

### Are those Non-returning Cows Pregnant?

On average 10-15% of non-returning cows are later found not to be pregnant. These are referred to as phantoms. If you have a herd history of large condition loss post-calving, metritis, high non-cycler rate, high NEFA at calving, low BCS at mating, metritis and BVD you have a higher than average risk. Consider identifying cows from the first 2 weeks of AI and scanning these in early December. Early identification and treatment of these cows will reduce the empty rate. Please contact your Prime vet for further details.

## Bull Management

'Rule of thumb' is to have 1 sound bull to 30 non-pregnant cows. Ideally there should be two teams of bulls and these should be changed every second day.

A bull is capable of mating up to 3 cows a day before semen quality drops. The daily work rate in most herds will be the same after the 3rd week as it is in the 5th week as the number of cows coming on heat on a daily basis will be similar. Like-wise the work rate will be similar between the 6th week and the 8th week.

Therefore in a 700 cow herd which is doing 4 weeks of AI, they will need (based on 3 weeks of mating):

- 'Rule of thumb' is to have 1 sound bull to 30 non-pregnant cows. Ideally700 cows x 82% submission rate x 52% conception rate = 300 pregnant,
  - this leaves 400 non pregnant, which requires 13 sound bulls in the herd at all times
  - In a 700 cow herd which is doing 6 weeks of AI, they will need:
  - 700 cows with 65% 6 Week-In-Calf Rate = 455 pregnant
  - This leaves 245 non-pregnant, which requires 8 sound bulls in the herd at all times.

Bull numbers in general can be reduced by about 40% at the end of each cycle. Remember to ensure that bulls have been both vaccinated and tested clear for BVD.

# 2nd Round Of Mating

The second 21 days of your AI period is just as important as your first. Staff motivation can however drop meaning heat detection rates can reduce.

- Heat detection aids (K-mars, ScratchE's) will improve heat detection sensitivity if scrutiny of tail paint drops.
- If using tail paint use a different colour to paint cows inseminated in the 2nd round of AI.
- Refer to your AI chart if in doubt about whether a cow is a return. If she was last inseminated 18 -24 days

ago there is a good chance she is a genuine return.

- As mating continues the number of cows in sexually active groups (SAG's) reduces. Ensure cows which are Al'd are returned immediately to the herd to form new SAG's to encourage tail paint loss in new cows coming on heat.
- Use paddock checks to increase sensitivity. These should be done 2 hours after the morning and evening shift

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pour-on for parasite control



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## Making the Most from Mating

Recommended mating lengths of 10 weeks are considered optimal to ensure all cows are calved by the 10th of October (if the PSM was the 23rd of October) to retain a healthy calving spread. In this scenario a 10 week mating period would have bull removal occurring on the 1st of January.

The number of lactation days is one of the key economic drivers of your farms profitability. Therefore success of mating should be measured in how quickly they get in calf (3 and 6 week in-calf rate) as well as the empty rate.

The reality of a 10 week mating period is that cows have just over 3 cycles to get back in calf. The average cow has a ~50% chance of getting in calf at each cycle. If given every opportunity she would have a 12.5% chance of being empty after 3 cycles. However if she was to miss the first round of AI she will have a 25% chance of being empty. Likewise if a heat is missed in the second round she has a 50% chance of being empty!

If your 3 week submission rate is tracking below the >90% target, review your heat detection practices immediately and look to get non-cyclers examined and treated. Ideally all eligible non-cyclers (calved >40 days) should be

### **Christmas Promotion**



With qualifying purchases of ■ Arrest C 20L

- Matrix Minidose 10L
- Eclipse pour-on 2.5L, 5L
- (excludes Eclipse pour on bonus 10% 5.5L)
- Eprinex 5L, 20L, 25L
- Genesis pour on 5L, 10L

■ Cydectin pour on 5L, 15 L you receive a tasty Ham on the bone or Crozier Turkey. (While stocks last).

OR FORGET THE HAM OR TURKEY AND DEDUCT \$30 OFF THE PURCHASE PRICE mated inside of 3 weeks. This involves hormonal treatment by day 11 of mating at the latest, or day 18 to achieve 3 cycles within 70 days. Failure to take proactive action will result in not only a protracted calving spread but also a higher empty rate.

All eligible cows not mated after day 24 of mating should also be examined and treated accordingly.



## The Cost of a Missed Heat

For the average producing farm in our area which AI's for six weeks and mates for a total of 10 weeks the cumulative cost of missing one heat in the first round is as follows:

■ 17 days lost milk x (1.4kgMS/day x \$6.50kgMS) = \$155

- \$1,000 net cost of empty cow x 12.5% higher chance of being empty = \$125
- 30% reduction in chance of producing a heifer replacement = \$26
- Less the cost of extra feed above maintenance (17 days x 30c/kgDM x 6kgDM = \$30
- Total opportunity cost = ~\$291/missed heat in the first round.
- A missed heat in the second round costs increases to approximately \$463 due to higher empty rates (25%) and no heifer replacements!!



Cattle initially become infected with the Johne's bacteria when they are calves, with the greatest risk period being the first 6 months of life. A major risk factor is the ingestion of faeces contaminated with the bacteria. This is where paddock selection for the calves while they are on the dairy farm can help. Try to put calves into paddocks that hasn't got effluent going onto them. This may prove more challenging if effluent goes over the whole farm through the irrigation. If this is the case at least try to prevent effluent being sprayed into troughs that calves drink from. Finally try and get calves off the dairy platform as quickly as possible when they have been weaned.

#### Day 24 of Mating - Have all the cows been put up?

If a farm has done early intervention with non-cyclers during the first 3 weeks of mating, then by day 24, in theory, the whole herd will have been mated. This is seldom ever the case!

There will be a mixture of unmated cows by this date which will include cystic ovaries, late calvers, missed heats, pyometras and genuine anoestrus cows.

If you have a significant number of these cows it is worth getting them scanned or palpated at day 24-26 and provide them with specific treatments.

### **BVD** Vaccination Of Calves

## Effect of lameness on reproduction

Lame cows continue to be among the three main problems we are seeing on our clients farms together with mastitis and infertility. Lame cows are clearly visable but often not treated promptly.

At this time of year with peak milk production and AB well under way the economic effect of lame cows can be huge due to lost milk production, lost body weight and and the fact that lame cows are less likely to cycle on time.

Lame cows are half as likely to conceive and take on average 40 days longer to conception, compared to their healthy herd mates.

If you need help with lameness contact Andrew, Luke or Ryan at The Veterinary Centre.





Testing your replacement calves is an easy and effective way to nip BVD in the bud on your farm. It means that infected calves can be removed from a herd while they are young and before they cause more problems especially if they come into contact with cows or heifers during mating. If you are considering DNA testing your calves doing a BVD test only requires ticking an additional box on a form if they are 35 days of age. If you aren't going to DNA test then getting a blood sample or an ear notch is an easy way to check your calves.

# Timely Reminders & handy hints for November

- Pink eye in calves We are coming up to the Pink Eye season in calves. A single dose of Piliguard vaccine given 3-6 weeks before the risk period will significantly reduce the risk of an outbreak.
- Covexin 10 If you have unexplained deaths in young stock every year despite using 5 in 1 vaccine, you should consider using Covexin 10 in 1 vaccine, which provides additional protection



against two other major clostridial diseases - Clostridium sordelli and Clostridium perfringens type A.

- Last year we saw a case of several acute deaths in calves which had been worm drenched through the milk. This is a very timely reminder, not to add worm drench, especially levamisole or abamectin, to milk. Each season we see 2-3 cases of either levamisole toxicity or abamectin toxicity in calves under 100 kg.
- Poa aquatic ( also known as Glyceria maxima) is a grass that proliferates in wet areas of paddocks and drains. Under the right environmental conditions it can accumulate cynanide - which can be fatal if ingested. Sudden death in a wet paddock could be potentially due to cyanide. If you have suspicions contact your vet for identification of the grass.
- Polioencephalomalacia (P.E.) This nervous condition of calves is now the most common disease of calves that we see over the summer months. Polioencephalomalacia (PE or CCN) is considered to be associated with a change of diet from a fibrous stalky diet to a lush, rapidly growing grass diet. High sulphur intakes have also been incriminated. P.E. is a vitamin B1 deficiency. Clinically, calves with P.E. show nervous signs. They may appear blind, staggery and develop muscle tremors, before becoming recumbent, with severe convulsions and die. We traditionally see P.E. cases from late November, peaking late Dec/early Jan.

Individual calves, if treated early enough with injectable Vitamin B1, respond well and make a full recovery. In the face of an 'outbreak', it is well worth considering the prophylactic use of an oral drench of Vitamin B1, for the entire mob of calves.

# Dating Your Mating

A number of farms have elected to run bulls with lower breeding worth cows this year as a cost saving initiative. To enable us to provide the greatest accuracy with your pregnancy dates we ask that you still record cows which appear to have a natural mating in Minda/Protrack once or twice a week.





Hope fully mating is progressing well and drafting cows for Al is not disrupting the milking routine too much.

Although the priority for the next four weeks is necessarily on heat detection this on most farms will only involve one or two people. For the rest of the team milking needs to continue as smoothly as possible to avoid the almost predictable spike in the BMSCC we see on many farms during AI. Keep a close eye on the tanker dockets and encourage all of the milkers to follow it. A graph of the BMSCC produced weekly is often very motivating for the milking team.

Common issues we see during AI Poor teatspray application

Antibiogram Results

Many of you will get a phone call from us in the next few weeks with the results from an "Antibiogram" test. An Antibiogram, taken from a Bulk Milk sample, cultures any Staph aureus and Strep uberis that is present, and then determines what concentration of different antibiotics are required to kill these bugs. We will be using this data to either confirm that what has been scripted for your farm is still appropriate, or to make a rational change to what we dispense for your herd going forward.

Penicillin	Penicillin											
	Staphylococcus auteur.				Streptococcus uberis							
	MIC (openL)				MC (uphic)							
0.03	0.12 0.5	20 8	0 32.0 >6	÷	0.03	0.12	85	20	8.0	12	0 >64	
0.015 0 100	06 0.25 1	0 40	16.0 64.0	100	0.015	10,08	0.25	1.0	4.0	18.0	64.0	
90				90								
80				80								
70				70			-					
60				60			-					
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mam, lactating m, perethanale (lactating)	_			Linum, kuctatin Linu, peneliharni (fluctating)	ade all			-				

- Increased row times due to slower exit times can result in over milking
- Dirty exit ways (cows pooing at drafting gates) - cows' teats on average are open for one hour after the cups are removed.

### *Watch out for a Rise in BMSCC*

We expect to see many BMSCCs spiking in the next week or so. "Stress" has been implicated as a cause of increased SCCs but experimentally this has not been demonstrated convincingly and estrus and stray voltage probably do not directly raise SCC, but do so by cows delaying their milk let down. When cups are on a cow that is not letting her milk down, at either end of her milking, the risk of mastitis increases. This highlights the importance of not over milking. You obviously want cows to express estrus but don't compound some unavoidable over milking with excessively long row times due to drafting etc. Your milking team may have to hang some cups between rows when large numbers of cows are being drafted or when touching up tail paint etc.

### Interpreting Herd Test Results



Many herd tests have been completed and hopefully you have studied these and identified your high SCC cows but before you decide to treat these cows look for what might be the underlying factors that resulted in these cows getting infected. There have been many studies looking at treating subclinically infected cows and how to get the best economic return from treatment. What is apparent is if the rate of transmission of infection is high the economic return from treating cows diminishes. For this reason look for reasons that infection could be going from cow to cow and

address these. These reasons are almost always associated with milking.

- Vaccuum and pulsation
- State of the rubberware
- Cluster alignment
- Cluster attachment
- Cluster removal
- Over and under milking
- Teatspray application

