

REPORT OF THE COMMITTEE ON ENVIRONMENT

Chair: Gavin Meerdink, Mahomet, IL

Vice Chair: Randall A. Lovell, Martinsburg, WV

Frank D. Galey, WY; L. Wayne Godwin, FL; John P. Honstead, CO; Laurent O'Gene Lollis, FL; Lee M. Myers, GA; Gary D. Osweiler, IA; Elizabeth J. Parker, DC; Jane F. Robens, MD; Larry J. Thompson, MO; Gary M. Weber, MD.

The Committee met on October 25, 2008 at the Sheraton Greensboro Hotel Greensboro, North Carolina, from 3:30 to 6:05 p.m. There were 2 members and 26 guests present. This was a joint meeting with the American Association of Veterinary Laboratory Diagnosticians (AAVLD) Veterinary Analytical Toxicology and Mycotoxins Committee.

Mycotoxin Update:

State mycotoxin updates showed isolated problems with aflatoxins, fumonisins, deoxynivalenol, ergot alkaloids, tremorogenic mycotoxins and zearalenone in different areas the past year. No large scale mycotoxin-related health problems were reported. In several states, the harvest of the 2008 corn and soybean crops has gone well due to dry conditions, but in some areas wet conditions have markedly delayed the harvest and may impact mycotoxin levels.

Planned Inter-Laboratory Projects:

Two inter-laboratory analytical toxicology proficiency projects were discussed. Dr. Jeffrey Hall plans on sending out swine serum to many AAVLD laboratories for analysis of elements in the next couple of months. Dr. Gene Niles, Centralia Animal Disease Laboratory, and/or Dr. Michelle Mostrom, North Dakota State University, will send cattle livers with elevated lead levels to Dr. Nick Schrier, University of Guelph. Dr. Schrier plans on freeze drying the livers and to send samples to many AAVLD laboratories for analysis of elements in the first half of 2009. The major objectives of these projects are to provide the AAVLD laboratories with certified serum and liver samples.

Dr. Christina Wilson, Purdue University, made a presentation entitled Suggested Guidelines for Analytical Method Validation. She discussed the International Commission on Harmonization (ICH) Q2B validation guidelines and summarized the efforts by the laboratory to validate a method on blood lead by graphite furnace atomic absorption spectroscopy (AAS). Christina specifically discussed linearity, precision and accuracy, instrument detection limit (lower and upper limits of quantitation), dilution integrity, specificity, carryover, system suitability, recovery, and matrix and solution freeze/thaw stability.

In 2007-2008, the United States Department of Agriculture (USDA), Food Safety Inspection Service (FSIS) collected fat samples at slaughter (n = ~500) from heifers, steers, barrows, gilts, broilers and turkey poult and USDA, Agriculture Research Service analyzed them for seven dioxin, 10 furan and three polychlorinated biphenyl congeners (dioxins). Whenever elevated dioxin levels were found (more than two standard deviations above the mean for the livestock class from the 2002-2003 USDA survey), the Food and Drug Administration (FDA) issued follow-up on-farm assignments. The FDA has collected and analyzed samples from two of these farms and in both cases high dioxin levels (>300 ppt toxicity equivalent [TEQ]) were found in wooden material (support post and a railroad tie) the animal had access to.