



Veterinary Centre MoozNews

Metricures – Treat them early!



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Was the diagnosis right? Did the treatment work?

Was the diagnosis right?? Did the treatment work?? One of the big advantages we've had with the Allflex Collar cows last season was being able to monitor the effectiveness of treatment. Sick cows tend to have a drop in rumination rates, and we can judge how well they respond by how quickly their rumination returns to normal levels. In cases where they don't climb, we need to look at other treatment options.

On the back of this one of our key findings was that endometritis (uterine infections) was one of the key drivers of low rumination in sick cows post-calving. The use of a Metricure in these cows consistently showed the best rumination recoveries and tended to keep the rumination rates up compared to the use of systemic antibiotics (injectables like Engemycin / Bivatorp / Betamox). The graph below shows a typical response post-treatment (note the red line indicates the target rumination level of 400 minutes per day).

We have historically thought of endometritis as a localised infection in the uterus. While we've known it causes reduced reproductive rates because of

a poor uterine environment, we haven't traditionally expected to see an effect at the "cow" level. However, the fact that we're seeing reduced rumination rates in these cows indicates that the line between endometritis (local infection) and metritis (systemic infection) is a bit blurrier than we'd thought.

This anecdotal data further backs up the results of a 15,500-cow study in the Waikato looking at the timing and treatment of endometritis with Metricures. This compared early intervention with a single intervention 3 weeks before the PSM. The results of the study showed that:

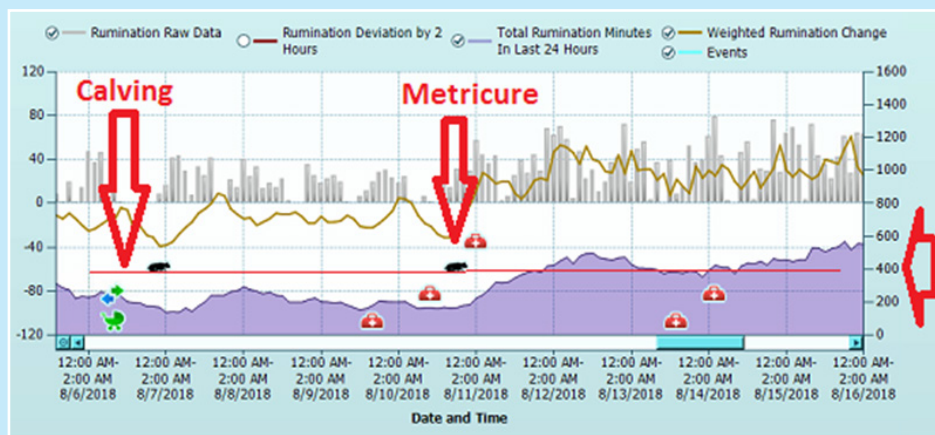
- The optimal time to diagnose and treat was between 7 to 22 days post calving
- Cows treated early (vs late) had a 9.6% higher 6WICR, 3.25% lower Empty Rate, and conceived on average 8 days earlier
- The level infected remained very stable between days 7 and 22. This means that if a cow was infected at day 7 it was likely to remain infected (so early treatment shouldn't significantly increase metricure use)
- By day 35 the ability to accurately diagnose infection was gone. We expect low levels of metricheck positive animals at this point (around 5%), but the

- ### In this Issue
- Metricures – Treat them early!
 - Downer Cows
 - Mylo – New Probiotic for Faster Calf Gut Development
 - Product of the Month - SELEKT
 - Preserving Colostrum Quality
 - Products of the Month - Winter Lice Control
 - Product of the Month - Multimin
 - UdderNews - Simple things for a busy time
 - Tailpaint Identification Groups
 - Bobby Calf Welfare
 - Transition Cows Management

reproductive figures on these "self-cures" show that there is still infection / damage

Ultimately, we want to avoid infection where possible. Talk to your prime vet about preventative measures including transition management, selenium, NEFA monitoring, calcium and magnesium, OAD milking, and Multimin use. However, the key for those cows that do get a uterine infection is diagnosing and treating early.

For those with collars keep an eye on your emails. The Vet Centre is taking part in a study to look at the rumination and reproductive response of cows given Metricures. We are hoping to find out what the impact of early (i.e 7-14 days) vs late diagnosis has on the cow and will be looking to enroll all of our collar farms within the practice to the trial. This is a great opportunity to get local data, with the findings from this trial presented back to the wider Veterinary Centre next year – watch this space!



Downer Cows

Luke Smyth BVSc
VETERINARY CENTRE OAMARU



Every dairy farm will experience some metabolic downer cow cases this spring and most are a relatively quick fix with metabolic treatment and up within a few hours.

But a significant number stay down for long periods. Any cow which has been down for over 24 hours requires good nursing to ensure a full recovery but this can be very labour intensive and time consuming.

It is important to understand that these cows are often not down due to the primary condition (i.e. milk fever) but are down due to secondary complications such as muscle injuries, nerve damage and compartment syndrome. This damage can occur within as little as 3 to 6 hours of going down, especially if the surface is hard and/or the animal is heavy. So, a cow needs to be got back on her feet quickly or managed appropriately to prevent this secondary damage.

Nursing of a downer cow should only be undertaken if the cow has a reasonable chance of recovery and a competent person is on hand, who is prepared to invest the time and energy in the care of the cow. This is an important animal welfare message. If you are unable or unwilling to provide a high level of care then euthanasia should be elected early in the piece.

Inadequate care of down cows is one of the most common animal welfare complaints from members of the public.

Research has shown that over 45% of downer cows can recover with good nursing, while 0% of cows will recover if very poor nursing is given!

- Ideally the down cow is sheltered and on clean, dry and soft bedding. Normally this means putting her in a calf shed. While the majority of down cows are nursed in the paddock, this is not ideal and she should at least have a cow cover put on her.
- Clean water and good feed should always be available. A cow should drink 40 litres a day and have at least 12-15kg of DM. A 1 litre bottle of Calstart or Headstart is equivalent to a kg DM.
- Longer acting anti-inflammatories such as Metacam and Rimadyl will definitely improve cow comfort and prognosis.
- Move the cow from side to side every 3 hours to ensure her weight is not always to one side and flex and extend the hind limbs each time the cow is moved
- Regularly milk the udder out by hand stripping, check she is not developing mastitis.
- Encourage the cow to rise, use hip clamps to get her to her feet only, never leave cows hanging in hip clamps.
- Regularly re-assess her progress and diagnosis. If you have any doubts ask for help.



Mylo – New Probiotic for Faster Calf Gut Development

Mat O’Sullivan BVSc
VETERINARY CENTRE Oamaru



In a continued move to try and avoid the use of antibiotics in calf rearing systems we have been looking at probiotics that can be used early in life to establish a healthy gut population. Mylo is an easy-to-use feed probiotic supplement (containing strains of Lactobacillus casei, Lactobacillus buchneri, and Lactobacillus paracasei) that improves calf growth and health. Mylo will accelerate the rumen and gut development (the gut actually weighs more) – with it you can wean calves around 10 days earlier.

Research from the University of Queensland’s School of Veterinary Science found calves fed 10mL of Mylo® per day were 8%, or approximately 6kg, heavier at weaning with the same feed intake. This weight difference continued beyond weaning.

Calf Dose
FROM
14.5c
per 10ml dose
per day

NOW Stocked at
Veterinary Centre

SELEKT™

Pump Complete

\$847.00

Incl GST

The SELEKT formulae are intended for delivery into the rumen, using a SELEKT cattle pump and drenching set

	Antacid	Fresh Cow	Off Feed	Restore
Use for rumen buffering	✓			
Following Caesarian section		✓		✓
For hydration				✓
Inappetance in early lactation			✓	
Reduction in the risk of ketosis		✓		
Ketosis recuperation				✓ if fluids needed
Following correction of left displacement of the abomasum			✓	✓
Reduction in the risk of milk fever/hypocalcaemia and ketosis		✓		

Preserving Colostrum Quality

We spend a lot of time talking about the importance of colostrum but there are some really easy things we can do **to look after** the quality once we've got it.

Measure gold colostrum with Brix refractometer; a **Brix value > 22%** means it's likely enough antibodies are present. With practice, it only takes 10 seconds to take a reading on your milk!

Ensure that milk buckets **stay clean by using lids on buckets**. Bacteria in faeces will immediately start degrading the antibodies in the colostrum. It's well worth getting in the habit of keeping it clean and being mindful of storage.

Antibodies in the colostrum will naturally start degrading immediately so **if not using the colostrum within 1-2 hours then strongly consider the following:**

- **Freezing gold colostrum** i.e. 1.5L soft drink bottles filled with gold colostrum. When defrosting, do it slowly in a water bath.
- OR if wanting to use in short term, **preserve with potassium sorbate**. It is very easy to do and we have good resources at our respective clinics to help with this. The mix can then be :
 - Make a 50% solution of potassium sorbate and water.

Potassium sorbate	And add this mix into the according water volume and stir.	Water
50g		100mL
500g		1L
1kg		2L
5kg		10L

- Add this potassium sorbate solution and mix into colostrum to make a 1% potassium sorbate / colostrum mix.

Use the potassium sorbate solution	And add this mix into the according water volume and stir.	Colostrum
100mL		10L
1L		100L
2L		200L
10L		1000L

If you are unsure on your colostrum quality management, get us to come and take bloods in your calves (<7 days old) and this will help evaluate if your current system is effective before a scours outbreak eventuates!

Calcium for Down Cows Lucy Cameron BVSc BSc – VETERINARY CENTRE WAIMATE

With some great new options available over the past couple of seasons, it's a good time to review your treatment options for down cows with suspected milk fever:

- ▶ **Calcium bags into the vein** – will cause blood calcium levels to **peak within minutes enabling the cow to rise**, and stay elevated for about 4 – 5 hours. A down cow needs 4g of calcium to restore her blood levels of calcium to normal, plus a buffer → 10g is deemed sufficient for a 500kg cow. One pink bag of **Calpro375** contains 15g of calcium and is the recommended treatment for a down cow.
- ▶ **Calcium bolus** – an ideal follow up to IV calcium, a calcium bolus will give a **sustained release of calcium for the next 12 hours**,
- ▶ **Oral calcium solutions** – takes up to an hour to raise calcium levels, which will then stay elevated for around 12 hours. Can be used to follow up IV calcium treatment. Some contain energy as well as calcium. Bovaseal Pearls and Calol are very effective choices.
- ▶ **Calcium bags under the skin** – are absorbed slowly – especially if the cow is cold, they don't cause blood calcium levels to peak like they do for IV calcium, but will be elevated for the same time period, about 4 – 5 hours afterwards.

keeping the cow on her feet as she regains her appetite and her body's calcium homeostatic mechanisms are restored. No risk of aspiration pneumonia unlike with an oral solution.

Products of the Month

Winter Lice Control in Cattle



Destruct Pour On 5 LITRE

Dose Rate 1ml/10kg (100 x 500kg Doses)

\$267.10

\$2.33 +GST per Dose

Meat Withhold – **3 days**

Milk Withhold – **5 days**

Bobby Calves Withhold – **3 days**



\$435

Blaze Pour On 5 LITRE

Dose Rate 1ml/20kg (200 x 500kg Doses)

\$1.89 +GST per Dose

Meat Withhold – **28 days**

Milk Withhold – **NIL**

Bobby Calves Withhold – **NIL**



Cydectin Pour On 15 LITRE

Dose Rate 1ml/10kg (300 x 500kg Doses)

\$1629

\$4.72 +GST per Dose

Meat Withhold – **NIL**

Milk Withhold – **NIL**

Bobby Calves Withhold – **NIL**



Genesis Pour On 5 LITRE

Dose Rate 1ml/20kg (200 x 500kg Doses)

IMPORTANT ANNOUNCEMENT

35 DAY MILK WHP
Abamectin Pour-On Products are no longer permitted for treating lactating dairy cows. 35 Day Milk With-holding Period

ACVM A009374



MULTIMIN Enhancing Calf Immunity

A 2018 New Zealand study¹ demonstrated the health benefits of injecting calves with MULTIMIN® early in life. The effect was rapid (within three days of injection), with death and disease consistently halved at all ages for calves that were injected.

Calf (less than 1 week old)
Dose Rate – 1ml (under the skin)

52% REDUCTION IN DISEASE

58% REDUCTION IN DEATHS

1ml New Calf Cost per Dose 76c Excl GST

1. Bates, A., Wells, M., Laven, RA., Simpson, M. (2019) Reduction in morbidity and mortality of dairy calves from an injectable trace mineral supplement. Veterinary Record Published Online First: 25 April 2019. doi: 10.1136/vr.105082.



Hamish Newton BVSc, PhD
Oamaru Veterinary Centre



Simple things for a busy time

Milk is going to the factory on many farms now. Do you have systems in place that are understood by everyone who milks the cows to make sure that antibiotic milk does not get into the vat? Simple systems that everyone understands are vital, for example does everyone know...

- How is a cow that is in the colostrum herd identified? A "dot a day", or a series of stripes on the legs or different coloured tail tape etc.
- If a cow gets mastitis (or any other treatment with a withhold) how is she **Marked, Recorded, and Separated**, before being **Treated (MRS T)**?

Are you RMT or paddle testing every cow before she leaves the colostrum herd? Not every RMT positive cow will need treating, so put a dot on her and check her tomorrow – most will pass but those that do not consider treating.

Is the teatspray getting on to the teats? Do all your milkers appreciate how important

this is? Have you checked the automatic teatsprayer is working as well as it can?

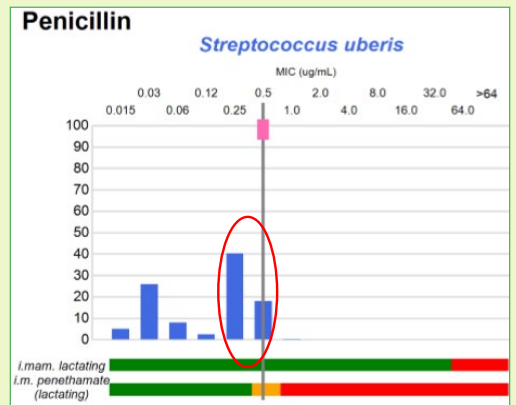
Inhibitory Substance Testing

If you suspect that an antibiotic treated cow has been milked into the vat, inside her milk withhold period, remember we can detect all of the dry cow products and most mastitis treatment drugs at the Oamaru clinic. Ring 0800 838 111 and tell us you are coming in with a sample of milk so we can get the testing equipment prepared and warmed up. Before you take the sample from the vat make sure the vat is well agitated/stirred, then discard the milk in the outlet pipe as this milk often does not get mixed. Then bring us in a sample of milk in a clean jar. Approximately 100ml is enough.

Treating multiple quarter mastitis

If you elect to use an injectable antibiotic for heifers in the colostrum period or multiple quarter mastitis the options available are effectively limited

to products containing penethemate (Mamyzin or Penetheject). If your antibiogram shows that your farms bugs are "a bit hard to kill with penicillin" (if your line is to the right of the graph on our Antibiogram) then consider using 10grams followed by 5grams (big bottle of mamyzin followed by a small bottle, or 40ml followed by 20ml of penetheject) rather than 5g three times.



Tailpaint Identification Groups

Mat O'Sullivan BVSc – VETERINARY CENTRE Oamaru

Having a good tail-paint identification system/plan should make it a lot easier to identify groups for both metrichecking, non-cycler treatment and then heat detection in the mating period.

The schedule below is simple and easy to follow and ensures groups are identified for timely management. The regimen has been based on a 1st of August PSC for cows and a 24th October PSM – adjust these dates to suit your herd.



Tailpaint Regime for Metrichecking

- Planned Start of Calving (PSC) for cows - 1st August
- 0-2 weeks after the official PSC (up to ~14th of August)
 - Mark all cows with a **Blue stripe over the hips**
 - This group to be metrichecked 7-10 days later ~21st August
- 3-5 weeks after the official PSC (up to ~4th September)
 - Mark all cows with a **Green stripe over the hips**
 - This group to be metrichecked 7-10 days later ~ 11th of September
- 6-9 weeks after official PSC (up to ~25th of September)
 - Mark these with a **Yellow stripe over the hips**
 - This group needs to be metrichecked 7-10 days later ~1st of October
- 10 weeks plus after PSC (after ~25th of September), mark these cows with a **DOUBLE Yellow stripe over the hips**.
 - This small group could be metrichecked around mid-October



Tailpaint Regime for Identification of Non-Cyclers

- Planned Start of Mating (PSM) for cows - 24th October
- 35 days before the PSM (~19th of September) all cows that had calved up to the 4th of September (Blue and Green Hip Stripe cows) to get **Red Tailpaint on Tailhead**.
All cows that calved after this date get **Yellow Tailpaint on the Tailhead**.
- Touch up every 5 days. As cows cycle repaint them in **Green**
- 9-5 days before PSM all **remaining Red Tailpaint cows** are eligible for CIDR treatment
- 1 day (24hrs) before PSM **repaint all cycled cows with Green**.
- As cows are **mated paint them Blue**
- 8-11 day into mating all remaining **Yellow Tailpaint cows with ONE hip stripe** are eligible of CIDR treatment
- 21 Days after the PSM all **second-round inseminations to be painted Orange**.
- 24 days into mating all outstanding non-mated cows (including the **Yellow TWO hip stripe** – very late calvers) are eligible for hormonal treatment.



Bobby Calf Welfare

Veterinary Centre MoozNews EXTRA



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VETERINARY CENTRE Waimate

Animal welfare is at the heart of any good farming business. All calves, regardless of their purpose, should be treated with care and respect. Bobby calf welfare is important – the following guidelines will help you meet the welfare needs of animals in your care and to comply with the requirements of the Animal Welfare Act 1999:

- **Colostrum** – bobby calves must be fed colostrum (10% bodyweight minimum) within the first 24 hours of life. Good quality colostrum should be fed twice daily for the first 4 days of life.
- **Handling** – handle calves gently and with care at all times.
- **Housing** – bobby calves should be moved to a sheltered, draught-free calf shed with comfortable bedding as soon as practicable after birth.
- **Water** – calves must have free access to clean, fresh water at all times.
- **Age** – calves must be at least four FULL days of age before transporting them.

How do I know if my calves are fit for transport?

In addition to being a minimum of four days old before transport, the following signs will indicate if a calf is fit for transport:

- **Healthy** – eyes are bright, not dull or sunken. Ears are upright. No signs of visible disease (eg. scours), deformity, injury, blindness or disability.
- **Strong** – able to bear weight on all four legs. Be strong, able to rise unassisted and move freely around the pen.
- **Hooves** – firm and worn, not rounded and soft.
- **Navel** – dry and withered, not pink/red, raw or fleshy.
- **Fed** – at least ½ the days ration of colostrum no more than 2 hours prior to collection, or as per your supply contract.

Slow and unsteady calves, those with a wet navel, concave (sunken stomach) or scours are unfit for transport and should not be presented. Truck drivers are not permitted to load unfit calves.

Fit for transport Tick all 8 to leave the gate

- 4 days old ✓
- Ears up and eyes bright ✓
- Correct eartag ✓
- Dry navel ✓
- No scours ✓
- Firm, worn hooves ✓
- Standing and walking ✓
- Full tummy – no antibiotic milk ✓

Transition Cows Management

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Getting it right in the transition period (2-3 weeks pre and post calving), is critical for the reduction of metabolic disease, improved early lactation appetite, the control of condition loss, increased production and subsequent reproductive performance.

1 OAD milking in the Colostrum period (and beyond)

OAD milking will positively alter the energy balance of the cow. Cows milked OAD are less likely to mobilise excessive condition – not only do they produce less milk, but they have higher dry matter intakes over the first 10-14 days post-calving. Cows will be in better immune status and recover from metritis and mastitis faster. The egg development in the ovaries is of higher quality leading to better fertility. Ensure milk withholds are complied with as instructed.

Tip – collect freshly calved cows from springers TAD and milk within 12 hrs of birth. The second milking should occur 12-24hrs later – i.e. in the mornings. Cows should ideally stay on OAD until “the belly is wider than the udder”, indicating they are eating well. Based on cow collar data the average OAD milked cow takes 10-14 days before dry matter intakes start to plateau – so this is our recommended OAD period. Poor condition heifers will benefit from remaining on OAD milking right up until early October. There will be little production loss if poor conditioned mature cows are milked OAD for the first 3-4 weeks of lactation. Over-conditioned cows and poor condition cows will equally benefit.

A.M. – TAD cows milked first, then Colostrums, then new mums (calved overnight), then Reds

P.M. – OAD cows milked first (early PM), then TAD, then new mums (calved during day).

2 Improve Calcium Status and Supplementation

Providing cows with magnesium and calcium anionic salts as springers will reduce much of the milk-fever risk, but also take away a lot of the subclinical issues that most cows experience on the 1st day of calving. Getting it right will reduce mastitis and increase DM intakes.

Tip – use transition mixes containing CaSO₄, MagSO₄, MagCl and CaCl, for approx. 10-15 days pre-calving. Discuss quantities with your Prime Vet. Effective

Ready-made Transition Cow pre-mixes (also containing trace minerals, Rumensin and Vit E) are available at ~70c/cow/day, these can be ordered through the Vet Centre.

Providing additional Ca on the day of calving may further improve the results. This is best given to the cow by either a Calcium Bolus (which have become very popular as they are the most effective), or a starter drench, oral Calol (Bovaseal Pearls) or a Ca bag under the skin.

Tip – give this at the first milking within 12 hrs of calving. Greatest benefits will be seen in cows of 5-6 years of age and greater.

3 Fibre to keep the rumen in top condition and reduce energy content of diet

Diets which are low in volume or fibre (e.g. FB) may result in the rumen muscles getting out of condition.

Tip – Feed up to 5kg of straw or hay to springers to maintain rumen muscle fitness and function (via active rumination) and to dilute the energy density of the springer diet.

4 Rumen microbial adaption

It takes 7-10 days for rumen microbes to change from one diet (that is fermenting soluble carbohydrates) to the next (that is fermenting complex carbohydrates – e.g. grass). Rumen fermentation needs to be at its peak efficiency at the time the cow calves.

Tip – Make sure that springers cows are exposed to the feed they will be offered as colostrums and milkers. This may mean that they are back on grass (or grass based) and also get some grain in the shed, silage or PKE starting 7-10 days before calving. They do not necessarily need to be taken completely off crop (although best not to feed more than 2-3kg of FB to springers). Feeding Rumensin will increase feed conversion efficiency by more rapidly selecting beneficial bacteria.

5 Protein

In late gestation the foetus is rapidly growing, the mammary gland is regenerating, and large volumes of colostrum antibodies must be produced. Springer cows (from 3-4 weeks pre-calve) have an increased protein requirement. Deficient cows have compromised immune function and production.

Tip – cows within 7-10 days of calving need ~2.0 kg of Crude Protein per day. For a springer offered 14kgDM, this would be a total dietary crude protein of 15-16%. Soya meal, canola, peas, DDG and Italian ryegrass are a good source of additional protein. FB, straw and cereal balages are very poor.

6 Springer Energy Intakes

The industry recommendation has been to slightly restrict intakes of springer cows. The benefit of doing this is to prepare the liver for post-calving fat metabolism and reduce milk fever. Aim to be feeding optimal condition cows 90% of their ME requirements and light cows 100% of ME requirements.

Tip – springer cows should ideally be eating (down the throat) 2.8% of their body weight daily. (min 2.5% - max 3.1%). For a 500kg cow this would be a 13-14kgDM offering. For a BCS ≥5.0 cow aim to give her 105MJME down the throat and a BCS ≤5.0 cow 115MJME down the throat.

7 Trace Minerals

Make sure that cow Trace mineral status is adequate at calving. The big three to ensure good immune function are Selenium, Copper and Zinc.

Tip – most farmers provide cows with short acting selenium as springer cows return home, consider extending this to the highly researched Multimin injection which provides all three for extra coverage. Analysis of Fodder Crops in our area shows that they are consistently low in Zinc.

8 Early Calf Removal

Removing the calf within 12 hours ensures that cow bonding is reduced, and cows are less likely to ‘pine’ at the gate. The risk of mastitis is significantly reduced by shortening the suckling period and the colostrum when harvested within 12 hours will be far superior to a cow that has been calved 24hrs.

Tip – use the fact that you are milking the main colostrum mob just OAD to free up time for TAD calf and cow pick up. Graze colostrum cows from the back of the paddock to the front so they are not hanging out at the gateway. Alternatively putting a wire across the paddock corner on a 45° angle, 30 m from closest corner to the shed will deflect them out of that area.