

CLUTHA VETS DAIRY FARMER NEWSLETTER



April 2018



Clinic News

Things never stand still, do they? As we get to the end of the pregnancy testing, it's time to be thinking ahead to teatsealing the heifers (which we'll be starting next week) and Autumn consults with their dry cow therapy prescription.

While all of that's being planned for and going on, we've also had quite a run of feed related "poisonings" over the last few weeks. We discuss a number of them in this newsletter, and to that list can be added an outbreak of calf deaths due to nitrate poisoning.

Fortunately, we have got a full team of vets and techs ready to help with whatever comes our way. We're watching Bevan and Marek enviously on Facebook, but at the same time we are thrilled to welcome Andrew Roe (a vastly experienced southern sheep vet) and Audrey MacBeath (technician), who can't wait to get stuck into the teatseal ahead!

Drying Off Assistance

How we can help.

Training & Support

We setup & supply aprons, pottles, cotton balls, meths, paper towels, buckets and disinfectant. Our vet or tech will provide training to your team at the start on best practice administration and supervise your staff while keeping everything running well.

\$200 first hour, \$150 / hour after.

Get your team started

We help you set up and our vet or tech will provide training to your team at the start on best practice administration and will supervise your team for the first hour.

\$150

Assistance Only

Depending on availability, we may be able to provide vets / techs to assist with administering Dry Cow / Teat Seal.

Minimum \$110/person/hour.



In this issue

- Clinic News
- Drying off assistance
- Autumn consults
- "Drying off"
- Antimicrobial resistance
- Heifer teatsealing
- Repro review—trends from the 2017 mating
- Fodder beet and lactating cows
- Ergot poisoning
- HT swedes
- Urea toxicity
- BVD—end of season results
- Veterinary certificates
- Mycoplasma bovis
- Decision making
- Retail news

Autumn Consults

It's that time of year again, when we encourage you to take the opportunity to sit down with your vet, and talk through a range of end-of-season animal health issues. Which tubes to use at drying off is certainly one aspect of this, but it is also a chance to discuss all aspects of drying off, trace element levels, Johne's and BVD monitoring, winter feeding strategies and vaccinations.

A couple of interesting things have come to light recently regarding what used to be called the "dry cow consult".

Firstly, there is a rumour around the place that on at least some of the farms where *Mycoplasma bovis* has come to light, restricted veterinary medicines were not being sourced from the local vet practices. In fact, visits to these farms by vets, and any discussion between the owners and the vets have apparently been very infrequent. If local veterinary practices are cut out of the supply loop, not only are there fewer eyes and ears on the ground monitoring for an exotic disease incursion; but also, when a problem does arise, there is a greatly reduced capacity of local veterinarians and resources ready to spring into action in response. Fonterra recognised this when they decided not to pursue RVM sales through Farmsource stores - they view it as more important to have a strong network of viable rural vet practices to support their suppliers, rather than to expand their product range in this way.

Secondly, we have had many more clients this year asking us to re-send them their paper work to meet the shed inspector's requirements. While the consult may seem to some to be a bureaucratic obstacle, it is viewed as pretty important by the milk companies. Our policy is to provide you with all the necessary documentation each time you get RVM's from us, and we encourage you to keep this somewhere safe and accessible for future reference.

"Drying off"

Our recent end-of-season farmer seminars were geared around helping you continue to make the transition away from whole herd antibiotic dry cow therapy.

One of the things that came up in discussion, was that if we are going to reduce antibiotic usage (as we must) we can no longer think of "drying off" as merely sticking tubes of antibiotic up the teat canals. If we are going to use less antibiotic, we are going to have to change our whole approach to getting the cows dried off safely and effectively. Essentially, more planning will be required. No longer will we be able to say "It's the 20th of May,

volumes are falling and cell counts are rising, the weather is turning to custard and we've all had enough, we'll dry off 800 cows tomorrow!".

With fewer cows receiving antibiotic, treatment is going to have to move closer to "best practice", which will inevitably take longer, and mean smaller numbers will need to be handled over several days. Those days are going to have to be carefully planned, and cow feeding adjusted for the week or so before hand. Post-dry-off care is also going to have to be more careful—just when and how the cows will leave the farm, what and where they are going to be fed, and who is going to be checking them.

Antimicrobial resistance (AMR)

These are all things we are happy to discuss at your Autumn Consult. We'll also be happy to talk to you more about AMR (Antimicrobial resistance).

Antibiotic resistance is a serious animal AND human health problem. It occurs when bacteria are exposed to repeated antibiotic treatments and become harder to kill / control.

Antibiotics are a valuable tool in the dairy industry, and when used responsibly, they are vital for the maintenance of good animal health and welfare. Bacterial resistance to these valuable treatments is a threat to the viability of dairy farming, and is perceived as a threat to human health.

Knowledge of the resistance status in your herd is the key to choosing the right treatments for your cows, and for monitoring and preventing the development and spread of resistance.

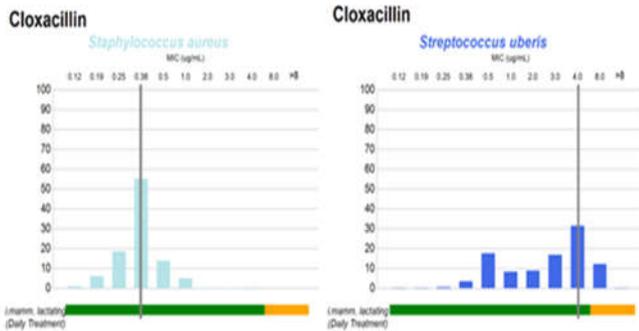
We now have a new test available on bulk milk tank samples which detects and monitors how resistant the two most common mastitis-causing bacteria (*Strep. uberis* and *Staph. aureus*) on your farm are to the range of antibiotics commonly used. This test is called "Antibiogram".

At Autumn Consults this year you will be given the opportunity to see what the Antibiogram is all about and have the option to sign up for it.

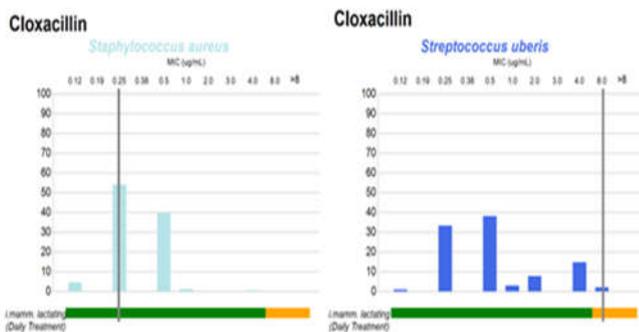
From these results we can make informed decisions on effective mastitis treatments and avoid using expensive broad spectrum treatments when other cheaper options are known to be effective. The cost is \$400 / test.

Here is an example of how we can use the test to inform the decision about dry cow therapy. The four graphs represent the effectiveness of a single antibiotic, Cloxacillin, against each of the two bacteria on two different farms.

FARM 1



FARM 2



Very simply, moving from left to right is the amount of antibiotic it takes to kill the bug concerned. At the bottom, where the green line turns to yellow, and then red, we know the drug becomes less effective (more of it is required to kill the bug). The individual farm's result is shown by the grey vertical line. (The light blue bars are the data accumulated from the 1200 farms in NZ that have been tested so far).

For Staph aureus (the two graphs on the left) and cloxacillin, the grey vertical line intersects well inside the horizontal green bar on both farms, showing it is highly effective. Cloxacillin would be an effective dry cow product for curing existing Staph infections in either herd.

However for Strep uberis (the graphs on the right), the vertical line is much further over. On Farm 1, cloxacillin is just inside the green zone, there is a reasonable level of resistance already. This antibiotic may be nearing the limit of its effectiveness, and needs to be managed very carefully to stop further problems developing. On Farm 2, the situation is worse—here the vertical line hits the yellow zone, meaning cloxacillin is getting marginal for effectiveness against Strep. A decision on this farm may be to move away from Cloxacillin as a dry cow choice.

Please discuss this in further detail with your vet in your Autumn Consult. They will have further examples to show you.

Heifer Teat Sealing

This year we have are adding a second teat sealing trailer to our fleet. This will allow us to complete more herds before the weather really turns south. We are also starting teat sealing earlier than normal with the last two weeks of April already booked up. We have in theory moved all jobs a week ahead of where they had been the last few seasons.

Here are some reminders we would like to mention again, to make sure the job goes as smoothly and efficiently for you as possible:

- We ask for at least three of your staff members to be present on the day to help with loading of the heifers
- It is best if teatsealing is the only procedure for the heifers that day
- If they need to be vaccinated, drenched or anything else, please run them back through the yards after we are finished – it is not ideal to do this right before they come on to the trailer, as it can upset them.
- The heifers tend to be more settled if they have had a feed before they are brought in for teatsealing.
- If possible, we prefer tails not to be trimmed so there is something to line heifers up with.
- Lead cows are helpful if we are teatsealing through a herringbone shed.

We are able to BVD blood test 15 heifers at the time of sealing if this age group has not previously been tested. This would ideally be done with the last animals waiting in the race. Fifteen is the number the statisticians tell us we need to test to get an accurate assessment of the BVD exposure from antibody levels.

We have decided to offer prizes this year for:

- best yard set up,
- best behaved heifers,
- best heifer pusher,
- best flow of heifers
- most helpers.

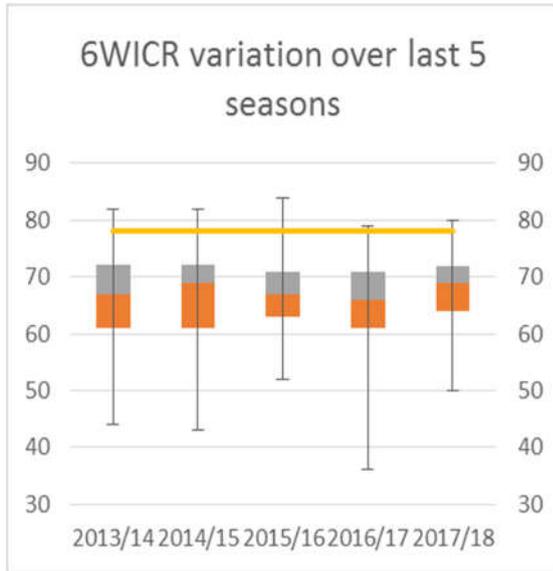
These will be named at the end of the season – start practising now!

If you would like to book your heifers in for teat sealing for the first time or have any questions on how the trailer would work then please either contact Kim (Balclutha) or Louise (Milton) and they will be happy to help.

Probing into the repro results

In late March we hosted farmer seminars at Balclutha and Waiholo with the aim of pulling apart and sharing insights into the repro results for the local farms where we did the pregnancy testing.

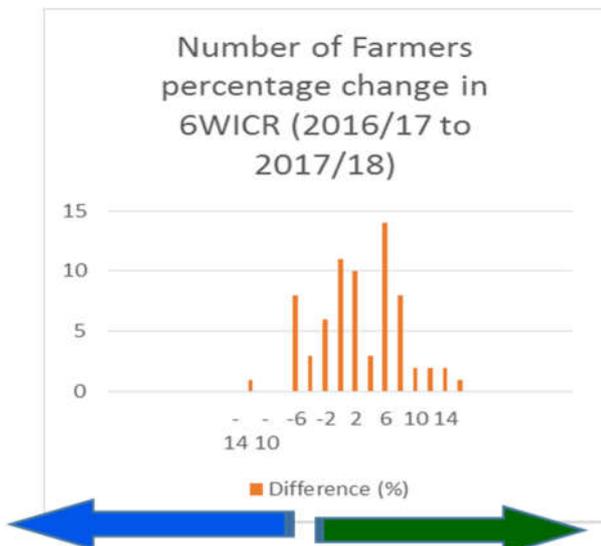
6 week In Calf Rate (6WICR)



6 Week In Calf Rate: The local average 6WICR for this season was 67%, 2% better than the previous season, and with a much tighter range of results than previous years.

The local average for the past 5 years has been steady between 65% and 67%. Why aren't we seeing the year-on-year improvement in repro, that we see in milk production, cell count etc?

Some individual farms are remarkably constant over time, but others can vary from year to year quite dramatically. There were great wins on some farms this year (many with a 6-10% improvement on previous year!) but a handful of farmers with up to 6% reduction in 6WICR.

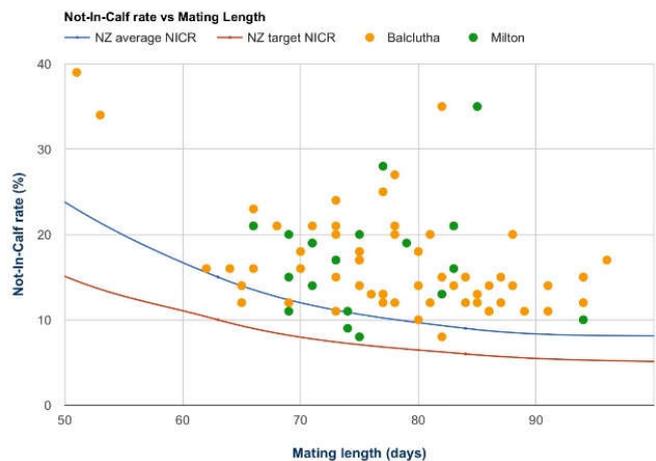


“Not-in-Calf” Rate – Instead of the “pub talk” figure of “empty rate” DairyNZ now uses the “not-in-calf” rate : the percentage of cows not confirmed in calf by end of preg testing compared to the total number of cows that were present at the start of mating. As well as the usual empty cows it includes cows not pregnancy tested (or a PD result not recorded) and cows culled while they are still a recheck.

This season, the local average was 17% not-in-calf.

Over the past 5 seasons the local average not-in-calf rate has fluctuated between 15% and 17%: a new normal in the post-induction era.

One of the factors that should affect the not-in-calf rate is the length of mating. Most farms locally are mating between 70 and 85 days (10-12 weeks) and it can be expected a longer mating period should allow more time for cows to get pregnant and a therefore a better result. However, the data in the graph below shows that some farms (dots) are able to achieve the same number of pregnancies in 10 weeks that it takes other farmers 12 weeks to get.



What's the difference?

Submission Rate

All the farmers who had a good 6 week in calf rate also had two other good parameters – good submission rates and good heat detection. Both these are critical for success.

The average local 3 week submission rate was 81%, while the target is 90%.

Submission rate is driven by cows cycling (affected by feeding levels, enough time since calving, no underlying metabolic, lameness, mastitis or metritis issues hanging over them) and good heat detection (finding them when they are on heat).

Heat Detection

It is hard to “measure” heat detection but one way is to look at the 4+ year old cows that have calved more than 8 weeks (ie should be cycling by PSM) and see how many are being picked up. Locally only 87% (target 95%) of these prime cows are being picked up on average.

A worked example

This example shows how these things all interact to give the result you get a scanning.

If you had 500 cows, and were “average” at heat detection and had average cow health and feeding after calving then you could expect the “average” submission rate that we see (81%). Assuming the cows you submit are mostly the right ones and the AI and fertility are OK (giving a 55% conception rate) then the best 3 week in calf rate you could expect would be 45% and the 6 week in calf rate 65% (funnily enough, the “average” 6WICR we actually see).

Average performance gets average results!

Making a difference

Every year at the end of preg testing, farmers ask how they can do better next year. In many ways it is about making small changes to lots of the things that matter, because not many farmers are making “major” mistakes that lead to a complete mating disaster.

Often farmers are more interested in fixing either the not-in-calf (empty) rate or the 6WICR as a particular goal or area of improvement for them. The reality is these are both very much interlinked and fixing one often requires work on the other.

There is one really simple and effective thing you can do right now, to improve next year’s mating result – go through the herd, pull out the light cows, and dry them off.

Condition score at calving (and time between calving and PSM) are known to be the two key drivers of submission rate and fertility in the spring. Especially if your winter feed has been affected by HT swedes, ergot or Mycoplasma (limiting your wintering off options), now is the critical time to get weight onto the skinny cows.

Remember we are aiming for BCS 5-5.5 at calving. A cow at BCS 4 dried off now is much more likely to hit that target with 120 days to get there, than if she is at the same score at the end of May and has only 60 days.

The amount of milk a light cow will produce between now and the end of the season is worth much less than the difference in price between an in-calf and an empty cow next year.

Fodder beet feeding in late lactation

As people start to transition cows onto FB in late lactation, it worth is re-iterating the points that we have learned over the last few years. If you follow this best practice advice, you are much less likely to cause animal health issues!

Regardless of when you decide to start feeding the crop, the cows need to be **properly transitioned** – start on 1-2kg DM per day and move up to a maximum of 4-5kg DM/day at increases of 1kg every 2 days.

Weigh the crop where you are going to be starting your transition, to work how many kg of dry matter you have per square meter. Do the maths!

To achieve even allocation, the herd requires a **long feeding face** (1m per cow ie 300 cows = 300m long feeding face) and a strip along the edge of the paddock that has no fodder beet in it to start them off on. If there is no strip, then a 4m wide strip can be cleared with the bucket of the tractor or handpicked, which doesn’t actually take that long with a team of people (2 people can clear a 120m strip by 4 m wide in about 1 hour).

Time based feeding does not work and leads to acidosis in some cows, so should be avoided

The cows should **all go on as one mob** so that no individuals have an excessive amount of time to gorge on the FB.

A **safety fence** should always be used 1-2 m in front of the actual fence line to limit breakouts.

Cows should ideally go onto a **grass paddock after milking, then onto their FB break**. This helps avoid mastitis issues from grazing FB (better teat canal closure before the cows go into the muddy environment). It also means they go on as one mob with some grass in their rumen (less likely to gorge themselves).

Cows should not be fed more than 4-5kg DM of FB during lactation. If you feed more than this, the low protein levels in the FB can cause the cows to try to dry themselves off and SCC will rise significantly.

Cows on a standard grass based diet do not require additional fibre while being fed FB during lactation.

If you have any breakouts, cows down or over-allocation of FB then please ring us as soon as possible to discuss what options you have.

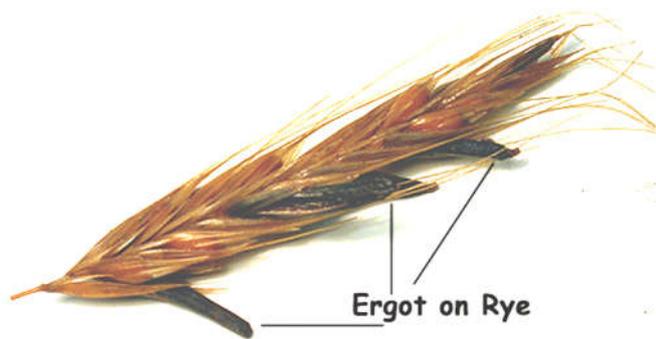


Ergot Poisoning

This is a fungal infection of the seed head of various grasses and grains. Given the right conditions of warmth and moisture over the summer/autumn this fungus can infect the seed head. Infected seed heads have distinctive sooty purple/black ergots which look a bit like mouse poo in them - see picture below. They are quite visible to the naked eye. These ergots contain toxins which cause constriction of the walls of small arteries and can result in dry gangrene similar to that which occurs in frostbite.

Obviously climatic conditions this season have suited the development of ergots as we have had quite a few observant farmers who have noticed these ergots on dried ryegrass seed heads lately and have rung up about them.

The problem is how much is too much? The safe



answer is to say if you see ergots on the seed head in the pasture don't feed it, as apparently you don't need many ergots to cause a problem. It is not safe as standing pasture and turning it to hay, baleage, silage etc doesn't help. However, "don't feed" is hardly a practical solution!

Obviously, avoid any heavily ergotised pasture, baleage etc. In the case of light infestations feed the pasture/baleage out but keep an eagle eye out for clinical signs and remove stock from the feed at the first sign of problem, as early cases should come right. The clinical signs present initially as lower limb swelling and lameness, and if spotted at this stage and removed from the suspect feed these are reversible. If not removed from the affected feed the condition progresses to skin dying and falling off, even loss of the whole hoof/foot where the tissue has died. Less commonly the tail and ears can be affected.

So if you have saved pasture that you are going to make into hay/baleage/silage go and have a close look at the dead stalky ryegrass seed heads and see if you can find any "mouse poo" in the ears of the seed. If you've already made the baleage or silage have a good look at the seed heads for presence of ergots before you feed out.

HT Swedes

As you've probably heard, PGG Wrightson Ltd Seeds, through simple human error inadvertently substituted the new Hawkstone swede with the HT white fleshed swede. More than 500 farmers have been affected this season - 90% of farmers are in the South Island and ninety percent of these are in the Otago/Southland region - potentially affecting a wide variety of stock classes.

A registry of potentially affected farmers has been set up with 100 farmers registered so far. PGG have set up a designated email address to be a contact point for questions and assistance and are endeavouring to contact those concerned within 48hrs of initial contact. Some 35 farms have already been visited.

Some 9,300ha of HT swedes have been sown out over the season. 46,000ha of the HT swedes have been sown in the last 6 years, with significant issues arising in the 2014 season with photosensitivity and cow deaths. Animals identified as most vulnerable are young stock and heavily pregnant dairy cows close to calving. However PGG Wrightson Seeds is conducting an ongoing investigation to confirm which stock classes could be most affected.

The plant toxins that cause the problems are called Glucosinolates. It is possible, but difficult and slow to measure the level of these compounds in the plant. It is more practical to be aware of the causes of high glucosinate levels, and avoid feeding crops that are more likely to be

In particular, glucosinates are more concentrated in the leaves of maturing plants and toxin levels increase as plants neck and turn reproductive. This occurs at the same time bulbs become harder and less palatable - a particular problem for young stock cutting teeth - resulting in bulb refusal, and a higher proportion of leaf being eaten.

The current recommendation is to **feed the swedes before they mature ie start feeding at normal time but at a higher stocking rate to get through the crop faster**. This means it is fed before the bulbs become hard and difficult to eat, before the plants start to go reproductive, and before cattle pregnancies become too advanced.

However, because of high ME content of the crop it is important to transition early and with ample supplement (baleage) to reduce the incidence of rumen acidosis caused by over feeding. Best practice is to **feed HT swedes with more than 30% of the diet made up of baleage/hay**.

If you have other winter crops - **feed off your HT swedes first; then go onto other crops** NOT the other way round! (Doing the latter resulted in significant death rates in 2014).

If you are suspicious of stock health on swedes, veterinary advice should be sought; confirmation can be either by post mortem or blood test for liver enzymes.

BVD—end of season results

The third and final bulk milk results for the season are mainly in now. At your Autumn Consult your results will be available to discuss with your vet.

It is easy to get blasé and think you don't need to keep monitoring your BVD levels, especially the farms with a history of very low BVD exposure in the herd. BUT in some ways these herds need to be monitored even more closely and biosecurity needs to be even tighter, because if the herd is exposed to BVD, the effects are much more devastating.

This is an example of a herd which has had no BVD for years and then this year there has been a sharp rise in antibody levels indicating some exposure to the disease. There's probably not a PI in the herd, because the rise isn't high enough, and the arrows at the top of the graph remain blue. But there probably has been over-the-fence contact, or perhaps a visiting bull, possibly with the heifers before they entered the herd.



This farmer thought they had tip-top biosecurity, but maybe they don't. What would happen if the infection did get into the herd?

Take home messages –

Always continue monitoring, even if you think your biosecurity is good and you haven't had a problem for years.

Vaccinate any heifers that are sent away for grazing if you want to keep replacements from them – probably one of the most common ways PI's are produced.

Check your R2 exposure levels at teatsealing – solve problems before they enter the herd and before the busy-ness of spring.

Urea Poisoning

We had an incident recently where an unfortunate series of events led to some urea getting mixed into Palm Kernel Extract that was fed out to lactating cows. The end result was 12 dead cows.

Excess urea intake causes increased levels of ammonia that can cause brain damage. Clinical signs can be seen within minutes of urea intake. Drooling & bellowing lead to frothing at the mouth & nose, with teeth grinding and severe abdominal pain. Muscle tremors & incoordination lead to convulsions and collapse. Affected cattle may be hypersensitive to sound & movement, often resulting in aggression (“bovine bonkers”). Other signs may include breathing difficulty & bloat. Most affected cows will die, usually within 4 hours of urea intake.

Early treatment is essential if it is to be effective. Drenching with 4L of vinegar (e.g. apple cider vinegar) may help reduce the absorption of ammonia. Any bloat must be relieved first (e.g. stomach tube).

Vet Certs for transport and slaughter

Any “abnormal” animal sent to the works should be accompanied by a Veterinary Certificate, demonstrating that it is fit for transport and slaughter. This is part of assuring our markets that we treat our animals humanely (on farm and during transport), and that we don't dump sick animals into the human food chain.

It is another area where policies are being continually reviewed. For the last couple of years, as vets, we have only been allowed to certify animals to the nearest slaughter plant. It doesn't matter who you usually supply or who your agent prefers to deal with. If it needs a vet cert, we have no choice but to specify the nearest beef processing facility, and that's where it must go.

We must also specify “same day slaughter” - ie a sick animal is not to be left standing on the yard at the works overnight because it arrives late in the day and can't be killed until the next day. In essence what this means is that you need to ensure your transport company can have it at the plant by midday, and that the plant knows it is coming. This will usually mean an early morning pick up, with the vet cert animal last on to the truck, and the truck travelling straight from your place to the freezing works.

We all want a good outcome for you and the animal in question, if you have any concerns, please speak to us early in the process about how we can help.

Your vets

Balclutha Clinic

John Smart	BVSc
Jason Darwen	BVSc
Rob Mills	BVSc
Hamish Moore	BVSc
Catherine Copland	BVM&S
Peter Heslip	BVSc, MACVSc
Annie Jackson	BVSc
Steven Butler	BVSc
Elsbeth Geddes	BVSc, BAgSc
Ruth Andrews	BVSc
Bridget Mason	BVSc (on leave)
Anna Burrell	BVSc
Erin Caswell	BVM
Andrew Comerford	MVB
Andrew Roe	BVSc

Milton Clinic

Peter Kalb	BVSc
Jillian Clark	BVSc
Sid Taylor	BVSc, MACVSc
Barbara Christensen	BVSc, MACVSc
Martha O'Connor	BVB
Tom Wallbank	BVM&S
Dario Mendoza	DVM

Things to do in April

- Autumn consult—get it booked and done!
(antibiogram, dry cow prescription, heifer teatseal, BVD & Johnes results, trace element testing, biosecurity etc)
- Start planning now for drying off
- Dry light cows off now
- Cull cows away (with Vet Certs where necessary); trace element livers if you are not using live cow biopsies
- Complete lepto vaccinations
- Drench calves against autumn worm level rises

What influences your decisions?

We have been asked to help a Waikato University Agribusiness student, who is studying what influences farmer decision-making around mastitis. She has a short online questionnaire looking at some of the factors, and would be really grateful if you could take a few minutes to fill it in.

Go to: <https://www.surveymonkey.com/r/7BM9JBY>

Mycoplasma bovis

The big news since our last update has been the MPI's decision to cull all of the animals on infected properties, and compensate the owners. We believe it is the right decision, and it is good news for the industry in two ways. First, it provides some certainty for the affected farmers and removes the massive shadow of doubt that has been hanging over them. Hopefully it will also encourage those who may have been holding information back because of potential financial ramifications, to come forward. Second, it shows that the advising scientists must be confident the disease can be eradicated (otherwise they would not be willing to spend all that money).

From a practical perspective, not much has changed. I am sure you have noticed the added precautions our vets and techs are taking as we move between farms. The single most important thing you can do, is not send your stock away to mix with other stock of dubious status, and not bring new stock on to your place, if you cannot be certain of their provenance.

We can help you assess the risks to your herd and prepare a plan using a "Biosecurity Toolbox" that has been developed if you are concerned about animals coming and going from your operation.

Retail

A few exciting things getting lined up for Autumn so watch this space.....

- Boehringer Ingelheim Cattle drenches- POOrals, Injection & Pour-ons Selected products get you great RJ Williams Gear! Belts, Bags & Boots
- Dectomax Inj- get a rugby top with 2 x starter packs + 200 ml Free
- Dectomax Pour-on Herd packs have 15% members discount—limited stock, limited time
- Coppermax Inj—get a free Bayer Thermo Mug
- Boss Pour On 5lt – receive a Nescafe Dolce Gusto Coffee Machine.
- Boss Pour On 7.5ltr – receive a Breville Scraper Cake Mixer. Very limited stock, be quick!
- Nexepirin LOW DOSE Cattle Inj – 1ml/100kg & a great price.
- Ridgeline Clothing & Kaiwaka Clothing deals in store.

NEW PRODCUTS

- Eclipse E + B12 + Sel is available now!
- Duomax 4000 B12 & Sel also available now with Kettle & Toasters.