

Profit drivers 101 – reproductive efficiency of cattle

As the calf is the major product from the breeding herd, maximising reproductive efficiency is imperative and a major contributor to total beef enterprise profitability.

Reproductive efficiency is a function of calving percentage, calving pattern and calving spread. Essentially, it is the ability of a cow to get in calf and produce viable offspring. That is, at least one calf within a 365-day schedule.

For a healthy (disease free) mature breeding cow, managing and supplying nutritional needs is fundamental to ensuring each cow is capable of delivering and feeding a calf every year.

Positioning the start and duration of calving such that peak lactation (and thus peak nutritional demand) in the cow herd align with the typical period of optimal pasture growth and quality is a good starting point. Depending on the seasonality of rainfall, this period usually falls in either spring or autumn.

Monitoring cow condition

Keeping a 365-day schedule for calving requires monitoring of cow condition at critical times throughout the year. From the day of calving, a cow has 80–85 days to get back in calf to stick to this schedule.

In advance of joining, cows should be on a rising plane of nutrition in order to meet their nutritional requirements and re-gain body condition, which is a key determinant of oestrus activity. A good rule of thumb is to target an average breeder condition score of 2.5 to 3 at joining to optimise conception rates (see Table 1).

To achieve this, a feed-on-offer target of 1,500–2,500kg/ha DM is recommended and/or cost-effective

supplementation options where necessary; ideally, this should commence at, if not before, the point of calving.

Calving span and weaning weight

Calving span (that is, the duration of calving) is a function of conception rates and the length of the joining period. Importantly, more calves born earlier in the calving span gives a higher average weaning weight within the herd due to a greater number of average growing days for the calves; this is a contributor to overall herd profitability.

In some scenarios, and assuming a fixed weaning date (in preparation for stock sales, etc), the difference between an 18 and 9-week calving span resulted in 258 versus 241 average growing days per calf weaned and as much as a 13% increase in weaning weight (*Situation analysis, Holmes Sackett, 2010*).

There is an important relationship between calving span and days-to-calving and herd age structure and overall business profitability. Factors include:

- A compact calving span is essential to optimise management and to maximise reproductive efficiency and the growth and consistency of calves.
- Paying particular attention to ensuring first-calf heifers calve as early as possible in the calving span will underpin their lifetime breeding performance.
- Cows calving at the beginning of the calving span will have a longer

interval to regain target joining condition scores and elicit more growing days for the calves (at a fixed weaning date).

- Calf disease and mortality tends to be reduced when there is less age differentiation across calves born.

Body condition scoring

Visual body condition scoring skills are essential for monitoring how well the nutritional requirements of all animals (not just breeders) are being met. Across the 365-day schedule, there are five key points whereby condition should be assessed in order to determine nutritional requirements of heifers and cows and revise and/or reprioritise pasture and feed allocations:

- Weaning – provides an opportunity to prioritise highest quality feed to weaners and young cows/heifers.
- 6–8 weeks after weaning – review feed budget/feed allocation.
- 8–10 weeks prior to calving – corrective action to improve nutrition if cow condition has dropped significantly and may affect calving.
- Calving – segregate cows and young stock that are unlikely to reach the target joining condition score of 2.5–3.
- Joining – majority of the herd should be close to condition score 2.5–3 and not exceed condition score of 3.5.

More information

- Jane Weatherley, MLA
Phone: 02 9463 9332
Email: jweatherley@mmla.com.au
- *More Beef from Pastures (MBfP) – The producer's manual (Model 6: Weaner throughput)* available at www.mla.com.au/publications

MLA Feed demand calculator
www.mla.com.au/feeddemand

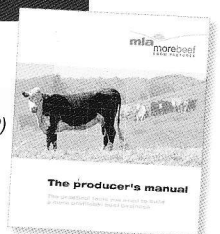


Table 1 Target condition scores for breeders

	Weaning	Mid-winter	Pre-calving	Joining
Condition score (0–5 scale)	3–3.5	2.5	2.5	2.5–3