



The magazine of Cambridge Vets *treating all animals large and small*

Summer 2022

## Merry Christmas from Cambridge Vets

### Clinic Opening Hours for Christmas and New Year 22/23

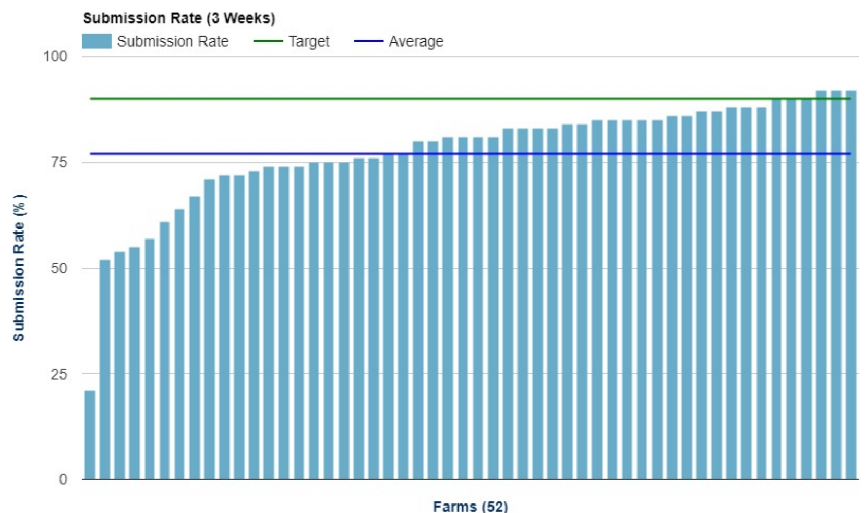
Friday 23rd December	8am - 5pm
Saturday 24th December	Christmas Eve - CLOSED
Sunday 25th December	Christmas Day - CLOSED
Monday 26th December	Boxing Day - CLOSED
Tuesday 27th December	Christmas Day Observed - CLOSED
Wednesday 28th December	8am - 5pm
Thursday 29th December	8am - 5pm
Friday 30th December	8am - 5pm
Saturday 31st December	New Years Eve - CLOSED
Sunday 1st January	New Years Day - CLOSED
Monday 2nd January	New Years Day Observed - CLOSED
Tuesday 3rd January	New Years Holiday Observed - CLOSED
Wednesday 4th January	8am - 5pm



## Repro Benchmarking

The Submission Rate (3 weeks) for our farms is down at 77% average this year, compared to 80% last year, and well below the industry target of 90%. This is not a surprise as spring felt like a struggle in terms of feed and cycling. It is suspected this will translate into a lower 6 week in-calf rate, but an analysis will be done once we have finished our early scans.

 benchmark.



# MALIGNANT CATARRHAL FEVER

Malignant Catarrhal Fever is a deadly disease of cattle and deer.

It is caused by the transmission of ovine herpesvirus-2 from sheep to cattle, deer or water buffalo. Sheep commonly have the virus, and adolescents (6-9 months) in particular can secrete a lot of the virus in nasal secretions. It is passed on by aerosol (sneezing) or direct contact from sheep to cattle, but once it reaches the end-stage host it is not infectious. This means we do not generally see outbreaks in cattle or deer, just isolated individual cases. Most affected animals present very suddenly with multiple systems affected. The most well known is the "Head and Eye" form, with blueing of the cornea in the eyes and Lesions of the eyes and nose and mouth. There may be lesions in the guts or respiratory system or urinary tracts. Lymph nodes may be swollen, and the animal may have a fever, bloody diarrhea, neurological signs or skin lesions. Cattle die quite quickly, but deer often present as sudden death with or without bloody scours. It is diagnosed based on these signs, or a PCR test on blood if alive, or if dead, then histology on sampled tissues, especially the brain.



# Staph aureus Infection in Dry Cows

Dr. P. Briston

There was a very detailed and fascinating (the bits I understood) article by McDougall et al in December's DCV newsletter looking at Staph aureus mastitis in cows dried off with internal teat sealants. Most dry period mastitis cases are caused by Strep uberis, but some culture Staph aureus. So the question with ITS is – was the infection already there in the udder, or was it a teat end / skin bug introduced with the syringe at dry off, or was it a human bacterium introduced at dry off?

The sequence study did genetic analysis of 8 cows and 4 bulk milk samples from both south and north islands, and looked at types and resistance genes.

Over 80% of the isolates were ST1 which is a bovine-associated staphylococcus. It seems unlikely that any human bugs have been introduced to cause the problem!

20-30 % of isolates had MIC > ECOFF for both penicillin and ampicillin i.e they showed the expected resistance to this class of antibiotics.

The authors concluded that a very small percentage of "low SCC" cows will already have Staph aureus infections which may result in dry period mastitis after ITS. This conversion to clinical mastitis probably has more to do with cow factors than anything else, so attention should be paid to good lactating and dry transition management.

However, it is most important to focus on staff training for hygiene and technique at dry period syringe insertion to avoid introducing a new infection.

# E. coli Mastitis

E.coli mastitis can be a serious health condition which may require prompt and aggressive treatment to save a cows life. So what is it about E.coli mastitis that causes cows to become so sick and also what can we do to treat cows so they have a speedy and full recovery?

E.coli is a bacteria naturally shed in cow faeces and yet, despite the amount of #2 that our cows come into contact with, it surprisingly only causes 10-20% of mastitis cases nationwide. Most of these cases will not cause cows to become sick and may naturally self-cure given time. It is not surprising that most cases are mild, as our cows have been exposed to E.coli all their life and have phenomenal natural immunity. It is only in periods of high teat contamination or when cows' immunity is suppressed that E.coli infections become a concern and the main cause of the sickness is actually a toxin released by the bacteria as the immune system kills it.

The differences between a mild and a severe case can also be explained by the presence of multiple strains of E.coli being present on every farm and that each strain will react with every cow in a different way. It can help to consider covid infection in people as an example of how a number of different strains (Delta, Omnicron etc) of the same disease, can result in different clinical signs in each person. Be it no detectable signs with one variant, all the way through to requiring hospital treatment with another. I liken treating E.coli to treating a poisonous snake bite, there's no point only killing the snake if it's already bitten the patient and likewise there is no point treating the toxin alone if there are still snakes around to bite again.

Therefore treatment focuses on two things:

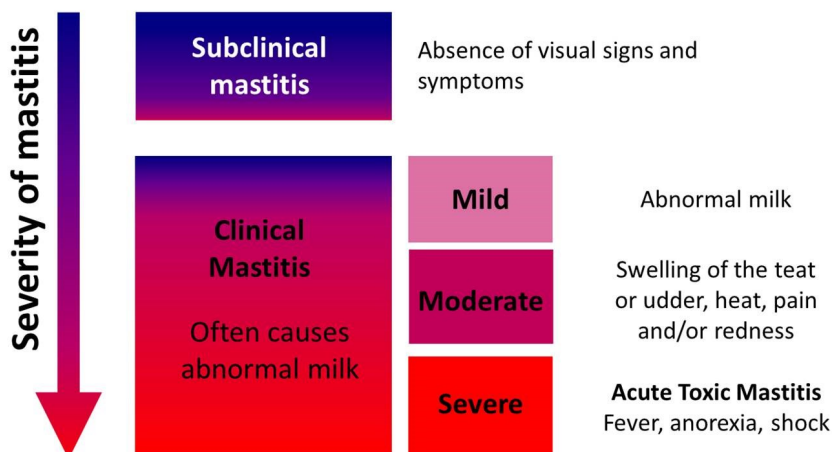
1. Neutralise the toxin and support natural immunity
2. Is the bug still around, or is the cow coping killing it herself.

The most urgent concern is neutralizing and removing the toxin. This can be done by giving anti-inflammatory (talk to your vet) and milking the cow out as thoroughly as possible. Then we need to give our cow some TLC (fluids, electrolytes, minimise walking, plenty of feed and a cow cover if cold) before asking ourselves, is the bug still alive and do we need to treat it or is the cow already killing it herself, this question is best answered as a case by case basis with your Vet.

Dr. P. Taylor

# Mastitis Infections

Image sourced from farmhealthonline.com



E.coli mastitis can be a serious health condition which may require prompt and aggressive treatment to save a cows life. Phone the clinics 24/7 phone number (07)8277099 for advice or if you need to book a vet visit.

# FACIAL ECZEMA

Every year we see cases of FE, where the animal is losing weight or is showing skin signs.

*Pithomyces chartarum* is a fungus in the pasture whose toxin sporidesmin poisons the biliary tract of the liver in deer, cattle, alpaca and sheep. This may be obvious and seen as red peeling skin and photosensitivity as the chlorophyll cannot be processed, or it may just be vague sick weight loss signs. You can also get redwater as the red blood cells break down. Unfortunately there is no great treatment.

- Provide shade
- Manderson's Mixture
- Vitamins
- Zinc cream

So prevention is the best option.



Interestingly chicory, plantain, legumes and tall fescue are less prone to *Pithomyces*, but zinc is the mainstay of prevention.

We generally see spores rising in February to peak in March and continuing past April.

Drop off grass samples at the clinic and we can do a spore count to see the risk profile on your farm. We publish these on our Facebook and website, so keep an eye on these for your area trend.

If you are using zinc in the water to protect against Facial Eczema, you may need to start at half rates in the new year. We find adding flavouring helps mask the bitter taste, either aniseed or apple.

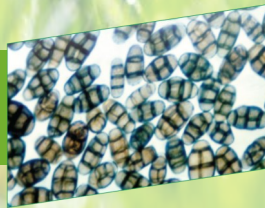
Zinc levels need to be in the Goldilocks zone – high enough to protect the liver from the oxidative damage caused by sporidesmin, but not so high as to cause poisoning which damages the pancreas and causes the animal to look sick, potentially with redwater, and fade away.

Check your dose rates carefully—check out our website: <https://www.cambridgevets.co.nz/farm-animal-services> and call us to take some blood samples to confirm zinc levels are right in the animal.

Options for zinc administration are:

- Zinc oxide in the feed or drench
- Zinc sulphate in the water
- Zinc bolus e.g. Time Capsule, FaceGuard (cattle, sheep) – these last 4-6 weeks depending on brand, so mark on your calendar when the next one is due!

An alternative is spraying paddocks with fungicide (e.g. Mycotak), but this needs to be done before the spore count rises.



## ZINC CHECK AND LIVER CHECK

This is a good point to also talk about measuring zinc levels and markers for liver damage.

A large proportion of herds do not receive enough zinc to offer protection against FE, but conversely, an excessive dose of zinc can cause a toxicity with symptoms quite similar to FE.

The simple answer is to monitor spore count, zinc levels and GGT to assess FE risk and efficacy of zinc prophylaxis.

Bringing in grass samples will allow us to give you a spore count specific to your farm. We publish these weekly, so you can monitor local levels too. <https://www.cambridgevets.co.nz/farm-animal-services/spore-counts/>

Zinc levels and liver damage can be monitored by taking blood samples from 10 animals.

There is now also an option of doing these tests on Bulk Milk.

Zinc Check was seen last year, and Fonterra will be running it again this year. It assesses the probability that >70% of the herd have protective levels of zinc. Over 80% of farms were "red" at risk last year, so blood tests are useful to assess it further. The first test is free, subsequent checks are \$99.

Liver Check – LIC has identified a biomarker in the milk which apparently correlates with GGT levels in the blood, an indicator of liver damage. An important point to note is that not all liver damage is caused by FE, and any signs should be checked with a vet. For example, anaemia can be caused by *Pithomyces*, *Theileria*, Onion toxicity, zinc or copper toxicity, leptospirosis.....

The scheme run with Fonterra tests BMT milk weekly over 10 weeks, and in conjunction with zinc monitoring, could be a useful warning of FE not being managed adequately.

Ultimately, we should probably be looking for alternative strategies to ameliorate FE other than using a heavy metal (zinc), including:

- Low-risk pastures e.g. chicory
- Supplementary feeding
- Pasture spraying with fungicide
- FE - resistant breeding

# Reminders:



## SCANNING

Don't forget to book your scanning in ahead of time! We like to scan herds 6 weeks after the bulls exit to identify empties and lates accurately.



## LEPTO

A Massey University study showed the importance of vaccinating calves early against Lepto as it significantly reduced the % of animals harboring and shedding the bacteria. Please ring us if you still need to get yours done.



## SHEEP

Tupping time is fast approaching! By now you should have ordered in Campyvax and Toxovax. Toxovax only needs to be given once (to ewe lambs) 4-8 weeks before mating, but Campyvax is an annual booster, and ewe lambs need 2 shots a month apart. In addition, find time to condition score the ewes and rams. Teasers need to be vasectomized a month before mating starts, so give us a call if that still needs doing.



**Cambridge Vets would like to thank all of our clients for your continued support throughout the year and hope you have a safe and enjoyable Christmas and New Year period!**

VET ONLY

## FACIAL ECZEMA DEFENCE



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