



MOOZNEWS

General Principals of Correct Fodder Beet Transition



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1. Measure your yield accurately

- Particularly important for the area that you will use to transition on. Get an expert to help and make sure DM % is measured at a lab.
- Rows are generally planted 50cm apart so there are usually two rows per metre square. A 25-tonne crop should contain 2.5kgDM/m² and 1.25kgDM/linear row metre respectively.

2. Allow at least 1 linear metre/cow along the face of the crop

- The 1m spacing means all cows can reach the face and ensures that shy cows can eat. NOTE: Any time a practice leads to differential feeding rates (i.e. shy cows unable to eat) then you will increase the risk of acidosis.

3. Ensure there is a 6m (minimum) to 10m headland that can be used for transitioning

- The headland provides space for

cows to enter the crop face and turn (important for less dominant cows). Using a beet bucket to harvest bulbs and create a headland is the most common method used. This headland can also act as an area where supplements can be fed.

4. Start at 1kgDM/day and stay there for 3 days until you are sure all cows are eating the beet and then increase by 1kg every second day

- over 14 days (to reach 8-9kg - cows which have never eaten beet before may/will take 21 days to achieve this). Ad-lib maximum intake is 10-12kg depending on breed size.
- Cows should not enter the paddock full on grass or supplement before-hand as some cows will not eat - leading to others overeating.
- Train cows to stay and eat their allocation. Even if most is eaten in 20 minutes, cows should stay on the break for 2-3 hours so they all learn that they need to eat.

5. Setting your allocation

- Cows can comfortably graze 18 inches under a wire. Set your fence 12 inches back from the row you wish to graze.

- Keep it simple – if you know your tonnage/ha, this will convert to kg/linear metre divided by two. Graze the length of your rows.

6. Feed a good quality supplement, but do not overfeed this.

- For dry cows, feed about 7kg of supplement initially. This should be a good quality supplement (not just Barley straw). Keep the supplement levels up around 7kg until the cows reach around 4kg of beet.
- Once at 5kg of Fodderbeet supplement can be reduced to 4kg (assuming it's not just barley straw!). Then keep the FB climbing
- 2-3kg of a hay or straw should be maintained even with cows at max feeding levels.

7. If you find beet underfoot BEFORE day 7, pull back – you have over allocated!

- You typically see the biggest issues with acidosis and deaths at day 7-10 of transition. It takes around 7 days for cows to reach maximum intake (but a further 7 days for the rumen to get ready).

Strategic BCSing – An invaluable tool in the current state

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Many farmers are reporting they are getting a drip feed of cull cows away, but are still expecting to be carrying surplus numbers (~15%) by the end of May and into the winter.

This will require for many farms a different approach to May. Light early calving cows should be dried off now. Moderate condition cows should be prioritised for feeding. Fat cows should be identified for restriction in supplement allocation (or dried off and put on restricted intakes if they are not producing) and use your lates and empty cull cows to maintain your lactation curve.

The information from a whole herd individual body condition score when matched against calving date is a powerful tool to conserve feed and create efficiencies. Infovet provides a great report for setting this up.

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VETERINARY CENTRE



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BVD Bulletin

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Dairy Nutritionist Andrea Murphy recently spoke to our vets with some tips on feeding around dry off, and avoiding udder oedema in spring. Some key points:

Feeding around dry off

The goal is to reduce individual cow production if producing more than 1kg MS/day, **by reducing dietary energy and excess protein.**

- **If producing >1kg MS** ⇒ reduce protein & energy of ration at least 7 days prior:
 - ♦ Target 16% protein, 157 MJME (15 kg DM)
 - ♦ Remove all protein concentrates (PKE, DDG etc)
- **Three days either side of dry off date:**
 - ♦ Target 12% protein, 90 MJME (10 kg DM)
 - ♦ No quality pasture intake – either low quality OR high covers/tag
- **If producing ≤5 litres** – dry off immediately, not only will SCC be increasing, but also the risk of inhibitory substance grades in spring are much higher if milk yields are very low at dry off
- **If producing ≤1 kg MS** – there's no need to change the diet in lead up to dry off
- **If pasture protein is >20%** – consider diluting with low protein silages e.g. whole crop cereals/maize
- **To decrease energy fed** – consider removing grain feeding, but there may be some advantage to continuing a small amount to settle cows
- **If fodder beet is being fed** – maintain constant intakes, otherwise cows will need to be transitioned back on again. When moving to the crop each day take the cows very slowly and quietly – to decrease their exposure to bugs.

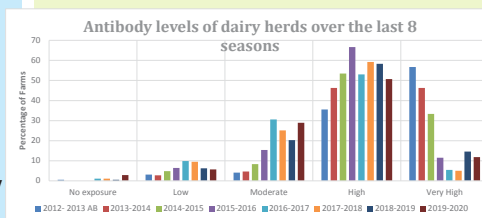
Avoiding Udder Oedema

Heifers are most at risk due to their less developed venous and lymphatic supply to the udder – at least 400 litres of blood flows through the udder to make one litre of milk – a lot to deal with! In addition, producing colostrum uses a lot of protein, leading blood levels to drop. When these systems struggle, fluid accumulates in the udder tissue. Some heifers are more predisposed than others (e.g. well-conditioned ones), but with a herd-wide problem reducing dietary risks factors may help:

- Excess dietary protein – target 16% protein for springers, not more. Avoid excess highly rumen degradable protein e.g. freshly sown, rapidly growing pasture. Instead target taller slightly lower quality paddocks, and/or consider diluting pasture protein with lower protein feeds i.e. cereal or maize silage, straw
- Salt – in the form of Na (sodium) or K (potassium). Don't feed salt to springers (and take care with Na in other forms e.g. sodium bicarbonate). Avoid high K pastures (e.g. effluent paddocks) and grass silage made from high K pasture
- Excess grain – low levels fed can be useful to train heifers, but very high levels fed pre-calving have been shown to increase the risk of udder oedema overseas. This is unlikely to be a problem in NZ.

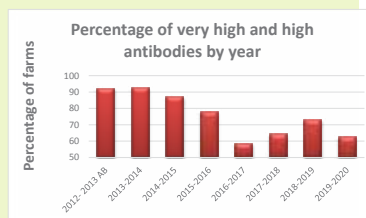
This month we continue our examination of the seasons bulk milk BVD results, by looking at the trends in antibody levels. Bulk milk antibody levels are a measure of the exposure of a herd to the BVD virus. Herds with high or very high levels of antibody have got virus in them (a PI) or have been exposed. With time (years) antibody levels in a herd will decrease provided there isn't further exposure. You can look at your bulk milk BVD results to see where your farm sits relative to others in the district.

The following graph shows the change in antibody levels across the last 8 seasons. This incorporates 1367 farm seasons of data so gives us a real picture of what is happening out there. As we have less BVD exposure in farms in the district the bars on the left of the graph will get bigger and those on the right will get smaller. This season 2.8% of our farms have no exposure. The largest percentage over all the years of testing.



GRAPH 1

The second graph looks at the percentage of farms that have very high or high antibody levels, an s/p ratio of >1.0 and >0.75 respectively. These are the farms that are likely to have a PI in them (it may have just been removed) or amongst dry stock off the dairy platform. The lower these levels get, the greater the likelihood that PIs have been removed from all parts of the dairy system. We can see this year that only 62.6% of farms fall into this category. The second lowest level in the 8 years and 30% lower than 6 years ago. Overall it appears we are slowly mopping up BVD in the local district.



GRAPH 2

Body Condition Score

Lauren Strange BVSc
Waimate Veterinary Centre



Following on from April's article about how to BCS and pull out your light cows, here is advice on how to feed these cows post dry-off to ensure they reach target BCS at calving.

- Mixed age cows should target BCS 5 at calving.
- Cows rarely gain more than 0.5 BCS units per month even with exceptional feeding or powerful winter crops.
- During the last month of pregnancy cows are unable to put on any condition as the fetal growth demands are too high.
- Taking all this into consideration, a cow who is due to calve on August 1st needs to reach her target body condition by July 1st.
- If she is a BCS of 4 at drying off, she will need at least 2 months to reach this, plus around 10 days post-dry off for feed intakes to be significantly reduced in order to cease milk production. This cow ideally would have been dried off on April 20th.
- From early May her feed intakes can be increased again to increase her body condition score.
- The average pregnant 500kg NZ dairy cow will require around 110 MJ energy daily to successfully reach target. When calculating requirements we must also remember to account for feed wastage and increase the requirement as the cow gains weight and pregnancy progresses.
- These cows will need to consume around 10-11kg of DM initially. They will need to be offered more than this (around 15kg depending on the type of feed).
- Commonly offered diets include 6kg of Fodder Beet or 7kg of Kale both with 4kg of baleage.
- Feed quality and wastage has a significant impact on the specific animal requirements. Ideally, sit down with your Blue Cross veterinarian and work out an accurate feed budget.



Jess McKenzie BVSc
Waimate Veterinary Centre

Maniototo/ Omakau Dairy Farmers update



George Smith caught up
with Mike Williams for a
Maniototo/Omakau dairy
farmer update.

Case Study –

Bovine Adenovirus in R1 Dairy Calves

What is Bovine Adenovirus?

- Bovine Adenovirus (BADV) is a viral disease that is mainly seen in 6-12 month old calves.
- Outbreaks are typically seen during autumn, winter and spring months.
- It is primarily an acute gastro-intestinal disease, but calves may also have respiratory signs.

BADV was noted as a disease of increasing occurrence in R1's during 2014/15. The practice sees 3-4 cases/year.

How do we know?

- Outbreaks tend to be short in duration and although a large number of calves within a mob can be affected mortality rates tend to be low (ie. maybe 1-2 deaths in a group of 160).
- A presumptive diagnosis can often be made based on the history.
- A post mortem is important to confirm specific gastro-intestinal changes from samples sent to the lab.

Case Study – March, 2020

- Grazier found two calves from a mob of 160, acutely dead within a day of each other.
- Noted the day before that a couple appeared to be a little bit dull/depressed.

Differential Diagnoses for Enteric Disease & Sudden Death in Calves

Yersinia, Salmonella, mucosal disease, GI parasites, toxicity, clostridial deaths, nitrate poisoning.

History

- Calves had received two doses of a 10-in-1

vaccine.

- Drenching was up to date. No known access to any toxicities.
- PM performed on one of the calves. Very fluid-like intestinal contents.
- Samples sent to the lab - a diagnosis of BADV was confirmed based on histopathology of the intestine. Viral inclusion bodies seen in the GI tract confirms the diagnosis.

No more deaths were seen in this mob, however about half of the remaining calves appeared a little bit 'dull', ears flat, and slightly snotty nose/ slightly gunky eyes. Calves were on liveweight target however weight gains had fallen in affected calves to 200-300 grams/day. A week or so later they were looking a lot better and had picked up again. Often the remainder of the mob appear to remain relatively unscathed and in general good health.

One calf from this mob had been diagnosed with Yersinia infection 3 weeks prior to this outbreak (lab confirmed diagnosis) and although it had been separated, it was possible that in this case Yersinia infection may have played a role in disease development. Bovine Adenoviruses are widespread in the environment and given the relatively low prevalence of disease it is likely that host and environmental factors play a role in disease development. Cold weather conditions, feed shortages, recent transport, ill thrift, and concurrent parasitism all have the potential to cause stress and predispose to opportunistic infections.

An interesting disease that we have seen more of in the last few years, and certainly on the differential list when you see 'sudden death' in calves.

Seasonal Summary

- Conditions very favourable for grass growth especially in autumn with cows having a good feed wedge in front of them heading into May.
- Good season for reproductive performance.
- Minimal number of frosts so far this year.
- Seasons production is on target to be slightly ahead of last year.
- Cow condition is hanging on well heading into the last month of lactation.

Preventing subclinical hypocalcaemia

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Waimate Veterinary Centre

Spring time is still some time away but it is not too early to introduce some new research about milk fever (clinical hypocalcaemia) that came out of data from monitoring NZ spring calving herds in 2019. One of the major findings included that about half of the dairy cows observed had subclinical hypocalcaemia. Subclinical cows will still be standing and appear normal but have a hidden cost of slowing down i.e reduced production, reduced fertility and an increased risk of developing other diseases such as metritis.

Therefore there is an avenue for you to help prevent sub clinical hypocalcaemia:

- Calcium oral bolus (i.e. Calpro bolus) = give one bolus at or immediately after calving and a second one 12 hours later. These

will get a large portion of cows out of that danger period. They are far more effective, easy to administer and longer lasting when compared to a calcium bag under the skin. Boluses are easiest administered through a head bail around milking time. We are happy to come out and show how to administer these.

- Calcium treatment under the skin = only lasts for about 4 to 5 hours. (Only give IV calcium to cows that are down with milk fever).

With upcoming MQR and RVM consults, it is a perfect opportunity to discuss options with your veterinarian on how to help prevent subclinical hypocalcaemia in your herd. Having a solid and robust plan early will save you down the track!





Mark the dried off cows well

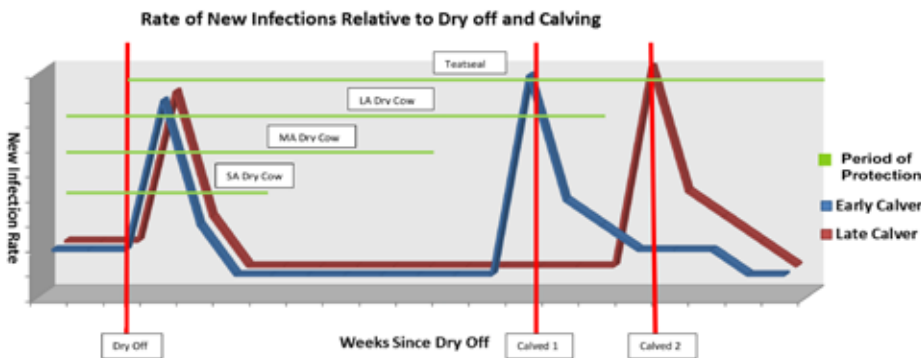
Cows will start to get dried off this month. What is going to happen to the processing capacity of the meat works is unknown now, but it appears there will still be a 4 to 6-week delay in getting cull cows away at best. Because these cows are either going

to be still on farm or possibly milked until space becomes available it is going to be vital that the cows that do get dried off with an antibiotic DCT are well marked for as long as they remain on the milking platform.

Attention to detail pays dividends

Regardless of what product you use when you dry a cow off the result you get will depend on the cleanliness of the insertion technique. This is most obvious if you are going to use Teatseal. The result of putting Teatseal into a teat that has not been cleaned properly can be a dead cow. Admittedly the results of not cleaning the teats properly when inserting an antibiotic DCT are not so dramatic but when we look at the apparent success of the dry period in herds where we know the attention to detail has been meticulous we consistently see better results. The approach that needs to be taken when putting a product into a cow's udder at dry off needs to be, clean one teat and insert the product, then repeat for the

remaining three teats. You will get better results cleaning and inserting teat by teat rather than cleaning all the teats and then returning to put the product(s) in. Do not forget to teatspray after inserting the DCT. Remember to record which cows got dried off with what and when and mark the cows that got antibiotic DCT. If your cull cows are going to be milked into June or are still going to be on the property until space becomes available at the works make sure your staff can easily identify them so they do not get an antibiotic DCT. On the same vein make sure that if a dried off cow gets into the milkers by accident she needs to be marked so the cups do not go on her.



Milk Quality Reviews

We have begun our reviews of each farm's milk quality, mastitis events and mastitis drug usage. Due to the ongoing need for social distancing we are doing these over "Zoom". Zoom allows us to talk with and see you and allow us to share to your computer screen the data we have collated. The data we have access to includes sales data, herd test data, and perhaps the most useful data is the mastitis event data if you have entered it into MINDA or InSight.

With this data (herd test data and clinical event data) many of you will be in position to continue using, or start to using teatsealants alone in the milkers that have a good cell count history and mastitis history, if the herd's performance as whole meets some well-defined and researched thresholds. The industry has moved steadily over the last 5 years towards a greater proportion of herds not using blanket dry cow therapy. We are seeing the same swing towards teat sealants in MA cows amongst our clients as well.

Remember the underlying aim of the dry period is to calve cows down with no infections. This involves clearing up existing infections and preventing a cow, regardless of whether she has infection at dry off or not, acquiring a new infection over the dry period. The two riskiest parts of the dry period are the 10 days after drying off and the 10 to 14 days either side of calving. See the graph on left. Regardless of how long a cow's dry period a teatsealant will protect against new infection.

Fodder Beet – Protecting the cow and balancing the diet

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The feeding of fodder beet to cattle is now a fully established practice. It has the potential for high yields making it a cheap, high energy feed. It does however possess some challenges in its management and balance of the ration.

- a. Acidosis - Acidosis is the greatest concern for all farmers. It occurs after a sudden increase in intake of individual animals. Without time to adapt, cows struggle to buffer and remove the increased production of VFA's from the rumen and a disastrous drop in pH occurs. See article on correct transition.
- b. Mineral Balance – Fodder beet is low in phosphate and is often below the daily animal requirements. It is also marginal in calcium. When feeding these crops for an extended period, there could be significant risk of depletion of bone mineral stores. This may result in increased risk of metabolic disease at calving and early lactation. Supplementing with Phosphorus and Calcium is

good practice through the winter. We have had good results with the phosphorus supplement Kynophos mixed with salt. Ask your Territory manager for details. Calcium supplements can be given pre-winter to replenish bone stores - limeflour at 100-200g/cow/day works well.

- c. Protein Deficiency – Fodder beet is protein marginal at best. A greater proportion of the total protein is in the leaf (17-20% CP) versus the bulb (7-11% CP). Cows need a minimum of 12-13% during the dry period but this increases to 16% closer to calving. The majority of crops out there this year appear to have fungal leaf damage. Significant leaf mass may be lost by mid/late winter potentially limiting protein availability which coincides with a 20% increase in protein requirements in late gestation. Protein deficiency at this time will impair appetite, health and production at calving. It is essential that a diet containing FB be balanced for protein. A bulb dominant crop plus straw or cereal silage/bailage is not a balanced diet.