



Inside this issue:

- **Virulent Newcastle disease outbreak in Southern California is over**
- **CAHFS Operations due to COVID-19**
- **Bovine**
 - Nitrate toxic
- **Equine**
 - Aortic valvular rupture
- **Wildlife**
 - Rabbit hemorrhagic disease
- **Pig**
 - Sodium (salt) toxicosis
- **Camelids**
 - Haemonchosis
- **Poultry/Other Avian**
 - Poult enteritis and mortality syndrome

Virulent Newcastle disease outbreak in Southern California is over

On June 1st the California Department of Food and Agriculture (CDFA) lifted the virulent Newcastle disease (vND) quarantine in Southern California, after no new cases of the disease have been confirmed since February 2020.

The United States Department of Agriculture (USDA), CDFA and California Animal Health and Food Safety (CAHFS) have worked tirelessly over the past two years toward this goal.

To guard against the risk of future outbreaks, the prevention plan led by the California Avian Health Education Network (CAHEN) will focus on disease monitoring and continual support for biosecurity training. Biosecurity practices work – they were essential in minimizing vND spread to commercial farms in the area and we have used them successfully in other poultry disease outbreaks. These practices must be followed by anyone who owns or handles poultry. Southern California's many backyard and commercial poultry owners must remain vigilant in protecting the health of their birds by ensuring biosecurity protocols are always followed.

All commercial and backyard poultry owners need to routinely check birds for signs of illness and report sick birds through CAHEN at 866-922-2473. This will allow animal health officials to investigate and quickly respond if needed. USDA will continue to provide educational materials and staffing support to CAHEN and CDFA.

CAHFS continues offering commercial and backyard poultry diagnostic services at its four locations: San Bernardino, Tulare, Turlock and Davis. All poultry owners are encouraged to submit dead or sick birds for necropsy and diagnostic work up.

During the quarantine, commercial poultry producers in Southern California were directed to a remote site close to the lab where CAHFS personnel met them and received their samples. That service will be discontinued as of June 15. CDFA is asking producers to voluntarily continue sampling once a month for the next 90 days, preferably on the first week of June, July, and August. Further testing after that may be requested after re-evaluation.

CAHFS Operations due to COVID-19

CAHFS has returned to full service and is now accepting all submissions. Please be aware that some testing turnaround times may be delayed due to staffing shortages and the need to batch testing to use our supplies wisely.

CAHFS modified process for in-person delivery of samples to minimize opportunities for disease transmission remains in place. Please follow directions at the lab when you arrive.

Thank you for your understanding.





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

Bovine

Nitrate toxicosis was the cause of death of six out of 50 dry dairy cows on pasture that were supplemented with oat hay. A new bale of oat hay had been started in the morning, and four hours later three cows were dead, and three others showed paresis, urine dribbling, and staggering before falling, developing agonal breathing and dying. Field necropsies revealed brown blood. Eye fluid from four cows had toxic levels of nitrate (130-170ppm, toxic >25ppm). The hay also had toxic levels of nitrate (11,000-13,000ppm, toxic >10,000ppm).

Equine

Aortic valvular rupture leading to cardiac tamponade was the cause of sudden death in a 20-year-old Quarter horse gelding found dead in the stall. At necropsy, a 2cm tear was found at the base of the posterior valve leaflet. The pericardial sac contained 3 liters of clotted and unclotted blood.

Wildlife

Rabbit hemorrhagic disease (RHD) was diagnosed for the first time in California in May. The California Department of Fish and Wildlife submitted an adult, female, wild black-tailed jackrabbit (*Lepus californicus*) that was found dead in an area where 10-20 other jackrabbits were found dead within a week, for postmortem examination. Two of the dead rabbits had blood coming from the nose. Necropsy revealed pulmonary edema, congestion and hemorrhage, hemorrhagic nasal turbinates, and mild reticular pattern in the liver. Histologically, massive hepatocellular necrosis was observed. The Foreign Animal Disease Diagnostic Laboratory at Plum Island confirmed the presence of RHD virus type 2 (RHDV2). RHDV2 affects a wide variety of wild and domestic lagomorphs.

Pig

Sodium (salt) toxicosis was diagnosed in a 2-month-old crossbred pig that developed red skin, seizures and convulsions when stimulated, one day after purchase and

was euthanized. The brain was grossly unremarkable but had microscopic lesions typical of salt/sodium toxicosis.

Camelids

Haemonchosis caused the death of a 16-year-old llama that lived with goats. The llama was found in severe respiratory distress and died within 24 hrs. On postmortem examination, the carcass was very thin, anemic, and had ventral edema and large clumps of trichostrongyle parasites, mostly *Haemonchus* spp. in C3. Histology demonstrated centrilobular hepatic necrosis suggestive of parasitism-associated anemia.

Poultry and Other Avian

Poult enteritis and mortality syndrome (PEMS) was diagnosed in three 5-, 17- and 31-day-old turkey flocks, respectively. Affected birds showed lethargy and ruffled feathers, while pasty feces around vents and watery intestinal contents were observed at necropsy. Astrovirus-like particles were observed in intestinal contents by direct electron microscopy. Histopathology revealed enteritis suggestive of a viral infection. The 5-day-old poults were also infected with *Salmonella* group C1. The 17-day-old turkeys presented with concomitant severe coccidiosis and bacterial infections (*Escherichia coli* was isolated from the livers and air sacs and *Enterococcus cecorum* was isolated from air sacs). Turkey coryza was also present in the 31-day-old flock, with *Bordetella avium* isolated from tracheas, sinuses and air sacs. These findings highlight the complex nature of PEMS, in which simultaneous co-infections with other pathogens often play a role in the disease outcome.

