FEEDER CALF RETAINED OWNERSHIP EDUCATIONAL PROGRAM: ALABAMA PASTURE TO RAIL

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I. OBJECTIVES

The Alabama Pasture to Rail is a retained ownership program that provides a mechanism for Alabama beef producers to collect feeder calf performance, health, and carcass data, for enhanced management decisions. The majority of beef cattle throughout the southeastern U.S. are marketed as stocker or feeder calves. Traditional marketing platforms through regional stockyards result in cattle being transitioned to the Midwest region of the U.S. for the confined finishing phase.

II. MATERIALS AND METHODS

Prior to shipping, all cattle arrive at a centralized location where body weights are recorded, feeder calf grades are assigned, and cattle are identified with both radio frequency and visual ear tags. Following processing phase in Alabama, cattle are transported to the Hy-Plains Feedyard in Montezuma, Kansas. Harvest dates are determined by feedyard management as the projected date of animal finishing approaches. Cattle are sold on a carcass merit grid, where premiums and discounts are applied using USDA Yield and Quality grades. After harvest and chilling, carcass characteristics were captured electronically. Live weight is estimated using the individual hot carcass weight and the carcass yield percentage of the harvest group. In addition, average daily gain is also a calculated estimate, using the estimated live weight. Data were analyzed with linear models using the GLIMMIX procedure of SAS version 9.4 (SAS Institute Inc., Cary, NC) with explanatory variables as gender (steer, heifer) and year (2017, 2018, 2019) and response variables as initial weight, live weight, average daily gain, hot carcass weight, days on feed, ribeye area, backfat, and marbling, in addition to quality and yield grade.

III. RESULTS

Results indicate that feeder cattle prices and total production costs were greatest in 2019, whereas carcass value and payable amount were greater ($P < 0.05$) during 2018, with profit being the greatest ($P < 0.05$) in 2017. Cattle participants in 2018 provided the greatest ($P < 0.05$) initial weight, live weight, average daily gain, and hot carcass weight coupled with the least ($P < 0.05$) days on feed. For 2018, carcass produced greater ($P < 0.05$) ribeye areas, less backfat, and higher marbling scores. In contrast, 2019 provided a different perspective of carcass traits as shown by the least ($P < 0.05$) amount of muscling in the ribeye area, subsequently resulting in the highest numerical carcass yield grade. The economic value by gender suggests that steer carcass value and payable amount were greater ($P < 0.05$) than heifers. Nonetheless, the data suggest that heifers can result in a greater ($P < 0.05$) price per hundredweight consuming less ($P < 0.05$) total cost, resulting in a greater ($P < 0.05$) profit margin. These results indicate that steers began the project with

greater ($P < 0.05$) initial weight, ultimately resulting in greater ($P < 0.05$) live weight, average daily gain, and hot carcass weight at the conclusion of the finishing phase. Gender differences for steer and heifer carcass traits indicate that steers resulted in significantly larger ($P < 0.05$) ribeye area, less backfat, and lower numerical carcass yield grade. Conversely, it was intriguing that heifer carcasses displayed greater ($P < 0.05$) marbling in the ribeye, greater backfat, greater calculated yield grade, and less muscling in the ribeye area ($P < 0.05$).

IV.   CONCLUSION

Analysis of Alabama Pasture to Rail results suggests the importance of providing growth, carcass, and financial data for southeast beef producers. A greater knowledge of feedyard performance and carcass merit could aid beef producers of the southeast in production management decisions.

Keywords: beef cattle, carcass data, feedlot performance, retained ownership