RVC
RANGIORA VET CENTRE
Enhancing Lives Together

SEPTEMBER 2023

Dairy News

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Health & Wellbeing

We all experience ups and downs at work and in life; it is inevitable. When we're busy and stress levels are high (hello spring calving!) our ability to get through these challenges can be hindered. There are some great resources and organisations available to help you recognise the signs of stress and burnout, both in yourself and in others, so you can reach out for help.

The five ways to mental wellbeing can help people stay mentally well. These five steps include:

1. Connection; positive social interactions help us to feel well
2. Being active; physically and within a community that you enjoy
3. Take notice; of the small things that bring you joy
4. Keep learning
5. Give; helping others can give us a real sense of purpose

For further information, resources and tips, please visit the following links:

rural-support.org.nz/Help-Support/Health-Wellbeing

farmstrong.co.nz/wellbeing-topics/burnout/

Looking after our physical health is also incredibly important, particularly ensuring that we eat well, get enough sleep and are physically active each day.

If you have concerns about your well-being, or someone else you live or work with we recommend you call the **North Canterbury Rural Support Trust on 0800 787 254**

24hr/7day emergency care available by phoning 03 313 7438

Cnr Lehmans & Oxford Rds, (181 Lehmans Rd), Rangiora
www.rangioravetcentre.co.nz Em: rangvet@rangvet.co.nz

BESTPRACTICE
New Zealand Veterinary Association
ACCREDITED HOSPITAL

By Lucie Sneek

Caring for the downer cow

Often seen as a drain on staff at a really busy time of year, care of downer cows is still incredibly important and can be very satisfying. To give yourself the best possible chance of success, the care given after the initial treatment often has the most impact.

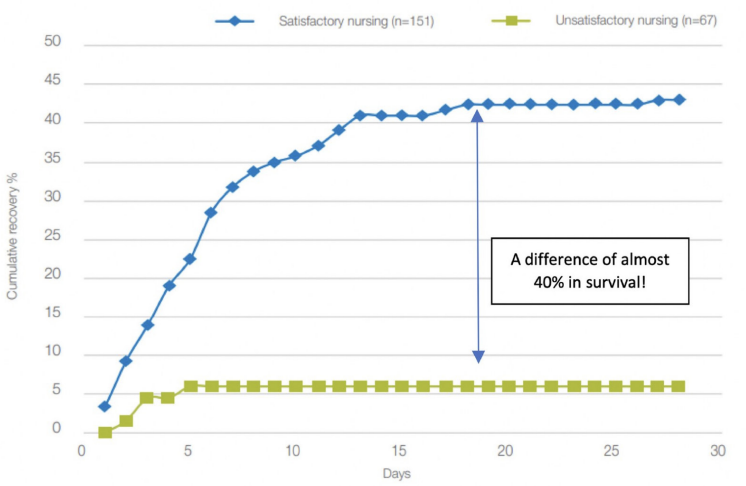
Obviously, the primary cause needs to be addressed:

- Damage post calving e.g. paralysis
- Metabolic disease e.g. milk fever, ketosis, grass staggers or a combination of these
- Infection e.g. metritis, mastitis

Don't forget to include **pain relief.**

Trial work from Australia has shown that the single biggest factor in making a recovery from being down for more than 12 hours is NURSING CARE. If a cow is down for more than 12 hours, chances of recovery are already <50%. The difference between good nursing care compared to no nursing care is thus the key - increasing chances of recovery by 40%!

Figure 1 Daily cumulative recovery percentage by nursing quality for 218 downer cows

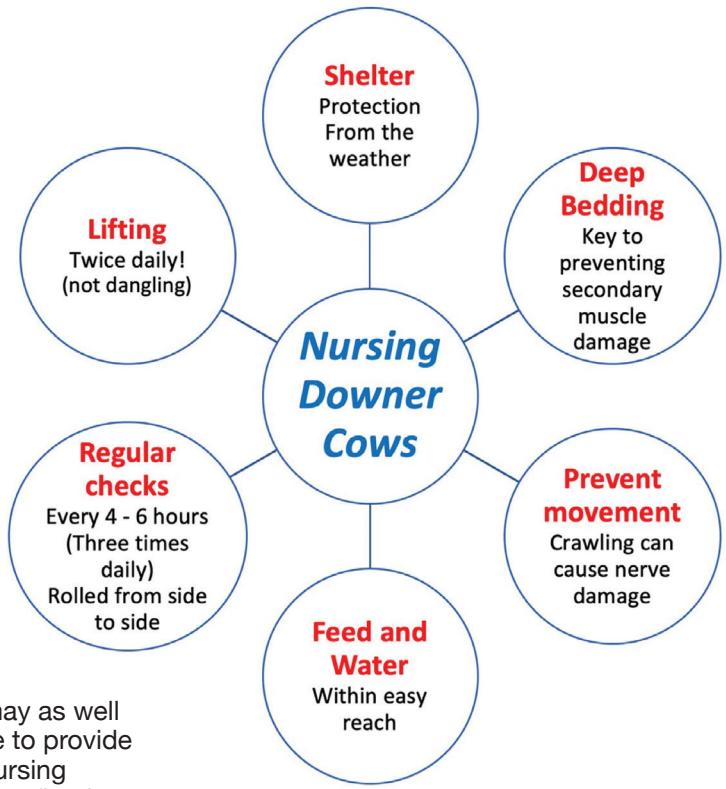


Source: Poulton PJ, Vizard AV, Anderson GA et al.
High quality care improves outcome in recumbent dairy cattle. Aust Vet J 2016; 94:173-180

The secondary damage from being recumbent is often more important than the primary cause of recumbency. This includes muscle and nerve damage. Imagine what lying on cold, hard ground all day and night does to you and multiply that as cows are so much heavier.

Now is the time to set aside a downer cow area (everyone will be busy with a hundred different tasks during calving). This should have:

- **Shelter** from excess cold and heat
- Suitable **deep bedding** so they cannot 'dig' through to underlying concrete (just a few hours on hard surfaces results in damage).
- **Barriers to movement** – excessive crawling can damage nerves in the back. It also makes it more likely the cow will end up off the deep bedding, or in a dangerous place (e.g. ditch if in paddock). A straw bale can also provide a prop to stop her lying flat out.
- Supplies of **feed and water**
- **Regular checks** by staff. The cow may need to be moved from side to side if unable to do so. This should be done every 4-6 hours. That's three times a day during daylight hours!
- Access to equipment to lift the cow **twice daily** (e.g. with hip clamp). That's lift, not hang!



take home message

Don't do downer cows half-heartedly, you may as well euthanase at the beginning if you're not able to provide good nursing care. HOWEVER, with good nursing care and provided the initial problem has been fixed, recovery is possible and the hard work will be paid off.

By John Spearpoint

Ooh!! The smell of spring

Retained placenta, retained membranes, retained cleanings, RFM's, afterbirth, dangly bits out the back end – whatever you call them, there's no disputing, it's a distinctive smell that can make the stomach churn.

Placental membranes are considered retained (RFM's) if they have not expelled 24 hours after delivery of the calf. As time goes on, the uterus stops contracting so the membranes will then only be released after bacterial decay of the attachments to the uterus.

What are the risk factors?

- Twins, difficult births + assisted calvings - an exhausted uterus after a prolonged delivery will lose its ability to contract
- Abortion, premature or induced calvings
- Trauma eg. Ceasarean - section or fetotomy
- Nutritional factors: Milk fever (low calcium)
  Ketosis (low energy)
  Vitamin E/Selenium deficiency

Any cow with a retained placenta should be recorded as **"at risk"** since there is a high liklihood she may need an intra-uterine infusion of Metricure.

Do you pull them out, treat them or leave them alone?

In the past, yanking membranes out was common until research highlighted how much damage this causes to the lining of the uterus with increased risk of cows not getting back in calf quickly. It is important to remember all cows have a contaminated uterus after calving – an infection will not necessarily come from the retention of membranes.

Most RFM's require no treatment and have no effect on the health of the cow and subsequent fertility. In fact, forced removal can delay the process. Any removal encourages bacteria to invade the scars left behind and scarring can affect subsequent fertility.

Some suggest any removal of membranes should not be attempted until at least 96 hours after calving and only then with very light traction to remove membranes that have already detached. But what is considered "light traction" can be very different among people and could possibly lead to accidental damage – it's better to leave them alone. Membranes hanging out in the mud and manure can act as a wick to bring bacteria into the uterus, so if this is a concern, cut them off and leave them alone to naturally decay.

Typical treatment protocol for cows with RFM

How long since the cow calved?	Most membranes are expelled in 2-12hours but can be retained up to 14 days
Is the cow sick (off-food, off-milk, depressed, slow)?	Antibiotics and anti-inflammatories
Does the cow have a temperature above 39°C?	Antibiotics and anti-inflammatories
Is the cow looking normal?	Leave alone and monitor daily for signs of illness
Are the membranes dragging on the ground?	Cut them off, don't pull them out

Do not rely on the blanket use of antibiotics for every case of retained placenta.
Antibiotics slow their removal due to lower levels of bacteria that act in digesting the attachments.

Clinical signs when antibiotics should be used;

- Temperature >39°C
- Off-food
- Reduced milk yield
- Depressed
- Dehydrated

If the cow is sick, refer to your primary vet or RVM script for appropriate treatment with antibiotics and anti-inflammatories.

***Oxytocin is not recommended** and won't have any effect on expelling the membranes if not given at the time of calving.*

How do you prevent retained membranes?

Since there are many causes of retained membranes, it is unlikely you will totally eliminate them. Consider how the contributing risk factors can be managed.

If you're having a few more retained membranes than normal, re-evaluate your nutritional program. This may involve changes to transition nutrition, avoiding stress and avoiding cows getting overfat or too thin prior to calving. Ensure optimal trace mineral supplementation in advance of calving. Optimal levels of selenium have proven to reduce the number of cows with retained membranes, so selenium injection 3-4 weeks pre-calving is recommended.

NOMINATIONS OPEN NOW

The aim of this award is to put calf rearers in the limelight and give them the appreciation and acknowledgement of the fantastic job they do during the busiest time of the season!

NOMINATION GUIDELINES:

- **Nominate** AND **give an explanation as to why** the calf rearer is so awesome. Self-nominations are allowed and welcomed!
- **FPT (failure of passive transfer) bloods** must be done on at least one batch of calves.
  Bloods are taken from 12 calves between 12 hours to 7 days old.
  We recommend this be done at debudding by our tech team.
- The **best five FPT results** will have a social visit towards the end of calving for some informal judging.

The winner will be announced towards the end of the year. Good luck to you all!

We hope you all have a smooth and successful calf rearing season. We know sometimes things don't go quite to plan and that's okay, we are here to help, do not hesitate to contact us with any issues or concerns you have.

Email your nomination's details, and your reason for your nomination to: **kellieg@rangvet.co.nz** by 30/9/23.

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By Tristan Kamps

Growing great calves

"Great calves make great heifers" and this starts before the calf is even born. How we feed and treat our pregnant cows, the length of the dry period and the conditions in which they calve has an enormous effect on the productivity and survivability of our heifer calves.

Directly after birth it is all about **colostrum intake**. Many people assume that newborn calves left in the paddock with the dam will receive enough colostrum quickly enough to build up a good immunity.

When this doesn't happen, Failure of Passive Transfer (FPT) occurs and this can lead to increased mortality and decreased general health.

In 2015 a large New Zealand study was carried out by Emma Cuttance and Winston Mason to test exactly this.

The main questions they were looking to answer were: Is it true that calves don't suckle off the dam? and How can farmers improve calves' suckling behaviour in the calving paddock?

Observations were carried out across four farms, two in Waikato and two in Canterbury. A scissor lift was used to observe cows and calves 24 hours a day over a 12 day period per farm. A total of 409 calves where observed.

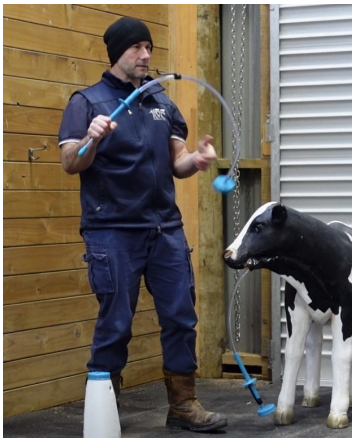
The results

- An average of 57% of all calves were fed from their dam in the paddock. (Range 40-87%)
- A large variance was found in times taken before 50% of calves had had a feed. Between 1.7 and 7.8 hours.
- Calves left longer in the paddock fed more but this reduced after six hours post birth.
- FPT occurred in 30% of all calves and was associated with poor welfare outcomes.
- FPT at day 1 (before being fed colostrum by the farmer) occurred in 72% of calves (Range 21 -82%)
- FPT at day 3 was 85 % more likely to have occurred in calves that had not fed in the paddock. This could be corrected if the farmer gave the calf high quality colostrum (>22g/L) early on day 1.
- FPT at day 3 was less likely in calves fed high quality colostrum compared to calves fed lower quality colostrum.
- Fewer FPT problems occurred during periods of warmer weather. During periods of rain it was seen that calves appeared to struggle to get up to feed and follow the dam.

take home message

- Around half of calves **won't** be fed by the dams in the paddock.
- This leads to around 75% of calves having FPT if no intervention is taken i.e. tubing of calves with colostrum.
- In calves with FPT this can be corrected if tubed early by the farmer with good quality colostrum (>22g/L).
- In periods of bad weather calves are much less likely to drink from the dam and we should expect FPT to be higher if no intervention is taken.

RVC ADVICE → TUBE FEEDING COLOSTRUM SAVES LIVES



Annual Calf Rearing seminar July 2023:

Thank you to everyone who attended our annual calf rearers seminar in July! We hope it was an informative and helpful afternoon for your team. If you were unable to attend, then please check out the highlight reel on our website: rangioravetcentre.co.nz/news

By John Spearpoint

Dirty Cows

With heads down into calving, milking and calf rearing, time can quickly pass away and before we know if it's time to get ready for mating season. Even though preparing for successful mating starts well before calving, managing dirty cows early can improve reproductive success.

Dirty cows have a condition called endometritis – an infection in the lining of the uterus which becomes inflamed and produces pus. A pus-filled uterus is a poor environment for a developing embryo and consequently affects conception rates.

Who is most at risk?

Understandably, the cows most at risk of developing a uterine infection are those that have, or have had, an assisted calving, retained membranes, stillborn, twin births, rotten calving, down cows, mastitis, metabolic conditions, or calved in a body condition score of 4 or less.

Even so, studies indicate that almost 1 in 5 cows (18%) with no risk factors or health issues are also likely to have an infection. This represents a large proportion of the herd that may be missed!

Why is it important to diagnose endometritis?

Dirty cows often don't show signs of illness and appear as normal healthy cows. Recent studies also indicate there is a high prevalence of endometritis within NZ dairy herds, with an average 1 in 4 cows (25%) diagnosed as metricheck positive. This does vary greatly across herds, with some only having a handful of metricheck positive cows to other herds having up to 50-65% of the herd affected.

Delaying treatment of cows with endometritis leads to;

- More non-cycling cows
- Reduced 6-week in-calf rate
- Reduced conception rates
- Higher empty rates
- Less days in milk
- Higher culling rates due to poor reproductive performance

Keeping endometritis in check with Metrichecking

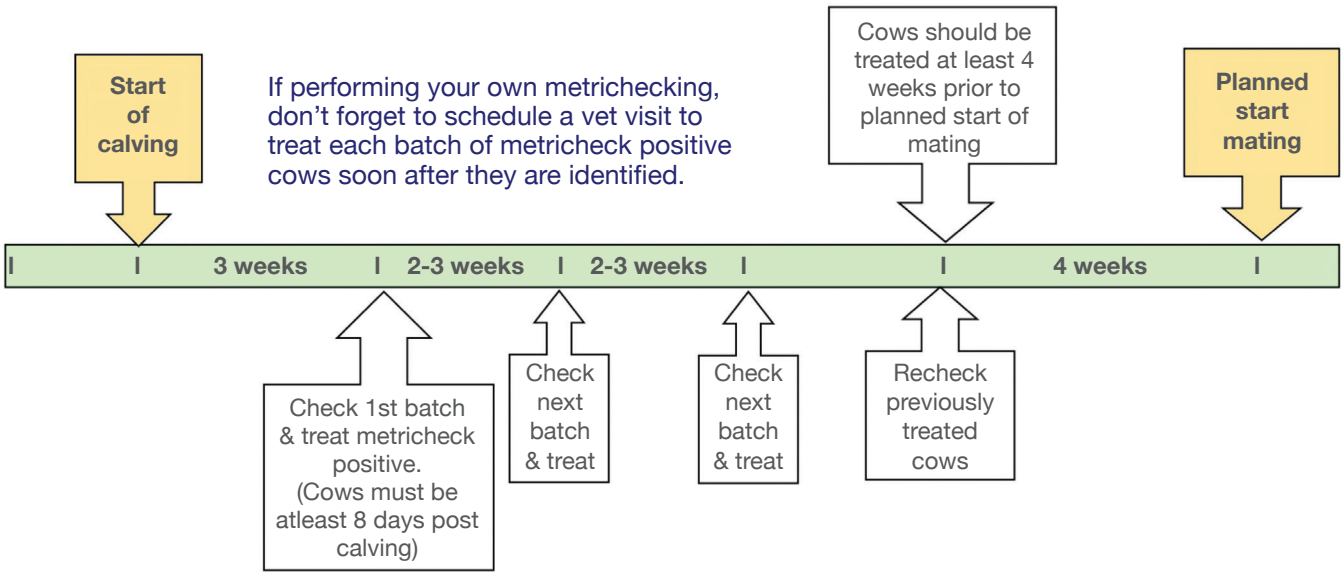
Endometritis is detected by inspecting vaginal mucous collected after insertion of a MetricheckTM device. Anything from the mere presence of flecks of pus to lots of pus, changes in colour or a foul odour is likely a sign of infection.

Metrichecking has been shown to be a quick, simple and reliable method of detecting endometritis.

Metrichecking the whole herd is preferred, not just 'at-risk' cows as this will give far greater positive benefits on reproductive performance.

When to detect and treat

Early detection and treatment leads to better reproductive performance. The 1st batch can be checked 3 weeks after calving starts. Include cows that have calved at least 8 days prior. Then, check in batches every 2-3 weeks to allow earlier treatment of cows through the calving season.



In a NZ study involving >15,000 cows, treating metricheck positive cows earlier resulted in a 9.6% higher 6-week in-calf rate and a 3% higher 12-week in-calf rate, compared to delaying metrichecking until closer to mating (ie. using the traditional approach of treating cows a month prior to mating). When treatment is delayed, the cervix is often closed, thereby preventing pus from escaping the uterus and making it harder to detect dirty cows. Early treated cows were also found to conceive 8 days earlier.

Turning a dirty cow into a clean cow

Metricheck positive cows are treated with an infusion of antibiotics directly into the uterus. Unlike other antibiotics, these have a nil milk withhold. Using the scoring system pictured right, any cow with a score of 2 or greater should be treated (ie. mucous with flecks of pus, obvious pus, foul odour).

Treatment leads to excellent cure rates (up to 90%) so a single treatment is usually sufficient to treat the majority of affected cows. At times though, a cow may require further treatment, so it is useful to re-check all previously treated animals again prior to mating.

Research suggests some cows will over time naturally cure themselves. But leaving this to chance is a gamble as a negative metricheck result does not mean she has cured the infection and inflammation may still be present in the uterus.

Treating endometritis early can give a 4:1 ROI (return on investment). Finding, treating, and curing affected animals early will give them the greatest chance of getting back in calf earlier. So don't wait to treat cows just prior to mating!

Metricheck scores where
1 = clear mucus with no pus,
2 = mucus with flecks of pus,
3 = mucus with <50% pus,
4 = mucus with ≥50% pus,
5 = mucus with ≥ 50% pus and foul odour.

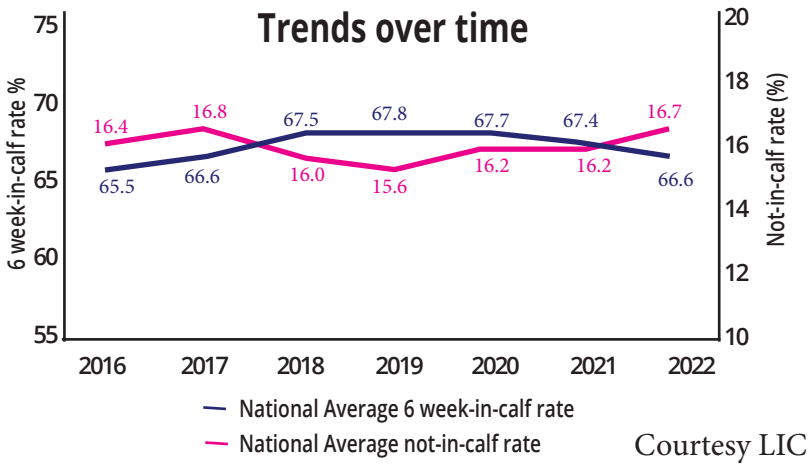
Photo sourced from Dr S. McDougall (Anexa FVC).

By John Spearpoint

Preparing for repro season

Spring is just around the corner and before long we will be heading into repro season. Now is the time to start setting some timeframes and goals for better reproductive performance. We understand there are ever-increasing cost pressures on farms at present, but cutting costs on reproduction can be a double-edged sword that may ultimately cost more in the longer term.

Results published by LIC indicate for the 2022-23 season, the national average 6-week in-calf rate was 66.6% and not-in-calf rate was 16.7%. For comparison, the RVC clinic 6-week in-calf rate average was 63% (for farms on Infovet).



Courtesy LIC

The graph above from LIC shows the national trend over time has not changed much across several seasons. For example, the national average not-in-calf rate since 2016 has fluctuated between 15.6% and 16.8%, which is only a 1.2% change over time. Before we go on, it is worthwhile noting that 'empty rates' are slightly different to 'not-in-calf rates'.

Empty rates are the number of cows empty at pregnancy scanning, whereas not-in-calf rates also include animals that were present at the start of mating and may not have made it through to pregnancy scan. Culling cows before pregnancy scanning and then calculating an empty rate will give a false indicator of the true number of cows 'not-in-calf' and is therefore not useful when comparing performance across different seasons. The 'not-in-calf' rate is also relative to mating length, so the target not-in-calf rates are higher for shorter mating lengths. The not-in-calf rate will generally sit about 3-4% above the empty rate and is a more accurate way of benchmarking performance year-on-year.

The national statistics (see LIC table below) shows the average mating length is now 10.7 weeks. It's interesting to see that the top quartile farms are achieving lower not-in-calf rates and higher conception rates with a shorter mating length. So, lengthening the mating period is not necessarily the answer.

If your 6-week in-calf rate is not at a desired level and not-in-calf rate is above the national average, then it would be worthwhile considering what practical steps you can take in advance of mating. More earlier calves next season will translate into more milk in the vat.

National Performance 2022	6wk-in-calf rate (%)	3wk submission rate (%)	Conception rate (%)	Not-in-calf rate (Wk 11) (%)	Mating length (weeks)
Top quartile average	75.6	85.3	57.0	12.6	10.1
2nd quartile average	70.0	82.5	52.9	15.2	10.5
Average	66.6	79.3	50.9	16.7	10.7
3rd quartile average	65.3	79.3	49.8	17.1	10.8
Bottom quartile average	55.4	70.2	43.8	22.0	11.3
Targets	78.0	90.0	60.0		

Courtesy LIC

PRE-MATING CHECKLIST

Metricheck early

See the Metricheck article on page 6 & 7 of this newsletter. Metrichecking can be done from 2 weeks after calving. **In a NZ study involving >15,000 cows,** treating metricheck positive cows earlier resulted in a 9.6% higher 6-week in-calf rate and a 3% higher 12-week in-calf rate, compared to delaying metrichecking until closer to mating.

Don't forget later calving cows – they are already behind the game and don't need another setback preventing them from getting back in calf.

Monitor body condition

Loss in condition after calving means the cow has a more severe negative energy balance which can delay (or even stop) cycling, reduce conception rate, and increase the rate of early embryonic loss.

Our assessment of pre-calving body condition shows most cows wintered well and are in good condition. However, it is crucial to identify cows that may be struggling or seem to be losing more condition.

Placing lighter conditioned animals on OAD milking will prevent further loss in body condition. The question we often face in putting these animals on OAD milking, is what about the loss of valuable milk volume into the vat. But consider the consequences of not getting these cows in calf - this will have a longer term financial impact.

Monitor pre-mating heats

There is no point waiting until the planned start of mating (PSM) or even later to realise there may be a problem with submission rates. Tail paint at least 35 days before PSM and record the number of pre-mating heats. This will give you a clearer idea of the level of non-cyclers and what level of repro interventions may be required.

Treat non-cycling cows early

To maximise the economic benefit of treating non-cycling cows, treat them 10 days before PSM so they are inseminated on the first day of mating. Even if they don't conceive to the first mating, the CIDR synchrony program will stimulate them to start cycling so they'll be ready for re-mating on the next cycle and still conceive within the first 3 weeks.

Treating non-cycling cows with a PG injection might seem like a way to save some money on CIDR's but this loses valuable time in the mating period and delays calving next season. And, PG will only work on cows that are cycling, so it will have no effect on true non-cyclers and will only be effective on cows with silent heats.

Estimate the right number of bulls

Have you got enough bulls ordered? Review last season's mating performance to estimate how many cows are likely to be 'open' when you intend to put bulls out. Use a mating ratio of 1 bull to 30 open cows and double this number to allow rotation of bulls and extra bull power to cover peak demands such as returns from CIDR programs.

Ensure bulls are tested or guaranteed BVD-free. Don't rely on the stock agent, ask for a documented copy. Bulls should be vaccinated for BVD with the second booster given 4 weeks prior to them going out.

If considering going "no-bull" or "all AI", then ensure a thorough heat detection plan is in place and staff are adequately trained. Treating non-cyclers and early-aged pregnancy scanning is recommended for "all AI" herds to optimise pregnancy rates.

Energy supplementation over mating

Last year, many cows went "off the boil" during the mating period due to pasture quality changes. Peak mating spans across November - a time when pasture quality is declining and seed heads are starting to emerge. Even though cows may look full, pasture bulk will limit the amount of grass a cow can physically eat. While we can't predict what the season will deliver, consider if high-energy supplementation or timing of nitrogen applications will boost pasture quality.

Managing later calving cows

Early calving cows get in calf well, having a longer recovery time prior to mating. Later calving cows are by nature "late to the party". Their ability to get in calf reduces the later they calve. Consider strategic use of CIDR's and short gestation semen to shorter calving spread the following season.

CONTINUES OVER PAGE >>

Drenching heifers

Heifers and lighter conditioned cows may benefit from a drench. Lincoln University trial work has showed heifers drenched pre-mating with Eprinex conceived 13 days earlier than untreated heifers.

Trace mineral check

(More info page 12)

Are your minerals levels up to scratch? We recommend having some blood samples collected to assess trace mineral status and supplementing 4 weeks prior to PSM. Avoid treating cows with injectable copper products in the month leading up to mating.

Follow the link to an earlier article on the use of MultiMin to boost reproductive performance, https://www.rangioravetcentre.co.nz/multimin-looking-to-inject-that-extra-edge-in-reproductive-performance

Monitor 3-week submission rates

The 3-week submission rate will give a good idea of how quickly cows are being presented for mating. Low submission rates may signal the need to intervene with additional repro programs to avoid many cows not conceiving early.

Pay particular attention to the 3-week submission rates for first calving heifers. These are one of the most challenging groups to get back into calf.

Measure conception rates and early-aged pregnancy scanning

There are two methods to determine if a cow has actually conceived to an insemination, either directly using early-aged pregnancy scanning, or indirectly using non-return rates. Remember if relying on non-return rates though, a proportion of these could be phantom cows. Phantom cows are cows which had one insemination and do not return within 35 days of insemination but are found later to be not pregnant by ultrasound scan.

A NZ South Island study found on average 10% of non-returning cows were found to be non-pregnant. And treating phantom cows with CIDR's showed an economic return on investment, especially for lighter conditioned cows.

Early-aged pregnancy scanning may give you another opportunity to get more cows in calf later in the season with short-gestation semen.

Please get in touch with your primary vet to discuss repro plans for the coming season.

Udder Health Check

A check at cow level to give you assurance that the interaction between milking plant and cow is running optimally.

Of course, you know the cause of mastitis are bacteria, but did you know that damage to the teats / teat ends, and the quality of the teats skin is a major factor in preventing bacterial colonisation of the teat?

The main cause of this damage comes from the milking plant.

TO ENSURE THIS ISN'T AN ISSUE ON YOUR FARM we recommend a milking time visit, which can be completed by our qualified Veterinary Technicians.

We recommend checks be completed twice a year, once during peak milking, around the end of September, followed by a further check at late lactation, in February.

During a visit the Veterinary Technician will check:

- Assess the teat ends
- Teat skin quality
- Functioning of the teatsprayer

Teat scoring is the starting point for improving milk quality and the cows will tell you what's wrong.

From this we can identify areas for action and opportunities for improvement such as:

- Teat spray essentials
- Milking machine function

Udder Health Check
Post visit report
Vet follow-up guidelines

Cost: $100+gst & travel*

*Please note: if the results of the Udder Health Check are concerning and require further Veterinary attention, a follow-up visit from a vet may be required. Additional charges apply.

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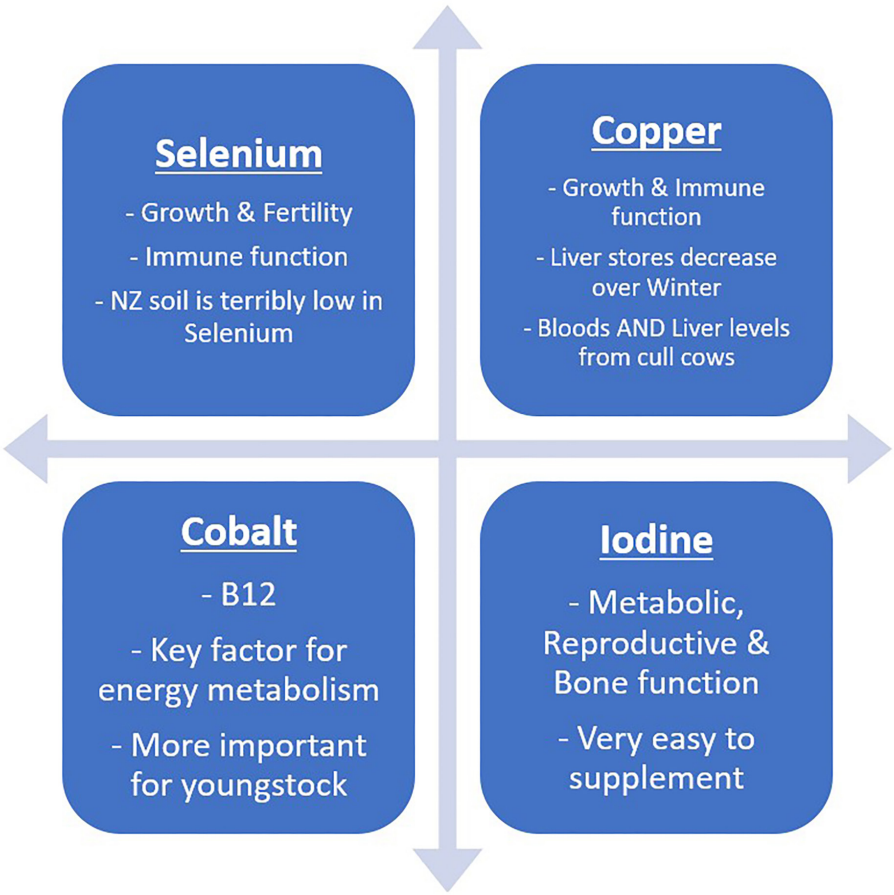
By Heather van Hout

Minerals; the highs and lows

This is a timely reminder to perform some pre-mating mineral testing.

The four key minerals we like to think about at this time of the year are Selenium, Copper, Iodine and Cobalt.



We used to think that there were two levels of minerals: normal or deficient. However, recently trial work has unveiled that there is a higher, third level; **optimal**. While a normal level prevents the animal from suffering from any of the negative effects of deficiency, an optimal level helps the animal perform at the next level. Keep this in mind when testing or supplementing animals, especially moving into Spring.

Bloods are a quick and easy way to assess mineral levels but sometimes do not correlate exactly with what is going on in the body. Copper for example is stored in great amounts in the liver so the blood levels will remain relatively constant until the stores are depleted. Liver samples for testing can be taken from cull cows at the works, contact our clinic to get the forms to request these tests.

Calving Care Packs

Calving arrived thick and fast this year! To support our farmers and their teams during this busy time, we have distributed our RVC calving care packs on farm. Hopefully these have provided your team with some sustenance and a smile during this busy time.