



Research update: beating stress through nutrition

Animal-science researchers continue to demonstrate the value nutrition plays in beating disease-causing stress that newly received feeders must overcome:

■ In an ongoing series of studies, researchers at Texas A&M and West Texas A&M have presented a convincing case that shipping and receiving stress cause calves to lose the “antioxidant” vitamins E and A. Antioxidants have also been shown to be important components of a healthy immune system in human medicine.

The studies, led by A&M’s Norbert Chirase, shipped commingled Southeastern feeders 1,300 miles to a west-Texas feedlot. One group was also subjected after arrival to a simulated dusty environment by being housed inside a dust-filled tent. Regular blood tests showed that shipping stress reduced the level of vitamin E to almost a fourth of the level when the calves went on the truck. The dust-stressed calves also showed lower levels.

Chirase’s work has found that as vitamin A and vitamin E levels in the blood fall, fever in the calves can be expected to rise, suggesting the diminishing level of antioxidants may be

connected to an increase in respiratory disease, the No. 1 killer of feedlot calves.

Source: Proceedings of the American Society of Animal Science Southern Section meeting, February 2002; Proceedings of the American Society of Animal Science annual meeting, January 2000.

■ Researchers from New Mexico State and Texas Tech provided groups of newly received calves with added vitamin E in their diets, at levels of up to 1,140 units per day. They found that although the additional vitamin E didn’t make a significant difference in final feedlot performance, it did increase the level of humoral antibodies that calves produced against an experimental inoculation. Furthermore, cattle receiving the highest level of vitamin E had a significantly lower level of repulls for treatment.

The study authors noted that although vitamin E is believed to help the body produce antibodies that fight disease, past studies have shown inconsistent results in attempting to improve immunity through vitamin E supplementation. Echoing Chirase’s suggestion that feedlot stressors may interfere with uptake or utilization of vitamin E, they suggest supplying additional vitamin E may only be part of the answer if you don’t at the same time try to reduce other stressors that can render it unusable.

Source: Journal of Animal Science, April 2002.

Minnesota’s David Peterson—

• Thief River Falls



working a pre-dawn-to-2 P.M. shift off the farm and only 100 miles from the Canadian border—was losing a lot of calves to bad weather... up to 28 percent in his worst year.

“My vet said it came down to they just didn’t have quite enough nutrition at birth,” says the Thief River Falls cow/calf producer. “It didn’t seem like they had the energy to get up and fight. If they got cold, they’d just give up.”

“So my feed dealer suggested I try Brigade®. I started putting it out for the cows anywhere from a month to two months before they calved. I noticed a considerable difference. With Brigade®, they are fighting to get up right from the moment they’re born. Now these calves are aggressive. They get up and they go right after lunch.”

The bottom line? This year’s calf loss: Just over 3 percent.

*In the next Supplement Strategies: November 2003
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