Dairy News

FEBRUARY 2024

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By Jevan Eady

Plagued by Pink Eye?

Summer brings many good things, long days, warm sun, and for many a holiday to enjoy it all. But these conditions can also spell frustration for farmers because it is the perfect conditions for spread of pink eye.

We covered how to identify pinkeye in a recent newsletter article, so I will not labour that point here, but what to do if you are having recurrent issues with this frustrating and costly disease?

The old adage prevention is better than cure rings true here. Below are the key control points for developing a pink eye control program:

- **Minimising exposure to dust –** Think away from gravel roads and shelter from prevailing winds.
- **Avoiding long stalky paddocks –** Top stalky paddocks or do not allow to graze low in these paddocks.
- **Minimise stocking density –** Spreading animals out will help to reduce the spread of the contagious bacteria that causes pink eye.
- **Protection from UV light –** Prolonged exposure can damage eyes allowing pink eye to take hold. Animals should have access to shade.
- **Fly protection –** Flies are a significant vector for spread of disease. Fly protection with topical insecticides or ear tags may help to reduce spread.
- **Ensure adequate mineral status –** Ensuring that the calves' immune system is working in top notch condition will help them fight off infection.
- **Rapid identification and treatment –** This will help to slow the spread of disease.

VACCINATION

There is only one registered vaccine for pink eye in NZ. **Bovilis Piliguard 1 trivalent vaccine**. This vaccine contains 3 killed strains of Moraxella Bovis, the most significant pathogen in the development of pink eye. However, clinical pink eye is not as straight forward as cause and effect, there are several bacterial species that are implicated in causation of pink eye and the vaccine provides no cross protection for these. Anecdotally and among researched work, the efficacy of vaccination is very variable with results ranging from not at all efficacious, to significant reductions in pink eye cases. Manufactures of the vaccine have shown with trial work that vaccinated animals have significantly lower rates of disease when challenged by one of the strains that is contained within the vaccine. Reasons for the variability of vaccine success in the field and in research works are not fully understood but different strains of Moraxella bovis, and the presence of other bacteria not covered by the vaccine are probably the main reasons why. In New Zealand all the strains of Moraxella bovis studied are genetically very similar to those covered in the vaccine suggesting that the vaccine should be effective, however, this research was completed in the 80's and no disease challenge studies have been performed in NZ.

The vaccine needs to be given 3-6 weeks prior to the risk period and this is difficult to predict. Vaccinating in the face of an outbreak yields highly variable results. If this is to be considered conjunctival swabs should be taken and cultured to confirm Moraxella bovis is the causative agent and assess for presence of other bacteria that may be contributing.

On top of being variable in its efficacy the pink eye vaccine is on the more expensive side of vaccinations.

What to do if Pink Eye is making you cry?

Pink eye is a lot more complex than it seems at face value. There are several grazing and management factors mentioned above to consider making changes to, vaccinating can be an important part of your control methods and can be highly effective when used appropriately but it is not a silver bullet. We suggest talking to your veterinarian about developing a control strategy if pink eye is plaguing your herd.

[i] 1.Schering-Plough Animal Health Ltd, Piliguard Pinkeye-1 Trivalent Technical Manual 2021

[ii] M.J. Burns, A.M. O'Connor, Assessment of methodological quality and sources of variation in the magnitude of vaccine efficacy: A systematic review of studies from 1960 to 2005 reporting immunization with Moraxella bovis vaccines in young cattle,2008.

[iii] R.B. Marshall , P.J. Winter , B.S. Cooper & A.J. Robinson (1985) Subspecies differentiation of *Moraxella bovis* by restriction endonuclease DNA analysis (BRENDA), New Zealand Veterinary Journal, 33:5, 67-70, DOI: 10.1080/00480169.1985.35167

By Kellie Grieve

Teatseal season is fast approaching

Heifer teat seal comes around very quickly each year, with the season kicking off late March. We are incredibly lucky to have the same fantastic techs from last season, meaning Team titties will remain the same as last year!

Getting this job done early has many benefits, such as the weather still generally being warmer and drier, beating the main herd dry-off. (And all the stress that comes with that time of year) Finally, a lot of heifers aren't on crop yet making the job easier, more efficient, and cleaner!

It has been shown that heifers have a higher risk of clinical mastitis in early lactation than older cows. With heifer mastitis rates over 25% on many New Zealand farms, the associated costs with this are clear, and we are better to spend the money we spend on mastitis treatments and days out of milk, on a preventative treatment such as Teatseal.

If you are still on the fence about teat sealing your heifers, an NZ study showed that you can reduce clinical mastitis by almost 70% in the first two weeks of lactation, and even higher reduction for specific environmental bacteria too.

To help the day run smoothly, we have made a handy checklist. If you have not teat sealed your heifers before but are interested in learning more, please give your primary vet a call, they would be happy to discuss this further with you.

- ☑ Check your yards are suitable for teat sealing. (Functioning loading ramp or gate we can back the trailer up to somewhere on the race)
- ☑ Let us know if we need our loading ramp or if you have one. (We leave ours at the clinic unless it is needed, as it is super heavy to lug around!)
- ☑ **Minimum of four** farm staff on the day to make the job go smoothly
- ☑ Hold heifers off pasture over night
- ☑ Good facilities to wash the trailer once the job is finished

Bookings for March/April are filling up fast, so if you wish to get in early give Kellie a call so we can give your heifers the best start to their milking career!

Zoonotic Diseases

Keeping you & your team safe!

Catch our talk, so you don't catch an illness.

SAVE THE DATE
6.30pm Tuesday 20th February

We invite you and your team to join us for an informative evening chat about Zoonotic Diseases on farm.

This will be followed by an educational and entertaining quiz.

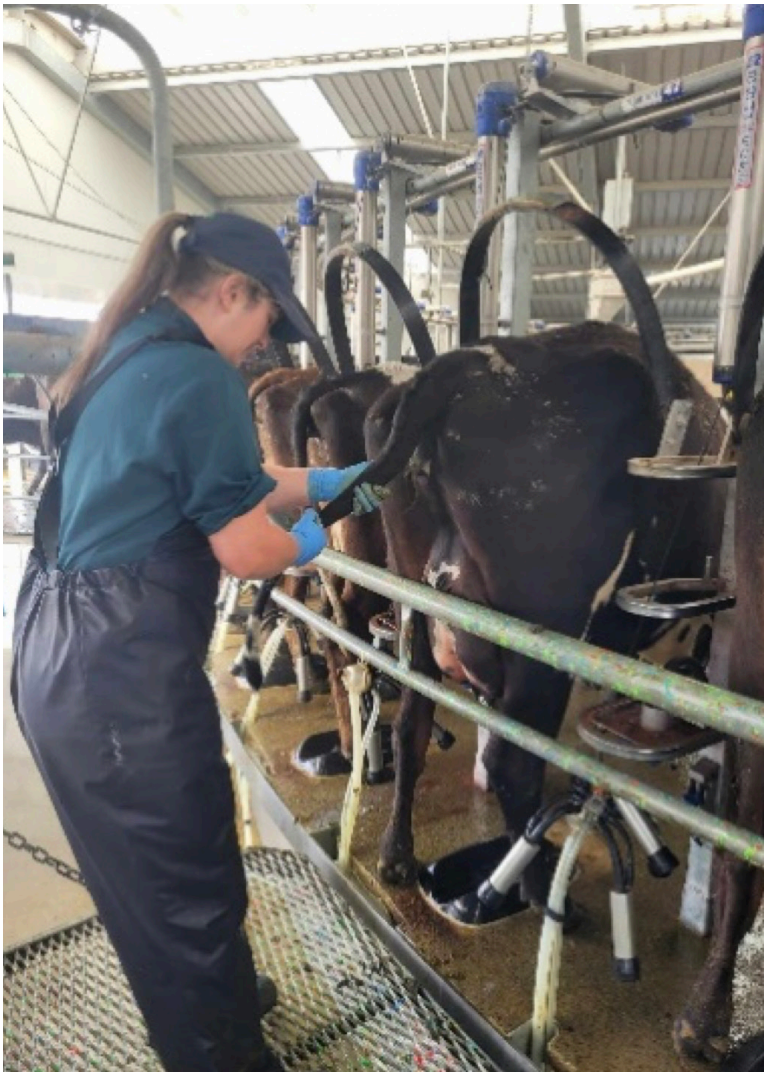
Spot prizes, BBQ & bevies provided.

SAVE THE DATE & PLEASE REGISTER NOW FOR THIS IMPORTANT INFORMATIVE EVENT.

Phone 03 313 7438 or
Email: largea@rangvet.co.nz to register your interest.

By Kellie Grieve

Tail scoring



We all care about the wellbeing of dairy cows, but one aspect often overlooked is the condition of their tails. A tail score is completed by manually palpating each individual cow's tail during milking time.

Here at RVC, our technicians tail scored 21,688 cows during the 2023-2024 season and revealed that **21%** of these cows had abnormalities. These abnormalities are broken down into three categories:

Deviated: *The tail shows evidence of a break or dislocation. This is felt as a callous with (or) a permanent deviation.*

Shortened: *Some portion of the tail has been amputated/removed*

Trauma: *Any other form of tail damage. Soft tissue damage such as constrictive injuries, wounds, growths, and tail deformities.*

Acknowledging that deviated and docked tails don't correct themselves, it becomes important that we take all measures to ensure we can keep tail damage at a minimum.

Tail damage can occur for many reasons, such as machinery in the cow shed, gates/tapes on yards and lane ways, or staff/contractors with insufficient knowledge on how to correctly handle tails.

Every farm has different policies around tail handling. The best way to reduce tail damage due to handling is to minimize handling altogether. Some ways we can achieve this are:

- Using **kick bars** to restrain temperamental heifers/cows
- Using **crushes/head bales** where we can
- Working **calm & gently** to minimize fear toward people
- When introducing heifers to the shed, use **training gates** and get them used to the yard and shed in the weeks/months leading up to calving time

If you must handle a cow's tail, it is important you **don't bend it in a way that is out of its normal range of motion**. Avoid bending or twisting the tail in an unnatural way. If tail jacking, hold the tail right at the base and lift. **Do not lift it higher than the height of the spine.**

Trimming tails regularly is important to reduce trauma caused by feaces but can also reduce other issues such as mastitis. We recommend this is done 4 times a year. We also recommend that farmers try and avoid using tail tape, as if this is used incorrectly it can constrict the tail and cause damage. Try using spray paint or leg bands as alternatives.

Our vet team is available for staff trainings on how to correctly handle tails and to observe a round in the shed during milking to look for problem areas such as backing bars, ACR units, yard entries and other places where tails could be getting caught and damaged.

Tail scoring is an important thing to do to ensure your herd is being monitored closely before it can become a problem. This is not a means to target anyone, but to help improve the wellbeing of our dairy herds, and make sure all staff and people coming to the farm have adequate training in the handling of tails. We would love to see the number of abnomalities reduced to a minimum.

If you would like to book a tail check today, give Kellie a call!

UPDATED RESEARCH

By John Spearpoint

Flexible Milking Frequency

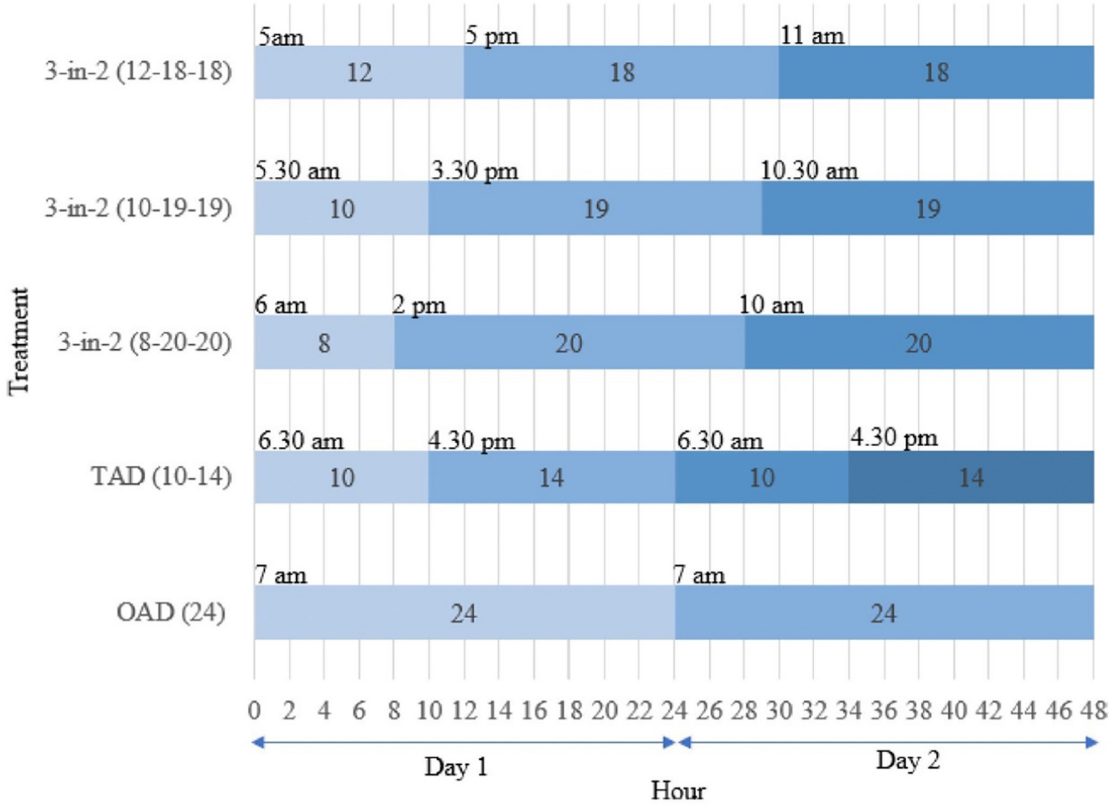
Dairy farmers are constantly facing challenges in attracting and retaining staff. Part of this is due to the time demands spent milking. Several research trials have been undertaken to find practical solutions to the traditional twice-a-day milking routine that can still maintain production and profit, while at the same time improve attractiveness of working in the dairy industry.

Some of our clients switch to flexible milking routines part-way through the season as the weather warms, pasture quality and feed availability declines or simply in response to changing staff resources and the desire to have some time off. So, we thought we would share some recent research results which highlight the effects on milk production by altering milking frequency to help you decide if it's worth giving it a go this season.

What is flexible milking?

Flexible milking is a term used to describe milking intervals that sit between the more traditional twice-a-day (TAD) and once-a-day (OAD) milking. It allows for more flexibility in the timing and number of milkings per week.

The most common is milking three times in two days (3-in-2) with many farmers adopting 16-hours evenly spread over 2 days (16-16-16). This requires an early start (4-5am) and a late finish (8-9pm) on the day the cows are milked TAD. Other variations on timings for 3-in-2 milkings have been studied[1].



Source: Hall et al. (2023)

Why switch to a flexible milking routine?

The following table by Dairy NZ outlines the benefits of switching to a 3-in-2 milking routine. Essentially, the benefits fall under two main categories.

1. **People and workplace**

   Milking accounts for approximately 50% of the time spent on farm, so a 28% reduction in milking frequency each week allows for more flexibility in work hours, resulting in less fatigue and improved staff wellbeing. Ultimately these changes contribute towards staff retention and creating a workplace to attract new staff.

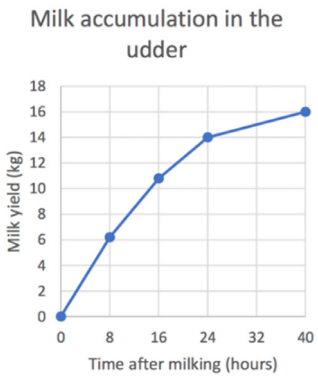
2. **Animals**

   Milking animals less frequently results in less energy expenditure primarily through reducing walking distance, less time standing on concrete and more time grazing. This translates into improved body condition, fertility and fewer cases of lameness. Farmers indicate cows overall appeared happier. More time spent grazing and more time lying for rumination are positive animal welfare indicators.

Key reasons for adopting 3-in-2		
People	Animals	Lifestyle
Staff attraction and retention	Better body condition	More flexibility
Better work hours	Less lameness	More family time
More flexibility	Better overall cow health	Improved wellbeing

Source: Dairy NZ website

Are there any trade-offs when switching to a flexible milking routine?



Milk yield

Milk accumulation in the udder is linear up to 16-18 hours, so a change to 3-in-2 will have little effect on overall milk volume, assuming other factors such as feeding remain constant (see graph).

Somatic cell count

It is commonly thought that longer milking intervals (like OAD) are associated with increases in SCC due to increased pressure in the udder. 3-in-2 milkings have shown no effect on SCC. Any increases in SCC are more likely to be seen with shorter milking intervals due to lower volumes of milk in the udder to dilute somatic cells. Adjusting tanker collection times to every second day may help as the pickup will contain all three milkings which will provide a greater dilution effect.

Mastitis

The incidence of mastitis does not increase with a change to 3-in-2 milking. This is because teats are less exposed to the milking process and have longer recovery time. It is possible however, that if a herd is already experiencing problems with mastitis, then a transition to 3-in-2 milkings may see an increase in mastitis as previously undetected early stage infections will have more time to establish. Regardless, early identification and prompt treatment is essential under any milking regime.

All RVC first line treatment options for mastitis have once-a-day label claims, so any clinical mastitis cases can still be treated once daily under flexible milking routines.

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Body condition

The study found no difference in body condition although it was only run over a 6 week period. Milking 3-in-2 over a longer period of time should theoretically contribute towards improved body condition as energy is saved through reduced milking frequency.

However, changing to a 3-in-2 milking frequency should not be used as a tool to reduce feed intakes. If the goal is to improve body condition in lighter conditioned cows, these animals will respond better on OAD milking.

Ultimately, improved body condition at the end of lactation/dry-off will result in lower feed requirements over winter and improved ability to reach pre-calving BCS targets next season.

Lameness

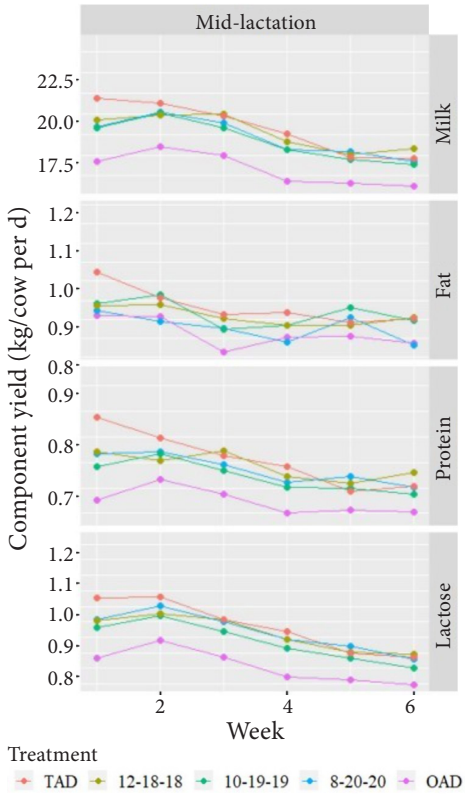
Reductions in lameness rates may be seen in 3-in-2 herds possibly as a result of reduced walking distance.

What does current research show on the effects on milk production?

A recent Dairy NZ and Lincoln University research project run at the Ashley Dene Research and Development Station in Canterbury compared milk yield and milk composition for different milking frequencies; 3-in-2, TAD and OAD milking implemented in either early or mid-lactation[1]. Since farms in our region mostly change milking frequency during mid-lactation, we've focussed the study results around this period.

The graph (right) shows there is little difference in milk volume and component yields between TAD and 3-in-2 milkings. Milk yield, protein and lactose yields are not affected by milking interval unless moving to OAD. Interestingly, fat, protein and lactose yields declined a greater rate for TAD than 3-in-2 milkings. At this stage of lactation, milk yield is already declining and there are likely to be greater contributing factors towards milk yields than changing milking intervals, such as climatic conditions, pasture quality and quantity.

With these research results, farmers can select variations in the timings for 3-in-2 milkings without compromising on milk production. For example, if milking 16-hours, shorter milking intervals on the day with 2 milkings may better suit your needs.



These results suggest it is possible to alter milking intervals from TAD without significantly impacting on milk production and animal health.

[1] Hall et al. Effect of altering milking interval when milking 3 times in 2 days on milk and component yields in pasture-based dairy systems. *Journal of Dairy Science*, 106, 7737-7749, 2023

KEY POINTS

- 3-in-2 milking has little impact on milk production if adopted during mid-lactation.
- 10-in-7 milking (10 milkings over 7 days) is a practical alternative to 3-in-2 (3 milkings in 2 days) or 16-hour milkings.
- For 16-hour milkings, a shorter interval can be implemented on the days when cows are milked twice a day (TAD).
- Cows settle into the new routine quickly. Overall animal health improves, reducing lameness and contributing to improved body condition.
- Staff wellbeing improves through flexible rostering, reduced work hours and creating a better workplace to retain and attract new staff.