

FEED FOR THOUGHT



News For Cattlemen From Suga-Lik® A Product Of U.S. Sugar Corp.

Vitamin Supplementation Pays Dividends to Cow/Calf Producers

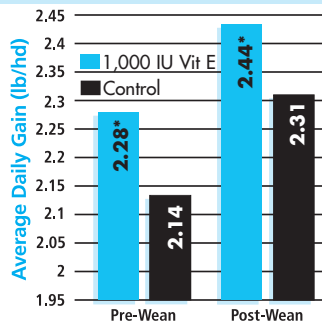
By Dr.'s Mark Engstrom and Will Seymour, Roche Vitamins Inc.

Vitamins were first identified in the early 20th century and yet scientists continue to discover new roles of vitamins in animal health and productivity. Vitamins A, D and E are essential for normal vision, growth and development, reproduction and immunity in beef cattle, and yet these nutrients are not always supplied at optimal levels in beef cow and calf feeding programs. Vitamins constitute less than 2% of the cost of feeding beef cattle but are involved in virtually 100% of the essential body functions. Recent studies demonstrate that optimum vitamin supplementation is a nutritional management tool that pays.

Supplemental Vitamin E Increases Weaning Weight in Calves from Winter-Calving Cows

In a winter-calving experiment with 79 Hereford and Angus cows, Bass et al supplemented an extra 1,000 IU/cow/day of vitamin E from 30 days pre-calving through the 65-day breeding season. The study was conducted at the Virginia-Maryland Regional College of Veterinary Medicine. All cows received grass hay and corn silage, calculated to provide 200-322 IU of vitamin E/head/day. In addition, cows were offered a free-choice mineral that provided 2.3 mg of Se plus either 15-25 IU of E/hd/day to controls or 1,000 IU E to the treatment cows. Cost of the additional vitamin E was less than \$.02/cow/day. Serum E concentrations of control cows dropped to borderline deficient (3.0 ug/ml) 2-3 days after calving. The additional 1,000 IU of vitamin E increased serum vitamin E concentrations in cows by 20% and calves (by 26% in multiparous cows), raised colostrum vitamin E (by 28%), and increased weaning weights for the calves from supplemented cows. As shown at right, vitamin E had a carry over effect, as calves from the supplemented cows gained faster both pre- and post-weaning.

Effect of Vitamin E on Beef Calf ADG
(Bass, et al, 2001 *p<.05)



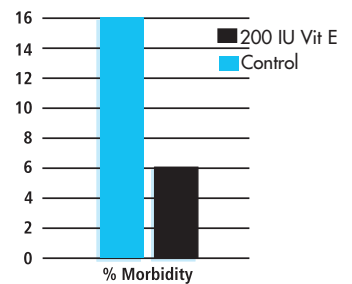
MSU Recommended

Weaning Strategy Includes Vitamin E

In a cooperative study involving 12 ranches and 2,300 calves, Montana State University researchers Fennewald et al compared a MSU-recommended weaning supplement (providing 200 IU of vitamin E/hd/day for 28 days) to the ranches' standard program(s). Health and performance records were analyzed per ranch, and subsequent feedlot

performance compared. Initial results from this ongoing study showed improvements in calf health, post-weaning gain, and feedlot ADG. As shown at right, calves receiving the MSU supplement (either liquid or pelleted form) gained faster and were considerably healthier than calves on the control programs.

Effect of MT State Weaning Program on Calf Morbidity
(Fennewald, et al, 2000)



Feedlot Studies Show Benefits to Vitamin E

Several researchers have investigated the effects of supplemental vitamin E on health and performance of incoming feedlot cattle. In three sets of studies, cattle receiving 400-1,600 IU of vitamin E per day gained faster and were healthier in the first 28 days (Gill, 1986; Hays, 1987; Lee, 1985). These improvements were due to better immunity and maintenance of antioxidant status in a challenging, stressful environment for incoming feeder cattle. What about these responses in cattle already up on feed, healthy, and eating and growing normally? One researcher analyzed 21 feedlot studies in which cattle received 400-500 IU of vitamin E during the entire feeding period. In these studies, ADG improvement in the E-fed cattle was 12.6 lb/hd for the feeding period (Secrist, 1997).

Economics (Ratio of Return over Investment)

As shown in the table on the following page, the relatively low investment cost of additional vitamin E often returns value five or more times the cost of the investment. Furthermore, responses are often additive: healthier calves gain faster and incur less

medicine costs.

Author	Vitamin E Investment	Response	Value of Response*	ROI Ratio
Cow/Calf Results:				
Bass, 2001	1,000 IU/hd for 95 days	+ 72.7 lb weaning wt	\$58.16	30 : 1
Fennewald, Paterson, et al 2000	200 IU/hd for 28 days	Reduced sickness from 16 to 6%, increased weaning wt 11 lb	\$8.80	164 : 1
Feedlot/Receiving Results				
Gill, et al 1986	1,600 IU for 21 days, 800 for 7	+ 6.2 lb/28 days, 6% less sickness	\$5.70/hd	7.2 : 1
Hays, 1987	700 IU/hd for 28 days	+ 17.6 lb/28 days, 17% less sickness	\$16.60/hd	42 : 1
Lee, et al 1985	400 IU/hd for 28 days	+ 4.2 lb, 6% less sickness	\$4.20/hd	19 : 1
Secrist, et al	500 IU for 140 days	+ 12.6 lb/140 days	\$7.56	5.4 : 1

*Economic values used: \$.02 per 1,000 IU of vitamin E, \$.80/lb for weaned calves, \$.60/lb for fed cattle, \$5/treatment for sick calves

References:

- Bass, et al, 2001. *AJVR*, Vol 62:921-927.
- Fennewald, et al, 2000. *MSU Cattle Report*, pg 53-59.
- Gill, et al, 1986. *OSU Animal Science Research Report*, pg 240, Stillwater, Okla.
- Hays, et al, 1987. *OSU Animal Science Research Report*, pg 198
- Lee, et al, 1985. *KSU Cattle Feeders Day Report*, 474:14.
- Secrist, et al, 1997. *Effects of Vitamin E on performance of feedlot cattle: a review. The Professional Animal Scientist*, 13:47-54.

Price Shopping for a Few Bucks a Ton Could Cost You a Ton! *By Pat Whidden, PAS*

Making supplement purchasing decisions can be perplexing. Comparisons can be difficult. Perhaps, price shopping becomes “the path of least resistance.” Cheap gets confused with value and may lead to some cattlemen losing sight of their goals. Being a low cost producer does not mean searching out cheap feed supplements. Being a low cost producer means getting the most value.

What is important to you? Productive cattle? Being profitable? Regarding supplement purchasing decisions, it is

important to first understand what your cattle need. Florida cattle need some supplemental nutrients every month of the year because no forage is ever a complete feed. Further, it is proven that during the typical time of year cows are lactating (and, which you are also trying to rebreed them), cows need supplemental energy, protein, minerals and vitamins in certain amounts and balances. Next, it’s important to understand what the product is and how it works. U.S. Sugar’s Fully Fortified® Suga-Lik® liquid supplements are formulated to supply the nutrients your cattle need but forage lacks (see *Feed for Thought* Summer 2002, Winter 2001, Fall 2001, etc.).

It’s important to understand the feed label. When evaluating supplements, consider the amount intended to be fed (should be stated on the label). The nutrients should be listed on the label and daily intake of each can be calculated. Regarding liquid supplements, pay particular attention to dry matter (or moisture) and sugars...these are value indicators. Finally, a cost comparison might be necessary.

Sometimes the “cart gets put before the horse”...which is asking price first. This can be really costly. Here’s why. ***If cattle performance is not achieved, a feed is expensive at any price.***

If “performance” is defined as calving percentage, a 2% decrease in performance results in one less calf for 50 cows. Here’s some perspective: Let’s say an individual uses a 32% protein liquid supplement for his cow herd and “price shops” while ignoring the important factors discussed above. Let’s say his “price shopping” locates a product \$5 per ton cheaper than Fully Fortified® Suga-Lik®. If the feeding rate is 3 lb/hd/day and he supplements for 150 days, 50 cows should consume 11.25 tons of supplement and he’d save \$56.25. However, he risks performance due to lower nutrient intake! If he does experience only that 2% reduction (one calf!), he’ll lose approximately \$400. So, he is not a low cost producer. His feed cost actually went up compared to his production.

What is your definition of “performance”? Likely it’s a combination of two or three things. Be sure to keep your eye on the value of those performance measurements compared to supplement feed cost. Our operating philosophy here at U.S. Sugar’s feed business is clear. Our products ***have*** to help you make money, or we won’t survive...because you won’t. We’re in this thing together!

DEALERS

- Altha**
Altha Farmers Co-op
850-762-3161
- Arcadia**
Walpole Feed & Supply
863-763-6905
- Branford**
Mayo Fertilizer & Farm Supply
904-294-2024

- Bronson**
Owens Liquid Feed
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- DeFuniak Springs**
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- Lake Butler**
Lake Butler Farm Center
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- Lake Helen**
Phil McClure’s Feeds
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- Lakeland**
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