Management of Optaflexx in Feedlots that Sort Cattle prior to Market

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Introduction

Optaflexx is a recently cleared feed additive for beef cattle that improves muscle and carcass growth when fed the last 28–42 days of the feeding period. It is a beta agonist that has a different mode of action than either implants or ionophores. To achieve the optimum biological and economic benefits of Optaflexx, the compound must be fed for the last 28 days prior to market. In the Upper Midwest, cattle feeders often sort market-ready cattle from pens and market the cattle in two or three groups or "drafts." This "topping out" of pens is a management technique that has existed since cattle were sorted to fill rail cars destined for eastern markets. This form of marketing management has gained additional economic benefit as producers increasingly market cattle on value-based grid marketing programs. Unfortunately, marketing management systems that involve topping out pens are inconsistent with the efficient use of Optaflexx. Producers are forced to only feed Optaflexx to the last draft of cattle remaining in the pen, or sort the cattle earlier into marketing outcome groups. The first option only allows a portion of the cattle to benefit from this technology. The second option requires cattle to be perhaps moved to a new pen with new pen mates and reestablish the social hierarchy within the pen at a critical time in the finishing period. Effects of feed intake due to this changing social structure are unknown. This study was designed to evaluate and demonstrate these two management options for feeding Optaflexx in feedlots where cattle are topped out or sorted out of pens prior to harvest.

Materials and Methods

One hundred and thirty-five steers were used in this study to compare strategies for managing Optaflexx in farm feedlots that sort cattle just prior to market. On November 5, the cattle were randomly assigned to one of four pens. The implant treatments were Synovex-S initially followed by either Synovex Choice or Revalor-IS as a terminal implant. All cattle were reimplanted with their respective implant on February 24. The pens were assigned to one of two Optaflexx management treatments. Two pens were assigned to each treatment. The first Optaflexx management treatment was: 1) topped out (TO), where half the cattle in each pen were sorted without being fed Optaflexx. The remaining cattle were fed Optaflexx for 28 days, or sorted early (SE), where market timing decisions were made more than 28 days prior to the first marketing so that Optaflexx could be fed to all of the cattle. In the SE treatment, cattle were evaluated by ultrasound on March 23 for fat thickness. Cattle were then given new pen assignments based on an early or late marketing on March 31 established by the ultrasound. Optaflexx feeding began on the earlier market pen in the SE treatment on April 1. This pen plus half of both pens in the TO treatment were marketed on April 26. Optaflexx was fed to all remaining cattle from April 27 until harvest on May 23.

Results and Discussion

Of particular interest in this study were the behavioral effects of sorting and remixing cattle that were 28 to 56 days from harvest. Reestablishment of the social order and stress in a new environment may negatively affect feed intake and subsequent cattle performance. There

was no discernable change in daily feed intake during or after the SE cattle were reassigned to new pens on April 1. Cattle in the TO pens appeared to have more daily intake variation during the month of May than the one remaining SE pen, but this was a single pen that seemed to have higher and more variable feed intake throughout the study.

Performance data through 139 days (sorting and reassignment of SE pens), final 28-day performance, and overall average daily gain (ADG) is shown in Table 1. There were no differences in any of the performance measurements by sorting treatment. There were, however, some interactions in weights, which made an assessment of the Optaflexx response difficult. Only the topped out first harvest (TO-H1, not Optaflexx) and the sorted early first harvest (SE-H1, fed Optaflexx) could be directly compared as cattle fed with and without Optaflexx. Differences in final weights (April 20 weights) and carcass weights between these two treatments would suggest a good response. However, these differences also existed in March. Cattle in the second harvest group were just the opposite. This suggests that more variation existed in the SE treatment than in the TO treatment, making direct comparisons within a harvest group difficult. Overall differences by main effect should still be valid, however.

Carcass information is given in Table 2. Cattle in the SE treatment tended to have more carcass weight, muscle and yield grade, and value per head. Only ribeye area was significantly higher in the SE versus the TO treatment, however.

Feed efficiency and overall intake for the last 56 days, starting just after the first sort, is shown in Table 3. There were no statistical differences in feed intake or feed efficiency over that time period.

Conclusion

This study was designed to evaluate two methods of managing Optaflexx when sorting of market-ready cattle is a normal management process. The use of larger pens (40-head capacity) allowed an evaluation of feed intake changes when cattle were sorted and remixed into pens. This study was not designed to accurately measure the Optaflexx response. Larger studies with more replication would be required for that. Based on the results of this study, sorting cattle into market outcome groups prior to the last 28 days of feeding of the first group to be marketed so that Optaflexx can be fed to all of the cattle in the pen is a viable alternative to only feeding Optaflexx to the last draft to be marketed.

Table 1. Performance by sorting treatment.

	Topped	Sorted	SE	Significance
Initial weight	525	538	8	NS
139-d weight	1029	1044	12	NS
139-d ADG	3.63	3.65	.05	NS
Final weight	1200	1213	14	NS
Final 28-d ADG	4.49	4.42	.13	NS
Overall ADG	3.59	3.60	.05	NS

Table 2. Carcass characteristics by sorting treatment.

	Topped	Sorted	SE	Significance
Hot carcass weight, lb	746	755	8	NS
Dressing percent, %	62.2	62.2	.3	NS
Fat KHP thickness, in.	.38	.38	.01	NS
Ribeye area, $in.^2$	12.50	12.81	.11	<.05
Marbling score[a]	1045	1057	9	NS
Called YG	2.20	2.20	.05	NS
Calculated YG	2.66	2.57	.05	NS
Total value, $	$1037.58	$1047.27	$12.70	NS

[a] 900 = Slight, 1000 = Small

Table 3. Intake and efficiency the last 55 days by sorting treatment.

	Topped Out	Sorted	SE	Significance
Dry matter intake, lb	22.1	21.8	.3	NS
ADG, lb	3.15	3.13	.10	NS
Feed/gain	7.03	6.98	.28	NS