



UC DAVIS

VETERINARY MEDICINE

California Animal Health and
Food Safety Laboratory System

CAHFS CONNECTION

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UPDATE: Virulent Newcastle disease in California

CAHFS continues working with the California Department of Food and Agriculture (CDFA), the United States Department of Agriculture and poultry owners to contain and eradicate the outbreak of virulent Newcastle disease (vND) diagnosed in California last May. As of July 26, USDA has confirmed 66 cases of vND in backyard birds in California, 57 in San Bernardino County, 5 in Riverside County and 4 in Los Angeles County. More vND information is available on the [CDFA](#) and [APHIS](#) websites.

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Bovine

Bovine viral diarrhea virus (BVDv) caused the **abortion** of two, 5-6 month gestation Holstein fetuses. The dairy reported six abortions of similar age fetuses. Both fetuses had necrosis in the heart and liver, and inflammation in the heart. The kidney was positive for BVDv by PCR and IHC, and the brain was positive for this virus on IHC.

***Histophilus somni* encephalitis and myocarditis** caused the death of an 8-month-old Angus steer that had mild bloat prior to death. At necropsy the heart was diffusely pale and the meninges were slightly cloudy. On histopathology typical lesions of necrosis, inflammation and vasculitis were seen in the heart and brain, both of which were positive to *H. somni* by immunohistochemistry. An unusual finding was unilateral hypopyon with retinal vasculitis.

Small Ruminant/Camelid

***Streptococcus* sp. and *Mycoplasma* sp.** were associated with polyarthritis in a 2-month-old Merino lamb from a flock of 200 with a history of ascending paresis/paralysis affecting 10% of the newborn to 2-year-olds. Both hocks and carpal joints and one each of the hip and stifle joints were affected. Four joints had thick capsules with caseous exudate while two had early lesions with minimal fibrin and red fluid. *Mycoplasma* sp. and *Staphylococcus aureus* were isolated from a lung abscess.

Continued

Attention: Commercial Poultry Producers

Please ensure that the CAHFS' contact information for your production sites is updated following any changes in management. That includes updated leases or purchases of new premises as well as personnel changes with access to e-mail boxes for lab results. To update your contact information, call Jamie Nunes at 209-634-5837 or e-mail jchall@ucdavis.edu.





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Enzoitic ataxia due to copper deficiency caused progressive hind limb paresis, and knuckling and dragging of rear legs in two, 3-4 week old Boer cross goat kids. These clinical signs progressed to the forelimbs a week later. Both kids remained pain free, bright and eating normally but unable to rise. They failed to improve after selenium injections, and they were euthanized. Demyelination of the spinal cord typical of copper deficiency was found, and liver copper levels were 2.0 and 5.9ppm (normal 25-150ppm). Selenium was slightly below normal in both animals. Copper deficiency is a commonly seen condition in goats in California.

Oleander intoxication caused the death of two adult alpacas from unrelated premises. Both alpacas had myocardial necrosis, and oleandrin was detected in the stomach content of both animals. One alpaca was breathing through the mouth just prior to death and had epicardial hemorrhages and dark red lungs and intestine. The other alpaca had diarrhea three days earlier and was unable to stand. Necropsy revealed congested liver and gelatinous fluid in the pericardial sac.

Equine

Staphylococcus aureus cellulitis and secondary septicemia were diagnosed in a 5-year-old Thoroughbred gelding with multiple open wounds of unknown origin around the right hock. *S. aureus* was isolated from cellulitis tissue, right hock joint, lung and liver. Histologically there was hock arthritis, embolic pneumonia and hepatitis. The left hind foot (weight bearing) had severe laminitis and sloughing of the hoof wall.

Pig

Actinobaculum sp. and **Streptococcus suis** caused severe bilateral purulent **pyelonephritis and cystitis** in a pregnant 1.5-year-old Hampshire sow who was off feed, had bloody urine, unstable gait and head bobbing prior to death. *Actinobaculum sp.* which is closely related to *Actinobaculum suis* is an anaerobic bacterium associated with cystitis and pyelonephritis in sows, and it is transmitted from the preputial sheath of carrier boars during breeding.

Wildlife

Coccidioidomycosis and **canine distemper** caused the death of an adult male raccoon found in a backyard with evidence of bilateral ocular discharge. At necropsy, bilateral conjunctivitis and multiple firm indistinct lung nodules were found. Histologically, the nodules contained numerous spherules consistent with *Coccidioides immitis*, the cause of Valley Fever. Coccidiomycosis infection occurs through inhalation of spores found in the soil, and can occur in many species, although llamas and alpacas are particularly susceptible. In this case, it was assumed that the raccoon had an increased susceptibility to infection due to an underlying infection with canine distemper virus, the cause of the conjunctivitis observed.

Poultry and Other Avian

Aspergillus syringitis was diagnosed in a 5-month-old and a 3-year-old chicken on unrelated backyard premises. Both chickens exhibited respiratory difficulty prior to death. At necropsy, a plug of fungal hyphae was obstructing and invading the syrinx (bifurcation of the trachea) causing asphyxiation. The older bird also had fungal pneumonia.

Curled-toe paralysis due to Riboflavin (Vitamin B2) deficiency was attributed as the cause of neurological signs such as paralysis in 10-day-old white broiler chicks. Approximately one percent of the chicks in a flock of 25,000 exhibited signs. Microscopically the peripheral nerves had demyelination and mild inflammation. These chicks did not exhibit curled toes probably due to the acute stage of the disease.



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