

## **REPORT OF THE COMMITTEE ON INFECTIOUS DISEASES OF CATTLE, BISON, AND CAMELIDS**

Chair: James Evermann, WA  
Vice Chair: Chuck Massengill, MO  
Vice Chair: Pat Long, OR

Helen Acland, PA; Chris Ashworth, AR; Gary Brickler, CA; Charlie Broaddus, VA; Charles Brown II, WI; Beth Carlson, ND; Karen Conyngham, TX; Stephen Crawford, NH; Lewis Dinges, TX; Edward Dubovi, NY; William Edmiston, TX; Anita Edmondson, CA; Adam Eichelberger, SC; James England, ID; James Evermann, WA; Betsy Flores, VA; W. Kent Fowler, CA; Robert Fulton, OK; Donna Gatewood, IA; Michael Greenlee, NV; Keith Haffer, SD; Thomas Hairgrove, TX; Rod Hall, OK; Timothy Hanosh, NM; Percy Hawkes, UT; Carl Heckendorf, CO; Del Hensel, CO; Linda Hickam, MO; Floyd Horn, MD; Dennis Hughes, NE; David Hunter, MT; Annette Jones, CA; Paul Jones, AL; Bruce King, UT; Diane Kitchen, FL; John Lawrence, ME; James Leafstedt, SD; Howard Lehmkuhl, IA; Scott Leibsle, ID; Rick Linscott, ME; Pat Long, NE; Francine Lord, ON; Janet Maass, CO; Chuck Massengill, MO; Patrick McDonough, NY; Shelley Mehlenbacher, VT; Mendel Miller, SD; Richard Mock, NC; Cheryl Nelson, KY; Jewell Plumley, WV; Jeanne Rankin, MT; Herbert Richards, HI; Julia Ridpath, IA; Keith Roehr, CO; Mark Ruder, KS; Bill Sauble, NM; Kathryn Simmons, DC; Ben Smith, WA; Justin Smith, KS; Tom Smylie, ON; Nick Striegel, CO; Manoel Tamassia, NJ; Rodney Taylor, NM; Robert Temple, OH; Charles Thoen, IA; Paul Virkler, NY; Brad Williams, TX; William Wilson, KS.

The Committee met on October 19, 2014 at the Westin Hotel in Kansas City, Missouri, from 12:30 pm to 5:30pm. There were 22 members and 48 guests present. Dr. Evermann welcomed the members and guests, and the speakers to the meeting. He introduces the committee's new Vice Chair, Dr. Patrick Long from Oregon and turned the meeting over to the new Chair, Dr. Chuck Massengill. Dr. Massengill thanked Dr. Evermann for his leadership and commitment to the committee.

### **Presentations & Reports (Example)**

#### **Tritrichomonas Subcommittee Report**

Dr. Carl Heckendorf, Animal Health Veterinarian, State of Colorado, Denver, Colorado  
Dr. Heckendorf updated the committee on the progress that has been accomplished by the newly formed subcommittee. Monthly conference calls and the USAHA and NIAA Trich forum has resulted in several areas of harmonization and agreement for interstate regulations. There were areas where disagreements still persist.  
Areas of subcommittee agreement include a 60 day test, 18 month of age for bulls from virgin herds and PCR for the recommended test.  
Areas where no consensus was achieved were on pooling of samples, quarantine regulations (notification of neighboring premises and subsequent release of quarantine) and sale of open cattle to non slaughter outlets.  
A study on proficiency evaluation was performed and results were presented. A recommendation was made to establish a Committee on Trichomonias within the USAHA.

#### **NAHMS Bison 2014 Study**

Dr. Amy Delgado, Veterinary Epidemiologist, USDA, CEAH, Ft. Collins, Colorado  
Bison 2014, the first national study of the U.S. ranched-bison industry, is intended to increase the level of knowledge and understanding about the characteristics of U.S. ranched-bison operations. The study focuses on health and management practices in the U.S. bison industry. Data collection began with the mailing of a questionnaire to bison producers in September 2014. The study was initiated as a result of discussions between the USDA's Animal and Plant Health Inspection Service and representatives of the U.S. bison industry. Bison 2014 is being conducted by the USDA's National Animal Health Monitoring System (NAHMS), with assistance from the National Agricultural Statistics Service (NASS). Industry members and other stakeholders provided input for the study process. This input was used to develop the study objectives: 1) Provide a baseline description of the U.S. bison industry, including operation characteristics, such as inventory, size, and type; 2) Describe current U.S. ranched-bison industry

production practices and challenges, including identification, confinement and handling, animal care, and disease testing; 3) Describe health management and biosecurity practices important for the productivity and health of ranched bison; and 4) Describe producer-reported occurrence of select health problems and evaluate potentially associated risk factors. All producers who reported having bison on the 2012 NASS Census of Agriculture were eligible to participate in the study and received a questionnaire in the mail. As with other NAHMS studies, Bison 2014 is national in scope, collaborative in nature, and voluntary. The study is being conducted by NAHMS under its designation as a statistical unit under the Confidential Information Protection and Statistical Efficiency Act. Data entry and validation for accuracy and consistency are underway, and descriptive analyses will be performed. Study results are expected to be available and disseminated in the form of descriptive reports, conference presentations, information sheets, and journal articles beginning in late spring 2015. The contact person for information on the study is Dr. Margaret Parker, [www.aphis.usda.gov/nahms](http://www.aphis.usda.gov/nahms)

### **BVDV Subcommittee report**

Dr. Julia Ridpath, ARS, Ames, Iowa

Dr. Ridpath reviewed the International BVDV Symposium which was held October 14 and 15 in Kansas City, MO. There were 15 presentations ranging from selection of novel vaccine strains to the future detection of in utero BVD PI. There will be another BVD symposium in two years.

### **Tritrichomonas Assay Proficiency Test:**

Ms. Tiffany Brigner, Rocky Mt. Regional Animal Health Laboratory, Denver, CO

With the absence of Federal oversight or a National Trichomonas Standardized Proficiency, there is an interest from The Western States Livestock Health Association (WSLHA) to assess the consistency between laboratories in their ability to detect *T. foetus* in cattle. A group of laboratory diagnosticians present at the 2014 WSLHA meeting were tasked to conduct this assessment. Laboratory diagnosticians from California, Colorado, Kansas, New Mexico and Texas worked with Biomed Diagnostics to create a *T. foetus* PCR QC panel. State Veterinarians from AL, AZ, AR, CA, CO, FL, ID, KS, LA, MT, NE, NV, NM, ND, OK, OR, SD, TX, UT, WA and WY were contacted regarding their level of interest in their state's lab participation. Ultimately 18 labs from 16 states purchased *T. foetus* QC panels consisting of 20 samples from Biomed Diagnostics. Labs had an option to purchase InPouch™ and/or Transit Tube panels. At the time of testing, labs were asked to also provide information such as temperature upon arrival, incubation time before processing, extraction method and PCR method. All pouches and tubes were inoculated with smegma to simulate a field sample. Ten of the 20 pouches or tubes were inoculated with concentrations of 11, 56, 112, 224 and 1120 *T. foetus* cells in duplicate and shipped overnight to receiving laboratories. Of the 11 labs that received pouches, 6 labs identified all positive pouches as PCR positive. Of the 11 labs that received tubes, 5 labs identified all positive tubes as PCR positive. This assessment has provided a unique opportunity for State Animal Health Officials and laboratory diagnosticians to come together to find areas of improvement in *T. foetus* detection.

### **Coronaviral Infections of Domestic Animals**

Dr. Kelly Lager, ARS, Ames, IA

The recent emergence of two coronaviruses demonstrates once again how dynamic the interaction of livestock, people, and Mother Nature can be. In May 2013, porcine epidemic diarrhea virus (PEDV) was detected in several US swine herds in 3 different states. It was recognized as an acute disease in baby pigs causing severe diarrhea and almost 100% mortality. Within a year the disease had spread to 31 states and infected over half of the herds resulting in dramatic losses that rapidly affected the domestic and export market. In 2012, a new human coronavirus, Middle East Respiratory Syndrome Coronavirus (MERS CoV) was first identified in a cluster of people in Saudi Arabia. Since then, there have been almost 900 confirmed cases to date with a 40% case fatality rate. Current evidence implicates domestic camels as a potential source of virus for many of these cases. However, there are cases with no known camel contact suggesting there may be additional transmission routes, some other source of virus, or sub-clinically infected people are transmitting the virus. Although PEDV was first identified about 40 years

ago in Great Britain and Western Europe, the swine virus has never been detected in North American swine until May of 2013. The North American PEDVs are very similar to several Chinese isolates indicating these viruses are the progenitors of the American isolates. How this virus made it from China to the US is still a mystery. Similarly, the emergence of MERS CoV is another mystery that represents a species jump of a previously unknown virus into man. Both events reinforce the critical need to be vigilant for emerging diseases. How these recent warnings can be applied for the Cattle, Bison, and Camelid industries will be discussed.

### **Ms Karen Coyngnam, International Llama Registry, Austin, TX**

Ms. Coyngnam gave an update on MERS in the Middle East After being first reported in humans in 2012, Middle East Respiratory Syndrome Coronavirus (MERS-CoV) continued to be a problem in several countries in the Middle East this year, with the Kingdom of Saudi Arabia the hardest hit. As of Oct. 8, 2014, the Saudi Ministry of Health reported 759 MERS cases, including 323 deaths, 427 recovered patients and 9 patients still in treatment. The complete MERS review can be obtained from Ms. Coyngnam at: [72040.3361@compuserve.com](mailto:72040.3361@compuserve.com)

### **Update on the BVD CONSULT for BVD control**

Dr. Bob Larson, Kansas State University, Manhattan, KS

Bovine viral diarrhea virus (BVD) infection is responsible for a variety of economically important syndromes in beef herds. The cattle industry and veterinary profession have made significant efforts in recent years to control BVD based on research that has provided a more complete understanding of the epidemiology of BVD, enhanced availability of diagnostic tests for detecting persistently infected (PI) cattle, and incorporation of biosecurity and biocontainment principles into control strategies. BVD CONSULT (Collaborative, Online, Novel, Science-based, User-friendly, Learning, Tool) is an internet-based decision tool, designed to aid development of BVD control programs for cow-calf herds. The BVD CONSULT organizes available BVD control recommendations based on available research into a user-friendly interactive format to develop BVD prevention and control programs customized for individual herds that emphasizes key management decisions that impact the success of these programs.

BVD CONSULT was designed to mimic a conversation between a veterinarian and a producer by asking if the producer is willing and able to perform specific management practices that will aid in prevention or control and eradication of BVD. After clicking on “yes” or “no” to each question, an appropriate response is given based on the choices that have been made, followed by another question. A printable report is available at the end of the tool which records the choices that were made and the responses that were given. BVD CONSULT can be found at the website, [www.bvdconsult.com](http://www.bvdconsult.com) which contains information about BVD from peer-reviewed articles as well as white papers and popular press articles.

### **Committee Business:**

The Committee put forward a recommendation as follows.

#### **Creation of a USAHA Committee on Trichomoniasis in Cattle**

*Trichomonas foetus* is an obligate parasite of the bovine reproductive tract that causes a highly contagious venereal disease with significant economic impact to the cattle industry. The importance of the disease is reflected by the dramatic increase in the number of states that have recently developed Trichomoniasis regulatory programs.

Effectively addressing Trichomoniasis in the cattle industry requires a national forum for sharing information and developing best management plans. The creation of a USAHA committee where cattle producers can work together with members of the scientific community as well as state and federal animal health officials to solve the problems faced by the industry is critical.

The Committee must contain a strong Scientific Advisory Subcommittee supported by the AAVLD.

**Mission Statement**

The purpose of the Trichomoniasis committee is:

- 1) Discuss scientific, laboratory, regulatory, commerce and political issues regarding T fetus and its effect on the cattle industry.
- 2) Evaluate interstate and intrastate regulatory issues.
- 3) Recommend effective disease control and management programs.

The Committee recommends Dr. Carl Heckendorf as Chair, and Dr. Bud Dinges as Co-Chair.

The Committee forwards two resolutions. One related to the biosecurity for imported fetal bovine serum and the second related to the harmonization of interstate Trichomoniasis regulations.