

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

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The Committee met on October 21, 2012 at the Greensboro Sheraton Hotel, Greensboro, North Carolina from 12:30 to 5:00 p.m. There were 22 members, and 37 guests present. Dr. Evermann welcomed the members, guests, and speakers to the meeting and reviewed the agenda.

Bovine Viral Diarrhea Virus (BVDV) Subcommittee Report

Dale Grotelueschen
Pfizer Animal Health

Dr. Grotelueschen presented an overview of BVDV with primary emphasis on cow-calf beef operations. He differentiated the attempts to “control” BVD persistent infectious (PI), rather than “eradicate” BVDV infections – disease from the US cattle populations. He reviewed the principles of biosecurity and that there are two main approaches to fulfilling this control. The first is by testing for BVD PI by antigen ELISA, IHC or PCR. The second is by vaccination of animals pre-breeding. The vaccines provide a good degree of PI prevention, but are not 100% therefore, testing is still a necessity.

Dale introduced a new web based BVD Control Program for 2013. It will be based upon risk assessment knowledge and can be used by producers as well as veterinarians (www.bvdinfo.org). He emphasized that it would be for beef production only.

Dr. Alison Von Enennaam from UC-Davis said such a program is being developed for dairy operations (www.brdcomplex.org).

Update on Schmallenberg Virus (SBV)

Dianne Rodman
National Veterinary Services Laboratory (NVSL), USDA-APHIS

Dr. Rodman gave a brief history of the discovery of SBV in the city of Schmallenberg, Germany, where it caused decreased milk production in adult dairy cattle in November 2011. It has subsequently been shown to be related to a group of arboviruses known in the US as the Bunyaviridae group, which includes Akabane and Cache Valley Viruses.

The virus is spread by the midge, *Culicoides* spp. It can cause fetal abnormalities in calves, lambs, and goat kids. In Europe there is an ELISA for antibody detection. AT NVSL there is a virus neutralization (VN) assay. The samples need to be submitted by an area AVIC. Antemortem samples include: RTT and PTT blood tubes. Postmortem samples include: fetal tissues and brain for PCR and virus isolation.

Update on Bovine Respiratory Disease Research at USDA Agricultural Research Center (ARC), Ames, Iowa

Julia Ridpath
USDA Project Leader

Dr. Ridpath introduced the different Current Research Information System (CRIS) programs being done at Ames. The two programs that interface the best are ones looking at: 1) Intervention Strategies to Control Viral Diseases of Cattle; and 2) Looking at Emerging Viruses and Immunomodulation of the Bovine Immune Response. Their group is looking at Bovine Respiratory Syncytial Virus (BRSV), Respiratory coronavirus, Hobi Virus (a variant pestivirus originally isolated from Farm Business Survey (FBS)); and unusual strains of Bovine Viral Diarrhea Virus (BVDV) from domestic and wildlife. Ridpath requested strains of BRSV, PI-3 and pestivirus for their comparative studies.

She also announced plans for an upcoming International BVDV Symposium in Kansas City in 2014 to be held in conjunction with AAVLD-USAHA. Interested individuals are to contact Ridpath.

Ecology and Epidemiology of Vesicular Stomatitis Viruses (VSV) in the Americas

Luis Rodriguez

USDA, Plum Island, New York

Dr. Rodriguez gave an overview of VSV ecology in Mexico and its spread via insects northward to the US where it infects susceptible cattle and horses. VSV disease mimics foot-and-mouth disease (FMD), so its epidemiology is very important for early recognition of and differentiation from the exotic FMD. VSV can also infect pigs by direct transmission (no insects needed), as well as humans where it can cause mild fever, headaches and photophobia. The biological vectors include: sand flies, black flies, and *Culicodes* spp. Many wild ungulates, as well as rodents, bats, birds, and reptiles have VSV specific antibodies. It is regarded as an “unconventional arbovirus.” The virus appears to overwinter in the reservoir populations and spread out of Mexico every 8-10 years.

Cryptococcosis in Camelids: Review of Fungal Infections

Rob Bildfel

Oregon State University

Dr. Bildfel reviewed the literature and presented the main groups of fungi affecting animals, primarily alpacas and llamas. Cryptococcosis usually observed clinically in cats and is spread by birds in feces. Some species of animal are more susceptible. Humans that are immunocompromised (HIV) are particularly susceptible to disease. *C. gattii* is the predominant fungal agent and in some areas can result in up to 62% infection rates with a case fatality rate as high as 20% untreated. In camelids, the fungus can cause ataxia and blindness. There is a polymerase chain reaction (PCR) assay available at Oregon State University (OSU) Diagnostic Laboratory.

Mycoplasma Bovis Infections in Bison

Dave Hunter

Turner Ranches, Hamilton, Montana

Dr. Hunter gave an overview of the management practices of handling bison in large groups. Along with the stress of working the bison for Brucellosis testing, the occurrence of *M. Bovis* can be a primary pathogen.

Hunter's group is working in conjunction with several laboratories to identify isolates for potential vaccines, and is also doing genetic testing of the bison to explore possible resistance genes against disease susceptibility.

Committee Business

The Committee had no resolutions or other actions during the course of the meeting.