



**The Inconvenience of Antimicrobial Resistance**  
**Selective Dry Cow Therapy**  
**Teatsealing in Heifers**  
**Nitrate Poisoning**

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## Biosecurity: What Does this Mean for Your Farm and Your Herd/Flock?

The concept of biosecurity is making sure that no biological hazard enters your property and negatively affects your own livestock assets.

New Zealand (NZ), as a country, has its own biosecurity at sea ports and airports to prevent what we call exotic disease entering NZ. That is biosecurity at a national level; all farms need to consider the same local measures for their own entity.

In this short reminder I am trying to impress upon our Vetlife clients the concept of biosecurity for individual farm properties. In real terms, we NZers “do this biosecurity thing quite badly” at individual farm level. Let’s see if we can get the subject matter aired and start to put some of the basic principles into practice.

Biohazards enter properties when they cross boundaries from neighbouring properties or more predominantly when they arrive with newly purchased and unscreened livestock. In NZ, many of the biohazards that enter a property have sub-clinical effects and the livestock owner or managers are unaware that an incursion and a negative effect has happened.

Well, if that is the sum total of the whole concept, who cares? Read on, please!

There are many obvious examples of historic biohazards in NZ, e.g. bovine and deer Tb, cattle or sheep Brucellosis and *Salmonella* Brandenburg, sheep measles etc. Parasite resistance is a more subtle biological challenge that is easily imported onto a property when livestock are purchased, and, of course, the viral condition of BVD is another significant one.

The reality is that many of our clients have worked hard and long for a particular level of disease control or freedom status for their herd or flock. So the last thing they deserve is to bring unscreened animals onto their property and to undo all of that hard work.

So, from the few examples I have stated above, we can appreciate that even in “good old NZ”

we have our share of nasties. In real terms, as a livestock owner, we need to demonstrate good care when buying livestock and not inadvertently and carelessly import any number of biological hazards/diseases.

The message is quite simple:

1. If you are buying livestock and bringing them home, you should both ponder and take advice as to what disease you may be introducing with that purchase. Do not hesitate to ring us and run past us the proposition involved. Better still would be to have a biosecurity plan made ahead of livestock purchases, so that you can avoid such diseases and conditions and DO NOT bring them home.
2. Be aware that some biohazards can easily cross property boundaries from neighbouring properties or that your livestock can give the neighbours' livestock something unwanted. The best approach here is to manage a clean herd when it comes to these types of biohazards and be open with your neighbours about them being responsible owners too.

If you have read this far I congratulate you, biosecurity is not a fascinating subject when presented like this, but I can assure you that many of our clients do practice good management around this matter and they are rewarded for it with healthier and more productive livestock.

So, in conclusion, have a chat to us about what this really means for your property, have a plan set up ahead of purchasing livestock and understand the productive value it represents.

Best regards,  
Adrian Campbell  
Vetlife Practice Principal



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# Helicobacter pylori Causing Abortions Down South

*Helicobacter pylori* was diagnosed as a cause of abortion for a Vetlife Oamaru client's ewe flock this season. *H. pylori* is a bacteria that survives well in wet or muddy conditions, and is thought to be transmitted between animals by the faecal/oral route. It has only been identified as causing abortions in the lower South Island to date. Abortion rates on affected properties have been between nine to 20 percent of the flock.

A ewe that ingests *H. pylori* shows few outward signs, but there are consequences for her unborn lamb. Depending on the stage of pregnancy she may abort early on, or have still-born or weak lambs. Upon postmortem, the lamb's liver may be swollen with white-ish spots on it. The ewe tends to develop strong immunity after infection, so if abortions are seen on the farm again, it is usually in two-tooths or bought-in ewes.

The initial research into this area began when a farm in Southland had large scale abortions and testing came back negative for the more common causes (*Campylobacter*/*Toxoplasma*/*Salmonella*/Hairy Shaker). The Ministry for Primary Industries (MPI) also ran tests that came back negative for exotic diseases. Going back to the livers of the aborted lambs, electron microscopy was used to

identify some silver stained, curved bacterial rods. This bacteria was identified as being from the *Helicobacter* spp. It has only been in the last couple of years that a PCR test has been commercially available to test for *H. pylori*. This is an emerging area, where more research needs to be done. There are still lots of questions to be answered about how common the bacteria is, how it is transmitted, how long it survives in the environment and whether or not carrier states are created. There is no vaccine or treatment available at the moment.

As an interesting side note, it has been reported that shepherds are much more likely to carry *H. pylori* in their gut than the general population. This is a reminder about personal safety when handling aborted material (especially if it turns out to be a *Salmonella* case that will make you really crook!). Wear gloves, wash hands, put material into sealed bags or buckets until it is disposed of.

If you are experiencing more than one to two percent late-term abortions in your flock, contact your Vetlife vet as it may be worth investigating. The information gathered is useful not just for your farm, but also for the New Zealand sheep industry. All samples sent to the lab are documented for statistical purposes

so that there is an overall idea about what farms are facing. Three to five freshly aborted lambs (ideally with their placentas) brought into the clinic should be enough material to get an idea on what is (or is not) going on.

Katie Ball  
Vetlife Oamaru



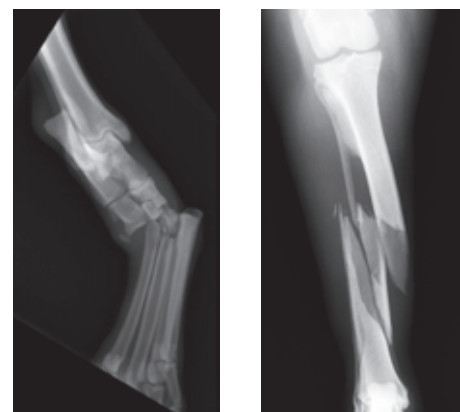
## Farm First Aid: Fractures

There is nothing worse than seeing your best dog head into a mob of sheep or cattle and come out carrying a floppy leg. Broken bones are one of the more common injuries we see in our working dogs. Many of these fractures can be repaired and the dog can carry on a normal working life, but like any injury, first aid at the time of the injury can affect the ability for the bone to heal. Ideally, the sooner they can be presented to a clinic the better.

First and foremost, when dealing with a dog with a fracture remember that fractures are very painful and the dog will often be in shock. They may bite when you try to help them, so if possible get a lead on them, and if necessary, muzzle them so they cannot bite if you need to shift them or manipulate the leg. If there is bone poking out of the skin do not be tempted to push it back in, it is usually contaminated with dirt and will need to be carefully cleaned before it is put back in place. If the limb is dangling and

in the lower part of the leg, you can splint the leg to prevent it from further damage. Lower limb fractures (below the elbow in front, or the knee/stifle in the back leg) are more important to support than upper limb fractures where they have lots of muscles to protect the pieces of the broken bones.

Clean padding (a padded bandage or cotton wool) can be wrapped around the leg and then something stiff (a piece of stick or wood) strapped or taped onto the outside can be used as a splint. In a pinch, a good old flannel shirt torn into strips will suffice. You need to make sure that you bandage from the joint above the fracture to the joint below. Once a fracture is stable it is much less painful. Once stabilised, transport them to a Vetlife clinic as soon as possible so we can manage the pain and stabilise it further before repair. If in doubt, talking to the vet on call (perhaps sending them a photo or two) can get you some good advice



on how to sort things out before you bring them into the clinic.

Lori Linney  
Vetlife Alexandra

## TeamMate Update

The parasite trial data is all in and is being analysed. Round 5 is about to begin and with this round we are ready to deploy our Heyrex collars and monitors. Approximately 50 base stations and 100 collars will be installed, getting us some around the clock data for some of our TeamMate dogs. Thanks to our partner, the Massey University Working Dog Centre, a university student will be available to help us get the equipment up and running.



# Oh How Now Down Cow

It does feel as though autumn has come early this year. At the time of writing in mid-March, South Canterbury has had a couple of cheeky light frosts and some good rain across the province which should set things up well going into April – shorten the irrigation and bring associated power savings for the season!

As growth and cows alike wind down for the season, many operators will be focusing attention on getting those early calving light condition score cows back into optimal condition for the winter. We have noticed as an industry the widespread adoption of fodder beet feeding systems and have had very good success with ad lib feeding (post a slow and gradual transition of course!) across tens of thousands of cows. We can demonstrate and achieve excellent BCS gain over the winter and with a good growing season there is sure to be a considerable surplus of crop available for cows over the winter. This places the operators into a tricky situation as cows going into the spring over-conditioned present a significant issue with increased incidence of metabolic issues and ketosis. This was demonstrated this past spring with many farmers and vets alike reporting increased metabolic issues, this associated with the longer covers on farm (poorer feed quality) also exaggerated the issue which led to considerable BCS loss across many farms in the mid to late spring period and especially going into mating as well.

It is important that managers with good winter feed supplies available utilise the time now, as

we run into dry off, to get cows to an optimum BCS but also tighten up the spread of BCS and reduce the opportunity for cows to be over-conditioned come the spring. This means strategising feeding options with cows going into dry off at BCS 5 and above, placing these cows on a restricted or poorer quality feed diet over the winter and running cows in mobs based around expected calving date but also potentially over-conditioned cows as a separate mob on their own.

There are increasing numbers of farms which also experience small numbers of down cows in the late autumn period; these farms tend to be relatively high producing farms (500+ kg MS/cow) with excellent feed quality going into the late April and May period. These down cow episodes tend not to be associated with severe weather events either as we do see, from time-to-time, southerlies pass through the region which result in one or two down cows the following day. These autumn down cows respond well to calcium in the vein and appear to be typical down cows but just not in the spring, thus supplementing with dusted calcium at 100 to 200 g/d/cow can be strategically used to reduce the risk of calcium issues to these high lactation production herds. There needs to be more work performed to understand the reasons for why we see these issues at a time where calcium intake from the pasture source along with bone reserves should be sufficiently adequate to maintain demand. An obvious explanation is that these high production cows are effectively “mining” their

calcium reserves (bones) over the season resulting in a calcium shortfall at the end of the season. The mobilisation of minerals in all animals is very complicated and our understanding from the literature that I have read says this should not be the case. Phosphorous of course too is another issue which appears to be associated with fodder beet feeding and we now talk of “mining P” in cows and supplement DCP over the winter and in some cases throughout the milking season. Cows certainly respond well to P supplementation. There is some work being conducted to evaluate and to understand the causes for apparent P deficiency which we see in cases of creeper cows, diagnosed PPH in several farms in the winter and heightened milk fever cases in the spring. Utilising strategic DCP (or a P equivalent), available and dosed at around 50 g/c/d, seems to work very well in lessening the apparent P deficiency issues in the spring.

Taking some time to strategically utilise effective supplements (mineral or feed) to ensure cows are set up well for the winter and spring is important. Focusing attention to assuring all your cows are a consistent BCS at dry off will go a long way in lessening issues of overfat cows in the spring; so too with using mineral supplement options to minimise the effect of apparent deficiency.

Craig Trotter  
Centre for Dairy Excellence, Geraldine



# The Dry Off Period: Things to Remember

As we approach the end of another season, it is time to start considering the steps to take in order to have a successful and stress-free dry off and winter period.

## Before...

Remember to have the mineral status of the herd and heifers checked. Liver biopsies are by far the best way to get an idea of the copper and selenium status of these two groups. Both dropped-hock syndrome (sciatic palsy) and spontaneous humeral fractures (broken shoulders) are becoming more and more prevalent each spring and in many cases have been linked to very low copper levels. The incidence of retained membranes and the flow-on effects will be much higher in herds with low selenium levels. The copper and selenium levels in the animal can drop dramatically over the winter and it is important that the herd is dried off with the necessary reserves. Liver biopsies should be done at least a few weeks prior to dry off to allow adequate time to administer any required mineral supplements.

A simple abamectin pour-on will protect the herd against lice for the winter period and can also improve BCS gain by clearing any sub-clinical worm burdens. This can be administered anytime in the days leading up to dry off as there is no milk withhold period. Remember there is a meat withhold so avoid treating cull cows.

Make sure all cows have received their leptos vaccine booster. It is important that herd immunity to leptospirosis is maintained in order

to protect your family, staff and animals. Do not forget the young stock boosters according to your animal health plan.

If you have been experiencing high stock losses in winter due to sudden, unexplained sporadic deaths, consider boosting herd immunity to clostridial disease using Covexin 10, Ultravac 5-in-1 or Ultravac 6-in-1. This has proven beneficial for many herds wintering on beet.

Cows producing less than 10 L per day will not require any dietary modification prior to drying off. If production is higher, restricting ME intake in the week leading up to drying off will prove very effective in lowering production. Seventy to 80 MJ ME will provide maintenance energy for the cow and her foetus. Only once the cows have stopped bagging up after dry off can energy intake be increased to requirements for BCS gain – this usually takes around seven days. Cows producing 5 L or less should be dried off as soon as possible in order to reduce the risk of inhibitory substance grades in the spring.

Once-a-day milking may be considered alongside reduced feed intake to help to shut down the herd, but is not a necessary step and could push the bulk tank SCC higher. Avoid skipping days.

And finally, do not restrict water intake.

## ...After

Cows should be dried off onto clean paddocks and must be kept away from the shed to avoid

any milking stimuli. Walk through the herd daily looking for any signs of clinical mastitis and monitor the progress of udder involution.

The dry off period presents many complex challenges: The cows need to be kept away from the shed and on clean paddocks but you need to load them onto trucks from the yards at the shed – when is it safe to do so? You need to walk the herd 15 km up the road to the run-off, do you do this straight after dry off, 24 hours later, seven days? You have half-transitioned onto a full beet allocation, how long can you keep the cows off beet before the transition needs to restart? What allocation should they restart on? There are many complex scenarios and it will be highly beneficial for you to discuss your particular challenges with your Vetlife vet.

Reon McMurtrie  
Vetlife Ashburton





# Selective Dry Cow Therapy

Selective dry cow therapy (DCT) is where individual cows are selected to receive antibiotic DCT at dry off based on their individual data, and the rest are treated with a teat sealant. It is intended to reduce antibiotic use and reduce the likelihood of antibiotic resistance. Incidentally, it also increases the length of protection the cows get from new mastitis infections during the dry period so can cause a reduction of clinical mastitis in spring. A number of our farms did this successfully last year and we are keen to encourage more of you to give it a go.

Historically you may remember that DCT was initially developed to cure sub-clinical infections over the dry period. Over time they were altered to help prevent new infections as well as cure them. As a result DCT products were used both for treatment AND prevention. More recently Teatseal has had great success at preventing new infections; you may have seen this yourself in heifers. Teatseal lasts much longer than antibiotic and, given dry period lengths in New Zealand are commonly 80 to 90 days or longer, it is still preventing infections around calving time when the antibiotic tubes will not be. Given that there is now an alternative to antibiotic for preventing mastitis infections in the dry period, we should aim to not be using dry cow antibiotic any longer to PREVENT infections during the dry period, only to TREAT them. This means that cows who have no infection at the end of lactation really only need to receive teat sealant at dry off.

So how do you know if your cows are infected at dry off? Ideally you need to be doing four individual cow somatic cell count tests, and it is best if two or more of these are towards the end of lactation. Then, any cow that has not had a cell count of over a certain level for all of these tests, and also has not had a clinical case during lactation, should be considered uninfected and therefore eligible for teat sealant alone. This "certain level" should be set depending on your farm, your cell count history and your preferred level of risk but will probably be somewhere between 150 to 200,000 cells/ml.

Not every herd will be able to do this, if your bulk milk cell counts are too high, then blanket DCT may still be needed. You also need to have some individual cell count data and good records of clinical cases during lactation. The other important factor is you need a team of people at dry off who are trained and able to insert teat sealant with scrupulous hygiene. There is a risk of killing cows if pathogens are introduced into the udder with teat sealant at dry off and this must not be underestimated.

Based on statistics from DairyNZ, 67% of farms in North Canterbury and Otago currently herd test whilst around 58% in South Canterbury do. In Canterbury, the herd average for cell counts is 172 and in Otago is 163. Based on these statistics, there should be a large number of farms eligible for selective DCT. We believe last year 25 to 50% of Vetlife farms used selective

DCT to some extent, this is great but we still have a long way to go. If you herd test, have reasonable BMSCC and low numbers of clinical cases then this is definitely an option for you. If you do not herd test then you will probably have to use blanket DCT this year but please think carefully and consider herd testing next season so you can use selective DCT in the future. Another alternative to the traditional blanket antibiotic treatment is combination treatment (Combo). Combo is where you use a teat sealant along with an antibiotic-containing dry cow tube. Perhaps get in touch with your Vetlife vet to see which options may be best for you.

Hayden Ferriman, Ashburton, has been using selective DCT for two years now on his 720 cow, crossbred herd. His cell counts used to sit at around 60,000 cells/ml and he did not have a problem with clinical cases so he was in a good position to try selective DCT. In his first year, he used teat sealant alone on some cows and Cepravin on the others. Last season he used teat sealant alone in 75%, teat sealant and Cloxamp (short-acting dry cow) in 13% and teat sealant and Cepravin in the remaining 11%.

*Hayden says, "Cell counts are slightly higher this year (80,000 cells/ml) but that could be down to any number of things. In the first year of doing it, it was fairly obvious our clinical cases in spring were from the Cepravin-treated cows, not the teatsealed ones, and then this year, when we teatsealed around 75% of our*





*cows, clinical mastitis was very minimal in spring compared to previous years. I certainly wouldn't go away from teatsealing again. If people are considering this though, it's important they don't cut corners. I've heard of people losing cows when it's not done properly. In the first year, I'd recommend getting vets or vet techs to come help them to make sure it's done properly. We do a maximum of 150 to 200 cows per day with six people to ensure we don't have issues."*

I believe Hayden's last comment is very important. Hygiene is paramount when inserting teat sealant as the effects can be catastrophic if it is not perfect. At Vetlife we can provide assistance at dry off in the form of staff training and supervision at your first dry off session or even assist directly with insertion so please do get in touch if this interests you. Another interesting point on Hayden's farm was that the percentage of clinical cases this season to date was 9.4% of cows that had Cepravin or Cloxamp but only 5.5% in teatsealed cows. This may well be because the cows treated with antibiotic were higher risk in the first place but in spite of this it does show on his farm that the 75% of cows he used teat sealant on did not suffer high rates of clinical mastitis this season.

Amy Avery  
Vetlife Temuka

## A Reminder on Hygiene at Dry Off!

- Plan ahead and employ plenty of people to be available when drying off.
- If using teat sealant on its own for the first time, get your Vetlife vet to come out and help (even just for the first hour).
- Dry off small groups of cows at once.
- Do not place tubes directly into water to warm them up - pseudomonas risk!
- Mark cows prior to treatment.
- Clean the teat and insert tubes one at a time (rather than cleaning all the teats then inserting).
- Use cotton wool soaked in spirit to thoroughly clean teats, this is better than teat wipes.
- Use partial insertion technique when inserting tubes.
- Thoroughly spray teats with freshly made teat disinfectant at the strongest recommended concentration.
- Record cow ID, date and product details for all treatments.
- Put cows in clean areas immediately after administration and ensure cows remain standing for two hours.
- Graze cows in clean, dry paddocks for the next 14 days.
- Avoid transport or walking cows for long distances between two to 14 days after dry off. If they must be transported move within 24 hours of dry off before the udder becomes swollen.
- Observe cows daily in paddock for swollen quarters.
- Any swollen quarter should be checked manually, secretions that are runny, clotty or cloudy may indicate mastitis.
- Check cows for signs of sickness (difficulty walking, off feed etc.).

Amy Avery  
Vetlife Temuka





# Teatsealing in Heifers

Autumn is here and it is time to start thinking about your rising two-year-old heifers coming back on farm. These beautiful girls are your new herd genetics. You have spent the past two years making sure they are healthy and well-fed. You do not want to waste all that time and money by having them get mastitis at calving! Using a teat sealant product before calving can greatly reduce the incidence of heifer mastitis at calving and into the first part of lactation. Teat sealant reduces the risk of production losses associated with clinical and sub-clinical mastitis at calving.

Teat sealant replaces what the udder attempts to do naturally, by making a plug that blocks the teat canal and stops pathogens entering the udder. The main ingredient in teat sealants is an inert substance called bismuth which acts as a barrier to physically block up the teat ends. Heifers will try to do this naturally with a keratin plug but often not well enough to stop the bacteria invading the susceptible swollen udder at (or before) the heifer's first calving.

There are many New Zealand-based studies that illustrate the efficacy of using a teat sealant product. Parker et al. (2008) have shown a 74% reduction in the risk of intramammary infections and a 70% reduction in clinical mastitis cases in heifers in the first five days post-calving.

Sealing the teat is ideally done approximately eight to four weeks prior to calving, but can be executed earlier or even performed up to one

week before the heifers calve. Teat sealant provides protection from the moment of insertion. The sealant is then removed by hand stripping at calving prior to the first milking (10 to 12 times per treated quarter is recommended); there is an eight milking withhold on teat sealant, and the milk must not be used for human consumption. Sometimes there is confusion in the shed with teat sealant being mistaken for mastitis. Teat sealant products will ball and leave a waxy residue in your hand when rubbed between your fingers. For this reason as well, it is important to change your milk filter sock often as the residue will also catch on this.

The most important thing to remember about teatsealing is that good hygiene is paramount. Gloves must be worn and every teat cleaned with meths-soaked cottonballs or teatsealing teat wipes until the wipe/ball comes away clean. Gloved hands are washed and dried between every heifer, and gloves are changed regularly. There is no antibiotic in teat sealant, so if any dirt gets into the teat there is nothing to kill it. You would just be introducing infection and sealing it in. For this reason we recommend that any teat sealant being used in maiden heifers is inserted by one of our Vetlife teatsealing teams. The consequences of not doing things properly can mean lost quarters and even heifer deaths.

Teatsealing can be a scary time for the heifers, so Vetlife recommends training your heifers through the shed a few times prior to the day of

teat sealant insertion. Teatsealing through a milking shed can come with certain challenges and heifers are often at a grazing or run-off block away from the main farm, so Vetlife has a number of teatsealing trailers that can be used to teatseal heifers through a set of cattle yards. Farmers will need to provide at least three staff to help load heifers and support the teatseal team. If the teatsealing is being done on the milking platform we ask that you have the hot water turned on for the day. If we are teatsealing through cattle yards that we have not used before it is a good idea to get one of our Vetlife vets or technicians to come out before the big day to make a plan for how best to fit our trailer into your setup.

After the heifers have been treated it is important that they are not left to stand on a feed pad or in a race, let them walk quietly back to a clean paddock.

If it is an excessively wet day, we may postpone the teatsealing as treatment should not be performed if dirty water is running down the udder.

For further information about teatsealing your heifers please contact your local Vetlife vet.

Fleur Chapple  
Vetlife Temuka





# The Inconvenience of Antimicrobial Resistance

Antimicrobial resistance is an ever-worsening problem that many of us, myself included, have often ignored. This may be because we feel we are playing too small a part to do any good or it may simply be down to a lack of understanding. I am certainly guilty of having been presented with a sick cow, with various non-descript signs, and giving her a shot of antibiotic “just in case” and given that much of the time it appears to work I have continued to do it. At least I did until fairly recently. My stint back in the United Kingdom opened my eyes to different approaches to this cow, and I was pleasantly surprised to find both farmers and vets were starting to only give antibiotics to animals that had temperatures or where there was a fairly certain diagnosis of infection. Instead, anti-inflammatories such as Metacam/Ketomax/Flunixin/Tofedine were much more heavily relied on, and still seemed to produce the desired effect, i.e. said cow got better, without the need for antibiotics!

Antibiotic use in production animals in New Zealand (NZ) has been estimated to be the third lowest in the world. However, this estimate is in terms of crude antimicrobial tonnage compared with crude livestock biomass i.e. total amount used. There is not much information on how NZ compares to other countries with regard to the classes of antimicrobial used. You will be aware, I am sure, that there are many different types of antimicrobial out there. Some of these antimicrobials have been listed as “critically

important antimicrobials” (CIA) for human health. These should be the last line of defence in animal infections, however the Ministry for Primary Industries (MPI) antibiotic sales analysis from 2011 to 2014 has shown that, in this period, all four classes of CIAs had increased sales. These increases were up between 18 to 55%, so not insignificant either. It is vital we do our best to preserve these drugs for human health until an alternative can be found.

Critically important antimicrobials include drugs such as Tyloguard, Excede, Marbocyl, many of which I am sure you have used and/or had recommended to you by your vet. For all of these drugs there are good alternatives to their use and we should now be making every effort to use these.

Resistance has been shown to be far more severe in countries where they have been fairly lax in their attitude towards antimicrobial resistance over time, for example in Europe, more antimicrobial resistance is seen in Italy and Spain than is seen in the Scandinavian countries. Therefore, if you are using heaps of CIAs on your stock then it is likely resistance in NZ may go the same way.

So, how do you make changes to the types of antibiotic you are using without having a negative effect on the animal’s welfare or your profitability?

Here are a few examples to consider:

- Do you use Tyloguard for mastitis cows? If the answer is yes, then please reconsider. Tyloguard is mostly used out of convenience in cows with mastitis in several quarters, it often is not the best antibiotic for the job. If only two quarters are affected perhaps you could consider tubing her, or alternatively using injectable Mamyzin or Penethaject which give comparable cure rates to Tyloguard.
- Excede LA should be a big NO NO these days. I fully understand why you do not want to hear this – a one-off, nil milk withhold antibiotic that is great for retained foetal membranes and metritis when you are flat out busy calving – but this really is another drug we should avoid. As an alternative, Cephalexin and Efficur are both nil milk withhold, and are a far better choice ethically. Unfortunately, you do have to repeat the treatment though. Even better than this, if the cow is a fresh calver and you do not need to worry about withhold, then Intracillin or Betamox are also valid choices.

If we all work together, we will be able to reduce our antibiotic use and know that we are doing our part to try to reduce antimicrobial resistance. This is for everyone’s benefit.

Amy Avery  
Vetlife Temuka

## Nitrate Poisoning

In order to grow, a plant takes nitrates up from the soil and then photosynthesis converts these nitrates into protein. Unfortunately, if too much nitrate accumulates in a plant it becomes toxic to grazing stock.

Nitrates are converted to nitrite in the rumen and when nitrite is absorbed into the bloodstream it affects the red blood cells preventing them from being able to carry oxygen through the body. Affected animals may breathe faster than normal and often have the appearance of being drunk, drooling and staggering around. If you were to look at the inside of a cow’s vulva you may see a muddy brown colour. Sometimes you will just find sudden deaths.

If you think you have a case of nitrate poisoning, ring your local Vetlife clinic immediately and let them know what you suspect. Animals should be moved off the break and given some roughage; those that cannot walk will require an antidote given into the vein and can die very quickly without it.

The following factors can be associated with excess nitrate accumulation:

- Dull overcast days.
- Frosts.
- Over-application of fertilisers or effluent.

- Young rapidly growing plants e.g. newly sown ryegrass.
- Brassicas.
- Cereals e.g. oats.

Fortunately there is a test that can be done to check that nitrate levels are low enough that a plant can be safely fed but care does need to be exercised so that the sample is representative of the paddock. Walk the paddock/ area to be grazed and collect from several areas. Walk in a zig-zag and stop at every corner and sample about 500 g of the sward. Collect the entire length of the plant as nitrate levels can be different in the stem compared to the leaves. Cut down to grazing height (about 5 cm). Aim to make at least five and preferably 10 cuts. Put all the sampled pasture into a bag and mix thoroughly so you get a representative sample of the whole paddock. Bring about 0.5 to 1.0 kg wet weight of the THOROUGHLY mixed sample into your Vetlife clinic.

The best time of day for sample collection is early morning, as close to sunrise as possible when the nitrate levels will be at their highest.

Similar for crop but it is often impractical to bring in 10 bulbs/whole plants. Aim for a minimum of three taken from different parts of the grazing area.



There are a few tactics that can be used to reduce the risk of nitrate toxicity:

- Fill animals up on a lower risk feed first so they do not go on hungry e.g. mature pasture, silage or straw.
- Feed a long narrow break so animals spread out and intakes are more controlled.
- Wait until the crop has been exposed to sun for a few hours, especially if there has been a frost.

If you have any further questions give your Vetlife vet a call, and if there is any doubt, get your crop tested before feeding. It is just not worth the risk!

Jess McDowell  
Vetlife Temuka

# Gypsy Day

In an ideal world everyone is happy in their job and never wants to leave. However, we do not live in an ideal world and many farmers will shift between farms during their dairying career. Some will be moving for a change of scenery, a promotion within the industry or just a new challenge. Others may be fed up, and be leaving on less than desirable terms with their employers. No matter what the reason for leaving there is information which should be made available to the next employee on that farm regardless of circumstances.

As veterinarians, we are not concerned with whether the fences were fixed or the milk lines cleared before someone left however, it is not fun when we are trying to figure out if animals are up-to-date with vaccinations or what dry cow they received. So if you are leaving a farm, before you do so, please take the time to check the following is recorded on, at worst, paper but even better on MINDA for the incoming farmer.

- **Vaccinations**  
Write them all down. Vaccinations such as 'lepto', if not done on an annual basis, pose a risk to humans. Ensure you have dates for all classes of stock.
- **Dry cow therapy**  
Ensure every cow has recorded what dry cow product it received and what its dry off date was.
- **Trace elements (selenium and copper)**  
Record what was given at dry off (product and date). Make note if cows need further supplementation through the dry period.
- **Drenching**  
Make note if this has happened and with what product. This is important when knowing about meat withholdings for bobby calves.

- **Three-titters**  
If you are keeping these in the herd, please remember to note these animals down as well as the quarter affected.
- **Calving dates**  
This should be a no brainer, but do not forget to note any early cows where a bull may have got in before the planned start of mating.
- **Young stock**  
Ensure you have a young stock plan in place that is easy to follow and that if anything has not been done, then it is noted.

Hopefully you all planned to have this information easily available to the new manager. Just remember what goes around comes around.

Olivia Sutton  
Vetlife Dunsandel

## It is Time for a Fodder Beet Checklist!



Fodder beet is widely used as a shoulder supplement and as a wintering main diet these days. This is because fodder beet allows operators to reduce the cost of importing other types of supplements for shoulder feeding (spring and autumn) and achieve BCS targets for calving. However, care needs to be taken at the time of introducing the crop to stock as fodder beet is high in sugar content. Below are some of the main points for fodder beet graziers to remember this year.

For lactating cows, it is important to:

- Know the total amount of dry matter of fodder beet offered on a daily basis to the cows. Keep in mind that the recommended maximum amount is 5 kgDM/cow when the remaining of the diet is grass only.
- Ensure all cows have access to the beet at the same time. This will minimise the risk of acidosis as all cows start eating at the same time i.e. do not let cows go onto the fodder beet crop as they walk out after milking. They should first go to a grass paddock during milking then go onto the fodder beet crop as a single herd to avoid individual cows eating more than their allocated quantity.
- If beet is lifted and fed out via the silage wagon used on a grass paddock, spread the bulbs all over the paddock or perhaps even better, use the edges of the paddock to minimise damaging the grass. Cow's graze

fodder beet differently compared to grazing grass and spend quite a long period in the same spot.

For dry cows, it is important to:

- Assess BCS individually before animals are put onto the crop. This will provide a starting point for the BCS target at calving time. The recommended BCS at calving is 5.0 for adult cows and 5.5 for heifers.
- Know the crop yield before the cows start grazing, especially the section used for transitioning onto the crop. This allows you to know how much fodder beet is in front of the cows and ensures there is little risk of over-allocation of the fodder beet during the transition phase and the associated risk for acidosis. Get an independent company to carry out the assessment to avoid bias.
- Work on a transition plan before putting stock onto the crop. Calculate daily allocation based on the crop yield measured by an accurate assessor.
- Secure the correct amount of supplement for the herd. Avoid running out of supplement as this will have an impact on the animals which may result in over allocation of fodder beet to the herd. Keep in mind that every cow needs to have access to the supplement to avoid issues.
- Use palatable supplement at the start of transition and slowly reduce the amount each

day. It is also important to introduce the 2 kg of low quality supplement that will be used for wintering from Day 1.

- Use one metre per animal for facelength, i.e. 200 cows get a facelength of 200 metres. A headland of 10 plus metres is also important to ensure there is sufficient room for the herd to move around in the early days of the transition phase.
- Constantly monitor the stock, especially through the transition period.

For either lactating or dry cows seek professional and experienced advice if things are not looking quite right. Feel free to contact us if you wish to discuss the utilisation of fodder beet in your dairy herd this season. Please ensure that the transition phase is managed well as this is where 99% of the issues develop post dry off. Getting it right or wrong sets the scene for mob performance for the remainder of the winter and, in extreme cases (where it goes wrong), may further result in issues for affected cows even into spring. Getting it right will ensure your cows are at a good BCS at calving time setting them up to perform well in the season!

Bernardita Saldias  
Centre for Dairy Excellence, Geraldine





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# Meet the Vetlife Team of Veterinarians in North Otago



**Ivan Holloway**  
Director and  
Shareholder  
Vetlife Oamaru



**Belal Sahlab**  
Veterinarian  
Vetlife Oamaru



**Katie Ball**  
Veterinarian  
Vetlife Oamaru



**Emily Webb**  
Veterinarian  
Vetlife Oamaru



**Hayley Shaw**  
Veterinarian  
Vetlife Oamaru



**Merlyn Hay**  
Veterinarian  
Vetlife Oamaru



**Rebecca Christie**  
Veterinarian  
Vetlife Waikouaiti



## Comments and feedback *We value your feedback. Please feel free to comment or lodge a complaint in confidence on our services, advice and products.*

**Mid and North Canterbury Raylene Clement**  
P 03 307 5195 | M 027 557 3619  
E [rjcllement@vetlife.co.nz](mailto:rjcllement@vetlife.co.nz)  
Vetlife Ashburton, 4 Seaford Road,  
Ashburton 7700, PO Box 161

**For account concerns please in the first instance contact: Jodi Cocking**  
P 03 687 7170 | E [jodi.cocking@vetlife.co.nz](mailto:jodi.cocking@vetlife.co.nz)  
Head Office, 82 Sophia Street,  
Private Bag 71000 Timaru

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**South Canterbury and North/Central Otago**  
**Richelle Bodman**  
P 027 204 7431 | E [richelle.bodman@vetlife.co.nz](mailto:richelle.bodman@vetlife.co.nz)  
Head Office, 82 Sophia Street,  
Private Bag 71000 Timaru

**Vetlife Alexandra**  
P 03 448 8115 F 03 448 7277 E [alexandra@vetlife.co.nz](mailto:alexandra@vetlife.co.nz)

**Vetlife Ashburton**  
P 03 307 5195 F 03 308 2452 E [ashburton@vetlife.co.nz](mailto:ashburton@vetlife.co.nz)

**Vetlife Banks Peninsula**  
P 03 325 1006 F 03 325 1053 E [littlriver@vetlife.co.nz](mailto:littlriver@vetlife.co.nz)

**Vetlife Culverden**  
P 03 315 8123 F 03 315 8125 E [culverden@vetlife.co.nz](mailto:culverden@vetlife.co.nz)

**Vetlife Dunsandel**  
P 03 325 4155 F 03 325 4156 E [dunsandel@vetlife.co.nz](mailto:dunsandel@vetlife.co.nz)

**Vetlife Fairlie**  
P 03 685 8884 F 03 685 8085 E [fairlie@vetlife.co.nz](mailto:fairlie@vetlife.co.nz)

**Vetlife Methven**  
P 03 302 8603 F 03 302 8228 E [methven@vetlife.co.nz](mailto:methven@vetlife.co.nz)

**Vetlife Oamaru**  
P 03 433 0411 F 03 434 8059 E [oamaru@vetlife.co.nz](mailto:oamaru@vetlife.co.nz)

**Vetlife Oxford**  
P 03 312 4882 F 03 312 4190 E [oxford@vetlife.co.nz](mailto:oxford@vetlife.co.nz)

**Vetlife Pleasant Point**  
P 03 614 7777 F 03 614 7701 E [pleasantpoint@vetlife.co.nz](mailto:pleasantpoint@vetlife.co.nz)

**Vetlife Ranfurly**  
P 03 444 9700 F 03 444 9701 E [ranfurly@vetlife.co.nz](mailto:ranfurly@vetlife.co.nz)

**Vetlife Rangiora**  
P 03 313 7962 F 03 313 7968 E [rangiora@vetlife.co.nz](mailto:rangiora@vetlife.co.nz)

**Vetlife Temuka**  
P 03 615 7352 F 03 615 5254 E [temuka@vetlife.co.nz](mailto:temuka@vetlife.co.nz)

**Vetlife Timaru**  
P 03 684 8181 F 03 684 8180 E [timaru@vetlife.co.nz](mailto:timaru@vetlife.co.nz)

**Vetlife Twizel**  
P 03 435 0212 F 03 435 0213 E [twizel@vetlife.co.nz](mailto:twizel@vetlife.co.nz)

**Vetlife Waikouaiti**  
P 03 465 7613 F 03 465 8094 E [waikouaiti@vetlife.co.nz](mailto:waikouaiti@vetlife.co.nz)

**Vetlife Wanaka**  
P 03 443 6409 F 03 443 6408 E [wanaka@vetlife.co.nz](mailto:wanaka@vetlife.co.nz)

