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UPDATE: Virulent Newcastle disease in California

After more than two months with no new cases of virulent Newcastle disease (vND) diagnosed in California, five additional premises (four backyard poultry premises and a feedstore with poultry) were diagnosed as confirmed vND positive in western San Bernardino County since November 14, 2019.

vND response team members from the California Department of Food and Agriculture (CDFA) and the U.S. Department of Agriculture (USDA) are working to establish control measures including mandatory euthanasia of infected and exposed birds and surveillance testing near the premises where infection was detected. The origin of the disease continues to be investigated.

Detections of vND have decreased greatly over the last several months. The priority remains to stop the spread of the virus and eradicate the disease. Significant progress toward this goal has been made by identifying and clearing remaining pockets of disease, but these recent cases remind all bird owners in Southern California to remain aware of vND signs, practice good biosecurity, stop illegal movement of birds from property to property, and report any sick birds immediately to the **Sick Bird Hotline, 866-922-2473**. The regional quarantines remain in place and include Los Angeles County and western San Bernardino and Riverside Counties. More information about vND, including biosecurity guidelines to keep birds healthy, is available on the CDFA virulent Newcastle Disease [web page](#).

Equine

Presumptive **arrhythmogenic right ventricular cardiomyopathy (ARVC)** was diagnosed in a 13-year-old Percheron gelding with acute collapse and death after very brief exercise. ARVC is a rare form of cardiomyopathy previously described in boxer dogs, cats, humans and rarely (three cases) draft horses.

Botulism was the cause of recumbency of a 14-year-old Quarter horse mare that had signs of sore feet without laminitis and developed head and neck edema and subcutaneous emphysema. On necropsy there was clear yellow edema fluid in the neck and head, particularly around the nuchal ligament. *Clostridium botulinum* type C toxin was confirmed by bioassay on the liver.

Welcome Dr. Carmen Jerry



CAHFS is pleased to welcome Dr. Carmen Jerry to our team. Dr. Jerry joined CAHFS-Turlock as an Avian Diagnostician on October 21, 2019. She received her DVM from the University of West Indies, Trinidad and Tobago; completed an internship in Pathobiology at Tuskegee University; completed a combined PhD/Anatomic Pathology Residency program with poultry emphasis at the University of Georgia; and obtained board certification by the American College of Veterinary Pathologists in 2017.





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Bovine

Oxalate nephrosis was diagnosed in three 9- to 10-day-old beef calves that were found dead from a herd in which 18 calves and none of the cows died. Calves and cows were on dry pasture and supplemented with hay. Curly dock (*Rumex* sp.) and pigweed were identified on the pasture but it was unknown whether there was an adequate amount to cause mortality in these calves. Soluble oxalates are absorbed and complex with serum calcium to form calcium oxalates resulting in as much as a 20% depletion of ionized calcium and a functional hypocalcemia. Animals that survive the hypocalcemia develop renal failure resulting from precipitation of calcium oxalate crystals in the kidneys. Ethylene glycol which can also cause oxalate nephrosis was not detected in kidneys of two of the calves tested. Ruminants are more resistant to oxalate nephrosis than monogastric animals since neutral rumen pH favors formation of insoluble calcium oxalates that are not absorbed, whereas acid pH allows absorption which may explain why only the young calves died and none of the cows. Oxalates can cross the placenta and oxalate nephrosis has been reported in bovine fetuses. It is unknown if the calves obtained the oxalates in utero or ingested soluble oxalates.

Small ruminants

Contagious ecthyma (CE) due to parapox was diagnosed in two, 2-week-old lambs from a group in which 10 lambs had oral lesions. One of the lambs had several extensive lip, dental pad, hard palate and tongue lesions, while the other had very few lip and oral lesions. PCR was positive for CE and pan-parapox virus on both lambs and histologic changes were typical of CE. Both lambs had concurrent pneumonia due to *Streptococcus ovis* in one, and *Mannheimia haemolytica* and *Histophilus somni* in the other.

Poultry and Other Avian

Erysipelothrix rhusiopathiae, the cause of erysipelas, was isolated from liver and spleen of 36-week-old commercial Broad-Breasted White turkey breeder hens from a flock presenting a slight increase in mortality. Necropsy findings included hepatomegaly, bronze discoloration of liver and enlarged, mottled spleens. Hepatic and splenic microscopic lesions included fibrinoid necrosis and mixed inflammation. In turkey breeder hens, artificial insemination is an important source of infection because male carriers may shed the bacterium in their semen.

Invasive **melanoma** of the eyelids was diagnosed in a 5-year-old chicken hen with facial swelling and increased respiratory effort. The tumor spread to peri- and retro-orbital spaces, the nasal cavity and the roof of the oral cavity. Metastases were identified in the neck and the lungs.

Holiday Schedule

In observance of the University of California's winter holidays, CAHFS will be open with limited services on Tuesday, Dec. 24, 2019; accepting submissions from 8 am-noon. CAHFS will be closed on Wednesday, Dec. 25, 2019.

CAHFS will be open with limited services on Tuesday, Dec. 31, 2019; accepting submissions from 8 am-noon and closed on Wednesday, Jan. 1, 2020 in observance of the New Year's holiday.

