



MOOZNEWS

Transition Management – The OAD Strategy

Ryan Luckman BVSc – Waimate Veterinary Centre



In 2018 The Vet Centre hosted nutritionist Sue Mackey as a guest speaker at our Autumn Seminars. One of the transition management tools she discussed at the time was keeping cows on OAD milking post-calving until their “rumen’s were wider than their udders”, a transition that was likely to take 8 days plus. In response many of our farmers started dipping their toes in the water, opting for 4 days on OAD, with the intention of getting ‘some of the benefit’ whilst ensuring there was minimal milk production lost.

Last season, with the growth in Allflex monitoring collars in our practice we were able to assess the rumination recovery of cows post calving on farms with extended OAD periods (14 days plus), vs short OAD periods (2-5 days only), vs the traditional TAD systems.

What was clear was that cows on OAD milking had much higher rumination rates in the immediate post-calving period than those on TAD. In the graph to right the blue cows (milked TAD) took about a week longer than the grey cows (milked OAD) to reach 90%. All cows go into a negative energy balance (NEB) post calving and need to strip weight off their back to milk. However, cows with lower rumination rates during this period will be eating less, and therefore need to mobilise even more fat, which has known negative influences on health and reproduction. It has previously been shown that cows on OAD during this period will maintain higher BCS’s.

On the orange farm we were further able to assess the effect of lower rumination rates (and therefore a higher NEB) on in-calf rates. The farm started milking cows on OAD, but then returned them to a TAD herd at variable times between 2-5 days post-calving. This created a high amount of variation with rumination recovery on the farm. When we ranked these cows on total minutes of rumination during transition (into quartiles), we found a 10% difference in the 6WICR between the highest 25% and lowest 25%.

While the follow-through with reproduction and BCS makes sense with OAD, the major barrier for people has been a concern over losing production. As a practice we’ve been reasonably cautious about pushing extended OAD based on some New Zealand research carried out 15 years ago in the Waikato which showed cows milked OAD for 3 Weeks post calving had a 5.5% drop in seasonal production.

It is likely that a minimum period of 7-14 days will be needed to see the positive effects of a

OAD system. This shorter period has not been assessed under research conditions in New Zealand, however anecdotally, farmers who have tried the OAD system for 7-14 days after calving have all seen lifts in production (rather than a drop). They report that they are seeing cows in better BCS, with higher peaks that are holding the peak for longer. Increases have been reported in the 5-10% range.

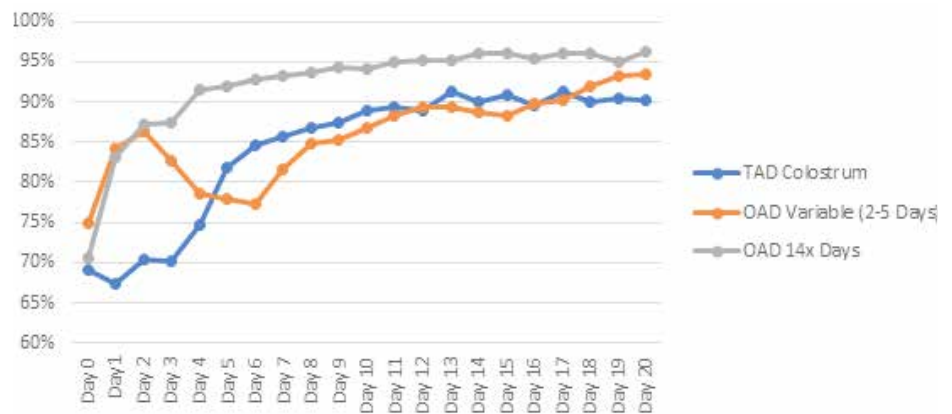
These anecdotal reports are more in line with some recent research from America on collar cows. In this trial it was shown that the faster a cows’ rumination recovered after calving the higher their peak milk yields were. For every 100 min/day increase in rumination time over the first 6 DIM there was an 8% increase in peak milk. Peak milk has in turn been linked to higher total season production.

Contact your Prime Vet if you would like to further discuss the application of this, or any other methods to optimise your transition management.

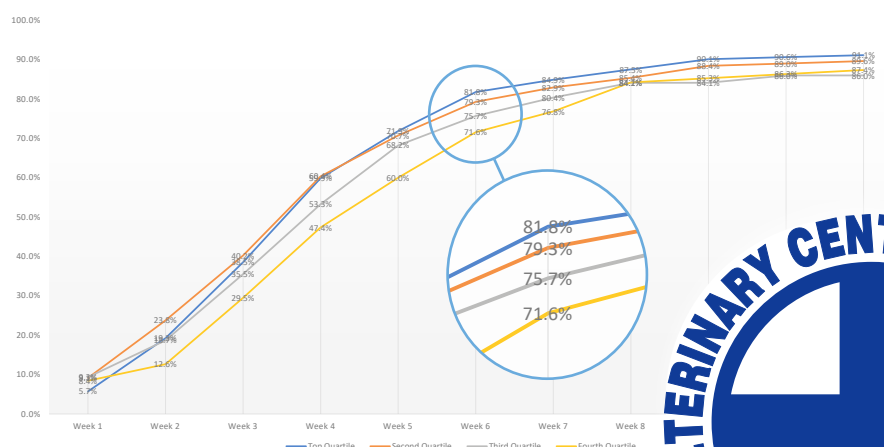
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Daily Rumination Average by DIM (cf average 30-40 day farm rumination rate)



Rumination Quartile vs Pregnancy Rate (August Only) ORANGE FARM



Keeping the Winter Diet Balanced for Pregnant Cows

Mat O'Sullivan BVSc
Oamaru Veterinary Centre



Over the last 10 years farmer focus has been on improving cow condition over the winter period. This has been mainly facilitated by setting realistic figures on crop utilisation and ME requirements for condition gain, maintenance and pregnancy.

The winter diet for a pregnant cow, through until about the last 3 weeks of pregnancy, requires about 11-12% crude protein in the diet (or 1.2-1.4kg of crude protein). As well as cow's normal base protein requirements, she has the demands of a rapidly growing calf, the development of new udder tissue and production of colostrum antibodies. Cows under protein stress for significant periods of time will break down their own body tissues to meet foetal demands, but the end result may be muscle loss (calving difficulty), poor udder development, poor colostrum quality and poor cow immunity (placing her at greater risk of mastitis or metritis).

Optimal crude protein requirements increase to 16-17% in the last 3 weeks before calving. Typically Fodder beet bulbs have crude protein levels less than 10%, whereas the leaf is in the 15-20% range. If the crop you are feeding is losing leaf yield in July, ensure that cows are receiving an additional supplement that has higher protein content.



Multimin Injection

Recent NZ Dairy Calf Research
(Bates, A.J, et al, 2018)*

- 1ml dose in Dairy Calves less than 1 week old
- 52% Reduction in Disease
- 58% Reduction in Deaths

Product Details

- 4 trace elements in 1 injection
- Copper/Selenium/Zinc/Manganese
- Rapidly Absorbed - into blood (8 hours) and liver (24 hours)
- 1 x 500ml pack contains 500 x 1ml calf doses.
- \$0.83 Incl/Calf

No Fat Pad? That's Bad

Euan Tait BVMS
Waimate Veterinary Centre

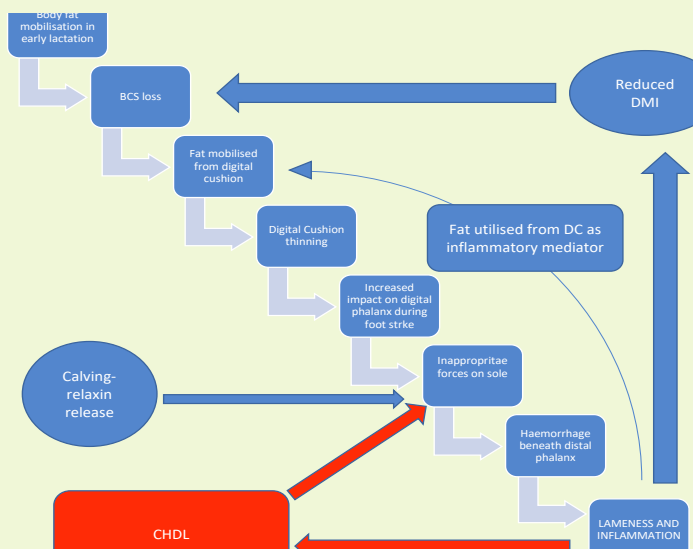


What fat pad?

The digital cushion is a supportive fat pad protecting the distal phalanx (the bone inside the hoof) from excessive compression and trauma. It plays a vital role in helping reduce lameness incidence. Thinning of this cushion, caused by body condition loss, can lead to claw horn disruption lesions (CHDL) – noninfectious causes of lameness including white line disease, solar ulcers, solar bruising - and a self-perpetuating cycle of lameness and poor body condition in dairy cattle.

When should we protect this cushion?

Peri-calving and early lactation is a vital time to protect this fat pad and ultimately increase the longevity of your cows. Excessive BCS loss leads to mobilisation of fat within the foot, reducing protection from the cushion, and therefore a greater incidence of lameness. There are also hormonal changes associated with calving (e.g. relaxin release) affecting the forces acting on the hoof, increasing the need for a healthy digital cushion around calving time. Utilising the dry period to get cows calving in the correct target BCS (5 for cows, 5.5 for heifers) helps ensure the digital cushion is maintained throughout this critical peri-calving stage. The following schematic helps show the effects of BCS loss leading to lameness, and highlights the vicious cycle of lameness causing more lameness:



As you can see there are several self-perpetuating cycles involved in lameness. Focusing on having cows in the correct BCS at calving and minimising weight loss in early lactation can have huge effects on preserving the digital cushion and thus decreasing lameness. If you are worried about the BCS of your cows, please get in touch and we can tailor a feed budget to suit their requirements.



Spring Reminders

- BCS cows pre-calve
- Start Magnesium supplementation at least 3-4 weeks pre-calve
- Check Trace element status if necessary after winter grazing
- Rotavec vaccination is due for early calvers
- Consider Salmonella vaccination – discuss with a vet.



Metacam 40

- Double strength Metacam (Metacam 40)
- More cost effective pain relief for cow and calves

Calf Scours



Celia van Kampen BVSc
Oamaru Veterinary Centre

Calf scours is the nightmare scenario for every calf rearer. It causes a lot of extra work and frustration, despite your best efforts you may not save all your calves. On top of that calves that recover have a higher risk of poor growth and poor life time performance.

The mainstay of preventing calf scours is careful colostrum management and good hygiene and feeding practices. Ensuring calves get their full allowance of colostrum is the vital key to scour prevention with a focus on the three Q's being followed:

- Quantity – 10% of body weight (split over two feeds usually to prevent overfeeding). Practically this means

calves should receive 2L within 6hrs and 4L within 12hrs

- Quality – Only top-quality first milking colostrum. Ideally measured using a refractometer of 22% or more.
- Quickly – Ideally the colostrum should be given within 6 hours of birth.

Pick up calves twice a day in a clean trailer and spray navel's with iodine before they go into the calf sheds. For the first 10 days calves should be fed twice a day. Calves should always have water and meal available.

Calf sheds should be clean, dry and draught free. Disinfect your pens twice a week with Virkon or Stalason powder. Avoid overcrowding pens, calves should have approximately 1.5 square metres and not more than 20 calves in a pen.

One of the first questions to ask when a calf gets scours is "is it a nutritional or infectious scour"? With nutritional scours the calf will often look healthy and still have a good appetite.



Luke Smyth BVSc
Oamaru Veterinary Centre

Nutritional scours are usually the result of:

- A sudden change of feed (like colostrum to milk or milk replacer)
- A sudden change in feed volume (like twice daily feeding to once a day feeding)
- Mixing problems with milk replacer.

Usually giving the calf 24 hours off milk and replacing these feeds with good quality electrolytes is all that is needed to stop the nutritional scour.

Infectious scours like Rotavirus, Cryptosporidium, Corona virus, Salmonella and E.coli will normally cause a sick, dehydrated looking calf.

If you do have a scours outbreak:

- A vet visit is vital to examine and treat calves and collect faecal samples. You can't tell the cause of the scour by just looking at a runny faecal sample. Faecal samples allow us to identify the cause of the scour. We can formulate a treatment and electrolyte plan to remedy the situation as well as look at

colostrum and management practices.

- Identify and remove sick calves from the pen. They should go to the sick bay
- Deal with healthy calves first before attending to sick calves.
- Wear gloves and always wash your hands after treating sick calves.
- Clean feeding equipment and your boots with hot water and disinfectant.

Treatment of scours is based on

- Good fluid therapy, this is the cornerstone to treating calf scours. Dehydration is what causes calves to go downhill rapidly and can kill them. When it comes to electrolytes you definitely get what you pay for. Use a quality product such as Rehydrate which will correct fluid loss, metabolic acidosis, electrolyte imbalance and low blood sugar levels. If the calf has stopped drinking then it needs to be tube feed.

- Anti-inflammatories can be a dramatic help as calves suckle better and rehydrate themselves.

- Antibiotics can help if the cause of the scour is bacterial.

As long as you are proactive with fluid therapy, 90-95% of calves will normally recover.

Spring Calving Seminars

- **TUES 13 JULY** and **THUR 15 JULY 2021**
at Oamaru Veterinary Centre 7-9 pm
- **WEDNESDAY 14 JULY 2021**
at Waimate Vet Centre 7-9 pm

Please contact your nearest clinic to register.

To be successful we have to plan for it to occur.

Build the knowledge and enthusiasm
in your team for this spring.

**RSVP to your closest Veterinary Centre
now or email: events@vet111.co.nz**

Transition Cow Anionic Salts – A Milk Fever Preventative



Mat O'Sullivan BVSc
Oamaru Veterinary Centre

The old adage that prevention is better than cure definitely holds true for milk fever. Studies have shown that for every clinical case of milk fever that you see there will be another seven sub-clinical cases.

Every farmer should try and remove as many risk factors as possible, e.g. not let cows get over fat, start magnesium supplementation 3-4 weeks before calving, avoid high Potassium pastures and not overfeed springers. There will however be situations where some of these risks are unavoidable.

Transition Cow Anionic Salts when fed to springer cows will perform three jobs. The first is that they acidify the cow's system and thus enhance her ability to mobilise bone calcium around the time of calving. The second is that they should supply Magnesium to stimulate the parathyroid gland that encourages increases calcium uptake from the gut and frees bone calcium. The third is that they will provide a Springer cow safe form of Calcium.

We stock two Transition Cow mineral formulations (high or medium levels of Magnesium). These also contain a full complement of trace minerals, Rumensin and Vitamin E (cows coming off FB are often low). The daily dose of these minerals is quite high at 340g/cow/day. This should be fed – mixed with baillage/silage for an average period of 7-10 days pre-calving. The daily cost is ~40c/cow/day. Please contact your Territory manager if you wish to order before calving.

Transition Calcium Bolus

Treatment – to raise blood calcium to counteract hypocalcemia during transition to lactation

Bolus weight – **176 grams**

Price – **\$12.00** plus gst each

Each Bolus Contains:

- Calcium chloride: Offers a potent immediate release, but levels drop over time
- Calcium carbonate: Offers a low immediate release, but calcium levels increase over time
- Calcium Propionate (preservative)
- Vitamin D3

Recommended dose:

- 1 bolus prior to or immediately after calving
- 1 bolus 12 hours after first bolus





Hamish Newton BVSc, PhD
Oamaru Veterinary Centre



Look after your heifers

We are now in the run up to calving and the heifers will be calving at the end of this month. Heifers that are “happy” to be in the shed milk out quicker and better, as their milk let down reflex (release of oxytocin) is working. Heifers that milk out well are at reduced risk of mastitis. Having heifers that are used to being on concrete and that have walked through the shed or onto the platform prior to their first milking tend to milk out better. If the heifers do go through the shed prior to calving don't miss the opportunity to teatspray them prior to calving. Teat spraying heifers 2 to 3 times a week prior to has been shown to reduce the number of Strep uberis infections by 50%. The majority of heifer mastitis infections you find in the colostrum period will be caused by Strep uberis. This is a bug from the cows' environment, or to be blunt wherever on your farm a cow has pooped. Strep uberis gets into the udder via the teat end so if you are getting heifer mastitis look at where

your heifers are getting dirt/poo on their udders and see what can change. DairyNZ recommends that if there are two cow pats per square meter the environment the cow will lie in is too contaminated.

- Can you alter break sizes if it gets wet?
- Could you manage the heifers separately from the mixed age cows?
- Once a heifer has calved if not bringing her in, can she be “put under wire” to where it is less muddy/contaminated?
- Is there a bit of the track that is pooling water that can be drained?
- If a heifer is dripping milk pre calving consider milking her – but feed her well.
- If the heifers' udders are dirty when they come into the shed wash and dry them prior to putting cups on.
- Get teatspray onto every teat after every milking.
- Do not let a heifer (or a cow) out of the colostrum herd until she passes the Rapid Mastitis Test (RMT).

Have a fool proof system.

Is the system you have for treating mastitis

cases simple and fool proof? Can your staff tell you what needs to happen? If they can't, then either they don't know what you want done, or it is too complicated. I think all systems should be based around the MRS T acronym.

- 1. Mark** the cow and quarter once a case of mastitis has been found.
- 2. Record** the case, diary, white board, MINDA live, ProTrack etc.
- 3. Separate** the cow – get her drafted out of the colostrum or milker herd into the treatment/red herd.
- 4. Treat** according to the treatment plans we have provided for your farm. If you are concerned about a particular case or are collecting milk samples for monitoring take these samples prior to starting treatment.

Teatseal residues vs mastitis clots

Finally, will your staff be able to differentiate Teatseal from mastitis? Mastitis clots when rubbed between the fingers disintegrate while teatseal “smears” along the fingers, and is “waxy”.

ScourGuard 4(K) Vaccine – Calf Scours Vaccine

Key features are:

- May be given IM or SQ and is very tissue friendly – no lumps
- In previously unvaccinated cows or heifers they will require two doses 3-9 weeks apart. The second dose to be given 2-12 weeks before calving.
- NZ trials show a very high antibody response to ScourGuard 4(k) vaccine.
- ScourGuard 4(k) can be given as an annual booster to cows vaccinated with Rotavec the previous year. The cost is 2/3rd that of Rotavec making it a cost-effective solution to scours.
- Ideally give booster dose 2-4 weeks before calving to cover all calves born in the first 8-10 weeks of calving.
- Ensure that all calves received the equivalent of 10% of their body weight in colostrum in the first 12 hours.



ScourGuard 4 (K) is available only under veterinary authorisation.

Transition – getting it right

Spring is fast approaching and with it the most crucial few weeks of the year for your cows. The “transition period” over calving requires huge physiological changes and is the biggest challenge a dairy cow will face. Over only a few days her requirements for energy, calcium, glucose and much more increase exponentially, but unfortunately dry matter intakes will take longer to catch up. If this imbalance is not managed well, the consequences are an increased risk of milk fever, along with ketosis, mastitis and metritis. So, what can we do to make this easier, and minimise any negative effects on production and reproduction?

Mineral supplements for springers

– magnesium is essential for the efficient absorption and resorption of calcium, and so plays a vital role in preventing milk fever. All cows should be supplemented with magnesium for 2 – 3 weeks pre-calving until 4 months post-calving. On higher risk farms a transition mix can help – our specially formulated mix contains anionic salts to reduce blood pH and increase calcium absorption, reducing the risk of milk fever. In addition, 500 IU of the anti-oxidant Vitamin E gives a boost to cows coming off crop with low levels. Vitamin E complements selenium in reducing susceptibility to disease.

Avoid high potassium pasture – potassium interferes with the absorption of

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Waimate Veterinary Centre



magnesium in the rumen, thus increasing the risk of milk fever. Don't graze springers on effluent paddocks, and consider feed testing potential springer paddocks and silage to better manage the risk.

Maximise dry matter intakes – at calving a cow's DMI drops, and getting her intake ramped up is the key to supplying her with the extra energy and minerals she needs. Pick up calves quickly to minimise bonding and get calved cows on to ample fresh pasture as soon as possible. Colostrum cows should be your top priority – they should be offered unrestricted access to good quality pasture and supplements. Consider following up with springers to tidy up paddocks.

Improve calcium status – colostrum cows should receive at least 100g limeflour/day, and up to 300g in a higher risk herd. At the point of calving treating at-risk cows with calcium reduces the incidence of sub-clinical milk fever as well as down cows. Calcium boluses, starter drenches or Calpro bags are some available options.

Monitor calved cows – a simple blood test on your day 3 calved cows is a quick test of their energy and mineral status, giving us the best idea of how well they are transitioning. Get this done early so changes can be made before there is a negative impact on the season.