



Growing Heifers for the Future



Written by:
Anita Renes BVSc (Dist)

We all talk about the importance of growing heifers well but to what degree does this actually affect their future performance?

Often the only measurement we have of mating success in our rising 2 year old heifers is the empty rate. The length of the mating period influences the final result but frustratingly, the empty rate often does not correlate with how well grown they are. We see plenty of low empty rates in poorer grown heifers and higher rates in the better ones!

The real impact of not achieving target weights will however be seen in the heifers first and subsequent seasons in milk.

The following table is from a study of 5800 heifers completed in the 2009/10 and 2010/11 seasons across 4 regions of New Zealand.

Heifers that achieved in the top quartile of their pre-calving target weight calved earlier showing that more had reached puberty by the start of their first mating. Importantly, compared with the



Quartile of percent of precalving target liveweight attained

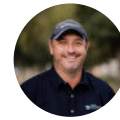
	Q1	Q2	Q3	Q4
Mean % of target precalving liveweight	78.4%	88.5%	95.2%	104.90%
Age at first calving (d)	734	731	730	728
Anoestrus treatment	15.8%	14.4%	13.7%	15.2%
Mean days from PSC to calving	16.8	12.5	11.6	10.1
3 week submission rate	78.2%	83.6%	85.6%	85.6%
6 week in-calf rate	64.2%	69.0%	71.0%	71.4%
Total milk volume (l)	3,146	3,416	3,665	4,081
Total milk solids (kg)	272	297	317	349

lowest quartile, they achieved a 7.2% higher 6 week in calf rate and produced 77kg more milk solids in their first season. This is approximately 2.1kg milk solids for every 1% increase in target liveweight. Other studies have shown that the impact on milk production persists into the second and third lactations.

Other research has shown that heifers entering the herd lighter are more likely to exit the herd before their second calving. This higher rate of wastage often persists into the second lactation when the 3 year olds are under more production pressure and fail to get in calf. The cost of raising a heifer to first calving is over \$2000. Improving longevity, fertility and milk production by growing heifers well will have a significant impact on the bottom line.

Heifer Management: the impact of undergrown heifers': McNaughton, Brownlie and McDougall 2014

Repro Update



Written by:
Nathan Back
BVSc (Hons) BAgSc

As I write this update we are entering the second cycle of mating and some early information for the 24/25 season is available:

- 3 week submission average is 85% - with a range from 68% to 95% (which interestingly enough is the exact same SR for the 1st 3 weeks of the 23/24 season)
- The top 25% of farms achieved a SR of 93%
- An interesting side note is that of the top 25 clients for SR (i.e. the highest 25 farms for 3 week SR) this season 23 of them use some form of cow wearable technology to aid in heat detection.

What can we do now?

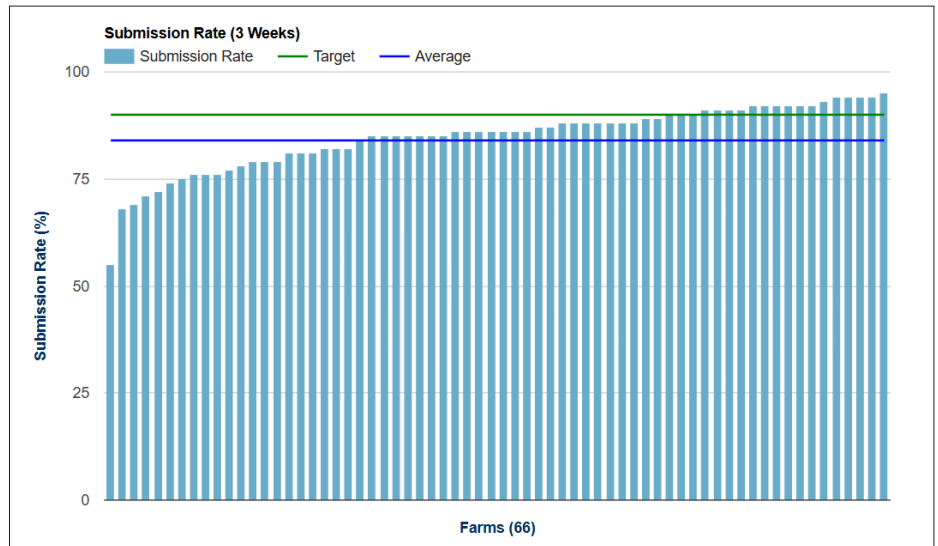
Continue to monitor NRR and make a plan to find cows that are NOT PREGNANT

This sounds counterintuitive right but the greatest opportunity we have now to influence days in milk is to find which cows we think are pregnant but are actually currently empty (and then do something with her). If she is not cycling she can be enrolled in a CIDR program but if she is cycling fine then we can PG her and AB with SGL semen to help her calve earlier this coming season.

How do we do this?

Early scanning or phantom cow scanning

- This is becoming more commonplace – we scan cows from 35 days post AB and they are either pregnant or MT (or a



recheck if they are currently pregnant but the foetus has an irregularity like a weak heartbeat etc) and treated accordingly.

- If we do this then we can identify the non-pregnant cows earlier (than say an early January scan) and look at intervening with that cow to try and bring her on heat to mate her another 2- 3 times before the end of this years mating
- We can target these cows with super short SGL semen to bring them forward and improve DIM or we could look at altering bull power by putting less bull power into herds of cows with more pregnant cows and more bull power into the herds with more MT cows

- This is becoming more commonplace in herds with cow wearable technology and we have found some great success stories with farms scanning earlier to identify these cows so we can do something with them
- If you decide to do this in tandem with SGL (- 20 day gestation length semen) at the end of mating (and for these MT cows we find from early December onwards) then you may find that you can identify and mate these cows for longer but actually have a more condensed calving pattern

If you would like any more information on this then please drop us a line at the clinic.

RAKAIA

OPENING HOURS

23rd Dec	Monday	Closed
24th Dec	Tuesday	Closed
25th Dec	Christmas Day	Closed
26th Dec	Boxing Day	Closed
27th Dec	Friday	Closed
30th Dec	Monday	Closed
31st Dec	Tuesday	Closed
1st Jan	New Year's Day	Closed
2nd Jan	Thursday	Closed
3rd Jan	Friday	8:30am-4:30pm

On call vet still available - call for urgent product pickups

HAPPY HOLIDAYS!

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24th Dec	Tuesday	8am - 1pm
25th Dec	Christmas Day	Closed
26th Dec	Boxing Day	Closed
27th Dec	Friday	Closed
30th Dec	Monday	8am - 2pm
31st Dec	Tuesday	8am - 2pm
1st Jan	New Year's Day	Closed
2nd Jan	Thursday	Closed
3rd Jan	Friday	8am-2pm

On call vet still available - call for urgent product pickups

HAPPY HOLIDAYS!

Practice What You Preach: A BVD Close Call!



Written by:
Anna Tarver
BVSc (Hons) MANCVS (Dairy Medicine)

We had the somewhat embarrassing job this year of bleeding our own heifers for BVD on a PI hunt on the same day that AB was happening!

The background to this: we ensured all our cows that we bought in to start our herd in 2023 were from BVD bulk milk monitored herds; our agents assuring us that all were from established herds with no BVD issues.

We considered BVD testing the calves in spring 2023 but the payout was bad, the budget was very tight and we thought we were ok BVD wise.

Fast forward to October 2024 and we have been rearing a nice group of well grown heifers. Nathan went to check on one that the manager had reported was very sick. She looked terrible and, on a hunch, Nathan checked her BVD status with a blood sample. She came back as a BVD PI animal! This was about the same time that we were starting a cidr synch programme on the heifers so this created a pretty stressful week or so. We opted to bleed the whole mob to identify any more PI animals. This turned up a further 2 positive animals (one of which we remembered as a poor calf that we had kept holding back with younger calves as it was doing poorly). We immediately removed and culled these two (the first PI animal died a few days after she was pulled out).

So where did the PI animals come from?



The first PI animal discovered

Their dams were all from the same north island line of cows that we had bought. Their mothers must have come into contact with BVD virus when they were 50-150 days pregnant, creating PI foetus's, sometimes known as 'trojan PI's' as they remain a 'hidden' issue during pregnancy.

Hindsight is a wonderful thing! We should have tested these as calves, particularly coming from unknown herd sources. However, it could have been a

whole lot worse had these PI heifers not been found and ended up in the herd. Hopefully we got the PI's found and out of the mob before they caused too many repro issues for the rest of the heifers.

This year, Nathan's going to listen to the boss and all calves will be BVD tested shortly. A great investment for peace of mind!

If you would like to talk through your farms BVD control plan please get in touch.

Vitamin B1 Deficiency (Polio)



Written by:
Angharad Wellwood
BVSc MRCVS

We are coming up to that time of year again where you may see B1 deficiency (Polioencephalomalacia or 'Polio') in calves and need to act quickly. Vitamin B1 (also known as Thiamine) is produced in the gut by rumen bacteria. Deficiency is caused by any disruption to the rumen and is generally seen when moving calves from older pasture onto lush grass. This will either cause B1 producing bacteria to be destroyed or an overproduction of the bacteria which creates enzymes that destroy vitamin B1.

It is commonly seen over summer in healthy, well-grown weaned calves. Usually only a single or small number of animals are affected but outbreaks can occur. B1 deficiency causes the brain to swell and brain cells to die. Early signs are not eating and separating themselves from the rest of the group. It then progresses to blindness, staggering gait, head pressing and star

gazing. It will eventually lead to them becoming recumbent and you may even see seizures when they are approached as they are sensitive to movements and noise. If it is not recognized quickly these calves will go downhill rapidly so prompt action is required.

If you see any of these signs in your calves we are only a phone call away from discussing a treatment plan. Often you may see a handful with clinical signs but many of the calves in the mob will be affected on some level. Treatment for clinical cases includes B1 injections for at least 3 days plus, anti-inflammatories and supportive treatments. It may be beneficial to dose the whole mob with vitamin B1 powder to help prevent further cases.

On some farms you will see B1 problems on a yearly basis and on others you may not see it for years and then it becomes a problem at random. Transitioning calves slowly onto lush new pasture and monitoring them closely for early signs is key.



Star gazing in a beef animal – Cattle diseases of Australasia



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AAH-BOTU-2024-014

Johnes Disease: The role of herd testing in management



Written by:
Anita Renes BVSc (Dist)
and Will McLean BVSc

The purpose of whole herd Johnes Disease (JD) testing is to identify high-risk shedders that are spreading infection to youngstock and at risk of dying on farm before they can be culled voluntarily. Overall, reducing the economic and welfare impact of JD.

The second or third herd test (November to March) is the best time to perform a whole herd screen Johnes test to find positive cows. Removing these cows now saves on the costs of wintering them and reduces the chances of infection from super shedders in the biggest risk period during calving. You are slightly more likely to have false positives earlier or later in the season but testing can be performed at any time.

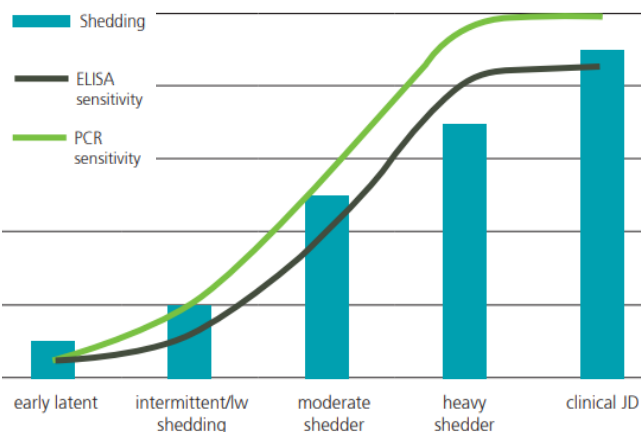
When planning your Johnes herd test, be aware that testing too soon after a TB test may increase the chance of false positives or suspect cows. Ideally TB test after Johnes testing or allow at least 43 days if it is before.

The stress of transition and calving often tips subclinical Johnes cows into clinical disease and they deteriorate quickly. In one case study performed by LIC, a third of cows testing high positive subsequently died on farm during the calving period.

Any cows which test positive, should be retested with a blood test to confirm the identity of that cow as mix ups can occur at herd testing. Knowing the Johnes infection status of cows will assist with voluntary culling decisions and more and more buyers are requesting a negative Johnes test before purchasing cows.

Interpreting the results

The Johnes ELISA is a very specific test – which means if a cow tests positive we know she is positive. However, sensitivity is poor, which means if a cow tests negative, it does not necessarily mean she isn't infected with Johnes disease. Testing does not detect infected cows in the early stages of disease meaning eradication is unlikely to be possible. As the disease progresses, Johnes bacteria are increasingly shed in faeces and diagnosis of JD become easier and more reliable.



Below is a summary table explaining what each individual result means.

ELISA Test Result Interpretation

High-Positive A high-positive result indicated a cow has JD and should be culled. Further confirmation testing tends to lower overall test sensitivity. Some high-positive cows may be shedding a smaller number of JD bacteria at the time of testing, but in time, especially after calving stresses, they may become heavy shedders in the next season.

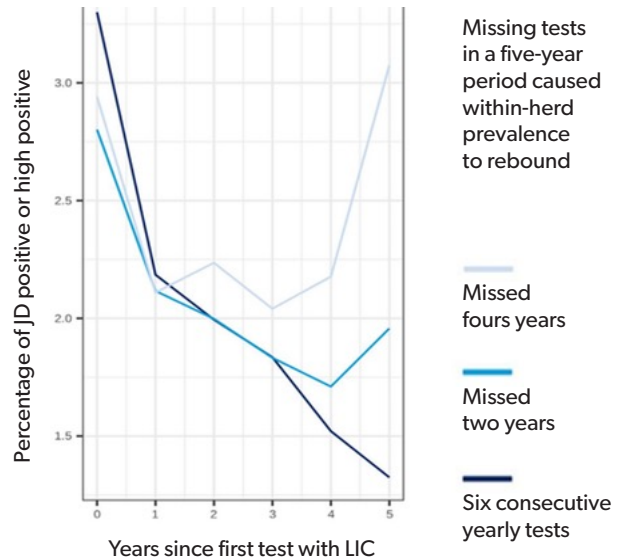
Positive cows A weaker positive result means a Johnes infection may be less advanced. Ideally all positive cows should be culled before calving if numbers allow it.

Suspect cows Suspect cows should be retested to assess their ID status.

'No Antibody Detected' or Negative Because the ELISA will not detect early JD infections, negative test results are also reported as 'No Ab detected'. Cows should be retested annually to detect changes to their JD status because they may be shedding MAP or advancing towards clinical JD by the following season. A small proportion of cows with advanced JD may evade detection by ELISA but farmers should expect clinical JD to be reduced by 80 to 100% after rigorous pre-season test-and-culling.

Johnes disease control is a long-term commitment. Disease prevalence is likely to rebound if whole herd testing is not carried out each year. Prevalence of JD positive and high positive results in herds testing with LIC 2013-2023

* Note this is industry median data so may not predict what may happen on individual farms.



Key takeouts from this graph:

- Farms that had six consecutive annual tests made the most progress in terms of reducing prevalence (3.3% to 1.3% over the five years since their first test).
- Herds that missed two annual tests within this same period tended to have a rebound in prevalence (from their initial starting point, a median of 2.80% to their lowest median prevalence of 1.71% after three years to 1.96% after five years).
- Median prevalence rebounded in herds that missed four annual tests to levels close to those identified when testing started (2.94% at year 0 to 2.04% after three years to 3.07% after five years).

It is strongly recommended that all test-positive cows are culled before calving. If this is not possible, they should be tagged, their calves culled and their colostrum discarded.

Herd testing is just one tool in the Johnes control toolbox. Calf management alongside testing and culling is vital to maximising the return on your Johnes management investment.

- Avoid grazing young calves on paddocks recently grazed by cows (this season). Graze ahead of cows if rotational grazing.
- Avoid feeding milk from your penicillin mob to calves. Cows in this mob are more likely to have Johnes. If this is not possible, discard milk from known or suspected Johnes cows. Consider pasteurisation of whole milk or use milk replacers.

Talk to your vet if you would like to discuss Johnes testing or to book testing at your next herd test.

Mid-Season Milk Quality Management



Written by:
James Postlethwaite
BVSc MRCVS

Minimising clinical mastitis and maintaining a low bulk milk SCC are key to maximising production as we go through the season, perfecting the milking routine is key to achieving this.

The key areas in maintaining good udder health are;

MINIMISE COW STRESS:

- Don't push cows with bikes and backing gates
- Allow cows to move to/from/ into the shed at their own pace.

LOOK AFTER TEAT ENDS:

- Damaged teat ends mean that a cow is at a higher risk of infection.
- Monitor teat end condition — if teats appear rough or damaged the vacuum may be too high or cows may be getting overmilked. Overmilked is more likely to cause mastitis than undermilked.
- Change cup liners every 2,500 cow-milkings — online calculators are available to help set a date
- We can carry out a routine teat score visit to assess teat ends and overall teat condition. This is a key indicator of milking machine function and efficiency.

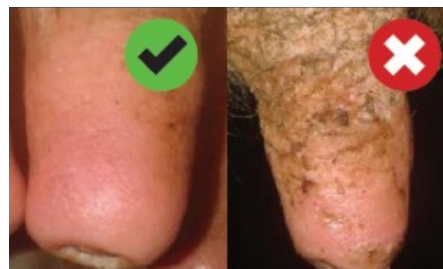
MINIMISE MASTITIS-CAUSING BACTERIA ENTERING TEAT ENDS:

- Keep tracks and yards well-maintained and clean
- Wear gloves when milking
- Teat spray effectively after every milking
 - o mix teat spray to correct concentration
 - o ensure complete coverage of all teats on every cow

MONITOR MASTITIS TOMANAGE IT PROACTIVELY:

- Bulk milk somatic cell count (BMSCC)
 - o Aim for <150,000 cells/mL
 - o A sudden spike might mean a clinical case has entered the vat — strip the herd to find clinical cow(s)
 - o A gradual increase could indicate a contagious mastitis problem
- is developing — herd test or RMT to find subclinical cows
 - o Test subclinical cows to determine the problem bacteria
- Clinical case records
 - o >1% month after calving = contact one of the Dairy Vets team

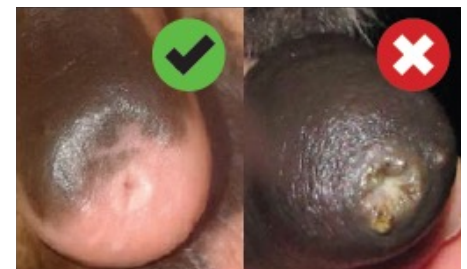
TEAT SKIN



All teats with soft supple skin

Dry Skin on one or more teats

TEAT SKIN



All teats with smooth ends

Rough ends on one or more teats

TEAT SPRAY COVERAGE



All four teats fully covered



Incomplete spray coverage on any teat



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