United States Department of Agriculture
Food Safety and Inspection Service

Verifying Sanitary Dressing and Effective Antimicrobial Intervention Implementation at Veal Slaughter Establishments

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Objectives

1. Discuss Higher STEC Percent Positive in Veal
2. Review FSIS Notice 20-13
3. FSIS Research Objectives associated with Veal

Slaughter Classes of Beef Include Veal

- Steer, Heifer, Beef Cow, Dairy Cow, Bull/Stag
- Veal
  - Bob Veal
  - Formula Fed Veal
  - Non-Formula Fed Veal
  - Heavy Calf

Identification of Problem

Higher percent positive for STEC in Veal

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http://www.fsis.usda.gov/Science/Ground_Beef_E.Coli_Testing_Results/index.asp

Identification of Problem: Higher Percent Positive for STEC in Veal

Raw Ground Beef Components (RGBC)				
YTD 2012 Totals (as of 12/31/12)				
Source	**Serotype**	**Trim Verification**	**Follow-up to RGB Positive at Supplier**	**Follow-up to RGBC Positive**
BEEF	**O157:H7**	**0.53%** (12/2,263)	**0.00%** (0/208)	**0.66%** (3/455)
	non-O157 STEC	**0.91%** (14/1,533)	**1.03%** (1/97)	**1.74%** (6/345)
	O26	5	1	4
	O45	0	0	0
	O103	7	0	2
	O111	2	0	0
	O121	0	0	0
	O145	0	0	0
VEAL	**O157:H7**	**7.89%** (3/38)	**10%** (1/10)	**1.67%** (2/120)
	non-O157 STEC	**13.04%** (3/23)	**0.00%** (0/0)	**19.33%** (23/119)
	O26	0	0	4
	O45	1	0	2
	O103	0	0	14
	O111	1	0	1
	O121	0	0	0
	O145	1	0	2

Analysis of Problem
FSA reviews and onsite visits

- FSIS reviewed FSAs from –or– visited 8 veal establishments
- Results from FSA reviews and onsite visits indicated common deficiencies.
- All establishments had multiple hurdle failures in:
  - Sanitary dressing
  - Antimicrobial intervention implementation

Key findings

FSIS Expects:

- Adequate sanitary dressing procedures
- Effective implementation of antimicrobial interventions

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- Contamination is reduced to an undetectable level by the application of the antimicrobial intervention

What We Observed:

- Inadequate sanitary dressing procedures
- Ineffective implementation of antimicrobial interventions

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- contamination overwhelms the antimicrobial intervention

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STEC Positives

FSIS Notice 20-13
Increased Verification by Inspection Program Personnel of Sanitary Dressing at Veal Slaughter Establishments

March 12, 2013

IPP Verification Responsibilities / Beef Sanitary Dressing Task

- Perform the task at least twice a week for the next 90 days by adding directed tasks
  - Follow FSIS PHIS Directive 6410.1
- Prioritize task over other priority 3 tasks, if needed, for 90 days
- When an establishment has an STEC positive, then IPP are to perform the task

Supervisory Personnel Responsibilities

- Conduct work-unit meeting (WUM)
- On-site visit to veal slaughter establishments within 90 days
- Ensure IPP
  - Correctly prioritize tasks
  - Apply inspection methodology
  - Properly document
  - Take enforcement actions

Areas of Concern at Veal Slaughter Establishments

- Sanitary Dressing, in particular:
  - Sticking
  - Hide removal
  - Bunging
  - Evisceration
- Establishment Antimicrobial Interventions

Cutting through the weasand (esophagus) during sticking

Cut the Aitch Bone

Bunging

Bunging

Bagged Bung Contacting Hide

Hide Removal / Legging

Hide Removal / Legging

Prevent Contamination From Hide

- **This establishment was cutting the through the hide into the brisket and also cutting the hocks.**

- **After the establishment made these cuts they applied an intervention with a sprayer. Spraying of the intervention sends contamination (from the hide runoff) into the brisket and hocks.**

Flaps of Hide Contaminating Carcass

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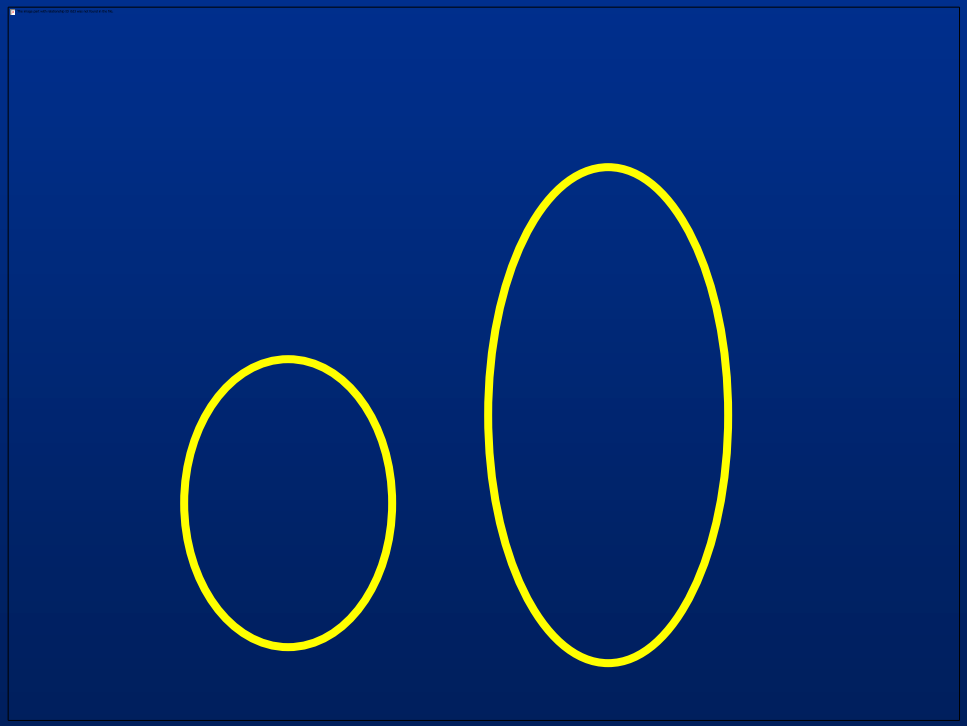
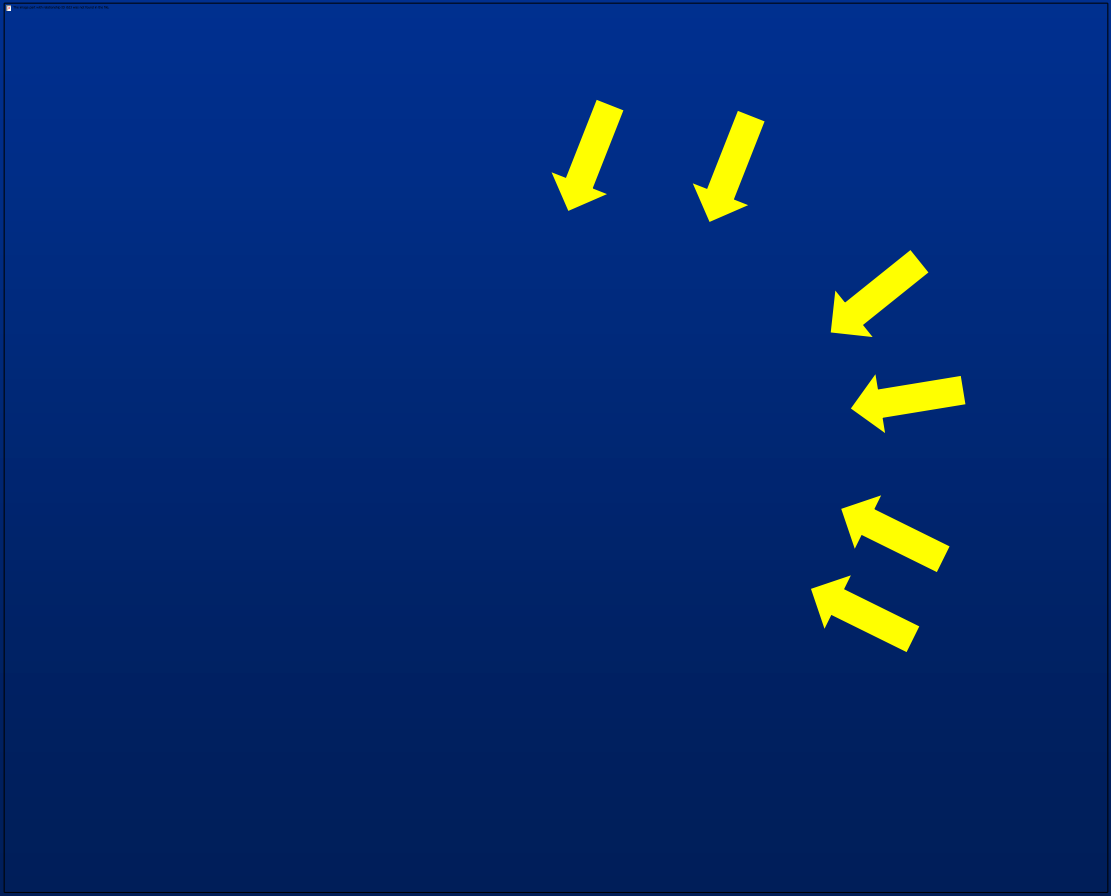
Flaps of Hide Contaminating Carcass



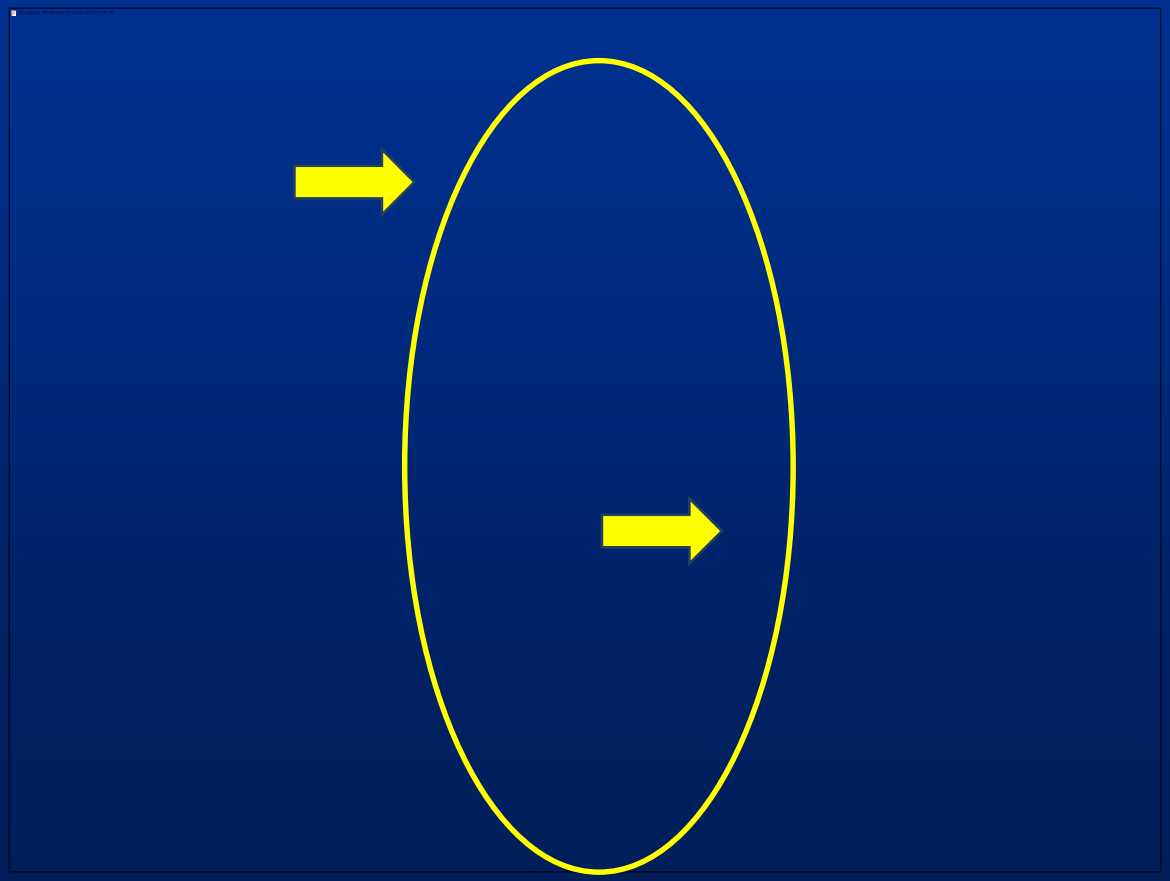
Hair Contacting Carcass

Bung area: cut used on the bung dragged hair into contact with the carcass.



Evisceration

Cross-Contamination



Establishment Failed to Implement Interventions Effectively

--- Deficiencies depicted in the next series of photos

Steam Vacuuming

Steam Vacuuming

Hot Water Wash

Not achieving full carcass coverage of the not water wash intervention when the stream is restricted (in this case the nozzles were clogged).

Hand Spraying of Intervention

Is the establishment meeting the critical operating parameters?

Failure to Meet Critical Operating Parameters

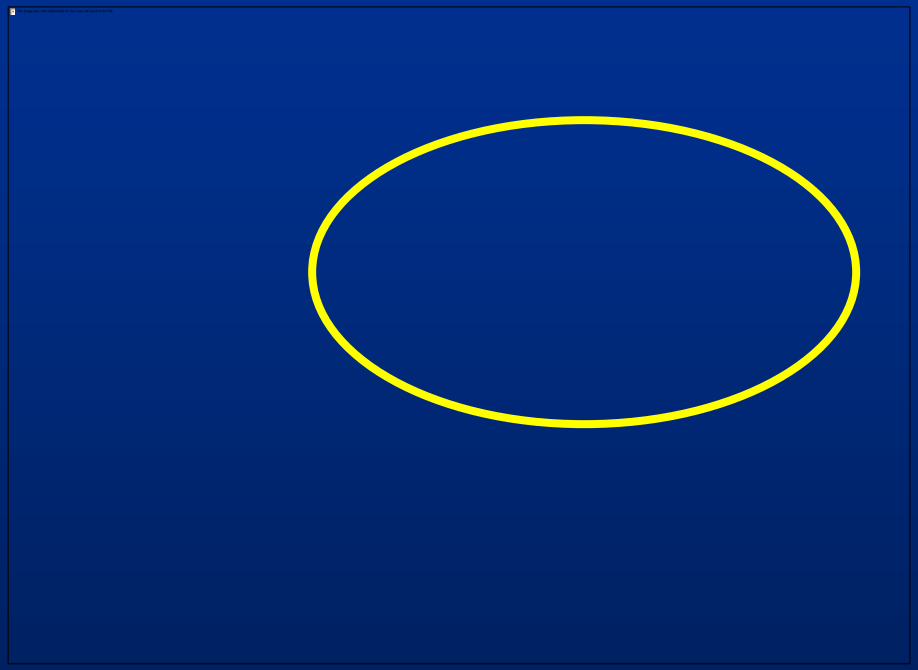
nozzle is not operational

Failure to Meet Critical Operating Parameters

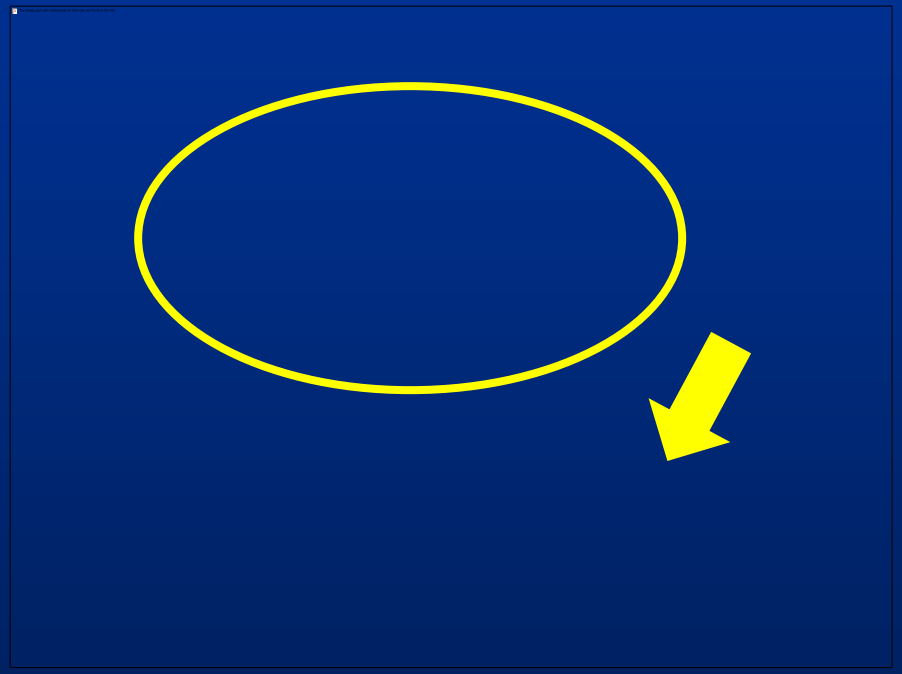
What are the Outcomes of these Sanitary Dressing Deficiencies and Failures to Implement Interventions Effectively?

Resulting Contamination

Resulting Contamination



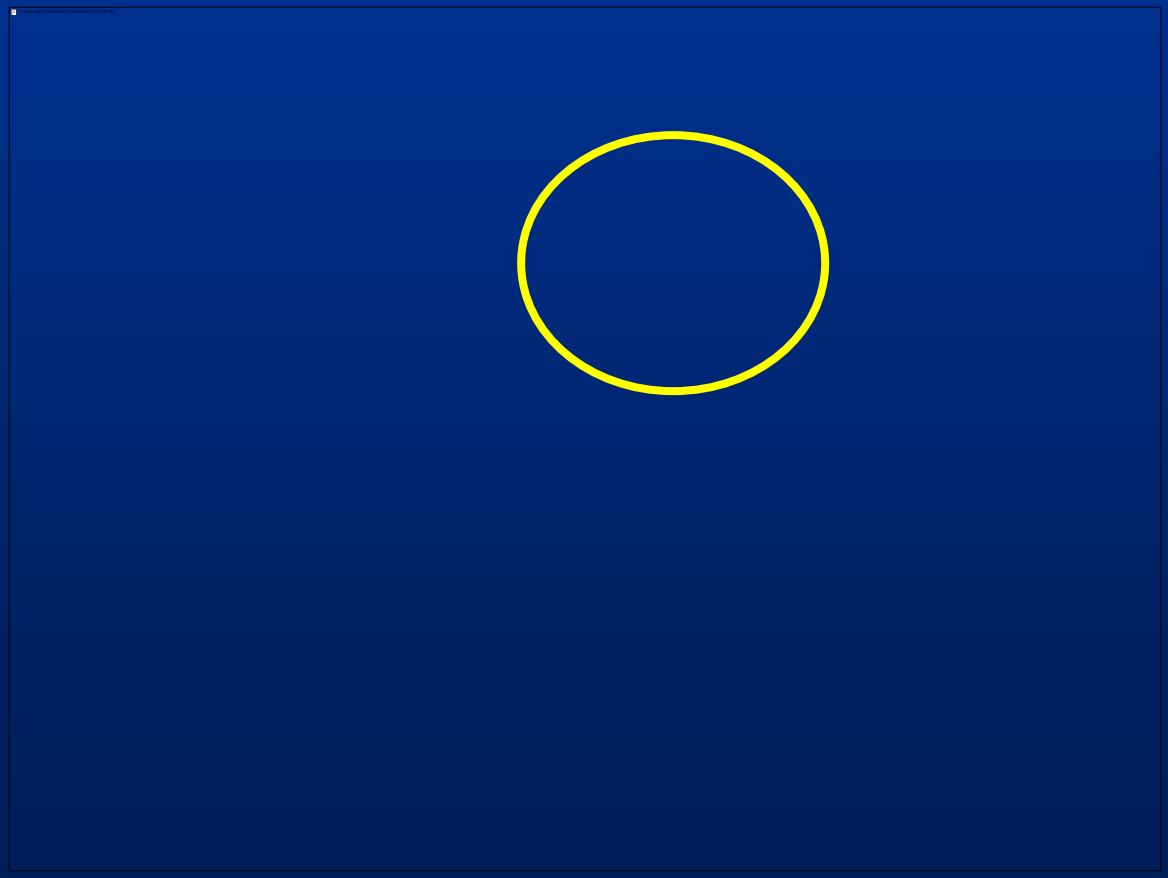
Neck



Hocks

Resulting Contamination in Cooler

Poor bunging and de-hiding



Resulting Contamination in Cooler

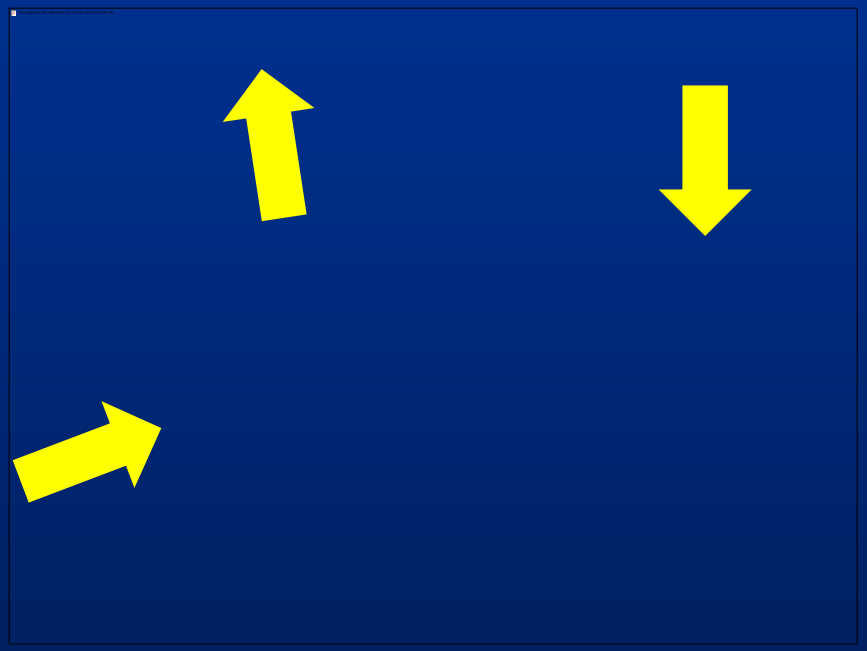
Resulting Contamination in Cooler

Contamination on Cutting Boards

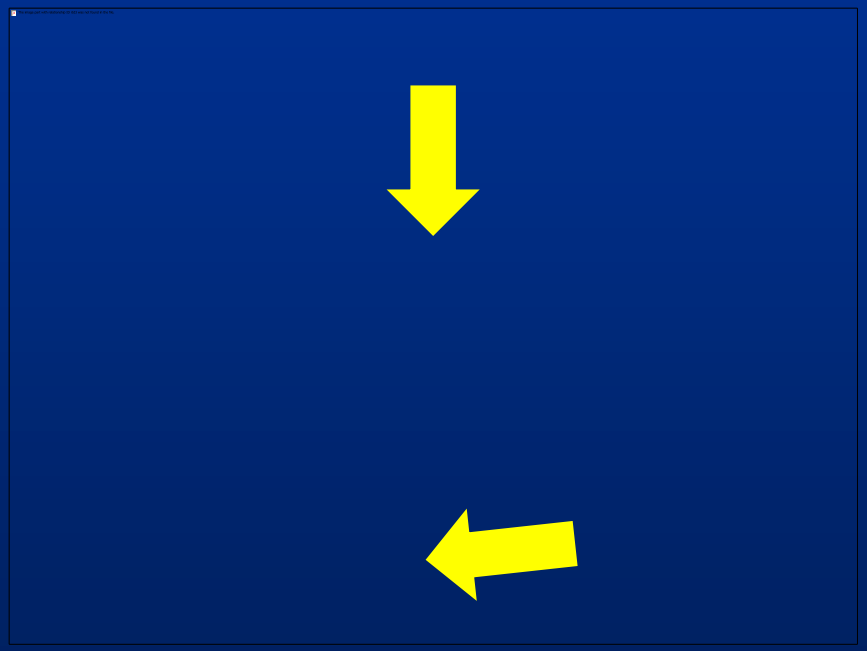
Contamination on Cutting Boards

Hair and Fecal Smear

Packaged Product in Freezer



Calves tongues



Boneless Legs

Conclusion:

Sanitary dressing deficiencies and Ineffective Intervention Implementation lead to:

Contaminated Product and STEC positives

Examples of Loss of Process Control

- Multiple STEC positives in trimmings from FSIS routine and follow-up testing
- Multiple STEC positives from establishment testing
- Generic *E. coli* results indicating increasing microbial contamination
- An establishment not evaluating what the test results say about their slaughter operations

Best Practices to Prevent Breakdowns in the Slaughter Process

- A prudent establishment should be proactive and prevent breakdowns in the slaughter process.
- How is this accomplished?

Best Practices to Prevent Breakdowns in the Slaughter Process

- Comprehensive written sanitary dressing program to address the hazard:
  - measures the establishment will take to prevent contamination from occurring throughout the slaughter process
  - describe on-going information that the establishment will gather to ensure that employees perform the procedures as written
  - Include documentation showing that employees perform the procedures as written and the procedures are effective (e.g., carcass audits)

Best Practices to Prevent Breakdowns in the Slaughter Process

- Explain how the establishment uses its trim testing results to assess the effectiveness of its sanitary dressing procedures and to identify criteria for when the slaughter process is out of control.
- May include a testing program for non-O157 STECs.

Veal Research Priorities

- Determine any unique husbandry, physiological, transportation, or processing factors leading to higher incidence of STEC/Salmonella
- Determine and unique steps in veal slaughter different from larger cattle slaughter requiring additional guidance

Veal Research Priorities

- Risk Profiles for STECs/Salmonella for classes of veal
- Determine any unique husbandry, physiological, transportation, or processing factors leading to higher prevalence/concentration of chemical hazards
- Determine risk to humans from exposure to chemical hazards from veal classes

Questions?