



**UC DAVIS**

**VETERINARY MEDICINE**

California Animal Health and  
Food Safety Laboratory System

# CAHFS CONNECTION

LEADING DIAGNOSTICS NATIONALLY, PROTECTING CALIFORNIA LOCALLY • JULY, 2019



## Inside this issue:

### Update - vND in California

#### Bovine

- Blackleg
- Anaphylactic vaccine reaction

#### Avian Influenza detected

#### Equine

- Theiler's disease

#### Pig

- Chronic pericarditis due to *E. coli* followed by *Erysipelothrix rhusiopathiae*

#### Small Ruminants

- Listeria encephalitis (sheep)
- Mycoplasma* sp. (goat)
- Squamous cell carcinoma (goat)

#### Poultry & Other Avian

- Multifactorial infectious and nutritional disease (turkey)
- Mycoplasma gallisepticum* (peafowl)
- Proventricular Dilatation disease (other avian)

## Holiday Schedule

In observance of Independence Day, CAHFS will be closed on Thursday, July 4, 2019.

## Update - vND in California

Four hundred forty-eight (448) premises have tested positive for virulent Newcastle disease (vND) by the California Animal Health and Food Safety Lab (CAHFS) and confirmed by the United States Department of Food and Agriculture (USDA), National Veterinary Services Lab (NVSL) between May 15, 2018 and June 28, 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. One case was also confirmed in backyard chickens located in each of these three counties: 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 humanely euthanized to protect the surrounding flocks. The latter are then tested, often multiple times, to ensure they remain free from vND.

Moving infected birds, including those 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, 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.

## Bovine

**Blackleg** was the cause of sudden death in an 8-month-old Red Angus heifer on pasture in a herd of 500 of which 25 had died over the past month. On gross exam, the right rear leg muscles and myocardium were necrotic with typical butyric odor; the heart sac contained fibrin. *Clostridium chauvoei* was detected by fluorescent antibody test and isolated from the heart sac and leg muscles. The heifer was also severely copper deficient (liver- 4.5ppm, normal 25-150ppm).

**Anaphylactic vaccine reaction** was the cause of death of two yearling Holstein dairy heifers in a group of 400 vaccinated animals. The heifers developed open mouth breathing, increased heart (160bpm) and respiratory rates (120bpm) shortly after vaccination, and despite treatment with epinephrine and Banamine, both died. Interstitial pneumonia, pulmonary edema and hydrothorax with fibrin was observed in both animals. No aerobic bacteria or viruses were detected.

## Avian Influenza detected

On June 26, 2019, during routine NPIP testing, a low pathogenic avian influenza virus subtyped as H7 was detected in a backyard, non-commercial duck layer flock in Merced County. The result was confirmed by the reference laboratory, NVSL, on June 27, 2019. This early finding underlines the importance of our continuous surveillance efforts to protect poultry health.





**UCDAVIS**

**VETERINARY MEDICINE**

California Animal Health and  
Food Safety Laboratory System

## Lab Locations:

### CAHFS – Davis

University of California  
620 West Health Sciences Dr.  
Davis, CA 95616  
Phone: 530-752-8700  
Fax: 530-752-6253  
daviscahfs@ucdavis.edu

### CAHFS – San Bernardino

105 W. Central Ave.  
San Bernardino, CA 92408  
Phone: 909-383-4287  
Fax: 909-884-5980  
sanbernardinocahfs@ucdavis.edu

### CAHFS – Tulare

18760 Road 112  
Tulare, CA 93274  
Phone: 559-688-7543  
Fax: 559-688-2985  
tularecahfs@ucdavis.edu

### CAHFS – Turlock

1550 N. Soderquist Road  
Turlock, CA 95380  
Phone: 209-634-5837  
Fax: 209-667-4261  
turlockcahfs@ucdavis.edu

## Equine

**Theiler's disease** (also known as equine serum hepatitis) was the cause of listlessness, anorexia, pacing, agitation and eventual recumbency in a 10-year-old Tennessee Walking Horse gelding. Gross exam revealed icterus and a small, flaccid, light brown to orange liver. Histopathology confirmed extensive liver necrosis most compatible with Theiler's disease, and secondary hepatic encephalopathy.

## Pig

**Chronic pericarditis due to *Escherichia coli* followed by *Erysipelothrix rhusiopathiae*** septicemia were the causes of death of a 4 year old Mulefoot sow that had been exhibiting weight loss, poor appetite and labored breathing with poor response to antibiotics, during 2 months. The acute onset of *E. rhusiopathiae* septicemia resulted in systemic vascular thrombosis and death.

## Small ruminants

**Listeria encephalitis** was the cause of high fever, depression, profuse drooling, vertical nystagmus and inability to stand in a 4-year-old Navajo ewe. Histologic lesions and immunohistochemistry were diagnostic for listeriosis.

***Mycoplasma sp.*** caused severe, diffuse fibrinous peritonitis and arthritis in a 2.5-week-old Nigerian dwarf goat kid that presented with weakness and fever (104-107.8°F) of a 4-day duration. Histologically severe necrotic and pyogranulomatous peritonitis and mesenteric lymphadenitis were seen. *Mycoplasma sp.* (goat type) was cultured and detected by PCR in the liver, joint, and peritoneum.

**Squamous cell carcinoma** in the udder and suppurative mastitis were diagnosed in a 5-year-old Saanen goat that presented with bilateral udder ulceration and swelling. Several bacteria were isolated from the ulcerative lesions including *Corynebacterium ulcerans*, *Providencia sp.*, and

*Staphylococcus aureus*.

## Poultry and Other Avian

**Multifactorial infectious and nutritional disease** including viral enteritis, colibacillosis, reovirus myocarditis, viral hepatitis, aspergillosis and encephalomalacia due to vitamin E deficiency were the cause of ill-thrift, decreased water and feed consumption and increased mortality in a flock of 16,000, 15-day-old turkey poults.

***Mycoplasma gallisepticum (MG)*** was the cause of death of a peacock in a backyard flock where several birds showed infraorbital swelling, coughing, nasal exudate and death over six months. This peacock was found dead and had reddened infraorbital sinuses as well as mucus and hemorrhage in the trachea and lungs. While MG is often associated with infections in chickens, in this case the nearby chickens were not as affected as the peafowl. There have been occasional cases of suspect MG strains being more pathogenic in peafowl.

**Proventricular Dilatation disease (PDD)** was diagnosed in two, 8-year-old red-vented cockatoos that exhibited neurological signs for several months. On necropsy, one of the birds had severe dilatation of the crop with dry ingesta, while no significant gross abnormalities were observed in the other bird. Histopathology of both birds revealed encephalomyelitis, adrenalitis, and ganglioneuritis of the gastrointestinal tract. Immunohistochemistry was positive for avian bornavirus, the causative virus of PDD.

