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# A comparison of selected breed crosses on growth rate during long-term grazing

## **Abstract**

Brahman crossbred and Simmental crossbred calves gained similarly during a 312-day, native range grazing study. Longhorn crossbreds gained less than the Brahman or Simmental crosses but more than the British crossbreds, which served as controls. Most of the gain advantage was obtained during the summer portion (April 30-September 20) of the project.

## **Keywords**

Cattlemen's Day, 1986; Kansas Agricultural Experiment Station contribution; no. 86-320-S; Report of progress (Kansas State University. Agricultural Experiment Station and Cooperative Extension Service); 494; Beef; Growth rate; Grazing; Crossbreds

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## A Comparison of Selected Breed Crosses on Growth Rate During Long-Term Grazing

Jack Riley and Ron Pope

### Summary

Brahman crossbred and Simmental crossbred calves gained similarly during a 312-day, native range grazing study. Longhorn crossbreds gained less than the Brahman or Simmental crosses but more than the British crossbreds, which served as controls. Most of the gain advantage was obtained during the summer portion (April 30 - September 20) of the project.

### Introduction

The use of Brahman, Simmental, and Longhorn bloodlines in crossbreeding programs has increased in recent years, primarily in an attempt to increase growth rate or influence calving ease. A large number of calves are still dry-wintered on native range and continued through the following spring and summer grazing season, although this practice is decreasing in popularity. It is difficult to find direct comparisons between crossbreds, especially those involving Longhorn and Brahman, when grazed under the same conditions. This trial was an initial attempt to determine the comparative performance for these selected breed crosses.

### Experimental Procedure

A total of 119 steer calves (12 Longhorn X, 12 Simmental X, 12 Brahman X, and 83 British or British X) were used in a 312-day grazing trial (November 13, 1984 to September 20, 1985). Six experimental pastures were used with each breed group equally represented in each pasture. All calves were individually identified, processed and determined healthy prior to allocation to pasture groups. Individual shrunk weights (overnight without feed and water) were taken initially, at end of winter phase, and at end of summer phase.

### Results and Discussion

Results are shown in Table 28.1. The average daily winter gain for the 119 calves was 0.58 lb. This level of performance would be considered too low to be economically justified unless substantial compensatory growth occurred during the following summer grazing phase. The average daily gain for the 143-day summer period was 2.39 lb; an excellent rate of gain indicating that compensatory gain probably occurred. The average daily gain for the 312 days was 1.43. The straight bred British and British crossbred calves (predominantly Angus X Hereford) gained slowest during the winter and for the total grazing period. The Brahman cross

calves gained the most during the winter and for the entire trial but only slightly more than the Simmental crosses. The Longhorn cross calves' gains were intermediate during the winter and overall.

Based upon the limited numbers in this trial, there was no indication that Brahman, Simmental, or Longhorn crossbreeding results in depressed grazing performance when compared to straightbred British or British crossbreds.

Table 28.1. Influence of Breed Type on Growth Rate During Long-Term Grazing

Breed:	British or British X	Longhorn X	Simmental X	Brahman X
Grazing Phase 1:				
No. steers	83	12	12	12
Winter: (Nov. 13 - April 30)				
No. days	169	169	169	169
Initial wt., lb	395	385	443	344
Gain, lb	90	117	107	125
ADG, lb	.53	.69	.63	.74
Grazing Phase 2:				
Summer: (April 30 - Sept. 20)				
No. days	143	143	143	143
Initial wt., lb	485	502	550	469
Gain, lb	333	331	386	372
ADG, lb	2.33	2.31	2.70	2.60
Total:				
No. days	312	312	312	312
Gain	423	448	493	497
ADG	1.36	1.44	1.58	1.59