

Cause and Effect: How management in the stocker phase affects feedlot and carcass performance

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Stocker cattle production is a vital part of Mississippi, as well as the nation’s beef industry. The goal of most stocker producers is to add value to calves while optimizing performance and profitability. Unfortunately, too often beef producers are only concerned with profitability and performance in their segment of the industry, and neglect to consider what the impact of certain management practices might be further down the production cycle. Feeder cattle buyers also seek to maximize their returns and may discount calves that have been managed in a way that they believe will hinder future performance. As the industry evolves and changes, it becomes important to consider all aspects of the production cycle and their impact on the ultimate end product, beef.

Average daily gain during the stocker phase is important to profitability. However, there are several schools of thought about whether ADG during the stocker phase should be low or high. In attempting to summarize over 40 year of research in this area, a few common themes appear. Increasing ADG during the grazing or stockering period can lead to increased fat (Hersom, et al. 2004), but not impact ADG during the finishing phase, and show similar final carcass composition. Another group found that calves with low ADG during the stocker phase had better ADG during finishing, but calves with high ADG during the stocker phase had higher carcass weights and better USDA quality grades (Neel et al. 2007). The targeted gains during the stocker phase indeed seem to have a lasting impact during the finishing phase, however other factors such as cost of gain must be considered when determining the level of gains to target.

Supplementation programs to cattle grazing during the stocker phase are often an option to improve gains and profitability. These supplementation programs also serve an additional benefit to have cattle bunk broke before entry into the feedlot. Supplement type should be considered based on availability. In general, supplemented cattle can be expected to enter the feedlot at heavier weights, and often maintain this advantage into heavier carcass weights and dressing percentages. These supplemented cattle are typically fatter and maintain this advantage through to harvest with greater fat thickness and better USDA Quality Grades compared to unsupplemented cattle (Pavan and Duckett, 2008). If the cost of supplementation is reasonable, there appears to be a benefit in terms on both increased weight at sale time for the stocker producer and improved carcass quality for the finishing phase.

Implantation strategy is another management tool in the stocker phase that has been studied and analyzed a great deal. Implant strategies during the stocker phase have been shown to improve profitability, with increases in ADG from 12% to 21% (Platter et al. 2003). There has however been some variation shown on the carryover effects of implantation during the stocker phase to the finishing phase. Some studies have reported no effects on finishing or carcass performance

while some have shown decreases in marbling or tenderness. Interestingly, a research team from the University of Arkansas (Barham et al. 2012) evaluated aggressive implant strategies (4 implants during the stocker and finishing phase) compared to delayed implant (1 implant during finishing) in 2 different groups of cattle, one with high potential for marbling and one with lower potential for marbling. For both groups ADG was increased in the aggressively implanted cattle, but for the cattle with greater potential for marbling the aggressive implant strategy decreased marbling, but cattle still graded low choice. This results tells us that an implant strategy would better tailored to each group of cattle based on their genetic potential rather than an over reaching recommendation for all groups.

Perhaps the greatest takeaway message from all of this information is “stop and think”. Stop and think of how a management decision today can affect the steak that might one day end up on your plate, or the plate of another consumer who might not be so forgiving of a bad steak experience. While management decisions are ultimately focused on the bottom line for your operation, often through adding cheap gains, potential impacts further down the production line should also be factored into that decision. It’s important to remember that we are all one beef industry whose ultimate goal is producing BEEF!

For more information about beef cattle production, contact an office of the Mississippi State University Extension Service, and visit msucares.com/livestock/beef.

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