Cambridge Veterinary Services (2023) Ltd

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Welcome to our Winter Newsletter of 2025!

Calving gear

- Ropes
- Chains
- Handles
- Disinfectant
- Lube
- Gloves
- Penicillin
- Oxytocin

Metabolics

- Calcium
- Magnesium
- Oral treatments
- Ketol
- MPG
- Starter Drench
- Rumenox

Mastitis Treatment

- Intramammary
- Injectables

At Cambridge Vets we have a comprehensive range of the best products in the market place, competitive prices and with professional advice to get you through the season without a hitch.

I attended a couple of days of the Vet Conference in Wellington last month, and got re-enthused about several topics covered by some great presenters. Here are some of my take-home points:

Transition Period Management

The transition period comprises the 4 weeks either side of calving, when the cow is altering her physiological state from pregnant dry cow to the metabolic marvel that is a dairy cow milking full steam. The change in diet and change in energy status means not only is her uterus and udder undergoing massive changes, but her rumen is adapting, her metabolic systems are gearing up, she is walking further, and her immune system is being challenged….

This is a hot topic at the moment, and you can see why! Especially when we consider that season milk production, reproductive performance and longevity are all impacted by the transition period. 80% of diseases are seen at this point in her life, as well as peak mortality.

The main things we need to manage are:

- Macromineral deficiency
- Lipid mobilization disorders
- Immune suppression
- Rumen disruption

Otherwise we will see more milk fever, ketosis, RFMs, metritis, mastitis, LDAs and reproductive impacts….

Macromineral Deficiency – Milk Fever

The cow's calcium levels drop precipitously over calving as her milk production ramps up (calcium output may go from 10g to 60g per day!) and her DMi drops. If a cow cannot mobilize calcium quickly enough then she will struggle to power muscles, including the heart and intercostals for breathing – kinda critical, but even sub-clinical hypocalcaemia can affect production and health.

Magnesium supplementation is a major influence on calcium levels, so supplementing magnesium over the transition period is a must for minimizing milk fever.

Dusting magnesium oxide is a traditional method of supplementation, but an increasing number of farms are also looking at magnesium chloride and magnesium sulphate, because these also have negative DCAD properties.

DCAD: Dietary Cation-Anion Difference. The balance of negative ions (chloride and sulphate) to positive ions (potassium and sodium) also has an impact on milk fever. If we can acidify the blood a little in the few weeks leading into calving, the calcium mobilization mechanisms are improved. This is achieved by having more chloride and sulphate than potassium and sodium (or using anionic salts) such that the mEq is zero. Unfortunately, with our spring calving system, the grass at this time of year has very high potassium, very low calcium and magnesium and very positive DCAD. All of these make milk fever more of a risk, and hard to get negative DCAD.

Shifting the DCAD away from positive value towards zero is a big challenge then, and the best way of approaching this is to do a full feed calculation based on pasture and feed analysis. Some feeds such as maize silage are naturally less positive DCAD, but also very low in magnesium and calcium, requiring extra balancing….

Strategies for reducing milk fever:

- Magnesium Oxide dusting of pasture
- Mag Chloride in the water
- DCAD salts in the feed
- Supplementing pasture with lower DCAD feeds at calving (hay, maize silage)
- Calcium bolus or calcium drench at calving for high risk cows (old cows, large volume) to bridge the high risk period
- MoreMag for the springers
- OAD milking of colostrums (but this may increase the risk of mastitis)
- Limeflour dusting for colostrum cows and milkers

The other major imbalance over calving is energy.

Not only does a cow's energy output skyrocket with milk production, but her dry matter intake drops over calving. Proportionate from feed is converted to glucose by the liver which upregulates insulin and udder genes expressing milk production

There are several points we can take from this:

1. Cows will benefit from good energy inputs to match their output / demands
2. Their rumen needs to adapt to this i.e. plan a transition diet rather than an abrupt change from dry to lactation diet.
3. Maintain her appetite! Monitor the cows eating and rumination – this is where wearable technology can really illuminate with data.
4. The milk protein is directly impacted by the cow's energy intake, and especially starch-based concentrates.
5. The milk protein graph is normally a Nike tick. Lifting the level of the protein tick will improve reproductive performance. A recent assessment of Fonterra data showed that this simple rule of thumb is generally true but there is variation across geography and years. For 73% of ward years, the higher protein curve farms were in the top quartile of reproductive outcomes, and conversely 76% of lower protein curve farms were in the lower repro quartile.

Wearables and Health Data – Transition Rumination

The collars and ear tags are giving us a wealth of information. We know how useful they are for heat detection and virtual fencing, but they are becoming more and more sophisticated for health parameter monitoring and productivity efficiency.

But how do we use this data, especially when we are busy?

Some critical assessments are:

- Transition Rumination
- Pre-mating Heats
- General Health - for mastitis, RFMs, LDAs…

These can be monitored in real time, and trends for different groups noted to allow timely management intervention.

Most systems allow vets access to this data, and we can monitor and run reports for you. AllFlex for example has the DataLive model which yields more usable reports than just the standard data. This is a space we are keen to be more involved in for pro-active decision making so please contact your vet if you are interested.

New Technology

Another interesting presentation was on a camera that is mounted at the exit race. It uses Ai to assess every cows' BCS and lameness score every time they walk past. The system can then alert the farm to cows with increasing lameness or decreasing condition score, and potentially draft them for examination. One of the crucial things with lame cows is to identify them and address it asap (ie lift, trim and block the foot for hoof horn issues), which will be assisted by this system. Both Nedap and Herd-i offer this technology.

NSAiDs and Long-term Benefits

Another important treatment for lame cows is use of an anti-inflammatory such as Metacam or Ketomax. Epivets did a study on lameness where half the cows were treated with Metacam and half were not.

The treated cows had:

- 5% lower culling
- Go in calf 42% quicker
- 6 week in calf rate of 74% compared to 63%
- 88% pregnant vs 77%
- Outcomes the same as the non-lame group

It has also been shown that cows with mastitis that receive Metacam had a 50% lower culling rate due to improved reproductive performance (31% first conception rate compared to 21%) and better bacteriological cure rate (66% vs 50%).

Scott McDougall also presented new research on a penicillin intramammary containing steroid as well. The addition of hydrocortisone resulted in less clots, lower SCC, and the same bacteriological cure.

Watch this space!

Facebook

Did you know that Cambridge Vets are on Facebook? We have a page for both the Companion Animal and the Production Animal Departments.
Follow our pages for topical news, offers and clinic Newsletters:

Cambridge Vets Page

Cambridge Vets Farm Services Page

Clinic Gossip

If you have not already met her, we are delighted to have onboard the front counter staff—Kelly. Kelly has grown up around animals, and loves horses to the extent she even did a stint of night foal watch. She is a proud owner of children and dogs, some of whom like going for long walks with her. Although she has previously worked in a vet clinic her more recent career has been looking after people. She is also a bit of a fellow petrol head!