



UC DAVIS

VETERINARY MEDICINE

California Animal Health and
Food Safety Laboratory System

CAHFS CONNECTION

LEADING DIAGNOSTICS NATIONALLY, PROTECTING CALIFORNIA LOCALLY • JUNE, 2019



Inside this issue:

- **UPDATE:** Virulent Newcastle disease in California
- **Equine**
- Nodular lymphofollicular conjunctivitis
- **Leadership change for CAHFS**
- **Bovine**
- *Mycoplasma bovis*
- Coccidiosis
- **Pig**
- Chronic iron deficiency anemia
- **Small Ruminant**
- Malignant catarrhal fever (sheep)
- Severe copper deficiency (goat)
- **Poultry/Other Avian**
- Infectious coryza (chicken)
- Round heart disease (turkey)

UPDATE: Virulent Newcastle disease in California

Four hundred and forty three premises have tested positive for virulent Newcastle disease (vND) by CAHFS and confirmed by the United States Department of Food and Agriculture (USDA) between May 15, 2018 and May 24, 2019. Most cases occurred in backyard exhibition birds of San Bernardino, Riverside, Los Angeles and Ventura Counties. The disease also spilled over into one chicken pullet and nine chicken layer farms from neighborhoods with large numbers of infected backyard poultry, all located in Riverside and San Bernardino Counties. Only four of these ten farms are large enough to be classified as commercial farms by USDA. USDA also confirmed one case each in backyard chickens located in Alameda County (California), Utah County (Utah) and Coconino County (Arizona). When an infected premises is identified, the area is evaluated by California Department of Food and Agriculture (CDFA) and USDA epidemiologists, and all infected and potentially exposed flocks are euthanized to protect the surrounding flocks. The surrounding flocks are then tested, often multiple times, to ensure they remain free from vND.

Moving infected birds, often ones not yet showing signs of disease, will lead to continued spread of disease. Do not accept birds of unknown disease status into your flock. Biosecurity is paramount to prevent spread of vND. Poultry owners are advised that to minimize the risk to their birds, they should follow [CDFA's biosecurity guidelines](#) for backyard and pet birds. If you suspect that your own birds may have vND, do NOT submit the birds directly to CAHFS. Call the Sick Bird Hotline at (866) 922-2473, where staff can assess vND risk and ensure that the correct samples are collected for diagnosis.

Equine

Nodular lymphofollicular conjunctivitis or "**pseudolymphoma**" was diagnosed on the biopsy of a growth in the conjunctiva and third eyelid from a 7-year-old horse. The cause of this condition is unknown, but it is thought to be an immune-mediated condition. This entity is characterized by marked lymphofollicular proliferation. It is typically unilateral and benign, and excision is curative.

Bovine

Mycoplasma bovis was the cause of unilateral carpal **arthritis** in two, 36- to 50-day-old Holstein calves from two premises. Both calves were euthanized due to lameness and had no other lesions.

Leadership Change for CAHFS

Dr. Pam Hullinger has stepped down as CAHFS' Director and is now working with the California Department of Food and Agriculture on the virulent Newcastle disease outbreak in Southern California.

Drs. Beate Crossley, Ashley Hill and John Adaska have been appointed as acting co-Directors through 2021.





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Coccidiosis was the cause of death of a 2-month-old mixed breed beef calf in a cow-calf operation of 15 head on irrigated pasture. The colon had diffuse, red-brown mucus and semi-pasty content over the necrotic mucosa. Severe selenium deficiency (liver level- 0.038ppm, normal 0.25-1.0ppm) was also detected.

Pig

Chronic iron deficiency anemia resulted in the death of a 2-month-old miniature pig. Postmortem examination revealed severe pulmonary edema, mild interstitial pneumonia, and generalized pallor of visceral organs, especially the heart. Histopathology revealed centrilobular hepatocyte and rare myocardial degeneration and necrosis consistent with anemia and hypoxia. Liver iron concentration was 42ppm (normal 100-200ppm). Vitamin E and selenium levels were normal, and no infectious agents were detected.

Small ruminants

Malignant catarrhal fever (MCF) was the cause of death of a 5-month-old female mixed breed lamb with no noticeable prior illness. Microscopy was suggestive of MCF and PCR confirmed the infection. While the virus, known as ovine herpes virus 2 (OvHV-2), exists as a ubiquitous subclinical infection in domestic sheep, there have been occasional clinical cases of MCF in sheep in the recent years.

Severe copper deficiency (copper 3.5ppm in liver; normal 25-150) in a 5-month-old, female, Boer goat kid presumably led to poor immunity resulting in severe intestinal **coccidiosis and cryptosporidiosis**. The goat kid was the third of three siblings to die with similar signs of lethargy and diarrhea. Postmortem examination revealed multiple small, pale tan to white, raised regions of mucosa as well as regions of hemorrhage in the small intestine. The raised regions were histologically confirmed to be associated with coccidia infestation. Large numbers of *Cryptosporidium* were also lining the surface of the enterocytes.

Poultry and Other Avian

Infectious coryza due to *Avibacterium paragallinarum* was the cause of respiratory signs, swollen heads, decreased water and feed consumption, and increased mortality in three different flocks of 20,000, 42- to 43-day-old broiler chickens from the same ranch. In addition, infectious bronchitis virus of different serotypes were also isolated from the trachea of the chickens.

Round heart disease (dilated cardiomyopathy) was diagnosed in 3-week-old turkey poults submitted for increase in mortality. The submitted poults had marked size variation and on postmortem examination 4/10 poults had moderately dilated right and left ventricles. Several poults also had increased mucus in the tracheal lumen, consolidated lungs, and airsacculitis. *Escherichia coli* and *Bordetella avium* were isolated from various tissues. Round heart disease is a multifactorial disease and has been associated with hypoxic conditions during incubation and brooding, high altitudes, cold stress, high salt diets, and genetic factors.



Please do not forget your **submission form**. In order for CAHFS to provide clients with timely and accurate

diagnostic testing services, a completed submission form is needed with your sample. We also encourage having a veterinarian listed on the submission form, as this professional will be able to better interpret your reports and provide advice on treatment options.

