

Phosphate is one of the most important ingredients of licks and promotes fertility, weaning mass and growth.

**Fertility**  
Calf %



■ Control group 56%



■ Animals on phosphate 80%

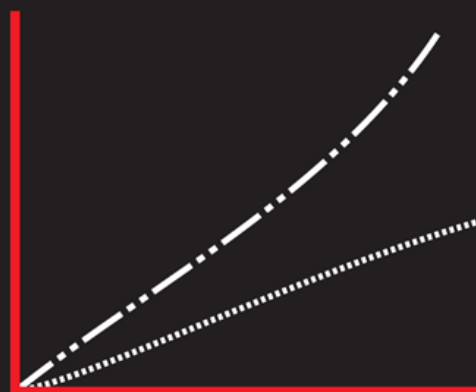
**Weaning mass**



■ Control 180kg

■ Phosphate 210kg

**Growth**



..... Control    - - - Phosphate

## The Use of Licks

Well-formulated licks enable you to ensure the general health and immunity of your animals and increase their production and reproduction.

Fodder-flow management is a vital part of the farm management system. If fodder flow is managed correctly, optimal animal production is ensured at the lowest possible cost. Managing fodder flow demands practical knowledge of the physical farm environment and the possibilities in terms of the veld's grazing capacity, production potential and history of field husbandry. This knowledge should be coupled with a long-term strategy that aims to ensure a stable herd composition.

Dividing animals into different production groups and feeding them accordingly is the most cost-efficient way of using licks. The starting point is to have a set calving season. In this way the lick can be applied in an efficient way to fill the nutrient shortfall between what the veld supplies and what the animal requires.

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Such a lick programme is compiled taking into account the seasons as well as the herd's changing feeding needs according to the individual animals' production status. It follows then that licks should be used very strategically. BioMinerale recommends a programme containing five different kinds of licks during one production cycle.

## Summer (Dec - Feb)

In the Highveld, summer starts three weeks after the first rains of the season and ends at the first signs of cold, which usually appear in the middle of February. It is a brief period during which the veld is green, succulent and palatable; during this season, high intakes can be obtained from the veld. While grass is in the growing phase before germination, it has a high protein and energy content and is also highly digestible.

On average, South Africa's natural veld lacks phosphate. The best time to supplement phosphate is on green summer veld and established pastures, on which animals quickly gain body mass. The better the quality of the roughage, the better the effect obtained from the phosphate supplementation. During this time, efficiency of utilisation is also at its best.

Since the nutritious value of Highveld pastures is significantly lower in winter than in summer, the production cycles of herds have been adapted so that the highest production times coincide with summer. Grass nutrient yield is also optimally utilised during this time. The biggest phosphate shortages also occur during this time; the shortage grows in proportion to the individual animal's production status.

During summer, the phosphate need of ruminants is approximately 8 to 12g/cow/day and 1.5g/ewe/day. Phosphate supplementation has a significant impact on cow/ewe mass, reproduction and calf/lamb performance.

## Late Summer and Autumn (Feb - Apr)

The grass now starts maturing. Grass is typically in the period before germination (plumes have been formed, and the sheaths are still green at the base). There is ample dry matter available, and the roughage is palatable, but there is low protein availability.

If body condition is the main criterion for fodder management, big mistakes can creep in that are difficult to correct in the same season. Even if animals still seem to be consuming enough grass, they might not be getting sufficient nutrients from their grass intake. As soon as you can see deterioration in body condition with the naked eye, the animal could already have lost as much as 20kg of its body mass. An improvement can be brought about by supplementing with a low level of protein but still enough phosphate to accommodate the production cycle.

It is also ideal to adjust and prepare for winter feeding during this time. If only protein licks are fed in winter, there is a grave danger that a hunger for salt will stimulate the animals to consume too much of the licks to still

the hunger. By feeding an autumn lick, the problem is avoided in a safe way, and animals can adapt to the salt and urea content. Biofos P4 is an ideal product to feed during the transition from phosphate licks to winter licks.

## Autumn and Winter (Apr - Jun)

This is when the first frost falls on the Highveld, but the natural veld's condition is still very good. The natural veld's dry-matter levels are still high enough, but germination brings the translocation of nutrients from the foliage to the root system. Protein levels drop to as low as 2%, which will give way to shortages. Remember that the rumen microbes need at least 8% protein intake to remain viable. Since the stimulation of a healthy rumen micro population is of critical importance for the efficient use of roughage, it is clear that more proteins need to be fed.

Protein dominates the nutrient shortages in winter, but phosphate and salt shortages also occur. These shortages result in breeding animals losing body mass and subsequently calving/lambing in a weaker condition, which leads to lower milk production and, ultimately, lower weaning mass.

Mainly consisting of urea, non-protein nitrogen (NPN), which is used to limit animals' body-mass loss during the winter months, improves the digestibility of the winter roughage. As the roughage intake improves, the loss of body mass is limited.

For cattle, protein need from licks is between 150 and 220g/cow/day.

Licks should only be used to supplement roughage. Under normal conditions, licks should not become a replacement for roughage; replacement is deemed to start when supplementary feed comprises more than 25% of the animal's total intake.

If the animal's natural lick intake deviates from the intake prescribed for the product, it is a sign that the lick should be changed.

The type of pastures, animals, their production status, the season and the roughage quality will all combine to determine which supplementary lick should be fed.

BioMinerale supplies three winter licks: Winteronderhoudslek, Winterlek 44 and Winterlek 50.

## Late Winter and Spring (Jul - Nov)

The Highveld is now dry and ashen – burnt veld can often be seen. Little dry matter remains with hardening and lignification having set in. The offering from the veld is unpalatable and difficult to digest, and intakes decline severely, which leads to energy, protein and phosphate shortages.

Yet again, it is important to start energy supplementation in good time. Animals should be in good condition during mating season.

Winteronderhoudslek is an ideal product to feed during this time. Its high energy levels and natural protein content help to build condition. Produksielek 25 can also be fed now, especially to in-calf and first-lactation heifers and very thin cows.

Any animal in a demanding breeding cycle – in-calf cows in the last trimester, for instance, or lactating or growing animals or those needing to build condition for mating season – should get a production lick during this time. The intake will vary according to the available roughage, and in these scenarios it is possible that a degree of replacement has to take place for the sake of breeding.

A transition lick will also achieve good results. It is important, however, not to switch to summer phosphate licks too soon after the first rains as the animals will lose too much condition.

## Wildslek

Since game farms have limited the free movement of game over large tracts of land, the animals have had to curtail their voluntary eating patterns to plant species that are more easily available. This gives way to protein and macro and micro mineral shortages, and lick supplementation has to be introduced.

Since game animals still have an intrinsic ability to eat according to nutrient need, intakes will vary depending on the species, the condition of the veld, the climate and where the lick is placed.

Place licks on the access routes to watering holes. Since the male animals of some species sometimes tend to take control of the feeding space, it is important to provide a sufficient number of lick points with sufficient space for other animals.

Lick feeding should be provided throughout the year to ensure that animals are not scared away by the sudden provision of supplements.

BioMinerale's Wildslek 18 can be fed, and it is recommended that it be made available in good time. This means it should be supplied before the veld is weak and scarce and the animals enter a "survival phase" with the associated limitation on breeding and growth.

Always ensure that enough roughage is available.