

Nutritional strategies for backgrounding of calves

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The main purpose of backgrounding is to build frame and muscle tissue without excessive fat deposition, using economical means. This can have a markedly positive effect on dressing percentage and consequently gross margin at slaughter.

Backgrounding is primarily achieved by feeding young calves specialised diets or supplements, depending on the system or available resources. Diets with lower energy and a higher protein content (compared to feedlot diets) must be fed during this stage, either on natural veld, cultivated pastures or in a dry-lot (smaller confinement) operation.

Backgrounding is a way of adding value to calves during the period between weaning and placement in a feedlot. It is mostly calves that have been weaned early that enter backgrounding operations – these calves weigh between 160 and 200kg. Calves are usually backgrounded to a weight of approximately 260kg before being moved to the feedlot finishing phase.

Depending on prevailing prices, a good gross margin is possible if calves can add around 100kg of live weight. This margin can be influenced by the type and quality of feed provided and can be improved by utilising self- or locally produced raw materials and supplementing any nutritional shortfalls.

There are four commonly used backgrounding options, each requiring a unique nutritional strategy.

Backgrounding on green grazing

In the case of fertilised cultivated green pastures as well as abundant natural green grazing, the best option is an energy lick that is free of non-protein nitrogen (NPN). Sufficient levels of soluble protein are present in most cultivated grazing. Utilisation of the grazing can be maximised by providing the correct balance of macro- and trace minerals, while supplementing energy and bypass protein. Energy licks can be mixed with one of the following concentrates: Green Grazer 126 (V16145)



Backgrounding calves in a dry lot requires diets with lower energy and a higher protein content.

or Green Grazer Premix (V30939). Since these products contain an ionophore, an improvement of up to 10 to 15% in growth and feed conversion can be expected, compared to ionophore-free supplements.

Backgrounding on crop residues

A different approach is taken when calves are backgrounded on crop residues such as maize stover. This supplementation strategy must consider the high starch content of the grains present in crop residues, in order to minimise the risk of acidosis. The limiting nutrients are protein and bypass protein, together with mineral imbalances.

The concentrate Beef Gainer 110 (V16140) can be used to formulate a crop residue lick (*landelek*). Beef Gainer 110 supplies optimal levels of soluble protein, as well as macro-minerals, essential trace minerals and vitamins required for growth and general animal health. It also includes medicaments for more effective digestion and overall better feed conversion and growth.

Backgrounding on veld

Calves that graze natural autumn and winter veld should be supplemented with NPN-containing licks to improve the digestion of the dry, low-quality roughage. They can be backgrounded on an energy lick or a grower meal, depending on the desired daily weight gain. These licks are

mixed with Veld Grazer 128 (V23495) or Veld Grazer 154 (V16146). The veld grower meal option is mixed with Beef Gainer 110.

Backgrounding in a dry lot

Backgrounding can be done in a dry lot (kraal) with specialised total mix rations (TMR). Limited movement results in more available energy for growth. However, the animals may be more prone to stress and feedlot-associated complications.

As an alternative to TMR diets, a cafeteria system can be applied. Roughage bales are provided and concentrate is given separately, thus reducing milling and mixing costs. One disadvantage is limited control over individual roughage intake, resulting in calves that show varying growth and feed conversion rates. The concentrate Beef Gainer 110 is best suited for feeds used for these options.

To further capitalise on the benefits of backgrounding, calves can be finished in the feedlot until slaughter. Backgrounding helps to condition calves to more intensive feeding systems, resulting in lower stress levels and morbidity in follow-up feedlot situations. It also improves feed intake and overall feedlot performance.

For technical assistance, contact your nearest Feedtek animal nutritionist at info@feedtek.co.za or visit www.feedtek.co.za.