

## Agriculture & Rural Development

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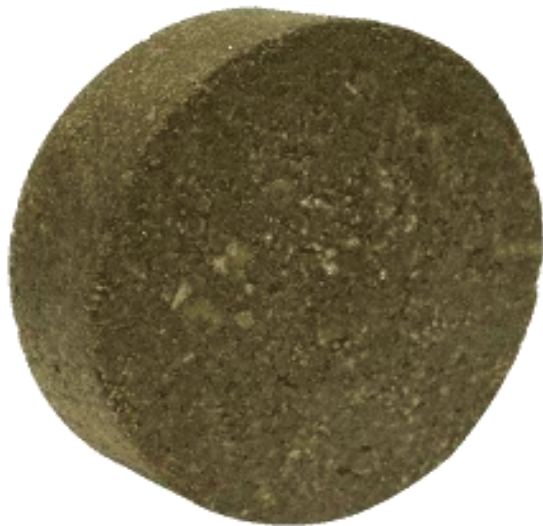
Event	:	Farmers' Study Group Training Day
Presenter	:	N.P. Bareki
Presentation title	:	Lick supplementation for beef cattle
Location	:	Ipopeng, Amalia in Mamusa
Date	:	18 May 2021
Requesting Agric advisor	:	Mr A.C. Mallo
Aim	:	Training of selected study group farmers farmers
Purpose	:	To enhance farmers' understanding of the different types of licks as well as when and how to use them.

# Lick supplementation for beef cattle

Ipopeng Livestock Farmer Study Groups **18 May 2021**

Most of the Southern African livestock farming is practised under harsh extensive conditions. Naturally, these harsh conditions also present mineral and nutrient deficiencies in both soils and grazing. These deficiencies often necessitate the use of supplementary feeding to increase nutrient intake as well as to correct deficiencies in pastures for the grazing and browsing ruminant.

There are three major lick supplement categories, namely:



Summer lick  
(Phosphorus based)

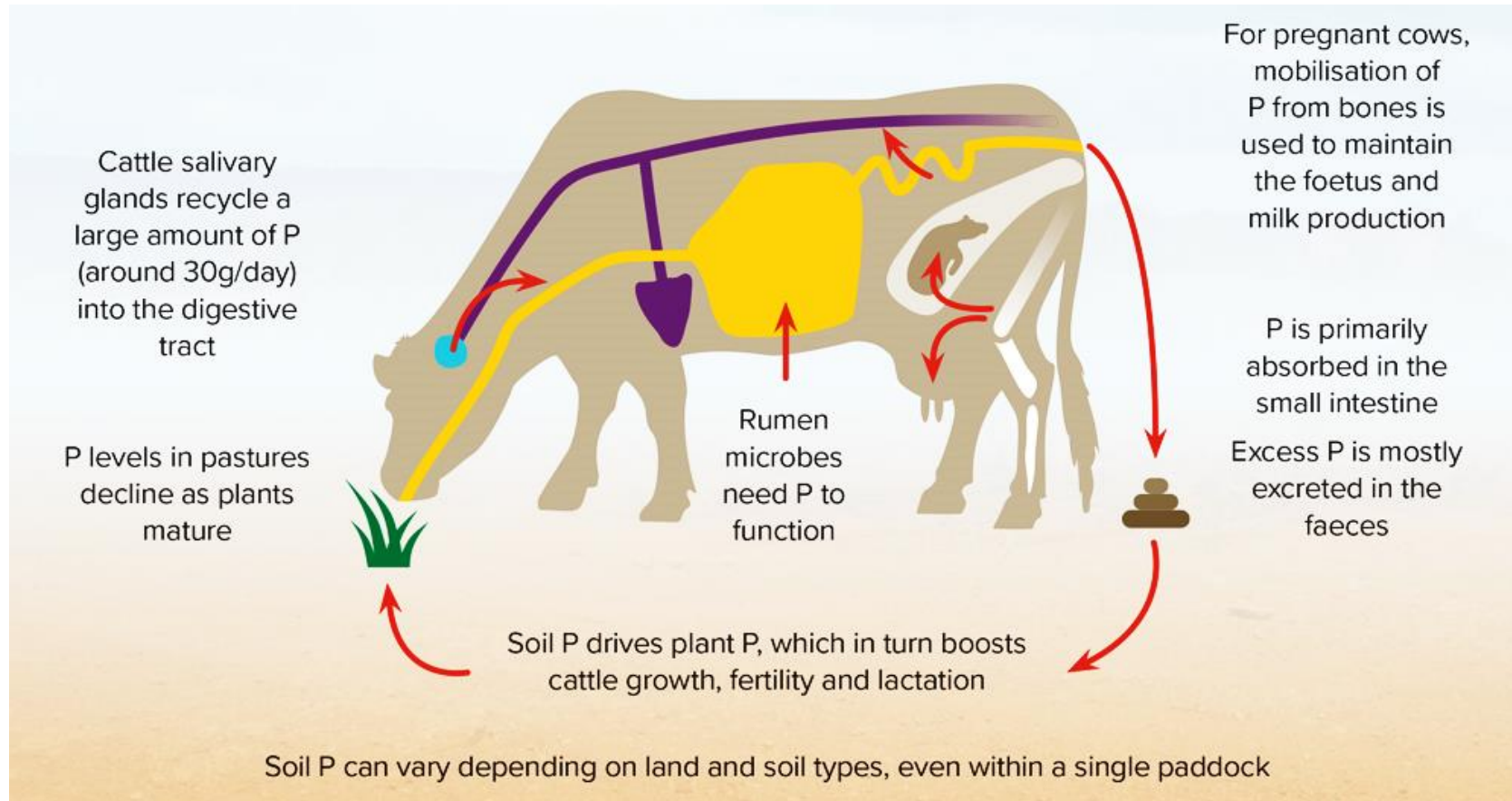


Winter Lick  
(Protein Based)



Production Lick  
(Energy based)

**Summer Lick:** The soil of Southern Africa is poor in phosphorus. It is for this reason that we should provide our stock with summer licks in the summer months when the grazing is able to provide the necessary minerals and essential nutrients, with exception of Phosphorus. The basic Phosphorus pathway is as follows:

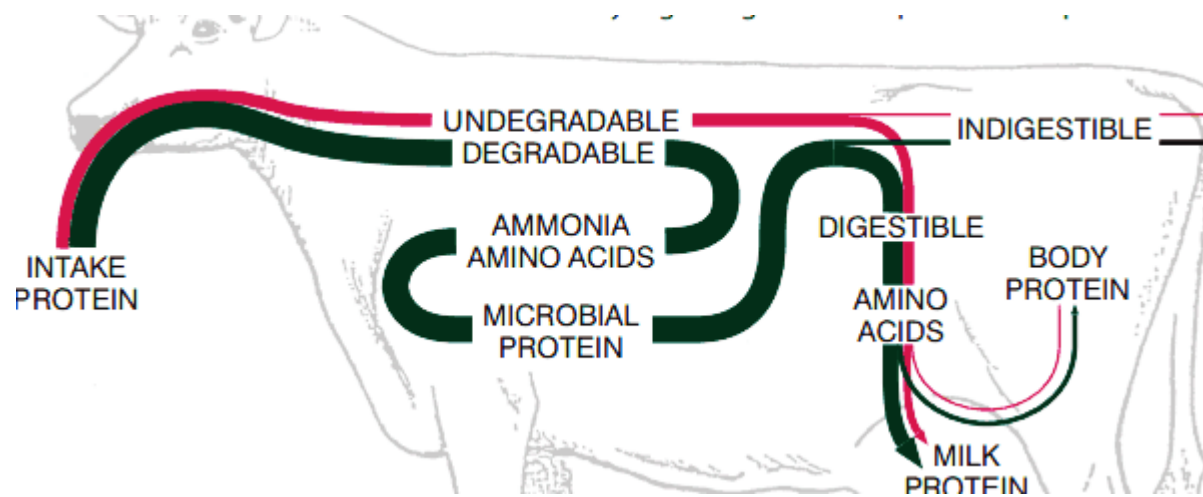


In short, lush green grass can provide both the energy and protein needs of grazing animals. However, animals are often in production during summer and need high levels of phosphorus, and the grass cannot provide for this need. It is for this reason that phosphorus must be supplemented during the wet season. Phosphorus has an effect on the rumen functions, by

stimulating the dry material intake. It also influences the physical condition of the grazing animal and leads to improved milk production and reproduction.

**Protein Lick:** The nutritional value of grazing changes with the changing seasons. For instance, as the grass reaches maturity, its fibre content increases, while the protein content drops. Protein is therefore the principal nutrient lacking in dry winter grass. Ruminant digestion is on the other hand based mostly on massive ruminal microbial activity.

Ruminants grazing on this low protein grass do not receive enough protein for the microbes in the rumen to grow and multiply. This then decreases the digestibility of the consumed grass and as a result, reduced nutrient uptake. This is because the grass moves slower through the rumen, reducing feed intake and finally animals start to lose weight. The basic Protein pathway is as follows:



Research has revealed that protein supplementation becomes essential for optimal animal production as soon as the protein content of the grazing drops below 6 to 8%.

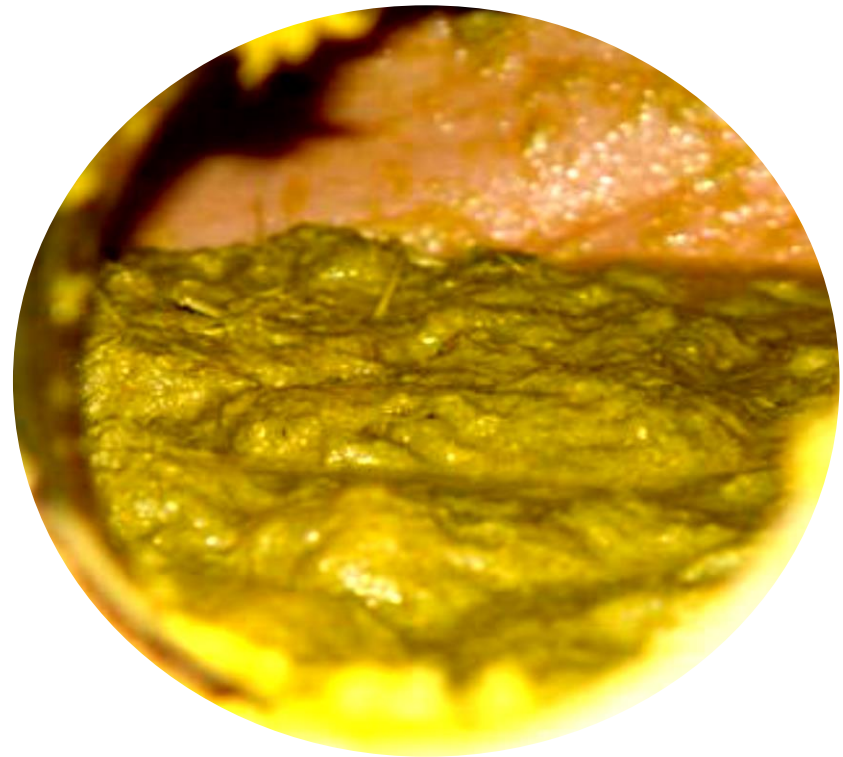


Natural protein sources such as oilcakes are expensive therefore it is not economical to use them as the only Rumen Degradable Protein (RDP) source. A less expensive alternative source is feed grade urea. Licks containing urea can be fed to animals to increase the digestibility of the dry grass and to stimulate grass intake.

Urea consists of 46% nitrogen and is broken down in the rumen to ammonia which is used by rumen microbes to produce microbial protein (much needed by the animal) and also for them to grow and multiply. The more microbes there are in the rumen, the better and quicker the grass will be digested, preventing animals from losing weight.



No lick



With lick

Finally,

**Production Lick:** This type of lick can be given to animals during both the wet and dry season in cases where more performance than the normal maintenance of animals is demanded. The composition of production licks often differs according to production aims, the type of animal and the quality of available grazing.

### LICK COMPOSITIONS

# THESE ARE LICK COMPOSITIONS AS USED AT POTCHEFSTROOM FOR BEEF CATTLE.

# Generally only summer and winter lick are used at Potchefstroom experimental farms.

COMPONENTS/ INGREDIENTS	SUMMER LICK	PRODUCTION LICK	WINTER LICK
• Salt	50 kg	150 kg	170 kg ± 3bgs
• P12/ D-Calcium Phosphate	50 kg	37.50 kg	110 kg ± 2bgs
• Urea	-	30 kg	110 kg ± 2bgs
• Maize meal	-	220 kg	110 kg ± 2bgs
• HPC 40	-	62.50 kg	-
NB Intakes	100g/animal/day	1000g/animal/day	300g/animal/day