CLUTHA VETS DAIRY FARMER NEWSLETTER

CLUTHA V·E·T·S

October 2021

Clinic News

Spring is giving us its usual alternating pattern of gorgeous summer and terrible winter days, and I think everyone would like the ground to dry out a bit so it can warm up and start growing grass the way it should be. Most farms are now well into the second round, and a few are beginning to think about shutting up some paddocks. The annual challenge of managing feed quality in the face of surplus will soon be here.

Friday 1 October was a momentous day in the history of Clutha Vets—not because it was balance date for the pasture growth / consumption curve, or because it was the date our clients had all of their winter crops in by (!!); but because it marked the retirement of John Smart, after more than 45 years as a veterinarian at Clutha Vets. While John has been a locally, nationally (and actually internationally) recognised sheep veterinarian, he has also interacted with many of our dairy farming clients over his extraordinary tenure here. One of his claims to fame is being lowered out of a helicopter into the waters covering Paretai in the 1978 flood, to sedate cows for rescuing from the rising deluge. Another is that he was the person who first encouraged dairy farmers in this practice to dust grass with magnesium pre-calving to help prevent milk fever. That's how long he has been here!

We will all miss John's straight talking and no no-nonsense approach, but also his vast wealth of knowledge and experience in all matters animal health. We wish John and Lois a long and very happy retirement together.

In this issue

Planning for mating

The best way to make sure the upcoming mating period goes well, is to go into it with a solid plan. Our "Plan to Mate" consultations are a great way to work through all the things it is important to remember at this busy time, if you are looking to make improvements year on year (who isn't?). We can start with early identification of light and non-cycling cows, and management strategies to turn them around, and we'll cover off pre-mating trace element and BVD testing. After that we move on to heat detection, drafting and AI practices. We can talk about non-cycling cows and synchrony of those that have cycled, and then bull requirements, selection, testing and management. We can also discuss options for your heifers that will produce early calving with a nice tight spread, and maximise your herd's genetic gain.
Contact us today, so we can help you achieve a great mating result!

BALCLUTHA **03 418 1280** | MILTON **03 417 8032** | CLYDEVALE **03 415 9121** | LAWRENCE **03 485 9008**

Minimising Non Cyclers

Every season, we ask the cows to do a pretty big job—turn around their breeding gear and physiology, and get back in calf just 80 days after they have given birth, while at peak lactation—and by and large most cows manage to do this year after year. However, there are also always some that struggle to do it, and need a bit of a helping hand. While some people might argue that helping them out is selecting for infertility in the herd, the evidence is that the heritability of traits associated with fertility is actually quite low. This means two things—first, whether a cow cycles or not has much more to do with how she is managed than her genetic make-up, and second, the calves of cows that have struggled to cycle are not much more likely to become non-cyclers themselves than the calves of those who have cycled early without help.

Some farmers don't like to intervene and view it as "unnatural", however this approach can be applied a little inconsistently across the farm. These people are usually quite happy to use an "unnatural" quad bike to get the cows in rather than walking around them, or put some "unnatural" electricity through their fences to make them a bit more effective, treat mastitis cows with "unnatural" antibioitics and anti-inflammatories for more rapid cure, or apply some "unnatural" fertiliser to give the grass a boost! What's the difference?

Although hormone-based interventions for non-cyclers give the most reliable results and best return on investment, other strategies can also be used. We know cow health and body condition have a major bearing on the rate of pre-mating heats. In these last few weeks before PSM, anything you can do now to help either of these will bring down the number of non-cyclers. The key strategy is identifying low BCS cows and prioritising their feeding. Even just putting them in a herd on their own, reducing the competition for the grass on offer will help. If you can add in once a day milking, this will help too, especially if you can bring them into the shed only once a day, leaving them more time to eat in the paddock, and less energy to spend on walking in. If you've never done this before, is this the season to try a new approach?

As well as feeding and reduced milking frequency, light cows can be targeted in other ways. Covers for cows who have been sick or are struggling to keep weight on, mean less energy needs to be spent on keeping warm, and more can be used for milk production, or getting ready to mate (as long as the covers don't hide a problem getting worse). Light cows can be targeted with a nil-milk withhold worm drench, or a rumensin bolus, which is proven to help cows get more energy out of every bite of grass they take.

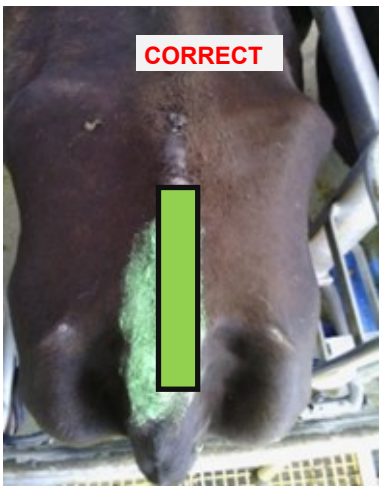
The key to all of these things is they must be started NOW in order to have an impact at PSM!

Which cows should you target?

When faced with a whole herd of cows to mate, it can be hard to know which ones to prioritise. The key thing is to get tail paint on early enough to give you the information you need in time to make good decisions. Even those farms who won't be starting mating until well into November **should have all cows painted and be monitoring heats by now** —recording the number of new cows that come on heat every couple of days. You can't manage what you haven't measured.

Treat painting a cow's tail the way Michelangelo treated the ceiling of the Sistene Chapel! Accurate heat detection requires the paint to be carefully applied, not just slapped on! Too much paint (too thick, too deep, too long) or in the wrong place, won't be reliably rubbed off when the cow is ridden. Too little paint, or paint in the wrong place, might come off when the cow is not genuinely on heat.

1) Remove all the excess hair and old paint
2) Start at the base of the tail, and paint forward to the high point of the spine just behind the pins
3) Stay centred on the spine
4) 20cm x 5cm (two phones long, one phone wide)
5) Thinly enough that hair fibres are still visible and are not caked down



Returning to the question 'Which cows should I target?", you can get really complicated and analytical, but there's also a simple answer:

Put your effort into mating the cows that you most want to calve next August! If you want all of your current herd calving early, you're going to have to take an aggressive approach to get them submitted. If you're chasing genetic gain, your best return comes from giving the young cows their best shot. If you are chasing numbers to enable increasing herd size, you're better to focus on those that are least likely to get there on their own—light cows and late calvers.

Cows that cycle before Planned Start of Mating are the "low hanging fruit" - it's an easy win to do nothing and wait for them to return about 21 days later, during the AI period. However, is it really a win, if you can give them a shot earlier than this? A cow that has a heat the day before PSM won't return until about day 20, but we can get her to return much sooner by giving her a PG injection 7 days after her heat which will encourage her to cycle a day or two later. Even if as few as 80% respond, and only 50% hold, it will average out at about 4 extra days in milk, for about the cost of 1kg of MS!

This system is known as **"Why Wait"**. If you'd like to give it a shot, discuss it with your vet, and they can design a programme that will fit your needs.

<table>
<tr><th>Days</th><th>-8</th><th>-7</th><th>-6</th><th>-5</th><th>-4</th><th>-3</th><th>-2</th><th>-1</th><th>1</th><th>2</th><th>3</th><th>4</th><th>5</th><th>6</th><th>7</th><th>8</th><th>9</th><th>10</th><th>11</th><th>12</th></tr>
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<tr><td rowspan="2">2 groups</td><td colspan="4">Why Wait Group 1</td><td colspan="4"></td><td rowspan="2">PSM</td><td></td><td>PG</td><td></td><td colspan="3">Group 1 cycles again</td><td colspan="4"></td></tr>
<tr><td colspan="4"></td><td colspan="4">Why Wait Group 2</td><td colspan="5"></td><td>PG</td><td></td><td colspan="4">Group 2 cycles again</td></tr>
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Non-cycling cows—CIDRs are still the best option

If you've done all you can to minimise the number of NCC you are faced with in the lead-up to Planned Start of Mating (see p2 of this newsletter), but are still faced with a number that have not shown a heat, it has been well proven that the most reliable and cost-effective thing to do is treat them with a CIDR programme. Analyses have shown that the dollar return on your investment in early treatment of NCC is about 3 :1, through extra days in milk, improved herd repro the following season, and more AB calves.

Each year the programme gets refined a little to give better and better results. Clutha Vets' standard programme this year involves the CIDR going in for 7 days, a larger dose of PG than that used previously, combined with another hormone (eCG), at CIDR removal, mating to detected heat for 48 hours, and then injecting all unmated cows with GnRH and blanket inseminating them 8-20 hours later.

Understandably, the programme gives the best results on the cows that are closest to cycling, and just need a little "shove" to get them over the edge. It can be used on deeply anoestrous cows (in fact, it may be these cows' only chance to get in calf) but it has a lot more work to do on these animals, and the response of these animals may be at the lower end. Treating all of the NCCs in the herd will give the best repro result overall for the whole herd.

Late calving cows—pulling them forward

Regardless of how much effort you put into the start of mating, calving will still be dragging on next October if you forget about this season's late calvers. Sometimes, the late calvers turn themselves around really quickly—they are usually in good condition (more prone to milk fever!), well fed, and have the advantage of the sun shining on their backs. But if you want to give them their best chance of getting back in calf ASAP, an aggressive approach with CIDRs will pay off.

It would be a bit unreasonable to expect them to get in calf in less than 40 days since calving, but by that time, the uterus should have involuted enough, and the ovaries be active enough, to give it a crack, and get them started on a CIDR programme. If you use short gestation semen, you can crib even more days out of next season's calving length!

Calving date	CIDR in (40 days later)	AI date	Calving date (standard gestation)	Calving date (short gestation)
27 Sept—3 Oct 2021	12 Nov	22 Nov	31 Aug 2022	21 Aug 2022
4 Oct—10 Oct 2021	19 Nov	29 Nov	7 Sept 2022	28 August 2022
11 Oct—17 Oct 2021	26 Nov	6 Dec	14 Sept 2022	4 Sept 2022
18 Oct—24 Oct 2021	3 Dec	13 Dec	21 Sept 2022	11 Sept 2022
25 Oct—31 Oct 2021	10 Dec	20 Dec	28 Sept 2022	18 Sept 2022
1 Nov—7 Nov	12 Dec	27 Dec	5 Oct 2022	25 Sept 2022

Heifers—Why wouldn't you synchronise and AI them this season?

Traditionally we have focussed on AI-ing heifers to increase the rate of genetic progress in your herd—breeding your genetically best animals to the best bulls will see rapid improvements in the trait that you are selecting for (milk production, A2, disease resistance etc).

However, there is some interesting new trial work that shows there are many other benefits from synchronising your heifers with CIDRs, and AI-ing them. These include more heifers getting in calf (3% fewer empties), and sooner (on average, 11 days). Of course this means 11 extra days in milk (13kg MS across the season—more than enough to pay for the programme) and 11 days longer for them to start cycling in the herd. In turn, this results in better repro outcomes as first lactation cows, and less wastage as three year olds.

There are several different ways to synchronise heifers, depending on just how many times you are prepared to run them into the yards for treatment and AI. We can use a single PG shot to get most of the mob mated within about a 10 day period, or with two PG injections, we condense mating down to about 3 days. The CIDR programme will give the tightest synchrony for mating, meaning just one day of AI, after two vet visits to set up the programme.

The thing is, with the lead-in time required, NOW is the time to be discussing with a vet which programme you will use, to take advantage of these benefits.

Bulls for mating

At this stage, the most important thing is to sort out how many bulls you need, and where you are going to get them from.

How many are enough?

AND THEN DOUBLE IT!

The recommended ratio is 1 bull in with every 30 non-pregnant cows. For a 500 cow farm with a 60% 6 week in calf rate, 200 cows may be non-pregnant when bull mating starts. Seven bulls are required for 200 non-pregnant cows. Another 7 will be required as the backup team to swap with, and it helps to have a couple of spares to allow for breakdowns.

1:30 can also apply to the heifers, although 1:25 is safer especially if you are using young virgin bulls over them. If you are synchronising heifers (PG, CIDR) then as many as 1:15 may be required for a short time (or restarting a few days of AI) to catch the 21 day returns to heat from heifers that don't hold – check with us for advice when booking your programme.

The DairyNZ website has a "Bull Management Practices" tool which can help you self-assess your bull selection and management to improve mating performance.

Key things are:

- enough bulls (semen deficiency is a leading cause of cows not getting pregnant!)
- of similar size to the cows/heifers
- well socialised and maintained in mating groups to avoid fighting
- BVD tested and vaccinated.

Lame cows …..already!

With the frustratingly wet start to the season, we are beginning to see an early spike in lameness around the district. As well as having a negative impact on cow welfare, production and reproductive success, having an increasing lame mob puts extra strain on an already stretched farm team and can become overwhelming if not kept on top of.

A few tips to help this spring:

- Stay on top of the workload - treat lame cows promptly as they are identified so that big numbers don't build up. If there simply isn't enough hours in the day give us a call to come and work through them for you.
- Ensure you have all the equipment you need in good working order. We have all the tools and materials you will need in our stores and can sharpen up your hoof knives if they've been lying idle since autumn.
- Talk to your vet about lameness prevention with the Healthy Hoof programme. Healthy Hoof is a comprehensive programme looking at the various risk factors for lameness on each individual farm. Have one of our 5 healthy hoof advisors work through a plan with you and your staff to reduce the amount of lame cows you get each season.

Wire, wire heart's on fire!

A recent post mortem provided a great (and visual) reminder of a cow's remarkable ability to survive against all odds, juxtaposed by her complete fragility.

Vet Hamish Moore had a case of a cow with a heart murmur and losing condition - that he diagnosed with a 'wire', aka 'hardware disease', aka 'traumatic reticuloperitonitis'. This is when a cow eats a sharp foreign body (often a piece of wire), that lodges in the first stomach (reticulum). As the stomach contracts, the wire can be pushed through the reticulum and the diaphragm, into the chamber surrounding the heart (pericardium) or even the heart itself.

While we are not usually into heart surgery, one thing that can be done is to put a magnet into the cows stomach, in the hope of attracting the wire and holding it in the stomach.

In this case, the cow continued to go downhill and was eventually euthanased. Unwilling to miss an opportunity, we took the chance to quality control Hamish's diagnostics and performed a post-mortem examination.

Sure enough, Hamish was on the money. The cow showed impressive pathology on post-mortem typical of hardware disease. The picture at right shows a massive abscess of pus around the heart, where the wire had introduced infection from the gut. But also, in sifting through the gut contents, the magnet was re-located with a sharp 3 inch piece of wire clinging to it.

Sadly for this cow, it turns out 2-3 inches (of wire) was more than enough to do plenty of damage. The offending piece of wire had probably been eaten weeks prior, where it nestled itself in the reticulum, and from here was just a poke through the diaphragm towards the heart.

The wire, being a nidus for infection, would have meant that bacteria readily multiplied in the sac around the cow's heart (pericardium), causing all the problems and pain.

Worried about bloat?

As we get into rapidly grown, nitrogen-fueled second round pasture, frothy bloat can become an issue. Bloat oils in the water or sprayed onto pasture have historically been the number one 'weapon of choice' and have been perceived to be the most cost-effective option available.

However bloat oils are used to simply treat bloat with no added benefits. Rumenox, on the other hand, is getting wide acceptance amongst dairy farmers, not only because it effectively prevents bloat but also because at the same time it helps get more cows in calf.

Cows don't always drink regularly. In fact, they drink very little at night and on wet days. Conventional bloat oils are short-lived in the rumen, therefore cows are still vulnerable to a bloat challenge once they stop drinking. But Rumenox's unique mode of action means herds are protected for a longer period, giving farmers added peace of mind even on those wet days.

Unlike bloat oils, Rumenox has a single dose rate regardless of the bloat challenge. This eliminates the need for estimating the level of bloat challenge and adjusting rates accordingly.

The good news is that the price gap between bloats oils and Rumenox has closed considerably, making Rumenox the most cost-effective option.

The other good news is there's a wealth of research both internationally and in New Zealand pasture systems supporting all the additional benefits of Rumenox.

Why we vaccinate

We were recently called to a beef cow which had calved normally and unassisted two weeks' previously, and had been noticed suddenly very unwell. From a distance, she looked very tucked up and uncomfortable, with her head stretched out and tail up, but most noticeably her eyes looked swollen and almost shut.

When she was examined close up, her muscles seemed quite tense (especially her neck), and her heart was racing, but her temperature was normal. At the back end, she was carrying a severe uterine infection (copious custardy pus); and at the front end, while she could see, her third eyelid was coming across over her pupil and there was bulging around the edges of the soft eye tissues. What really gave things away was our complete inability to open her mouth to examine inside – her jaw was locked shut. Got it yet?

These are the classic symptoms of tetanus – caused by a "clostridial" bacteria that is widespread in the soil throughout New Zealand, but we don't often see the disease they cause. Part of the reason is that tetanus is one of the diseases that is most commonly vaccinated against, normally as part of the 5 in 1 (or 6 in 1, 7 in 1, 10 in 1….) programme. The remaining components of the vaccine are usually other varieties of clostridium that cause pulpy kidney, black leg, malignant oedema and other "blood poisoning" type diseases. The fact we don't see much tetanus is testament to how effective these vaccines are. That's just as well, because treatment is usually pretty difficult, with death being caused by suffocation when the muscles of the chest and abdomen become paralysed (unfortunately, the cow we saw was one that did not make it).

Vaccination is a really cheap insurance policy against a number of lethal diseases. This case however goes to remind us that while any vaccination is better than no vaccination, no vaccination can be guaranteed to protect against any disease under all circumstances. In this case, it is likely the bacteria were able to proliferate inside the anaerobic environment of the pus-filled uterus, where the vaccine-derived antibodies could not reach, and release their neuro-toxins into the cow's blood stream.

Keen to learn more?

Cathy Thompson is a well known, and very experienced dairy cattle veterinarian from Taranaki. Over the years, she has also taken many, many photos of the things she has seen and done.

Cathy has recently compiled all of this information and these photos into a very readable book targeted at New Zealand farmers and covering many aspects of cattle health and production.

If cases like the hardware disease or tetanus described in this newsletter fascinate you, or you are keen to do your own diagnostics, or just check up that your vet knows what they are talking about, this book would be really interesting to you! Or even if you are wondering what sort of a head bail to get (or how to tie a cow up when you haven't got a head bail) or ideas for getting a down cow out of the cowshed—there are lots of tips.

This valuable farm resource is available from Clutha Vets stores for $150. Be warned, there are heaps of gorey pictures "you can't be a vet if you don't love pus!"

Cows rock !

Each month, Jason takes great delight in trawling through his extensive musical knowledge (or at least the internet) to come up with a song for you that makes mention of cows, dairy farming or the like. The first people back to us who can identify the song, are in for a prize.

Congrats to Pete Benny, and Courtney Guise who both provided correct answers to last month's competition. The song "Holy Cow" was written by Allen Toussaint and first recorded by the excellent Lee Dorsey in 1966. I was more familiar with The Band's version from 1972, and others have recorded it over the years, including The Shadows and Jools Holland.

This month we have an absolute classic, and I'm sure this was written about a particular breed of cow. Song title & original artist please, to be in the chance to win a box of beer or moderately-priced bottle of wine.

So don't bother me man I ain't got no time
I'm on my way to see that girl of mine
'Cause nothing matters in this whole wide world
"When you're in love with a _____ ____
Sha la la la la la la…

Answers to admin@cluthavets.co.nz

Additional Discount

Most, if not all of you, as members of the Vet Club will notice a credit on your statements this month. Your Board of Directors has approved the payment of additional discount for the 2020-2021 financial year. The additional discount is dependent on the financial performance of the practice, and although this financial year was down somewhat on the previous, mainly due to the increased price of goods from our suppliers, your vet club continues to operate as an efficient animal health provider.

The credit on your account is apportioned according to your annual spend, and demonstrates the philosophy of the vet club model—any surplus remains with the members of the club, not lining the pockets of private owners. The Board wish to thank you for your ongoing support of the Clutha Veterinary Association, and with this support we will continue to grow, and continue to provide top quality service and advice 24 hours a day, 7 days a week.