KENPAL FARM PRODUCTS INC

Beef Briefs

The Latest Information on Beef Cattle Nutrition

Feeding the Right Minerals

By Pedro Nogueira

When selecting a Vitamin-Mineral Supplement it is important to note not only the concentration of minerals but also their source. Mineral sources vary in bioavailability, or how much of the mineral can be absorbed and utilized. For example, copper sulfate is well utilized by cattle, whereas copper oxide has nearly zero availability. Cost should not be the sole consideration.

Vitamins in a vitamin-mineral supplement will lose their potency over time. For this reason it is important to keep vitamin-mineral supplements fresh, cool, dry and out of direct sunlight. Animal Scientists from Michigan University say that only as much supplement as can be consumed in a 90-day period should be purchased or mixed at one time.

Mineral intake

Beef producers should record the amount and date of mineral feeding so consumption can be monitored. Kenpal minerals are known for their high level of acceptance by the animals when feeding free choice. This is very important. The mineral can be the best in the market, but if the cows don't eat it, it's useless. If you are feeding the mineral free-choice, don't provide any extra salt. Cows have an appetite for sodium and if they have salt available they can reduce the consumption of the vitamin-mineral supplement, negating its benefits.

Recording the amounts of mineral that are being consumed is important because it allows you to make adjustments. If the animals are over-consuming mineral, you can add some white salt to it to limit intake, until the desired intake is obtained. A simple table like the following may help you:

Kgs of mineral put in the Feeder(s)	# of Animals	# of days the mineral lasted	Qty of Mineral/head/day
25	100	2	(25 kg/100 heads)/2days = 0.125 kg

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Volume 3, Issue 2
August 2010

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Table with the amounts of recommended Kenpal Beef Minerals

	Amount/Head/Day	Days Fed	Total/Head/Year
Kenpal Beef Nurse Cow	150 grams	180 days	27 kg
Kenpal Beef Dry Cow	125 grams	185 days	23 kg
TOTAL		365	50 kg or 2 bags/head/year

Mineral feeder considerations

Feeder design and location are important to maintain consistent vitamin-mineral mix consumption. Place feeders in areas that cattle frequent, such as near water, loafing areas, back rubbers, etc. It is important to keep the mineral mix in a well constructed self-feeder that limits exposure to precipitation or in a sheltered trough. Watch for caking, mould, manure and other contamination. Cattle licking and salivating on the mineral may also cause caking. Therefore, keep the mix fresh and do not feed too much at one time, but keep mineral in the feeder at all times to encourage steady consumption.

Conclusions

Profitability of the cow/calf enterprise is influenced greatly by pregnancy rate; therefore, pregnancy rates must be consistently high. Monitoring body condition can be used as a risk management tool against reduced reproductive rate and overfeeding. Manage feed resources so cows are in moderate to good body condition at calving. If cows are fat, feed resources are not being economically used and cows probably are being overfed. Two likely times to check body condition of the cow herd are at weaning, and 60 days before calving. The easiest and most economical time to get condition back on thin cows is between weaning and calving, because the cow's nutrient requirements are low.

Shortening the calving season is perhaps one of the most important and cost-effective programs that can be implemented by a producer. Cost of the program is minimal, and timely labor usage and increased net production make it an important approach in enhancing overall production efficiency.

Vitamin and mineral nutrition, as well as energy and protein, is a year long commitment to the health and well being of the cow and calve. Knowing the different requirements of the production cycle of the cow allows for a better allocation of the available feeds.

References:

"Upper Midwest Beef Cow Mineral-Vitamin Nutrition". Dan Buskirk, Gretchen Hill, Harlan Ritchie, Doug Nielsen. Department of Animal Science, Michigan State University. Extension Bulletin E-2810 • July 2002.

"Advantages of a Short Calving Season." Brian Palichuk. University of Alberta. April 30, 2009

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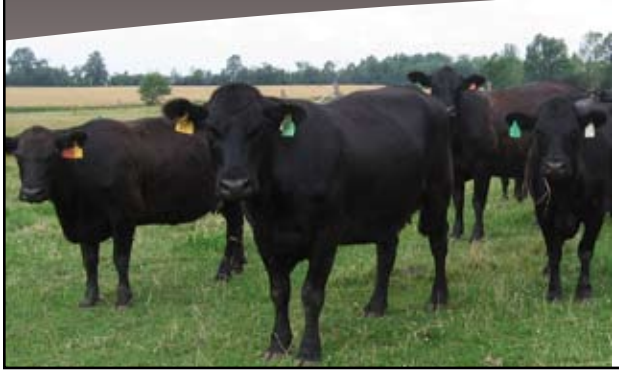
"Long Calving Seasons: Problems and Solutions". Tom R. Troxel Extension Beef Cattle Specialist. University of Arkansas.

Breeding Success with Kenpal's Beef Cow Mineral



SHERDON FARMS HAVE THEIR BEST YEAR EVER WHEN USING KENPAL BEEF COW MINERAL!

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Don & Sherry Alton
Sherdon Farms
Lucknow, ON

Heat Stress and Reproductive Performance of Beef Cows

Heat stress can have an important effect on the reproductive performance of beef cows. Glenn Selk, from Oklahoma State University, indicates the work of a scientist who, after reviewing the scientific literature available up to 1979, wrote that the most serious seasonal variation in reproductive performance was associated with high ambient temperatures and humidity. He further pointed out that pregnancy rates and subsequent calving rates were reduced in cows bred in July through September.

To illustrate this point Glenn Selk refers a study done at his University. In this study cows were exposed to bulls as one group (while in a thermoneutral environment) and one week later exposed to the environmental treatments listed below in Table 1.

Table 1 – Effects of Imposed Heat Stress on Reproduction in Beef Cows

	Control	Moderate Heat Stress	Severe Heat Stress
Day time temp, F (°C)	71 (21.7)	97 (36.1)	98 (36.7)
Night time temp, F (°C)	71 (21.7)	91(32.8)	91(32.8)
Relative humidity (%)	43	27	38
Rectal temp, F (°C)	102.0 (38.9)	102.7 (39.30	103.6 (39.8)
Pregnancy (%)	83	64	50
Conceptus wt (grams)	0.158	0.111	0.073

(Biggers, 1986, OSU)

What researchers found is that heat stress of beef cows from day 8 through day 16 affected the weights of the conceptus (embryo, fluids, and membranes) and the increased body temperature may have formed an unfavourable environment for embryo survival. As noted in table 1, the percentage of pregnancies maintained throughout the week of severe heat stress was considerably reduced.

Glenn Selk indicates some take home messages, especially to beef producers conducting Artificial Insemination or Embryo Transfer:

- Make certain that cows are allowed access to shade and adequate air movement, at breeding, and immediately following breeding;
- Adequate cool water is important anytime during the summer months;
- Avoid forcing recently inseminated cows to stand in treeless, drylot situations where relief from the heat is impossible.

Source: Glenn Selk, Oklahoma State University Extension Cattle Reproduction Specialist.

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Bunk Number	Treated With
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#2	Control – no treatment
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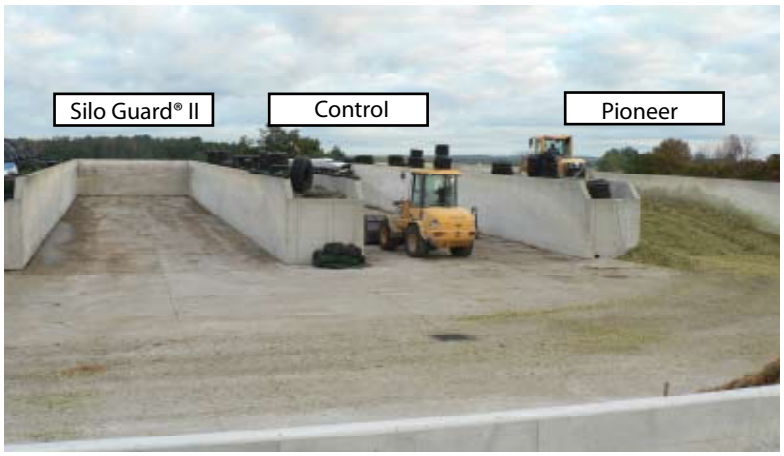
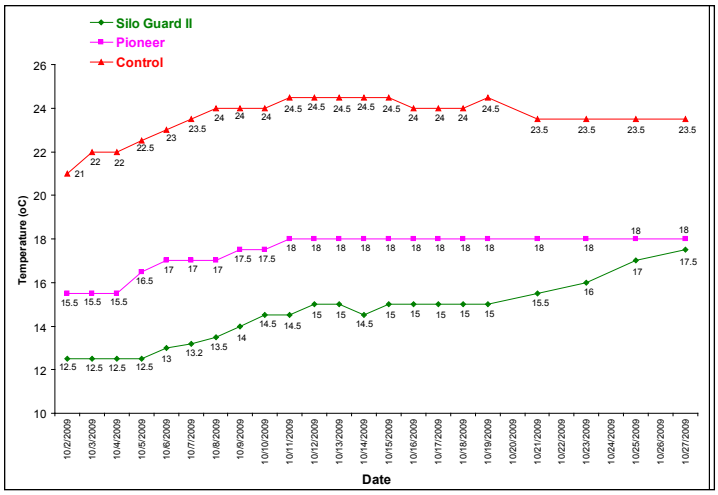


Temperatures were recorded daily by Nico for the following 30 days and plotted on a graph.



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