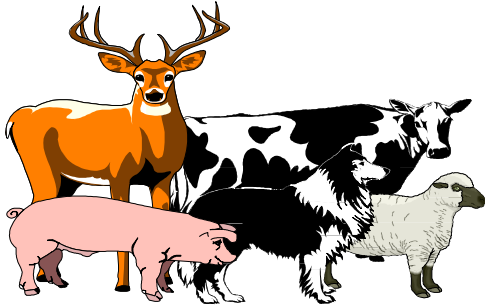


Dairy Farmer Newsletter August 2007

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Staff News

Here we go again! I hope you are all feeling well rested after a rather cold and wet couple of months, and ready to face the new season. Most of the vets are beginning to get itchy feet and are keen to get back out “amongst it”. We welcome aboard Hanneke van Kooten, who is a graduate of the Utrecht vet school in Holland – widely regarded as the best in the world for dairy cattle vet training. You’ll catch up with her on

farm before long. At the Milton end, Barbara Christensen has been taken on to help in the clinic three days a week, freeing up the others to get to farm calls a bit more promptly.

You may also see John Howie about. He led the dairy vet team here between 1997 and 2003, and is returning in a part-time consultative role, in the employment of Pfizer Animal Health, to pilot some new initiatives amongst our clients.

Around the practice

In general cows seem to have wintered pretty well, and most farms have good covers for calving (what is yours... and how does it measure up with the Dexcel targets?). It seems a kind May nursed most of the cows through the transition on to crop gently, and allowed the grass to keep growing for a couple of extra weeks beyond drying off in many cases. But then..... do I mention the flooding?

We enjoyed catching up with a few of you at our annual winter dairy farmers' meeting. Our key speaker, Jim Lloyd, from Norbrook gave a staggering description of what has happened to Victorian cows and dairying as a result of the Australian drought. Also our Spring Supply night (now in its sixth year) was well supported with some great instore specials. Thanks for supporting your vet club, and these events.

With the renovations at the Clydevale store, we plan to keep a vet based in Clydevale all day, every day throughout the spring, with additional support from Balclutha as and when required. It will most often be Jason. We hope this will increase the efficiency and decrease the cost of providing service to you, and also provide a more regular point of contact with us. Calls will still need to be booked by phoning the Balclutha clinic.

In Western Australia, the legal requirement for vets to provide 24-hour emergency care has been dropped. In the first instance, it was felt that insisting human doctors provide a 24-hour service was contributing significantly to the problem of recruiting and retaining doctors in rural areas, so it was dropped for them. That left the situation that animals were legally entitled to better care than people, which was not well received! And so with no consultation with the vets, the burden to provide 24/7 emergency service has been taken off them as well. What do you think?

Jason, Rob and Tash attended the Dairy Cattle Vets' conference in Christchurch at the beginning of July. This is an important part of Clutha Vets keeping up to date with what is happening on the dairy scene throughout New Zealand. We aim to bring this latest information back to you, both in the way we operate and the things we discuss on farm, and in newsletters like this one.

Spring Emergencies

So the value of a cow is higher than it's been for years, and you weren't able to make it to the Spring First Aid seminar, so you might have occasion to call the vet in the next couple of months....

On the phones this spring you'll hear Bruce, Suzanne, Teresa and Natasha. If you do need a vet, the most helpful thing you can do is phone *as early as possible* – at the first hint of trouble. On a recent weekend I drove from Balclutha to Berwick to calve a cow, and as I pulled back into my driveway at home, the farmer next door to where I had just been called with another calving! If he had phoned even half an hour earlier it would have given the cow speedier help, saved me a lot of driving and time and saved the client a lot of money. A phone call from you early on doesn't commit you to a vet visit, but might allow us to get some greater efficiencies in the system, if there is already a vet nearby.

Regardless of what we are coming to, a couple of buckets of warm water are usually required, to rehydrate cows, lubricate calvings, prepare for surgeries etc. Warm, because if a cow is already sick, the last thing she needs is 30 litres of icy water dumped into her body core.

If a cow is down, it is helpful for both diagnosing the problem and treating her if the tractor and some equipment for lifting her are nearby, when we get there.

For calvings, if she can be brought to the shed or yards before we get there, that will also make life much easier for everyone. And if she's not at the cowshed, a clear description of where she is (including rapid number) will help.

At night, extra light (beyond the vet's car headlights and torch) may well be required.

Regardless of the job, extra hands on deck are always welcome – especially if someone has to leave to fetch something, etc. Please try to have at least two people present to assist the vet.

Magnesium Supplementation

Last season we saw issues on a number of farms with metabolic problems related to mag supplementation. By now this should be well under way on all farms, but here's a bit of a refresher.

Magnesium is involved in both milk fever (low blood calcium) and grass staggers (low blood magnesium) problems. The first usually occurs in older, fatter, high producing cows within a day or two of calving; the latter can affect any cow at any time of the year. Both can be clinical (you can actually see the symptoms – slow, wobbly cows; nervous, aggressive cows; downer cows or dead cows) or subclinical (in which case there is nothing to see, but the cows will be affected in a number of ways, and have reduced production).

If you are getting a high number of clinical cases (>3%), then you almost certainly have a higher number of subclinicals – the problem will be costing you production and money. It is worth getting it right, and the best way to ensure this is by blood testing. Depending on the circumstances it may be appropriate to test springers and/or animals in early lactation.

The key part of dealing with these problems is supplementing with mag – it directly prevents staggers, and because of a biochemical tie-up between calcium and magnesium, helps prevent milk fever. The amount of supplementation required depends on the amount of mag in the feed (spring grass is especially low), the amount of feed actually offered and eaten, and the cow's production levels.

In most situations, 15gm of magnesium per cow per day from 3 weeks before calving should be adequate. Magnesium chloride ("Mag-C") and magnesium sulphate ("Mag-S") can be added to the water, but each is only about 10% magnesium, i.e. 150gm of these products are required per cow per day, to give 15gm of mag. However Mag-C or Mag-S above about 60gm will decrease the palatability of the water (if you wouldn't drink the trough water, why would you expect the cattle to?), and if water intake is depressed, all sorts of problems can follow. For this reason it is best to

give only part of the full requirement via the water.

Magnesium oxide ("Causmag") for dusting or spreading on silage is 55% magnesium. So if this is the only source, cows must *eat* 28gm. The amount offered must allow for wastage, so most would work on an allowance of up to 100gm/cow/day.

Magnesium levels in the body fluctuate quite markedly, because the daily turnover is high compared to the body stores. Thus, it is best to supplement a smaller amount several times a day, than the entire daily dose in a single hit.

Other than palatability, feeding too much mag can cause as many problems as feeding too little. High mag levels can cause scouring, depress metabolism, and paradoxically, lead to more metabolic problems. It is definitely *not* a case of "the more the better". If you are getting milk fevers, it's not just a case of "upping the mag" because that can, in fact, make things worse.

One more thing to consider is the concept of "DCAD". In lay terms, this means making the blood more acidic, to aid calcium metabolism. Practically, this is done by - feeding sulphates and chlorides (Mag-C and Mag-S); avoiding potassium (don't graze effluent paddocks with springers or colostrums); avoiding nitrogen and potassic fertilisers in spring; and not feeding lime flour pre-calving (although it may be of benefit to colostrum cows and milkers). The confusing part is that the oxide part of Mag Oxide makes the blood more alkaline (leaving you stuck between a rock and a hard place), but almost always the net benefit is in favour of feeding Mag Oxide (for the beneficial effect of the mag part).

How to calve a cow – it's as easy as this!

- Be kind and gentle.
- Immobilise her somewhere safe for her and you.
- Wash the dung from around her vagina and tail, with disinfectant.
- Using plenty of lube on your arms, establish whether the cervix is dilated, and how big the calf "seems"
- Establish which way the calf is coming. If

there is no head, remember that the fetlock and “knee” on the front leg bend the same way, the fetlock and hock bend in opposite directions. Beware - elbows can feel just like hocks!

- Check that all parts you are feeling belong to the same calf.
- Insert 4-5 litres of warm water and lube. Use a big syringe, or manual pump.
- If you need to rearrange legs, make sure you keep one hand over the claws, to avoid them ripping the uterus. If you need to move a head, keep one hand over the mouth so the calf’s teeth can’t do the same thing. You may need to gently push the calf back into the cow to do this.
- If using a rope on a live calf’s head, make sure it is in the mouth and behind the ears, not around the throat, strangling the calf. This rope is for maintaining the calf’s head in the correct position, not for hauling on!
- If you can’t achieve what you’re trying in 10 minutes, call for help, or try another approach.
- Use clean ropes and chains.
- Don’t start to pull until you have the head and front legs in the correct position (or the back legs, with the tail down).
- Pull slowly; give the cow time to stretch, and work with her.
- Pull down, as well as out, the way a calf would fall if born unassisted. If using a jack, use gentle downwards pressure on the bar to ease the calf out, and crank the handle to take up the slack. If you are using a pulley, anchor it near to the ground.
- Don’t pull with all your might. Don’t tighten the jack beyond what is reasonable. Don’t have two people on a pulley rope. If it doesn’t want to come, don’t force it.
- Roll the calf length-ways as the front comes out, to line the calf’s hips at 45° to the cow’s pelvis.
- Check the calf’s airway is clear, and rub the calf vigorously to stimulate breathing. Use the pressure point on the top gum, and swing or hang the calf to drain the lungs if necessary.
- Clean your arms, check the cow for internal damage and **always always** check for a twin.
- Don’t pull the membranes if they are not ready to come on their own.

- Give the cow a starter drench, and add her to your “At Risk Cow” list for checking in three weeks. She has a high chance of developing a uterine infection.
- Any problems? Call your vet straight away!

Mastitis Treatment Failure

The average rate of mastitis in New Zealand dairy farms is 14 cases/100 cows/lactation. How does your herd measure up?

Cure rates for infected quarters treated with antibiotics (in New Zealand surveys) range between 75 and 90%. If you have more than 15% treatment failure, you should be looking for a cause (and a solution!). We can help with this.

Things that decrease the likelihood that treatment will be successful include:

- The actual bug causing the mastitis - Staph. aureus is harder to treat – in some studies, as few as 25% respond to treatment.
- Antibiotic resistance in the bugs
- The length of time the infection has been there (treat as soon as you detect, don’t wait a day to see what happens)
- Infection occurring later in lactation
- Older cows (but not breed or BCS)
- Type and length of treatment
- Somatic cell count before treatment (but not RMT score or severity of signs – swelling, clots, etc)
- Rear quarters compared to front (but not number of quarters simultaneously affected)
- Over-zealous detection and re-treatment. Or wrong diagnosis (eg teat canal infections)
- Poor treatment technique – introducing new infections or damaging the teat while inserting intra-mammary tubes – do your staff know how to disinfect a teat properly? How far is the tube inserted? Not using whole tubes or not completing a whole course of treatment.
- Lack of supportive non-antibiotic, treatments (eg oxytocin to ensure full milk-out; and anti-inflammatories to reduce swelling and pain, aid drug penetration of the udder, and keep the cow well and eating). Drugs do not work well in dehydrated cows.

The two key points to take out of this are:

1) Choose which cases are worth treating, and which are not. Old cows, with high SCC's, and clinical mastitis late in the season, in a herd with Staph aureus problems, are unlikely to respond permanently to any treatment. Culling is the best option for these girls, or at the very least, drying off with a long-acting DCT. The longer they remain in the herd, the more of their herd mates they will spread the infection to. Unfortunately, they are often the highest producers in the herd.

2) Treat clinical cases for longer, and make sure your technique is right. There is no need to keep treating a cow just because she is positive on an RMT paddle within a fortnight of treatment, if she has no clinical signs of mastitis – the reaction is due to her body's immune response, not an active infection.

However, if a treatment doesn't seem to be working, i.e. clinical mastitis persists, keep going for another three treatments, with the same type of tube or injection. A couple of recent studies have shown that increasing the duration of treatment is a better way to get a cure, than changing the drug being used. This will put your use of that treatment off-label, and so you will need a much longer milk withholding period – please speak to a vet before returning milk to the vat! It will, of course, also put up the cost of drugs and milk discarded, and so go back to point (1) above.

Colostrum Management

Colostrum is gold! It is the single most important part of getting your calves off to a good start in life. It is amazingly high in digestible energy, and loaded with antibodies to help the calf fight infections. It is best of all when it is the first two milkings from 3 - 8 year old cows.

Every calf requires 10% of its body weight (3 - 4 litres) in colostrum in the first 10 hours of life. During the first 24 hours after birth, the gut is permeable to the ingested antibodies, and they can be absorbed into the calf's blood stream to offer systemic protection. After that the gut is effectively "closed" and although (for the next few weeks) the calf still benefits from the high energy component of the colostrum, the antibodies provide only temporary protection at a local level

on the gut lining.

It is not safe to assume that calves are getting the required amount of quality colostrum from their mothers in this time. NZ studies have shown that only about 50% of calves do receive this! We therefore recommend that every calf is directly drenched with 2lt of high quality, fresh colostrum via a Bovivet Calf Drencher, as soon as it is taken to the calf shed, and another 2lt a few hours later. Colostrum should continue to be part of the diet as long as possible. Once calves are 48 hours old (and up to three weeks) you can start using colostrum from 3rd, 4th etc milkings, and/or diluting it with whole milk.

If you have any queries about your colostrum management, Clutha Vets have an in-house colostrum quality meter. We can also blood test young calves to check they are getting the antibodies required. This blood test is a standard part of our calf scours investigation.

What is the best way to keep this colostrum for feeding older calves? Bacteria in the milk and from the environment ferment the lactose (sugar) into lactic acid. As the pH falls, no further spoilage happens (just like making silage or yoghurt!). Under outdoor New Zealand conditions, with twice a day stirring, the colostrum will remain stable and usable like this for up to 2 months, with just a gradual reduction in antibody levels to 50% in 28 days, and similar nutritional value to whole milk.

Some people like to add preservatives to help. Citric or formic acid, hydrogen peroxide or yoghurt can all be used. However, simplest of all is a commercial product, Nutricare's "Colostrum Keeper". There's a set inclusion rate, and using this preservative, colostrum will keep up to three months. A single tub will treat 2000 litres.

Most scours in NZ calves are "nutritional" – caused by the food, feeding or environmental conditions (eg weather) rather than infectious bugs. Of the infectious causes, viruses and parasites are much more common than bacteria, and so antibiotics have a limited place in managing calf scours. The corner stone of therapy is maintaining fluid and energy intake, and with a non-infectious cause, a binder like bentonite may have a place.

Non-cycling Cow Treatments

Treatment regimes for non-cycling cows in New Zealand are being constantly reviewed and updated in the light of ongoing research. Over the last couple of years the most common protocol has involved the use of CIDR's, with an injection of "OB" (an oestrogen hormone) at the time of CIDR insertion and the day after CIDR removal. This seems to produce about 95% submission, with about 45% conception. Another regime that has been used is "OvSynch", a series of 3 injections with fixed time insemination of all cows.

Because of undesirable human side effects of some misused oestrogen compounds, the EU has placed a total ban on importation of milk or meat products from any animal treated with these hormones. If these regulations are not complied with entry will be refused to New Zealand dairy products. Therefore the New Zealand Food Safety Authority (NZFSA) has followed suit, and banned the use of OB in all food-producing animals, effective immediately.

The NZFSA, with support from industry, has decided against applying a Hormone Growth Promotant type segregation system (i.e. identification of certain animals for export to particular markets only, eg the US) to oestradiol products as it would likely be too complex and costly to manage.

So what do we do now with our non-cyclers? Well there are alternative programmes and some of the cleverest minds in dairy cattle reproduction are working on a new protocol that uses hormones other than OB. The most likely system will involve a 7 day CIDR with GnRH injection on the day of insertion and PG on the day of removal, followed by a second GnRH injection and then blanket insemination three days later for all cows not previously served.

This programme is a combination of current CIDR programmes and OvSynch, and is likely to generate better results than either treatment on its own. However, it will involve more injections and more cost.

We will keep you posted as the developments come to light, but the key message is that CIDR programmes will be quite different this year from how they have been done in the past.

Mad Cow Disease Surveillance – Scheme Changes

Over the last couple of years many of you have offered cows suffering from neurological signs, as candidates for the "Brain Scheme". This is run by MAF Biosecurity to detect and monitor TSE's (eg Mad Cow Disease). In May 2007, NZ was declared BSE free, and given "Negligible Risk" status. This is good news for our international trading, but it means fewer brains are now required for testing. Some changes have therefore been made to the scheme:

- Only two samples may be collected from any vet visit to a farm, and the payment will be \$133 for the first and \$89 for the second.
- GST will now be applied.
- One or two of the "fringe" symptoms have been removed from the qualifying list e.g. wasting.

Cattle that fit the criteria must be between 30 months and 9 years of age; be non-responsive metabolic disorders; down or abnormal gait with no obvious injury; have signs of nervous disease or behavioural disorders.

Despite the changes, the scheme is still a viable option to salvage something from a cow that would otherwise be pushed into a hole. And on some occasions the scheme has provided a diagnosis on an otherwise "mystery" illness.

"Copycat" Drenches

There are an increasing number of companies (usually not primarily dealing with animal health), who are sourcing (usually off shore), labelling, and coming up your tanker track to sell drench. They often claim that their product is "just the same" as the more familiar brands and will achieve just the same results. That is quite often far from the truth.

Under the modern ACVM regulations the NZ Food Safety Authority now care much less about whether a product will actually perform the job the label claims it does (they see this as an issue for the Consumer Guarantees Act) and are really much more focussed on residues. Thus, label claims of effectiveness are not stringently policed and companies have been able to argue that similar drugs should do similar jobs without

having to do trial work to prove it.

For example one of the key differences between abamectin pour-on drenches is the “carrier”, or the chemical that the wormer is dissolved in. Check whether the carrier of a pour-on is oil-based (as Genesis, the market leader, is) or only solvent/alcohol based. If it is not oil-based, it will not be rainfast and will not have the same penetration or persistent activity (i.e. it may kill the worms in the cattle today, but provide no ongoing protection from incoming worms). Check the shelf life (usually short), which is especially important if it is available only in large pack sizes. Check the meat withhold – remember this applies to bobby calves and may make the product unsuitable for use pre-calving.

The carrier is also important for injectables. Again the alcohol carrier of the copies creates a painful sting making administration harder. Does it have a long claim for persistent activity? Is it allowed in young calves? Is it available with Vitamin B12 added?

When these reps come to you, don't be afraid to ask the hard questions of them. Does “similar active ingredient” equal “same proven result”? What local controlled trials have they done? Will the rep come back to provide ongoing advice and solutions to animal health issues or do they just need to meet their sales target for the month?

Condition Scoring Cows

Once again this year the Induction Code has made vets the meat in the sandwich between the regulatory authorities and our farmer clients. While most people are doing well and meeting the criteria for inductions (accurately aged pregnancies; injected at the right time; age of cows; magnesium supplementation etc) the single greatest bone of contention is condition scoring. The code specifies a minimum BCS of 4.5 but ideally in the range 5 to 6.

At Clutha Vets we use the Dexcel method to measure BCS, and we don't believe that all dairy cows in NZ are always between BCS 4 and 5! A cow at score 4.5 (the minimum) has a smooth, rounded covering of all bones (no notches in the backbone; ribs not individually visible; hips and

pins rounded; rump and thigh smooth and flat; tail head with an even cover and no sharp edges). If you have any doubts, check the Dexcel website to see what they should look like. And if your cows don't measure up this season, please understand the awkward legal position it puts us in when you expect us to induce them, and plan for how to make things better next year.

Odds and sods

Calf disbudding – Clutha Vets will be offering our painless calf disbudding service again this Spring. We sedate the calves, then use local anaesthetic to numb the nerve to the horn area before burning the horn buds out. This method minimises stress to the calves, and to you, because you don't even need to be there! At the same time we can check for hernias and remove extra teats, and some people take the opportunity to do ear-tagging and castrating bulls. Any time from three weeks of age is a good time to get underway.

Health and Production Consults – Please renew your prescription for the coming season, before the old one runs out. You might view this is an annoying necessity, but some people use it as an opportunity to seek up to date advice on aspects of animal health, or utilise us to help educate farm workers about correct treatments and regimes.

Clutha Vets AGM – This year at the Rosebank Lodge, Balclutha on Tuesday 14th August, 8pm start. Of particular interest will be a presentation by Bernie Vaatstra and John Gill (a pathologist from Invermay), on the effect of *Campylobacter* on bull fertility. Please come along!

BVD – If you suspect issues in your young stock, now is a good time to do some blood testing. If there is a problem, there will be time to get in two doses of vaccine before the start of mating. We can check trace element status at the same time.

At risk cows – Consider tail-taping your cows who have assisted calvings, dead calves, inductions, RFM's, or smelly discharge now, as the problems occur. This makes identification and drafting easy for checking them out in batches, starting a month after their calving date.

Cow Political Philosophy

Socialism: You have two cows. The Government takes one, and gives it to your neighbour.

Communism: You have two cows. The Government takes them both, and provides you with the milk.

Fascism: You have two cows. The Government takes them both, and sells you the milk.

Capitalism: You have two cows. You sell one to buy a bull, and build a herd of cows.

EU Bureaucracy: You have two cows. The Government buys them both, shoots one, milks the other, pays you for the milk, then pours it down the drain.

Christian Idealism: You have two cows. Your neighbour has none. You keep one, and give one to your neighbour

ACT Party: You have two cows. Your neighbour has none. So what?

Labour Party: You have two cows. Your neighbour has none. You feel guilty about being successful. You vote people into office who tax your cows, forcing you to sell one to raise money to pay the tax. The people you voted for then take the tax money and buy a cow to give it to your neighbour. You feel righteous.

Corporatism: You have two cows. You sell one, force the other to produce the milk of four cows, and then act surprised when it drops dead.

French Agrarianism: You have two cows. You go on strike because you want three.

Japanese Corporatism: You have two cows. You re-design them so that they are one tenth the size of ordinary cows, and produce twenty times the milk.

German Corporatism: You have two cows. You re-engineer them so they live for one hundred years, eat once a month, and milk themselves.

Italian Corporatism: You have two cows, but you don't know where they are. You break for lunch.

Russian Corporatism: You have two cows. You count them and learn you have five cows. You count them again and learn you have 42 cows. You count them again and learn you have 12 cows. You stop counting cows, and open another bottle of vodka.

Indian Corporation: You have two cows. You worship them!

Merchandise Matters (all prices include GST)

ALL SHOOF PRODUCTS – Calving gear, calf rearing etc. 10% off Farmer Catalogue prices.

- **Calf Milk Powder** – Milligan's 20kg for \$89
- **Calf Meal** - Sargent Dan's special formulation for Clutha Vets. Very popular with those who have tried it.
- **Bentonite** – TruBond, non-antibiotic binder for calves. Available in 25kg bags from your vet.
- **LSD** – a convenient way to supplement vitamins and trace elements, especially important when cows have been on brassicas - it really gives lack-lustre calves a boost.
- **Calf Covers** – plastic, jute, wool, various sizes, from \$18
- **Calol** – the gold standard oral treatment for clinical milk fever cases. Save 17.5% on boxes of 24.
- **EmulsiCal** – dated stock. Two for the price of one.
- **Starter Plus** – energy boost with calcium and magnesium for cows after calving. \$14 for a 1litre dose, or 20 litres for \$124.75
- **Jute Cow Covers** – nurse the struggling cows through to mating \$36.44
- **Tail Paint** - Alert aerosol. Orange / Yellow / Green, 25% discount for members.
- **Rumensin Trough Treatment** - \$100 cash back per 60litres.
- **Chelated Trace Element Liquid** 100l for \$1350.
- **Genesis Herd Pack** – Buy 10lt, get 2.5lt free (effectively \$3.15 per 500kg dose)
- **Eclipse** – the combination drench of choice for calves. Buy 5lt & get 1lt free.
- **Dog Biscuits** – Tux Energy – 40kg for \$59.95.