

Program Pays Off

by Teresa Spivey

The old saying, "you have to spend money to make money," applies to the cattle business just as it does to any other money-making project. Like other projects, it usually takes time for the investment to pay off. But once it does, you usually find the wait well worth it.

As you've learned in the previous articles, a number of cattlemen throughout the country have found that investing in the proper trace mineral program can have quite an impact on a herd. An impact that is not only production oriented, but economic as well.

Take, for example, a study that was done at Oklahoma State University, Stillwater, during the spring and summer of 1988. Approximately 40 first-calf heifers were divided equally into two groups based on breed, calving date and body condition. Both groups were synchronized for estrus and were artificially inseminated approximately 12 hours after heat was observed. They also received identical levels of mineral supplementation starting 30 days prior to initiating the first A.I. service, and continuing 45 days post-insemination.

The big difference, however, was the control group received their copper, zinc, manganese, magnesium and potassium as inorganic sources, while the treatment group contained a combination of amino acid chelates and inorganic minerals.

"The biggest result we saw was in fertility," says Bob Kropp, OSU beef scientist. "More females in the test group came in heat and were able to settle more on the first service. The test group of cows also weaned 47 pounds more calf than the inorganic supplemented cows. With the combination of these two factors, fertility and weaning weights, Kropp estimates that a producer could expect, based on a 100-head cow herd, more than a \$12 return for every dollar invested when similar results are experienced.

Like Kropp, Denny Benoodt of Circle B Cattle Co., Geneseo, Ill., has also seen the females in his herd make some positive reproductive progress. Benoodt has been very impressed with the results he has had with his embryo implant program since he started using the amino acid chelated mineral.

"Since we started the mineral program we have had a 15 percent increase in our

conception rate," says Benoodt. "We were satisfied with our embryo transplant results before we started on the Albion program, but the 15 percent increase has made a difference of about 30 more transplant calves being born every year. That means the potential for more sales."

This 15 percent increase includes donor cow egg production as well as confirmed pregnancies. Benoodt, as well as Dr. Jim Collins, who does the embryo transfer work at Circle B, have noticed that they have retrieved more number one quality eggs.

"During the past three years we have implanted 684 fresh eggs with a 78.6 percent conception rate," says Benoodt. "We have also implanted 118 frozen eggs with a 58.1 percent conception rate."

Two females in the Circle B herd that have contributed greatly to this percentage are Circle B First Lady and her dam, Circle B Miss 0 10N. First Lady, a two-time Denver Champion, was flushed once as a virgin heifer and four good eggs were recovered. She was then artificially bred to calve naturally and had twins in 1985. Since that time she has been flushed an average of four times per year and has never had less than eight number one grade eggs in a flush, with 23 being the most number one grade eggs she has ever had in a single flush.

First Lady, as well as her dam, produce approximately 30 calves a year for the Circle B herd, says Benoodt. Circle B Miss 0 10N had First Lady as a two-year-old, and that is her only natural calf. She has been flushed approximately 30 times since then with successful results.

Benoodt and Dr. Collins are both quick to admit that management plays a big role when it comes to getting results like these. "The bottom line," says Benoodt, "is that if cattle don't have fertility and femininity bred into them, it won't matter what you feed them, you won't get these kind of results."

Like Benoodt, Dr. Randy Bennett, DVM, of Lone Star Herefords, Henrietta, Texas, has also seen an improvement in their embryo transplant program. "Since we started on the amino acid chelate mineral program we have had an increase of 1.7 good eggs per cow per flush," says Bennett.

To put this in perspective, if you flush,

for example, 10 cows and have an increase of 1.7 good eggs, you will get an increase of 17 eggs per flush. If you flush five times a year, this will result in an additional 85 eggs per year. If half of these eggs result in pregnancies, you will have about 42 more calves born in a year. Put a \$500 value on those calves and you will find a gain of more than \$20,000.

By now you are probably asking, "what is my investment and how much net return am I going to get?"

There are various factors that are going to enter into the cost depending on the needs of your particular herd. The cost will also depend on the type of mineral you choose—an inorganic trace mineral mix or a mineral mix with amino acid chelates.

When you compare prices you will probably find the amino acid chelate mineral is higher priced. The producers you have read about in these articles have found out, however, the extra cost has paid off time and time again.

One of the biggest advantages of the amino acid chelates over the inorganic supplements seems to be the way in which it is absorbed into the body.

"My feeling is that the chelates are able to get to the areas of the body where they are most needed better than the inorganic materials," says Dr. Robel, president of the Veterinary Specialty Diagnostics Inc., Sterling Md.

Kropp agrees with this. "From the data we have, it appears that the absorption rates are different," he says. "If you are in a trace mineral-deficient area, the chelates will help with increasing the absorption of a particular mineral."

Dr. Robel who was formerly an assistant professor at the University of Maryland, was involved with some work done on the university's dairy herd using an amino acid chelate program. In addition to the increased absorption, Robel thinks the chelates help reproductive function.

"I think the most important time to use the amino acid chelates is probably late gestation through breeding," says Robel. "The cow has an increased amount of need during this time to not only support the fetus, but during ovulation as well."

Robel then recommends that cattle be put on a lower level from pregnancy through the first part of gestation.

