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Holiday Schedule

In observance of Labor Day, CAHFS will be closed on **Monday, September 3, 2012.**

Director's Message—CAHFS Budget Update

Richard E. Breitmeyer, DVM, MPVM

Most of you are aware that CAHFS receives the majority of our funding from the California Department of Food and Agriculture (CDFA) in order to protect the health and safety of animal agriculture. These funds allow us to provide many diagnostic services for our poultry and livestock clients at below cost, while simultaneously protecting public health and our food supply. Unfortunately, as the result of continuing budget deficits in California, CAHFS' funding was once again reduced for the current fiscal year beginning July 1. Since 2009, our general fund support has been reduced by 9.2 percent, requiring us to eliminate 29 permanent positions and close our Fresno laboratory. Despite these ongoing budget challenges, CAHFS is committed to providing the highest quality diagnostic services for our clients. With the help of our Advisory Board, we are investigating new revenue streams, expanding our client base via outreach efforts and continuing to identify more cost efficiencies.

Our Advisory Board met on July 6, 2012 and in light of the decrease in state support and increases in operational costs, they approved a 10 percent fee increase for all tests, as well as an increase in the standard necropsy fee for food and fiber animals from \$100 to \$120.00; while maintaining the group discounts for poultry, aviaries and young (<3 month old) rabbits, ruminants and pigs. Other non-food animal necropsy fees which are charged at existing higher rates (equine, etc.) will increase 10 percent. **Please note that this is the first fee increase since July 2008 and will take effect September 1, 2012.**

We appreciate your continued support for CAHFS as we work closely with CDFA and our stakeholders to protect this important animal health infrastructure for California.

Small Ruminant

Abomasal parasitism, *Haemonchus* sometimes mixed with *Teladorsagia*, was the primary cause of **death** in sheep submitted from eight flocks throughout California in a 5-week period of June-July. Affected sheep ranged from 3 months to 5 years with a median age of 5 months. Clinical signs were most often **weakness, lethargy, weight loss** and **bottle jaw**. At postmortem, abomasal worms, thin watery blood and pale mucous membranes due to anemia and excess fluid in chest, abdomen and below the skin from low protein were common findings. Selenium deficiency was detected in seven flocks and copper deficiency was found in four. In the past few years, flocks with parasite problems have submitted multiple fresh feces from different age sheep before worming and again 10-14 days post-worming to check for parasite eggs in order to ensure the wormer is working. Sheep can become re-infected with *Haemonchus* and begin shedding eggs from new infections after 21 days post-worming.

***Coxiella* infection** caused the death of a 1-month-old Boer goat shortly after developing **diarrhea and neurological signs**. On post mortem examination colitis and coning of the cerebellum (suggesting inflammation and/or edema of the brain) were noted. Histologically, inflammation

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was observed in the colon, brain, lung and heart. Bacteria identified as *Coxiella* spp. (probably *C. burnetti*, the agent of Q fever) were identified in all of these tissues. Although Q fever is a common cause of abortion in goats, it is very rare to see infection in animals that survive the first few weeks of life. Immunosuppression was considered a possible predisposing factor for the disseminated infection in this goat.

Bovine

Acute fatal *Pseudomonas aeruginosa* mastitis caused the death of eight late gestation dairy cows that died suddenly approximately three days after a large group of cows were dried off. At dry off the cows were vaccinated and received dry cow mastitis treatment followed by a teat canal sealant. Three dead cows submitted for necropsy had severe necrotizing and suppurative mastitis with all four mammary glands were swollen and firm. Large numbers of *Pseudomonas aeruginosa* were isolated from the mammary glands of the three cows. Cultures of the parlor wash hoses and water tank were positive for *P. aeruginosa* while the dry cow treatment tubes were negative. *Pseudomonas* sp. is a common environmental contaminant that is extremely difficult to treat and often resides in water systems. Introduction via contaminated wash water during dry cow treatment is the presumed route for the intra-mammary infection.

Equine

Hundreds of *Parascaris equorum* (**ascarids**) in the stomach and proximal small intestine contributed to the death of a 3-month-old Thoroughbred foal that died from peritonitis secondary to a **stomach perforation** (rupture). This foal also had five foci of pneumonia, from which *Rhodococcus equi* was isolated; however, this was considered an incidental finding.

Pig

Whipworms (*Trichuris suis*) was the cause of **diarrhea** leading to death in a 3-month-old project pig, which had failed to respond to bismuth and antibiotic treatment. Necropsy revealed roughened colon and cecum but no visible worms. On histopathology, larval stages were seen migrating through the mucosa. Fecal testing was negative for eggs. Whipworms are the most common cause of diarrhea in project pigs. The eggs can survive for years in dirt and infections can lead to watery and bloody diarrhea and death before worms begin to shed eggs. The herd of 40 pigs had four sick pigs and one other death. Testing for *Brachyspira* (swine dysentery) and *C. difficile* toxins was negative but large number of *Clostridium difficile* were isolated, possibly secondary to antibiotic treatment. *C. difficile* may have acted synergistically with *T. suis* and contributed to the diarrhea.

Poultry

Severe coccidiosis due to *Eimeria necatrix* was diagnosed in two live, 4 to 6-week-old, backyard chickens. The birds were submitted with a history of increased mortality after one week of illness. The submitted birds were severely depressed, very pale and with pasty vents. At necropsy, birds exhibited flaccid and dilated **intestines with bloody contents** from the lower part of the duodenum to the cecal bifurcation. Coccidiosis was diagnosed by scrapings of the intestinal mucosa and histopathology.

Femoral head degeneration and necrosis was diagnosed in chickens from a flock where approximately 5 percent of the 20,000 birds in one house were noticed to be **down, unable to walk or stand** with increased mortality and decreased water consumption. Three of eight, 41-day-old birds submitted had severe, uni- or bilateral lesions in the proximal femur, ranging from erosion and loss of the articular cartilage to bone lysis. Histologically, most birds had severe bone degeneration and fibrosis. Femoral head degeneration and necrosis of broiler chickens has been associated with several different bacterial infections, including *Staphylococcus* sp., *Escherichia coli* and *Streptococcus* sp., although its mechanism is not completely understood. In this case, no bacteria were isolated from the bone and no bacteria were seen histologically, suggesting a non-bacterial cause.