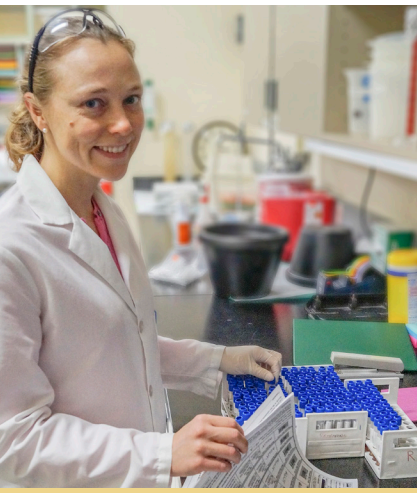
UCDAVIS VETERINARY MEDICINE
California Animal Health and Food Safety Laboratory System

CAHFS CONNECTION

LEADING DIAGNOSTICS NATIONALLY, PROTECTING CALIFORNIA LOCALLY • JULY, 2020



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Rabbit Hemorrhagic Disease

After the first diagnosis of rabbit hemorrhagic disease (RHD) near Palm Springs, Riverside county, on May 11, 2020, additional cases of the disease have been confirmed in the following California counties: Orange, San Bernardino and San Diego. To date, RHD has only been detected in wild cottontails and jackrabbits in California, but all lagomorph species may be susceptible. CAHFS is working with the California Department of Fish and Wildlife (CDFW), the California Department of Food and Agriculture (CDFA) and the US Department of Agriculture to provide diagnostic services for this disease. CDFW is tracking the geographic spread and impact of RHD on wild rabbits, jackrabbits, and hares. Please report sick or dead wild rabbits, (2 or more) found in an area over a short period of time (3-4 days apart), to **CDFW**.

Contact your veterinarian if your rabbit is sick. Please report dead domestic rabbits to CDFA at (909) 947-4462.

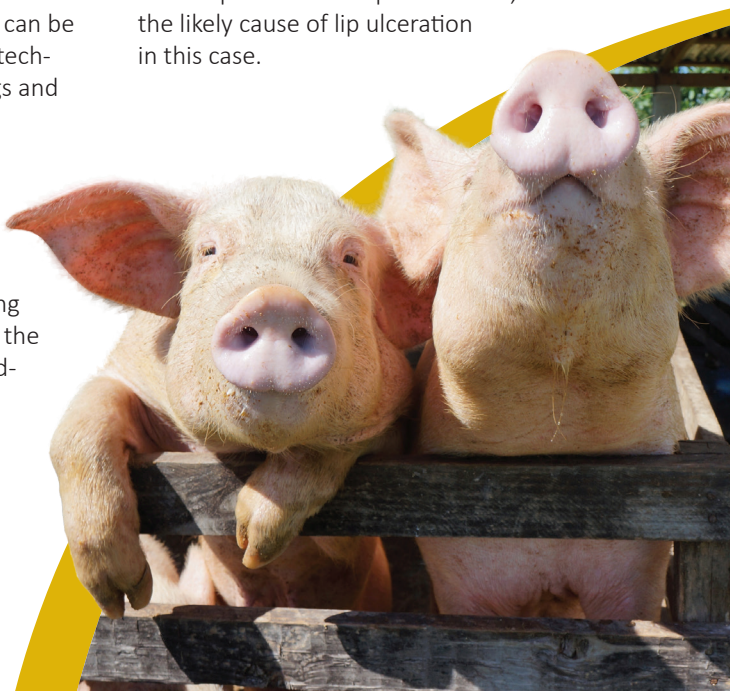
Bovine

Lungworms were the cause of respiratory disease and death in four out of 130 Angus cattle, in a large irrigated pasture. Two, 12- to 14-month-old heifers were euthanized after failure to respond to bacterial pneumonia treatment. Both heifers had diffuse mottling affecting 60-70% of the lungs and numerous lungworms (*Dictyocaulus viviparous*) over the tracheal mucosa and occasionally filling bronchi. Lungworm infestation in cattle is most commonly caused by *Dictyocaulus vivip-arous* and herd-wide disease occurs usually in young grazing animals exposed to a wet environment. In most cases, cattle develop cough and labored breathing that usually ranges from mild to moderate, and results in decreased weight gain or milk production. Rarely, severe infestation in young calves can be fatal. Larval stages can be detected in the feces using the Baerman technique. Examination of the sputum for eggs and larvae can also be performed.

Vitamin A deficiency was the cause of blindness in a 15-day-old Holstein calf which was the 5th blind calf born in a month on the dairy. The calf was otherwise normal. At necropsy, there was coning of the cerebellum due to compression by the skull, and the optic foramina were markedly narrow. There was severe atrophy and fibrous replacement of the optic nerve within the optic foramen.

Equine

Hepatic encephalopathy was the cause of neurologic signs, inspiratory stridor that seemed to be originating from the larynx, dyspnea and mucosal ulceration of the lips in a 17-year-old mare submitted for necropsy. Histologic lesions in the liver and brain confirmed hepatic encephalopathy, which was thought to be due to intoxication by pyrrolizidine alkaloid (PA)-containing plants. Laryngeal hemiplegia was initially suspected, but it was ruled out based on lack of lesions in the cricoarytenoideus muscle and left recurrent laryngeal nerve. Neuropathy has been reported associated with PA intoxication and it was probably the cause of the inspiratory stridor in this case. Mucosal ulceration has also been reported with exposure to PA, which was the likely cause of lip ulceration in this case.



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Pig

Swine dysentery by *Brachyspira hyodysenteriae* and **whipworms** (*Trichuris suis*) were the cause of diarrhea, decreased appetite and failure to grow in a 50 lb. crossbred pig. Four pigs at the site had diarrhea and two had died. There was diffuse, necrotizing colitis noted on necropsy. Spirochetes compatible with *Brachyspira* spp. and whipworm larvae were present in the lesions. No whipworm eggs were found in the fecal flotation. Prepatent period of *Trichuris* spp. is 74-90 days. Therefore, clinical disease can occur prior to the adult worms producing eggs. Management of the disease can be difficult in some environments as infective whipworm eggs can remain viable in the soil for many years.

Small ruminants

Ruminal acidosis was the cause of death in a yearling wether Boer goat from a herd of 12, from which another goat had died 3 weeks earlier. Both goats appeared normal in the evening, but were found down the following morning. The wether submitted had large amounts of corn in the rumen. Histologically, the rumen showed moderate to marked changes consistent with ruminal acidosis.

Camelids

Severe **proliferative gastritis** of the 3rd stomach compartment (C3) was the cause of chronic diarrhea in a 14-year-old llama. Proliferative gastritis in camelids is typically associated with parasitism, mainly caused by trichostrongyles such as *Camelostrongylus mentulatus*. In a significant number of cases, such as in this case, the parasites may not be present at time of necropsy, but the tissue damage still is. In this llama, strongyle eggs were detected on fecal examination. This llama also had selenium deficiency, despite supplementation with this mineral. This was likely a consequence of the chronic diarrhea.

Other Mammalian

Thymic lymphosarcoma in a 5-year-old male rabbit resulted in muffled heart sounds, and the presence of a cranial mediastinal mass observed radiographically. On necropsy, milky fluid filled the thoracic and abdominal cavities, and a large mediastinal mass compressed the lungs and heart. Histopathological examination and immunohistochemistry identified the mass as thymic lymphosarcoma.

Poultry and Other Avian

Pasteurella multocida septicemia caused the death of six out of 20 adult backyard hens within a few days. The chickens showed weakness and died within 24 hrs. On necropsy, there was multi-organ congestion suggestive of sepsis. Histology demonstrated inflammation of several organs from which *P. multocida* was isolated.

Oropharyngeal squamous cell carcinoma in an adult rooster formed a firm yellow caseous plaque in the oropharynx that interfered with feed intake. Differential diagnoses in chickens with this lesion are avian pox, virulent Newcastle disease, trichomoniasis, vitamin A deficiency, and less likely candidiasis and capillariasis.

Gastrointestinal impaction in a 6-month-old hen led to severe jaundice secondary to obstruction of the bile duct drainage into the duodenum. A large amount of long-fragment forage caused impaction of the duodenum, ventriculus, and proventriculus. Backyard, pasture-raised, and free-range poultry producers should maintain short pastures, avoid feeds that may expand in the gastrointestinal tract, and provide adequate grit to prevent impactions.