

## **Cattle Business in Mississippi – April 2010** **“Stocker Cents” article**

### **How Stocker Management Influences Feedlot Performance and Carcass Quality: Weaning and Health**

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Morbidity (disease rate) and mortality (death loss) are two factors that can have a drastic impact on the profitability of stockered or backgrounded cattle. The health factor seems logical but often gets lost in the profit equation. Many scientific studies, field trials and a large dose of common sense show how weaning management can have an effect on health treatment costs and death loss even after leaving the stocker operation.

First, consider each of these management issues individually. Weaning age for calves has been fairly standardized for many years with a target of seven months (205 days) of age. Surprisingly, according to data from the National Animal Health Monitoring System (NAHMS), most commercial cattlemen do not base weaning age on optimizing performance of the dam or calf or on environmental factors. Serious consideration of how weaning age alters calf performance could motivate cow-calf producers to be more flexible and encourage stocker operators to invest more in “non-conventionally” weaned calves.

Early weaning (less than five months of age) can improve post-weaning performance when calves are fed a high concentrate diet. Research shows that these younger calves can gain faster and more efficiently and can be as heavy as their conventionally weaned contemporaries at similar ages. As mentioned in the previous article, when early weaned calves are maintained on a high plane of nutrition they usually finish at a younger age and hang a lighter carcass. Fat deposition for early weaned calves on a high concentrate ration is also changed such that they will, on average, have a more desirable quality grade.

Managing stress at weaning also alters post-weaning performance in the stocker and/or feedlot phases. Much of the improved performance from low-stress weaning is realized through better health. Because most vaccinations are either initiated or boosted at weaning, the inherent stress can reduce the immune response to those vaccinations. So, it stands to reason (and is scientifically proven) that limiting the amount of stress a calf realizes during weaning will improve that calf’s immunity.

Stocker operators and backgrounders should consider weaning management as a part of their procurement plan. In the past, buying preconditioned calves has been considered a good way to ensure calves were properly weaned. Now that preconditioned calves are more abundant, more specific questions can be asked about how the long-lasting effects of weaning stress were avoided. Good ways to decrease the stress associated with weaning are to use methods that allow the cow and calf to remain in close contact. Fenceline separation and nose clips are two proven methods

for accomplishing this. Ask the cow-calf producer or buyer if these methods were used to be more confident that the associated vaccinations were effective. Of course, this type of information would likely only be available on farm-fresh and specialty marketed cattle but the associated higher price is usually offset by improved health.

Another aspect of weaning management that affects stress and health is the transition diet. Rations that are more palatable and easily digested by the relatively immature rumen will have a lasting impact through improved performance and health. Creep feeding can also ease the transition stress of weaning. Of course, attention should be given to the condition of the calves to ensure profitable weight gain when introduced to a primarily forage based diet.

Improving immunity increases profitability by decreasing the cost of health treatments, increasing feed efficiency and improving carcass quality. The benefit of lower treatment cost to the stocker operator is obvious. The less obvious result is that healthier cattle coming into the feedlot will remain healthier through that transition and be more profitable in the feeding period. Maintaining good health through the stockering phase also allows the full expression of fat cells in the loin muscle. If those cattle are finished to an appropriate fat deposition, they should hang a higher quality grade carcass.

Studies have demonstrated the negative association of health treatments with feed efficiency. Poor performance of calves that were treated for respiratory disease prior to entering the feedlot, even if they seem healthy on arrival, can be linked to decreased lung capacity that cannot be reversed or repaired after the damage is done. Taking that knowledge a step further and combining some of the other issues addressed above, it can be seen that disease problems early in a calf's production cycle can lead to poor feedlot performance and a less valuable end-product.

The next important task is relating how an impact on feedlot performance and carcass quality changes profitability for the stocker producer. While essentially all stocker cattle are traded on a live weight transaction (unless retained ownership is part of the business model), data about how those cattle performed is used when feeders and packers procure their product. So, quality control of the calves coming out of a stocker operation can affect the willingness repeat buyers and should be considered equally important to incoming product quality.