

ONA REPORTS

published in

THE FLORIDA CATTLEMAN AND LIVESTOCK JOURNAL

August-1993

Mineral Supplementation is More Important With new Fertilizer Recommendations

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With the revised fertilizer recommendations for bahiagrass pasture by the University of Florida, IFAS, many cattlemen are applying less, and in some cases no phosphorus. Reduced phosphorus fertilization results in less phosphorus in the grass. Field data collected from nine counties by the South Florida Beef/Forage Extension Group showed that the phosphorus level in bahiagrass was reduced from an average of .32 percent to an average of .26 percent (a 20 percent reduction) when phosphorus fertilizer was eliminated.

The National Research Council recommends that the phosphorus content of diets consumed by a 1000 pound brood cow nursing a calf should be .23 to .29 percent. It is obvious that the phosphorus content of unfertilized bahiagrass pasture in Florida is borderline for lactating cows. In fact, in many bahiagrass pasture situations there probably is a deficiency of phosphorus. Since the phosphorus level in bahiagrass is very seasonal there is more of a problem during the fall and winter when phosphorus levels are the lowest in our grasses. This period often coincides with the breeding season used on many ranches in central and south Florida.

Situations in which the phosphorus content of bahiagrass may be below that needed for proper nutrition poses no problems to cow/calf production if a good mineral formula is provided free choice year-round. It is more economical to feed phosphorus directly to the cow than to provide it through pasture fertilization if phosphorus is not contributing to better forage yield.

For many years the Ona Research Center has recommended a mineral mix containing 12 percent phosphorus and an average dairy intake of 1.5 to 3.0 ozs. per cow. Cattle tend to vary their consumption of mineral mix relative to the phosphorus level of the grass, eating more mineral mix when the forage has a lower phosphorus content. With a daily intake of three ounces, a mineral containing 12 percent phosphorus provides about 10 grams of phosphorus which is approaching one half the daily phosphorus needs of the average lactating brood cow in Florida. This level of supplementation will adequately provide the phosphorus needed when it is most limiting in Florida forages.

Underconsumption and overconsumption of a free choice mineral may present problems at times. A chronic problem will require adjustments in the mineral formula by altering the level of salt or palatable ingredients such as cottonseed meal, citrus pulp and/or molasses. Over-consumption of the mineral mix is usually not a problem, but is costly. When overconsumption is a short term problem it is acceptable to feed mineral on a set schedule. If cattle eat all the mineral provided before the next feeding it will not cause problems because excess minerals are stored in bones, liver and other tissues for use when minerals are not available for short periods (a week or two).