

Meet the Vetlife team of Veterinarians in North Otago



Ivan Holloway
Veterinarian/Owner
Vetlife Oamaru



Katie Ball
Veterinarian
Vetlife Oamaru



Rebecca Christie
Veterinarian
Vetlife Waikouaiti



Hayley Shaw
Veterinarian
Vetlife Oamaru



Javid Ali
Veterinarian
Vetlife Oamaru



Jess McKenzie
Veterinarian
Vetlife Oamaru



Emily Webb
Veterinarian
Vetlife Oamaru

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 rjclment@vetlife.co.nz
Vetlife Ashburton, 4 Seafield Road,
Ashburton 7700, PO Box 161

North Otago Ivan Holloway
P 03 433 0411 | M 027 530 4645
E ivan@vetlife.co.nz
Vetlife Oamaru, 281 Thames St,
Oamaru, 9400

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South Canterbury Adrian Campbell
P 027 220 5559 | E adrian@vetlife.co.nz
Head Office, 82 Sophia Street,
Private Bag 71000 Timaru

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

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Vetlife Alexandra
P 03 448 8115 F 03 448 7277 E alexandra@vetlife.co.nz

Vetlife Ashburton
P 03 307 5195 F 03 308 2452 E ashburton@vetlife.co.nz

Vetlife Banks Peninsula
P 03 325 1006 F 03 325 1053 E littlriver@vetlife.co.nz

Vetlife Dunsandel
P 03 325 4155 F 03 325 4156 E dunsandel@vetlife.co.nz

Vetlife Fairlie
P 03 685 8884 F 03 685 8085 E fairlie@vetlife.co.nz

Vetlife Methven
P 03 302 8603 F 03 302 8228 E methven@vetlife.co.nz

Vetlife Oamaru
P 03 433 0411 F 03 434 8059 E oamaru@vetlife.co.nz

Vetlife Oxford
P 03 312 4882 F 03 312 4190 E oxford@vetlife.co.nz

Vetlife Pleasant Point
P 03 614 7777 F 03 614 7701 E pleasantpoint@vetlife.co.nz

Vetlife Ranfurly
P 03 444 9700 F 03 444 9701 E ranfurly@vetlife.co.nz

Vetlife Rangiora
P 03 313 7962 F 03 313 7968 E rangiora@vetlife.co.nz

Vetlife Temuka
P 03 615 7352 F 03 615 5254 E temuka@vetlife.co.nz

Vetlife Timaru
P 03 684 8181 F 03 684 8180 E timaru@vetlife.co.nz

Vetlife Twizel
P 03 435 0212 F 03 435 0213 E twizel@vetlife.co.nz

Vetlife Waikouaiti
P 03 465 7613 F 03 465 8094 E waikouaiti@vetlife.co.nz

Vetlife Wanaka
P 03 443 6409 F 03 443 6408 E wanaka@vetlife.co.nz



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ruralnewsletter

April 2015 | Issue 73



Protecting your assets for next season

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Pneumonia in lambs/hoggets

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New calf diseases seen on Canterbury farms



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Lighter ewes? Consider using drench capsules in the pre-tup or over the autumn

Traditionally the primary use for drench boluses in sheep is considered to be over the pre-lamb/lambing period.

Despite all the negative conjecture around enhancing drench resistance and other drawbacks, drench capsules have provided an enormously successful tool to the New Zealand sheep industry and offer a great continued source of help for the future i.e. they work and they are safe when used appropriately.

This autumn it could be that some of our ewe flocks have a "tail-end" of ewes with full mouths and that are otherwise good productive ewes.

Some of the very old original trial work around the use of drench capsules in ewes was done in the autumn. The original results demonstrated a real pick up in ewe body condition score (BCS) and a positive impact on reproduction.

Essentially, drench capsules in the face of a drought not only act on existing burdens but more importantly offset the energy cost in fighting ingested parasite larvae. That energy saving assists the ewe to gain BCS and catch up with her "non-capsuled" flock mates.

We are not advocating whole flock treatment, but the judicious treatment of light tail-end good ewes.

Regardless of adopting capsule use in the autumn, ewe flocks should be carefully monitored for internal gut parasites, both over the dry period and when it rains i.e. keep doing the faecal egg counts (FECs).

Often we overly blame poor quality tucker in a drought for poor ewe body condition and do not pick up that despite the drought we do have parasitism occurring. I think we think like this because we have been taught that the parasite lifecycle only operates under green conditions - it is not that simple and clean cut.

When it does rain of course it will create the ideal parasite lifecycle conditions so we need to be more careful again.

Anyway, as I write this article the challenges of farming are upon us. Many thanks to the many clients who continue with the attitude of "business as usual".

Best regards,
Adrian Campbell



Practice Principal
Adrian Campbell (Vet)



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New calf diseases seen on Canterbury farms

It may only be April but calving will sneak up fast and with that calves! Recently we have been informed about two conditions that were diagnosed in South Island farms in the last calving season and wanted to share these new diseases with you, so you can keep an eye out for them this coming season.

The first condition is caused by *Pasteurella multocida* type B. Most cases have been seen in weaned calves however there have been a couple of cases in calves before weaning, so do not exclude the possibility of this disease in your unweaned animals. In cases of the condition, previously healthy animals, have suddenly been found dead; or if alive they are found depressed, recumbent and with a high respiratory rate. Quite large numbers of calves can be affected: this is not just sudden death in one sick calf. Testing is available by taking samples from animals at post-mortem. However, if animals have been treated with antibiotics before testing then the test will be negative.

The second condition is called Sporadic Bovine Encephalomyelitis (SBE) and is caused by *Chlamydia pecorum*. Animals have increased temperatures and appear weak; they struggle to stand up and collapse on their back legs with stiffness and knuckling. They may also have a cough and nasal discharge. Some may even develop more substantial neurological signs such as blindness. All these signs continue to progress until they become recumbent and die. This disease has been seen in weaned calves only at this stage.

Both these diseases may affect large numbers of animals and will result in death if not treated. *Pasteurella multocida* type B kills very quickly whereas animals with SBE become progressively

worse over a week. They both look very similar on post-mortem so your Vetlife veterinarian may request that samples are sent away for testing to know which bacterial agent is present. There are antibiotic treatments available in both cases but these animals need to be identified early before the disease progresses. Control of an outbreak of both these conditions may involve blanket treatment of all calves in that mob. The

success of treatment is highly dependent on identifying these animals as quickly as possible. If you have any calves that are potentially displaying signs of these diseases then please do not hesitate to contact your Vetlife veterinarian right away.

Olivia Sutton
Vetlife Dunsandel



When the rain comes

We are heading into a dry looking March as I write this but with a bit of luck much needed rain will have fallen when you read this latest copy of the Vetlife newsletter. Sooner or later it is going to rain and there are a few animal health conditions that are worth considering when that happens.

Worms in sheep and calves

The dry summer has meant that worm burdens in stock and on pasture have been low this season which has been a bonus for productivity. However, the worms have been waiting it out as eggs on the pasture and egg levels can be very high especially around dung patches. When it does rain, mass hatching of these eggs can lead to very high worm challenges for stock which may have had relatively little prior exposure and so little immunity. This can be a particular problem if short re-growth is grazed (see below).

If stock have been sent off farm, make sure that they receive a quarantine drench immediately on returning so that resistant worms are not introduced to your farm.

Pasture growth

Although pastures may come away very quickly after a drought there are a few important points to note:

- A brown drought can be temporarily replaced by a green one. The first flush of growth often

has relatively little nutritional value in it and a very high water content. Grazing animals will often waste more energy than they can consume chasing every last watery green leaf and rejecting the supplement that they have been getting.

- Magnesium levels can be particularly low in this rapidly growing, watery grass. If the weather is cold and wet (hard to imagine but it will be at some point) then the risk of grass staggers (magnesium deficiency) is real. Poorly conditioned and lactating stock are especially vulnerable. Dusting and water supplementation are easy and cheap.

- Weed species and broad leaves sometimes respond faster than perennial ryegrass when a drought breaks. Phalaris (bottlebrush grass) can be a problem in this situation as it tolerates dry conditions and hard grazing and bounces back quickly when it rains. Phalaris toxicity looks like ryegrass staggers but is more often fatal.

- Rapid growth after a drought can also lead to bloat if dry matter content is low, and nitrate toxicity in brassicas and ryegrasses - especially Italian annuals. A lot of this has been put in this year as a salvage crop. A good idea but test the crop before you feed it.

All these issues can be avoided by transitioning animals onto fresh growth slowly and continuing to offer supplementary feed whilst you do so. Judicious testing for nitrates and supplementation with magnesium should also be used. Transitioning onto fresh growth will also help the plant as it too is recovering from the drought. During a period of drought the plants will have developed a deep root system with the bare minimum of green material above the surface: browned off. When the rain comes, the plant responds by drawing on the reserves it has in its roots to make fresh green material above ground. If this is eaten too quickly or too much, the plant is unable to recover and has nothing left to produce fresh leaves. Do not graze off this first leaf but rather allow the plant to recover before establishing a normal round. So use a long rotation and a higher pre-grazing cover than normal.

Once the grass is fully growing, then maintaining pasture quality becomes an issue, especially as many farms have de-stocked over the summer. Making bailage can replenish winter feed supplies where a poorer quality product may be less of a problem and it can also help if weed dominance of swards has become an issue.

Andrew Bates
Vetlife Temuka



Hot off the press from the LUDF!

A quick glance of weekly farm data	17th Feb	24th Feb	3rd Mar	10th Mar
Pasture growth rate (kg DM/d)	48	96	90	79
Pre-grazing pasture mass (kg DM/ha)	3000	2970	3408	3769
Average pasture mass	2346	2598	2709	2759
Post-grazing pasture mass	1650	1650	1650	1650
Pasture quality (MJME/ kg DM)	11.8	12.1	11.5	-
Pasture offered (kg DM/cow/d)	19	12.6	19	19
Pasture silage offered (kg DM/cow/d)	-	6	-	-
Milk solids production (kg MS/cow/d)	1.81	1.79	1.78	1.72
Milk solids production (kg MS/ha/d)	6.19	6.12	5.48	5.48
Herd mean body condition score	-	4.18	-	4.16
Monitor group LW (kg)	496	493	494	496
Bulk milk somatic cell count ('000)	159	151	177	208

For more detailed information go to www.siddc.org.nz



The next LUDF focus day is 7th May 2015. Book into your diary now!!

May I ask ewe a question?

The extensive dry conditions have caused considerable issues along the South Island's east coast either with many ewes going to the ram lighter than they should ideally be or some operators needing to remove some of the capital stock from the farm to ensure they get through the tight times which are hopefully behind us now.

The body condition scoring of all capital stock (dairy, beef or sheep) is of course of primary importance. I know that advisors do tend to harp on about it, but it is extremely effective in ensuring stock perform well. It also allows the farm manager to gauge how well their stock are performing and provides opportunity to make the most from their capital stock!

Trevor Cook's article in the 2007, "Proceedings of the Sheep and Beef Cattle Veterinarians of the New Zealand Veterinary Association" provides quite good reading and a broad summary of some of the main results to date. From various publications (200 of them by the year 2000) such as, "Serious Solutions, Flock Master: A guide to feed planning" and articles from "Country Wide", the following relationships are quoted:

- The conception rate of a ewe increases incrementally with increased body condition score up to a condition score of 3.
- The performance of ewes conceiving in the first cycle increases up to a body condition score of 2.5.

- Increasing body condition score from 2 to 3 may mean saving 20 lambs from the weather per 100 twin bearing ewes lambing.
- Lambs born to ewes that maintain condition can mobilise brown fat better (and so keep their body temperature up).
- Ewes of condition score 3.5 at lambing produce colostrum for twice as long as ewes of condition score 2.5.
- Ewe milk yield is 80% higher in ewes of body condition score 2.7 or above compared to ewes of body condition score 2. This advantage decreases as feed allocation increases.

It is particularly those ewes that are in a state of body condition score of 2 and less that are most vulnerable and likely to perform poorly in comparison to their higher body condition scored cohorts.

Currently most operators will be doing their best to flush their ewes in preparation for tupping; this of course increases fecundity and potential lambs, particularly in the lighter ewes in the mob. Through focusing attention on the low body condition score ewes, you can make the most of the limited feed resource available and potentially make the greatest benefit; research data indicates that lower liveweight ewes (51 to 57 kg LW) growing at 100 to 150g/d three to six weeks pre-tupping will result in 17% more multiple bearing ewes versus heavier ewes (63 to 69 kg LW) having 8% more multiples.

The goal is to have ewes at a BCS of 3 at lambing. So, the aim of farmers should be to try and ensure they are at this state of body condition at scanning and if they are not, primarily multiple bearing ewes are split from the main mob and preferentially fed to ensure they reach a condition score of at least 3 come lambing time.

Through focusing attention on the lighter low body condition score ewes in your flock this autumn, you can make the most of when the rain finally does arrive and, if available, can supplement these ewes preferentially. There is quite a range of supplements available and, in particular, grain and meal nuts are used to feed ewes preferentially. Palm kernel expeller (PKE) is being widely used at the moment due to its lower cost of purchase; it is a good substitute for grass though managers do need to be careful with copper intake of the stock especially if they are consuming PKE over a long period of time.

Feel free to discuss ewe feeding and management post-mating and the use of supplements with your Vetlife vet or farm consultant. This is especially important to make the most of the potential limited feed available especially for the autumn and winter. Through utilising this feed most effectively, the biggest gains can be made to your bottom line dollar and flock productivity.

Craig Trotter
Vetlife Geraldine



Beef calves

Autumn is weaner-calf fair time and if you have invested good money buying calves then you want to ensure that their performance is not impaired by parasites and sub-optimal trace element levels. This applies to all young growing cattle including retained heifer replacement calves.

Recommended practice is a quarantine parasite treatment of bought-in calves upon arrival on farm. This treatment should be a combination that includes Levamisole to ensure that any endectocide-resistant Cooperia worms are eliminated. This approach is recommended for treating any retained calves on beef breeding properties also.

Ideally treatment options would range from triple-active oral drenches such as Matrix C to the combination pour-on Eclipse or the new combination injection Eclipse E. A combination of Dectomax and Oxfen C Plus is another way to get an effective triple into these calves at a modest price. The treatment product, type of stock on your farm and associated grazing regime will influence the frequency of ongoing parasite treatments. Talk to your Vetlife vet for advice on drenching programmes.

Copper and selenium are two important trace elements that can be production-limiting in cattle. We know from liver and blood testing of beef cows from inland hill country farms that copper and selenium levels will be low to marginal where no supplementation has been carried out. This will be reflected in the copper and selenium status of calves from these farms.

If calves are wintered on brassica crops such as kale, their copper and selenium levels will become further depleted even if they are adequate to start with.

Along with being low in copper and selenium, brassica crops contain chemicals called goitrogens which interfere with the uptake of iodine from the diet. Although iodine levels are unlikely to be low enough for long enough to effect growth rates in cattle they may have a negative effect on the onset of puberty and cycling in heifer calves.

Copper can be supplemented with injections or longer-acting copper oxide needles (bullets). Selenium can be supplemented with injections including a highly effective long-acting injectable form. Similarly iodine can be

supplemented with a long-acting injection called Flexidine.

As for parasite control programmes every farm is different so seeking advice from your Vetlife vet about the various trace element supplementation options would be time well spent.

Hayden Barker
Vetlife Pleasant Point



Pneumonia in lambs/hoggets

Pneumonia in young sheep is a complex disease involving several micro-organisms and their interaction with the host's immune system. Micro-organisms implicated include the bacteria *Pasteurella* spp and *Bordetella* spp, mycoplasmas and several viruses. These organisms are common in lung tissue and when the antibacterial defences are compromised then pneumonia develops. This may be an acute form with septicaemia and often death, or chronic resulting in permanent lung damage and usually pleurisy. Most commonly the disease occurs in late summer/autumn through to early winter.

Chronic non-progressive pneumonia occurs regularly on many farms and goes unnoticed until lambs are sent to slaughter. However outbreaks of acute pneumonia causing widespread coughing and some deaths often occur subsequent to a period of stress especially mustering and yarding in dry dusty conditions. Other stressors include post-shearing cold shock, post-dipping with deaths four to seven days later, lungworm and internal parasites and live shipping where ventilation is inadequate with toxic gas accumulation.

Acute cases may be found dead but most affected mobs will exhibit coughing especially when driven and many will have a runny pussy nasal discharge. Lambs may continue to die for four to six weeks or longer and many will be chronically unthrifty. There is usually pleurisy with adhesions and yellow fibrin in the pleural cavity while the lungs are dark red and solid. Chronic cases show lighter red/grey areas especially in the lobes of the lungs at the cranial (head) end.

Treatment with antibiotics is generally ineffective.

Prevention is aimed at minimising the predisposing factors by avoiding unnecessary stress. Thus yarding in hot dusty conditions should be avoided; however it is also important to maintain parasite control. Options include early morning mustering when cooler and some farmers in high risk situations dampen down dusty yards or use portable yards to avoid long periods of driving. It is also important to drive them slowly as coughing and mouth-breathing exacerbates the condition. All measures to maintain good animal health and nutrition need to be attended to.

Economic losses result directly from deaths but more importantly from reduced weight gains and wool production. Because the lung damage is permanent they never really recover and there have been instances of deaths during the second winter when under severe stress of lambing and snowfall. There are also the losses associated with condemnation and downgrading of carcasses.

Contact your local Vetlife vet where sudden deaths are occurring or excessive coughing is occurring for post-mortems and advice.

Chris McFarlane
Vetlife Dunsandel



Protecting your assets for next season

When dry conditions persist, de-stocking inevitably must occur. Breeding and replacement stock are the source of next season's income. With less stock, it is even more important to look after those remaining and aim to maximise their production next season. The costs associated with putting condition back on cows and ewes are usually more than the cost of buying in feed to maintain their body condition.

Whilst having to de-stock can be stressful and upsetting, it creates a good opportunity to cull poor performing animals. Look critically at udders and conformation and be sure to mouth breed ewes. Drought conditions result in increased tooth wear, so a ewe with worn teeth that would normally get a reprieve for one more year might be better culled now. If you do not usually pregnancy test your cattle, it would be a good year to consider utilising this tool. Empties can be culled as soon as possible. In addition, aged-scanning can be used to identify early and late calving cows, allowing them to be fed at different levels if you are able to run multiple mobs. Talk to your Vetlife vet about the appropriate timing for pregnancy testing cows on your property.

Consider early weaning of calves. It will allow the calves to be offered better quality feed, whilst the cows can be maintained on less expensive options. However, if you do not have appropriate feed for calves, they may do better left on the cows until your normal weaning date.

Weaning is the time to start clostridial vaccination programmes for your calves, if you have not already. Whilst it seems hard to imagine that animals are getting enough high quality feed to put them at risk of the likes of pulpy kidney, once the drought breaks this is a real possibility. And again, with a lot of properties having to explore the use of different types of feed from what they usually offer, animals have to adapt their guts as well. This adds further to the increased stress levels stock are already coping with.

While finances are tight it can be hard to justify spending money on animal health products, but when animals are under stress, maintaining good animal health is even more important. Stressed animals are less resilient to disease, and are also likely to have lower trace element status.

Selenium is an anti-oxidant and plays important roles in many body systems, so it is vital that animals are not deficient in selenium. Cobalt/vitamin B₁₂ is vital for efficient energy metabolism and can be limiting for growth, whilst copper is required for efficient feed utilisation and absorption. Iodine is crucial for lamb survivability and has a role in fertility in both cattle and sheep. Your Vetlife vet will be happy to discuss the options for supplementation on your property.

Essentially, our capital stock are doing it tough, and we need to do all that we realistically can to help them come through this season as healthy and strong as possible so that they are set up well to provide good returns next season.

Georgina McKerchar
Vetlife Fairlie



Milk sampling and culturing: a useful tool in culling and control decisions



being administered, which eventually results in a bigger financial burden. This article will examine the milk sampling process and provide information on the common types of bacteria causing mastitis.

The milk sampling process

- The milk sample collection process is undertaken before the cow has been milked.
- Clean gloves should be worn.
- Three to four streams of milk should be discarded from each quarter to decrease contamination from bacteria in the teat end.

• Any dirt or debris should be removed and the teat sprayed/dipped with teatspray. The teat is then dried with a clean paper towel.

• The teats should then be scrubbed (until clean) for 15 to 20 seconds with a cotton or cloth gauze swab with 70% methylated spirits; each quarter requires a new swab.

• If sampling all quarters, the furthest away teats should always be cleaned first to prevent cross contamination.

• The collection container can be opened and the lid kept in one hand, ensuring the inside of the lid does not touch anything.

• On a 45 degree angle, the container is held in the same hand as the lid, the teat is turned towards the collection container and milk is streamed into the container, you only need around 20 mL.

• The teat end should never touch the container.

• If sampling multiple quarters, sample the back teats first.

• The lid is placed back on.

• Always ensure the container is labelled with the cow number, quarter, farm and date.

• After collection place the container on ice or in the refrigerator.

It might sound like a lot of work for one sample but if these steps are not followed it is all too easy to take a contaminated sample and then the bacteria that grow will NOT be the ones that are causing the problem.

Once the sample has been delivered to your Vetlife vet clinic, technicians will process the milk by sampling the milk on MacConkey and blood agar plates.

Common types of bacteria causing mastitis

MacConkey plates are used to differentiate between gram-negative and gram-positive bacteria, such as *E. coli* (gram negative) and *Strep. uberis*, *Staph. aureus* (gram positive). A gram-negative bacterium is the only bacteria that will grow on MacConkey plates. Blood agar plates are used to detect hemolytic activity i.e. to differentiate *Strep. uberis* and *Staph. aureus*.

Staph. aureus lives inside the udder or on the teat skin and is commonly passed cow to cow at milking. These infections are difficult to cure and unless appropriate action is taken it can become a real problem in your herd.

Strep. uberis and *E. coli* live in the environment. These infections are common in wet weather and in the housed systems we are increasingly seeing. The bacteria can be introduced via poor treatment technique or from damage to the teat end.

To sum up, with sterile milk sampling techniques it is easy to diagnosis the bacteria causing mastitis. If no care is taken during the sampling, contaminants will grow on the plate, which leads to the farmer/vet being no further ahead.

Danielle Weeks
Vetlife Temuka



Blood agar - *Staph. aureus*



Blood agar - *Strep. uberis*



Blood agar - *E. coli*



MacConkey - *E. coli*

