U.S. Department of Agriculture

Food Safety and Inspection Service

Small Plant NEWS

Vol. 4, No. 1

Inside

Small Plant NEWS

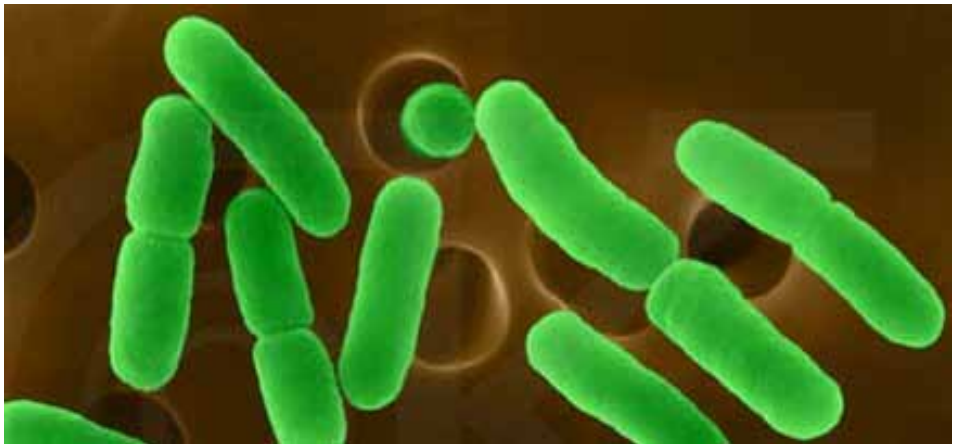
Editor: Keith Payne

Production: Joan Lindenberger, Sally Fernandez

Design: Gordon Wilson

Contact: *Small Plant News*, USDA/FSIS, Aerospace Building, 3rd Floor, Room 405, 14th and Independence Ave., SW, Washington, DC 20250. (800) 336-3747 E-mail: *SmallPlantNews@fsis.usda.gov*

Controlling *E. coli* O157:H7 Through Effective Sanitary Dressing Procedures



By Denise Amann

Every cattle slaughter operation must control for *E. coli* O157:H7 and other pathogens. If you run one of these operations, you know all too well those contaminants are commonly present during the slaughter and dressing of cattle of all ages. For this reason, it is essential that all cattle slaughter operations have sanitary dressing procedures designed and implemented to minimize exposure of the carcass to harmful bacteria.

Sanitary dressing is defined by the U.S. Department of Agriculture's (USDA) Food Safety and Inspection Service (FSIS) as "the practice of handling carcasses by establishment employees and machinery, throughout the slaughter process, in a manner that produces clean, safe, and wholesome meat food product in a sanitary environment." Sanitary dressing procedures should be designed to prevent or eliminate contamination at each step in the slaughter process.

Most of the bacteria that end up on beef carcasses come from the hide or intestinal tract of the animal, the hands of workers, or contact with contaminated surfaces, such as knives or equipment. Rather than rely on any one intervention, it is more effective to use a systemic "multiple hurdle" approach to pathogen control. In using this systemic approach, you can utilize multiple interventions at various steps of the process to achieve the maximum reduction of harmful bacteria on the carcass.

FSIS has identified locations in the typical slaughter process where carcass

Continued on Page 2 ...

... Continued from Page 1

contamination is most likely to occur. Included on this list are: live animal receiving/holding, sticking, hide removal, rodding the weasand, bunging, and evisceration. More descriptive detail on each of these points in the process follows.

Live Animal Receiving/Holding

Pathogens will be present on the hide and within the feces of cattle. Transportation and handling may cause stress and result in an increase in pathogen shedding by the animal. Therefore, ante-mortem control measures often include frequent cleaning of unloading and holding areas, monitored cattle washing, and a mud-scoring system to identify cattle with an increased likelihood of contamination during hide removal.

Sticking

This is the point in the process where the animal is bled. Regardless of your slaughter method, it's important for you to minimize contamination of the carcass during any cut conducted at this step. Control measures commonly include using the smallest cut possible, use of a validated antimicrobial treatment for the knife, and a "two knife" system where one knife is being used while the other is being sanitized.

Hide Removal

Hides are a significant source of contamination in cattle of all ages. It's vital to maintain sanitary conditions and prevent cross-contamination when handling the hide. Control measures to consider include removing visible contamination at the cut line, preventing the exterior side of the hide from touching the carcass, and cleaning and sanitizing of knives, aprons, and hands that become soiled.

Rodding the Weasand

This is the point in the process where you'll use a metal rod to free the esophagus (weasand) from the trachea and surrounding tissues. It is very important that contamination not be transferred from the exterior of the carcass to the interior. In addition, care must be taken not to perforate the gastrointestinal tract with the rod as that will contaminate the carcass. Some control measures for you to consider include tying off the esophagus to prevent leakage, use of a validated antimicrobial treatment, and sanitizing the weasand rod after each use.

Continued on Page 4 ...

FSIS Reaches Out to Illinois Meat Processors and Learns of Their Proud History

By Lindia Howell

Last year, FSIS' Office of Outreach, Employee Education, and Training staffed an exhibit booth at the 2010 Illinois Association of Meat Processors (IAMP) Annual Convention and Trade Show in Champaign, IL. IAMP is a non-profit organization that provides consultation and other business support to its members. Its objective is to make its members aware of changes in State and Federal laws and regulations and new meat processing technologies and equipment.

FSIS' booth was 1 of 61 booths representing vendors of meat processing equipment, supplies, meat seasonings, and specialty sausages. Trade show attendees obtained a diverse array of technical information from FSIS, including issues of *Small Plant News*, humane handling materials, Hazard Analysis and Critical Control Point materials, and DVDs and CDs covering pertinent topics for small plants.

IAMP celebrated its 35th anniversary. Merlyn Eickman, the first IAMP president, shared the history of IAMP (formerly called the Illinois Locker and Freezer Provision) and reminisced about its first conventions in Peoria, IL. He also spoke about his new grandson, who he hopes will carry on in the family-owned business someday. The attendees applauded Eickman's son, Tom, the current IAMP president and third generation owner of Eickman Processing Co., Inc., for 20 years of service to IAMP and induction into the Cured Meat Hall of Fame.

IAMP members and trade show attendees sincerely welcomed FSIS' presence at the meeting. Attendees shared their concerns on humane handling and HACCP implementation with FSIS exhibit booth staff.

To find out more on FSIS' upcoming exhibits at trade shows around the country, call the Small Plant Help Desk at (877) 374-7435 or send an email to *InfoSource@fsis.usda.gov.*

Food Safety Resources

By Sally Fernandez

Are you a small livestock producer looking for a way to direct market your meat? FSIS recently released a new DVD on Red Meat Mobile Slaughter Units that may interest you.

Mobile slaughter units are self-contained slaughter facilities that can travel from site to site and are subject to the same regulations as a fixed slaughter facility. FSIS partnered with the Niche Meat Processor Assistance Network (NMPAN) to produce this DVD, which shows the operation of two federally inspected red meat units in the State of Washington.

To order this free DVD, fax the order form found in the Food Safety Resources brochure to (202) 690-6519 or email it to *FoodSafetyResources@fsis.usda.gov*. The online form can be found at *www.fsis.usda.gov/Science/Resources_&_Information/index.asp*.

For further assistance, call the Small Plant Help Desk at (877) 374-7435.

Commonly Asked Questions & Answers

Q. *Why should I develop a food defense plan?*

A. A food defense plan helps identify steps that your plant can take to minimize the risk that food products will be intentionally contaminated or tampered with and increases preparedness. Although the plan should be in place at all times, it's particularly helpful during emergencies. During a crisis, when stress is high and response time is at a premium, a documented set of procedures improves your ability to respond quickly. A food defense plan also helps maintain a safe working environment for your employees, provide a quality product to customers, and protect your bottom line.

... Continued from Page 2

Bunging

A cut is made around the terminal portion of the large intestine, or rectum, to free it from its surrounding tissues and facilitate the removal of the viscera. Control measures usually include tying off or bagging the bung to prevent leakage, and cleaning and sanitizing of knives, aprons, and hands that become soiled.

Evisceration

At this point, the viscera, including edible offal (heart, liver, etc.), is removed from within the carcass. Again, careful attention must be given to not perforating or tearing the gastrointestinal tract, thereby releasing contaminants onto the carcass. Some control measures for you to consider include removing visible contamination in a timely manner, handling knives and other equipment in a manner that prevents spillage of intestinal contents, and preventing footwear from contaminating other areas of the operation by using footbaths.

If you implement the suggested control measures at each of these locations, you should make considerable progress in lowering the pathogen load on your carcasses.

However, the key to effective sanitary dressing is employee training. Employees must know how to identify and remove fecal or other contamination promptly with a high level of skill and care. Training should emphasize the importance of frequently cleaning and sanitizing hands, knives, aprons, and other equipment that comes in contact with carcasses. Focus should also be placed on proper hide removal and maintaining adequate separation between carcasses to prevent cross-contamination.

Post-dressing antimicrobial treatments are important, but their effectiveness depends in large part on how well your sanitary dressing procedures have minimized contaminants to that point. Without effective dressing procedures, the bacterial load could overwhelm the antimicrobial intervention treatments, resulting in *E. coli* O157:H7-adulterated meat.

If you have further questions or would like additional resources on controlling *E.coli* O157:H7, contact the Small Plant Help Desk at 1-877-FSIS Help (877-374-7435) or email *InfoSource@fsis.usda.gov*.