



Rabbit Hemorrhagic Disease Update

Rabbit hemorrhagic disease produced by RHD virus serotype 2 (RHDV2) has moved northward in California. Over the past few months, RHDV2 was detected in domestic rabbits in Fresno, San Luis Obispo and Sonoma Counties. RHDV2 is considered a “stable endemic” in California by USDA; however, it is still considered a foreign animal disease in other states of the U.S. where it has not yet been diagnosed. Rabbit hemorrhagic disease produced by RHD virus serotype 1 (RHDV1 or RHDVa) is considered a foreign animal disease in all states of the U.S. In California, disease caused by either serotype (RHDV2 or RHDV1/a) is a regulatory condition reportable within 48 hours. Please report sick or dead domestic and feral domestic rabbits to the California Department of Food & Agriculture (CDFA), 909–947–4462, and wild rabbits to the California Department of Fish & Wildlife at 916-358-2790 or via their [web site](#). Be sure to maintain your biosecurity measures to prevent infection of domestic rabbits and to avoid spreading the disease to naïve wildlife populations. Additional information on this disease and its control can be found on [CDFA’s web site](#).



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Bovine

Vitamin A deficiency was diagnosed in a dairy herd with about 30% of the heifers calving early, aborting, or producing full term stillborn calves. The heifers were doing well otherwise and the cows were not affected; both groups of animals were on different rations. Three near term fetuses submitted had mildly dome shaped skulls and one had cerebellar coning with partial herniation of the cerebellum through the foramen magnum. Histologically the optic nerves had marked loss of nerve fibers secondary to compression. All three fetuses had no detectable vitamin A in the liver.

Systemic fungal infection was the cause of neurologic signs and death of Angus calves from separate premises. A 5-month-old calf had a 4-day history of poor mentation, staggering, blindness in right eye, fever, depression and nasal discharge. A 2-month-old from another ranch had a few hours history of weakness, difficulty standing and increased respiratory rate. Both calves had oral ulcers that were invaded by fungi and bacteria, and severe inflammation in the kidneys and brain; the latter characterized by vasculitis associated with fungal invasion. Similar lesions were also found in the lungs, heart and renal lymph node of the 5-month-old calf.

Small Ruminant

Listeria monocytogenes caused **meningoencephalitis** in a 10-month-old Nubian buck with a 3-day history of anorexia, ataxia, excess salivation, nystagmus and obtundation. At necropsy, the goat had severe cerebral edema with cerebellar herniation. *Listeria monocytogenes* was isolated from the brain and immunohistochemistry for *Listeria* spp. was also positive on brain sections. Most commonly, this disease of ruminants is observed as a result of feeding moldy or spoiled hay or silage.





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Small Ruminant (cont'd)

A 7-month-old Hampshire club lamb with several month's history of having an arched back and being unsteady on its hind legs was submitted for necropsy. The history also indicated that this animal showed signs of pain when walking, but it walked near-normal when on Banamine. The tail had been docked very short using a rubber band and at the time of submission pus was seen at the remnant stump. A large **abscess** was found in the **spinal canal** encompassing the caudal lumbar area and the entire sacral portion. *Fusobacterium* spp., *Trueperella* spp. and *Bacteroides* spp. were isolated from the abscess.

Equine

A euthanized 2-year-old Thoroughbred colt with a 20-day history of severe nasal discharge, fever, and lameness was submitted for necropsy. Grossly, there was a thickened, tan area with diffuse hemorrhage on the right guttural pouch, which histologically corresponded to a severe, **necrotizing eustachitis with bacterial colonies**. *Streptococcus equi* subsp *zooepidemicus* and beta-lactamase-producing *Staphylococcus aureus* were isolated. In addition, this colt had chronic laminitis, which is a common complication of systemic inflammation in horses. Guttural pouches are prone to bacterial and fungal infections, which may become systemic and fatal.

Pig

Porcine circovirus type 3 (PCV-3) infection was diagnosed in a 4-month-old pig from a farm with 60 animals of which eight had respiratory signs. Grossly, the lungs had a slight red to brown "checkerboard" appearance, failed to collapse, and were moderately heavy. Microscopic examination revealed interstitial pneumonia and vasculitis/perivasculitis affecting the lungs, kidneys, liver, and brain. Fibrin thrombi were seen in the stomach. High viral loads of PCV-3 were detected in the lungs. PCV-3 is a relatively new circovirus that has been associat-

ed with abortion, weak newborns, myocarditis, dermatitis and nephropathy syndrome, and systemic periarteritis. Most of the reports about PCV-3 are published on the East coast of the U.S., and this case seems to be the first detection by CAHFS.

Cervid/Camelid

Bluetongue virus serotype 11 was diagnosed in an 11-year-old, female llama with a history of sudden death. Grossly, the lungs were diffusely dark red, wet, heavy, and did not collapse. There was moderate amounts of straw colored fluid in the thorax and heart sac. The heart had multifocal to coalescing endocardial hemorrhages. Microscopic examination revealed interstitial pneumonia with perivasculitis and myocarditis. High viral loads of bluetongue virus were detected by qPCR in the lung. The virus was identified as serotype 11, which has been previously associated with the sudden death of a llama and an alpaca in Washington state. ELISA for bluetongue antibody was negative, which indicates that this was an acute infection.

Poultry and Other Avian

Weepy eyes characterized by increased lacrimation, matting of the feathers around the eyes, and swollen eyelids was seen in 12-day-old chickens. The incidence was less than 2% in a flock of 20,000 birds. Except for edema in the conjunctiva there was no inflammation suggestive of an infectious agent. No bacteria were isolated, and no foreign bodies were seen. No corneal ulcers suggestive of ammonia exposure were seen either. The cause of this condition remains undetermined.

