

MATING MANAGEMENT POLICY (updated 2017)

OBJECTIVE

The aim is to get cows to calve on a 365-day interval to maintain a spring calving farming system. Therefore, to get the herd in-calf as early as possible with the least intervention. Through the use of good husbandry, and record keeping, we are able to make good proactive decisions that result in tight calving patterns, low empty rates and maximum days in milk prior to Christmas.

BODY CONDITION

This has a big impact, and lays the foundation for mating. Light cows take longer to cycle, and have more animal health issues post calving. Therefore, Dairy Holdings Limited (DHL) has a strong focus on BCS throughout the season to ensure cows are at target by the plan start of calving (PSC). First, and second calvers will need to be at BCS 5.5 with the remainder of the herd at 5. To achieve this, a plan needs to be set out in the autumn that identifies light cows and ensures they are dried off at the right time and adequately feed to meet these targets.

INTERVAL BETWEEN CALVING AND PLANNED START OF MATING (PSM)

Cows will need time to recover. On average mature cows will cycle 35-days after calving while first calvers take an average of 47 days. This means that heifers calving after week eight of calving and cows calving after week ten of calving are unlikely to cycle in the first three weeks of mating.

ENERGY INTAKE LEADING UP TO MATING IS VITAL

Your best feed (high quality grass) should be reserved for milkers, while poorer quality feed fed to dries and springers. Following the SRP to ensure the farm has sufficient cover leading up to mating is crucial. Modern dairy cows are unable to consume enough energy for the first five to six weeks post calving to meet their energy requirements, and will naturally strip weight off their backs with 0.5 – 0.75 of a condition score being normal. After five to six weeks, and leading up to mating, feeding becomes critical to ensure cows enter a positive energy balance. This is achieved by offering increasing amounts of high energy pasture while maintaining residuals of 1500 kg DM / ha.

MINERAL STATUS

A pre-mating blood test of ten MA calved cows (not first calvers) should be undertaken at four weeks before Planned Start of Mating (PSM) to confirm mineral status and results must be discussed with farm supervisor before undergoing any follow up treatments.

HEIFERS MATED EARLIER

Heifers will generally take seven to ten days longer to cycle after calving compared to MA cows. For this reason the heifers on the grazing blocks will be mated to start calving earlier than the herd. Heifers will be mated for a total of 9 weeks. Minimum mating weight for heifers is 220 kgs Lwt.

It is very important that these dates are adhered to.

Event	Canterbury/Waitaki	Southland	West Coast
Bulls in	13 th Oct	25 th Oct	1 st Nov
Book Scanner	1 st Dec	1 st Dec	1 st Dec
Bulls Out	15 th Dec	31 st Dec	3 rd Jan
Scan	10 th – 20 th Mar	10 th – 20 th Mar	10 th – 20 th Mar

FOUR WEEKS FROM PSM

RFM's and Metritis

Any cows that are retaining membranes need to be checked daily, and remain in the colostrum mob until the RFM has passed. Any cow that is showing discharge, is smelly, and/or is losing weight will need to be treated accordingly. Smelly cows can be treated - it is important to think about your treatment options if you are still feeding calves then a withholding treatment would be the most appropriate. Cows that are not improving need to be checked by your veterinarian and dealt with accordingly.

Four weeks from the PSM, the herd needs to be checked for any remaining ill-thrift, dirty, or rough-coated animals. Once these are identified, consult with your supervisor for the best plan of action. Actions may include; Metri-checking a proportion of the herd (hygiene is critical), and treating the dirty cows as required. Plans need to be tailored for the farms situation and treat only the required animals.

At Risk Cows

Defined as cows in the following groups:

- Recovered downer cows, lame cows, or have had mastitis, or a difficult calving.
- Cows below condition score 4.
- Cows calved within a month of mating or not yet calved.
- Cows not cycling before the start of mating.

These at-risk cows need to be kept close to the shed to and milked OAD to encourage weight gain.

If the farm has a high proportion of at risk cows, these may need to be put on OAD four weeks prior to the PSM, but only after consultation with your farm supervisor.

Cow can be returned to TAD milking once cycling or once they have had their first mating.

Tail Painting

Tail Paint entire herd RED a month before the start of Mating.

Paint all cycled cows Blue no less frequently than weekly.

Touch up reds that lose paint due to hair loss etc.

Farm supervisors must be notified of the number of cows that have cycled each week by the Sunday evening of that week. This will help identify any developing problems and allow for some timely intervention.

Bulls

The amount of bulls your farm receives the week prior to you starting mating will depend on how many non-cycling cows you have and if there is no data provided, the default will be all of your allocated bulls will arrive prior to the start of mating.

These will later be reported and available on the company website.

Three key actions for bulls to be effective;

1. Use all your AI straw allocation before stopping AI mating and putting out the bulls.
2. Split bulls into teams – two teams for each milking herd.
3. Swap teams every day – one day with cows, next day resting on ad-lib grass.
4. Deal with lameness very quickly.

At Planned Start of Mating minus one week, assess pre-mating heat performance.

Draft all cycling cows into main mob, and all non-cyclers into at risk mob.

If you will have less than 80% of cows cycled by PSM (at your current rate) then this is of major concern. Consult your farm supervisor and discuss putting bulls in with non-cyclers early, improved nutrition or other options.

PLANNED START OF MATING (PSM)

- **Begin AI mating** - All AI mated cows are to be painted **GREEN**. Paint is to be touched up a minimum of twice weekly. Managers and sharemilkers are expected to be picking cows most days with fully trained staff picking cows when this is not possible. If you are not fully confident in picking cows on heat you will need to notify your farm supervisor prior to PSM to receive the required training.
- **First Cyclers** - Once a cow from the "at risk" mob cycles, and mated, she needs then to be sent back to the main mob.
- **Make sure heat detection timing is** correct - If you AI in morning, it is a good idea to put mated cows in a paddock by themselves until the afternoon milking. If you bring them in and tail paint them then, before the first herd say, you will have a good indication of your timing. If they still rub the paint off by the next morning then you may be a bit early and a further insemination will be required.
- **PSM Plus 4-5 Weeks (up to 1.2 Straws/Cow)** - From this time on AI may be stopped after consulting your farm supervisor and advising him of submission rates and non-return rates to that time. This information should all be available on MINDA.

BREED SELECTION

AI will be Premier Sires Kiwi Cross.

BULLS INTRODUCED TO HERD

Have your bulls on farm a few days before they are needed.

Non-cycling cows should get to run with a bull from the start of mating.

Where this is more than 20% non-cyclers, your farm supervisor must be notified.

If you are running a bull mated only herd during AI you require permission from your supervisor. Ensure red paint is touched up.

All natural matings must be recorded daily, and loaded into MINDA.

The standard rate per farm is three bulls per 100 cows. However, the Company will generally provide four bulls per 100 cows to cover for bulls being run with non-cyclers. If AI is poor, or non-cyclers high (30% plus at PSM), then you will need to check the availability of spare bulls to cover the breakdowns.

After the AI draft on the last morning, introduce bulls straight away to the rest of the herd. Bulls need to be introduced at a rate of one bull per 30 not in-calf cows. To work out the number of bulls per mob consult with your farm supervisor and use the below formula.

$$\frac{\text{Total cows} - (\text{Number of cows submitted} \times (\text{non-return rate} - 10\%))}{30 \text{ cows per bulls}}$$

Example: 800 total cows – (750 cows mated x 55% (NRR 65% - 10%))
= 388 cows not in-calf / 30
= 13 bulls in the herd + 13 bulls to rotate/rest
= 26 bulls required

Bull rotation is very important, especially in the first three weeks as the workload may be high.

Change all bulls every two days and ensure they have plenty of fresh grass and water. Bull and cow lameness and injuries can be greatly reduced if bulls are not allowed to stay in the yards during milking. Prevent them entering the yard of draft out prior to starting milking.

BULLS OUT OF HERD

All bulls are to be removed from the herd after **10 WEEKS TOTAL MATING** and no later. Notify your farm supervisor a week prior to when bulls are ready to be removed. If you have rotated the bulls well, they should be in good order.

Ring your farm supervisor to advise the number of bulls that are above 550kg live weight and are ready to go to Silver Ferns Farms.

The remaining bulls should then be sent off-farm to the Company's bull finishing unit. Please liaise with your supervisor to co-ordinate freight to this farm.

After the bulls have been removed, any cow showing a strong heat should be recorded and later culled if the farm comes under feed pressure.

FIRST SCAN AT 78-DAYS

This is a vital management tool. It will give you all cows in-calf in the first six weeks (42 days). All other cows will be re-checks with potential half empty. This scan can also confirm when animals will be calving which will be useful for drying off and wintering. This mob should amount to 20%

of your herd or less and will become your recheck mob. These need to be clearly marked and touched up for their final scans.

All cows over eight years old that are rechecks go to the Works (ring your farm supervisor).

RECHECK AND FINAL SCAN

Scan 35 days after the bulls have been removed from the herd. A final scan will be done in May to identify any cows that have slipped. Once these are identified they should be culled immediately as the farm will typically be in deficit through April and May.

KEY PERFORMANCE INDICATORS

Much can be learned from your farms historic performance and a poor calving spread is the result of the platform laid in the previous season (sometimes two years earlier). Often due to the dynamic nature of Dairy Holdings, you may not have been in charge of the mating in the previous season.

This information should all be available on MINDA.

The table below gives some indication of the national reproductive performance and some targets to aspire too. Note the average performance would put you well behind by the end of spring in the Company.

Indicator	Achievable Target	Average NZ Herd
28-day calving rate	75%	61%
Cows calved less than 40day before PSM	8%	18%
Cows with pre-mating heat (PMH)	85%	Less than 80%
21-day submission rate	90%	76%
Short cycles 18-24 days	Less than 13%	19%
Normal cycles 18-24 days	Greater than 69%	61%
Double cycles 39-45 days	Less than 7%	5%
Non return rate 18-24 days	Greater than 65-75%	70% 28 day pregnancy rate
28-day pregnancy rate	67%	61%
56-day pregnancy rate	95%	82%

EVENT	Coastal Canterbury	Oxford Te Pirita Hackthorne	Canterbury Waitaki	Southland	West Coast
Bloods	16 th Sept	25 th Sept	21 st Sept	29 th Sept	1 st Oct
Vet Check Non Springing Cows	16 th Sept	25 th Sept	21 st Sept	29 th Sept	1 st Oct
Tail Paint (Red paint)	22 nd Sept	1 st Oct	27 th Sept	4 th Oct	7 th Oct
Identify Dirty Cows	22 nd Sept	1 st Oct	27 th Sept	4 th Oct	7 th Oct
Bulls Arrive	16 th Oct	25 th Oct	21 st Oct	28 th Oct	3 rd Nov
AI Starts (cycled = blue paint)	20 th Oct	26 th Oct	25 th Oct	1 st Nov	7 th Nov
Bulls into Non – cycling cows. (Requires supervisor approval)	20 th Oct	26 th Oct	25 th Oct	1 st Nov	7 th Nov
Last Days of AI	17 th - 23 rd Nov	26 th Nov – 2 nd Dec	22 nd - 28 th Nov	30 th Nov – 6 th Dec	7 th Dec – 13 th Dec
All Bulls in	17 th - 23 rd Nov	26 th Nov - 2 nd Dec	22 nd - 28 th Nov	30 th Nov - 6 th Dec	7 th Dec – 13 th Dec

Book Scanner	1 st Dec	10 th Dec	6 th Dec	14 th Dec	14 th Dec
Bulls Out	30 th Dec	7 th Jan	3 rd Jan	11 th Jan	18 th Jan
First Scan	6 th - 10 th Jan	15 th - 19 th Jan	11 th - 15 th Jan	19 th -23 rd Jan	26 th – 30 th Jan
Second Scan	2 nd - 6 th Feb	11 th - 15 th Feb	7 th - 11 th Feb	15 th - 19 th Feb	22 nd – 26 th Feb
Final Scan	20 th - 30 th Apr	20 th - 30 th Apr	20 th - 30 th Apr	20 th - 30 th Apr	27 th Apr – 7 th May