

Dairy

Newsletter

October 2022



CVC CLINIC NEWS

Welcome to the October edition of the dairy newsletter. This issue will focus on toxicities which may affect your livestock when grazing pastures.

Leptospirosis

Are your cattle vaccinated with 7 in 1? If your answer is no, you and your workers could be at risk of contracting leptospirosis. Leptospirosis is a bacteria which can be transmitted from animals to humans in urine and bodily fluids. Infected cows don't always have clinical signs but infections in humans include fever, severe headache, sore muscles, chills and vomiting. If you are worried you and your workers might be at risk, vaccination with 7 in 1 is the best defence. Please contact our vet team for more information.



Camperdown

Veterinary Centre

Ph: (03) 5593 1077

Hours:

Monday to Friday 8:00am – 5:30pm

Saturday 8:30am – 12:00pm (Medication Only)

If you have medications to pick up, where possible, please try to call ahead so our nurses can organise vet clearance prior to your arrival. This will help reduce wait times and ensure you are getting the correct medication for the job at hand.

Pink Eye is Coming

Pinkeye is multifactorial and occurs as an interaction between bacteria, animal factors and the environment. It is important to consider all three areas implementing pinkeye control.

Susceptible animals can be vaccinated 3-6 weeks prior to the onset of pink eye season so now is the perfect time. Annual re-vaccination is recommended to maintain protection.

It is important to note that vaccination alone may not be enough to stop pink eye occurring in your herd. If you have had trouble in the past or are worried about its occurrence coming into summer, give our vets a call to discuss prevention options.

Nitrate/ Nitrite Toxicity

Nitrate accumulation in plants is a potential danger to all grazing animals. Nitrate accumulates in plants during periods of growth when they are high in nitrogen. **Nitrate** itself in high levels can cause diarrhea but the primary issue with grazing plants with high nitrate concentrations is the conversion that occurs in the rumen of Nitrate to **Nitrite**.

Nitrite interferes with the blood's ability to carry oxygen around the body resulting in severe respiratory distress and rapid death. Other clinical signs include: muddy mucus membranes (gums or conjunctiva around eye has a brown tinge colour), chocolate-brown coloured blood, recumbency, weakness, elevated respiratory rate, excessive salivation, diarrhea, convulsions and dribbling urine.

Predisposing Factors: Low light is a critical factor in the accumulation of nitrate in plants; dull overcast conditions are favourable for plant growth but not for photosynthesis, resulting in nitrate accumulation in plants. The use of inorganic nitrate fertilizers also poses a potential threat of nitrate poisoning in grazing cattle. Many weeds, crop and pasture plants have been reported as capable of causing nitrate and/or nitrite poisoning including capeweed, Brassica crops, variegated thistle and lush annual ryegrass.

Risk of nitrate poisoning can be reduced by feeding risky pasture in the afternoon, feeding for shorter periods, or "pre-feeding" with carbohydrate-rich feed or hay to prevent gorging. Nitrite poisoning requires urgent veterinary attention and animals will often need repeated treatments. If you suspect either nitrate or nitrite poisoning seek immediate veterinary advice and remove the animals from the suspect paddock. Feed them hay or other low-nitrate herbage so as to dilute the nitrate or nitrite in the stomach.



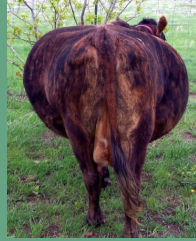
Ruminal Bloat/ Frothy Bloat

Frothy bloat can be caused by consumption of young, lush, rapidly growing pasture, especially those with high legume content (clover, medics or lucerne). During normal digestion, large amounts of gas are produced in the rumen which is then belched up or passed through the gastrointestinal tract. When grazing lush pastures, the gas can become trapped forming a foam which inhibits expulsion from the rumen resulting in bloat. Severe ruminal bloat places increased pressure on the lungs pushing the cow into respiratory distress.

Death can occur within hours of being placed on high risk pasture due to respiratory distress from abdominal distension.

When pasture is considered risky, bloat prevention should include:

- **Restriction of pasture intake** by limiting grazing time or implementing strip-grazing.
- **Fill animals on hay** before turning onto pasture.
- Spray the pasture daily with pasture oil.
- Add bloat preventatives or **products containing monensin** to the feed.



Ruminal bloat is often an emergency, therefore contact us immediately!

Urea Poisoning

Urea is a very useful fertilizer for crops and pasture however it can be dangerous to cattle if consumed in excess. Excessive urea intake results in increased concentration of ammonia in the blood, resulting in neurological disease due to brain damage. Signs of toxicity are usually seen within minutes starting with increased salivation and frothing at the mouth followed by increased aggression/agitation, staggering, collapse and death.



Mortality is often high with urea poisoning and treatment unsuccessful therefore prevention is key. Limit cattle's access to urea through proper storage and not grazing fertilized pastures until it has been absorbed by the soil. We recommend waiting at least 3 weeks after application before grazing pasture. Some longer lasting products may need up to 28 days rest.

Polioencephalomalacia (PEM)

Most cases of PEM are caused by thiamine deficiency. Thiamine is responsible for the conversion of carbohydrates into energy for the brain. Thiamine is produced in the rumen by bacteria when cattle are on well-balanced roughage diets. When thiamine levels are low, there is reduced energy availability to the brain, which leads to brain degeneration called polioencephalomalacia or (PEM). Outbreaks generally occur when there is a sudden change to feed composition. This usually occurs during spring and autumn but cases have been known to occur year round.

Causes of low thiamine include: inadequate roughage in diet and consumption of plants containing thiaminases (bracken fern) as these can break down thiamine before it is consumed by the body.

Clinical Signs Include: agitation, muscle twitching, high stepping gait, star-gazing, blindness, head pressing, seizures, paddling legs, followed by death.

Other causes of PEM include Sulphur poisoning. When sulphur is fed at concentrations higher than 0.4% of the ration PEM can develop. If you are considering adding sulphur products to your ration please consult a dietitian or our vets prior to feeding out.



Grass Tetany aka Hypomagnesemia

Magnesium is responsible for transmission of nerve impulses and muscle contraction within the body. Grass tetany (aka hypomagnesemia) occurs when the magnesium concentration in the blood stream becomes too low for these impulses to be transmitted.

Magnesium levels in the body are directly related to absorption in the gut from feed and utilization of magnesium within the body.

Hypomagnesemia primarily occurs when grazing lush, rapidly growing pastures as they have shorter transition times through the gastrointestinal track reducing time that magnesium can be absorbed from the feed.

High potassium and nitrogen levels in pasture can also reduce magnesium intake therefore grazing pastures which have been fertilized with nitrogen and/ or potassium are also high risk for development of grass tetany.

Many outbreaks are precipitated by an episode of reduced feed intake (eg. yarding, transport, inclement weather). Most cases of hypomagnesemia occur in cows between 4-6 years old and generally arises as a herd problem characterized by cows becoming extremely irritable, aggressive and showing signs of muscle twitching, incoordination, extreme reaction to nose/ movement and in some cases, sudden death.

Signs of grass tetany may include:

- Tetany (involuntary contractions of the muscles)
- Convulsions and paddling of the legs

Nutrition is key to preventing hypomagnesemia. Heavily pregnant cows as well as those during early lactation must have constant access to feed. Feed hay even if pasture appears adequate. Hay feeding promotes saliva production and slows gut transit time to allow nutrient absorption.

