



Report on the US Animal Health Association 2011 Annual Meeting

Compiled by Karen Conyngham, ILR representative to the USAHA Board of Directors and Susan Tellez, Camelid Alliance.

The 115th annual meeting of the US Animal Health Association was held in Buffalo, NY October 1-5, 2011. Camelid owners who attended this year included Susan Tellez representing the Camelid Alliance, Karen Conyngham, representing the International Lama Registry on the USAHA Board of Directors and Dr. Pat Long, representing the Alpaca Owners & Breeders Assoc. on the USAHA Board of Directors.

USAHA is an international forum where producers join state and federal regulators and researchers/scientists from a wide variety of specialties to discuss issues affecting the health and welfare of livestock species and wildlife. The annual meeting gives the camelid representatives a chance to talk with state veterinarians, US Dept. of Agriculture, Animal Plant & Health Inspection Service (USDA/APHIS) personnel and researchers about issues of concern to the camelid community.

Two common themes were heard during many committee presentations. First, the absolute need for strict biosecurity measures for animals that travel off their home ranches AND for ranches that bring new animals in. The outbreak of EHV-1 in cutting horses last May began as a result of commingling at a competition in Utah and spread to affect 10 states. While no camelids were infected, several university vet hospitals had to quarantine their equine and camelid facilities while treating infected horses, thus prolonging the length of the hospital stay for llamas/alpacas. For a review of recommended camelid biosecurity measures, see: <http://www.camelidcare.info/biosecurity.htm>

Animal welfare also came up many times. Several national groups are trying to impact production animal facilities and this issue definitely has the attention of livestock producers, USDA/APHIS and USAHA. This has become a global issue.

The following report covers committees in which camelids or diseases of interest to camelid owners were mentioned.

Committee on Infectious Diseases of Cattle, Bison and Camelids

The committee began its program with a memorial tribute to the late Bob Frost of Lincoln, CA given by Karen Conyngham. Bob served as president of USAHA in 2003, the only camelid owner and one of the few private producers ever to hold that office. He was a member of the committee since 1990 and made many significant contributions to USAHA and the overall health of camelids, other livestock and wildlife in the US. He will be sorely missed.

Parasitic Infections of Alpacas and Llamas

Dr. Patrick Long, Camelid Health Care Services, Corvallis, OR

Mycoplasma haemolamae and *Eimeria macusaniensis* are commonly diagnosed for camelid owners in the United States. These parasitic diseases can cause serious disease in camelids but in many cases, there will be unapparent, low level infections that do not cause apparent clinical disease. Dr. Long explained that chronic, asymptomatic carriers are present in both of these diseases.

Mycoplasma haemolamae is a hemotrophic bacterial infection of camelids that has been detected in several countries across the world. Most prevalence studies show that 20-30% of camelids surveyed in multiple locations are positive for this hemoparasite. It is believed that biting insects may be vectors; transplacental transmission may be possible. Anemia is usually mild with inconsistent evidence of regeneration. Many positive camelids have higher packed cell volumes than negative animals. There

have been no treatments identified that consistently clear camelids that are positive for this parasite. Clinical camelids do respond to tetracycline treatment. Most infected camelids have been identified as chronic carriers. Dr. Lakritz at Ohio State Univ. is currently working on establishing lab culture methods.

Eimeria macusaniensis (*E. mac*) is a coccidia that has been linked to high death loss in neonatal alpacas in Peru. While first described in the US in the 1990's, it has recently emerged as a severe pathogen in the US. This may be due to increased animal density on farms, increased awareness and more consistent detection methods. It appears that *E. mac* can survive for considerable time in the environment; farms that have had problems with this parasite in the past need to be watching for symptoms that include wasting, possible abdominal pain and weakness with diarrhea appearing in crias. Hypoproteinemia is the main blood abnormality. This pathogen is problematic due to the long pre-patent period (36-41 days under experimental conditions) and increased mucosal damage as compared to other coccidia of camelids. To detect *E. mac*, floatation fluids used must be of high specific gravity (1.27 or higher). The Modified Stolls test (using a sugar float solution) is recommended in conjunction with centrifugation. Mix 2 grams of feces with 98 ml of water and allow to rest overnight. 10 ml of this solution is then spun in a centrifuge for 5 minutes. The water is poured off and the remaining fecal pellet is re-suspended with a sugar floatation solution and again spun in a centrifuge for 5 minutes. A cover slip is then placed on the top of the test tube and examined under a microscope 60 minutes later. *E. mac* is a large coccidia compared to others and is avocado-shaped. There is a PCR test now available to test for *E. mac*, but it needs to be validated so it not yet commercially available. Treatment medications include Albon, Corid or Marquis (ponazuril).

Dr. Long also gave a report on the diagnosis of Granulocytic Ehrlichiosis in camelids in the U.S. This has been infrequently reported. The causal agent is now classified as *Anaplasma phagocytophilum*. Clinical signs may include partial anorexia, lethargy and progressive ataxia. Treat with oxytetracycline and supportive care.

Rift Valley Fever Review and Update on Veterinary and Wildlife Surveillance in Kenya

Dr. William Wilson, ARS/USDA, Manhattan, KS

The presentation gave a thorough overview of Rift Valley Fever (RVF), its multihost range (including cattle, camels/alpacas, and other small ruminants), its epidemiology, geographic distribution, the potential U.S. mosquito vectors, vaccine availability, and its zoonotic potential. He reviewed diagnostic tests available including Antigen capture ELISA, serology, and PCR. He is working on a field deployable and a high throughput PCR assay for RVF.

More than 50 alpacas and llamas have died from RVF in South Africa during the 2011 outbreak. Ages were not reported on these cases. Sheep and cattle are the main hosts of RVF. Clinical signs include anorexia, diarrhea and abortion. Young animals tend to be more likely affected. ARS is researching whether N. American mosquitoes can be a competent vector for this disease; *Culex tarsalis* is definitely going to be a problem and is common in the US. There are African vaccines in use and some of those could be useful in the US, once they are validated. Ever-increasing international travel and trade, in conjunction with climate change, means the US could be at risk for RVF.

Committee on Captive Wildlife & Alternative Livestock

Serodiagnosis of Tuberculosis in Camelid Species

By Konstantin Lyashchenko

Konstantin Lyashchenko of Chembio Diagnostic Systems, Inc. provided a presentation on serodiagnosis of tuberculosis. Tuberculosis (TB) in South American camelids (SAC) is caused by *Mycobacterium bovis* or *Mycobacterium microti*. Three serological methods, Rapid Test (RT), Dual Path Platform (DPP), and Multiantigen Print Immunoassay (MAPIA), were evaluated on naturally infected SACs.

The study population included 156 alpacas and 175 llamas from Great Britain, Switzerland, and the United States. TB due to *M. bovis* (n=44) or *M. microti* (n=8) was diagnosed by gross pathology examination and culture in 35 alpacas and 17 llamas. Control animals were from herds with no TB history. Results were compared with the comparative skin test that is currently used.

In alpacas, RT and DPP showed sensitivity of 71% and 74%, respectively, while in llamas it was 77% for both assays. Diagnostic specificity was higher for DPP (98%) if compared to RT (94%) in llamas and

similar for the two assays in alpacas (98%). When the two antibody tests were combined, the parallel testing interpretation (either assay is reactive for a positive result) enhanced the sensitivity of antibody detection to 89% in alpacas and 88% in llamas, but at the expense of lower specificity (97% and 93%, respectively), whereas the serial testing interpretation (both assays must be reactive for a positive result) maximized the specificity to 100% in both SAC species, although the sensitivity was 57% for alpacas and 65% for llamas.

Full text data will be published in the spring of 2012.

Note that *M. bovis* continues to be a serious problem for camelids in the UK due to the overwhelming infection endemic in badgers and cattle in parts of England and Wales.

Committee on Import/Export

Relative to camelid import/export, there is no change in regulations between the USA and most foreign countries. The Canadian regulations remain in place for movement, with a request now for the E-File CVI (Certificate of Veterinary Inspection in electronic format) to be implemented on all cross-border movement.

Bluetongue regulations by the European Union prohibits Imports from the USA, because each location has very different serotypes of the Bluetongue disease. Movement among the EU Countries remains restricted. Imports of camelids from the USA to the EU must continue to go through Canada, and is still an active process. No current camelid export numbers were made available here.

ALL ports of embarkation or import are on high alert and testing for all animal diseases with exceptionally high alert for foot and mouth disease symptoms to ensure safe products and animals.

Committee on Bluetongue and Related Orbiviruses

A REMINDER that the West Nile Fever [WNV], Bluetongue [BTV] and Enzootic Hemorrhagic [EHD] diseases are transmitted by mosquito-like midges, and not from animal to animal or farm to farm. The seasonal environment and locations reflect the incidence, and that appears to be reduced now in camelids. The extremes of rains and drought across the US have changed the populations of midges collected for identification.

Committee on Parasitic Diseases

Remember to check camelids for ticks at regular intervals, as there are numerous diseases carried by a wide variety of ticks. The incidence of tropical diseases has increased in the southern states of the US. Regular herd health checks and wildlife control within pastures is advised. The newest innovative application of insecticide to control horn flies in farmed deer and commercial cattle is by use of paint ball guns.

AAVLD Bovine Virus Diarrhea Special Scientific Session

Detection of BVDV Antigens in Hair Samples from Alpacas, Deer and Cattle

By Andres Read, Jing Zhang, Daniel Givens, Clayton Kelling, Daniela Bedenice, Lalitha Peddireddi, Peter D. Kirkland.

This short presentation indicated that alpaca hair samples could be used to test for BVDV. 50 tail hair samples (with root ball, taken from the base of the tail) were collected and stored dry in a zip-lock bag. Samples can be held for up to 7 days at 98 degrees F. This study confirmed results by also testing skin and blood samples from the same alpacas.