



United States Department of Agriculture



Food Safety and Inspection Service

antimicrobial intervention implementation

veal slaughter

sanitary dressing best practices

Sanitary Dressing and Antimicrobial Intervention Implementation at Veal Slaughter Establishments: Identified Issues and Best Practices

The purpose of this document is to help veal slaughter establishments to implement effective sanitary dressing and process-control procedures.

August 2015

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What issues has FSIS identified concerning veal slaughter establishments?

FSIS test results show that the percent positive for Shiga toxin-producing *Escherichia coli* (STEC) from trimmings produced from veal appears to be higher than that for trimmings produced from other cattle slaughter classes. FSIS identified common deficiencies: inadequate sanitary dressing, ineffective antimicrobial intervention implementation, and failure to use microbial data in decisionmaking.

What are some examples of the sanitary dressing deficiencies FSIS observed repeatedly during onsite visits to veal slaughter establishments?



Cutting through the weasand (esophagus) during sticking resulting in ingesta contaminating the carcass and head.



Cutting through the hide and further processing without sanitizing knives, gloves, and equipment adequately to prevent carcass contamination.



Cutting through the hide and into the carcass without sanitizing knives, resulting in carcass contamination.

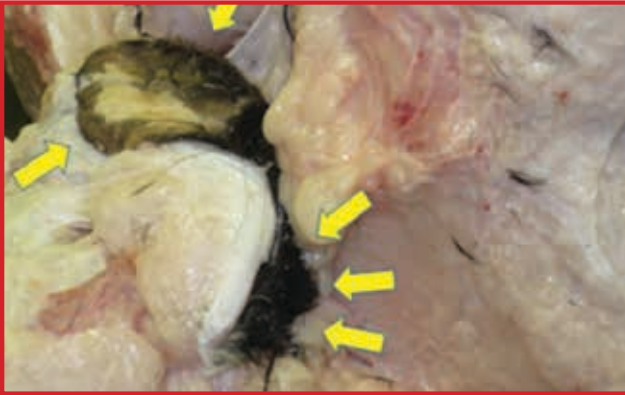


Hide flaps contaminating carcass.



Bagged bung contacting hide and contaminating carcass.

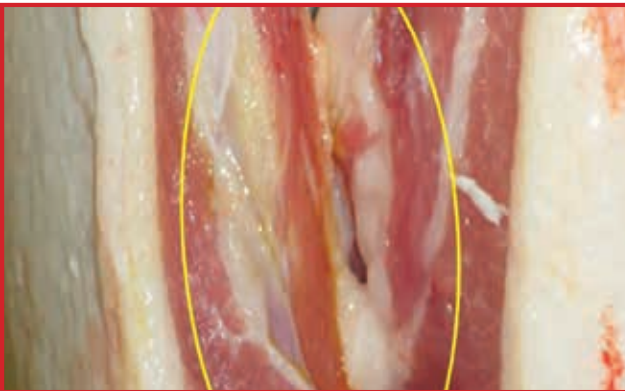
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Exposed bung
contaminating
the carcass.



Puncturing
paunch and
intestines during
evisceration,
resulting
in carcass
contamination.



Ingesta from
punctured
paunch and
intestines,
resulting
in carcass
contamination.



Eviscerating carcass with the hide on, resulting in carcass contamination.



Cold skinning (removing the hide after the carcass has chilled down), resulting in carcass contamination.



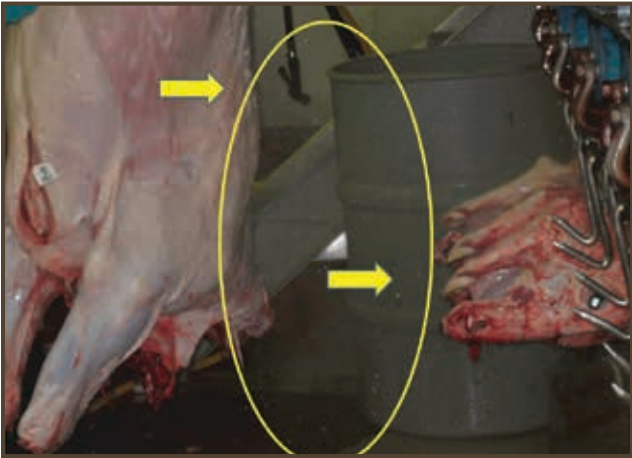
Contaminated carcass in cooler as a result of sanitary dressing deficiencies.

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Contaminated packaged product in freezer as a result of sanitary dressing deficiencies.

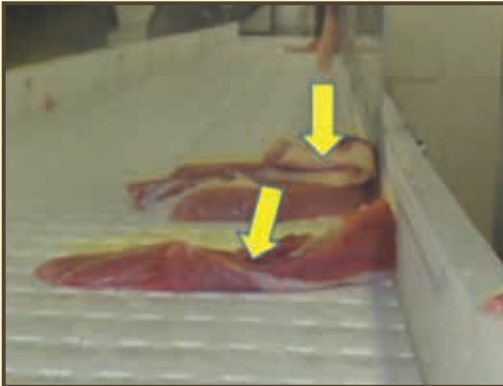
What are some examples of antimicrobial intervention implementation deficiencies FSIS observed repeatedly during onsite visits to veal slaughter establishments?



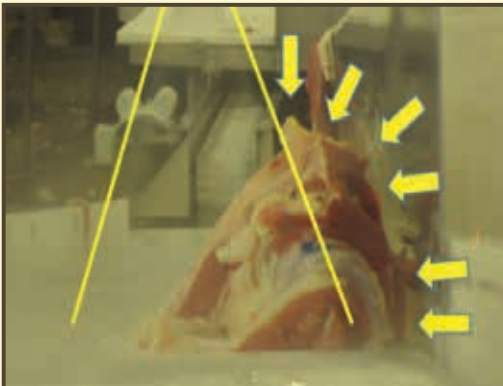
Cross-contamination of heads from carcass intervention overspray.



Intervention failing to achieve full carcass coverage, thus reducing the intervention's effectiveness.



Intervention failing to achieve full product coverage, thus reducing the intervention's effectiveness.



Intervention failing to achieve full product coverage, thus reducing the intervention's effectiveness.

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What other issues did FSIS identify at veal slaughter establishments?

FSIS observed that veal slaughter establishments were not properly evaluating testing results, including indicator organism results (e.g., generic *E. coli*, Aerobic Plant Count, or Enterobacteriaceae) on carcasses and STEC on beef manufacturing trimmings and in ground veal to help determine how the results impact their slaughter operation.

What are some examples of best practices concerning sanitary dressing?



Misting hides in pens to reduce dust and dirt particles.



Rodding the weasand to free the weasand from the trachea, making it easier to close the weasand.



Weasand clip to prevent leakage of rumen contents.



Reflecting the hide away from the carcass during skinning to prevent contamination from the hide.



Dual knife system for sterilizing knives.

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Hide clips for preventing contamination from the hide.



Tying and bagging bung to prevent spillage of fecal material.



Preventing puncturing the paunch and intestines during evisceration.

How do veal slaughter establishments implement effective sanitary dressing procedures to prevent carcass contamination and the creation of insanitary conditions?

Establishments should develop a comprehensive written sanitary dressing program. The program should include written procedures to prevent carcass contamination. The program should include verification activities that ensure employees are performing the procedures as written and the procedures effectively prevent contamination. Establishments should assess the effectiveness of their procedures using real-time data and assess the impact of microbial results on their slaughter operation.

What are some examples of best practices concerning antimicrobial intervention implementation?



Hind limbs are spread apart to allow intervention to achieve full carcass coverage.



Applying intervention according to supporting documentation.



All nozzles are operational, and critical operating parameters are met.



Lactic acid dispenser with gauges for monitoring temperature and pressure that, depending on the establishment's supporting documentation, may be critical operating parameters.

How do veal slaughter establishments implement antimicrobial interventions effectively?

- Identify supporting documentation that closely matches selected intervention.
- Identify critical operating parameters in the supporting documentation.

Critical operating parameters are the specific conditions (such as contact time, pH, temperature, and concentration) of the intervention that must be met for the intervention to be effective.

- Incorporate critical operating parameters into Hazard Analysis and Critical Control Point (HACCP) system.
- Implement intervention so that it meets critical operating parameters.

How do establishments properly assess microbial testing results?

- Use test results to assess the effectiveness of their controls for preventing contamination.
- Identify specific criteria for use when the slaughter process is determined to be out of control.
- Verify that their slaughter controls are reducing STEC to a non-detectable level on an ongoing basis.
- Review sanitary dressing procedures and intervention measures to investigate the cause when microbial test results indicate a loss of process control.
- Perform increased microbial testing to demonstrate that the corrective actions taken in response to the loss of process control are effective.

FSIS developed the [Compliance Guideline for Establishments Sampling Beef Trimmings for Shiga Toxin-Producing *Escherichia coli* \(STEC\) Organisms or Virulence Markers](#). This guidance has general information on verification testing, designing sampling plans, and factors affecting the design of sampling.

Where do establishments find more information about sanitary dressing and process-control procedures?

Guidance for Minimizing the Risk of *Escherichia coli* O157:H7 and *Salmonella* in Beef Slaughter Operations at

<http://www.fsis.usda.gov/wps/wcm/connect/74de2bea-74d6-491b-b2cf-0047650bf0c6/BeefSlauterGuide.pdf?MOD=AJPERES>

Best Practices for Beef Slaughter, developed by the beef industry at

<http://www.bifsc.org/CMDocs/BIFSCO/Best%20Practices/BestPracslaught%20Sept%2009.pdf>

Compliance Guideline for Establishments Sampling Beef Trimmings for Shiga Toxin-Producing *Escherichia coli* (STEC) Organisms or Virulence Markers at

http://www.fsis.usda.gov/wps/wcm/connect/e0f06d97-9026-4e1e-a0c2-1ac60b836fa6/Compliance_Guide_Est_Sampling_STEC_0512.pdf?MOD=AJPERES.

FSIS PHIS Directive 6410.1 Rev. 1, Verifying Sanitary Dressing and Process Control Procedures by Off-line Inspection Program Personnel (IPP) in Slaughter Operations of Any Age at http://www.fsis.usda.gov/wps/wcm/connect/5d100e39-8eab-4c88-85a3-bb60147d6e10/PHIS_6410.1.pdf?MOD=AJPERES.

Where do establishments find more information about identifying scientific support and the critical operating parameters in the support for their interventions so they can implement their interventions effectively?

FSIS Compliance Guidance HACCP Systems Validation at http://www.fsis.usda.gov/wps/wcm/connect/a70bb780-e1ff-4a35-9a9a-3fb40c8fe584/HACCP_Systems_Validation.

Who can establishments contact if they have questions or need additional information?

Contact the Small Plant Help Desk by telephone at 1-877-FSISHelp (1-877-374-7435) or via email at InfoSource@fsis.usda.gov or contact the Office of Policy and Program Development through askFSIS at <http://askfsis.custhelp.com/> or by telephone at 1-800-233-3935.



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