

FEEDTEK GREENGRAZER PREMIX (WITH TAUROTEC) ADDS TECHNOLOGY INTO HOME MIXED PHOSPHATE LICKS!

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The green season is an absolutely critical phase in the livestock production cycle for any stock farmer. It is the only time when the extensive stock farmer has got highly nutritious, digestible and palatable natural grazing to replenish any lost condition in the female animal for the following breeding season, to grow out replacement animals and males effectively and to stimulate milk production to improve the growth of animals before weaning. In Southern Africa with its long harsh dry seasons, these favourable conditions does not last very long, in addition to the fact that most of the virgin soils in the country are deficient in phosphorus, a critical element required for growth, fertility and milk production. The concept of providing so called “phosphate licks” during the green season has become a very general (and wise) practice amongst progressive farmers.

In the current economic environment with input costs rising faster than prices realized for livestock products it is critical for any farmer that wants to farm progressively and improve profitability, to approach his farming enterprise as a professional business. Therefore the farmer has to continually be informed of the latest technological developments at his disposal in his industry, as well as continually evaluating these developments by asking the following 3 questions:

1. What will it cost to implement this technology ?
2. What effect will it have on production output ?
3. How much additional income will this additional production response generate ?

If the minimum expected additional return is much higher than the additional investment itself, serious consideration should be given to implement such technology.

The phosphate lick market is at present very lacking in applied new technology, mainly due to the fact that this market has mistakenly been transformed into a highly competitive volume driven commodity market where “price per unit phosphate” carries far more weight than what it validates and few, if any, other factors are taken into account when farmers decide which phosphate lick should be used. This notwithstanding the fact that not only a lot of new technology with widely differing applications have been developed over the last 20 years, but that a lot of research results are available which provide more than enough proof that this technology delivers excellent return on capital investment. It could therefore enable farmers not only to increase production outputs but also profitability, which in turn improve the financial viability of the farming enterprise.

With the above facts in mind, Feedtek developed a unique phosphate lick macro premix called Greengrazer Premix. The following technological developments with its associated benefits are offered in this product.

1. Greengrazer Premix contains the ionophore Taurotec



Ionophores acts selectively against certain types of bacteria in the rumen, consequently indirectly benefitting other types which produces nutrients that are used more effectively to provide energy to the ruminant. This in return improves growth and feed conversion. A further benefit of ionophores is that it effectively helps to prevent digestive disturbances such as bloat and acidosis. In 15 trials with more than 1000 beef cattle on grazing the addition of 1333mg of Taurotec (200mg Lasalocid Sodium) per head per day to the supplement resulted in an average increase of 11,1 percent or 77g in average daily gain. This has the following benefits for the farmer.

- a. An extra 77 grams live mass gain implies an additional daily income of R1,54 per head for weaners (taken at R20,00 per kilogram live mass). This is more than 7 fold higher than the daily cost of the included ionophore, Taurotec, which is less than 20c per head (October 2016).
- b. In replacement animals it leads to the dual benefits of reaching puberty earlier and heavier heifers that are put to the bull - both these benefits have a marked positive influence on her fertility throughout her reproductive life. As early as 1969, a study with dairy heifers found that for each 50 grams additional daily growth above 350 grams per day, heifers will reach puberty one month earlier. An additional growth of 77g per day implicates that beef heifers will put on around 12 kg additional live mass during the green season at a cost of around R30. An increase of less than one percent in calving percentage already pays for this additional cost. If the very strong positive relationship between live mass at first mating and fertility is taken into account, it could be presumed with a lot of certainty that the calving percentage will improve by far more than one percent.
- c. In a USA study of mature beef cows amounting to more than 11000 cows, it was found that conception rate within a 60 day breeding cycle improved from 70 percent to 84 percent as a result of increasing the plane of nutrition from moderate to high from calving until the end of the breeding season. When cows increase 11 percent faster in live weight (and condition) it could again be assumed with certainty that the improvement in calving percentage will be much higher than the less than one percent required to cover the additional costs.

2. Greengrazer Premix contains a high level of Sulphur

The advantages of added sulphur include an improvement in the utilization of highly soluble protein (the main type of protein in green grazing), the prevention of prussic acid poisoning on lush green grazing as well as the positive role sulphur plays to help prevent bloat on lush green grazing. The daily cost of this additional sulphur is less than 6 cents per head (October 2016).

3. Greengrazer Premix contains a high level of Magnesium

The magnesium present in grazing is very poorly absorbed by ruminants, especially in mature animals where as little as 20 percent is absorbed. Magnesium plays a critical role in nerve impulse transfer and energy metabolism. Supplementation with magnesium therefore not only improves growth but also has a beneficial effect on fertility. The daily cost of this additional magnesium is less than 6 cents per head (October 2016).

4. Greengrazer Premix contains high levels of 6 trace minerals

Trace minerals play a critical role in fertility and resistance against diseases. Most South African soils and grazing are deficient in trace minerals, which result in poor fertility and health problems. The investment a farmer makes in supplying adequate levels of all the essential trace minerals remains the most cost effective investment he can make, with an input of less than 5 cents per day resulting in major benefits concerning fertility as well as immunity.

Rearing of replacement dairy heifers



The successful rearing of replacement heifers in a dairy farming operation is one of the most important facets that influence the profitability of the enterprise. It comprises a large capital investment that takes years before any returns are realized. Since these initial investments don't show an immediate return and as it is very difficult to calculate whether this investment will be financially worthwhile, essential input costs in the rearing of heifers could easily be regarded as unnecessary expenses, which could explain why many farmers tend to neglect this very important aspect of their operation.

In general heifers are allowed out to pasture (normally inferior to the pasture reserved for the lactating cows) at 4 to 6 months of age and left to fend for themselves. To make matters worse they normally receive the minimum supplements or even no supplements at all. At 15 months of age, these heifers are expected to have reached puberty, but most heifers will not be capable to reach the minimum target weight for first insemination under these circumstances. This results in heifers being inseminated at a live weight lower than minimum target weight, or heifers being inseminated for the first time at an older age. If the heifer is inseminated before she has reached her minimum target weight (which is at least 60 percent of her mature weight) it will result that she never reaches her full potential mature live weight. Re-conception after first calving will also be difficult since the heifer is still spending energy on growth. The result is a lengthened calving interval for the rest of her reproductive life. Heifers inseminated for the first time at an older age, automatically have a bigger chance to produce one calf less during her economically viable lifetime. A study conducted by the University of Cornell in 1998 clearly showed that optimum profitability was attained with heifers calving at 21 months compared to heifers calving at 24 and 27 months respectively. Because of "maturity" problems that might arise when heifers calf too young, a practical target age for first calving is 24 months of age.

A heifer growing out normally will reach puberty at 24 months of age and produce her first calf at 33 months of age. The accelerated growth of a heifer receiving supplementary feed can enable her to reach puberty at 12 – 15 months and to calf at 24 months. This results in a saving of nine months of feeding costs for a non-producing animal, while her total milk production over her lifetime will increase, due to a much greater chance of producing an additional calf during her lifetime. In the process the heifer is not only producing milk earlier than normal, but her calf will be nine months old when the regular growing heifer has her first calf. If this second generation heifer also calf at 33 months of age, the farmer will have lost 18 months in generation interval, aggregating to 27 months by the time the third generation offspring calves. The time lost in three generations represents another calf, meaning the farmer lost a generation of genetic advance. In today's competitive environment this can be the difference between success and failure.

From the above it is therefore clear that it will be extremely beneficial to increase the growth of heifers on green pastures, and for this purpose Greengrazer Premix is the ideal macro premix.

Examples of licks mixed with Greengrazer Premix for good green pastures/veld:

Ingredient	Mineral Lick	Production Lick	Energy Lick
Hominy Chop / Maize meal		425 kg	700 kg
Dicalcium phosphate (P18)	350 kg	175 kg	75 kg
Kalori 3000 (*)	50 kg	50 kg	50 kg
Salt	400 kg	250 kg	125 kg
Green Grazer Premix	200 kg	100 kg	50 kg
Total (kg)	1000 kg	1000 kg	1000 kg
Composition (%)			
Calcium	13,78	7,09	3,40
Phosphorus	6,35	3,31	1,58
Sulphur	2,72	1,42	0,78
Magnesium	3,55	1,85	0,99
TDN (Energy)		38,25	60,80
Lasalosid Sodium (mg/kg)	1000	500	250
Intake (g/head of cattle/day)	100 - 200	200 - 400	400 – 800

(*) Kalori 3000 forms a crust on top of the lick which improves weather resistance. It may be replaced with molasses meal, molasses syrup, maize meal or hominy chop if preferred.

Applications of these licks:

Type of Lick	Applications (Beef)	Applications (Dairy)
Mineral Lick	Dry Cows Pregnant replacement heifers	Dry cows
Production Lick	Lactating cows	Dry cows in poor condition
Replacement heifers (6 – 24 months)	Replacement heifers (6 – 24 months)	Pregnant replacement heifers
Energy Lick	Growing out weaners for marketing	Replacement heifers (6 – 15 months)

Summary

If the technology with accompanying benefits offered in Greengrazer Premix is taken into account, it is clear that the increased response in growth, improved fertility and resistance against disease as well as the prevention of digestive disturbances not only validates the marginal daily increase of less than 20 - 40cents per head in lick costs (if compared with a home mix phosphate lick mixed with di calcium phosphate and salt), but will also enable the farmer to increase his production profitably, which should be the ultimate aim of any stock farmer.

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