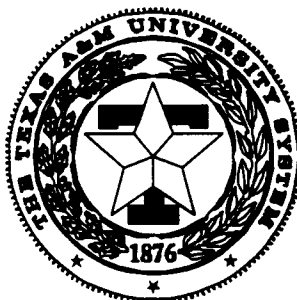


# **FORAGE-LIVESTOCK FIELD DAY REPORT - 1998**

## **TEXAS A&M UNIVERSITY AGRICULTURAL RESEARCH and EXTENSION CENTER at OVERTON**

**Texas Agricultural Experiment Station  
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## CARCASS TRAITS OF STEERS AND HEIFERS PREVIOUSLY PASTURED AT THREE STOCKING RATES

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**Background.** Calves used in a stocker grazing experiment (grazing method x stocking rate) were fed in respective treatment pens at a commercial feedlot in Hereford, Texas. Simmental-sired and a combination of Angus- and Limousin-sired calves were used in this birth-to-slaughter experiment. At time of slaughter, calves were processed at a commercial packing facility near Hereford and physical carcass data collected after a 48-hr chill-time by the Cattlemen's Carcass Data Service from West Texas A&M University. The objective of this experiment was to determine the effect of pasture stocking rate on feedlot performance and resultant carcass traits.

**Research Findings.** As mentioned in the companion feedlot performance paper, length of feeding period was based on a combination of visual "finish" by trained personnel and weight of cattle entering the feedlot. Data presented in this paper were not intended for use as a breed comparison, but rather to document carcass traits of crossbred calves unique to much of Texas and the southeastern US. Table 1 shows that the half-Simmental steers and heifers from both low and medium stocked winter pastures which entered the feedlot at 860 to 930 lbs were fed for 115 days. Calves that grazed at a high stocking rate and entered the feedlot at a 743-lb pay weight were fed for 131 days. Steers and heifers which grazed at a low stocking rate had an average marbling score of TR 80 which resulted in Quality Grade of USDA Standard-Plus. The objective for feeding the heavy weight calf of this breed type was to feed sufficiently long enough for cattle to grade Select and then terminate feeding. The other two groups of calves also had lean carcasses; however, both the medium and high stocked pastured calves had Quality Grades of USDA Select-Minus. The additional 16 days on feed for high stocked calves apparently resulted in greater backfat and a higher Yield Grade. Body condition at the time of feed initiation may have also been a contributing factor to the greater backfat on the high stocked cattle. Internal fat from this pen of calves, however, was lower than the 115-day fed cattle.

Table 2 presents carcass traits of steers and heifers from both Angus- and Limousin-sires. Both the low and high stocked cattle which had initial feedlot pay weights of 820 and 833 lbs, respectively, were fed for 131 days. Calves on high stocked pastures entered the feedlot at 646 lbs and were fed for 152 days. With the additional 21 days on feed for high stocked calves, carcass traits were relatively similar with Quality Grades of USDA Select-Minus and Select-Plus, backfat at about .5 in., and USDA Yield Grade of approximately 2.5. Dressing percent of these three pens of cattle

ranged from 62.6 to 64.9%.

**Application.** Numerous, previous feeding experiments have documented that carcass traits are primarily influenced by days on feed, animal genetics, and postmortem treatments. Graziers strive for optimum-maximum weight gains per animal and per unit land area. Recognition and awareness of packer premiums and discounts currently encourage feeders to use cattle that meet minimum Quality Grades of USDA Select with appropriate backfat and Yield Grade standards. These 1/4 Brahman x 1/4 Hereford x 1/2 Simmental, Angus, or Limousin were pasture and feedlot efficient with 115 to 130 days on feed. Longer feeding periods for these heavy weight cattle may have enhanced Quality Grade; however, feeding inefficiencies and carcass weight discounts were also significant factors affecting management decisions.

Table 1. Carcass traits of half-Simmental steers and heifers previously grazed at three stocking rates.

ITEM	<u>PASTURE STOCKING RATES</u>		
	LOW	MEDIUM	HIGH
Number cattle	26	26	29
Days on Feed	115	115	131
Final Live Pay Weight (lbs)	1336	1277	1237
Hot Carcass Wt (lbs)	826	788	753
Dressing Percent	61.83	61.71	60.87
Marbling Score	TR 80	SL 0	SL 20
USDA Quality Grade	Standard+	Select-	Select-
Fat Thickness (in)	0.21	0.17	0.34
Ribeye Area (in <sup>2</sup> )	13.99	13.96	13.02
Internal Fat	1.98	2.04	1.67
USDA Yield Grade	2.08	1.86	2.35

Table 2. Carcass traits of half-Angus and half-Limousin steers and heifers previously grazed at three stocking rates.

ITEM	<u>PASTURE STOCKING RATES</u>		
	LOW	MEDIUM	HIGH
Number cattle	15	26	21
Days on Feed	131	131	152
Final Live Pay Weight (lbs)	1244	1180	1179
Hot Carcass Wt (lbs)	779	741	765
Dressing Percent	62.62	62.80	64.89
Marbling Score	SL 60	SL 40	SL 70
USDA Quality Grade	Select+	Select-	Select+
Fat Thickness (in)	0.44	0.43	0.52
Ribeye Area (in <sup>2</sup> )	13.27	13.29	13.96
Internal Fat	1.77	1.62	2.21
USDA Yield Grade	2.69	2.47	2.67