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HOLIDAY SCHEDULE

CAHFS will be closed on Monday, September 6, 2021 in honor of Labor Day.

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**Malicious poisonings**

CAHFS toxicology sees cases of malicious poisonings regularly. One local animal control agency submitted a piece of hotdog that had been carefully tied to retain foreign material inserted into it (see picture). Zinc phosphide was identified as the foreign material. This substance is used for control of small mammalian pests such as squirrels and gophers, and is a restricted use pesticide in California.

CAHFS has also seen a recent increase in the number of bromethalin positive tests in dogs, cats, and wildlife. Bromethalin, a potent single dose rodenticide, primarily targets the nervous system causing paralysis, coma, seizures, and respiratory failure. While an effective method for rodent control, non-target species, such as wildlife, pets, and children, can access baits if care is not taken with placement. There is no antidote for bromethalin and even low doses can be fatal. Please follow label instructions for appropriate and safe bait placement.

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**Bovine**

**Nervous coccidiosis** was the presumptive cause of neurologic signs in a yearling Longhorn cross steer that had diarrhea and was unable to walk. The steer was in lateral recumbency and exhibited ~5-seconds-long convulsion and twitches prior to euthanasia. Grossly, the colon content was diffusely red to bright red, and microscopically the colon had severe lesions with intralesional coccidia. Coccidian oocysts were found at >30,000 oocyst/gram of feces on McMasters. There were no significant findings observed on histology within the nervous system. Liver copper was also deficient at 11 ppm (reference range 25-100 ppm). The cause of nervous coccidiosis syndrome is not clearly defined, but there are reports that demonstrated nervous coccidiosis is more frequent in calves that have a lower liver copper concentration than in those experiencing coccidiosis without copper deficiency.

**Anaplasmosis** was diagnosed in a dry-lot Holstein dairy herd that had a history of sudden death in cows with no or minimal signs and anemia, but no hemoglobinuria or melena. Liver samples from a field necropsy showed a pattern of lesions consistent with hypoxia. A blood smear showed a large percentage of red blood cells with one or more structures consistent with *Anaplasma marginale*. Serology for *A. marginale* antibodies was positive in one of two live cows, and hematocrit values as low as 8-9% were found in several other live cows. The herd had a high rate of infection with ear ticks, which were hypothesized to be functioning as vectors for the *A. marginale* organisms.

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Equine

Gastric rupture was the cause of death in a 30-year-old, Warmblood horse gelding that had colic signs. On physical examination the heart and respiratory rates were high, and there were no gut sounds on the left side of the abdomen. Within a few hours after the examination, the horse went down and died. On necropsy, there was a large amount of fluid and gastric contents frequently enmeshed in fibrin free in the abdomen. A 32 cm linear tear of the serosa and muscularis was present along the greater curvature of the stomach, with a 3 cm full thickness tear at one end. There was no blockage of the gastrointestinal tract and there was evidence of chronicity. A specific cause for the rupture was not identified.

Pig

Actinobacillus suis septicemia and concurrent PRRS infection resulted in anorexia and coughing followed by death in a 4-month-old cross-bred pig. The lungs were diffusely swollen, red and failed to collapse. There was also focal, mild pleuritis. Pure culture of A. suis was isolated from lung, liver and trachea. It was assumed that A. suis caused embolic pneumonia while PRRS virus caused diffuse interstitial pneumonia.

Small Ruminant

Staphylococcal mastitis in a 3-year-old Alpine goat resulted in lethargy, fever, trouble standing, and death three days after giving birth. Necropsy examination revealed bilateral asymmetrical swelling and reddening of the mammary glands, and multiple subcutaneous abscessed tracts. Histologically, necrotizing and suppurative mastitis with abundant Gram-positive cocci was observed. Staphylococcus aureus was isolated from the mammary gland. Staphylococcal mastitis, a common form of mastitis in ruminants, may occur as an acute postpartum infection with life-threatening toxemia.

Selenium deficiency caused severe heart damage and death in 4-month-old goats and 2-day-old lambs from three unrelated premises. The animals exhibited respiratory signs prior to death. The affected heart muscle was pale; similar but milder lesions were also found in the tongue and diaphragm. Pulmonary edema, hydrothorax and ascites were seen in all animals. A few animals had also acute passive congestion of the liver. Liver selenium level in one goat tested was 0.05 ppm and in both lambs tested was 0.02 ppm (normal 0.25-1.5 ppm).

Other Mammalian

Baylisascariasis spp. was the cause of neurologic signs including head shaking, falling over, weakness and atypical behavior in a female flying squirrel (Pteromyini spp.). Encephalitis with intralesional nematode larvae was seen on histopathology. Animals usually affected with Baylisascaris spp. larval migration in the brain are the intermediate hosts (mice, woodchucks, squirrels, rabbits, and birds).

Poultry and Other Avian

Very virulent infectious bursal disease (vvIBD) was diagnosed in two, four-month-old backyard brown chickens in a group of four, which were bought at a swap meet. The birds developed acute lethargy and prostration; three of them died. Necropsy revealed a band of hemorrhage in the lower part of the proventriculus in one bird and enlarged yellow bursa of Fabricius in both birds. PCR on the bursae was positive for vvIBD virus. Immunohistochemistry for the virus was positive in the bursa, spleen, and lymphoid tissues in other organs. vvIBD is a sporadic disease in California and can cause very high mortality in unvaccinated chickens.