIED LIVESTOCK PERSONNEL. SORTED HOG INFORMATION WILL BE DOCUMENTED. | CONTROL AND CORRECT AT HEAD INSPECTION, VISCERA INSPECTION OR FINAL RAIL. SLAUGHTER ABNORMALS IN A LOT BY THEMSELVES. FEEDBACK- RETRAIN. DOCUMENT ALL INFORMATION. | MAINTAIN LOT CARD/PLANT SORT RECORDS DAILY INCLUDING DEVIATIONS AND CORRECTIVE ACTIONS. | PLANT DESIGNATED HACCP COORDINATOR TO VERIFY RECORDS AND PROCEDURES. VERIFICATION PROCEDURES TO BE DETERMINED BY PLANT. |
| STUNNING | CHEMICAL - NONE | | | | | | | |
| | PHYSICAL - NONE | | | | | | | |
| | BIOLOGICAL - NONE | | | | | | | |
| SHACKLING | CHEMICAL - NONE | | | | | | | |
| | PHYSICAL - NONE | | | | | | | |
| | BIOLOGICAL - NONE | | | | | | | |
| STICKING/ BLEEDING | CHEMICAL - NONE | | | | | | | |
| | PHYSICAL - NONE | | | | | | | |
| | BIOLOGICAL- MICROBIOLOGICAL CONTAMINATION | TRIMMING PRIOR TO NECK BREAKER | NO | | | | | |

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| HAZARD ANALYSIS/PREVENTIVE MEASURES | | | | | | | | |
|---|--|------------------------|-----------|---|--|--|---|---|
| PRODUCT CATEGORY : PORK SLAUGHTER MARKET HOGS | | | | | | | | |
| WORKSHOP LOCATION : MINNEAPOLIS, MN | | | | | | | | |
| Process Step | Chemical Physical Biological Hazards | Preventive Measures | CCP | Critical Limits for Preventive Measures | Monitoring Procedures/ Frequency/ Person Responsible | Corrective/ Preventive Action/ Person Responsible | HACCP Records | Verification Procedure/ Person Responsible |
| SCALDING | CHEMICAL - CHEMICAL ADDITIVES | EMPLOYEE TRAINING | CCP 2C | CHEMICALS ADDED BY QUALIFIED EMPLOYEES ONLY. | TRAINED, QUALIFIED DESIGNATED EMPLOYEES. LOG OR RECORD CHEMICAL USAGE. | RETRAIN. | DOCUMENT TRAINING. | PLANT DESIGNATED HACCP COORDINATOR TO VERIFY RECORDS AND PROCEDURES. VERIFICATION PROCEDURES TO BE DETERMINED BY PLANT. |
| | | CORRECT AMOUNTS | CCP 2C | USDA - FDA APPROVED CHEMICALS ONLY. CONCENTRATION S NOT TO EXCEED MANUFACTURER' S RECOMMENDATI ONS. | VERIFY CHEMICALS UPON ADDITION. TEST PLANT SPECIFIC AT DESIGNATED TIME INTERVALS. | RETAIN OR HOLD HOGS. IDENTIFY CHEMICAL - MSDS. OBTAIN USDA DISPOSITION OF HOGS. IF NECESSARY, DRAIN TUB/CLEAN/REFILL. EMPLOYEE CORRECTION; DOCUMENT ACTION. NOTIFY APPROPRIATE PERSONNEL, EVALUATE/ADJUST PROCESS AND/OR PRODUCT AS NEEDED. APPROPRIATE INFORMATION RECORDED AND SIGNED. | MAINTAIN DAILY RECORDS OF CHEMICAL TESTING USAGE INCLUDING DEVIATIONS AND CORRECTIONS. | MAINTAIN DAILY RECORDS OF CHEMICAL TESTING USAGE INCLUDING DEVIATIONS AND CORRECTIONS. |
| | PHYSICAL - NONE | | | | | | | |
| | BIOLOGICAL - MICROBIOLOGICAL CONTAMINATION | TIME/ TEMPERATURE | CCP 2B | TIME/ TEMPERATURE, PLANT SPECIFIC, TO PREVENT OVERSCALDING. | THERMOMETER/ THERMOCOUPLER; CONTINUOUS TIME/ TEMP-RECORDING (CALIBRATED); KILL FLOOR MANAGER; CHART OR GRAPHS DOCUMENTED. | REMOVE OVERSCALDED AREA OF HOGS. EVALUATE SYSTEM. MAKE NECESSARY ADJUSTMENTS. DOCUMENT ACTIONS. | THERMOMETER/ THERMOCOUPLER CHARTS ON FILE SHOWING DEVIATIONS/ CORRECTIONS FOR SCALD OPERATION. | PLANT DESIGNATED HACCP COORDINATOR TO VERIFY RECORDS AND PROCEDURES. VERIFICATION PROCEDURES TO BE DETERMINED BY PLANT. |
| DEHAIRING | CHEMICAL-NONE PHYSICAL-NONE | | | | | | | |

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MARCH 31 - APRIL 2, 1992

| HAZARD ANALYSIS/PREVENTIVE MEASURES | | | | | | | | |
|---|--|------------------------|-----------|---|--|---|--|---|
| PRODUCT CATEGORY : PORK SLAUGHTER MARKET HOGS | | | | | | | | |
| WORKSHOP LOCATION : MINNEAPOLIS, MN | | | | | | | | |
| Process Step | Chemical Physical Biological Hazards | Preventive Measures | CCP | Critical Limits for Preventive Measures | Monitoring Procedures/ Frequency/Person Responsible | Corrective/ Preventive Action/Person Responsible | HACCP Records | Verification Procedure/Person Responsible |
| | BIOLOGICAL - MICROBIOLOGICAL CONTAMINATION | TIME TEMPERATURE | CCP 3B | TIME/TEMPERATURE DETERMINED BY PLANT SPECIFIC TESTING RESULTS TO REMOVE VISIBLE HAIR TO AN ACCEPTABLE LEVEL WITHOUT BREAKING SKIN | PLANT SPECIFIC MONITORING BY A TRAINED AND QUALIFIED PLANT INDIVIDUAL. RECORD OBSERVATIONS ON TIME/TEMPERATURE ON CHART OR HACCP LOG | EVALUATE THE CAUSE AND/OR SIGNIFICANCE OF THE DEVIATION. QUALIFIED/TRAINED PLANT INDIVIDUAL WILL TAKE NECESSARY ACTION TO CORRECT OR PREVENT UNACCEPTABLE CONDITIONS. HOLD UNACCEPTABLE CARCASSES FOR CORRECTIVE ACTION. CORRECTIVE ACTION RECORDED ON HACCP DEVIATION LOG. | TIME/ TEMPERATURE RECORDING CHART OR LOG; HACCP/DEVIATION LOG; HOLD TAG; RECORDS ON FILE AND AVAILABLE FOR REVIEW. | SLAUGHTER FLOOR SUPERVISOR OR DESIGNEE WILL VERIFY DAILY. QC/PLANT SUPERVISOR WILL AUDIT HACCP RECORDS AT FREQUENCY DETERMINED BY PLANT SPECIFIC PLAN VERIFICATIONS RECORDED ON AUDIT RECORD. |
| | | PROPER MAINTENANCE | CCP 3B | DEHAIRER MAINTAINED AT AN ACCEPTABLE LEVEL CONSISTENT WITH REMOVAL OF VISIBLE HAIR WITHOUT BREAKING SKIN | PLANT SPECIFIC MONITORING BY A TRAINED AND QUALIFIED PLANT INDIVIDUAL. RECORD OBSERVATIONS ON TIME/TEMPERATURE ON CHART OR HACCP LOG | EVALUATE THE CAUSE AND/OR SIGNIFICANCE OF THE DEVIATION. QUALIFIED/TRAINED PLANT INDIVIDUAL WILL TAKE NECESSARY ACTION TO CORRECT OR PREVENT UNACCEPTABLE CONDITIONS. HOLD UNACCEPTABLE CARCASSES FOR CORRECTIVE ACTION. CORRECTIVE ACTION RECORDED ON HACCP DEVIATION LOG. | TIME/ TEMPERATURE RECORDING CHART OR LOG; HACCP/DEVIATION LOG; HOLD TAG; RECORDS ON FILE AND AVAILABLE FOR REVIEW. | MAINTENANCE SUPERVISOR OR DESIGNEE WILL VERIFY AS NEEDED. QC/PLANT SUPERVISOR WILL AUDIT HACCP RECORDS AT FREQUENCY DETERMINED BY PLANT SPECIFIC PLAN VERIFICATIONS RECORDED ON AUDIT RECORD. |
| GAMBRELLING | CHEMICAL - NONE | | | | | | | |
| | PHYSICAL - NONE | | | | | | | |
| | BIOLOGICAL - NONE | | | | | | | |
| SINGEING/ POLISHING/ WASH | CHEMICAL - NONE | | | | | | | |
| | PHYSICAL - NONE | | | | | | | |

| HAZARD ANALYSIS/PREVENTIVE MEASURES | | | | | | | | |
|--|--|------------------------------|--------|--|---|---|--|---|
| PRODUCT CATEGORY : PORK SLAUGHTER MARKET HOGS | | | | | | | | |
| WORKSHOP LOCATION : MINNEAPOLIS, MN | | | | | | | | |
| Process Step | Chemical Physical Biological Hazards | Preventive Measures | CCP | Critical Limits for Preventive Measures | Monitoring Procedures/ Frequency/ Person Responsible | Corrective/ Preventive Action/ Person Responsible | HACCP Records | Verification Procedure/ Person Responsible |
| SHAVING | BIOLOGICAL - NONE | | | | | | | |
| | CHEMICAL - NONE | | | | | | | |
| | PHYSICAL - NONE | | | | | | | |
| PRE- EVISCERATION WASH | BIOLOGICAL - NONE | | | | | | | |
| | CHEMICAL - NONE | | | | | | | |
| | PHYSICAL - NONE | | | | | | | |
| TRIMMING | BIOLOGICAL - NONE | | | | | | | |
| | PHYSICAL - EAR TAGS & NOSE RINGS | REMOVAL | CCP 4P | TOTAL REMOVAL OF ALL EAR TAGS AND NOSE RINGS | MONITORING WITH SUFFICIENT FREQUENCY BY DESIGNATED PLANT EMPLOYEE. RECORD OBSERVATIONS ON HACCP LOG. | EVALUATE CAUSE AND ENSURE COMPLETE REMOVAL. HOLD AND RETRIM PRODUCT. RETRAIN EMPLOYEE. CORRECTIVE ACTION RECORDED ON HACCP DEVIATION LOG. | HACCP/DEVIATI ON LOG; HOLD TAG; RECORDS ON FILE AND AVAILABLE FOR REVIEW. | SLAUGHTER FLOOR SUPERVISOR OR DESIGNEE WILL VERIFY DAILY. QC/PLANT SUPERVISOR WILL AUDIT HACCP RECORDS AT FREQUENCY DETERMINED BY PLANT SPECIFIC PLAN. VERIFICATIONS RECORDED ON AUDIT RECORD. |
| | BIOLOGICAL - MICROBIOLOGICAL CONTAMINATION | REMOVAL OF STICK WOUND | CCP 4B | NO VISIBLE STICK WOUND RELATED DEFECTS | MONITORING WITH SUFFICIENT FREQUENCY BY DESIGNATED PLANT EMPLOYEE. RECORD OBSERVATIONS ON HACCP LOG. | EVALUATE CAUSE AND ENSURE COMPLETE REMOVAL. HOLD AND RETRIM PRODUCT. RETRAIN EMPLOYEE. CORRECTIVE ACTION RECORDED ON HACCP DEVIATION LOG. | HACCP/DEVIATI ON LOG; HOLD TAG; RECORDS ON FILE AND AVAILABLE FOR REVIEW. | SLAUGHTER FLOOR SUPERVISOR FOR DESIGNEE WILL VERIFY DAILY. QC/PLANT SUPERVISOR WILL AUDIT HACCP RECORDS AT FREQUENCY DETERMINED BY PLANT SPECIFIC PLAN. VERIFICATIONS RECORDED ON AUDIT RECORD. |
| NECK BREAKER/ HEAD DROPPING/ BRISKET OPENING | CHEMICAL - NONE | | | | | | | |
| | PHYSICAL - NONE | | | | | | | |

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MARCH 31 - APRIL 2, 1992

| HAZARD ANALYSIS/PREVENTIVE MEASURES | | | | | | | | |
|--|---|---|--------|---|--|--|---|--|
| PRODUCT CATEGORY : PORK SLAUGHTER MARKET HOGS | | | | | | | | |
| WORKSHOP LOCATION : MINNEAPOLIS, MN | | | | | | | | |
| Process Step | Chemical Physical Biological Hazards | Preventive Measures | CCP | Critical Limits for Preventive Measures | Monitoring Procedures/ Frequency/ Person Responsible | Corrective/ Preventive Action/ Person Responsible | HACCP Records | Verification Procedure/ Person Responsible |
| | BIOLOGICAL - MICROBIOLOGICAL CONTAMINATION | SANITIZING EQUIPMENT BETWEEN EACH CARCASS | CCP 5B | SANITIZING EQUIPMENT BETWEEN EACH CARCASS; 180°F. MINIMUM H2O OR OTHER APPROVED METHOD OF SANITIZING | PLANT SPECIFIC PROGRAM TO MEET CRITICAL LIMITS (A) OPERATOR OBSERVATION (B) TEMPERATURE OR CHEMICAL CHECK FREQUENCY AND RESPONSIBLE PERSON TO BE DETERMINED BY PLANT. RESPONSIBLE PERSON TO RECORD OBSERVATIONS AND INITIAL RECORD. | IMMEDIATE CORRECTIVE ACTION TO INSURE CRITICAL LIMITS ARE MET TO INCLUDE: (A) INSTRUCTING EMPLOYEE (B) TEMPERATURE AND/OR CHEMICAL REQUIREMENT IS MET. | CCP LOG. LOG TO BE MAINTAINED FOR TIME PERIOD SPECIFIED BY PLANT. | PLANT MANAGEMENT TO REVIEW RECORDS AND VERIFY HACCP PROCEDURES/ ACCURACY OF INSTRUMENTS; FREQUENCY TO BE DETERMINED BY PLANT |
| OPENING CARCASS/ SPLIT AITCH BONE/ BUNG DROPPING | CHEMICAL - NONE | | | | | | | |
| | PHYSICAL - NONE | | | | | | | |
| | BIOLOGICAL - MICROBIOLOGICAL CONTAMINATION | OPERATIONAL SANITATION | | | | | | |
| REMOVE BLADDER & REPRODUCTIVE ORGANS | CHEMICAL - NONE | | | | | | | |
| | PHYSICAL - NONE | | | | | | | |
| | BIOLOGICAL - MICROBIOLOGICAL CONTAMINATION | OPERATIONAL SANITATION | | | | | | |
| EVisCERATION | CHEMICAL - NONE | | | | | | | |
| | PHYSICAL - NONE | | | | | | | |
| | BIOLOGICAL - MICROBIOLOGICAL CONTAMINATION | OPERATIONAL SANITATION | | | | | | |

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| HAZARD ANALYSIS/PREVENTIVE MEASURES | | | | | | | | |
|---|--|--|-----------|---|--|---|--|---|
| PRODUCT CATEGORY : PORK SLAUGHTER MARKET HOGS | | | | | | | | |
| WORKSHOP LOCATION : MINNEAPOLIS, MN | | | | | | | | |
| Process Step | Chemical Physical Biological Hazards | Preventive Measures | CCP | Critical Limits for Preventive Measures | Monitoring Procedures/ Frequency? Person Responsible | Corrective/ Preventive Action/ Person Responsible | HACCP Records | Verification Procedure/ Person Responsible |
| SPLITTING | CHEMICAL - NONE | | | | | | | |
| | PHYSICAL - NONE | | | | | | | |
| | BIOLOGICAL - MICROBIOLOGICAL CONTAMINATION | SANITIZING AFTER EACH CARCASS OR OPERATIONAL SANITATION | CCP 6B | WATER TEMPERATURE MAINTAINED $\geq 180^{\circ}$ F. OR OTHER APPROVED METHODS. IF SPLIT PRIOR TO VISCERA INSPECTION; SANITIZE AFTER EACH CARCASS. IF SPLIT AFTER VISCERA INSPECTION; SANITIZE EACH OCCURRENCE OF CONTAMINATION | PLANT SPECIFIC PROGRAM TO MEET CRITICAL LIMITS (A) OPERATOR OBSERVATION (B) TEMPERATURE OR CHEMICAL CHECK FREQUENCY AND RESPONSIBLE PERSON TO BE DETERMINED BY PLANT. RESPONSIBLE PERSON TO RECORD OBSERVATIONS AND INITIAL RECORD. | NOTIFY APPROPRIATE PLANT MANAGEMENT AND TAKE APPROPRIATE CORRECTIVE ACTION; EMPLOYEE TRAINING BY DESIGNATED PLANT MANAGEMENT. EQUIPMENT CALIBRATION. | DAILY DOCUMENTATION LOG MAINTAINED AND SIGNED BY DESIGNATED PLANT EMPLOYEE; LOCATION OF LOG IS PLANT SPECIFIC | PERIODIC AUDIT BY DESIGNATED HACCP TEAM PERSONNEL FOR ACCURACY AND COMPLETENESS OF DOCUMENTATION. |
| TRIM RAIL/RETAIN RAIL/FINAL RAIL | CHEMICAL - NONE | | | | | | | |
| | PHYSICAL - DEADLOCKS | REMOVAL | CCP 7P | ZERO TOLERANCE | MONITORING WITH SUFFICIENT FREQUENCY BY DESIGNATED PLANT EMPLOYEE. RECORD OBSERVATIONS ON HACCP LOG. | NOTIFY APPROPRIATE PERSONNEL AND TAKE APPROPRIATE CORRECTIVE ACTION; EMPLOYEE TRAINING; DESIGNATED PLANT MANAGEMENT | DAILY DOCUMENTATION LOG MAINTAINED AND SIGNED BY DESIGNATED PLANT EMPLOYEE; LOCATION OF LOG IS PLANT SPECIFIC | PERIODIC AUDIT BY DESIGNATED HACCP TEAM PERSONNEL FOR ACCURACY AND COMPLETENESS OF DOCUMENTATION. |
| | BIOLOGICAL - MICROBIOLOGICAL CONTAMINATION | TRIMMING; OPERATIONAL SANITATION | CCP 7B | NO VISIBLE CONTAMINANTS | MONITORING WITH SUFFICIENT FREQUENCY BY DESIGNATED PLANT EMPLOYEE. RECORD OBSERVATIONS ON HACCP LOG. | NOTIFY APPROPRIATE PERSONNEL AND TAKE IMMEDIATE ACTIN; EMPLOYEE TRAINING; DESIGNATED PLANT MANAGEMENT | AND SIGNED BY DESIGNATED PLANT EMPLOYEE; LOCATION OF LOG IS PLANT SPECIFIC | PERIODIC AUDIT BY DESIGNATED HACCP TEAM PERSONNEL FOR ACCURACY AND COMPLETENESS OF DOCUMENTATION. |

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MARCH 31 - APRIL 2, 1992

| HAZARD ANALYSIS/PREVENTIVE MEASURES | | | | | | | | |
|---|--|---|-----------|---|---|---|--|---|
| PRODUCT CATEGORY : PORK SLAUGHTER MARKET HOGS | | | | | | | | |
| WORKSHOP LOCATION : MINNEAPOLIS, MN | | | | | | | | |
| Process Step | Chemical Physical Biological Hazards | Preventive Measures | CCP | Critical Limits for Preventive Measures | Monitoring Procedures/Frequency /person responsible | Corrective/ Preventive Action/ Person Responsible | HACCP Records | Verification Procedure/ Person Responsible |
| | PATHOLOGICAL | RETAIN FOR VMO/USDA DISPOSITION/TRIM AND REMOVAL | CCP 7B | HANDLE AS DIRECTED BY USDA | MONITORING WITH SUFFICIENT FREQUENCY BY DESIGNATED PLANT EMPLOYEE. RECORD OBSERVATIONS ON HACCP LOG. | NOTIFY APPROPRIATE PERSONNEL AND TAKE IMMEDIATE ACTION; EMPLOYEE TRAINING; DESIGNATED PLANT MANAGEMENT | DAILY DOCUMENTATION LOG MAINTAINED AND SIGNED BY DESIGNATED PLANT EMPLOYEE; LOCATION OF LOG IS PLANT SPECIFIC | PERIODIC AUDIT BE DESIGNATED HACCP TEAM PERSONNEL FOR ACCURACY AND COMPLETENESS OF DOCUMENTATION. |
| HEAD REMOVAL | CHEMICAL - NONE | | | | | | | |
| | PHYSICAL - NONE | | | | | | | |
| | BIOLOGICAL - MICROBIOLOGICAL CONTAMINATION | OPERATIONAL SANITATION | | | | | | |
| KIDNEY & LEAF FAT REMOVAL | CHEMICAL - NONE | | | | | | | |
| | PHYSICAL - NONE | | | | | | | |
| | BIOLOGICAL - NONE | | | | | | | |
| BRANDING | CHEMICAL - NONE | | | | | | | |
| | PHYSICAL - NONE | | | | | | | |
| | BIOLOGICAL - NONE | | | | | | | |
| FINAL WASH | CHEMICAL - NONE | | | | | | | |
| | PHYSICAL - NONE | | | | | | | |
| | BIOLOGICAL - NONE | | | | | | | |
| COOLER | CHEMICAL - NONE | | | | | | | |
| | PHYSICAL - NONE | | | | | | | |

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MARCH 31 - APRIL 2, 1992

| HAZARD ANALYSIS/PREVENTIVE MEASURES | | | | | | | | |
|---|--|--|-----------|---|---|---|--|--|
| PRODUCT CATEGORY : PORK SLAUGHTER MARKET HOGS | | | | | | | | |
| WORKSHOP LOCATION : MINNEAPOLIS, MN | | | | | | | | |
| Process Step | Chemical Physical Biological Hazards | Preventive Measures | CCP | Critical Limits for Preventive Measures | Monitoring Procedures/Frequency/Per son Responsible | Corrective/Preventive Action/Person Responsible | HACCP Records | Verification Procedure/Person Responsible |
| | BIOLOGICAL - MICROBIOLOGICAL CONTAMINATION | TIME/ TEMPERATURE; PLANT SPECIFIC PROCEDURES | CCP 8B | PLANT SPECIFIC TIME/TEMPERAT URE TO CONTROL MICROBIAL GROWTH | PLANT SPECIFIC TEMPERATURE CHECKS (CARCASS OR AIR) BY DESIGNATED EMPLOYEES. FREQUENCY DETERMINED BY PLANT. APPROPRIATE INFORMATION RECORDED AND SIGNED. | NOTIFY APPROPRIATE PERSONNEL, EVALUATE/ADJUST PROCESS AND/OR PRODUCT AS NEEDED. APPROPRIATE INFORMATION RECORDED AND SIGNED. | PLANT SPECIFIC MONITORING AND CORRECTIVE ACTIONS. RECORD ON FILE FOR PRE DETERMINED TIME. | REGULAR AUDITS BE DESIGNATED PERSONNEL TO ASSURE COMPLIANCE WITH PROCEDURES, EQUIPMENT, CALIBRATION, AND RECORDKEEPING. |
| OPERATIONAL SANITATION | CHEMICAL - NONE | | | | | | | |
| | PHYSICAL - NONE | | | | | | | |
| | BIOLOGICAL - MICROBIOLOGICAL CONTAMINATION | EMPLOYEE TRAINING; PERSONAL HYGIENE; SANITARY DRESSING PROCEDURES; PERSONAL CONCERNS. | CCP 9B | TRAINING PROGRAM WILL BE PROVIDED FOR ALL EMPLOYEES WHICH SHOULD INCLUDE PERSONAL HYGIENE, PRODUCT HANDLING PROCEDURES AND SANITARY DRESSING PROCEDURES | DOCUMENTATION OF EMPLOYEE TRAINING FOLLOWED BY PERIODIC OBSERVATION OF EMPLOYEE PRACTICES. RESPONSIBLE PERSONS/ FREQUENCY TO BE DETERMINED BY EACH PLANT. RESPONSIBLE PERSON WILL RECORD AND INITIAL. | | DOCUMENTATION OF TRAINING FOR INDIVIDUAL EMPLOYEES RECORD. CCP LOG TO BE MAINTAINED FOR PERIOD SPECIFIED BE PLANT. | PLANT MANAGEMENT TO REVIEW RECORDS AND VERIFY HACCP PROCEDURES. FREQUENCY TO BE DETERMINED BY EACH PROCESSOR. |

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MARCH 31 - APRIL 2, 1992

| HAZARD ANALYSIS/PREVENTIVE MEASURES | | | | | | | | |
|---|--|--|---------|--|--|--|--|--|
| PRODUCT CATEGORY : PORK SLAUGHTER MARKET HOGS | | | | | | | | |
| WORKSHOP LOCATION : MINNEAPOLIS, MN | | | | | | | | |
| Process Step | Chemical Physical Biological Hazards | Preventive Measures | CCP | Critical Limits for Preventive Measures | Monitoring Procedures/ Frequency/Person Responsible | Corrective/ Preventive Action/Person Responsible | HACCP Records | Verification Procedure/Person Responsible |
| | | ENVIRONMENTAL CONCERNS | CCP 9B | PLANT SPECIFIC GMP'S TO MINIMIZE CARCASS CONTAMINATION | PERIODIC OBSERVATION OF FACILITY. RESPONSIBLE PERSONS/FREQUENCY TO BE DETERMINED BY EACH PLANT. RESPONSIBLE PERSON WILL RECORD AND INITIAL. | IMMEDIATE CORRECTIVE ACTION TO INSURE CRITICAL LIMITS ARE MET TO INCLUDE: A. INSTRUCTING EMPLOYEE B. PREVENT CARCASS CONTAMINATION | CCP LOG TO BE MAINTAINED FOR PERIOD SPECIFIED | PLANT MANAGEMENT TO REVIEW RECORDS AND VERIFY HACCP PROCEDURES. |
| PRE-OPERATIONAL SANITATION | CHEMICAL - CHEMICAL RESIDUE; EXCESSIVE SANITIZER CONCENTRATION | EMPLOYEE TRAINING; MIXING AND USE; CHECKING OF CORRECT CONCENTRATIONS; CORRECT PRE-RINSE | CCP 10C | PROPER TRAINING AND PROPER USE OF USDA APPROVED SANITATION CHEMICALS | DAILY VISUAL/SENSORY INSPECTION BE DESIGNATED EMPLOYEE. CHEMICAL TRAINING PROGRAM IN PLACE ROUTINELY MONITORED BY DESIGNATED EMPLOYEE. APPROPRIATE INFORMATION RECORDED AND SIGNED | DEVIATIONS NOTED, APPROPRIATE PERSONNEL NOTIFIED, CORRECTIVE ACTION IMPLEMENTED AND APPROPRIATE INFORMATION RECORDED AND SIGNED. | PLANT SPECIFIC MONITORING AND CORRECTIVE ACTIONS. RECORD ON FILE FOR PREDETERMINED TIME. | REGULAR AUDITS AND/OR CHEMICAL TESTING BY DESIGNATED PERSONNEL TO ASSURE COMPLIANCE WITH PROCEDURES AND RECORDKEEPING. |
| | PHYSICAL - NONE BIOLOGICAL - MICROBIOLOGICAL CONTAMINATION | VISIBLE CLEAN | CCP 10B | PLANT EQUIPMENT AND ENVIRONMENT MEETING SANITARY STANDARDS | DAILY VISUAL PRE-OP INSPECTION BY DESIGNATED EMPLOYEE. APPROPRIATE INFORMATION RECORDED AND SIGNED. | DEVIATIONS NOTED, APPROPRIATE PERSONNEL NOTIFIED, CORRECTIVE ACTION IMPLEMENTED AND APPROPRIATE INFORMATION RECORDED AND SIGNED. | PLANT SPECIFIC MONITORING AND CORRECTIVE ACTIONS. RECORD ON FILE FOR PREDETERMINED TIME. | REGULAR AUDITS AND/OR MICRO TESTING BY DESIGNATED PERSONNEL TO ASSURE COMPLIANCE WITH PROCEDURES AND RECORDKEEPING. |

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**HACCP STEERING COMMITTEE
(SWINE SLAUGHTER (MARKET HOGS))**

| <p style="text-align: center;"><u>CHAIRPERSON</u></p> | <p style="text-align: center;"><u>CO-CHAIRPERSON</u></p> |
|---|---|
| <p>KATIE HANIGAN MANAGER, ANALYTICAL SERVICES FARMLAND FOODS INDUSTRIAL DRIVE DENISON, IA 51442</p> <p>(712) 263-7383</p> | <p>ELLEN L. GRABER QUALITY CONTROL MANAGER THORN APLE VALLEY 1487 FARNSWORTH DETROIT, MI 48211</p> <p>(313) 832-6080</p> |
| <p>PAUL T. CONNER DIRECTOR, PRODUCT CONTROL PORK DIVISION IBP P.O. BOX 515, HWY. 35 DAKOTA CITY, NE 68731</p> <p>(402) 241-3105</p> | <p>KIRK JONES DIRECTOR, PRODUCT INTEGRITY AND FOOD SAFETY, PORK DIVISION MONFORT, INC. P.O. BOX G GREELEY, CO 80632</p> <p>(303) 353-2311</p> |
| <p>BOB NEUBAUER PLANT COORDINATOR JOHNSONVILLE FOODS 104 DIVISION STREET WATERTOWN, WI 53094</p> <p>(414) 261-1870</p> | |