Dairy Farmer Newsletter October 2008

CLUTHA ·V·E·T·S·
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Rob Mills looks set to take away the inaugural Clutha Vets' Calving Cup. This is decided by a highly dodgy system, where vets score points for various factors such as position of calf, live calf, rotten calf, Caesarean Section etc. If anyone is aware of Rob cheating in any way, or if you have been billed for a calving that just didn't happen, please let us know a.s.a.p. Confidentiality assured.

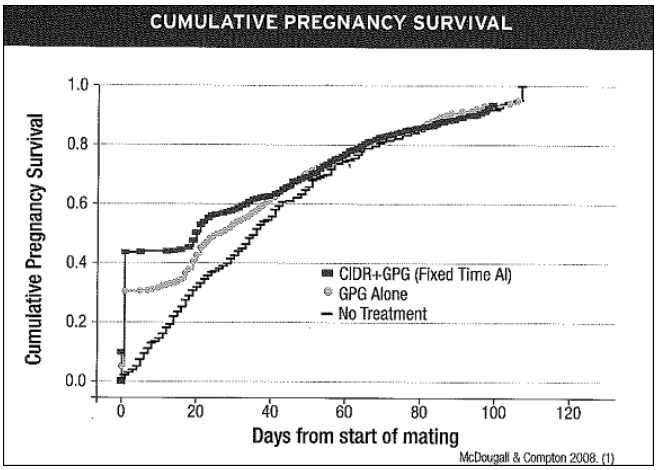
Sid Taylor has unfortunately re-ruptured his Achilles tendon, and will not now be joining us until well into the New Year. Our best wishes for a successful recovery, Sid, but you may wish to leave it a bit longer this time before you attempt to skateboard on a mobile clothes hanger!

Caroline Murray will be working as a locum vet based in Milton for about 3 weeks from 19th October.

What to do with those Non-Cycling Cows

Last year's ban on oestradiol benzoate ("OB") meant that we had to rely on programmes that looked good on paper, but were untried in New Zealand. We had a few sleepless nights wondering how successful they would be, particularly when we found that many cows did not display "bulling" behaviour. Putting up cows for service with no visible signs of heat was an act of faith which we are glad to say seems to have been justified.

This year we can back up our advice with a whopping 2222 cow trial, involving 12 herds (average size 510), comparing 3 options for dealing with non-cyclers 9 days before the start of mating. The results from this trial can be summarised by the following graph which shows the proportion of cows in-calf (1.0 = 100%) as mating progresses, depending on whether the cows were treated with OvSynch (GPG alone), CIDRSynch (CIDR + GPG) or No Treatment.



As would be expected, non-cycling cows that receive no treatment gradually start cycling and get in-calf, so that by day 21, 36% are pregnant. This will vary hugely from herd to herd, depending on a range of factors, most notably cow condition and calving spread. This trial does not include cows calved less than 20 days at the time of examination, and I would not expect too much from these girls!

The main benefit in treating non-cyclers appears to be early on, with in-calf rates by day 21 in excess of 57% for the CIDR based programme, and somewhere in between for OvSynch. By 8 weeks (day 56), the lines have pretty much converged, and the message here is that we wouldn't expect early treatment of non-cyclers to have much effect on your induction rate or empty rate.

Treatment should be viewed in terms of giving extra days in milk next season, with 10 extra days per treated cow with OvSynch, and 16 extra days with CIDRSynch. For a $7.00/kgMS payout, this works out at $82.00 per cow net return on treatment with OvSynch, and $135.20 per cow with CIDRSynch, once treatment costs and additional feed costs (for cows calving earlier) have been accounted for. Speak to your vet as soon as possible for further details, timing and costs for these programmes.

PG Programmes for Cycling Cows

What about the cow who cycles the day before the start of mating? Three weeks later she might get her one & only chance at AI before the bulls take over. Prostaglandin (PG) can be used to "short-cycle" a cow, and is effective from 6 days after a cow has cycled. Cows usually cycle again 3 to 4 days after injection. A number of programmes can be used where cows are identified as cycling in the week or so prior to mating, and injected some time in the following week. A certain amount of planning is required, so please speak to a vet soon if interested.

Heifer Synchrony

If you are considering AI on your replacement heifers, then some sort of synchrony programme may be advisable. There are a number of different options, depending on what resources are available, for heat detection, drafting, AI etc.

Single PG involves mating to detected heat for 5 days, and then injecting all remaining heifers with Prostaglandin (PG). Most should respond within 5 days of injecting, and should be served to detected heat. (i.e. 10-11 days heat detection and spot mating before putting the bulls out).

Double PG involves 2 injections 11 days apart, with the 2nd injection 2 days before Planned Start of Mating (PSM). This offers fairly tight synchrony, and heifers should be mated to detected heat for 3 to 4 days before putting the bulls out.

CoSynch offers tight synchrony to allow fixed time insemination. Heifers are treated on 3 occasions:
Day -9: Insert CIDR & Inject GnRH
Day -2: Remove CIDR & Inject PG
Day 0: Inject GnRH & Inseminate

This is subtly different from the CIDRSynch programme for non-cycling cows, where cows are inseminated approx 16-20 hours after the final GnRH injection. The reason for this is that heifers ovulate faster than cows in response to PG, and the good news is that it involves one fewer yarding for these animals.

These programmes should only be considered on heifers that are well grown and showing good cycling activity. In the run-up to mating, attention should be paid to trace element status, parasite control and BVD status. 40% of predicted adult body weight should be the target for PSM.

BVD Matters

I will not go into details of this disease here, but please call in to have a chat with one of us if you are unfamiliar or unclear about the impact BVD could have on your herd. There are a number of tests available to monitor the level of disease in your herd, through bulk milk tests and blood samples.

Most important at this time of year is to ensure that any bulls you are planning to use are confirmed free from BVD by blood test. Persistently Infected (P.I.) bulls could prove disastrous if introduced to a mob of unvaccinated heifers or cows that hadn't previously encountered the disease. Even a bull that is free from the disease can cause problems if put into a group where BVD is present. The virus may well cause temporary infertility in the bull, and he will spread it to any females who are not yet immune. For this reason we recommend that bulls should also be tested to see if they have yet come into contact with BVD (Antibody positive). This can be done from the same sample used to confirm they are not P.I. If Antibody negative, they should be vaccinated prior to running with your heifers or cows. Since vaccination is approximately the same cost as the Antibody test, you may choose to vaccinate anyway. Vaccination consists of 2 injections 3 to 4 weeks apart, with full protection from 2 weeks after the 2nd shot, so needs to be done right away!

The decision on whether or not to vaccinate your heifers should be based on the level of immunity in that group. We recommend blood testing 12 to 15 heifers to measure Antibody level. If 100% are Antibody positive (i.e. immune), then there will be very little to gain by vaccinating. If 100% are Antibody negative (i.e. naïve), then increased biosecurity, and/or vaccination, will be necessary. With a mixed result vaccination will probably be beneficial, since a proportion of these animals will still be at risk and there is likely to be active infection.

Please let our retail staff know a.s.a.p. if you need to order any BVD vaccine. We do not carry excess stock of this product, and only order in what you require.

Measurement of BVD Antibody level in a bulk milk test can give you an idea of the level of immunity within your herd, and can easily be arranged by us through Fonterra, once you have 95% of your cows in milk.

We can also detect the BVD virus itself in a bulk milk sample, which will let you know whether or not you have P.I. animals in your herd, and can also be used as a tool to aid in eradication of this disease from your herd. Please speak to a vet for further information on how best to use these tools.

Mastitis Matters

With the majority of cows now in milk, and hopefully over the tricky calving period, we can start to assess and deal with mastitis on another level. Up till now, the majority of infections will have been associated with environmental conditions, with Strep. uberis to the fore. In many herds, Staph. aureus will start to become more of an issue, particularly if the milking machine is not functioning efficiently, or there are "people" issues, such as inadequate teat spraying, over-milking or taking the cups off inappropriately. In the milkers, a reasonable target for new clinical mastitis cases would be 1% of herd size per month. So, anything more than 1 to 2 cases per week for a 500 cow herd should be considered significant. We have a lot of experience in this area and can offer plenty of practical advice, so please contact us to arrange a shed visit if you are concerned about the level of clinical mastitis, the size of the Bulk Milk Somatic Cell Count (BMSCC), or any other issues such as teat end damage.

Now is also the time to review your mastitis treatments, and get some samples in for testing. Some of the products you will have been using through the Spring may not be so effective against contagious bacteria such as Staph. aureus.

If everything is going smoothly, and the mastitis rate, BMSCC and incidence of teat end damage are low, then you can look to reduce the concentration of your teat spray (e.g. 1 part teat spray to 9 parts water for iodine based products, rather than 1:3 which you should have been using up till now).

With many farms herd testing around now, there is sometimes a need to raise the vacuum slightly for this procedure. I would avoid doing this unless absolutely necessary, and only make slight adjustments (1 to 2 kPa), taking careful note of the starting level. Above all, remember to turn it back after herd testing. Beware of faulty or sticking vacuum gauges, and if in doubt, get the vacuum checked after you have made the adjustments. Differences of 0.5 to 1 kPa can make a huge difference in some sheds.

Choice of Antibiotic

I was admiring a treatment board in a herringbone shed the other day which had very clear instructions to workers on how to mark/identify treated cows, lame cows, "3-titters" etc. On the other half of the board the mastitis cases were listed, and every cow had been treated with Mastalone. Our retail staff have also informed us that some clients are asking for large amounts of this product. We consider this to be a downside to the PAR consultation process, where we try to give clear instructions in regards to responsible use of antibiotics. I don't think there will be a single farmer who has been prescribed Mastalone as a first-up treatment for Spring mastitis. Although the antibiotics in this product will give reasonable cure rates against Strep. uberis, it is certainly not the most appropriate product for these cases. Overuse of this product will promote bacterial resistance and reduce its efficacy over time. **Mastalone should only be used as a backup for cases that have failed to respond to your first-up treatment, or where culture of clinical cases has indicated that it is appropriate to use.**

I think in some cases, the problem is that we have the PAR consultation with "the boss", where someone else is making the treatment decisions at ground level. There are serious implications to a failure to pass on adequate information to appropriate staff, or to ignore it. With increasing regulation and auditing of both farms and veterinary clinics, there has to be a clear link between prescription of PAR's and what is happening on farm. Many farms are now using the PAR consultation as a valuable opportunity to put effective systems in place for control of diseases such as mastitis, and there is clear involvement of all staff. Others are seeing it as a chore. We are open to suggestions as to how we can make the process more useful to your situation.

We will be contacting clients who appear to have been overusing Mastalone, and other products which may be inappropriate, such as Tylo. If your first-up treatment is "not working", then you must contact a vet to discuss alternatives, and we will almost certainly advise you to take some samples from clinical cases for culture.

PKE and Copper Toxicity

In a recent article by J. Gill and F. Hill, palm kernel extract (PKE) as a feed supplement was discussed, in particular, with reference to its feed characteristics. The product is imported from Asian and Pacific countries and costs about 28c/kg DM which makes it a reasonably cheap feed when compared to other supplements such as hay or silage. It has a ME of around 11 MJ/Kg DM, however lacks in palatability, and has a mineral content that it is high in copper and selenium, but low in magnesium.

To date, in New Zealand, there have been two cases of copper toxicity resulting in the death of several cows which were being fed PKE. In both cases the cows were being fed PKE as well as zinc for facial eczema protection with one lot of deaths occurring after the cows were transported.

Copper is taken up from the diet and stored in the liver. Toxicity can occur suddenly from a massive intake/overdose of copper, or as a result of excess intake over a prolonged period. In chronic copper poisoning the copper builds up in the liver and can be suddenly released into the blood during a stressful period (eg transport, deteriorating plane of nutrition, pregnancy), or as a result of extra copper supplementation. Acute copper toxicity usually occurs as a result of over supplementation of copper. The excess copper in circulation damages red blood cells and can cause sudden death.

Selenium toxicity can occur as a result of prolonged periods of exposure or, acutely, from ingestion or injection of high doses of selenium. Chronic exposure to toxic selenium levels causes weight loss, rough coats, deformed hooves and

poor repro performance. Acute selenium poisoning causes gut upsets with diarrhoea, breathing difficulties, unsteady gait and death within a few hours of the injection, or ingestion of, the toxic dose.

The aim of this write-up therefore is to make farmers aware of the mineral content of PKE so that precautions can be taken when it comes to supplementing cattle with the trace elements present in PKE.

Some take home pointers then include:

- Measuring the copper and selenium status, via liver biopsies and blood tests respectively, during the PKE feeding period to assess its effects on trace element levels.
- Extra selenium or copper supplementation should be avoided while animals are being fed PKE unless testing shows otherwise. Ideally the PKE would be mixed with grain making it more palatable, adding more protein and energy to the diet, and diluting out the high trace element component of the feed.
- PKE should not be fed to sheep (or young calves), as they are more susceptible to copper toxicity than adult cattle.
- Farmers should also be aware that copper and selenium toxicity does not only cause sudden death. Other effects on animal condition and production will also be occurring.

"Metabolic" Disorders

A couple of recent cases involving stock losses highlight the need for accurate recording of events, and accurate diagnosis of "metabolic" disorders.

One or two cow deaths in the Spring period may be deemed acceptable, and put down to misadventure. When these losses continue, and we become involved, it is important that we can relate the timing of problems to changes in supplementation, feed or management. Most important of all is to have pre-treatment blood tests from affected cows. Blood testing non-affected herd mates may or may not highlight a problem at the subclinical level, but this could even confuse the picture if levels of supplementation have changed in response to cow losses.

Discovering one or more cows flat out on their side, possibly thrashing about, when you venture out in the early hours post Daylight Saving must be a trying experience, and the natural inclination would be to get a bag into the vein as soon as possible. Depending on the urgency of the case, you may be able to sit the cow up and call a vet to take a blood sample prior to giving any treatment. The on-call vet may not be singing your praises on the way to the call, but we do appreciate the need to know what the cause of the problem is. Metabolic cases can be confusing, and throwing more Magnesium at the cows just because you assume that this is the problem, can be harmful. Alternatively, you could collect a blood sample from the jugular vein of affected cows into a clean syringe, before treatment.

Nutrition

By now, most cows are being fully fed on grass, leaving residuals that are more likely to lead to grass quality issues next round, than to indicate that cows are going hungry! Many farms have already shut a few paddocks up for cutting.

There are a couple of measures we can use to assess feeding levels at this time of year. On a pre-mating blood test we can assess "B-HOB's". These are produced when the body breaks down its own fat reserves to compensate for low feed levels, during times of high production. Thus high B-HOB's are an indicator of low feeding levels.

You can also get a crude indicator form your milk docket. The amount of milk a cow produces and its composition (lactose, fat and protein) is influenced by the cow's genes, stage of lactation, plane of nutrition, milking interval and many other factors. However, the fat **:** protein ratio normally remains fairly constant, despite absolute changes in the amount of these two components throughout lactation. Therefore, changes in the ratio away from "normal" can provide useful information on feeding levels.

When feeding levels are low, the fat : protein ratio increases. This is because the cows are not eating enough protein to put into the milk, but they can continue to produce milk fat from their own body fat reserves. In broad terms, underfeeding would be indicated if the Jersey fat **:** protein ratio was above 1.45, crossbreds above 1.4 and Friesians above 1.3. If fat ever fell below 4% or protein below 3%, there would be a severe problem on the farm.

Check List (for PSM date of 7 November)

- Get this season's inductions out of the way as soon as possible.
- Feed lactating cows maximally.
- Consider supplementary feeds until after mating (molasses etc).
- Separate young/light cows into their own mob; consider once a day milking.
- Consider Rumensin bullets for light cows **(now)**.
- Consider Eprinex for young cows, from around calving time **(now)**.
- Blood test /liver biopsy cows for trace element status, six weeks before PSM **(26/9/08)**.
- Start iodine supplementation (if not already doing so) four weeks before PSM **(10/10/08)**.
- Use cow covers on light cows.
- Mate maiden heifers early **(2/11/08)**.
- Consider a programme to condense mating of heifers & carry-overs (e.g. PG synchrony).
- Identify and mark "at risk" cows **(now)**.
- Check and treat at risk cows (if not checking whole herd), one month before PSM **(7/10/08)**.
- Tail paint "late calvers", from 42 days before PSM **(26/9/08)**.
- Tail paint herd at least 28 days before PSM **(10/10/08)**.
- Record heats and change colour of cows that cycle.
- Consider a PG programme to condense cycling cows. Tail paint appropriately.
- Consider early treatment of non-cycling cows **e.g. (CIDR's in 31/10/08)**
- Buy an adequate number of suitable bulls early **(now)**.
- Isolate bulls until confirmed free from BVD & EBL and consider leptospirosis status.
- Blood test bulls for BVD and EBL **(as soon as purchased)**.
- Rotate bulls between mobs of cows; allow for spells.

Retail News – Direct Line Balclutha 418 1281

- ***Merial Ancare Cattle Pour-on:*** Receive a Breville Wok or a Breville Wizz'n'Blend with Eprinex 5ltr, Genesis Pour-on 2.5ltr & 5ltr, Eclipse 2.5ltr & 5ltr – your choice.
- ***Cydectin Pour-on 5ltr:*** Receive either a watch or a bonus 60ml pour-on gun. Cydectin 15ltr pack – receive a food saver, home vacuum packaging system – nil meat, nil milk.
- ***Meaty Bites Working Dog:*** Buy 2 bags and receive a large umbrella.
- ***Milligans Calf Milk Powder 20kg:*** only $93.96 nett incl.

Joke

It's essential the farmer-vet relationship be a good one if satisfactory results are to be achieved from your animal health programme. Here are a few pointers to help you ensure you get the best from your vet:

- Whenever possible try to ensure the cow is as far away as possible. Vets get insufficient exercise, driving around all day, having long coffee breaks and 2 hour lunches. There's also no better way for them to appreciate the grass cover than to be face down in it.
- Always have twice the number of jobs you said you would. Vets work best under pressure. For added effect, bollock them first for being late from their last call.
- Try treating everything yourself for several days before calling the vet. Straightforward diagnoses are far too boring for any self-respecting vet. A good challenge really makes their day.
- Remember to tell any "new young vet" how great your last vet was – how they could perform caesarians from their car, could diagnose any ailment from the other end of the cowshed, and then only charged if the cow was still producing 400kg of milksolids in 3 years time.
- When they are face down in the mud in the sleet at midnight with a rotten, swollen calf wedged inside a dying cow, always remind them that they are ridiculously well paid for what they do, that it's a privilege for them to be called out and don't forget to mention you were going to call them out at 10am when you first thought she might need help, but were too busy and forgot!