

# Beef Cattle Winter Nutrition

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Beef cattle make use of veld for both grazing and browsing and both the veld and supplementary feeds need to be managed in such a way that production and profit are maximized on a sustainable basis.

## Managing On-Farm Forage

On farm forages are usually the cheapest food sources for cattle and to utilise them sustainably rotational grazing should be practiced. Each herd should be allocated a minimum of 4 paddocks with a central water point so that paddock 1 is grazed in summer from December to April, paddocks 2 and 3 are grazed in winter from May to November and paddock 4 is rested for a year. Burning of the rested paddock should be carried out in October, should not be more frequent than every 3 years and only be used to remove moribund (grey) grass and reduce bush encroachment. Then in the following year paddock 1 is rested, paddock 2 is grazed in summer and paddocks 3 and 4 are grazed in winter. This rotational pattern is repeated so that a complete cycle takes 4 years.

Paddocks need to be allocated according to veld types because topland and red soils are more sensitive to grazing than vleis and sandveld, so small areas of vlei and sandveld should be included with large areas of topland and red soils. The ecological region of the country will determine the carrying capacity on comparable soil types as generally carrying capacity is proportional to the average rainfall. For example, in region 2 the optimum paddock size for 25 to 30 livestock units is 60 to 120ha. Vleis would be about 60ha and

woodlands would be about 120ha. I have taken a livestock unit to weigh 450kg.

In low rainfall years rotate grazing between all the paddocks not burnt in early summer and destock to the point where the forage available is sufficient. The foot of the farmer grows the grass and the eye of the farmer fattens the cow. If you cannot destock to that level, then you have the option of providing bush meal or purchasing Beef Survival Meal fed at the rate of 4kg per livestock unit where veld forage is absent or very little.

## Winter Protein Supplementation

Why is winter protein supplementation recommended?

This is basically because perennial grasses exhibit declining protein levels as they mature so that by winter these levels have dropped to 3% or less. In the extensive ranching areas in the southern lowveld rainfall is low and annual grasses tend to predominate. Here protein supplementation is not recommended because the dry grasses are like standing hay with higher protein and digestibility than perennials. A useful rule of thumb is that a pregnant livestock unit cow needs 6kg of dry matter at 6% crude protein for maintenance of livemass. Bigger cows and cows in late pregnancy or lactating will require more. Thus, at an intake of 6kg of dry matter grass at 3% crude protein per day, the protein deficiency would be  $6\text{kg} \times 0.03 = 0.18\text{kg}$  or 180g.

Other basic guidelines to protein supplementation worth remembering are as follows.



1. Cow productivity is determined by weaned mass of calf per annum.

2. Cows should weigh at least 85% of peak mass to reconceive. No calf means no profit as you cannot have half a calf.

3. You need pregnancy diagnoses and reliable cow records to know which cows to keep and supplement.

4. The priority ranking on supplementation is in-calf heifers, then in-calf cows that have just weaned their first calves, then in-calf cows for the second successive year, then yearling heifers that will be mated the following summer and lastly weaners. Weaners are not usually worth supplementing.

For example, Winter Blocks containing 35% crude protein and 6% urea have half of the crude protein coming from the urea which is a cheaper protein source than plant protein. They should also contain a significant amount of iodized salt to help to guard against over consumption of the block and consequent over consumption of urea. The management of using these blocks as a protein supplement for cattle need to follow the following guidelines.

1. Put out Salt Blocks at the rate of one per 100 head of cattle for a week before introducing the Winter Blocks.

2. Put out the Winter Blocks at least 300m away from the water source to prevent cattle from quenching their thirst from salt intake and then overconsuming the blocks. Target bare areas where the soil is capped to break up the capping and encourage new grass growth during the rains.

3. Arrange the blocks in a circle at least 10m apart to limit

bullying by dominant animals. Cows are more inclined to bully down a straight line than across a circle.

4. Put out the blocks twice a week.

5. Start feeding blocks in June or when you observe the cattle eating grass seed heads.

6. Feed 600g of block per head per day in midwinter to a mixed herd, rising to 700g/day in late winter. For large herds with many paddocks where, for example, heifers, cows and weaners are in separate herds, feed 900g per day in midwinter and 1kg/day in late winter to 2 to 3-year-old pregnant cows, 500g per day in midwinter rising to 700g per day in late winter for cows bearing their second consecutive calf and feed yearling heifers and in-calf cows that were dry last season as for a mixed herd.

7. Bulls should be fed separately on a bull maintenance meal that is urea free as they are usually too valuable to risk being fed any urea. They should only join the cows in the summer bulling season.



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