



# Veterinary Centre MoozNews

## Fodder Beet Over the Dry Period

**Mat O'Sullivan BVSc – VETERINARY CENTRE Oamaru**



Fodder beet (FB) is now a mainstay crop for wintering cows in our area. Many cows have been pre-transitioned onto this crop pre-winter. Follow these steps to avoid hassles if transitioning in June.

- Measure your yield accurately – once you know the yield/ha (i.e. 25 tonne/ha crop), you can calculate your yield per square (two rows per metre square) and yield per linear row metre this would be 2.5kgDM/m<sup>2</sup> and 1.25kgDM/linear row metre respectively.
- Allow at least 1 linear metre/cow at the crop face and at least 5m<sup>2</sup> of turning room in the first break.
- Either drop wires on the permanent fence in the first break to allow a bigger area or scrape bulbs with a front end loader (and feed in paddock or stock pile) to create a headland.
- Best to calculate allocation in linear metres to be fed - i.e. if offering 3kg a cow from a 30 tonne crop this would be 2 linear metres or 1 square metre/cow. To be accurate you will have to offer part rows – i.e. your live strand will have a dog leg in it at some point.
- Cows will comfortably graze 18 inches under a single strand wire. Make sure that the wire sits back 12 inches from the row you are looking to graze. It must be very high voltage!
- Always feed your supplement or grass first and give a gap of 2hrs before shifting onto break. Cows must get a minimum of 2kgDM of “something chewy” in their diet. This may be either straw, balage, silage or grass

and must be maintained through the whole period while on fodder beet.

- For the first couple of days, drive over bulbs with tractor tyres or roller to break up bulbs to get cows eating it.
- Start at 1kgDM/day and increase intakes by 1kgDM every second day until fully transitioned (7kgDM). This takes a minimum of 14 day. Once cows have reached intakes of 7kgDM FB they are unlikely to suffer acidosis but further intakes up to 10-11kgDM total (ad-lib) must still occur at 1kg every second day.
- If you are going to get acidosis this will tend to occur at days 7-10!! It is critical to remain restrained with allocation over this time. Do not let beet bulbs accumulate while still shifting breaks forward.
- Once cows have got above 10kgDM day and looking to ad-lib feed there should be 15-20% of beet left from the previous day when shifting wire and about 5% from the previous day before that. Cows will always eventually clean this up. This is the true definition of ad-lib on beet.
- With a high ME and utilisation at around 90-95%, condition gain on fodder beet can be rapid. Monitor cow condition (BCS) to avoid them becoming over-fat as this can predispose them to metabolic diseases in the spring. Ensure you are not feeding more than required!
- Crude Protein maybe limiting particularly in crops of low leaf yield. Ensure the total diet is balanced.

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## Veterinary Centre EVENTS

JUNE

3

### Cow Collars Unlocking the Potential

Wedderburn Tavern  
from 3pm

JUNE

29

### Dairy Winter Seminars

#### TOPICS

- Early Lactation Nutrition
- Transition Management
- Control of Mastitis, Managing BMSCC with 10-in-7 Milkings
- Principles of Weaning Nutrition
- Johnes Herd Testing

Lower Waitaki Golf Club – 3-5pm  
Waimate Event Centre – 7-9pm



## Loose Lick Fodder Beet

**LOOSE LICK FODDER BEET MINERAL BLEND 25KG**

- Essential Macro elements – phosphorous and calcium
- Balanced blend of macro and trace minerals required during the winter.
- Place in troughs close to where cows are grazing ... recommended to be fed in 1 x 100 litre container (200 litre drum cut in half) per 100 cows
- Daily Dose 70g per cow per day ... daily dose is variable give or take up to 40% depending on environment e.g. warm/cool weather conditions

**Daily Cost  
per Cow Dose**

**15.8c**

**\$56.35 +GST**  
25kg Bag (Tonne Rate)

**357**

Daily Cow Doses  
per 25kg bag

# The Importance of Transitioning off Fodderbeet – A Collar Perspective



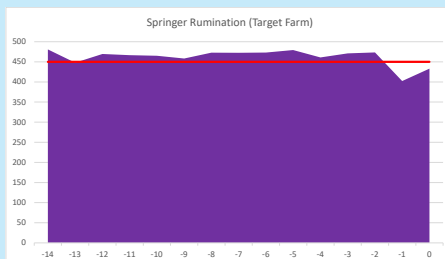
**Ryan Luckman BVSc (Dist) MANZCVS (Epidemiology) – VETERINARY CENTRE Waimate**

We've had plenty of articles in Mooz News over the years discussing fodderbeet, including some on the importance of early transition off beet, and setting cows up for calving with higher protein diets. In our collar repro reviews we've also found that another key reason to transition off fodderbeet early is to ensure adequate rumination rates in the Springer period.

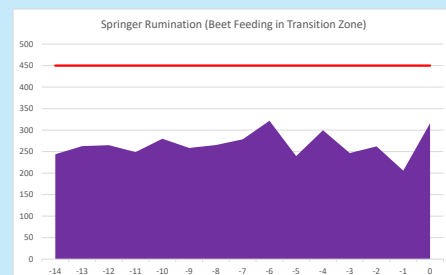
Our analysis of the Springer zone (0-14 days pre-calving) has shown that the best performing farms are feeding diets that hit 90-100% of maintenance energy demands, AND daily rumination minutes around the 450 minutes per day mark.

On the day of calving we see the rumination rates of all cows drop, usually by about 1/3rd. By having cows at the 450 minute mark it appears that farms can keep this drop to sit around 300-330 minutes per day which really sets the cows up well in the colostrum period. We suspect that at these high rumination minutes that cows are much better set up to handle a grass-based diet, and they have a higher voluntary feed intake in the colostrum period.

The graph below is an example of a herd with optimal Springer feeding. This herd hit a daily rumination on the day of calving of 363 minutes per day (which is very good!).



The following example is a farm that we discovered during our collar repro reviews that was unable to transition off beet early. Some of these cows calved on beet, and many had limited time off on grass prior to calving. As you can see the rumination rate in this herd sat at only 250 minutes per day. More importantly this set up an average rumination rate of just 284 minutes per day on the day of calving. At about 80 minutes per day lower than the target farm, on a similar diet, it is highly likely that this will represent a markedly lower energy intake for the cows at this critical point.



While there are many factors that will have contributed, it does appear that this poor fodderbeet transition has subsequently affected the following areas:

- It took 7 days for rumination rates to reach target rates post calving despite OAD milking. We like to see these recover in the first 1-2 days.
- 50% of the cows had a health alert on the collar system in the first 14 days post-calving. Top farms hit less than 25%.
- The cows had low first service conception rates, about 12% below industry average, despite being on OAD for the whole season

It may seem early to be highlighting this now (a week after dry-off!!), but it's important to ensure that your Spring feed budget has been set up to ensure a good transition diet will be achievable, especially on farms feeding fodderbeet. Get in touch with your prime vet if you want to discuss options for the transition zone.

## Dry Period Nutrition

**Lucy Cameron BVSc BSc – VETERINARY CENTRE Waimate**

With cows transitioning onto winter feed now, some key points to consider over the dry period:

- **Yield crops & feed test** so you know what you're feeding, and can target appropriate levels
  - An accurate yield will minimise the risk of digestive disorders & allow accurate allocation
  - Use feed test information to prioritise higher quality feed to younger/skinnier mobs
  - DM can vary greatly – it can be higher than expected in a dry year such as this, which will impact allocation
- **Energy & dry matter intake for ½ BCS:**
  - Energy fed will depend on target weight gain, but in most cases the aim will be to gain ½ a body condition score over winter
  - Target ~ 120 MJ ME/cow/day (12.5 kg DM down the throat)
  - Increase proportion of crop fed for increased BCS gain
- **Protein:**
  - Mixed age cows need at least 10-12% CP in their diet over winter

- For R2's & R3's aim higher (14-15%) i.e. winter on kale, or feed out a higher protein silage (grass/lucerne) if using fodder beet or swedes
- Consider checking protein levels in the diet, levels of crop/supplement can be adjusted accordingly
- **Fibre** – keep the rumen full by offering a palatable source of fibre e.g. silage and/or free choice straw.
- **Minerals:**
  - Phosphorus and calcium supplementation is strongly recommended on fodder beet diets
  - Trace element levels should be checked before dry off, and boosted before calving if necessary, or through the water over the winter if possible – winter crops are often low in copper, selenium & iodine
- **Water** – make sure cows have access to clean good quality water at all times, even with low dry matter crops. Lack of access to water can lead to a drop feed intake too.
- **Welfare** – cows must have access to a dry lying area. Cows will normally sit for 8hrs a day.



## Spring Calving Seminars

Our popular 'Spring Calving Seminars' for farm staff will be held in July. These interactive sessions will include four modules covering spring mastitis, metabolic disease, calf rearing and calving a cow.

**\$35 PP**

- **Tuesday 5 July, 7-9pm at Veterinary Centre Waimate, 128 High St, Waimate.**
- **Tuesday 12 July & Thursday 14 July, 7-9pm at Veterinary Centre Oamaru.** Please contact your nearest clinic to register.



Kevin Kearney presents the bag to Janine Stackhouse

**Peter & Janine Stackhouse, Fleetwood Dairy,** were the lucky winners of the 'Honest Wolf Weekender Bag' for entering the Veterinary Centre survey for topics to be presented at our Winter Dairy Seminar event in late June.

# Animal Wellbeing Plan

Andrew Muir BVSc – VETERINARY CENTRE Oamaru



ANNUAL DAIRY FARM ANIMAL WELLBEING PLAN				
Health Category	Farm Plan/Industry Target	Farm Target	Plan	
<b>NUTRITION</b>				
Target 5.0 for cows (and 5.5-6.0 for heifers) at calving and maintain BCS 3.0 post-calving on cows as a positive energy balance and ewe				
Body Condition Score	5	5.0 at Calving & 3 BCS loss Post-mating	5.0, 5.5 for heifers and 3.0	Change to 6AM milking frequency in mid-late lactation to reduce BCS loss. Feed Springer cows at 90-100% of requirements. Feed colostrum cows ad lib
Thin Cows (Below 3.5 BCS)	0%	0%	0%	Autumn strategic dry-off. Early calving cows at BCS 3.5 dried off at start of April, cows at BCS 4.0 at the start of April. Withers light cows in separate paddock for higher level allocation. Identify and examine cows under BCS 4.0 and manage accordingly. Aim to milk these cows OADR or preferentially level
<b>HEALTH</b>				
Aim for an annual lameness incidence of less than 5%				
Lameness	5%	12%	5%	Track lameness to scheduled. Identify slow progression points on tracks and remedy. Lameness are identified and treated ASAP. Use NSAIDs and block to improve outcomes (and pain) in lame cows. Staff are made aware at the start of the season about the proper use of banding and top gates, keeping them behind cows on lanes, common sense of lameness, identifying lame cows, and recording all cases into MBSGA (not just those needing drug)
Aim for an annual mastitis incidence of less than 5%				
Mastitis	17%	12%	12%	Prevent SCC for the environment. Environmental SCC prevention measures: Clean and dry udders for high SCC cows to be treated for S. aureus. Collect pre-milking mastitis samples for culture. Identify high SCC cows identified at herd testing for culture to be treated for low SCC cows. GENETICS - To use genetic breeding values to identify bulls whose daughters have low SCC and good udder conformation. Place checks completed in winter and summer. Positive udder care replacement - monitoring for splits and cracks. Engage vets to assess rear health as a measure of machine performance. Ensure regular or better connectivity at every milking. RRP4 Feed cow colostrum cow
Aim for less than 2% mortality rate in cows				
Mortality Rate - Cows	0%	2%	1%	Institute John's testing of herd via herd test samples. Cull positive animals. Record & analyse cause of mortality for future investigation. GENETICS - To use genetic selection of bulls to minimize calving difficulty in heifers
Aim for less than 5% mortality rate in calves (pre-weaning)				
Mortality Rate - Calves (pre-weaning)	1%	5%	2%	Aim for every calf to receive 80% of their body weight in gold colostrum within 12 hours of birth. Collect calves twice daily, especially in adverse weather conditions

The 2021- 22 season was the first time that Wellbeing plans were implemented with Fonterra suppliers as part of the Co-operative difference. These covered off the domains of health, nutrition, environment and behaviour.

For the 2022-23 season there is an increased focus on calf care. This will require a discussion around nutrition, health and housing for calves in addition to the other areas of wellbeing that were discussed at the start of last season.

This will all be taken care of over the winter, when we sit down with you to do the Herd Health/ RVM consult. You will receive an animal wellbeing plan in the blue folder that contains all the important documents you require for your shed audits.

## Protection Against Calf Scours

Scours vaccination is a two part process, with vaccination of the cows followed by even more critically good colostrum management, to ensure that calves can absorb those antibodies. Continuing to feed transition milk from the 2-8th milkings to calves for as long as possible may provide additional protection, but ensuring they get the right amount of gold colostrum at the right time is critical to ensuring the vaccine is effective.

ScourGuard 4(K), a scours vaccine in New Zealand covers two Rotavirus serotypes (Rotavirus G6 and G10), as well as bovine coronavirus and E. coli K99.

- 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.



ACVMA 10057



The Waimate teatseal team

From left:  
Brodie, Viv,  
Tayla, Brianna



The Oamaru teatseal team.

From left:  
Amy, Jordyn,  
Rhonda, Tegan

## Abortions

Between scanning and calving we do, unfortunately, expect some foetal loss. The "normal" figure is hard to determine – but around a 1-2% loss is expected. ie 10-20 cows in every 1000. If the norm is exceeded, intervening is important to prevent excess losses at this stage. Larger numbers of abortion or abortion storms (more than 2 or 3 in 24 hours) should be investigated promptly. Abortion can be caused by various bacteria, viruses, parasites and fungi as well as non-infectious causes. To determine the cause of an issue, it is important we build up a clear history and get good samples from both the aborted foetus and the placenta. Getting these samples and reaching a diagnosis can be tricky, but if done properly can be very helpful in prevention of issues in the future. If you discover an aborted foetus in the paddock, store it in a plastic bag in the freezer (ideally with the placenta if it is there). This means that if there are more cows aborting, you have samples ready to go and hopefully a diagnosis can be reached quickly. If you are having issues with abortion, please get in touch and discuss it with your prime vet as reaching a diagnosis is imperative in preventing further loss.

The team at the Veterinary Centre want to congratulate Jaspal Singh (Jass) - he has just been named as the New Zealand dairy farm manager of the year, at the recent Dairy Industry Awards national final in Christchurch. Jaspal, together with his wife Ruby, work for Troy and Donna Yaxley on the 800 cow Waterstone Farms owned by Mark and Carmen Hurst. Jass received glowing comments from the judges. Well done on this outstanding achievement!





# UdderNews

**Hamish Newton BVSc PhD**  
VETERINARY CENTRE Oamaru

- The optimal dry off procedure will see a cow's:
- lactation sufficiently wound down before her last milking.
  - the introduction of dry cow therapy (DCAT or Teatseal) done with sterility.
  - and the cow's continuance on a maintenance only diet for a further 3 days.
  - a clean environment for at least the first week.

When done poorly there is:

- the risk of introduction of mastitis causing bacteria during insertion.
- the risk of large milk volumes in the udder with resultant pressure forcing teat sealants out or milk leakage providing bacteria an opportunity to enter.
- the systemic reabsorption of antibiotic as milk is reabsorbed from the udder. This results in declining residues in the udder which limit the extended protection period.

Avoid bringing the herd back to the shed for 7 days post dry off but look out for slow moving cows that are not eating in the first 24 hours – these could have a toxic mastitis and require immediate action. A combination of Mastiplan intramammary, Engemycin and Metacam would be a suitable treatment.

For cows that are noted with mastitis two plus days after dry-off we recommend these be treated with Penclox intramammary and milked during this treatment period and then treated with Dryclox after the last milking.

# GrowSMART



## On the Road to Recovery



**Jess McKenzie BVSc (Dist) – VETERINARY CENTRE Waimate**

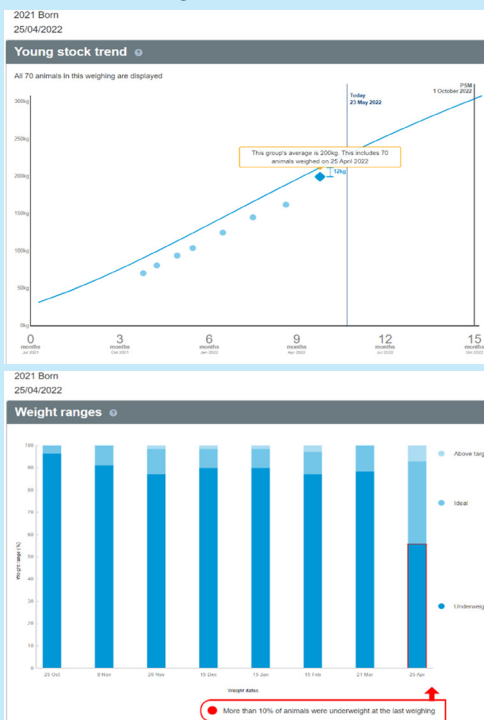
In late March we were called in to help with a mob of 70 x R1 dairy heifers. The concern being that they were on average 20kg below their target weights. Calves were in good health – there were no signs of disease or scouring, the drenching programme had been robust and calves had been well supplemented with selenium, copper and B12.

Growth rates had been reasonably good – averaging 700 grams/day for the 2 months prior. They were being well fed on a grass only diet. Feed QUANTITY was good - calves were full and good residuals were being left behind.

- However, feed QUALITY was poor with calves grazing older pastures. This was a limiting factor.
- The other limiting factor was that these calves started out behind and were simply struggling to catch up.

We decided the best plan was to try and catch them up as much as possible before winter. Palm Kernel was added into their diet and right are the results 4 weeks later.

The low quality pasture presumably had high levels of NDF fibre which eventually becomes a limiting factor in voluntary intakes. PKE is a low effective fibre concentrate - its inclusion in the diet thus enabled calves to increase total daily energy intake.



## Balancing the Winter Diet

**Mat O'Sullivan BVSc – VETERINARY CENTRE Oamaru**



### Fodder Beet

A cow in the dry period typically requires 10-11% dietary crude protein as a minimum to remain healthy and gain muscle mass as well as body fat. This requirement (for udder development, colostrum production, rapid phase calf growth) starts to rapidly increase in the final 3 weeks of gestation reaching an optimal 16% in the final 10 days before calving. Fodder beet (FB) is usually low to marginal in protein. The leaf yield of the crop is a prime determinant in the total available crude protein. Crops that have low leaf yield or have had minimal nitrogen application/ depleted soils will generally be low. Careful consideration needs to be made around the form of supplements to complement a FB diet. Where the CP levels are low, addition of a good quality grass or lucerne silage/ bailing will aid in restoring to optimal levels, whereas a poor-quality hay or straw will worsen the situation. Getting crops tested for crude protein is a good place to start when calculating supplement balance.

Fodder beet may be low in Phosphate (but not always) and is commonly low in Calcium.

Phosphate levels in beet in the Waitaki area are not as low as those reportedly found in other areas in Canterbury. With Calcium the leaf typically contains 5-7 times the concentration than the bulb. Thus, having a healthy leaf yield is a good way to ensure cows are not deprived. Testing for these two macro-minerals is a good start point to decide on the requirement for supplementation. Lucerne is a good matching supplement for FB as it is generally high in protein and very high in calcium.

Where it is possible to provide calcium on FB I suggest you do it. 50g/day of DCP plus an additional 50g/day of limeflour will meet most requirements. Some crops are quite low in salt. Mixing salt with limeflour/DCP can encourage intakes. Most Fodder beet 'loose lick' type products benefit from an additional calcium boost.

Selenium levels are always very low, so ensure cows are well supplemented while on crop or going on and coming off. High rates of soil ingestion can deplete liver copper stores so keep this in mind particularly with R1s and R2's.

### Kale/Giant Rape

Generally, kale will have adequate crude protein to support pregnancy - ~15% crude protein, but this is not always the case if it has been nitrogen deprived (it can measure sub 10%). Most of our brassicas are high in Calcium so require no additional supplementation – they can be quite good at replenishing bone stores.

Kale however contains goitrogens which can bind up dietary iodine. Consider supplementing with iodine, particularly with R2's as deficient heifers are more prone to still births.

Kale diets usually result in the body consuming more Selenium and Vitamin E (vitamin E deficiency is also associated with still births and RFMs). For Vitamin E restoration try to get back onto 5kgDM plus of grass 10 plus days before calving and ensure selenium supplementation pre and post going on the crop.

It is recommended that a maximum of 75% of the diet be kale, the rest silage/hay.