

Spotlight on Agriculture

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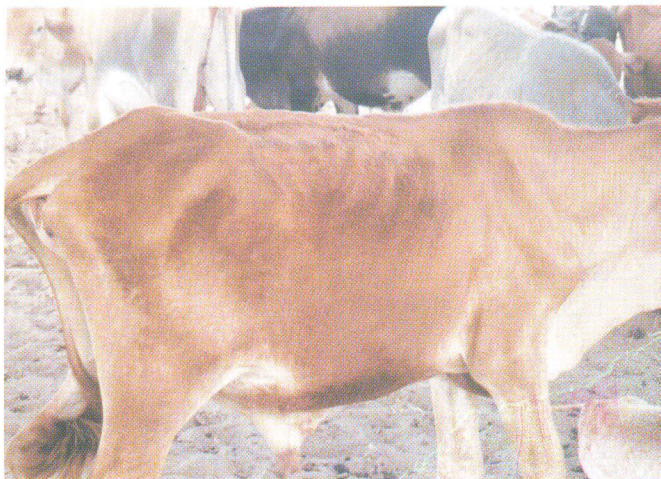
Home-made multi-nutrient blocks for improved ruminant performance in the communal areas

INTRODUCTION

There exists a problem of feed quantity and quality during the dry season in the North Central Regions of Namibia. The forages are normally dry and contain very little protein and minerals. This leads to the deterioration of animal body condition, higher susceptibility to diseases and the death of large numbers of animals during extended dry periods. In addition, reproductive performance becomes impaired because of excessive loss of condition and weight. As a general rule, animals can lose up to 18% of their peak body weight without affecting the reproductive processes. Beyond this point, fertility becomes severely affected. Low prices are received for such animals at the market. One way to arrest the decline in body condition is to offer protein and mineral rich supplements. However, commercial feeds are expensive and unaffordable by the majority of communal farmers. The availability, purchase price and cost of transport of feed stuffs and/or crop residues from Etunda Irrigation Scheme, places this alternate source of feed also beyond the means of the average communal farmer in the North Central Regions.



During the dry season, the forage is dry and contain little protein and minerals.



Deterioration of animal body condition.



Many animals die during extended dry periods. °

An alternative is to offer non-protein nitrogen in the form of blocks. Commercial blocks are also expensive and may not be afforded by the average farmer. Nevertheless, cheap blocks can be made on-farm which can have the same results as commercial blocks. Substitution of some of the most expensive components with cheap local materials makes these blocks cheap and affordable.

COMPOSITION AND TYPES OF LICKS

Multi-nutrient licks as the name implies, are made up of different ingredients, which supply a variety of nutrients to animals.

Commercial licks are made up of the following components:

Molasses: It supplies readily available energy and also serves as a binding agent. The content of molasses can be lowered to reduce cost but normally the best licks are those that contain above 45% molasses.

Urea: It supplies the non-protein nitrogen required by the ruminant animals to improve the utilization of fibrous feed materials. It normally should not exceed 10% of lick composition, as it may become poisonous.

Di-calcium phosphate: Supplies the major minerals, namely calcium and phosphate. These are normally not adequately supplied by natural grazing.

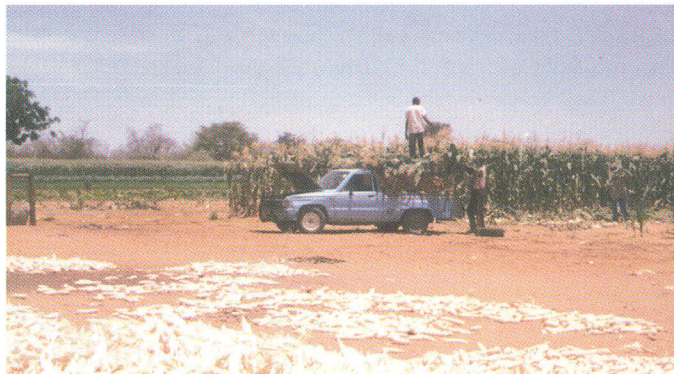
Fiber: Fiber gives the lick some bulkiness. Various sources of fiber are used in the making of licks. High quality wheat and maize brans are used by those who can afford them, but cheap sources such as natural hay and locally available materials like tree foliage and fruits can be use with outstanding results.

Cement: It is use for making those licks that are in block form. Its function is to bind the materials together to form a compact structure. In some mixtures, dolomite lime is also used. In order to reduce expenses, farmers in the communal areas could also use clay in the place of cement. Where clay is used in the mixtures, it should not exceed 20% of the total composition.

Salt: The last component important for making licks is common rock salt. The salt is required to control the intake of the lick by animals. Naturally, animals cannot consume excessive amounts of salt, therefore the addition of the right amount of salt in the licks ensure that only the required amount of the lick is consumed per day. If the salt content is low, animals may eat too much of the lick and may suffer poisoning that comes with the excessive consumption of urea. On the other hand if the salt content is too high, animals will not be able to consume adequate amounts of the lick thus the benefits may not be observed. Generally, adult cattle should consume about 300 to 400 grams of lick per day. The Table below shows some lick mixtures that have been used successfully in a trial done at Ogongo Agricultural College.

Table 1. Composition of two lick mixtures which have been used successfully in North Central Namibia.

Ingredients	Mixture 1	Mixture 2
Urea	10.0 %	10.0 %
Molasses	45.0 %	40.0 %
Di-calcium phosphate	5.0 %	5.0 %
Salt	25.0 %	25.0 %
Grass hay	0.0 %	8.0 %
Acacia pods	7.5 %	0.0 %
Cement	7.5 %	0.0 %
Clay	0.0 %	12.0 %
Total	100.0 %	100.0 %



Crop residues can be collected from Etunda.

SOME COMMENTS ON MAKING AND FEEDING LICKS

The production of lick blocks is not difficult. One needs a hard surface for mixing the ingredients, a measuring scale and the ingredients themselves. Normal equipment used by builders can be used for mixing. The blocks need not be necessarily rectangular in shape. The farmers can use whatever moulds they can get in order to make the blocks. Even old plastic buckets can be used. The size and weight of each block can be varied to suit the needs of individual farmers.

For practical purposes, the blocks can be placed in or around the night pens. Animals thus will have access before going out for grazing. Water should be readily available. The licks should not be fed during the rainy season. Rainwater may leach the urea and make it concentrated in one part of the block. This causes such a block to become highly poisonous to animals. Urea containing licks should not be fed to non-ruminant livestock such as pigs, chickens, donkeys and horses.

CONCLUSION

It is easier and cheaper for farmers to make their own licks than to rely on commercial formulations. The inclusion of locally available materials greatly reduces the cost although some components such as urea, molasses and di-calcium phosphate still have to be obtained from commercial suppliers. Nevertheless, the costs incurred will be balanced out by the improved productive performance of the livestock herds.