UF | IFAS Extension
UNIVERSITY of FLORIDA

Basil Bactawar
Extension County Director/Agent
UF/IFAS Extension Union County

Are Your Beef Cattle Getting Enough Minerals?

BACKGROUND

- *Florida cattle industry ships approximately 700,000 head of calves annually to feedlots in the Midwest.*
- *Some of these calves do not perform well.*
- *This is attributed, in part, to lack of minerals as confirmed by blood assays and liver biopsies.*
- *Forages in Florida are generally poor at supplying some of the required minerals especially copper and zinc for cattle.*

Feed Minerals with Adequate Energy, Protein and Vitamins

- If all the minerals are supplied and correctly fed to the animals to ensure adequate intake, the animals may not perform to their full genetic potential if the diets are lacking in energy, protein and vitamins.
- Adequate minerals in the diet help the animals to maintain their immunity to diseases, and cope with stressful situations like hauling calves over long distances to feedlots in the Midwest.

Calves Need Minerals Too!!

- Calf health begins with the cow, and so it is essential to feed the cow properly.
- Adequate mineral nutrition during pregnancy has a positive impact by imparting protection to the calf through colostrum.
- These deficiencies may lead calves to become susceptible to scours, pneumonia, navel and joint ill.
- In general calves are born with reasonable levels of trace minerals.
- The exception is selenium because the cow does not concentrate this mineral in the unborn calf.
- After 2 to 3 months of birth, calves become marginal in some trace minerals. This is demonstrated in Figure 1.

Creep Feed Calves with Supplements Fortified with Minerals

- Creep feeding is necessary to meet the calf's mineral requirements.
- A study at University of Florida reported increased calf weaning weight and enhanced trace mineral status of weaned calves when they were fed trace minerals.

Conditions that Lead to Inadequate Minerals Intake

- Free choice mineral supplement is the most practical choice for producers. Mineral blocks are also used
- If salt (sodium chloride) and loose mineral mix are sometimes offered separately at the same time to the same beef animals.
- Cattle are likely to consume the salt rather than minerals which are required.
- Look out for seasonal variation in mineral intake. This is demonstrated in Figure 2.

KEY POINTS

- Good maternal nutrition is important to produce a healthy calf.
- Consider creep feeding calves.
- Ensure that the calf is fed colostrum 4-12 hours after birth.
- The feeding of salt (sodium chloride) is not necessary for beef cattle when loose minerals are offered.
- Pay attention to mineral intake during the year. Minerals intake during the winter months may decline. Add cotton seed meal or soybean hulls to increase intake.

Figure 1. Calves Become Marginal in Some Trace Minerals after 2-3 Months of Birth (Havenga, 1999)

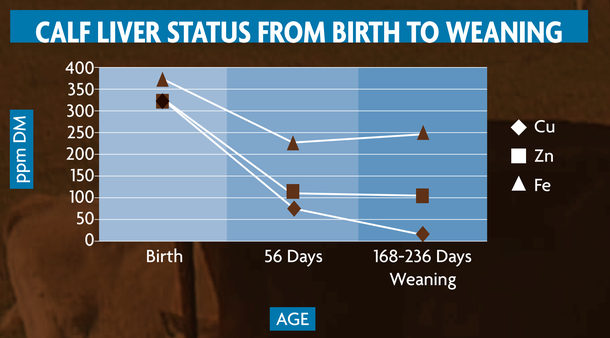

Figure 2. Effect of season on free choice mineral intake in grazing Bradford cows. (Courtesy of Dr. J. D, Arthington. Range Cattle Research and Education Center, UF/IFAS)