

Bovine Special Edition

CAHFS

CONNECTION

September 2011

Inside this issue:

- **Pinkeye**
- **Hypomagnesmia (grass tetany)**
- **Nitrate toxicosis**
- ***Tritrichomonas foetus* testing**
- **Hypophosphatemia alert down cows**
- **Jejunal hematoma**

Pinkeye

Ocular swabs to diagnose **Pinkeye** caused by *Moraxella* subgenus *Moraxella bovis* and *Moraxella bovoculi* were submitted throughout the year. Peak isolation months were January, February and March in the past two years. Several dairies and calf ranches experiencing abnormally high morbidity rate with poor response to treatment had concurrent or sole infections with IBR virus. Optimal samples for *Moraxella* culture are Amies transport culturette swabs of the corneal ulcer or the conjunctival sac immediately above or below the center of the cornea submitted within 24 hours of collection. Swabs from the medial and lateral canthus of the eye should be avoided due to overgrowth of normal flora or *Moraxella* subgenus *Branhamella ovis*. If additional testing such as IBR virus PCR is requested at least two swabs should be submitted per eye (animal). CAHFS is now performing IBR PCR on ocular swabs at our Davis laboratory.

Hypomagnesmia (grass tetany)

A number of beef cattle ranches experienced multiple deaths due to **hypomagnesmia (grass tetany)** in lactating beef cows, most often 1-2 months postpartum and some up to 6 months. Cows were 3-10 years of age. Most deaths occurred between December 20, 2010 to February 15, 2011 during periods of heavy rain, fog and cold weather. Affected cows were on pasture or receiving supplemental hay which was found on one ranch to have very high potassium (4%, daily recommendation 0.6-0.8%) and normal magnesium and on another to have normal potassium but low magnesium (0.025%, recommended 0.2%). Since most animals were found dead, serum was rarely available for electrolyte testing and postmortem samples were normal. Aqueous humor and vitreous humor (eye) were usually below normal if the fluid was removed promptly from the eye and separated from cellular elements which can leak magnesium. Urine magnesium testing was found to be a valuable sample for confirmation in several dead cows. Clinical signs were rarely observed but included one or more of the following when seen: bellowing, lateral recumbency, paddling, nystagmus, head banging, opisthotonus, periodic prolapsing 3rd eyelid, sweating, salivation, ataxia, poor rumen motility and spasms. Two cows were found entangled in the fencing. Gross necropsy revealed non-specific hemorrhages in the tongue, endocardium, pleura, pulmonary artery, liver and subcutis.

Nitrate toxicosis

Approximately 15 beef cattle of varying ages were found dead on a 500-acre ranch. Cattle were fine 12 hours previously. Cattle had been on a field of wheat grass stubble the previous 3 weeks. Four animals and one fetus were necropsied in the field and at CAHFS and all had high levels of nitrates in the eyeball fluid compatible with **nitrate toxicosis**. Wheat stubble and water from the trough were tested. The stubble had a low nontoxic level of nitrate and the water trough had a toxic level of nitrate.

CAHFS Lab Locations

CAHFS - Davis

University of California
West Health Sciences Drive
Davis, CA 95616
Phone: 530-752-8700
Fax: 530-752-6253

cahfsdavis@cahfs.ucdavis.edu

CAHFS - San Bernardino

105 W. Central Avenue
San Bernardino, CA 92408
Phone: (909) 383-4287
Fax: (909) 884-5980

cahfsanbernardino@cahfs.ucdavis.edu

CAHFS - Tulare

18830 Road 112
Tulare, CA 93274
Phone: (559) 688-7543
Fax: (559) 686-4231

cahfstulare@cahfs.ucdavis.edu

CAHFS—Turlock

1550 Soderquist Road
Turlock, CA 95381
Phone: (209) 634-5837
Fax: (209) 667-4261

cahfsturlock@cahfs.ucdavis.edu

Your feedback is always welcome. To provide comments or to get additional information on any of the covered topics or services, please contact Sharon Hein at slhein@ucdavis.edu.

We're on the Web
www.cahfs.ucdavis.edu

Tritrichomonas foetus testing

Tritrichomonas foetus testing volume increases in the fall as producers are getting bulls ready for the breeding season. InPouch® TF collection pouches provide excellent media for recovery and identification of *T. foetus*; however, this media is also easily contaminated with bacteria, making Trichomonad detection by either culture or PCR impossible. To minimize risk of contamination, flush out the prepuce with sterile water or LRS prior to collection of the preputial scraping; prevent the pipette from contacting the outside of the sheath; and use sterile technique when inoculating the InPouch®. *T. foetus* doesn't survive for long outside the body, so time and temperature between collection and testing are critical to finding it if it's there. Submitters can use either the Trichomonas submission form located on the CAHFS website, or the standard CAHFS submission form as long as the information on test requested (culture or PCR) and prior incubation (done at the practitioner's office or needs to be done at CAHFS) is included on either form. We have adapted the test procedure to a high-throughput format that should help to expedite testing; however, samples are processed on a first-come-first-test basis so plan ahead to make sure your samples aren't at the end of the line. Please let us know if you will be submitting > 30 samples in a submission. For more information, click [here](#).



Hypophosphatemia alert down cows

CAHFS has worked with a few dairies that had numerous **hypophosphatemia alert down cows** that were not responding well to treatment. The initial blood samples taken before electrolyte treatment were refrigerated with the serum left on the blood clot (red blood cells), and sent to the lab 1-3 days after collection. Electrolyte values were normal on these samples. Later blood samples that were submitted within an hour of collection at which time the serum was removed from the clot, had significantly low phosphorous values. Changes in treatment to include more phosphorous resulted in improved response to treatment and changes in the diet to increase phosphorous resolved the problem. Both potassium and phosphorous increase in serum from hemolysis or delay in removing serum from contact with the blood clot, the post-collection increase can mask detection of deficiencies.

Jejunal hematoma

Jejunal hematoma leading to exsanguination was the cause of death in 6 lactating cows and one bull submitted from 7 different dairies in June and August. Clinical signs reported included one or more of the following: abdominal pain, bloated appearance, off feed, constipated, blood or blood clots in feces, acting drunk then go down, rapid drop in milk production or sudden death. Three dairies reported clusters of 2-3 affected cows every few weeks or 1-2 cases/week for 4 weeks or more. For more on this condition click [here](#).