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CARCASS CHARACTERISTICS OF HALF-SIMMENTAL, ANGUS X BRAHMAN, TULI X BRAHMAN, AND BRAHMAN STEERS

F. M. Rouquette, Jr., C. R. Long, R. D. Randel,
T. H. Montgomery, and S. W. Coleman

Background. Previous pasture experiments with Tuli (Sanga) crossbred steers have been targeted at live weight performance. This study was initiated to evaluate carcass traits of four breed types of steers, Simmental X F-1 (Brahman X Hereford) (SIMX), Angus X Brahman (AXB), Tuli X Brahman (TXB), and Brahman (BRM). Steers were born and weaned at Overton, TX, grazed winter pasture at either El Reno, OK or Overton, TX, and were fed at a commercial feedlot in Hereford, TX. Breed types of steers were fed in separate pens for 126 days and slaughtered by a commercial packer.

Research Findings. Dressing percent for the four types of steers was 62.6 (SIMX), 63.1 (AXB), 62.7 (TXB), and 62.6% (BRM). Each breed type from the two winter pasture locations were combined in the same feedlot pen. Carcass data summarized for each breed type by winter pasture location proved to be similar for most of the traits measured (Table 1). A comparison of each breed type (Table 2) shows that the SIMX and AXB had hot carcass weights (HCW) of 851 to 831 lbs, and ribeye area (REA) of 13.6 to 13.4 sq. in. The TXB and BRM had identical HCW of 661 lbs, and REA of 11.8 and 11.1 sq. in., respectively. Backfat was .4 for AXB, 0.3 for SIMX and TXB, and .22 in. for BRM. The USDA yield grades ranged from 2.49 to 2.86. Marbling score, an indicator of USDA quality grade, was 3.93 for AXB, 3.55 for TXB, 3.52 for SIMX, and 3.27 for BRM. A subjective crest score was different for all breed types and ranged from 1.74 for SIMX to 4.4 for BRM. The USDA quality grade analyses (Table 3) showed that SIMX steers graded 91% Select and 9% Choice, AXB steers graded 55% Select and 45% Choice, TXB steers graded 5% Standard, 70% Select, and 17% Choice, and BRM steers graded 13% Standard, 80% Select and 7% Choice.

Implications. The approximate 50:50 Select:Choice grade of the AXB steers meets current industry standards. The SIMX steers, with a high percent Select grade, provide optimum carcasses for lean beef. Tuli-sired calves had growth rates similar to BRM steers but with carcass traits similar to the SIMX steers. The BRM and TXB steers may have needed a longer feeding period; however, accompanying feedlot data were very favorable for both of these breed types with respect to overall gain efficiency. The TXB steers that were grazed on winter pasture and fed for 126 days had similar carcass traits to Tuli X Angus and Tuli X Hereford calves weaned and fed for 180 days at McGregor (Herring *et al.*, 1994, Beef Cattle Research in Texas PR-5157:20).

Table 1. Carcass characteristics¹ of four breed types of steers previously wintered at two pasture locations.

Pasture Location	n	Breed Type	HCW	REA	FAT	YG	MARB ¹	CREST
			lbs	in ²	in			
Overton	12	SIM X	837	13.7	.34	2.65	3.38	1.75
El Reno	11	SIM X	866	13.52	.25	2.59	3.66	1.73
SE ²			17	.36	.03	.11	.07	.15
Overton	10	AxB	827	13.48	.38	2.79	3.95	2.3
El Reno	10	AxB	834	13.26	.42	2.94	3.91	2.1
SE			16	.23	.02	.10	.11	.09
Overton	9	TxB	663	11.84	.34	2.56	3.38	3.0
El Reno	9	TxB	660	11.69	.27	2.42	3.72	3.3
SE			15	.31	.03	.11	.13	.14
Overton	8	BRM	678	11.09	.23	2.58	3.35	4.4
El Reno	7	BRM	642	11.03	.21	2.39	3.19	4.4
SE			21	.20	.02	.13	.14	.21

¹HCW = Hot carcass weight; REA = ribeye area; FAT = back fat; YG = Yield Grade; MARB, 1 & 2 = Standard, 3= Select, 4 = Low Choice; CREST, 1 = none, 5 = severe.

²Standard error of mean.

Table 2. Carcass characteristics¹ of Simmental crossbred (SIM X), Angus x Brahman (AxB), Tuli x Brahman (TxB), and Brahman (BRM) steers.

Breed Type	n	HCW	REA	FAT	YG	MARB*	CREST
		lbs	in ²	in			
SIM X	23	851	13.6	.30	2.62	3.52	1.74
AxB	20	831	13.4	.40	2.86	3.93	2.2
TxB	18	661	11.8	.30	2.49	3.55	3.2
BRM	15	661	11.1	.22	2.49	3.27	4.4
SE ²		13.3	0.19	.015	.059	.062	.13

¹HCW = Hot carcass weight; REA = ribeye area; FAT = back fat; YG = Yield Grade; MARB, 1 & 2 = Standard, 3= Select, 4 = Low Choice; CREST, 1 = none, 5 = severe.

²Standard error of mean.

Table 3. Quality Grade of four breed types of steers.

Breed Type	n	USDA Quality Grade		
		Standard	Select	Choice
		-----%		
SIM X	23	0	91.3	8.7
AxB	20	0	55	45
TxB	18	5.6	77.7	16.7
BRM	15	13.3	80	6.7