Veterinary Centre MOOZNEWS

Final Not-In-Calf Rates (Empty Rates) for 2023/24



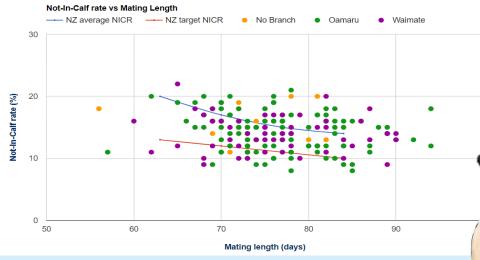
Mat O'Sullivan BVSc – VETERINARY CENTRE Oamaru

The Not-In-Calf Rate is a "boots 'n all" term that includes the percentage of all cows that were present at the start of mating but failed to attain a diagnosis as pregnant. It will obviously, include the empty cows, but will also include culls, deaths and cows which failed to be tested. The denominator used in the calculation is the cows pregnant at the PSM. It's quite a good metric as it gives a good idea of herd wastage occurring through the season.

We are often asked what the average empty rate/not in calf rate is for the season. The answer is really dependent on the length of the mating period. A short mating period can expect more empties as compared to a longer one, but these have the benefit of a more compact calving and generally have a trend for greater 6 week-in-calf rate for the following season.

There is a very tight relationship between 6 week-in-calf rate and Not-In-Calf rate so it's imperative to focus on areas that drive the front end of mating.

If you look at the graph below of local herds you can see the average mating length is about 76 days (just less than 11 weeks) with an average Not-In-Calf for the district of 14.3%. For herds that have a 2% death rate in the spring and a 23% heifer replacement rate, this leaves them with a 7% of the herd for discretionary culling.



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Mat O'Sullivan BVSc VETERINARY CENTRE Oamaru

Balancing the Winter Ration

To ensure a successful outcome to cow wintering, consideration needs to be made around cow requirements for energy, protein and minerals (Ca, P and Na). Knowing the content of the diet, the proportions to be fed and the likely utilisation will enable you to fine tune where required. A dry cow needs a minimum of 10-11% crude protein and this increases to 16% as she nears calving.

Last year our practice did a large amount of feed testing on Fodder Beet crops. The

range and variation in protein and macromineral content was enormous. A very low crude protein/calcium FB crop coupled with a low protein/calcium cereal/maize silage will not adequately support a pregnant cow or set her up for the following lactation (and reproductive season).

A large part of the protein and calcium in a fodder beet plant is held in the leaf. Although the leaf yield in most crops is looking good right now, as they exhaust soil of nitrogen and potassium reserves this may lead to leave senescence (die back of exterior leaves to pull reserves into the bulb). Consider the late applications of around 50 units of N and K/hectare to maintain the green leaf mass.

Look to get your winter diet tested now to provide time to make tweaks with supplement matches if these are required. Contact your Prime Vet about collection, testing and diet balancing.

Planning Ahead for Decreased Winter Crop Yields



Mat O'Sullivan BVSc – VETERINARY CENTRE Oamaru

There is no doubt that the sprinkling of rain at the end of March helped out many farmers, but for many, particularly those inland, the dryland winter crops are significantly back on yield compared to this time last season.

This should stimulate a bit of planning for the next couple of months of lactation and the dry period beyond.

If your winter feed budget is potentially going to be tight, it might be a case of getting as many runs on the board now (in the form of cow condition) before the end of May rolls around.

You can be smart by prioritising the feed of those animals that are going to need it most. These would be the cows of low BCS and the cows that are still doing high levels of production.

Cows which are already fat (BCS 6.0 or greater) and not making much milk may be better to be culled or dried off soon, as they are likely to continue to drop in production faster than their herd mates.

OAD milking does help but will generally provide no more than about 0.2 of a BCS difference over cows milked TAD when initiated

in March.

Off load empties as space allows at the freezing works but remember to not let empties become skinny second-class citizens if they are retained by lack of choice.

If you are not confident about capability of condition gain in the winter look to use the DairyNZ dry-off rules. These would tell you that BCS 3.5 cows be dried off by the start of April and a BCS 4.0 cows by dried off by the start of May.

The dietary make-up in late lactation can also drive the degree of milk production and therefore condition gain. Diets that stay above 16-18% crude protein will not limit milk production, but if you feed more that 5-6kg of either fodder beet or maize in late lactation, milk yield will begin to drop and condition gain will follow.

A good starting point is to get some estimated crop yields done soon and to also individually BCS the herd. The Vet Centre can produce BCS reports that also include the most recent herd test result and due to calf date to customise a plan for individual cows.

Heifer teatsealing Top 10 Hints from our Teatsealing Team



Trailer

- 1. Supply a minimum of 3 staff members to help load the trailer.
- 2. Ensure that heifers go onto a dry paddock after sealing and are only walked to paddock.
- 3. Do not feed heifers a fresh break the morning of sealing date. Ideally straw if anything.
- 4. Ensure we have a water-source to clean the trailer at the end of the day if there's no cowshed near.
- 5. Make sure yards and/or loading ramp is in good working order.
- If drenching and injecting please make sure this is done in the race before the heifers come on so that it doesn't effect heifer flow.
- COMMUNICATION if heifer numbers and/ or yards being used changes – please communicate with the Oamaru/Waimate clinic as early as possible.
- 8. Do not trim heifers tails before teatseal date please.
- 9. Make sure heifers have had their Lepto booster prior to teatsealing date.
- 10. Draft empties and carry-overs so they do not come on the trailer.



Teatseal ACVM A007294

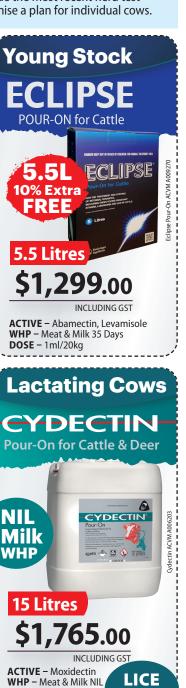
Vivienne Tribble Amy Parish Waimate Vet Tech Oamaru Vet Tech

Our 2024 Heifer teatsealing teams "Ready to go"

alseal

DIY Sealing

- 1. Order teat-sealant through your preferred clinic prior to sealing date.
- 2. Make sure weather conditions are dry to ensure optimum results.
- 3. Ensure all sealing staff are taught the correct way to teatseal and are provided all the correct gear.
- 4. Have hot water supplied for cleaning inbetween cows.
- 5. Make sure there are enough teatwipes supplied so there are no shortages in the teat cleaning process.
- Ensure hands are washed AND dried in between every cow and teats are cleaned as you go.
- 7. If heating teat-sealant do not submerge tubes in water.
- 8. Make sure all cows are teatsprayed after sealant is administered.
- 9. Make sure heifers teats are stripped before inserting sealant to check no mastitis is already present.
- 10. Record all abnormalities ie: blind quarters, bagged up quarters, blood, swelling and mastitis.



DOSE - 1ml/10kg

Treatment

Body Condition Scoring (BCS)



Kristina Gee BVSc BS – VETERINARY CENTRE Oamaru

BCSing on Farm

BCSing is now a very familiar term but some farmers may not given it a nudge as they are unsure about the practicalities of doing it on their farm.

In the Paddock

With this method, tag numbers are not recorded and a standard group of 70 animals are scored to provide a herd profile and an average. It's useful for monitoring change and to see if you are 'on track'.

In a Rotary Shed

Using a raised platform, cows are scored and recorded against individual ear tag. This enables specific and targeted plans to be set up for different groups within the herd. We use Infovet to record results and this provides some excellent reports. Infovet BCS records are now uploaded and appear in MINDA.

In a Herring Bone Shed

Cows can be scored from a trolley in the pit, with a recorder normally in front of the cows to record ear tag numbers. These go into Infovet as above.

Target BCS heading into dry off and early lactation:

	Early Calver	Rising 3-Year-Old
1st of June	4.5	5.0
1st of August	5.0	5.5
Planned Start Mating	4.5	5.0

Many cows that are dried off in too light a body condition at the end of May, will fail to reach BCS target by calving. This leads to lower production in the following season and poorer health and reproductive outcomes.

The most important time to body condition score your whole herd is during late summer and early autumn (Feb-April). This allows individual groups of cows to be managed differently to ensure BCS targets at calving are met. BCS gain is not a quick process while lactating. Cows which are below BCS 4.0 should be considered for early dry-off to ensure they reach target at calving. A repeat BCS can be performed again close to dry off, to create specific wintering groups that will utilise winter feed in a targeted fashion.

Drench Strategies for Autumn



Mat O'Sullivan BVSc - VETERINARY CENTRE

Moving into the autumn period, it is time to start thinking about shedding the worm burden your herd has accumulated over the season. During the months of March and April we see the highest seasonal load of larval parasites on pasture.

Using long-acting pour-on products allows you to remove the existing burden, while continuing to control any newly ingested larvae for a period of around 4-5 weeks. Therefore, the optimal time to use the likes of Cydectin or Eprinex would be around mid-April. One area of consideration here though is that if treatment occurs too early in the autumn there may be opportunity for lice to repopulate over the winter/spring and require retreatment.

As a reminder pour-on products that contain abamectin may no longer be used in lactating cattle (35 day milk withhold). Genesis is no longer available but we do stock an abamectin product which is suitable for treatment of lice and internal worms (little persistent activity) at dry off.

Copper Complacency



Luke Smyth BVSc - VETERINARY CENTRE Oamaru

Over the last 10-12 years a level of complacency has developed around copper deficiency and the need to supplement. This has come about largely through the feeding of palm kernel. PKE has been a great supplementary feed source and it has the bonus of being high in the trace element copper.

However, the replacement R1's & R2's are away from the milking platform where they are fed a mostly pasture or crop-based diet depending on the season. Replacements, therefore, are at far higher risk of developing Cu deficiency than a milking herd being fed PKE through the season.

The extent of this problem was investigated several years ago when our practice conducted some basic surveillance work looking at copper levels in rising two-year-olds at grazing. We found that over 80% of R2 mobs sampled had individual animals deficient in copper.

Before disregarding the need to supplement copper in R1's and R2's consider the following points:

- Copper levels are at their lowest in late winter/early spring. This coincides with higher copper demands over this period for late pregnancy and early lactation.
- First calving heifers are often slow to start eating PKE in the shed unless they have been fed it as calves. So, feeding PKE can be an unreliable way of supplementing copper to these animals.
- Humeral fractures are a major issue on individual farms and a significant animal welfare problem. While copper supplementation is not the silver bullet to stopping their occurrence it is a key part of the prevention strategy.

The optimal time to supplement Copper in R1's and R2's is mid-late autumn before animals go onto winter crop.

Options to supplement Copper in R1's and R2's:

- Coppermax and Copaject injection. This can be safely given to cattle over 4 months of age. A 2ml dose is given under the skin of the neck. The dosage may be increased up to a maximum of 4ml if severe copper deficiency has been confirmed through liver biopsies.
- Copper bullets. These are given orally and contain copper oxide wire particles in gelatine capsules. Typically, a R1 would be given a 10 or 20g capsule and a R2 a 30 or 36g capsule depending on liveweight.



CopaCaps 10g ACVM A005259 CopaCaps 20g ACVM A004945 Copaject ACVM A011573 CopperMax ACVM A009469

To establish the true copper status of a milking herd 5 liver biopsies are the way to go and we should never assume the copper status of a dairy herd is fine because PKE has been fed during the season. Copper levels will naturally decrease over winter especially if the herd is wintered on crop and the property has no in-line dispenser in the water system.

Whilst blood samples can measure copper levels easily, this only tells us what an animal's copper status is on an individual day. It unfortunately tells us nothing about the animals' copper stores in the liver which is of far greater importance going into winter.

Liver biopsies are quickly and easily performed on farm. Whilst collecting liver samples from cull cows at the freezing works is convenient on farm liver biopsies have several advantages.

- The vet is on farm so can select the animals to be biopsied.
- Accurate animal identification at sampling.
- Clear traceability of samples from collection to reporting.

Fodder Beet Feeding in Late Lactation

Mat O'Sullivan BVSc VETERINARY CENTRE Oamaru

Feeding up to 5-6kg of Fodder beet in late lactation has multiple benefits.

- It allows the round to be extended, with a relatively cheap supplement.
- Is very good for encouraging condition gain.
- Cows are partially transitioned before heading off farm for the winter

Providing that there is still a significant quality grass portion in the diet (9 kg plus), it is unlikely that at 5-6kg/DM of FB that cows will be protein deprived. However, at 5-6kg of FB in the diet, a lactating cow still producing 1.7kg of MS will be in a negative balance for Calcium. She will be drawing on bone stores and have a higher chance of clinical milk fever. Calcium supplementation (~150g lime-flour cow/day) is important to maintain health and production and reduce bone calcium exhaustion before the next lactation. Cows that have a large proportion of Fodder Beet or Maize in the diet in late lactation and over the winter are at higher risk of milk fever in the spring.

One problem that we repeatedly see with FB transition is the creation of space for cows to get onto the crop. Creating a headland in the crop by using a Beet bucket and feeding this in the paddock initially works very well. Once on a crop, a herd needs 1 linear metre/cow on the face and 6 square metres (minimum) of room/cow on the headland.

Cows should start on an allocation of not more than 1-2kg/cow/ day. Maintain this for 3 days until **all** cows are eating and then increase by 1kg every second day. Cows are best to go onto the crop hungry to encourage shy eaters.

Train the cows to stay and eat their allocation. Even if most is eaten in 20 minutes, cows should stay on the break for 2-3 hours so they <u>all</u> learn that they need to eat. By doing this you will break the habit of those cows which do not eat the beet but stand at the gate anticipating a quick shift back onto grass.

Using an 'increasing time allocation technique' and using a big, long break (6-7m2/cow) to enter a paddock can be risky. Those that use it usually start with 15 minutes (precisely!) and increase the time by 5 minutes every 3 days. Once a long headland is established (fully eaten), then move to using accurate measured daily allocations. Use a stop-watch and wait with the cows!

When setting an allocation, it is easiest to calculate if the fence is shifted parallel to the rows. Cows will graze 12-18 inches under the wire so will effectively always be eating the next row.

Never allow beet to build up in a break. You have over allocated and need to pull back. Day 7-10 on crop is where problems often occur when cows will suddenly click and eat the accumulated surplus.

You must accurately measure your crop yield to enable accurate per cow allocation!



Culling Decisions Making the Most of your Milk Quality Consult



Ryan Luckman BVSc (Dist) MANZCVS (Epidemiology) VETERINARY CENTRE Waimate / Timaru

With dry-off just around the corner we'll soon be sitting down with farmers to do a milk quality consult and work out a dry-off plan.

As part of the consult we have the ability to combine herd test results with other data that is likely to influence culling decisions – this includes mastitis cases, johnes results, calving date, age, and staph testing results. To make the most of the session we recommend also bringing along a list of "definite culls" that we can add in – these are often your bad udders, lame cows, or jumpers that have had their final chance.

А	В
Cow 🖵	Cull (Reason) 💌
88	Bad Udder
149	Bad Udder
622	Bad Udder
688	Bad Udder
1037	Bad Udder
1183	Bad Udder
1740	Drinkers
1928	Drinkers
1985	Drinkers
2002	Drinkers

We can then use the combined data to help make some culling decisions, and include these culls as part of the treatment plan, meaning they will come off the final allocation of teatseal and dry-cow. Get in touch with your Prime Vet if you need to make some early culling decisions with your current feed situations and we can prioritise an early milk quality consult.

Animal Tag 🖃	Year Bo 🔻	Combined 💌
58	2013	Empty
80	2013	Cull Calving Date
88	2013	Bad Udder
109	2013	Empty
149	2013	Bad Udder
17	2013	Teatseal
212	2012	Empty
31	2013	Teatseal
51	2013	Teatseal
216	2008	Cull cos we're mean
52	2013	Cepravin
317	2010	Cull Age
381	2013	Empty
90	2013	Dryclox + Teatseal
105	2013	Teatseal
447	2013	Empty
111	2013	Teatseal
1047	2015	Inactive
614	2014	Cull Mastitis
124	2013	Teatseal
126	2013	Dryclox + Teatseal
622	2014	Bad Udder
625	2014	Mastitis
639	2014	Empty
664	2014	Empty
128	2013	Teatseal
688	2014	Bad Udder

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After a Drought – Parasites Abound

Luke Smyth BVSc – VETERINARY CENTRE Oamaru

You've made it through the dry summer. Now that we've had a bit of rain, and the soil temperature is still warm hopefully we start to see the grass greening up a bit and calves growing well.

However, be very aware that after a drought calves can quickly succumb to parasitism. Showing signs of weight loss, scouring and in some cases even death at a time when we would have expected them to start doing better.

The catch is that parasite eggs require heat and moisture in order to hatch and develop into infective larvae. During a drought the calves are churning out parasite eggs, when moisture isn't available these eggs go into a dormant state waiting for rain. They don't hatch and survive just under the dung pat or soil surface. After an extended dry period followed by rain the worm challenge can be much higher as a synchronised hatch of these dormant parasite eggs occurs. A massive drought breaking rainfall is not required, 10-15mm of rain over a few days is enough to trigger egg hatching and development into infective L3 larvae. Within 2-3 weeks any calves grazing these paddocks suffer an exceedingly high worm challenge.

It is common over the dry for calves to have grazed pastures down to levels they normally wouldn't have simply as a means of maintaining intake. Because 75% of infective parasite larvae live in the bottom inch of the sward calves are forced to pick up more infective larvae than they usually would.

So, what can we do.

• Always drench calves with an effective combination drench containing a

macrocyclic lactone and levamisole.



- Ideally graze sheep or adult cattle behind calves to vacuum up as many infective larvae as possible, unfortunately this rarely if ever happens on a dairy runoff. A mob of carry over cows can be a great tool for parasite management.
- Getting calves onto winter crop earlier than usual is a remarkably effective tool in reducing larval challenge. However, be aware that grassy headlands and perimeter edges of crop paddocks can become infested with high numbers of infective parasite larvae.

Nitrate Toxicity – Nitrate Testing Kits



Ewan Penny BVMS VETERINARY CENTRE Waimate

Be wary of toxic levels of nitrates in winter crops, especially brassicas i.e. kale, particularly in areas which have had recent rainfall after a prolonged dry spell.

Rain after drought results in rapid plant growth, therefore high nitrate uptake by the plant. If plants haven't had enough time to process these high volumes of nitrates into ruminant friendly proteins, toxicity will result. Cold weather will also reduce a plant's nitrate processing abilities.

Signs include: staggering, muscle tremors, rapid breathing, inability to stand and death. Please phone us if you see any of these. Cattle are most susceptible to this, especially pregnant cattle.

Testing should be carried out prior to and during grazing. Nitrate levels can increase after grazing has started, so new breaks should also be tested. Leaves vs. bulbs/stems can have two different results, so it is helpful to test both. When nitrate levels are "risky";

- Feed out baleage before giving a new break cows with a full stomach won't gorge on crop so much this way.
- Check stock 1-2 hours after putting onto crop/a new break signs of toxicity should start to appear in this time frame.
- Restrict access feed for only an hour at a time until nitrate levels are more acceptable.

Nitrate Levels of Grazing Crops		
0-50mg/ml	Safe to feed	
50-100mg/ml	Use cautiously - see steps above.	
>100mg/ml	Do not feed. Re-test in 7 days.	



Transport of Cull Cows

Andrew Muir BVSc BSc (Hons) – VETERINARY CENTRE Oamaru

We all have to do our bit to ensure that cull cows are transported in such a way as to maintain animal welfare, so they arrive at the other end fit and healthy.

10 years ago, Massey University did research looking at what caused cows to go down when they went to works. They found:

- 80% of down cows had milk fever (low blood calcium levels).
- 2. Most cows that went down were still lactating.
- 3. The further cows were transported the greater the risk of going down.

What can you do to reduce the risk of them going down?

- Only select animals that are fit for transport.
 - A BCS of at least 3.0, ideally more.
 - No signs of ill health.
 - No visible signs of wounds, bleeding disease or deformity.
 - Can bear weight evenly on all 4 legs.
 - No ingrown or recently removed horns.
 - If you are unsure have them assessed to see if they can qualify for a transport certificate by a vet. When we write a transport certificate we can only certify them for 7 days and it must be to the nearest works. Make sure you have this all organised prior to booking us in to see them.

- Where possible, fully dry cows off before transporting to slaughter. Transporting in full milk is high risk. Milk any lactating cows as close to transport as possible.
- Cull cows should be transported for the shortest time possible and ideally processed at the nearest works. Discuss options with your stock agent. The risk of injury or going down increases with travel time and distance.
- Supplement with extra calcium and magnesium
 - Lime flour 250- 300g per cow
 - Magnesium 60- 70 gm Mag Chloride or Mag Sulphate in water and 30gm Mg Oxide mixed with hay or straw.
- Take cows off green feed (lush pasture) for a minimum of 4 hours and a maximum of 6 hours if they are still lactating, (12 hours if dry) prior to pick-up time.
- Provide ad-lib roughage and water until loading with the calcium and magnesium added.
- A grazed-out paddock is recommended to give cows the opportunity to rest before the journey. Don't stand them on concrete.
- Cows may be held in yards overnight at the processing plant, so the total time off feed is longer than just the journey time.



UdderNEWS

Hamish Newton BVSc, PhD - Veterinary Centre



Staph aureus is in 85% of herds – often causing minimal issues

With the average empty rate sitting at around 14-15 % this year there is going to be, on many farms, a bit more room to make culling decisions that will impact your herd's "udder health" (e.g. rates of mastitis and BMSCC) next season, by selecting cows to cull with "poor udder health". I mentioned in the March Uddernews, that there are now multiple companies offering whole herd screening, primarily for Staph aureus. While in some situations screening every cow will be of use, in many situations you will only be after additional information on some cows, and not want, be able use, or require the information that you can get be screening every cow in the herd. The reality on many farms is that once you have excluded the empty cows, your Johne's test positive cows, and your worst mastitis cows, you may

not be in position to cull all the remaining cows with a poor mastitis history (eg ISCC and treatment history). In this situation screening only the "potential cull" cows for *Staph aureus* makes sense to me.

If a "potential cull" tests positive for Staph aureus then she is far more likely to become a "definite cull" than a cow that tests negative for *Staph aureus*. Options for testing "potential culls" include :

- i. A PCR test on nominated cows at your last herd test,
- Testing samples using on farm mastitis culture systems (use the correct cartridge though)
- iii. Or dropping samples off at one of our clinics for testing.

If you have any questions about the myriad of testing options now available, please phone your Prime Vet or one of our clinics. All have a place, but a discussion about what you want to achieve with testing will help you narrow which offerings will best assist you achieving your goals.

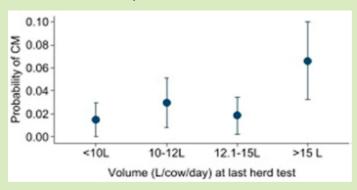


Planning for a successful dry off

It is now time to at least start thinking about drying off. Things to consider are

- Have you got skinny cows to be dried off early? How will you protect these cows against new infection for duration of what will be a long dry period?
- Do you have cows to be culled based on this year's mastitis records (are your records up to date)?
- What dry cow treatment approach to use at drying off? When did mastitis occur last spring relative to a cow's calving date and when relative to the planned start of calving, were the heifers over-represented? We need mastitis records to answer these questions.
- Do you have enough staff to dry off in one go or will it work better to do it in batches over a period of days?
- How will you start to reduce production prior to abruptly drying off?

There is an association between the volume of milk a cow is producing at the last herd test and her probability of clinical mastitis in the first 60 days of her next lactation.



S McDougall, J Williamson, K Gohary & J Lacy-Hulbert (2022) Risk factors for clinical or subclinical mastitis following infusion of internal teat sealant alone at the end of lactation in cows with low somatic cell counts, New Zealand Veterinary Journal, 70:2, 79-87

Use your April herd test data to identify your highest producers and start to reduce their feed intakes in the seven days prior to dry off to get them closer to 1kgMS. This may be as simple as dropping out in shed feeding.

MoozNews EXTRA (April 2024)

What will the future bring?

It seems that our ability to prescribe a whole herd antibiotic dry cow therapy (DCT) is likely to be removed or we must meet stricter criteria in the near future. The latest guideline from the Veterinary Council of New Zealand (VCNZ) states we "should not" prescribe blanket (whole herd) antibiotic DCT, and it seems it will only be a matter of time before we are told we can't. For the majority of you this will not require any change as you are already only giving antibiotic dry cow therapy to the cows deemed infected. It is a possibility next season we wont have the option of prescribing whole herd antibiotic DCT without data to explain why selective treatment is not a valid option. If you are still using whole herd DCT, why not this season "give it a go". We can select cows based on well researched, and proven "in the field" criteria, but if you are not comfortable, we can create some very conservative selection criteria so a smaller proportion of your herd gets TeatSeal until you fine tune the logistics and systems required to insert Teatseal effectively. In previous years I have begged for mastitis data to be recorded to allow the selection of cows for selective DCT - it now seems that in the future we will need that data to justify blanket DCT – so please get your data into MINDA.



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