

## NITRATE POISONING

### New grass, crops, nitrate poisoning and sudden death.

It's that time of the year again and we have already had a few cases reported.

#### Signs of Nitrate Poisoning:

Cattle generally show signs of poisoning 4 to 8 hours after grazing toxic pasture/crops as the nitrate needs to be metabolised into its toxic form (nitrite) in the rumen before toxicity occurs. We usually get calls to see affected stock around lunchtime, cattle having been put onto toxic pasture that morning. It often occurs on a dull overcast day where the plant is unable to photosynthesize leading to a buildup of nitrates. We also see cases after a heavy frost in cows put on new pasture.

Affected animals are drunken, weak and staggy and deteriorate rapidly, leading to death. They may gasp for breath and have very dirty blue coloured gums and conjunctiva. If you take a blood sample, it is distinctly chocolate coloured instead of the normal dark red. However, most animals are found dead and by then the blood has returned to normal colour for a dead animal.

Animals that have apparently recovered may abort - usually within a week after exposure to high nitrate feeds.

#### Reducing the risk

Management factors that can help reduce deaths due to nitrate poisoning include:

- Testing new pasture and suspect crops prior to the first grazing. Take a pasture sample in the morning and deliver it to us prior to 10am. We should be able to report the result to you within 24 hours
- Introducing cattle to suspect crops in the late morning or early afternoon. Pastures accumulate nitrate during the night and in dull weather. Sunlight reduces the accumulated nitrate.
- Making sure cattle are not hungry when you put them onto suspect pasture. Provide supplementary dry matter (hay, silage, etc.) before cattle go onto the break.
- Reducing the time period cattle are grazed on suspect pasture. Allow cattle no more than 1 to 2 hours grazing on the suspect feed.
- Check cattle regularly for signs of poisoning. The toxic metabolite peaks in the blood about five hours after ingestion of nitrate.
- Nitrate poisoning is often not so much due to the actual quantity eaten as to the rate at which it is consumed. It's possible that a hungry cow can ingest a lethal dose in 1 hour. Fill cows up on "safe" feed before allowing short periods of grazing the high nitrate feed.

Contact us immediately if any signs are noticed. Cows die rapidly from nitrate poisoning and require intravenous treatment with an antidote A.S.A.P.



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## JUNE 2021

Welcome to the new season and welcome to all new-comers to the area. If we haven't already made contact please pop in and say hello and we'll get you set up for spring while you're here. Speaking of getting set up, our **RVM consults** have got a bit behind. When I say a bit, I mean quite a lot actually. We're only about halfway through so if we haven't yet been in touch with you about your RVM requirements for the 2021/22 season, it might be in your best interests to get in touch with us so we can get you sorted out.

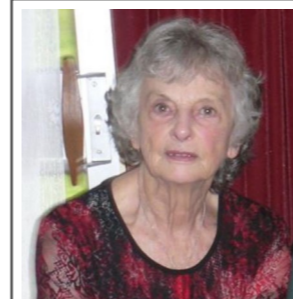
I was watching the news the other night and looking at the devastation in the South Island after the flooding thinking "crickey, what are they going to do with spring just around the corner?" Well it wasn't the word crickey, but you get the picture. One farmer summed it up when he talked about having to move cattle all around the country, drain and clean paddocks, sheds & houses, write off all the supplementary feed he had planted and essentially look to get his cows milked elsewhere this season. In his words "there's nothing much else I can do; this season is f####ed". Poor bugger. We may get lots of rain in Taranaki, but we very rarely get anything like that (I'm crossing my fingers as I write this...). Is it just me or are these "once in a hundred year events" happening every year?

I'm not going to take up too much of your time in this newsletter; you've got plenty to keep you busy. So this is a pre-pre-spring edition with a few useful snippets to keep you going over the winter, but most of the meaty spring-related stuff will come in our next newsletter closer to calving.

Make the most of the dry period. Get away, refresh, spend time with family and loved ones and come back ready to take on whatever the new season throws at you.

We'll have a full team of vets and staff ready to help you out whenever you need us. Next time I write, hopefully we are the World Test Series Champions and we've been able to enjoy some test rugby and who knows, maybe even the Olympics (although I'm not holding my breath on that last one ...).

Take care everyone.



### PUTTING A FACE TO THE VOICE

For many years now (too many to remember) when you have made an afterhours call to us, the voice on the end of the phone has been Pam Mason. She's answered the phone at all hours of the night, taken your details and then roused whichever vet was on call and given them the dreaded news that they're needed urgently.

You won't believe it, but Pam is now in her 80's and going as strong as ever. Dealing with stressed clients (and equally stressed vets at times) isn't easy but Pam has managed her way through it all with ease and grace. She's a comforting voice to vets when they've had a tough day, and she's been a reassuring voice to many a stressed farmer and pet owner.

She was also a top-notch table tennis player in her day. She and her sister were outstanding junior table tennis players (her sister represented NZ at age group level) and she told me the other day that she's thinking of taking the game up again, so watch out. Even in her 80's she'll probably give you a darn good thrashing. So next time you ring us after hours and speak to our wonderful afterhours lady Pam, you'll be able to put a face to the voice.

Purchase 5L of **BOSS** or **TURBO** Pour On and receive an Alleva wet weather rain jacket and bib over-trouser.

Purchase 2.5L and receive a 3 pack of NZ made thermal work socks. Come in and see Daniel or John for more details.



*Pictured above are the lucky winners of the Boehringer Ingelheim promotion Nicole & Jesse Goodwin and Brad & Jo Bielski. Each winner received a Ziegler and Brown BBQ.*

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## SPRING FIRST AID SEMINAR

**7th July 2021**  
**9.30am - 3.30pm**

Topics include:

- Calving and related conditions
- Metabolics e.g. milk fever and grass staggers
- Sick & downer cows
- Calf care and sick calves
- General procedures including injections, stomach tubing and drenching

This seminar is targeted at new entrants to dairy farming and anyone wishing to brush up on their knowledge.

Cost is \$150  
(includes morning tea and lunch)  
Please ring the clinic now to register.



## CONTROL CALF SCOURS BEFORE THEY CONTROL YOUR LIFE

As we approach another calving, it's worth reflecting on one of the challenges of rearing calves. Scours is something most dairy farmers have experienced at some stage, and anybody that has been through the unpleasant experience of a severe outbreak will know it is one of the worst experiences in farming. And it can happen to anybody – even the most careful farmers have experienced a scours outbreak.



For the first month of life, calves that encounter high levels of “bugs” (viruses, bacteria or protozoa such as rotavirus, coronavirus, *E. coli* or cryptosporidium) have an increased chance of going on to develop scours. With about 70% of farms positive for rotavirus alone, it's quite likely they will come into contact with at least some of these bugs.

When calf scours occur “damage control” is about all you can do in the midst of an outbreak, so it makes sense to focus on prevention. Good hygiene and facilities will help to limit the number of bugs calves are exposed to, but it's just as important that calves have good immunity to cope with what bugs they do encounter.

The most important factor in calf immunity is ensuring that calves receive timely, adequate, good quality colostrum containing important antibodies for protecting calves against common causes of calf scours such as rotavirus, coronavirus, and *E. coli*.

Colostrum produced in the first milking contains the highest levels of protective antibodies. The milk from the following milkings until the cows join the milking herd, is called transition milk. Of course, this is still fed to growing calves, but it doesn't have the same level of antibodies and it should be stored separately from the ‘gold’, first milking colostrum.

Suckling on the cow cannot always be relied on to deliver the volumes and quality of colostrum that the calf needs, and it may be necessary to supplement this by additional feeding of colostrum in the first 24 hours of life.

Every new-born calf should receive at least two 2-litre feeds of high-grade colostrum within its first 12-24 hours of life. This can be fed either via tube or teat, but tube is often less wasteful and ensures the calf gets the right quantity, quickly.

**The ability of calves to absorb the antibodies in colostrum declines very quickly during the first day of life.**

**At 24 hours after birth they will no longer be absorbed, so those first hours are crucial.**

A **Brix refractometer** is a useful tool for monitoring colostrum quality objectively. It's a simple and inexpensive tool, and an easy way to ensure the colostrum being fed is good enough. It takes only a few seconds to take a reading and it's easy to see whether a batch is above the 22 percent Brix threshold for Grade 1 colostrum or not.

To ensure that this colostrum gives the best protection against calf scours vaccinate the herd with a quality vaccine such as **Rotavec® Corona or Scourguard**. These vaccines stimulate the cow to produce extra antibodies to rotavirus, coronavirus and *E. coli* which are passed via the colostrum to calves. This provides far greater immunity to calves, increasing their chances of dealing with these common causes of calf scours in the first few weeks of life.

All cows and heifers should be vaccinated within 3 to 12 weeks of calving. The protocol is slightly different depending which vaccine you use but the principle is the same; boosting colostral immunity a few weeks before calving. Those animals then receive pre-calving booster shots in subsequent years.

**In conjunction with good hygiene, housing and colostrum management, Rotavec Corona or Scourguard will significantly increase the protection your calves have against the major causes of scours.**

**Talk to us about vaccinating to maximise your calf health and income and reduce the stress on you and your family.**

## CALF IMMUNITY

Are your calves getting enough colostrum in the first 24 hours of life? Calves are born with an under developed immune system and must absorb antibodies from colostrum until their own immune system becomes functional. At 24 hours old the gut can no longer absorb antibodies. Calves that fail to absorb enough antibodies in the first 24 hours are said to have suffered Failure of Passive Transfer (FPT).

Calves with FPT have increased risk of scours, other disease, death, poorer growth rates and lower lifetime production and fertility than calves who receive adequate colostrum.

Recent studies have shown about a third of calves in New Zealand suffer from FPT. How do yours measure up?

We can test 12 calves between 1-7 days old early in the coming season to see if your systems need tweaking. The test is a simple blood test and testing can be done in the clinic with results back to you the following day.

Please contact the clinic if you are interested.

*Two Crocodiles were sitting at the side of the River. The smaller one turned to the bigger one and said,*

*'I can't understand how you can be so much bigger than me. We're the same age, we were the same size as kids - I just don't get it.'*

*'Well,' said the big Croc, 'what have you been eating?'*

*'Politicians, same as you,' replied the small Croc. 'Hmm. Well, where do you catch them?'* *'On the other side of the river near the Parliament car park in Canberra 'Same here-hmm...How do you catch them?'* asked the big Croc.

*'Well, I crawl up under one of their big Lexus, BMW or Mercedes cars and wait for one to unlock the car door.*

*Then I jump out, grab them by the leg, shake the shit out of them and eat 'em!' 'Ah!' says the big Crocodile, 'I think I see your problem. You're not getting any real nourishment.*

*See, by the time you finish shaking the shit out of a Politician, there's nothing much left but an arsehole with a briefcase.*



## STREAMLINING OUR ROTAVIRUS VACCINES



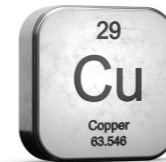
This year after much thought we have decided to drop Rotagal from our suite of Rotavirus vaccines. Rotagal found its way onto our shelves a few years ago when there was a sudden shortage of Rotavec and Scourguard. Because it was cheaper than the other two it hung around. While the majority of clients who have had their cows vaccinated with this product have had no issues, when we sat back and looked at data from the last few years we found a higher incidence of problems in farms where Rotagal was used, than Rotavec and/or Scourguard. Not much, but enough to make us suspicious that perhaps it's not as effective as the other options we have available.

On top of that, the price of Rotagal has gone up this year, so it was actually going to be more expensive than Scourguard. MSD (makers of Rotavec) have dropped their price, which we are passing on to you. Rotavec (MSD) and Scourguard (Zoetis) are produced and distributed within NZ by the companies who make them. Therefore if we get a possible ‘vaccine breakdown’ we have the full weight of a large multinational behind any investigation into what might have gone wrong. They have both been extensively trialled in NZ conditions. Rotagal comes into NZ via a distributor and if something goes wrong you don't get the same level of support or back-up. It also hasn't undergone the same level of trialling under NZ conditions as the other two.

So our standard regime this winter will be as it used to be. You can either choose to do everything with Rotavec (single shot), or if you're vaccinating something for the first time (a heifer or a recently brought-in animal) we'll give it the one-shot jab (Rotavec) so you don't have to get it back in before calving, and anything else that just needs an annual booster can get Scourguard to save you a little money. Rotavec will cost \$8.80 per dose, while Scourguard costs \$6.80. Scourguard has the additional benefit of being the safer vaccine to handle and is the only vaccine that gives protection against the ‘G10’ variety of Rotavirus. In around 10% of rotavirus outbreaks it has been found that the G10 variety was present and Scourguard is the only vaccine that covers that strain.



## ARE YOU GIVING YOUR COWS TOO MUCH COPPER?



This year liver samples taken from cull cows at the works are showing high, sometimes dangerously high, levels of copper. If cows are fed too much copper it accumulates in the liver year by year until toxic levels are reached. The first sign of copper toxicity is death. It is an emerging problem in NZ dairy cows. Rye grass/clover pasture on the Taranaki ring plain contains barely enough copper for an average dairy cow and not enough for a good milker. Back in the day when many farms were system one it was necessary to give supplementary copper to cows and most of you did. Triple mixes of copper, cobalt and selenium were standard on many farms.

But times have changed. Most farms these days import feed and much of that is Palm Kernel Extract (PKE). PKE is a good source of highly available copper for cows. If you feed 250kg/cow/year you may not need to supplement copper and **if you feed 500kg/cow/year you should not supplement copper**. Exceptions to this may be farms on drained swamp land where cows may need more copper than on other soil types. Quarter of a tonne of PKE sounds like a lot but most in-shed feeding blends are 40 – 60% PKE. If you only feed 2kg blend/cow/day for 8 months that's 250kg/cow/year.

Please review your mineral supplementation for the coming season. If you have fed, or are planning to feed, 500 kg/cow PKE you should take all the copper out of your mineral supplement.

I'm not anti PKE, it is a really useful feed and the milk price makes it very cost effective. But we do need to get smarter about how we monitor copper levels in our cows. Blood copper isn't a good measure. Liver biopsies on live cows is the best measure, cull cows sampled at the works are not always representative of the rest of the herd.

Look out for more information on liver biopsies in future newsletters.



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