



Veterinary Centre MoozNews

Transition – Getting it Right!

Lucy Cameron BVSc BSc – VETERINARY CENTRE Waimate

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 – 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. This imbalance must be managed well, or the consequences are an increased risk of milk fever, along with ketosis, mastitis and metritis.

Key actions to minimise the risk:

Springer minerals

- **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 from 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

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.
- Tidy up paddocks with springers, late calvers, and/or mow in the second round so pasture quality does not suffer.

Improve calcium status

- Colostrum cows should receive at least 100-150g 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, with Transition Calcium boluses giving 12 hours of increased calcium levels.

Monitor calved cows

- A simple blood test on your day 2 colostrum 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.

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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/ScourGuard 4(K) vaccination is due for early calvers
- Consider Salmonella vaccination – discuss with a vet.



Veterinary Centre 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.

- **Tuesday 11 July, 7-9pm at Veterinary Centre Oamaru, 311 Thames St, Oamaru.**
- **Wednesday 12 July, 7-9pm at Veterinary Centre Waimate, 128 High St, Waimate.**

Please contact your nearest clinic to register.

It'd be great to catch up!

Book Today

RSVP to events@vet111.co.nz

\$35 pp

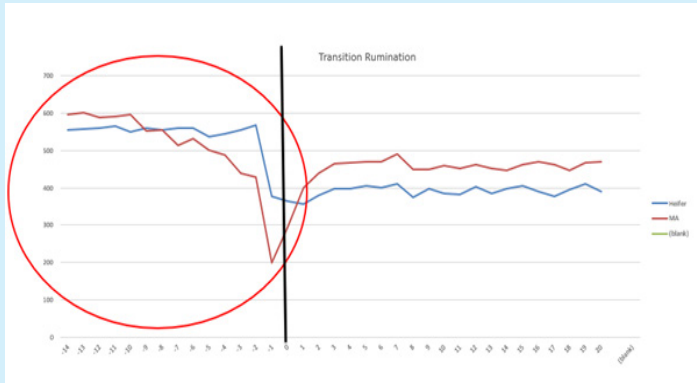
Transition Management – The Key Learnings from Collars



Ryan Luckman BSc (Dist) MANZCVS (Epidemiology) – VETERINARY CENTRE Waimate

The transition period (Springers through to the first 14 days post calving) is a critical time for a cow. The transition period has a strong influence on BCS loss, endometritis rates, mastitis, lameness, metabolics, production, and ultimately repro results. Needless to say getting it right can have a major impact on a farm's performance!!!

With a few seasons of monitoring transition (via collars) under our belt, we now have a pretty good handle on the key learnings for the period.



Springer Feeding

In our Collar Repro Reviews this season, one of the major findings was that underfeeding of Springers had a massive impact on early season health, as well as pre-mate cycling rates. We could monitor this via rumination rates in the mobs pre and post calving. We know that during the calving process cows stop eating, so subsequently their rumination levels fall to the lowest point on the day of calving (day 0).

If you think of the rumen as a fuel can, those cows that are well fed beforehand have plenty of energy (and calcium) left in the tank to keep the engines running until the cow starts eating again. However, the cows that are already using up the reserve tank will drop to very low Day 0 rumination rates, and these cows tended to have:

- slower rumination recovery rates in the Colostrum mob
- higher numbers of health alerts in the first 2 weeks post-calving
- longer interval until the average first heat

For cows with collars we have been able to set a target of ~450 minutes per day (of rumination) over the Springer period. HOWEVER we need to also consider the energy component of the diet. Rumination rates increase with high fibre diets, so you may be able to reach target rates with 6kg of straw, but the reserve energy will still be limiting. We would therefore recommend first sitting down and working out the energy in the diet, with a target of feeding 90-100% of maintenance energy (down the throat). The good news for farms without collars is that by reaching the 90-100% target you will typically also reach the 450 minute target.

We have built an energy calculator that can be used with Springers (see below) to make these calculations easy. **Typically a diet needs to have around 10kg of green fed component**

(silage/ grass / maize etc), plus 1-2kg of straw to hit target. The calculator can be left on farm, and will also spit out the change in daily feed requirements as the mob size fluctuates once it's set up.

Transition Rumination

I've just included some key bullet-points for the findings from day 0-14. If you've missed our previous articles look at MoozNews online (www.vet111.co.nz) July and August editions for the past two seasons. These include more commentary on OAD colostrum management, and potential monitoring strategies.

Key Findings:

1. Don't leave freshly calved cows on tight Springer breaks (draft them early onto feed)
2. Avoid management of freshly calved cows that leaves them in the yard for extended periods
3. Under-allocation of feed to the colostrum mob as more cows were added (ensure you have systems)
4. Need multiple offerings of feed, especially with colostrum cows. Successful farms offered 3 feeding opportunities, with at least 2 different feed types. NOTE: This included freshly calved cows (just chucking them in a grass paddock for the day didn't work). It appears they aren't "driven" to eat and they need the psychological encouragement with multiple offerings
5. Grazing to residuals lower than 1800kgDM in colostrum's
6. OAD colostrum milking tended to have better transition management outcomes
7. Insufficient limeflour – successful farms were using 250g limeflour in the colostrum mob

Contact your Prime Vet if you would like to further discuss the application of this, or any other methods to optimise your transition management. Getting your system set up so that you hit the key points above will certainly help maximise the benefits and minimise the risk of this intervention strategy.

	ME	Wastage	kg of Feed	Multiplier	ME	
Grass	11.5	10%	4	10.35	41.4	SPRINGERS 40 % Maintenance 96%
Silage	11	25%	5.5	8.25	45.375	
Grain	13	11%	1.5	11.57	17.355	
PKE	11	20%		8.8		
Baleage	10	20%		8		
Straw	6	40%	1.5	3.6	5.4	
Hay	10	20%		8		
Average ME of Diet (maintenance demand increases with lower ME feeds)	11.0		TOTAL DM (kg) Offered 12.5	TOTAL ME 110		
			TOTAL DM (kg) Eaten 10.0			
Liveweight (kg)	525	Maintenance (MJME)	114	90% Target	103	

Spring Cow Management

Mat O'Sullivan BVSc – VETERINARY CENTRE Oamaru



Around 80% of all cow health issues occur inside the first 30 days of lactation. It is therefore imperative that we prepare a cow so her transition from a dry state to a lactating state goes as smoothly as possible.

When this is done well, the result will be reduced risk of milk fever, mastitis, metritis and ketosis. It will also improve dry matter intakes post calving, early milk production and rate of weight loss.

Ideally the springer cow needs the following:

- She should be on a similar diet to her lactating diet for at least 10-14 days before she calves to allow microbial adaptation to occur in the rumen.
- If she has achieved BCS 5.0 or better her total ME intake should not exceed 90% of her total springer ME requirements. For a 500kg cow this is about 105MJME down the throat (very important to build in wastage here). A slight energy restriction in these cows results in modest fat mobilisation which in turn primes the liver for its high demands post-calving.
- For cows under BCS 5.0 they should get 100% of their ME

requirements (and not more). This is about 120MJME for a BCS 4.0 or 4.5 cow.

- While calculating a ration to provide adequate ME, also provide another 3kg of cereal straw (or similar) as an effective fibre source.
- Springer cows need higher crude protein requirements than cows in the mid-dry period. To have them in a healthy state they need to be on 15-16% crude protein for about 2 weeks before calving. A springer diet heavily based on fodder beet, maize silage or poor-quality silage/bailage is unlikely to achieve this.
- Magnesium supplementation should begin at least 2-3 weeks before calving.
- In some scenarios supplementing with Anionic Transition salts will greatly reduce the risk of milk fever. Gypsum is a safe calcium salt to give pre-calving (100-150g/cow/day).
- Ensure trace mineral status is adequate before calving. Multimin or Selovin 5 should be given 2-4 weeks before calving.

Transition Calcium Bolus

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

Bolus weight – **176 grams**

Price – **\$12.26** 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



Transition Cow Anionic Salts – A Milk Fever Preventative

Mat O'Sullivan BVSc – VETERINARY CENTRE Oamaru



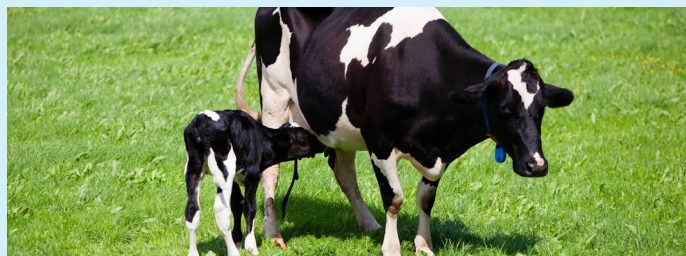
The old adage that prevention is better than cure definitely holds true for milk fever. Studies have shown that for every clinical case of milk fever that you see there will be another seven sub-clinical cases.

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 increased 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 bailage/silage for an average period of 7-10 days pre-calving. The daily cost has reduced this year and now is ~64c/cow/day (excl GST). Please contact your Territory manager if you wish to order before calving.



ACVM A009374

MULTIMIN
Enhancing Calf Immunity

A 2018 New Zealand study¹ demonstrated the health benefits of injecting calves with MULTIMIN® early in life. The effect was rapid (within three days of injection), with death and disease consistently halved at all ages for calves that were injected.

Calf (less than 1 week old)
Dose Rate – 1ml (under the skin)

52%
REDUCTION
IN DISEASE

58%
REDUCTION
IN DEATHS

1. Bates, A., Wells, M., Laven, R.A., Simpson, M. (2019) Reduction in morbidity and mortality of dairy calves from an injectable trace mineral supplement. Veterinary Record Published Online First: 25 April 2019. doi: 10.1136/vr.105082.

1ml
New Calf
Cost per Dose
82c
Excl GST



Hamish Newton BVSc, PhD
Veterinary Centre Oamaru



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".

Record where every calf born ends up!!

Hamish Newton BVSc PhD – VETERINARY CENTRE Oamaru

- Fonterra has introduced a new clause within the Terms of Supply. This clause requires that calves can only be euthanised on-farm when there are humane reasons for doing so.
- From the 1st of June 2023, when the clause came into effect, Fonterra farmers must ensure all non-replacement calves enter a value stream - either beef, calf-veal (bobby) or petfood.

This will be audited so it is important to maintain accurate records to show the destination of all calves born on farm. You can do this through any of the following options.

- MINDA records (don't forget to record the still born calves when a cow calves)
- NAIT tracking
- Processing dockets or receipts
- On-farm mortality records, vet reports etc.

We understand that the fate of this season's (23-24) calves will be audited next season (24-25) so you will need either electronic records or a safe place to store any paper records.

As far as we can tell this won't require any major changes for you other than being able to show some proof of calves going to processors (dockets), recording the fate of calves that are stillborn or are euthanised for humane reasons and of course the correct NAIT transfers for calves sold to rearers.

Brix and FPT – What's new??

Ryan Luckman BVSc (Dist) MANZCVS (Epi)
VETERINARY CENTRE Waimate



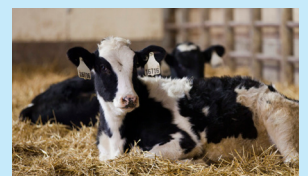
Over the past few years we've had a lot of farmers doing Brix testing on their day 1 colostrum. Previous research had shown that feeding colostrum with a brix over 22% to calves helped to reduce the risk of Failure of Passive Transfer (FPT).

However, one of the issues that has been faced on some farms is that they are seeing very few cows with high brix levels. New research has backed these anecdotal statements – on some farms the average brix levels were over 25% (with no cows under 22%!!), while on others the average was only 16%.

The research wasn't set up to investigate what caused these farm level differences, but did show that for every 1% increase in Brix % the odds of having Failure of Passive Transfer reduced by over 30%! So feeding 22% is great, but if you only have 20% then that will still be better than 18% and so on.

A second paper validated that potassium sorbate was the best option for preserving colostrum, but that yoghurt and citric acid were also effective. The use of a preserver will help all farms, but are probably even more critical on farms with low brix levels, as high bacterial counts can interfere with a calf's uptake of antibodies. Visit <https://www.dairynz.co.nz/animal/calves/0-4-days-old/colostrum/> for more detailed instructions on how to use them.

So keep testing the colostrum, it's definitely worthwhile!! However we'd love to hear from any farms that are seeing consistently low brix levels. We suspect that feeding in the late gestation period or springers could be contributing. If so, brix levels may be a good proxy measure of the success of this period.





Downer Cow Survival Predictor Tool

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

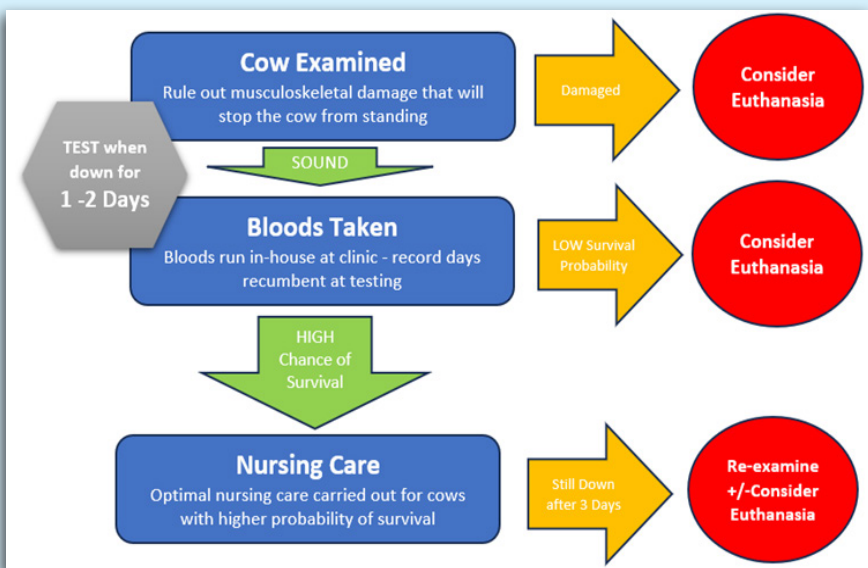


Dealing with down cows that don't respond to treatment can be one of the most frustrating things facing dairy farmers during a very busy Spring. Not only do they require intensive nursing care (with lifting multiple times per day, metabolic and anti-inflammatory drug top-ups, feed and water), but they are also emotionally taxing as already busy people face tough choices about cows that they really care about.

A paper has recently been published validating a test to enable EARLY identification of cows that aren't likely to survive. This test (a blood test) measures metabolites involved with secondary muscle damage. It is this secondary damage that is largely responsible for the outcome of whether a downer cow can/will get up or not.

THE PREDICTOR TOOL

THE PROCESS



The Predictor Tool

The test uses a model that incorporates the blood test results, as well as the number of days recumbent to output a survival score. There are three parts to the result outputs;

1. Metabolic Panel – A summary of the Calcium, Magnesium, and Phosphorous levels of the cow (gives you an understanding of whether there are underlying deficiencies that are contributing)
2. Critical Levels – This test screens two muscle and liver enzymes. Cows that have levels above these critical levels have less than a 5% chance of surviving, and should be considered for euthanasia
3. Survival Probability – This outputs a score – levels over 313 are seen in cows with a higher chance of standing up. Result interpretation;
 - UNDER 313 – Only 1/10 cows with a score less than 313 would be expected to survive. Euthanasia should be considered
 - OVER 313 - 4/5 cows with this score (or higher) would be expected to survive. If proper nursing care can be managed consider continuing with treatment

Good nursing care is critical to maximise a cow's chance of standing up (if they pass the Predictor Tool). We have a handout sheet outlining the fundamentals of good nursing care, but in brief the key points are; provide bedding, roll often, lift effectively, restrict

movement, physiotherapy (massaging legs), feed and water, managing hypothermia/environmental temp, and the use of anti-inflammatories.

The test cost (with report) is \$98.60 (incl) per cow. We would recommend testing early in the process to maximise time saved, and welfare outcomes, and bloods can be taken as part of a Veterinary examination / visit, OR for farmers who are comfortable taking bloods a blood can be taken and dropped into the clinic (after an examination to rule out musculoskeletal conditions). Results will be reported on the same day so immediate decisions can be made.

If you'd like any more information or to get a copy of the downer cow nursing handout please contact one of our clinics.

REMINDER

metacam

• Double strength Metacam 40 with meloxicam 40mg/ml

• More cost effective pain relief for cow and calves

NEW DOSE RATE
1.25ml/100kg

ACVM A011754

Preventing Metritis and Endometritis

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

Last year we saw a number of herds with a high incidence of health alerts picked up in cows during the first 14 days post-calving. This coincided with high rates of metritis and endometritis in these herds. Once we see these alerts kicking off it may be hard to prevent the problem in cows that are already within 10 days of calving (springers). Five common causes are 1) Cows calving down too fat – these mobilise high levels of NEFA suppressing the immune system 2) Cows calving down too skinny – these are also immune compromised due to energy status 3) Cows having inadequate dietary protein in the final 3-4 weeks of pregnancy – protein is required for production of antibodies and this may be preferentially drawn on by the calf when in short supply 4) Clinical or sub-clinical milk fever – slows the involution of the uterus 5) Selenium deficiency – reduces the immune function and increases the chances of retained membranes.

Optimal dietary protein intakes are regularly compromised in the last weeks of pregnancy when cows remain on Fodder Beet crops with low leaf yield together with low protein supplements. Ensuring that the springer diet is meeting the energetic needs and no more is also vital.

If metritis and endometritis has been a problem in the past – discuss transition cow prevention steps with your prime vet.



Introducing

**Kristina Gee BVSc
VETERINARY CENTRE Oamaru**

I was born and raised in the mountains of California, I have always loved the mountains and sea. I attended Lincoln University in 2015 to study Animal Science, after graduation I returned to pursue my passions in the Veterinary Degree. My interests in dairy include repro-synchronization planning and calf health. I am especially excited to be out calving cows this spring, and getting to know the local farmers!



Outside of work, I love everything outdoors rain or shine, which made New Zealand the perfect place to call home. Scuba diving, rock climbing, snow sports, mountain biking and multi-day tramping are just a few of my hobbies outside of work. The most rewarding trail I recently completed was the Dusky Sounds Track in Fiordland!



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**

17.4c

\$62.10 +GST

25kg Bag (Tonne Rate)

357

Daily Cow Doses
per 25kg bag

**Jin Tan BVSc
VETERINARY CENTRE Waimate**

I grew up in Malaysia and arrived in New Zealand in 2018 for vet school. I grew up with animals, especially dogs. I found my interest in production animals while doing a variety of placements in vet school.

Outside of work, I enjoy going hiking, tramping and other outdoor activities. I like playing music for my own entertainment as well.

I am interested in herd health management especially nutrition in the dairy industry as well as the welfare of the dairy cattle. I am looking forward to getting involved in dairy practice in this region.



BOVILIS Rotavec Corona ScourGuard 4KC

Ideally all early calvers should have been vaccinated by now. Consider vaccinating late calving cows now, as their calves are the ones which will be in highly contaminated sheds/pens.



Scourguard 4(k) ACVM A010057
Rotavec Corona ACVM A008132



**FREE
Delivery Service**