



## Keeping the Winter Diet Balanced for Pregnant Cows

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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.

## Winter Dairy Seminar Thursday 2<sup>nd</sup> of July, 2020

**Lower Waitaki Golf Course**  
(26 Hilderthorpe Rd, off State Highway 1)

- **CALF REARING**  
Nicola Neal 1:30-2:30pm
- **LAMENESS PREVENTION**  
Neil Chesterton 3:00-4:00pm
- **SPRINGER THROUGH TO EARLY LACTATION MANAGEMENT**  
Dr Jim Gibbs 4:15-5:15pm

### Evening Event

- Waimate Veterinary Centre
- **LAMENESS PREVENTION**  
Neil Chesterton 7.00-8.00pm
- **TRANSITION MANAGEMENT**  
Dr Jim Gibbs 8:15-9:15pm

*RSVP to your closest  
Veterinary Centre now or  
email: [events@vet111.co.nz](mailto:events@vet111.co.nz)*

## Spring Calving Seminars are Back!

- Monday 13th July and Wednesday 15th July 2020 at Oamaru Vet Centre 7-9 pm.
- Tuesday 14th July 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](mailto:events@vet111.co.nz)*



## Maniototo/Omakau Dairy Farmers Update

George Smith BVSc BSc. caught up with Luke Jeffries of Maniototo Dairy Partnership for a farmer update.

### Winter Summary

- The mercury has plummeted in Puketoi, with temperatures consistently below freezing (some days reaching as low as -8).
- Winter feed crops have yielded well.
- Dry conditions have led to full utilisation of crops.
- Cows have dried off well and are nearing ideal target body condition scores for calving.
- Local farms are finding residuals post autumn grazing are lower than previous years.

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Finja Schmidt BVSc.  
Waimate Veterinary Centre

# Timing body condition scoring right

Over the dry period, it is an excellent time to reflect how the season went and make a plan for the upcoming season. We all know that well fed and appropriately conditioned cows will be able to cope with most things that the season throws at them. Whilst some of you may have in shed BCS monitoring, for the majority of others, there will be some strategic times of the year where it will be important to sit down and record BCS.

Time of year and targets	Reason to BCS	Effects and possible changes
Winter  	Gives insight to how feed allocation is going (i.e. are targets going to be met before calving?)	Lighter animals <ul style="list-style-type: none"> <li>Have 4 – 6 weeks to make a change therefore are a focus group</li> <li>Will need to be prioritised and have more feed allocated</li> </ul> Fat or over-conditioned animals <ul style="list-style-type: none"> <li>Cut back and feed maintenance only</li> </ul>
Calving  	Allows a reference point to assess if cows reached targets and how much condition was gained over wintering period	Lighter animals <ul style="list-style-type: none"> <li>Mark and identify at-risk animals (e.g. retained membranes or endometritis)</li> <li>Could be run as a separate mob (or with heifers) and preferentially fed +/- milked once-a-day</li> </ul> Over-conditioned animals <ul style="list-style-type: none"> <li>Closely monitor for metabolic disease when in the springers and colostrum mob</li> </ul>
4- 6 weeks before mating	Gives insight as to how the cows have recovered from calving (i.e. what was the BCS loss?)	Lighter animals <ul style="list-style-type: none"> <li>Will struggle to cycle and get in calf</li> <li>Need extra attention and still have time to respond prior to mating</li> <li>Could be run as a separate mob (or with heifers) and preferentially fed +/- milked once-a-day</li> </ul>
Mating	Allows a reference point to see if earlier feed changes had effect or not	<ul style="list-style-type: none"> <li>Will help set BCS standard at which to monitor at throughout rest of season to minimise losses</li> <li>Ensure that cows are on rising plane of nutrition throughout mating and if not, do something about it (supplements or external advice).</li> </ul>

As the RVMs are coming up this month, be sure to discuss with your prime vet what your current BCS monitoring is throughout the season. There are some key times in the season where BCS monitoring can give real value for your system. This season could be the year to add in a more structured monitoring programme – better fed cows, better health, better production.



Lucy Cameron BVSc, BSc  
Waimate Veterinary Centre

## 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 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.

# Calf scours

Celia van Kampen BVSc &  
Luke Smyth 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. Pickups 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.

**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 fed.
- 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.

# No Fat Pad? That's Bad

Euan Tait BVMS  
Waimate Veterinary Centre

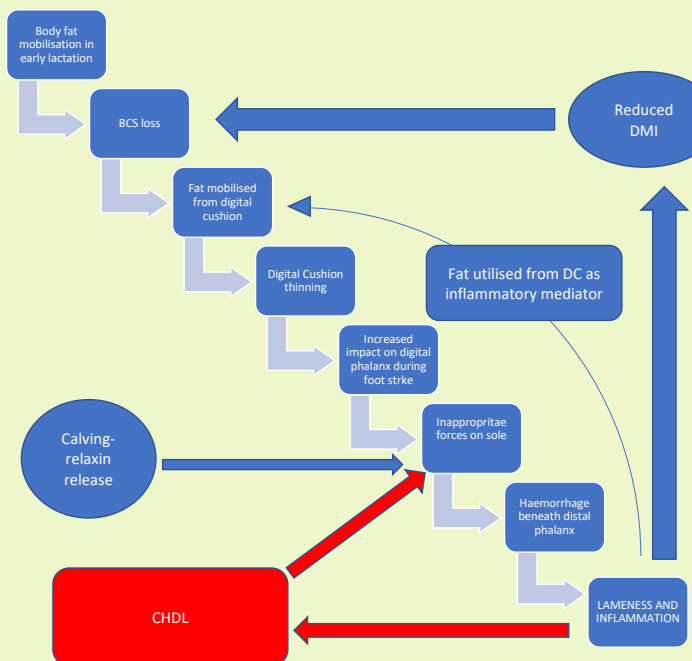


## What fat pad?

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.





## Managing the heifers to reduce mastitis

There will be heifers calving in a fortnight on many of your farms. For a variety of reasons heifers are more predisposed to getting mastitis than mixed age cows. While all the risks cannot be eliminated, if they are known about, steps can be taken to reduce the impact of these risks.

Some of the factors that make a heifer susceptible to mastitis are.

- Heifers get more udder oedema than mixed age cows.
- Heifers take more time to calve, and spend more time lying down when calving than cows.
- Heifers often have never been on concrete or into a shed before their first milking and when nervous or frightened won't let their milk down rapidly.

If possible, calve the heifers down separately from the mixed age cows. Once a heifer has calved, especially if she is in a big mob, or the weather is going to pack it in and you are don't get the fresh calvers in until the next morning milking, put her under the wire where it will be cleaner and she is more likely to eat.

Take any opportunity to walk heifers on the yard and through the shed prior to calving. In addition, take any opportunity to teatspray the heifers' teats prior to calving (also do the MA cows if drafting springers through the shed). Teatspraying heifers three times a week prior to calving has been shown to reduce the number of Strep uberis mastitis by 50%. A heifer that is "happy" in the shed will milk out better when she does calve. If there are issues with heifers not letting their milk down consider the use of oxytocin.

Milk any heifers with severe udder oedema or those dripping milk prior to calving – just have a good system to identify that she has not yet calved.

As final reminder, please don't let any heifer or cow out of the colostrum mob until she has passed a RMT or paddle test.

Inhibitory substances testing

Remember we have at the Oamaru clinic the ability to test for the presence of dry cow products in the bulk milk. If there is a chance that a cow got inadvertently milked into the vat before her with hold period has been exceeded, please get a well-mixed sample from the vat after draining out 5 to 10 litres in a clear jar. Ring ahead to Oamaru and we can get you an answer often within an hour of receiving the sample.



Jess McKenzie, BVSc  
Waimate Veterinary Centre

## Calf Milk Replacers - Milk based vs. Whey based Products

There are two main types of calf milk replacer (CMR) available on the market – milk based CMR and whey based CMR. What is the difference?

They differ on the component of the milk fraction on which they are based – ie. casein vs. whey based.

### Caesin based CMR

- Are digested like whole milk, forming a 'casein curd' in the abomasum. Failure of a curd to form can lead to nutritional scours. Good curd formation = good quality CMR. Poor curd formation = poor quality CMR.

### Whey based CMR

- Whey proteins are digested in the small intestine and do not form a curd in the abomasum. This aids in quicker digestion = more room for meal = GOOD!!! (quicker digestion encourages earlier dry matter intake). It also lessens the chances of nutritional scours and abomasal bloat due to the lack of a curd formation.
- A whey based product will move through a calf in only 2-3 hours, compared to 5-8 hours for traditional curding (casein) products. Globally whey based milk replacers are commonly used and lead the market in the US and Europe.

Before deciding to use a milk replacer you should weigh up the advantages and disadvantages for your calf rearing system. Ease of handling with automated calf feeding systems, high milk prices, minimal waste milk and disease control are reasons why they may be favoured on some farms. Only high quality reputable products should be used otherwise health problems and poor growth rates may result. And remember consistency is key – always mix according to the manufacturer's directions!!!

Whole Milk	Calf Milk Replacer
<b>Advantages</b> <ul style="list-style-type: none"> <li>▪ Cost</li> <li>▪ No mixing</li> <li>▪ Storage?</li> </ul>	<b>Advantages</b> <ul style="list-style-type: none"> <li>▪ Consistency of product (when mixed correctly)</li> <li>▪ Stored easily</li> <li>▪ Can be fortified</li> <li>▪ No disease transfer risk (M. bovis, Johnes disease)</li> </ul>
<b>Disadvantages</b> <ul style="list-style-type: none"> <li>▪ Potential for disease</li> </ul>	<b>Disadvantages</b> <ul style="list-style-type: none"> <li>▪ Cost</li> <li>▪ Labour to mix</li> <li>▪ Storage space/rodents</li> </ul>

## Critical important antibiotics

Currently as part of our herd health and expenditure reviews we are discussing the use of critically important antibiotics (CIA's)/ red antibiotics on farm.

- From the 1st January 2020 the regulations around these drugs changed, this means that it will NO longer be possible to use antibiotics like Excede or Excenel on farm.
- Antibiotics like Mastalone and Tylan/ Tylofen/ Tyloguard will only be able to be used by certain farms in certain circumstances. This will be recorded on the RVM authorization.
- Please be aware that only farms that have this veterinary authorisation will be able to purchase them. It will not be possible to purchase them in our clinics without it.

