



UC DAVIS
VETERINARY MEDICINE
 California Animal Health and
 Food Safety Laboratory System

CAHFS CONNECTION

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Holiday Schedule

In observance of Independence Day, CAHFS will be closed on **Wednesday, July 4, 2012.**

Bovine

Oleander toxicity on a dairy - Oleander toxicosis resulted in dehydration, anorexia, decreased milk production, and diarrhea in 11 of a group of 40 recently fresh dairy cows after exposure to Oleander leaves from cut bushes that had blown into their pen following high winds. Analysis of serum samples from the affected animals confirmed the presence of oleandrin. Bulk milk samples from the exposed group of 40 tested at the first post-exposure milking had barely detectable level (1ppb), and no oleandrin was found at the second milking. Milk from both milkings was combined and discarded. Milk production returned to pre-exposure levels over the next week. Fresh and dried oleander leaves are toxic and very few leaves can cause illness and death in livestock.

Malignant catarrhal fever due to ovine herpesvirus-2 was diagnosed in a 5-year-old Wagyu cow on pasture that was afebrile, lethargic and weak, with bilateral epistaxis and foam from the nose, and a rapid heart rate. Lesions included fibrinohemorrhagic and necrotizing tracheitis, myocardial necrosis with subtle vasculitis, nephritis, lymphadenitis, ulcerative esophagitis and marked intestinal crypt necrosis. The intestine and esophagus lesions were highly suggestive of BVDV but BVDV testing was negative; however, PCR was strongly positive for MCF.

Anaplasmosis caused severe anemia leading to lethargy, weakness, shallow breathing and death in three Angus cows in a 24-hour period with several others affected in a group of 150. Organisms were seen attached to red cells in tissues and smears.

Camelid

Abortion and disseminated infection by *Coccidioides posadasii* in an alpaca fetus - An aborted 9-month gestation alpaca fetus and placenta were submitted for necropsy. Multiple organs of the fetus and the placenta had pyogranulomas with large numbers of *Coccidioidomycosis spp.* organisms, which were identified as *C. posadasii* by PCR. The dam serum was tested and found positive for *Coccidioides spp.* serology. The dam was euthanized and necropsy revealed pyogranulomas with *Coccidioidomycosis spp.* in multiple organs. Although *Coccidioides spp.* infection is frequently diagnosed in adult animals, congenital infection and abortion are rarely seen in other species and it has never been reported in alpacas before. In this case, it was thought that the transmission was from the dam via the placenta.

Small Ruminant

Border disease in a lamb - A moribund 4-month-old male lamb with diarrhea was submitted to CAHFS for euthanasia and diagnostic work-up. Necropsy and histopathology revealed enterocolitis, lymphoid depletion of the gut-associated lymphoid tissue, erosive esophagitis and erosive rumenitis. There was also intestinal zygomycosis and coccidiosis due to *Eimeria sp.* Immunohistochemistry was performed using antibody against bovine viral diarrhea virus that also binds to border disease virus (BDV), both pestiviruses. Disseminated pestiviral antigen was detected throughout the gastrointestinal tract, kidney, brain, spleen, pancreas, liver and adrenal gland. BDV was isolated from intestinal contents. Mucosal disease-like lesions in sheep with BDV infection have been rarely reported.

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We're on the Web
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Poultry

Runting layer chickens - Several 6-week-old chickens from a commercial layer ranch with a history of having many undersize chickens (runts) and increased mortality were submitted for necropsy and diagnostic work up. These birds were about half their expected size for the age and 20 percent of the birds submitted had a dilated proventriculus. Histologically most birds had lesions in the proventriculus, which were consistent with transmissible viral proventriculitis, a condition reported usually in broilers and caused by chicken proventricular necrosis virus (CPNV), a birnavirus closely related to the agent of infectious bursal disease. CPNV was detected in the proventriculus from 4 out of 5 chickens tested. In addition, all birds tested had extremely low values of vitamins E and A in the liver. The histological lesions, coupled with detection of the CPNV in proventriculus, are highly suggestive of a causal association between CPNV and the runting syndrome observed in these birds. Low vitamin levels are likely due to absorption impairment associated with inflammation of the proventriculus.

Toxicology

Xylitol detection in bait - Xylitol is a commonly used and readily available sugar substitute. Dogs are uniquely sensitive to adverse effects following xylitol ingestion. Due to insulin release, dogs rapidly become severely hypoglycemic. In addition, xylitol can cause acute hepatic damage due to an unknown mechanism. Hypoglycemia and hepatic damage are possible following ingestion of xylitol of > 0.1 g/kg and > 0.5 g/kg, respectively. It has been speculated that xylitol is being used to kill coyotes and wolves in some regions of the country. CAHFS recently received samples from another Western state where a dead coyote was found near bones believed to have been intentionally placed to attract canine predators. Xylitol was detected at high concentrations in two bone samples and at a trace concentration in the submitted stomach contents of the dead coyote. Due to the rapid metabolism of xylitol, testing of tissues of affected animals is generally not useful to diagnose the problem. However, in any suspected case of malicious use of the chemical, bait and/or stomach contents are potentially useful samples to confirm exposure. Currently, CAHFS is the only veterinary diagnostic laboratory in the country that is able to detect xylitol.

Salmonella in pet food

Salmonella outbreak—The FDA issued an announcement that pet food manufactured by Diamond Pet Foods is being voluntarily recalled due to possible Salmonella contamination. To date, 22 people in 13 states have been infected with the outbreak strain of *Salmonella* Infantis. Some of these human cases have been associated with exposure to pet food produced at a specific manufacturing facility operated by Diamond Pet Foods where this isolate has also been detected. Any dogs or cats that have symptoms consistent with Salmonella (vomiting, diarrhea, fever, abdominal pain, inappetence) should be examined by a veterinarian and have a fecal sample tested for Salmonella. Additionally, CAHFS can perform Salmonella testing on pet food samples if requested by the owner. Recalled lots of pet food can also be returned to the distributor. More information can be found at www.diamondpetrecall.com or <http://www.fda.gov/Safety/Recalls/ucm303034.htm>

Good communication as part of biosecurity

It is well known in the poultry industry that biosecurity is the most important tool in the defense of transmissible disease from occurring and spreading. The early communication of ongoing diseases in a particular region or state aids producers in preventing disease spread by reinforcing biosecurity measures. People are the main mechanical vector of infectious diseases in poultry by carrying infectious agents on their bodies, clothes, shoes, vehicles, and items they transport from farm to farm. Warning of disease outbreaks facilitates decisions on whether it is necessary to take alternative travel routes for feed delivery and technical service to farms or just stay away from sources of infection. The California Poultry Federation (CPF), the trade association for California's poultry producers, administers an industry-run hot line to communicate ongoing transmissible diseases among the poultry producers of California. The producer-only hotline, 209-576-6355, is established and designed to efficiently inform all participants of the occurrence of contagious disease in poultry so that spread of the disease may be halted as quickly as possible.