

Strategic supplementation before and during the calving season



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The onset of calving marks a significant point in the reproductive cycle of the beef cow, and management and nutritional practices adopted around this period, can have a profound effect on the total kilograms of calves weaned per cow in the herd.

Once calving is completed, the main priority is getting cows to return to oestrus in time for the subsequent breeding season. Numerous studies have shown that the single most important factor in determining the ability of beef cows to reconceive after calving, is their body condition score at the time of calving.

With the onset of lactation, there is an inevitable drop in bodyweight and condition. Heavier cows in better condition are less likely to fall below the critical bodyweight required for them to return to oestrus in time for the subsequent breeding season.

The herd's nutrition prior to calving plays a pivotal role in achieving the desired condition score at calving. What needs to be borne in mind, however, are changes in the cow's nutrient requirements prior to and after calving. During the last three months of pregnancy, nutrient requirements increase dramatically since the majority of foetal growth occurs during this period. After calving, nutrient requirements increase even more due to the onset of lactation (Figure 1).

Supplementary feeding of cows prior to and after calving, needs to consider the increased requirements for protein, energy and minerals, particularly phosphorus, during these periods. It should also be noted that first calf heifers have even higher requirements than mature cows as they are still growing.

The amount of nutrients supplied via a supplement will furthermore depend on the quality and quantity of available grazing. In most areas of the country, breeding cows enter their last trimester of pregnancy in late winter, on dry veld grazing or crop residues that are low in protein and relatively indigestible.

The first requirement of a supplement fed during any time of the production cycle, is that it should allow for maximum intake and digestion of the available grazing. To achieve this on dry winter grazing, a supplement will require sufficient crude protein in the form of urea and/or other non-protein nitrogen (NPN) sources, together with a small amount of energy in the form of grain and/or molasses to allow for efficient utilisation of the grazing by the



rumen microbes. It should further supply sufficient minerals, especially phosphorus, as well as the trace elements and vitamins that grazing frequently lacks. Once these requirements are met, additional protein in the form of oilcakes and energy in the form of grain, may need to be fed to meet the high levels

of nutrients required prior to and after calving.

An important consideration to bear in mind when formulating lick supplements for late pregnancy and lactation is that, due to the fact that the cow prioritises nutrients for either foetal growth or milk production, it is difficult to increase the cow's bodyweight or condition at this time, unless excessively large amounts of protein and energy are fed. The ideal situation to aim for is cows that enter their last trimester in the optimal body condition required for calving, which is then maintained by judicious supplementation until they have been mated again.

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Figure 1: Relative nutrient requirements of mature beef cows at various production stages.

