FORAGE-LIVESTOCK FIELD DAY REPORT - 1998

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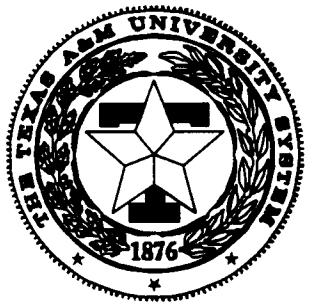

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FEEDLOT PERFORMANCE OF STEERS AND HEIFERS PREVIOUSLY PASTURED AT THREE STOCKING RATES

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Background. A cooperative cow-calf grazing experiment between two TAMU locations resulted in Simmental-sired (Overton) and Angus- and Limousin-sired calves (Uvalde). All cows and calves were pastured at Overton from May until October. From November through May, steers and heifers grazed 'Elbon' rye -'TAM 90' ryegrass at three stocking rates at Overton. On May 22, all cattle were transported to a commercial feedlot in Hereford, Texas. Steers and heifers were fed together in pens in which pasture treatment and origin identity was maintained. The objective of this feeding experiment was to ascertain the influence of previous pasture stocking rate on feedlot performance.

Research Findings. At the onset of feeding, it was deemed appropriate to slaughter cattle based on: (a) visual estimate of "finish" (backfat) by trained personnel; and/or (b) final live weight. We selected a short feeding period for cattle entering the feedlot at heavy weights (850 to 930 lbs) to prevent potential discounts for heavy carcass weights. Data presented here should not be interpreted as breed comparisons, but rather as feedlot performance of crossbred calves representative of Texas and the southeastern US. Simmental-sired steers and heifers (Table 1) that grazed winter pastures at either a low (LO) or medium (MED) stocking rate entered the feedlot at 928 and 857 pounds, respectively; whereas, calves grazed on high (HI) stocked pastures started the feeding period at 743 pounds. These calves were 15 months of age at feedlot initiation. Feedlot average daily gains (ADG) did not indicate an expression of compensatory gain in these calves since all three pens had pay weight ADG of about 3.6 lb/d. Although average daily consumption was relatively consistent for each pen at about 28 lb/d, cattle from HI consumed 2.7% of their body weight; whereas, calves from MED and LO consumed 2.6 and 2.4% of body weight. With these levels of consumption, feed:gain conversion (6:1) and performance, total costs per pound of gain were economically acceptable at $.47 to $.49 with feedlot ration costs of $98 per ton.

Table 2 presents feedlot information on combinations of Angus- and Limousin-sired calves that were 13 to 14 months of age at feedlot initiation. Initial feedlot weights ranged from 820 to 770 to 646 lbs, respectively, for LO, MED, and HI. The ADG of these calves (Table 2) showed some expression of compensatory gains with concomitant enhanced performance in feed:gain and higher daily intake (2.8% BW). Calves previously pasture stocked at MED had the lowest gains and the most expensive total costs per pound of gain ($.66/lb).

Application. Cattle with high growth rate potential tend to make acceptable gains on pasture and in feedlot. Only slight indications of compensatory gain for cattle on high stocked pastures were

detected. Although cattle with compensatory gain potential are commonplace in the cattle industry, a knowledge of genetics, age, and previous pasture management are the primary factors which contribute to successfully estimating compensatory growth. Using high quality pastures to optimize or maximize animal weight was not a deterrent to feedlot performance. However, retained ownership of these heavy weight calves through the feedlot may be the only economically feasible option for merchandizing pasture gains.

Table 1. Feedlot performance of Simmental-sired calves grazed at three stocking rates.

ITEM	PASTURE STOCKING RATES LOW	MEDIUM	HIGH
Number	26	26	29
Shipping Wt (lbs)	978	921	782
Feedlot Arrival Wt (lbs)	928	857	743
Transit Shrink (%)	5.1	7.0	5.0
Final Feedlot Wt (lbs)	1392	1330	1289
Final Pay Wt (lbs)	1336	1277	1237
Days on Feed	115	115	131
Total Feedlot Gain (lbs)	464	473	545
Total Pay Wt Gain (lbs)	408	420	471
Avg Daily Gain			
Off-Truck (lb/d)	4.03	4.12	4.16
Pay Weight (lb/d)	3.55	3.65	3.60
Feed:Gain, Pay Wt (dry)	6.4:1	6.2:1	6.1:1
Avg Consumption (lb/d)	28.3	28.5	27.6
Avg Daily Intake (% BW)	2.44	2.61	2.72
Total Costs/lb Gain, Pay Wt ($)	0.4940	0.4824	0.4783

Table 2. Feedlot traits of Angus- and Limousin-sired calves grazed at three stocking rates.

ITEM	PASTURE STOCKING RATES LOW	MEDIUM	HIGH
Number	15	26	21
Shipping Wt (lbs)	877	811	685
Feedlot Arrival Wt (lbs)	820	770	646
Transit Shrink (%)	6.5	5.1	5.7
Final Feedlot Wt (lbs)	1295	1229	1228
Final Pay Wt (lbs)	1244	1180	1179
Days on Feed	131	131	152
Total Feedlot Gain (lbs)	475	395	582
Total Pay Wt Gain (lbs)	399	321	533
Avg Daily Gain			
Off-Truck (lb/d)	3.63	3.02	3.83
Pay Weight (lb/d)	3.04	2.45	3.50
Feed:Gain, Pay Wt (dry)	6.8:1	8.4:1	6.1:1
Avg Consumption (lb/d)	25.8	25.9	26.6
Avg Daily Intake (% BW)	2.44	2.50	2.84
Total Costs/lb Gain, Pay Wt ($)	0.5322	0.6635	0.4735