

## How do you choose the right calving pattern for your business?

### Does calving pattern really matter?

When choosing the calving pattern for a dairy business there are a number of factors to consider:

- Managing seasonal risk - balancing calving time and producing milk to match the best seasonal conditions available:
  - The time when the herd can calve onto and consume the optimum amount of direct grazed feed (high quality diet, optimise direct grazed feed to reduce cost of conserving feed or purchasing in feed),
  - The time when climatic conditions will have:
    - the least impact on ability to grow and directly harvest feed
    - the least impact on ability to get cows back in calf
    - the least impact on cow intake to aid peak production (e.g. avoid heat and humidity, wet conditions)
- Taking advantage of milk pricing structures and production demands from milk supply companies
- The cost of producing milk at different times of the year (direct grazed feed V processed, ability to get cows to optimise intake without wasting feed)
- Managing herd fertility
- Managing work/life balance (scheduling calving and joining around other commitments).

### Milk price

The simplistic logic is to produce milk to achieve the maximum milk payment.... However this is far too simplistic. There is a healthy 'supply and demand' tension between the monthly milk payment set by milk supply companies and the ideal time for dairy farmers to produce milk.

In general milk companies use milk pricing to 'send signals' to manipulate (and flatten) milk production. Most companies would prefer a flat supply to optimise the use of their capital invested.

Below are some rough example of a monthly milk pricing spread ('standardised' to \$5.50/kgMS):

\$/kgMS	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	
MG	6.12	5.22	4.71	4.80	4.81	4.83	5.05	5.58	5.87	6.19	6.38	6.46	5.50
Parmalat (Vic)	6.82	5.23	4.16	4.14	3.99	3.96	5.38	6.33	6.49	6.43	6.53	6.55	5.50
Norco (NSW)	5.64	5.35	5.30	5.21	5.12	4.94	5.21	5.66	5.57	5.84	6.02	6.11	5.50

cents/litre	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	
MG	0.47	0.40	0.36	0.37	0.37	0.37	0.39	0.43	0.45	0.48	0.49	0.50	0.42
Parmalat (Vic)	0.52	0.40	0.32	0.32	0.31	0.30	0.41	0.49	0.50	0.49	0.50	0.50	0.42
Norco (NSW)	0.43	0.41	0.41	0.40	0.39	0.38	0.40	0.44	0.43	0.45	0.46	0.47	0.42

(Note: These figures are rough examples only and don't consider individual supply arrangements...)

With some milk payment systems there is also an added complication associated with 'linked months' payment systems where a formula is used to encourage lower total production in the 'peak' months and higher total production in the 'off' months. There are also growth incentives, etc.

In the main the best milk payment months will normally align with the periods where the majority of farmers produce least milk. There is a link between milk payment and current milk supply trends. This is more transparent in Victoria.

*From a 'maximising milk income' perspective the best time to produce peak milk to optimise milk price is to avoid the 2 lowest price months and capture the 2 highest paid months..... however it is highly likely that the lowest paid months are the most efficient months to produce milk, and the highest paid months are the most difficult ones to produce milk in.*

- *Which months best suit your unique pricing system?*

*The alternative question is 'which 2 months would you choose not to produce milk?'*

*If milk pricing is relatively flat then the decision on calving time is not as critical – but it could still impact on farm profit.*

### **Optimising direct grazed home grown feed**

Ideally farmers aim to produce milk to align with optimising use of home grown feed. The assumption is that when the cow has maximum production she has maximum intake, and as a result more of the potential feed grown can be directly harvested (and this feed is often at optimum quality to increase the overall diet quality and optimise production).

If the feed isn't directly grazed it needs to be conserved and fed back at a later stage. This increases cost (compared to the direct grazing). There is:

- the cost of the conservation of the feed,
- the cost of the feed quality drop that can (and often does) occur with fodder conservation (the quality of the fodder conserved is rarely as high as the standing feed that the fodder was made from)
- the increased risk with the conservation process (risk of delay between cutting and getting into the bale/pit which can cause significant quality losses).

*How significant is the potential difference in the amount of pasture that a well fed and maintained cow can consume in the peak growing period compared to other times of the year?*

E.g.

*Peak at 30 litres. Decline at 7 %. Dry off at 17 litres.*

*Difference between peak intake and dry-off intake is 13 litres or 6.5 kgDM intake/day.*

*Peak at 30 litres. Decline at 4%. Dry off at 22 litres.*

*Difference between peak intake and dry-off intake is 8 litres or 4 kgDM intake/day.*

*(The better job you do of holding production over the lactation the lesser the impact of the cost of fodder conservation on overall feed costs).*

*If we use these rough figures to estimate the potential additional cost of conserving the feed that couldn't be consumed directly if the cow demand didn't match the peak growth:*

*250 cows X 6.5 kgDM X 12c/Kg = \$195/day saved by reducing conservation costs*

*250 cows X 4.0 kgDM X 12c/Kg = \$120/day saved by reducing conservation costs*

The question is: Are there significant savings in matching calving to peak home grown feed availability (Yes).

In most cases there are also production benefits associated with having enough high quality grazing feed available when the cows are trying to peak. Quality pasture is an excellent feed source if managed well.

Do you know the economic impact of calving to match pasture growth for your business?

### **Managing herd fertility**

There have been significant challenges with herd fertility in Australian dairy herds and this directly influences calving pattern on many farms. Fertility can have a significant impact on the planned time of calving. It certainly impacts on:

- The number of cows in each calving group (more cows will calve into the groups that are easier to get in calf – and this could be very different to the ideal time to have those cows calving and producing milk.
- The spread of calving (the time that the calving period extends for).

There are periods where it is more difficult to get cows in calf. An example is the late spring calved cows that should be cycling and ready for joining in November/December. This often coincides with a period where feed quality drops off (seed head stage of pasture) and the first real hot days hit.

Key questions for many businesses are:

- Does your joining program assist you to manage herd fertility and have cows calving when you want them to calve?
- Does your joining program consider the impact on matching cow requirement to peak pasture growth and milk payment structure?

Batch calving V year round calving – Pro's and Con's

(Use Neal's as an example of why they prefer batch calving, and the benefits of batch calving)

- A shorter period where there is a tight focus on calving and joining cows
- Calf rearing in batches
- The ability to accurately measure herd fertility performance
- More control over the calving groups (what % of the herd calves in which group)
- ?

### **Ease of feeding and calving**

What periods of the year are more suited to calving the herd down?

What periods of the year is it easier to rear calves?

### **Managing lifestyle – work/life balance**

Does multiple joining's increase or decrease workload and stress?

Does a single calving allow better holiday planning?

### **Other general discussion points**

Does split calving increase the focus on getting cows in calf or decrease it? (A few shorter sharper focussed periods – or a spread over the whole year?)

For some businesses (e.g. Kydds – Finley NSW) - What are the cost/benefits of retaining a single calving period?

- How do you manage the empty cows?
- How long do you continue to join for to get cows in calf to reduce empty rate?

# Pat and Louise Neal - Mating Calendar

## June Calving

- Calving for **7 weeks** starting from 7<sup>th</sup> June.
- This is to match the peak spring growth (ryegrass dominant)
- Mating starts on 29<sup>th</sup> August for milkers
- Heifers go through CIDR programme to be mated 22 days after mature cows

## November Calving

- Calving for 3 weeks starting the first of November.
- This period is to flatten out supply curve (production taken off spring peak, add to Dec/Jan production when February calvers dried off)
- Mating starts on 23 January for milking cows
- Heifers go through CIDR programme to be mated 4 days before mature cows

## February Calving

- Calving for 6 weeks starting the first of February.
- This is to match the kikuyu growing period.
- Mating starts on 26<sup>th</sup> April for milkers
- Heifers go through CIDR programme to be mated 4 days before mature cows

## An overview of the general joining program

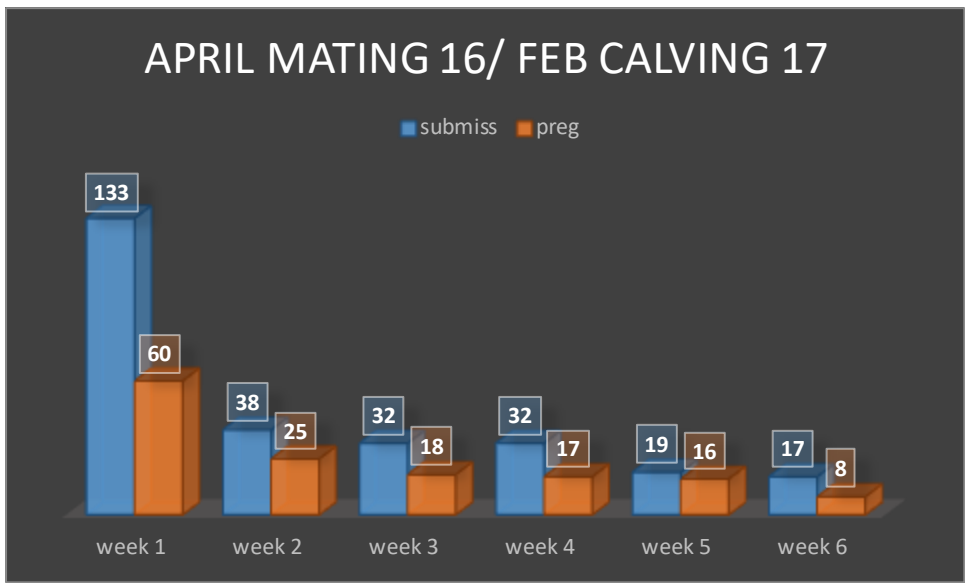
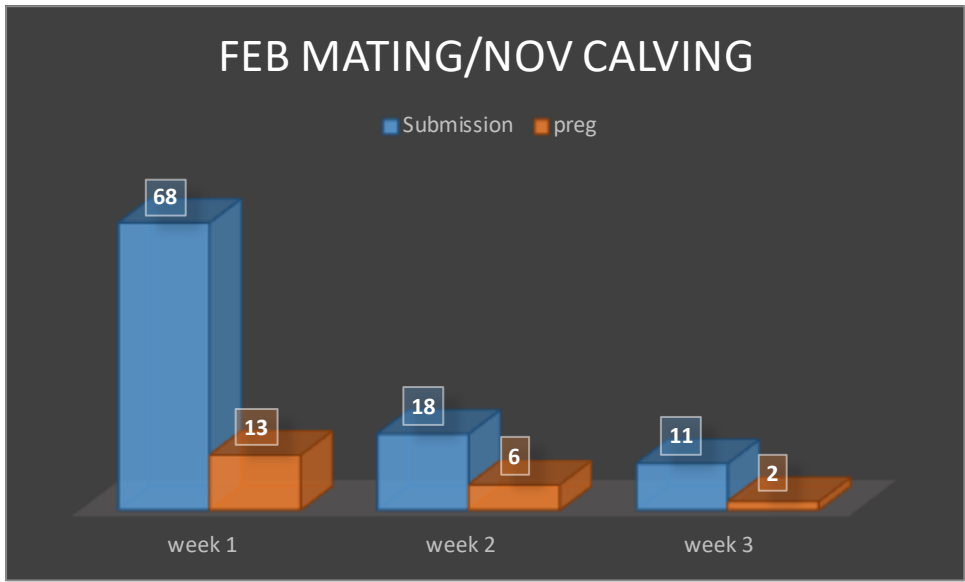
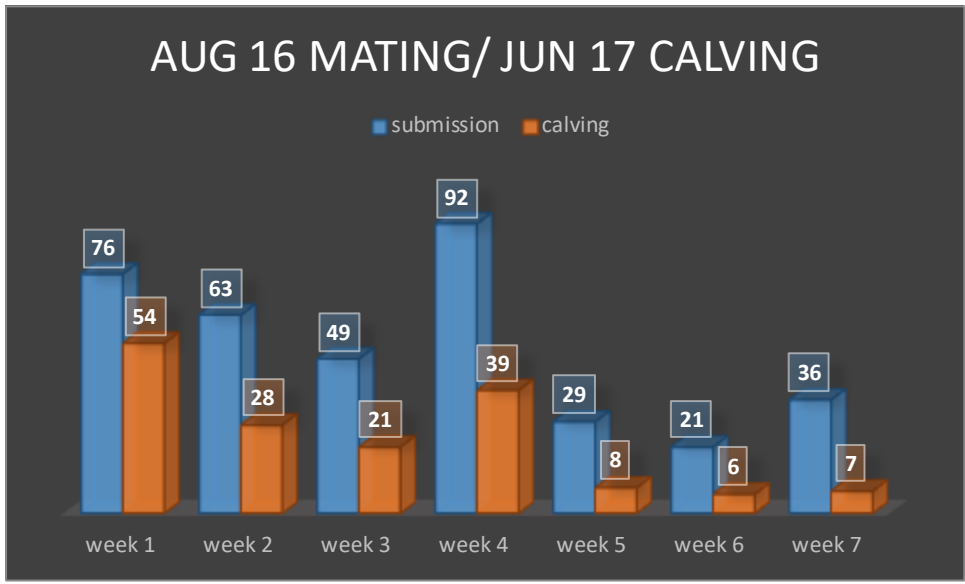
- The vet always visits the farm 21 days before we start mating to pre-test and check empty cows to make sure there are no cysts and are all cows are able to cycle.
- Pre calving ritual:
  - Cows are put into springing paddocks and fed a lead feed
  - The lead feed starts 2 – 3 weeks before they calve
  - Aimed mostly at no milk fevers and no RFM's (RFM's <5%)
- Cows with RFM's are put to vet on a monthly visit
- Tail paint and KMARS are used as heat detection aids for first 3 weeks, then just Tail paint
- Heat Detection is carried out for 30 minutes at the end of milking in the morning and again for 20 minutes before the cows are brought home in for the afternoon milking.
- A person is designated to look for heats during milking

The aim is to tighten up calving pattern and to get 60% of the herd to calve in the first 3 weeks after CSD (calving start date).

To do this the Neal's will try to calve 150 heifers a year so that they have a younger herd (higher fertility)

We also have a lot of crossbreeds which assists with fertility.

Some herd fertility data:



Aug 16 Mating / June 17 Calving				
	submission	calving	cummulative	% total cows calved
week 1	76	54	54	33%
week 2	63	28	82	50%
week 3	49	21	103	63%
week 4	92	39	142	87%
week 5	29	8	150	92%
week 6	21	6	156	96%
week 7	36	7	163	100%
		163		

Feb Mating / Nov Calving				
	Submission	preg	cummulative	% total cows calved
week 1	68	13	13	62%
week 2	18	6	19	90%
week 3	11	2	21	100%
		21		

Apr 16 Mating / Feb 17 Calving				
	Submission	preg	cummulative	% total cows calved
week 1	133	60	60	42%
week 2	38	25	85	59%
week 3	32	18	103	72%
week 4	32	17	120	83%
week 5	19	16	136	94%
week 6	17	8	144	100%
		144		

Latest Joining – submission rates only

