# Beef + Sheep Newsletter

## Summer 2022

## CVC CLINIC NEWS

Welcome to the Summer Beef + Sheep Newsletter!

The very wet spring has thrown many production curve balls including lots of lameness, sick calves and lambs as well as a few trace mineral problems. Worms have been a huge problem this year so we encourage everyone to perform faecal egg counts if you are concerned.

We would like to thank all our Beef and Sheep clients for a wonderful 2022 and pass on our best wishes for a productive and safe 2023.

The clinic will be closed over the Christmas/New Year period with a vet available for emergency calls. Our opening hours are included on the next page. In other clinic news we would like to welcome Suzanne Cameron to the team. Suzanne is our new receptionist and we hope you can join us in making her feel welcome as she learns the ropes!


**Camperdown Veterinary Centre**

1 Leura St, Camperdown VIC 3260

**Ph: (03) 5593 1077**


**Opening hours:**

Monday—Friday 8:30am—5:30pm

Saturday 9:00– 12:00 PM
(Food and drug collections ONLY, on call vet available for emergencies)

Our 24 hour emergency/afterhours service is always available.


**Email: team@camperdownvet.com.au**


## Drench resistance trials

Drench resistance is becoming very common in sheep enterprises, and for some drenches the resistance is severe. Therefore, testing drench effectiveness is becoming a crucial part of an integrated worm control program. Drench resistance trials are designed to give sheep producers valuable information about what drenches are likely to work on a property and identify which drenches are no longer working effectively.

We recommend that sheep producers perform a drench resistance trial every 2-3 years or sooner if you have concerns about drench failure on your property. We are able to conduct drench resistance trials for all 9 drench actives and combinations currently on the market.

One of the main benefits of the drench resistance trial is the inclusion of larval cultures from the faecal samples provided. This allows us to identify what worms you have on your farm and identify if Barbers pole worm is a problem.

We recommend performing the drench resistance trial on stock between 6- 12months old, ideally stock should be the same age and breed. To get the most statistically beneficial results from the trial sheep need to have FEC results above 500 epg for barbers pole worm and 200 epg for brown stomach worm and black scour worm.

Following the trial producers will receive a report for an integrated worm and grazing management plan best suited to your enterprise and individual stock classes.

If you are interested in running a drench resistance trial on your property, please call the clinic for an estimate.

A **drench check** can be used to check how effective a particular drench is between drench trials. These checks are also useful for small flocks and determining whether resistance is present however they are not as accurate as a full drench resistance trial. A **drench-check** compares two FECs, one performed 10 days before drenching with a short-acting drench and the second done exactly 14-days after drenching. If you think a **drench check** is required on you farm, please contact one of our vets to discuss.

CAMPERDOWN
VETERINARY CENTRE

# Merry Christmas and a Happy New year from the CVC Team!

**The clinic will be closed over the Christmas and New Year period while our staff take a short break to regroup before 2023.**

**We will have a vet avaliable for any emergency visits required during this time.**

**If you are planning any stock work during this period that requires medication (such as ram sedation etc.) please get in touch now to order before we close.**

**Special orders will need to be placed by the Friday the 9th of December to ensure they arrive in time for Christmas.**

**Please note our opening hours for the holiday period below:**

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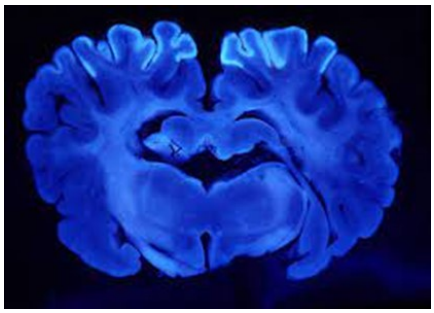
| Saturday December 24th 2022 | Christmas Eve | 8:30am — 12pm |
| Sunday December 25th 2022 | Christmas Day | CLOSED— Emergency only |
| Monday December 26th 2022 | Boxing Day | CLOSED— Emergency only |
| Tuesday December 27th 2022 | Christmas Day Public Holiday | CLOSED— Emergency only |
| Wednesday December 28th 2022 | Boxing Day Public Holiday | CLOSED— Emergency only |
| Thursday December 29th 2022 | | CLOSED— Emergency only |
| Friday December 30th 2022 | | CLOSED— Emergency only |
| Saturday December 31st 2022 | New Years Eve | CLOSED— Emergency only |
| Sunday January 1st 2023 | New Years Day | CLOSED— Emergency only |
| Monday January 2nd 2023 | New Years Day Public Holiday | CLOSED— Emergency only |
| Tuesday January 3rd 2023 | Normal hours | 8:30am—5:30pm |

## Polio in sheep and cattle

"Polio" or polioencephalomalacia (PEM) is a neurological condition of sheep and cattle associated with a deficiency in Vitamin B1 or Thiamine. Thiamine or Vitamin B1, is normally produced by bacteria in the rumen of cattle and sheep on well-balanced roughage diets. Thiamine deficiency reduces energy availability to the brain, which leads to a type of brain degeneration called polioencephalomalacia. PEM is very different from the poliomyelitis in humans caused by a viral infection.

Excessive production of thiaminases (proteins which break down thiamine) in the rumen is by far the most common cause of PEM. This can occur from certain pastures or from changes in rumen microflora such as in cases of ruminal acidosis. Most outbreaks of PEM in sheep and cattle are sporadic and affect only a couple of animals in a mob, but death rates of up to 10% have been reported. All ages and classes of stock can be affected, although we commonly see it in fast growing young animals on excellent quality pastures.

Signs of PEM include agitation and anxiety, muscle twitching, blindness, high stepping gait, recumbency and seizures. Severely affected animals may draw their head back so that it touches their spine or appear to be "star gazing". Affected cattle may show signs for days before eventually dying due to dehydration and starvation.



To diagnose PEM we can submit samples of an animals brain to the laboratory for histopathological examination. If animals meet the correct criteria, their brains may be submitted as part of the TSE program outlined below. The brains of animals with polioencephalomalacia have a characteristic appearance of the cerebral cortex under fluorescent light.

The success of treatment in animals with PEM depends on when treatment is initiated. If treated early, animals can have a rapid response within hours, while others may take up to 48 hours and have ongoing neurological problems such as blindness. The treatment of PEM involves supplementing with Thiamine.

### *Transmissible Spongiform Encephalopathy Surveillance Program*

Victoria participates in the national Transmissible Spongiform Encephalopathy Freedom Assurance Program (TSEFAP). The TSEFAP aims to enhance market confidence that Australian animals and animal products are free from Transmissible Spongiform Encephalopathies (TSEs), such as Bovine Spongiform Encephalopathy (BSE or 'mad cow disease') and "scrapie" in sheep. The TSEFAP is funded by industry and governments and managed by Animal Health Australia.

Australia is currently free from BSE and scrapie. However, to continue to be classified as 'free' and to maintain access to international markets, there is an active surveillance program in place to detect cases of BSE and scrapie, should they occur. This program is known as the TSE Surveillance program.

An incentive scheme is funded by industry. Producers who have suitably sick animals autopsied for the program are entitled to claim:

- $300 GST free for cattle
- $100 GST free for sheep

Laboratory examination of the brain for transmissible spongiform encephalopathies (TSEs) requires its removal from the skull (cranium), whole and intact, and without damage to the brainstem therefore your veterinarian should be consulted to perform a post mortem and collect appropriate samples.

To be eligible for the program, cattle must be 30 months or older and sheep and goats must be 18 months or older. They must show nervous signs that can include:

- abnormal behaviour
- gait and sensitivity to sound and touch
- and for sheep/goats, persistent itchiness

If you think you your animals are exhibiting abnormal behavior, please call the clinic as you may be eligible for inclusion in the TSE surveillance scheme.

# GRAZING STUBBLE CROPS

Stubble crops can provide a valuable source of nutrition for sheep and cattle during the warmer months. Grazing these crops also has the added benefit of reducing stubble loads. While stubble crops can be a very useful resource when feed is otherwise limited it is important to understand that the nutritional value of the feed avaliable varies greatly and supplements are after required to meet the animals dietary requirements.

The feed value of stubble crops can be measured with a feed test. This can provide crucial details such as energy and protein content. The nutrient value of stubble will vary depending on the amount of residual gran present and the green plant biomass avaliable. Stock may require supplementing with grain or pellets if the feed value is poor. As a general rule stock should be removed from crops after 6 weeks or once the grain and green shoots fall below 40kg per hectare dry matter.

Potential health conditions seen in cattle and sheep grazing stubble crops:

***Grain poisoning***

Animals grazing stubble crops are at a high risk for grain poisoning (acidosis) from gorging stubbles with high grain content. The sudden introduction of large amounts of high carbohydrate grain, upsets rumen function resulting in over production of acid by the rumen microbes. Signs of acidosis in sheep and cattle may include sudden loss of appetite, recumbency, bloating and scouring. In some cases sudden death of a large number of animals may occur. Animals affected by acidosis are often the biggest animals in a herd/flock as they tend to eat the most grain. Sheep and cattle should only be introduced onto a stubble crop with full stomachs or gradually introduced by grazing for small amounts of time on confined areas.

***Thiamine deficiency/polioencephalomalacia***

Not only do stubbles often have low levels of thiamine present, but they also promote the growth of thiaminase producing bacteria in the rumen resulting in thiamine deficiency. More information on thiamine deficiency and polioencephalomalacia is included later in the newsletter.

***Water belly (urinary calculi)***

The low moisture content of stubbles combined with mineral imbalances in the feed content make stubble grazing a high risk for development of bladder stones. “Water belly” can occur if the urethra becomes completely or partially blocked by a stone, in some cases the blockage can lead to rupture of the bladder and ultimately death. Wethers and steers are more susceptible to blockages due to having narrow urethras. Animals with urinary calculi may be reluctant to move, be straining to urinate and have swelling in front of their prepuce. Urinary calculi can be prevented by feeding salt to encourage animals to drink more and addressing the mineral imbalances in the diet in particular the calcium and phosphorus content.

***Nitrate or nitrite poisoning***

Some crop stubbles will have a high nitrate content, this can cause irritation of the gastrointestinal tract resulting in cramping and diarrhoea. Nitrite is a by product of nitrate metabolism by the rumen microbes and in some instances, nitrite builds up to such high levels it can cause serious toxicity. Nitrite toxicity affects haemaglobin in the blood and its ability to carry oxygen to the body’s tissues. In most cases animals with nitrite toxicity are found dead.

***Worms***

Weaned lambs are particularly susceptible to worms. A high worm burden also makes sheep more susceptible to other conditions. We recommend performing a faecal egg count (FEC) prior to placing sheep onto a stubble crop incase they require drenching first. If you would like to get a FEC done at the clinic, please contact us for information on sample collection.

# TRACE MINERAL DEFICIENCIES in BEEF + SHEEP

Trace mineral are those required in small amounts by the body but are essential for every day function of an animal. Copper, selenium, cobalt and iodine are the main trace minerals required by livestock. Deficiencies sin trace minerals tend to occur when the quantity of mineral in the feed avaliable to the animals is inadequate to meet their needs or it cannot be adequately absorbed by the animal.

Young fast growing stock such as lambs and calves often have the highest trace mineral requirements of any other stock class. Therefore, deficiencies develop more rapidly if there are inadequacies in their diet.

Copper and selenium deficiencies are the two most common trace mineral deficiencies we see in this region.

## *Copper*

Copper is an important trace mineral required by the body for functions such as weight gain, bone and wool growth, pigmentation, nerve development and white blood cell function.

As a rule, if the soil provides enough copper for wheat, pasture grown on the same area will have sufficient copper for sheep and cattle, unless molybdenum levels in the soil are very high limiting adequate uptake.

In cattle and sheep there are two main causes of copper deficiencies:

- Low copper levels in plants due to lack of copper fertilisation in copper-deficient soils, or
- Induced deficiencies caused by ingestion of excessive levels of molybdenum and sulphur in pasture or feed supplements

Copper deficiency presents most commonly as enzootic ataxia (or 'swayback'), a condition causing paralysis of the hind limbs of newborn or very young lambs. Other signs include steely wool, anaemia, and reproductive loss in older sheep. Some lambs may also present with limb fractures due to brittle bones; this appears to be a common presentation when weaned lambs with trace mineral deficiencies are mustered and become acutely lame or paralysed.

Signs of copper deficiency in cattle may include ill thrift (failure to thrive/gain weight), scouring, infertility and a harsh light coloured coat.

It is more common to see copper toxicity in sheep. It is important to note that cattle have a much higher copper requirement than sheep therefore feeding a ration designed for cattle to sheep can be very dangerous.

If you are concerned about copper in your sheep or cattle, we highly recommend giving us a call. Supplementing without knowing what the actual copper levels in your animals are can be very dangerous.

## *Selenium*

Selenium is an essential trace mineral due to its roles in preventing and repairing cell damage, immune function as well as growth and fertility.

Selenium is found in the soil and taken up by plants. Sheep obtain their selenium from consuming these plants. Selenium is only stored in the body for a relatively short time period therefore continuous intake is required to prevent a deficiency developing. Selenium deficiencies are more common in high rain fall areas due to selenium deficient soils.

In lambs, selenium deficiency is associated with "white muscle" disease which causes white lesions on skeletal and heart muscles, resulting in lameness or sudden death. Ill-thrift, poor wool growth and infertility are also signs of selenium deficiency in sheep.

In calves selenium deficiencies cause a similar condition to white muscle disease, called nutritional muscular dystrophy (NMD). NMD can present as weak calves with abnormal stiff gaits or in some cases sudden death.

These days a lot of vaccines and drenches contain selenium, therefore, always be careful administering excessive amounts of selenium to young stock to avoid toxicity and even death. Selenium levels can be determined via blood tests or liver biopsies. If you are concerned about selenium deficiencies in your stock, please call the clinic to discuss an investigation with one of our livestock vets.