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SALT NEEDS OF FLORIDA CATTLE SHOULD BE WATCHED CAREFULLY

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The essential need for sodium and chlorine by cattle has been demonstrated for thousands of years by a natural craving for common salt. These two mineral elements function as electrolytes in body fluids and are specifically involved at the cellular level in water metabolism, nutrient uptake, and transmission of nerve impulses. The initial sign of sodium and chlorine deficiency is a craving for salt, demonstrated by the avid licking of wood, soil, and sweat from other animals. A prolonged deficiency causes loss of appetite, decreased growth, unthrifty appearance, reduced milk production, and loss of weight.

The need for supplemental salt by cattle is primarily for sodium, with a need for additional chlorine above that normally found in feeds being less evident. However, the requirement is expressed as salt (sodium chloride). The salt requirement of all classes of cattle has been placed at 0.25 percent of the total diet dry matter by the National Research Council. This is approximately one ounce per head daily for 1000 pound brood cows.

It must be considered that forages contain moderate levels of sodium and chlorine. Florida grasses contain about 0.2 percent salt equivalent. Thus, forage eaten by a 1000 pound cow supplies 0.8 ounces of salt daily, and only 0.2 ounce of salt needs to be provided in a mineral supplement. This can be easily met with mineral mixtures containing 20 to 35 percent salt and consumed at 0.1 pound per head daily, an intake recommended for loose mineral formulas developed by IFAS for Florida conditions. If salt is fed separate from other minerals as some cattlemen prefer, 0.2 ounce per head daily would be six ounces per head monthly or five pounds per head annually. Higher amounts would not be harmful, but would be a waste of salt.

It is recommended that feedlot diets contain 0.25 percent added salt, one-half the 0.5 percent level recommended a few years past. Lower salt levels in modern feedlot diets prevents salt build up in feedlot waste, lessening problems in waste treatment and its utilization as a fertilizer.

High salt intake can be a problem in Florida due to the proximity of many ranches to coastal brackish waters and the salt contamination of well water. Evidence indicates that cattle can tolerate drinking water containing up to one percent or 10,000 ppm total soluble salts (sea water contains 3.6 percent without affecting health or production). Water containing more than one percent salt should be avoided because of possible adverse effects. The major response of cattle to high saline water is a reduced feed intake, which causes reduced growth and milk production.

A major problem with salt in drinking water is that cattle may not consume mineral mixes provided, and essential supplemental minerals such as phosphorus, copper, cobalt, selenium, iron, iodine and zinc will not be consumed. Mineral intake will begin to become affected when drinking water contains 1500 ppm or more total salts. If low mineral mix intake is caused by the salt content of drinking water, a mixture with little or no salt might have to be provided, or a palatable feed ingredient such as cottonseed meal, citrus pulp or molasses may have to be added to the mineral to encourage intake.

Be sure to keep an eye on the mineral intake of the cow herd. It should average around 0.1 pound per head per day for loose mineral formulas developed from Florida research, and approximately that recommended on the feed tag for other mineral formulas. Mineral mixture intake is affected by many factors and can be very variable over short periods, thus estimates should be based on intakes obtained over several weeks or months. Do not be concerned if cattle do not consume or are without mineral mix over periods or several weeks, because body stores will prevent mineral deficiencies.