

Report of the Committee on Infectious Diseases of Cattle, Bison and Camelids
Chair: Chuck Massengill, MO
Vice Chair: Pat Long, NE

Helen Acland, PA; Chris Ashworth, AR; Danelle Bickett-Weddle, IA; 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; W. Kent Fowler, CA; Robert Fulton, OK; Donna Gatewood, IA; Timothy Goldsmith, MN; Michael Greenlee, NV; Keith Haffer, SD; Thomas Hairgrove, TX; Rod Hall, OK; Timothy Hanosh, NM; Percy Hawkes, UT; Carl Heckendorf, CO; Linda Hickam, MO; Dennis Hughes, NE; David Hunter, MT; Annette Jones, CA; Paul Jones, AL; Bruce King, UT; Diane Kitchen, FL; Randall Larson, IA; John Lawrence, ME; James Leafstedt, SD; Scott Leibsle, ID; Rick Linscott, ME; Coleman Locke, TX; Janet Maass, CO; Patrick McDonough, NY; Shelley Mehlenbacher, VT; Emily Meredith, VA; Mendel Miller, SD; Richard Mock, NC; Igor Morozov, KS; Cheryl Nelson, KY; Kathleen Orloski, CO; Jewell Plumley, WV; Jeanne Rankin, MT; Grant Rezabek, OK; Herbert Richards, HI; Julia Ridpath, IA; Jonathan Roberts, LA; Keith Roehr, CO; Michael Sanderson, KS; Kathryn Simmons, DC; Ben Smith, WA; Justin Smith, KS; Nick Striegel, CO; Manoel Tamassia, NJ; Susan Tellez, TX; Robert Temple, OH; Brad Williams, TX; Ellen Mary Wilson, NM; William Wilson, KS.

The Committee met on October 25, 2015 at the Rhode Island Convention Center in Providence, Rhode Island from 12:30 to 5:30 pm. There were 23 members and 38 guests present. The response to the resolution on Bovine Fetal Serum from 2014 was read and approved. Dr. Massengill announced that he was retiring as chair and the incoming president of USAHA would be appointing a new chair to work with Dr. Long.

Presentations & Reports

Title

BVD Subcommittee Report

Julia Ridpath NADC/ARS/USDA

The pestivirus genus continues to expand with the discovery of a new virus that is associated with congenital tremors of pigs. This virus is the most genetically distant of the pestiviruses discovered to date. It is becoming increasingly evident that other emerging pestiviruses may have significant impact on the health of wild and domestic ruminants. Surveillance studies of wildlife species in the state of Nevada has yielded evidence that the antelope virus is currently circulating in mule deer, mountain goat, big horn sheep and pronghorn antelope populations. The recognition of the prevalence of HoBi-like viruses continues to expand with reports from India and Bangladesh that HoBi-like viruses are more prevalent in those countries than BVDV1 or BVDV2. A serological survey, conducted using 2000 serum samples originally collected in the course of the U.S. brucellosis surveillance program, has been completed. Cross reactivity was seen between BVDV1, BVDV2 and HoBi-like viruses but differential serology indicates that HoBi-like viruses are not prevalent in the U.S. However, these results also suggest that the majority of cattle tested would not possess an adequate level of cross-reactive antibodies to provide against infection with HoBi-like viruses.

Tritrichomonas Subcommittee Report

Dr. Carl Heckendorf

Colorado Dept of Agriculture

State Veterinarians Office

2014 *T. foetus* QC Panel Report – Individual PCR

Background

With the absence of Federal oversight or a National Trichomonas Standardized Proficiency, there is an interest from The Western States Livestock Health Association (WSLHA) in assessing the consistency between laboratories in their ability to detect *T. foetus* infection in cattle. A group of laboratory

diagnosticians present at the 2014 WSLHA meeting were tasked with conducting this assessment. Laboratory diagnosticians from California, Colorado, Kansas, New Mexico and Texas worked with Biomed Diagnostics to create a *T. foetus* PCR QC panel. Preliminary data was shared at USAHA during the Annual Meeting in October 2014.

Participants

Thirteen laboratories submitted results for 15 pouch panels and 10 laboratories submitted results for 13 tube panels. Eighteen labs participated from 16 states including California, Colorado, Idaho, Kansas, Louisiana, Montana, Nebraska, Nevada, New Mexico, North Dakota, Oklahoma, South Dakota, Texas, Utah, Washington and Wyoming.

Panels

Panels were created at Biomed Diagnostics in White City, Oregon. Each panel consisted of 20 pouch or tube samples, all samples were inoculated with 0.5 ml each of pooled *T. foetus* negative smegma (collected from three laboratories). Ten samples in each panel were then inoculated with 11, 56, 112, 224 and 1120 *T. foetus* cells in duplicate. Samples were shipped overnight from Biomed Diagnostics to participating laboratories. All labs received the samples at room temperature although Lab 16 noted that they would have rejected the shipment based on their submission criteria which is a lack of hand warmer and insulated shipping container. Lab 18 did not receive their panel within 24 hours but results were still included in this report although this lab's data was not used in any final analysis. When submitting results back to Biomed, labs were asked to also provide incubation time, extraction method used and type of PCR used.

Results

Tables 1 and 2 show the tube and pouch panel results respectively. The results are listed in numerical order of Lab number with sample classification starting with the sample of greatest cell concentration. Lab results in red are those that deviated from the expected result. Extraction method, type of PCR, Vendor of PCR and Instrument Model are listed for each laboratory.

The above QC *T. foetus* panel was the impetus for developing our approach to mitigate *T. foetus* infection in the US cattle population. Currently, 29 states have Trich Regulations, 11 States are harmonized with the recommendations of the subcommittee ie. 18 month old bulls need to be Trich checked, the test is valid for 18 months, and the DNA amplification tests are the tests of choice. 7 states are in the process of harmonizing, and 4 states will start to harmonize in the near future.

Given the above information it was apparent that we needed some form of laboratory validation for quality control of trich testing. Laboratory personnel from a number of AAVLD laboratories met and discussed how this should be accomplished. Three topics were agreed upon 1. A quality control protocol would be developed 2. The homogeneity of the samples would be validated before the samples were shipped 3. There would be 3rd party validation. The focus was on the results of the test not how the individual labs performed the tests. The meeting participants agreed to have the protocol within six months.

In conclusion it is hoped that the labs will be communicating with each other to determine best practices and the labs will then communicate with the State Animal Health Officials.

NAHMS Bison 2014-Update Dr. Kelly Patyk, USDA/ APHIS /VS

NAHMS Bison 2014 Study

Margaret Parker¹, Kelly A. Patyk¹, Steven Sweeney¹

¹ Center for Epidemiology and Animal Health, United States Department of Agriculture, Animal and Plant Health Inspection Service, 2150 Centre Avenue, Fort Collins, CO, USA

Summary: Bison 2014, the USDA's first national study of the U.S. ranched-bison industry, will increase knowledge and understanding about health management practices and other characteristics of the bison

industry. The USDA's National Animal Health Monitoring System (NAHMS) is conducting Bison 2014, with assistance from the National Agricultural Statistics Service (NASS). Bison industry members and other stakeholders provided input for the study needs assessment and process. This input was used to develop the following 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 in September 2014. A total of 2,891 questionnaires were mailed. Of those, 634 recipients returned completed questionnaires and 221 reported that they had no bison (response rate: 29.6%). 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. Results focusing on health and disease will be presented. Full study results are expected to be available and distributed as descriptive reports, conference presentations, information sheets, and journal articles beginning in late 2015.

Tuberculosis testing in Camelids—International update
Dr. Sunny Geiser-Novotny, USDA/APHIS/VS

Details of past reports of Tuberculosis in both Old World Camelids (OWC) and New World Camelids (NWC) along with clinical signs, routes of transmission and necropsy findings were presented. Current status of testing in other countries were presented. Details were given regarding sensitivity and specificity of serology testing options currently available in other countries. While there are very limited reports of Tuberculosis in camelids in the US, there are many reports of TB in alpacas in the EU and in OWC in the UAE, Africa and Pakistan. Research is needed on naturally infected and non-infected camelids with known infection status to determine true sensitivity and specificity of available tests. In US risk of transmission to camelids is very low due to low prevalence of TB in cattle in the U.S and no wildlife reservoir (with the exception of MI)
Reportable to state vets if signs are consistent with TB

Alpacas in the Food Chain, Food safety concerns
Dr. Kristin Haas
Vermont Agency of Agriculture, Food and Markets

The desire by alpaca owners to have their animals slaughtered for sale in niche' markets and restaurants is increasing in the Northeast as fewer owners are interested in raising them for fiber and for exhibition/show. Alpacas are not amenable to the Federal Meat Inspection Act and they are not defined as exotic species by USDA-FSIS. As a result, the harvesting and processing of alpacas does not require state or federal inspection, but if that level of oversight is desired by the owner due to market demands, the processes fall under the regulatory jurisdiction of FDA. The FDA/Center for Food Safety and Applied Nutrition is responsible for protecting consumers against impure, unsafe, and fraudulently labeled foods covered by the Federal Food, Drug and Cosmetic Act and for assuring consumers that foods are wholesome and produced under sanitary conditions.

The Vermont State Meat Inspection Program maintains an equal-to status and is one of the few in the country that provides state voluntary inspection for owners who wish to sell alpaca-origin food products to niche' markets or restaurants that require inspection. There is a lack of regulatory, diagnostic and best management practice guidance to support alpaca slaughter, and the lacking infrastructure has ramifications for all parties involved, including state meat inspection programs, accredited veterinarians, camelid owners, and the consuming public. Administration of all medications, including dewormers, to alpacas is considered to be an extra-label use and must conform to ELDU requirements. There are no established meat withdrawal times for any of these medications, and there are no FDA-validated tissue residue tests available in the U.S. for use with alpacas. Since alpacas historically have not been

considered food animals and their owners often do not have an agricultural background, there is a high likelihood that alpacas slaughtered for meat have not been raised in a manner that minimizes violative tissue residues. Since there are no validated tests that can detect violative residues, it is likely that alpaca meat produced under inspection is entering the food supply with inappropriate levels of multiple medications present in the tissue. This activity constitutes a potential food safety concern.

This situation results in the potential for increased liability for any state meat inspection program that is providing voluntary inspection for the slaughter/processing of alpacas. The collective public assumption is that meat food products that are produced under inspection and offered for sale at retail or in restaurants are unadulterated, wholesome and safe to consume; this may not be the case with alpaca meat. It is imperative that organized industry counsel alpaca owners about this issue and educate them about best practices associated with raising alpacas for food production purposes. Additionally, veterinarians treating alpacas for illness or providing routine preventative care should take into consideration the fact that some alpacas may end up being slaughtered for human consumption and medicate accordingly. The development of FDA-validated tests for detection of alpaca tissue residues would be ideal.