

REPORT OF THE USAHA/AAVLD COMMITTEE ON FOOD AND FEED SAFETY

Chair: Bonnie Buntain, CAN

Vice Chair: Lisa Ramsey, VA

David Ailor, DC; Deanna Baldwin, MD; William Ballantyne, ONT; Marilyn Balmer, MD; Richard Benton, MS; Karyn Bischoff, NY; Joseph Blair, VA; Richard Breitmeyer, CA; Deborah Brennan, GA; Beverly Byrum, OH; Jim Collins, GA; Kevin Custer, IA; Glenda Davis, AZ; Ignacio dela Cruz, MNP; Linda Detwiler, NJ; Tracy DuVernoy, MD; Robert Eisner, NJ; Kathy Finnerty, NY; Mallory Gaines, DC; Robert Gerlach, AK; Eric Gonder, NC; Chelsea Good, MO; William Hare, MI; David Harlan, MN; Larry Hawkins, MO; Jay Hawley, IN; Jerry Heidel, OR; Jan Hershenhouse, CA; Joseph Hill, GA; Susanne Hinkley, NE; Christine Hoang, IL; Donald Hoenig, ME; Kristin Holt, GA; Clyde Hoskins, SC; Danny Hughes, AR; John Huntley, WA; Doreene Hyatt, CO; Susan Keller, ND; Barry Kelly, CA; Hailu Kinde, CA; Jennifer Koeman, IA; Daniel Lafontaine, MD; Dale Lauer, MN; Elizabeth Lautner, IA; Arthur Layton, MT; Tsang Long Lin, IN; Laurent O'Gene Lollis, FL; John Mahoney, MN; Bret Marsh, IN; David Marshall, NC; Patrick McDonough, NY; James McKean, IA; Katherine McNamara, VT; David Meeker, VA; Gavin Meerdink, IL; Nicole Neeser, MN; Gene Niles, IL; Richard Oberst, KS; Ogi Okwumabua, WI; Kenneth Olson, IL; Stephanie Ostrowski, AL; Gary Osweiler, IA; Lanny Pace, MS; Elizabeth Parker, ITA; Lynn Post, TX; John Ragan, MD; Stephen Raverty, CAN; Renate Reimschuessel, MD; Grant Rezabek, OK; M. Gatz Riddell, Jr., AL; Jane Robens, MD; Mo Saif, OH; John Sanders, WV; Joni Scheftel, MN; Irene Schiller, CHE; David Schmitt, IA; Craig Shultz, PA; Kathryn Simmons, DC; Harry Snelson, NC; Bruce Stewart-Brown, MD; Stan Stromberg, OK; Larry Thompson, MO; H. Wesley Towers, DE; Bob Tully, KS; Lucie Verdon, CAN; Liz Wagstrom, DC; Gary Weber, MD; Larry Williams, NE; Robert Wills, MS; Nora Wineland, MO.

The Committee met on October 20, 2013 at the Town and Country Hotel, San Diego, California, from 1:30 to 4:00 p.m. There were 19 members and 29 guests in attendance. Members and guests were informed that the expected agenda was affected by circumstances beyond our control (the Federal Government shut-down and one speaker cancellation due to illness), but that speakers present, including a last minute volunteer speaker, would be presenting their scheduled topics, though perhaps not exactly on the original times listed on the agenda.

The meeting agenda was affected by cancellations related to the Federal Government shut-down (Dr. Renate Reimschuessel – had been scheduled to speak on two topics: Vet-LIRN, and Update on FDA food and feed safety policies; Dr. Joe Hill – had been scheduled to give an update on FSIS STEC testing), and one speaker was unable to participate due to illness.

Presentations

The Horsemeat Scandal - Implications for Global Food Security and Safety

Patrick L. McDonough, PhD

Cornell University, College of Veterinary Medicine

This topic has been in the news globally since early this year when beef burgers in Ireland were found to have both equine and pig deoxyribonucleic acid (DNA). It illustrates many aspects of food safety and food security unfolding in real-time before our eyes: consumer confidence issues, pre-harvest food safety, food safety continuum, regulatory matters: inter-country food distribution and movement, food adulteration (motive/intentional), humane treatment of animals (horses), and societal differences in food consumption (horsemeat consumption) and food taboos.

This topic also poses the question: are there any Issues for the USA in the horsemeat scandal? Have we contributed to the problem in some way? Are we complicit in the horsemeat scandal? In light of that one must consider the ongoing issues of unwanted/abandoned horses, cessation of domestic equine slaughter in the USA, horses in the USA not raised for food/thus residues exist? ("Bute"), the issues associated with the transport of horses to Canada...to Mexico.

This talk presented the ongoing story involving issues of cheap horse meat found in ground beef in the European Union. While initially detected by the Food Safety Authority of Ireland due to a unique, proactive Food Fraud Task Force that was set up to support the quality of the Irish food production industry, it was later found in the U.K. by the Food Standards Agency after an alert from Ireland.

Subsequently it became a European Union-wide issue with Poland...then France....and then a more widespread problem.

Dr. McDonough also explored the issues of food safety posed by the scandal after phenylbutazone residues were detected in ground meat products sold as beef. The talk showed how horses may enter the human food chain, possible motives for the introduction of horsemeat as if it were beef, the issues of traceability of sources, and what does it mean to have “Irish” meat....or “British” meat, or USA meat on the consumer label.

Lastly, the issues raised by the Government Accountability Office (GAO) Report that examined horse welfare since cessation of domestic slaughter in 2007 were presented.

Incidence of Shiga Toxin-Producing *Escherichia coli* In Meat.

Chitrita DebRoy

Pennsylvania State University

Shiga toxin-producing *Escherichia coli* (STEC) are associated with foodborne illnesses, including hemolytic uremic syndrome in humans. Cattle are reservoirs for STEC and therefore, beef products are a major source of STEC. While STEC O157:H7 has been considered an adulterant in ground beef since 1996, Food Safety and Inspection Service of the Department of Agriculture has declared six additional STEC (O26, O45, O103, O111, O121 and O145), as adulterants in beef since June 2012. Little is known about the prevalence of these “top six” STEC O groups in retail meat as well as in game meat, that are consumed worldwide. While there are selective media to distinguish *E. coli* O157 from other strains, there are no distinguishing characteristics to detect these “top six” STEC O groups easily. *E. coli* Reference Center at the Pennsylvania State University has been involved in serotyping of *E. coli* for many decades. We have developed different assays such as PCR, ELISA, flow cytometry and microarray for detecting the STEC O groups. Based on these assays, we determined the incidence of STEC O groups in ground meat from beef, chicken, pork, deer, reindeer, bison, boar and whole rabbit. In another related study, we assessed the load of STEC O groups in the carcass, ground beef and the environment of small and very-small beef-processing plants. It was clear from the findings that although several samples collected from retail vendors exhibited the presence of STEC O groups in the meat as well as in the environment, most of them were non-pathogenic and did not carry Shiga toxin genes (*stx1* and 2) or attaching and effacing enteropathogenic *Escherichia coli* (*eae*) gene. Only one strain belonging to O45 from deer, out of 136 isolates tested, carried *stx1* gene. In the other study from beef processing plant, only 7.4% of environmental samples, 4.4% of carcass samples belonging to STEC O groups carried *stx* and *eae* genes that were potentially pathogenic. The research on prevalence of these pathogenic STEC strains in meat will assist in improving food safety and public health.

Raw Pet Food Diets

Shelley Mehlenbacher, DVM

Vermont Agency of Agriculture

The purpose of the study was to characterize the commercially available raw meat pet food diets in the Minneapolis/St. Paul area by (i) determining the number and types of available diets; (ii) assessing pet food stores and brand labels for the provision of precautionary statements regarding the risk of foodborne illness from raw meat; (iii) assessing the labels for Food and Drug Administration (FDA)/American Association of Feed Control Officials (AAFCO) required content and nutrient-related information; and (iv) culturing purchased diets for the presence of Salmonella. Sixty raw meat diets were purchased, representing 11 different brands from eight different stores. Diets were readily available in the form of raw-frozen, dehydrated or freeze-dried varieties from different protein sources, such as lamb, beef, chicken or duck. All stores promoted raw meat diets; however, none provided foodborne illness warnings. Brands varied greatly in their precautionary statements; none of the diets underwent feeding trials; and nutritional adequacy substantiation was through formulation only. The first five ingredients tended to consist of meat, organ meat (by-products), vegetables, grains and ground bones. Currently, it is required that pet foods have an AAFCO nutritional adequacy statement and provide a guaranteed analysis table. Three brands did not meet these FDA requirements. Thirty-one (51.7%) of the 60 raw meat diets underwent some degree of processing including dehydration, freeze-drying or high-pressure pasteurization. Four of the 60 raw diets (7%) tested positive for Salmonella. Analysis of raw meat pet food labels indicated a lack of foodborne illness warnings. Based on these findings, we recommend that warning statements similar to those required by the United States Department of Agriculture.

Committee Business

The Committee was informed of the acceptance by the Presidents of both USAHA and AAVLD of the recommendation made by the committee at the last annual meeting (2012) to combine the AAVLD Food Safety Committee and the USAHA Committee on Food and Feed Safety into a joint committee – the USAHA/AAVLD Committee on Food and Feed Safety.

No new Resolutions were put forth, and no new recommendations were formulated.

Committee members were invited to suggest topics or actions for the 2014 meeting. One committee member suggested that a larger subcommittee be formed to develop the committee agenda. Another suggestion was to have topics for moderated discussion on the agenda, rather than just speakers. Another member expressed an interest in more discussion on policy next year.