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PERFORMANCE OF TROPICALLY ADAPTED STEERS GRAZING WINTER PASTURE AT OVERTON, TX AND EL RENO, OK

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Background. Commercial adoption and use of tropically adapted beef genotypes in the southwest and southeastern U.S. depends upon several factors which include reproduction, growth rate, and carcass attributes. The objective of this experiment was to determine the influence of environment on growth and performance of Angus x Brahman (AxB), Tuli x Brahman (TxB), and Brahman (BRM) steers grazing winter pasture.

Research Findings. Bull calves born in the spring of 1993 to Brahman dams and Angus, Tuli, or Brahman sires (AI) were weaned at approximately 205 days during the fall of 1993. At weaning, calves were castrated, implanted, grazed on bermudagrass pastures and hay, and received 3 lb/hd/day of a 1:1 (soybean meal:corn) ration until November 18, 1993. On November 18, 1993, steers of each breed type were paired by weight and randomly assigned to a winter pasture location (Overton, TX or El Reno, OK). Designated steers were transported to El Reno, OK on December 12, 1993 and grazed replicate wheat pastures until May 10, 1994. Steers that remained at Overton grazed replicate Elbon rye-wheat-TAM 90 ryegrass pastures until May 10, 1994. The average daily gain (ADG) from December to May was relatively similar between locations for AxB steers (Table 1). The TxB and BRM steers gained about .2 lb/day more at the Overton location compared to El Reno. Among breed types, AxB had the highest ADG, TxB intermediate, and Brahman steers the lowest ADG. The November to May ADG were considerably lower than the December to May ADG due to the delayed initiation of grazing winter pastures until mid-December 1993. The overall winter-spring growth rates of these three tropically adapted genotypes are shown in Figure 1. The AxB were heavier at weaning and initiation of winter pasture grazing, and they maintained this weight advantage throughout the grazing period. Both the TxB and BRM steers exhibited a tendency toward a slower growth rate near the termination of winter pasture grazing in late April to mid-May. Off-pasture weights ranged from about 870 lbs for AxB, 725 lbs for TxB, and 675 lbs for BRM steers.

Application. During this one-year study, location of winter pasture grazing had less effect on growth and performance than did breed of sire. The Angus-sired steers made exceptional gains as expected; whereas, both the Tuli- and Brahman-sired steers had acceptable, but less dramatic weight gains. The Tuli-sired steer performance was more similar to the Brahman-sired steers than to steers sired by Angus bulls.

Table 1. Weight gain by steers grazing winter pastures at either Overton, TX or El Reno, OK, 1993-94.

Item	Location	
	Overton	El Reno
Angus x Brahman		
n	10	10
Wt, 11-15-93, lb	498	497
Wt, 5-10-94, lb	861	886
ADG, Nov.-May, lb/day	2.06	2.25
ADG, Dec.-May, lb/day	2.63	2.51
Tuli x Brahman		
n	9	9
Wt, 11-15-93, lb	419	415
Wt, 5-10-94, lb	718	732
ADG, Nov.-May, lb/day	1.70	1.83
ADG, Dec.-May, lb/day	2.20	2.07
Brahman		
n	8	8
Wt, 11-15-93, lb	402	403
Wt, 5-10-94, lb	685	662
ADG, Nov.-May, lb/day	1.61	1.58
ADG, Dec.-May, lb/day	2.02	1.78

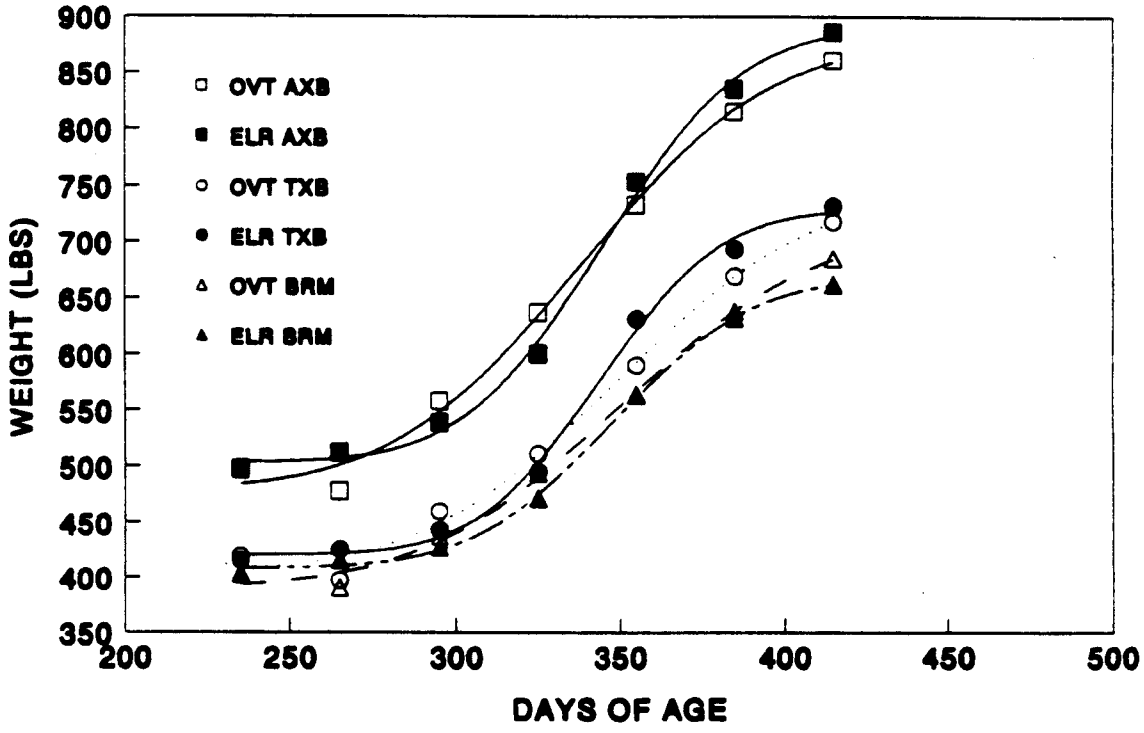

Fig. 1. Growth of Angus x Brahman (AxB), Tuli x Brahman (TxB) and Brahman (BRM) steers grazing winter pasture at Overton, TX (OVT) or El Reno, OK (ELR).