

What's Up Doc?

- Beth Martin

We had some welcome rain towards the end of January after a few weeks of heat. February and March are predicted to be dry, so hopefully the downpour will be enough to green everything up.

The maize around the region is looking fantastic, with yields set to be good.

While we have yet to see spore counts rising, the weather patterns we've been having suggest facial eczema is going to be much more prominent than last season. Cows need to be on full dose rates coming into the highest risk period and, once those counts rise, don't hesitate to put boluses into

youngstock. We are more than happy to send a team out to assist you with this. Jackie's article gives a great refresher on facial eczema.



As well as zinc boluses, continue to monitor youngstock growth patterns. The majority of farmers have great drench programmes in place, so parasites haven't been as much of an issue as last season. Calves will now be big enough for pour-on drenches - these need to be continued every 6 weeks.

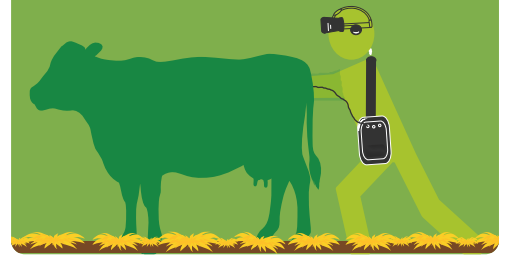
We've seen some cases of coccidiosis and Yersinia, which often present as ill thrift with scouring. Now we are in the middle of summer, also keep an eye out for thiamine deficiency (check out the article below with more detail on this condition).

Empty rates have been variable. We've had quite a few farms improve on last season, with some getting less than 10%! There is still much more scanning to come in the next month and we will provide an in-depth analysis in next month's newsletter.



What's happening on-farm?

- ✔ Pregnancy testing
- ✔ Zinc treatments
- ✔ Monitor spore counts
- ✔ Bulk milk BVD testing
- ✔ Body condition scoring pre-dry off



Thiamine (B1) deficiency

- Beth Martin

Every summer we see a few cases of thiamine (vitamin B1) deficiency in weaned calves.

Thiamine is made by the bacteria in the rumen. If the bacterial balance is disturbed and there is a decrease in

the bacteria that make thiamine and an increase in the bacteria that break down thiamine ('thiaminases'), then there can be a deficiency.

Bacterial balance can be disturbed by diet change, plant sources and grazing

on soil with high sulphur levels (sulphur inhibits the production of thiamine).

Deficiency is often seen when calves are moved from stalky to lush, green pasture.

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A high worm burden can also lead to deficiency, as they impair nutrient absorption, and levamisole toxicity can also lead to delayed thiamine deficiency.

Thiamine plays a role in carbohydrate metabolism and energy supply. It is not to be confused with Vitamin B12, which is crucial for growth, production and appetite stimulation.

Symptoms

Symptoms are usually neurological, such as:

- tremors or seizures,
- depression,
- wandering,
- wobbliness.

Mild cases can be seen as reduced appetite and separation from the mob. Calves may become blind, or recumbent and have an outstretched neck ('star gazing') posture.

Diagnosis is based on clinical signs, or on post-mortem, which will show the brain glowing under UV light due to the damage.

Treatment and outlook

If treated early, most animals can make a full recovery. Treatment involves supplementing thiamine as well as supportive care and preventing permanent brain damage.

Prevention includes avoiding sudden diet change (move stock on to high quality feed slowly and provide lots of fibre) and accurate drench doses. Some farms require preventative drenches if they see outbreaks each season.



Facial eczema

- Jackie Davies

Despite its name, facial eczema is primarily a liver disease, caused by cows eating lots of spores from the fungus *Pithomyces chartarum*, which grows in dead matter in pasture, in the right environmental conditions, in the summer.

Here in the Waikato, the facial eczema season can be from January to late April. Fungal growth can happen when temperatures rise above 12°C, but

spore production is highest when the temperature is between 20-24°C. It occurs rapidly, 2-4 days after rain.

The spores **require dead matter in the pasture**, so paddocks with more mature flowering grasses and topped grass paddocks will be most at risk. Grazing lower residuals will increase the amount of dead matter the cattle will be consuming.

Symptoms

Symptoms of facial eczema in cattle can range from

- Mild sunburn on teats,
- White haired skin peeling,
- Blood in the urine,
- A drop in milk production,
- Sudden death of the cattle, either in the acute phase or when they undergo periods of stress (such as calving).

Clinical signs are generally seen 1-2 weeks after the liver damage has occurred and we can only provide symptomatic care via shade, skin protection and liver support at this time. Liver damage can be measured with a blood test for the liver enzyme GGT.

One cow with clinical signs will usually equal 50-100 cows with unseen liver damage!

Liver damage can be very severe and, while sometimes the liver regrows, it is unlikely that the cow will ever completely recover and may relapse in the future.

Reducing the risk

- **Offer other sources of feed**, such as meal, silage and other crops (e.g. chicory) over the summer to reduce the number of spores ingested from traditional pasture.
- **Fungicides can be used on the pasture**, but it needs to be applied before spore counts rise, not when it rains. It also needs to be combined with spore counting, as, if spore counts rise, further spraying is ineffective for reducing them and the cows are unprotected against any outbreaks.
- **Breeding for resistance.** In the 30 years the sheep industry has been breeding for resistance, it now needs to use 7x the dose of the toxin *sporedesmin* to cause liver damage. Bull testing is 20 years behind, but making progress. Breeding with selected bulls for facial eczema resistance helps cows develop less liver damage, with associated milk

drop and clinical disease, than cows not being bred for it.

- **Doing weekly pasture spore counts** over summer can help you to monitor when spore counts start rising, when preventative treatment is needed and what is happening in the pasture.

Zinc supplementation

Zinc is also commonly used for facial eczema prevention. However, supplementing with zinc may not always be an option, as zinc levels are increasing in the soil and high zinc levels are not good for microbial growth or plant growth.

Many farms use in-water zinc, but research has shown that it may not be effective. **Approximately 60% of cows do not have adequate blood zinc levels for facial eczema control with in-water zinc.**

This ties in with results from blood tests for liver damage in dairy cows (done in a year with lower spore counts and no clinical cases seen) showing that 33% of farms have increased enzymes and liver damage (with associated production loss).

Delivering zinc directly to the cattle either in-feed, with zinc boluses, or through oral drenching, can ensure the dose is effective.

When to use zinc

Zinc supplementation needs to be started a few days before high spore counts. A mixture of weekly spore testing your paddocks and watching the

rain forecast may help with predicting when to start this, as well as keeping your pasture quality high going into the summer; not topping and not grazing too low.

Zinc toxicity in cattle is likely to occur when zinc is used for more than 12 weeks. Nowadays, the facial eczema season can be 14 weeks and toxicity may be more common, particularly in calves. Monitoring spore counts can ensure that treatment doesn't start too early or too late.



Blood testing cows for zinc levels can also be useful, both early and late in the season, to ensure your supplementation method is providing effective levels for preventing facial eczema and that it has not reached toxic levels.

Using a combined approach, with breeding for facial eczema tolerance, pasture management, alternative feeds, spore counting and effective zinc supplementation with monitoring, can lead to more effective reduction in facial eczema risk, with associated reduced liver and clinical disease, improved milk production and bottom line!



Dry cow therapy regulations reminder

- Jackie Davies



As the dry cow consult season approaches, it is important to remember what the regulations are as they have changed over the last few years.

Understanding what data you need to bring (and why) makes the consults a lot more productive and informative for you and your vet.

Why have rules changed?

Antibiotics are not only used in our animals, but also for us and our families. Antimicrobial resistance is when bacteria which cause disease are no longer killed by antibiotics. Resistance is on the rise and, globally, infections by "superbugs" are likely to match cancer as a leading cause of fatalities by 2050!

While we may think animals are unlikely to cause this, bacteria have been shown to pass information, such as genetic resistance, across species. Any unjustified use of antibiotics - such as putting them in uninfected quarters at dry cow time, is increasing

the exposure of bacteria to antibiotics which they can develop resistance to.

As an interesting side note, it is not only antibiotics that bacteria can develop resistance/tolerance to. It can also include anything they are exposed to in the environment, such as copper and zinc.

What are the new recommendations?

It is recommended that all cows have some form of protection against mastitis at dry off, however, only cows likely to have an infection should be given dry cow antibiotics (and teat seal), with the rest to be given teat sealant only.

How can you tell if a cow is infected?

Like many things, we need data to back up our recommendations and give sound advice. Useful data includes:

- Herd test results- individual Somatic Cell Counts, especially repeated over the season, are the best,
- Clinical mastitis records,
- Rapid Mastitis Testing.

The role of the vet

In your mastitis and dry cow consult, discuss with your KeyVet what the best approach is for your herd. Bringing the following records will help facilitate this discussion:

- Herd test results,
- Bulk tank averages over the season,
- Clinical mastitis treatment record,
- Any other relevant information, such as RMT testing results and cow ages, etc.

Anything else?

We are always here with a friendly, trained team who can help apply dry cow or teat sealant, in a hygienic and low-stress manner.

We are going paperless!

As part of our Here for Good purpose, we have been looking at ways to reduce our environmental footprint. From the 1st of April 2024, we will be going paperless, which means all

monthly statements and newsletters will be sent via email only. If you would still like to receive paper copies, please let us know at office@vetcm.co.nz, or on 07 889 6738.

Our clinic

62 Moorhouse Street,
Morrinsville
3300

Phone : 07 889 6738
Email: office@vetcm.co.nz
www.vetclinicmorrinsville.co.nz

