

R&D BRIEF 111: BEEF COWS PRE & POST CALVING MANAGEMENT

Losses in the month before and after calving can amount to over half of the beef cow's annual reproductive losses. Profit-wise it is crucial to get a live calf from a pregnant cow. This R&D Brief covers the key management targets to help safely negotiate this risky period.

PRE CALVING

At calving, the target condition score (C.S.) for beef breed cows is 5.0 and for dairy-cross cows is 4.5. This is on a scale of 1 to 10. Feeding management through the last four to six weeks pre-calving should be focused on meeting this target. Through winter cows may lose weight and condition. Check on C.S. four to six weeks before calving then feed accordingly.

If a cow is at target levels, then the aim will be to maintain her body condition while also allowing for her calf growing in-utero at 250g per day. For example a 500kg cow needs 5.8kg DM/day for maintenance (around 63MJME). A cow in the ninth month of pregnancy needs 81MJME/day. Her maintenance requirements increase through the last three months of pregnancy, as shown below in **Table A**.

Table A: Cow maintenance requirements

Pregnancy Month	7	8	9
MJME	69	74	81
Kg DM/head	6.4	6.9	7.5

If a cow is light and needs to gain a condition score over the last six weeks before calving (i.e. 40kg of liveweight), she would need to consume an extra 5kg/day above those in **Table A**.

If feed is available, cow weight gain will be easier precalving than post-calving.

However if feed is limited, priority should be given to the post-calving period as this benefits the calf the most.

COW HEALTH AT CALVING

Hypomagnesaemia or magnesium deficiency is a major cause of deaths and complications at calving. On properties prone to the problem losses of up to 20% have been recorded. A classic scenario for this problem is an aged cow of high condition score (i.e. 7.0 or above) eating short, recently grown feed in the second week of lactation. Inclement weather can act as a trigger.

Blood testing pre-calving is recommended. Where deficiency exists farmers can:

- Dust magnesium oxide onto pastures or supplement hay and silage
- Give an intra-ruminal bullet
- Add magnesium chloride to the water supply

The method used must ensure that the cow takes in adequate magnesium to correct the deficiency.

Other metabolic conditions to monitor for are milk fever and ketosis.

The key to managing metabolic issues is nutrition. By giving cows an ad-lib pasture allowance of 2500kg DM/ha, maximum intake can be achieved.

POST CALVING

There are two key aims post calving:

1. Achieve at least 1.0kg per day liveweight gain in the calves.
2. Feed the cow so she achieves a condition score of 6.0 for beef cows and 5.5 for dairy beef cross cows at mating (for optimum reproductive performance).

It may be necessary to limit feed intake for the first 3 to 4 weeks in Friesian-cross (high milk producing) cows rearing a single calf. Calves are generally unable to consume all of the milk produced by these cows and udder problems can result from overproduction. Research shows that maintaining pasture at 1200kg DM/ha for these cows is adequate to meet calf requirements.

Milk dominates a calf's intake up until 12 weeks of age by which time grass makes up 50% of their total diet.

Based on a calf birthweight of 40kg, at 12 weeks the calf will weigh 125kg and will require 43MJME per day to grow at 1.0kg/day. To meet the 43ME requirement, the calf pasture intake needs to be four kilograms of drymatter of pasture worth 11MJME/kg DM.

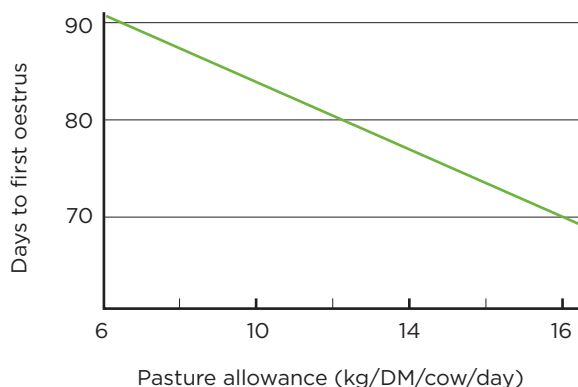
COW FEED REQUIREMENTS

Post calving feeding should be aimed at maximising intake. Nutrition levels impact on the cows time to reach first oestrus after calving. **Table B** shows the minimum recommended feeding levels for a 500kg cow.

Table B: Minimum recommended feeding levels

Daily ME intake (MJME)	Kg DM/head	Pre-graze	Post-graze
120	12	2500kg DM (10-12cm)	1500kg DM (5-6cm)

Graph A: Relationship between pasture allowance and interval from calving to first oestrus.



HOW GOOD IS CURRENT INDUSTRY PERFORMANCE?

Beef + Lamb New Zealand is funding a beef systems project aimed at increasing beef cow performance.

There were four hill country focus farms demonstrating how production and profitability can be increased. The focus farms have input from farmer mentor groups.

The four farms were -

- Don and Jacque McKay (manager - Julian Allen), Maungaturoto, Northland
- Wi Pere Trust, Otago Station (manager Tim Rhodes), Te Karaka, Gisborne
- James and Denise Anderson, Awatere Station, Waikaiti, South Otago
- John and Donna Journeaux, Raetihi

Measurements taken on these farms showed liveweight gain between birth and weaning of 0.8 to 0.9kg/ hd/ day. Calf losses at calving range from 2% to 10%.

This data indicates that on most farms there is an opportunity to improve beef cow nutrition during spring. There are a number of options which include -

- Carrying cow condition into the spring to allow some utilisation of body reserves.
- Building up feed reserves for spring feeding through tools like nitrogen and winter saved feed.
- Having a later calving date that coincides with the 'spring flush' and minimises competition with ewes. This is by far the most cost effective way of calving cows so they complement rather than compete with high-fertility ewes with valuable lambs. Most Focus Farms are concentrating on this option.

WHAT ABOUT THE HEIFERS?

A separate R&D Brief provides an overview of feeding and liveweight targets leading up to mating at 15 months. Phone Beef + Lamb New Zealand on 0800 BEEFLAMB (0800 233 352) to be sent a copy or download at www.beeflambnz.com.

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