285 Performance of finishing beef steers in response to anabolic implant dose and zilpaterol hydrochloride. S. L. Parr*[1], K. Y. Chung[1], M. L. Galyean[1], J. P. Hutcheson[2], N. DiLorenzo[1], K. E. Hales[1], M. L. May[1], M. J. Quinn[1], D. R. Smith[1], and B. J. Johnson[1], [1]*Texas Tech University, Lubbock*, [2]*Intervet / Schering-Plough Animal Health, De Soto, KS.*

British × Continental steers (n = 168; 7 pens/treatment; initial BW = 362 kg) were used to evaluate the dose of trenbolone acetate (TBA) and estradiol-17β (E_2) and feeding of zilpaterol hydrochloride (ZH) on performance and carcass characteristics. A randomized complete block design was used with a 3 × 2 factorial arrangement of treatments. Main effects were implant (no implant [NI]; Revalor-S [REV-S; 120 mg TBA + 24 mg E_2]; and Revalor-XS [REV-X; 200 mg TBA + 40 mg E_2]) and ZH (0 or 8.3 mg/kg of DM for 20 d with a 3-d withdrawal before harvest). Steers were fed for 153 or 174 d depending on block. No implant × ZH interactions occurred for cumulative performance data. Overall final BW (591, 632, and 650 kg for NI, REV-S and REV-X, respectively), ADG (1.4, 1.7, and 1.8 kg) and G:F (0.16, 0.18 and 0.19) were increased ($P < 0.05$) as TBA and E_2 dose increased. Implanting increased ($P < 0.05$) DMI, but DMI did not differ ($P > 0.10$) for REV-S and REV-X (8.8 for NI vs. 9.4 kg/d for the 2 implants). From d 1 to 112 of the feeding period, implanting increased ($P < 0.05$) ADG and G:F, but REV-S and REV-X did not differ ($P > 0.10$). From d 112 to end, ADG was increased (19%; $P < 0.05$) and G:F was greater (18%; $P < 0.05$) for REV-X vs. REV-S. Carcass-adjusted final BW (614 vs. 643 kg for 0 and 8.3 mg/kg ZH respectively), ADG (1.5 vs. 1.7 kg/d), and G:F (0.17 vs. 0.19) were increased ($P < 0.05$) by ZH. Hot carcass weight was increased ($P < 0.05$) by both ZH (390 vs. 409 kg) and implant, with REV-X resulting in the greatest response (376 for NI vs. 404 and 419 kg for REV-S and REV-X respectively; $P < 0.05$). An implant × ZH interaction ($P = 0.05$) occurred for dressing percent (DP). Without ZH, implanting increased DP, but DP did not differ ($P > 0.10$) for REV-X and REV-S. With ZH, REV-X increased (1.7%; $P < 0.05$) DP vs. NI and REV-S. Marbling score, 12th-rib fat, and KPH were not affected ($P > 0.10$) by implant or ZH. A greater dose of TBA and E_2 in combination with ZH increased HCW and steer performance in an additive manner, suggesting a different mechanism of action for ZH and steroidal implants.

Key Words: beef steers, estradiol-17β, zilpaterol hydrochloride

286 Comparison of a single Revalor XS implant with a Synovex Choice-Synovex Plus implant combination on feedlot steer performance and carcass characteristics. G. I. Crawford*[1], R. Gilland[2], C. G. Campbell[3], and D. Fedders[3], [1]*University of Minnesota Extension, Hutchinson*, [2]*Gilland Feedlot, Morgan, MN*, [3]*Fort Dodge Animal Health, Overland Park, KS.*

Crossbred beef steers (n = 751; initial BW = 319 ± 8 kg) were utilized in a commercial feedlot experiment to compare the effect of a single dose of Revalor XS (200-mg trenbolone acetate, 40-mg estradiol; REV with a Synovex Choice (100-mg trenbolone acetate, 14-mg estradiol benzoate) followed by Synovex Plus (200-mg trenbolone acetate, 28-mg estradiol benzoate; SYN) combination on feedlot steer performance and carcass characteristics. At feedlot arrival, steers were stratified by BW and allotted to 8 pens, with 6 pens of 72 to 75 head and 2 pens of 144 to 145 head. Pens were assigned randomly to treatment within pen size, with 4 pens/treatment. Steers were fed a finishing ration containing (DM-basis) 51% corn earlage, 30% modified distillers grains, 16% dry-rolled corn, and 3% supplement. The experiment began at initial implant, and re-implant for SYN steers occurred, on average, 80 d after initial implant. Cattle were harvested in paired groups of SYN and REV from the same initial implant date, and carcass characteristics were measured after a 48-h chill. Days on feed ranged from 159 to 185 d and averaged 174 d. Carcass-adjusted final BW averaged 594 and 582 kg for SYN and REV, respectively ($P = 0.17$). Average daily gain tended ($P = 0.07$) to be greater with SYN (1.58 kg) than with REV (1.52 kg). No treatment differences were observed for DMI ($P = 0.24$) or G:F ($P = 0.41$). Percentage of carcasses grading USDA Choice or higher was greater ($P = 0.004$) for REV (68.7%) than SYN (55.9%). Percentage of carcasses grading USDA Yield Grades (YG) 1 and 2 was greater ($P = 0.04$) with SYN (44.4%) than with REV (32.8%). No treatment differences ($P > 0.13$) occurred for LM area, 12th rib fat thickness, marbling score, percentage of carcasses grading USDA YG 3 or USDA YG 4 and 5. Results indicate steers implanted with a Synovex Choice-Synovex Plus combination tended to have greater ADG, and also produced a greater percentage of USDA YG 1 and 2 carcasses and a lower percentage of carcasses grading USDA Choice and higher than steers receiving a single Revalor XS implant.

Key Words: beef steers, beedlot performance, implants

287 Effect of hide color and percentage Angus on feedlot performance and carcass traits in beef calves. L. R. Corah*[1], G. D. Fike[1], M. E. King[1], and W. D. Busby[2], [1]*Certified Angus Beef LLC, Wooster, OH*, [2]*Iowa State University, Ames.*

To determine the effect of hide color (n=47,747) and percentage Angus (n=30,743) on feedlot performance and carcass traits, data on calves from 19 states and fed at 18 Iowa feedlots in the Iowa Tri-County Steers Carcass Futurity (2002-2009) were analyzed. All calves received a common diet, similar implant and health program and were sorted and harvested when visually determined to have one cm of fat cover. Upon arrival, calves were classified as black-hided (B; n=35,387) or non-black-hided (NB; n=12,360). Percentage Angus, based on sire and dam information, was low (L; n=7,931), half (H; n=6,429), three-quarters (¾; n=6,473) and straight (S; n=9,910). Percentage Angus, feedlot ADG (kg/d), mortality rate (%) and morbidity rate (%) were 72.1, 1.46, 1.18 and 16.95; and 23.4, 1.4, 2.31 and 20.74 for B and NB calves, respectively ($P < 0.05$). Percentage Prime, Choice, Select and Standard quality grades were 1.17, 70.33, 26.65 and 1.85; and .4, 53.09, 41.59 and 4.92 for B and NB carcasses, respectively ($P < 0.05$). Percentage Angus, Feedlot ADG (kg/d) and morbidity rate (%) for L, H, ¾ and S were 9.2, 1.42 and 21.69; 48.6, 1.45 and 15.49; 74.2, 1.45 and 17.29; and 99.4, 1.49 and 16.01, respectively ($P < 0.05$). Percentage Prime, Choice, Select and Standard for L, H, ¾ and S carcasses were 0.31, 51.21, 43.07 and 5.4; 0.44, 66.15, 31.32 and 2.09; 1.03, 69.3, 28.11 and 1.56; and 2.16, 79.81, 17.25 and 0.77, respectively ($P < 0.05$). Acceptance rates for black-hided Angus-type calves eligible for the Certified Angus Beef (CAB) program were 8.9, 15.8, 16.7 and 27.3 for the L, H, ¾ and S groups, respectively ($P < 0.05$). Calculated yield grade was 2.92 and 2.62 for B and NB carcasses, respectively ($P < 0.05$) and 2.56, 2.78, 2.93 and 3.03 for L, H, ¾ and S carcasses, respectively ($P < 0.05$). Feedlot performance, health and carcass quality grade were positively influenced in the black-hided and higher percentage Angus calves, while average yield grade was negatively affected.

Key Words: hide color and percentage Angus, health, feedlot and carcass performance

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