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Solving Stocker Stress

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Stocker graziers and stress always seemed to be locked in mortal combat, each trying to gain the upper hand. Reducing stress to manageable levels could mean the difference between profit and loss. Stress is not only equated with sickness and death, but reduced animal performance. Therefore, it seems logical that it is easier to reduce stress than to treat the resulting symptoms.

In the past, all stockers were mass injected with antibiotics and other medications in an effort to combat stress-related illnesses. Currently, this method is finding disfavor because of the variability in results and consumers are frowning upon the over use of antibiotics. Concerns are also being voiced by packers over inject site lesions. Losses attributed to injection sites lesions cost the packing industry millions of dollars, which are consequently passed on to the consumer. Antibiotic at therapeutic levels are also added to the feed. Inhibition of rumen microflora has been one of the deleterious side effects associated with antibiotic use. Proper rumen microflora levels are essential for normal rumen function and the utilization of fibrous feeds. Another problem encountered with the use of feed additives is that most stressed animal will eat little if any feed. The solution would appear to lie in the fact that stressed animals readily consumer water.

Research conducted by Fred Owens and others at Oklahoma State University has shown that 40-80% of the water consumed by cattle bypasses the rumen. If these nutrients are able to decrease rumen degradation they will increase the flow of nutrients which reach the intestines, thereby increasing intestinal digestion and absorption. Quoting Garza and Owens “For shipping stressed cattle, electrolytes, amino acids, and B vitamins in water should escape fermentation and potentially could improve health status. Soluble protein, amino acids, vitamins, or electrolytes might be supplemented via water avoiding the need to select or treat these

compounds to resist bacterial attack in the rumen or inject them."

The next approach was to determine what product or products would meet these criteria. Due to the impressive results that I have obtained with seaweed, I theorized that seaweed powder should be the major active ingredient in a water soluble mineral supplement. Seaweed powder, soluble in water, contains 60+ minerals and trace elements, 12 vitamins, 21 amino acids plus soluble carbohydrates. Additionally, the minerals are in a chelated form, which means they are more biologically available than inorganic minerals. Also, inorganic minerals mixes commonly contain only 8 to 12 minerals plus vitamins A, D, and E. Seaweed not only acts as an energy source but also functions as a complex sophisticated electrolyte.

Upon further research I discovered that a product similar to the one proposed by me is marketed in New Zealand and Australia, Known as Nutrimol, it is rapidly gaining acceptance in these areas because of it stress-fighting properties, as well as its array of vitamins and minerals. Under stress conditions or the anticipation of stress, animals are routinely drenched with Nutrimol and it is metered into their water at a constant daily dosage.

Research conducted in New South Wales demonstrated that sheep drenched with 5ml Nutrimol every two weeks showed and improvement of 14.2% in live weight gain over the control group. The results of this study indicate that while Nutrimol does exert beneficial effect on live weight gain, the effects are more pronounced with increased frequency of application. With these results in mind, I believe that a combination of drenching and a dosage via the water system would maximize the benefits of this seaweed based mineral supplement.

The author's version of Nutrimol (Recover) was tested in three different geographic areas with wide-ranging climatic conditions: Lush pastures (Kentucky), Typical or average pastures (Louisiana) and drought (Texas). Why do I always get struck with the drought conditions! In Kentucky Ralph Quillin runs commercial cows and stockers. Winston Broussard has a grass-based seasonal dairy in Louisiana. The author has registered Beefmasters in Texas. Upon addition of the seaweed-based mineral to the water it was observed, by all three cooperatives, that this product had a "calming effect" on their cattle.

This "calming effect" is most likely attributed to a reduced level of

stress and a more nutritionally satisfied animal. Even Ralph's 12 year old son noticed how much easier the cattle were to handle. This would especially beneficial to graziers who routinely select brahman crosses.

Since the article is focused on stockers, I will detail Ralph Quillin's results. Several months prior to weaning Ralph began metering the Immuno-Boost into his watering system. Approximately 55 calves were drenched with this product, wormed, and given typical vaccinations. The weather was clear and 60 degrees when the calves were processed and weaned. By the following day, the temperature plummeted to 25 degrees and was now sleeting. To further complicate matters, the calves were confined to a muddy pen. During confinement the calves also received a metered daily dosage of Recover in their water. All conditions were favorable for the proliferation of stress-induced diseases. After two weeks no clinical symptoms such as coughing, running noses and eyes had been observed. Ralph exuberantly stated that weaning calves was never this easy.

Another prime consideration when implementing a health program is cost. If a product isn't affordable to the average grazier then it will be slow in gaining widespread acceptance. After all, profit the driving force behind any business. With this product, drenching routinely cost less than a $1.00 per head. In a traditional inorganic mineral program, cost is approximately 6 cents per head.

It would be highly advantageous if the grazier would have the stockers drenched before shipping. Also cattleman could insure repeat business if they added Recover into their water at least one month before shipping. Preconditioning will help overt heightened levels of stress and should enable them to receive a premium for their cattle. It is also believed that transit stress can be significantly reduced if the cattle are properly handled when they are loaded and unloaded on the truck. In other words, leave the "yellers" and "hot shot jockeys" at home. I am sure Gordon Hazard will agree with this statement. Also, a grazier, knowing he can "turn them around" might purchase lower priced "risk" cattle.

Nutrition can play a pivotal role in combatting stress. When a ruminant is stressed the result is a reduction in ruminal fermentative capacity, which is accompanied by a reduction in feed intake. A reduction in nutrient intake will accelerate the depletion of nutrient reserves in the rumen and subsequently body tissue.

Therefore, if the ruminal environment can be maintained, stress can be kept to a manageable level.

The key to a profitable stocker operation lies not only in the market (which you have no control over) but in the health status of the cattle. Not only do sick and stressed cattle gain poorly, they require extra time and money. It is imperative that you start the cattle on the right program if you want to “get them going” and “keep them going”. Alleviating a stocker’s stress will go a long way in reducing your and your banker’s stress.