

FEED FOR THOUGHT

Production Information For Cattlemen From Suga-Lik®, A Product Of U.S. Sugar Corp.

The Cow Herd - Preventing Malnutrition

by Chet Fields, Ph.D. PAS

Acute nutrient deficiencies and toxicities are well characterized, are easily recognized and are relatively easy to diagnose. (Acute = intense or serious) In contrast, chronic nutrient deficiencies and toxicities are not well characterized, are difficult to recognize, and are often difficult to diagnose. (Chronic = subtle or sub clinical) As an example, acute deficiency of energy arising from a shortage of forage that results in beef cows with a body condition score (BCS) of two or three will be readily apparent and easily diagnosed visually by most ranchers.



In comparison, a relatively modest energy deficiency arising from a dietary energy intake sufficient for 12 pounds of milk production when the cow is producing 18 to 20 pounds of milk will result in a negative energy balance, an inevitable reduction of body condition score and lower pregnancy rates. **Recognize that the cows' energy requirement varies with diet, health status, environmental conditions, activity, the level of milk production and the stage of her reproductive cycle. Oxygen, water, protein, mineral, vitamin and essential fatty acid requirements also vary with the cow's diet, health status, environmental conditions, activity, level of milk production and the stage of her reproductive cycle.**

Appropriate nutrition is especially critical during reproduction. The cows' uterine mass increases exponentially during pregnancy and the increases in mass and vascularity require that additional nutrients be provided in the cows' diet. From the middle to the end of gestation uterine blood flow increases 4.5-fold and uptake of oxygen by the fetus increases 16-fold. This increase in uterine blood flow is necessary to supply oxygen, water, glucose, amino acids and other nutrients essential to the rapidly developing fetus for normal growth and development. Those dietary nutrients that are essential for the growth of the uterine mass and the developing embryo **MUST** be provided in the cows' diet to assure normal fetal growth and development.

The consequences of both acute deficiencies and toxicities, and chronic deficiencies and toxicities are similar. Depending upon the nutrient involved, the stage of the reproductive cycle in which the deficiency occurs, and the magnitude of the deficiency or toxicity, the result can be death loss, poor conception rates, increased embryo losses, increased calving intervals, low voluntary forage intake, decreased forage digestion, increased susceptibility to parasitism and disease, lowered perinatal vigor and increased perinatal mortality and morbidity, lower weaning weights and rates, poorer post-weaning performance, and increased health related costs. In addition, bulls may exhibit decreased libido. With the possible exception of death loss, all of the before mentioned are difficult to recognize and to diagnose. In addition, both the consequences and the diagnosis of the consequences are expensive. It is therefore important to implement a nutrition program that avoids both acute and chronic malnutrition.

Developing and implementing a nutrition program that provides year around insurance to prevent malnutrition is challenging. Not only are the nutrient requirements of the cow constantly changing with her stage of reproduction and milk production, but the quantity of forage she is offered changes seasonally, and the nutrient composition of the forage is also constantly changing. Developing a cost effective nutrition insurance program requires knowing the weight of the cow, her body condition score, stage of

reproduction and milk production, adequacy of forage quantity, and nutrient composition of the forage for each month during the reproductive cycle. The nutrient requirements and voluntary forage intake of the cow can then be estimated from equations published by the National Academy of Sciences. Knowing the nutrient requirements, forage intake and forage nutrient composition permits development of a nutritionally appropriate and economical nutrient supplementation program that will prevent losses incurred as a result of chronic and acute malnutrition.

U.S. Sugar has established a large database of forage nutrient composition for several forages typically found on Florida ranches. In addition to providing the rancher with insight on plant nutrient balance (DRIS), dietary cation – anion differences (DCAD), and estimated voluntary forage intake, this database is essential in knowing the concentration of each nutrient that is available to the cow for each month of the year. The U.S. Sugar Forage Database is therefore the foundation for the formulation of our Fully-Fortified® Suga-Lik® nutritional supplements. One **MUST** know the nutritive value of the forage in order to supplement in a nutritionally prudent and economical manner.

Dr. Chet Fields is U.S. Sugar Molasses & Liquid Feed Dept.'s Manager of Nutrition and Product Development since 1998. Contact Dr. Fields at cfields@ussugar.com.

Timely Reminders

by Pat Whidden, PAS

• Eliminate the hassle of putting out dry mineral.

Use the feed industry's first flowable mineral and vitamin. This Fully-Fortified® supplement is ideal for pasture and cattle that do not require protein and energy supplementation (i.e. – spring, summer, early fall). You can keep using your same liquid supplement feeders. No more lifting and hauling bags, torn bags, rusted out truck beds, replacing damaged mineral boxes and other expensive hassles.

This product has been extensively researched and tested. Mature cattle should consume about 1 pound per animal unit per day. Ask for product #678, *Grass Mate Mineral & Vitamin Supplement*.

• **Horn flies cost you money.** Horn flies bite. They bite to harvest your cattle's blood and use it for horn fly food. Cattle with high infestations of horn flies have higher heart rates, increased body temperatures, increased respiration rates, require more water, graze less and have higher nutrient requirements compared to cattle with low horn fly infestations. These stresses result in reduced cow condition, lower milk production and lighter weaning weights.

A summary of university research trials showed the average response from control of horn flies was 29 pounds heavier weaning weights (range 13 – 46 pounds).

Bar none, the most convenient and efficacious way to control horn flies in your cattle is to include *Altosid® IGR Cattle Feed-Thru* in your Fully-Fortified® Suga-Lik® Supplement. If you used this method year around, the fly control portion would cost less than \$10 per cow per year. The cost is only a fraction of your return if your weaning weight improvements are simply minimal.

• **If grass is in short supply.** Spring and early summer in the Gulf States can be dry. Forage is green and growing, but there just may not be enough.

One effective method to extend forage supply is to continue to feed winter supplement. For example, *Fully-Fortified® Suga-Lik® Grass Mate HD/16 (#500)* can replace four-to-five pounds of forage dry matter, thus extending your forage supply, while at the same time providing the essential nutrients to help your cows and calves perform.

Patrick B. Whidden is U.S. Sugar Molasses & Liquid Feed Dept.'s general manager since 1994. You can email Pat at pwhidden@ussugar.com.

Suga-Lik® Dealers:

ARCADIA

Walpole Feed & Supply
863-763-6905

DELEON SPRINGS

McClure Feeds
386-734-0095

OKEECHOBEE

Walpole Feed & Supply
863-763-6905

BRANFORD

Mayo Fertilizer
& Farm Supply
386-294-2024

LAKE BUTLER

Lake Butler Farm Center
386-496-3921

MAYO

Mayo Fertilizer &
Farm Supply
386-294-2024

CHIEFLAND

Tex Lea Distributors
352-572-4787 or
352-493-1386

MYAKKA CITY

Myakka Farm Supply
941-322-1783

DEFUNIAK SPRINGS

West FL Farmers Co-op
850-892-5522



A product of U.S. Sugar Corporation
U.S. Sugar Corporation • An Employee-Owned Corporation

www.suga-lik.com

800-940-7253

