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VETERINARY CLINIC
MORRINSVILLE

Thoughts from the sideline:
Managing the transition cow

- Bruce Hunter

Farmers are increasingly spending more time and money on preventative animal health measures and treatments rather than the more traditional reactive approach to disease on-farm.

One of the season's most sensitive times is the transition period, which includes the 3-week period before calving and 3 weeks after. If managed well, a host of animal health issues can be mitigated, but, if inadequately managed, it can lead to several animal health issues which can significantly impact animal health costs.

Unmanageable incidences of milk fever, grass staggers, clinical mastitis, assisted calvings, lameness and retained membranes are all signs that transition management could have gone better.

When cow condition is too high (above 5.5 - 6.0 BCS at calving), there is a risk of metabolic disorders such as milk fever and ketosis. If too light (below 4.5 BCS at calving) there is an increased risk of infectious diseases such as metritis and mastitis, and of course, lower reproductive performance, including a high empty rate.

Feeding should be adjusted to manage cows outside the ideal condition score range or, better still, to prevent cows being in this category. Body condition scoring throughout the season will help better manage individual cows as they approach key periods such as mating, dry-off and the transition period.

Magnesium supplementation is important for springers to reduce the risk of milk fever at calving and grass staggers soon after. Ensure adequate magnesium is supplemented to the cows from at least 4 weeks before calving until the spring pasture flush ends.

Lime supplementation should also be provided post-calving to the colostrum cows. Soils high in potassium (e.g. effluent paddocks) can interfere with magnesium uptake, so it is best to avoid effluent paddocks at this time.

The cow's immune function is greatly affected by trace element imbalance. Treatments such as Multimin, 3 - 4 weeks prior to calving, can provide much needed supplementation of selenium, copper and zinc.

Whilst this past season has seen lower incidences of lameness, the transition period poses an elevated risk for foot trauma. Naturally occurring hormones in a calving cow can relax ligaments in the foot, creating a less stable foot which is easily prone to damage. Race care is important to reduce foot trauma but, with low payouts and the need to reduce maintenance costs, this spend is one of the first to be impacted. Extra care and time will be needed walking the cows on the race and ensuring that excess backing gate pressure is not applied. Fast action identifying and resting impacted cows is important – the sooner a damaged hoof is treated the less harm done.

The transition period can be a daunting and stressful period, particularly when things go wrong, so always know we are available to provide a helping hand.

What's happening on-farm?

- Herd vaccinations
- Heifer teat sealing
- Autumn mating
- Trace element and mineral testing
- Getting set up for calving
- Start magnesium supplementation

Bloat oil vs. Rumenox®

- Beth Scott

We have seen a few cases of bloat this autumn. Many dairy farmers still use traditional bloat oils as standard practice to keep on top of it. If used correctly, they can be relatively effective at reducing bloat, but they do have their limitations.

Bloat oils are short-lived in the rumen and are reliant on cows drinking regularly to keep the rumen topped up 24 hours a day. The problem with this is that on wet days (and we've had many of them recently), cows drink very little.

Rumenox®, on the other hand, actively manages the production of rumen gases, enabling herds to be protected for longer. With this longer duration of activity, Rumenox® will always outperform bloat oils when it comes to controlling bloat.

Bloat oils have no added benefits. Rumenox® not only effectively prevents bloat, but at the same time helps a cow's rumen function better. This results in more energy available to the cows. Cows are then more likely to stay in optimal condition, which not only supports in-calf rates and milk protein production, but also protects against ketosis.

We often see poor production as a result of subclinical ketosis in early lactation.

The good news is that the price gap between bloat oils and Rumenox® has closed considerably, making Rumenox® a more cost effective option.

Talk to your KeyVet if you are interested in using Rumenox®.

Nitrate toxicity

- Ryan Olesen

We are already seeing an increase in nitrate toxicity in farms around Morrinsville with the recent overcast, wet weather, resulting in sudden death of livestock without warning.

Toxicity occurs when plants accumulate nitrates, which, when consumed, then overwhelm cattle's rumen bacteria. Excess levels of nitrate are converted into nitrite in the rumen, which then leaks into the bloodstream and binds to haemoglobin, making it unable to transport oxygen. The cow essentially suffocates to death, despite being able to breathe.

Signs of nitrate toxicity in livestock include:

- Increased breathing rate;
- Blue colouration of vulva or gums;
- Unbalanced walking (cows look 'drunk') and muscle tremors;
- Excessive drooling and frothing at the mouth;
- Colic (abdominal pain) and scouring;
- Down cows;
- Sudden death of multiple animals in a mob;
- Chocolate/dark coloured blood.

Some of the risk factors for excessive levels of nitrate include:

- Rapid changes in climate. Periods of cold/wet changing into dry/warm conditions, or rainfall after drought conditions;
- Overcast weather. Sunlight is needed to convert plant nitrogen into plant protein;
- New grasses. Rapidly growing grass will uptake more nitrogen;
- Over supplementation of pasture fertiliser (e.g. urea);
- Supplementation of forage crops high in nitrogen (e.g. brassicas, such as kale).

Nitrate toxicity is an emergency and requires immediate veterinary treatment.

Do not hesitate to call your vet if you suspect nitrate toxicity.

What can you do to prevent animal deaths from nitrate toxicity?

- Test high risk pasture if you are unsure about its safety, especially following cold, overcast days. Continue to retest nitrate levels, as plant nitrogen levels can change dramatically depending on weather conditions.
- Always check animals 1 hour after putting them on to new feed. Marginal pasture should only be grazed for 1 hour maximum.
- Ensure cows are going onto pasture full (e.g. feed silage or meal first).
- Graze crops during the afternoon and avoid night or morning grazing to enable more sunlight to convert plant nitrogen into plant protein.
- Graze any forage crops for no more than 1-2 hours per day.
- Limit the access of sick cows, or cows in poorer condition score, to crops, as these animals are more sensitive to elevated plant nitrates.
- Do not apply nitrogen fertilisers to brassica crops within 6 weeks of starting grazing.

Why did the cow win an award?
She was out standing in her field

Getting ready for calving checklist

- Oscar Porras

Spring calving is just around the corner! As the season approaches, it is crucial to prepare your cows for a successful and healthy birth. Here are some tips to help:

1. **Evaluate your grazing management.** Ensure your grazing management is adequate for the calving season. Set up a calving paddock in a dry, well-drained area close to the shed.
2. **Monitor your cow's body condition.** It is important to monitor your cow's body condition during the calving season. Ideally, they should have a Body Condition Score (BCS) of 5 (5.5 for heifers) to ensure a successful calving. A lower BCS can increase the risk of dystocia, or other calving problems and flow on to poor mating outcomes.
3. **Provide adequate nutrition.** Ensure your cows have access to adequate nutrition by managing your pastures well. You may need to supplement their diet with hay, silage or other feed sources if the pasture is lacking in nutrients. Don't forget magnesium and calcium too!
4. **Keep an eye on your cows.** During calving season, cows can experience stress due to inclement weather, changes in stockmanship with new workers, and social stress (heifers integrating with older cows). Signs of stress include reduced feed intake, decreased milk production and unusual behaviour. Be sure to check their udders regularly for early signs of mastitis, such as swelling. This will help you identify any potential problems early and address them before they become more serious.
5. **Be prepared for emergencies.** Despite your best efforts, calving complications can still occur. Make sure to have essential supplies on hand, such as clean towels, disinfectant, lubricant, and calving ropes or jack/pulley. Have a plan in place for how to address any complications that may arise, and know when to call your veterinarian for assistance.

Calving season requires careful planning and management to ensure a successful outcome. By following these tips and being prepared for emergencies, you can help ensure a healthy calving season for your pasture-based dairy herd.

Wishing you a successful calving season!

Calving first aid kit

- Beth Scott

Everyone has a first aid kit ready to go in their cupboard, and the same should be said for having an easily accessible "calving kit" ready before calving. It can be on the quad, at the calf pens or at the shed, whatever is easiest. We are more than happy to put together a box of supplies for you if time is short.

Cows

- ☐ Disinfectant
- ☐ Lube
- ☐ Calving pulleys or jack
- ☐ Calving chains
- ☐ Halter
- ☐ Metabolic bags
- ☐ Oxytocin
- ☐ Metacam or KetoMAX
- ☐ Intracillin and engemycin
- ☐ Red paint

Calves

- ☐ Naval spray
- ☐ Thermometer
- ☐ Electrolytes
- ☐ Taggers and tags
- ☐ Elastrators and rubber rings

You

- ☐ Yellow book with pencil/pen
- ☐ Warm clothing: ask for a VCM beanie next time you're in clinic
- ☐ Headlamp
- ☐ Long and nitrile gloves
- ☐ Phone: with the vet's number in it
- ☐ High energy snacks and a thermos.

Cow wearable tech update

- Charlotte Glass

The last five years have been good for cow wearables, with the number of farmers using the tech jumping from 3% in 2018 to 16% in 2023 - a growth rate of 50% per year. If this kept up, all dairy farms would have wearables within the next five years. But there's a factor that could put the brakes on - running out of drafting gates!

The main idea behind wearables is that they notify you when something needs to be done with an animal - heat detection being the major use case. The issue is that simply providing you with a list of 20 cows on heat to draft out is not very useful, as you would need to read the tag numbers of every cow and check them against your list (you may as well be tail painting)!

That's where the magic of automated drafting gates comes in. The systems talk to each other and, at the end of milking, all cows ready for mating are waiting patiently in the yard for the AI tech. But that's only if you have paid the $40k or more to install one. It turns out that around 60% of rotary sheds have put in automated drafting gates, compared to only 20% of herringbones – that's a 3x difference. It's not surprising then that the uptake of wearables in rotaries is also 3x that for herringbones; ~30% vs ~10%.

When asked which tech topped their wishlist (provided they had the capital), cow wearables came out as number one for both herringbone and rotary farmers. If all farmers got their wish, there would be a 30% increase in both systems. Based on the same survey, drafting gates would only see an increase of around 10%.

What does this mean?

- For rotary farms, 70% will have drafting gates and 60% will want cow tech.
- For herringbones, 30% will have drafting gates and 50% will want cow tech. This causes an issue in that, for a large number of herringbone farms, they won't have a drafting gate to reap all the benefits of their cow wearable tech.

Is there any workaround to allow farmers without drafting gates to still reap the benefits of cow wearables?

It seems that products designed in NZ, for our way of farming, rather than the other side of the world where cows are kept inside and milked by robots, have a rather simple solution - put a light on it!

- Aside from in-paddock, virtual fence drafting, **Halter** provides an LED that lights up in the shed when cows are on heat.
- **Flashmate** (aptly named) are a single season smart patch glued to the rump that flashes when estrus is detected.
- **ProTag** is another NZ startup based in the Waikato that incorporates a bright LED to assist farmers in drafting. The cows of interest can be easily identified in the shed (or paddock) by their flashing LED light and drafted.

Over the last few years, I've been helping out ProTag as they have been developing the next generation of affordable wearables - a solar powered eartag that can track location in addition to temperature and behaviour. The ability to track the location in pasture-based dairy is a game changer.

Heat detection can be improved by tracking riding events and sexually active groups; and lameness can be identified by changes in distance and speed. Even simple things like knowing that milking started on time, cows are in the correct mob/paddock, and gates are closed can help a farm run more smoothly. Most wearables don't do this because it's not needed in the barn environments where the tech was developed.

To find out more, you can check out the ProTag website: protag.co.nz, or, get in touch with me at: charlotte.glass@vetcm.co.nz.

Goodbye Beth

- VCM Team

We are sad to say farewell to our mixed animal veterinarian Bethan Scott.

Beth has been with us at Vet Clinic Morrinsville since 2019 and developed a lot in the past five years as a mixed animal vet, with specialties in avian, caprine (goat) and equine medicine.

We wish her all the best with her move to Wellington, where she will be continuing as a vet, but focusing on small animals, and starting a new chapter with her husband Dan and dog Scout.

Take care Beth, we will miss you!

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HERE for GOOD