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ABSTRACT

PSXI-18 Influence of Akaushi Genetics on Beef Performance and Carcass Merit in Grain and Grass-finishing Systems

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The study objective was to investigate the impact of beef genetics and finishing system on beef production and carcass merit. Red Angus (RA, n = 30) and RA x Akaushi (AK, n = 30) were equally assigned to one of two finishing treatments: a mixed-species pasture forage (GRASS) or a total mixed feedlot ration (GRAIN) in three replications. Each finishing treatment had free access to mineral and water, and GRAIN were fed once daily (20% hay and 80% concentrate) over 107 d. The grazing period was 80 d. Body weight (BW) was measured after a 12-hour fasting period at the onset and end of the trial. Animals were slaughtered at 18 and 26 mo (GRAIN and GRASS, respectively), and carcass data was collected 48 h postmortem. Initial and final BW were greater for GRAIN (469.7 and 611.0 kg) than GRASS (439.1 and 548.7 kg). Although steers had different total BW gain (141 kg for GRAIN vs 90 kg for GRASS; $P < 0.01$), there was no difference for average daily gain between two systems. The GRAIN's advantage in performance, led to higher HCW (+16%), ribeye area (+10%), and backfat (+52%) compared to GRASS. Dressing and marbling score were greater in GRAIN compared to GRASS (61.2 % and 621 vs 57.8 % and 417). The AK cattle presented higher values for dressing (58.7 vs 60.1%; $P < 0.0001$), ribeye area (70.2 vs 74.3 cm2; $P = 0.02$), and marbling (548 vs 490, $P = 0.03$) compared to RA. There was genetics x diet interaction for internal fat, where AK animals had greater value than RA (2.7 vs 2.3%; $P < 0.0001$) in the GRAIN treatment. These results indicate that GRAIN had superior performance and carcass merit and that AK enhanced these traits to a greater degree as compared to RA.

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