

# Kansas Agricultural Experiment Station Research Reports

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Volume 0  
Issue 1 *Cattleman's Day (1993-2014)*

Article 1337

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1975

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R.R. Schalles

K.O. Zoellner

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### Recommended Citation

Schalles, R.R. and Zoellner, K.O. (1975) "Performance of bulls on Kansas Bull Test," *Kansas Agricultural Experiment Station Research Reports*: Vol. 0: Iss. 1. <https://doi.org/10.4148/2378-5977.2740>

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## Performance of bulls on Kansas Bull Test

### Abstract

Bulls on summer test gained faster than those on winter test. Breeds from Continental Europe were taller at the shoulder and gained faster than British breeds. Older bulls that were lighter at the start of the test gained slightly faster than younger, heavier bulls, probably because of differences in condition. Adjusted 205-day weight had little relationship to performance; however, weaning weight ratio was positively related to performance on test, indicating that the heaviest bulls at weaning in a herd are most apt to perform best on test.

### Keywords

Cattlemen's Day, 1975; Report of progress (Kansas State University. Agricultural Experiment Station); 230; Beef; Performance; Gain; Weaning weight

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## Performance of Bulls on Kansas Bull Test

R. R. Schalles and Keith O. Zoellner

### Summary

Bulls on summer test gained faster than those on winter test. Breeds from Continental Europe were taller at the shoulder and gained faster than British breeds. Older bulls that were lighter at the start of the test gained slightly faster than younger, heavier bulls, probably because of differences in condition. Adjusted 205-day weight had little relationship to performance; however, weaning weight ratio was positively related to performance on test, indicating that the heaviest bulls at weaning in a herd are most apt to perform best on test.

### Introduction

The Kansas Bull Test started in June, 1971. Since then, two tests have been conducted each year at Solomon Valley Feedlot, Beloit, Kansas. Nearly 1500 bulls have completed the seven tests. Performances of the bulls are analyzed here.

### Experimental Procedure

Bulls are delivered to the test station each fall and spring approximately three weeks before the test officially starts. They are weighed two consecutive days at both the start and end of the 140-day test. Intermediate weights at 56 and 112 days are obtained. The ration increases in energy at the discretion of the Kansas Bull Test committee and the feedlot manager.

### Results and Discussion

The average daily gain of all bulls on test for 140 days was 2.77 lbs. Gain in the summer tests (tests 1, 3, 5, and 7) has exceeded gains in winter tests (test 2, 4, and 6) as shown in table 5.1. Gain was highest the first 56 days of most tests and lowest the last 28 days. Winter test 2 and 6 had the highest rate of gain during the last 28 days, a gain pattern in winter probably due to weather conditions.

Bulls in breeds of Continental European origin averaged 3.01 lb. per day while bulls in breeds of British origin averaged 2.79 lb. per day. Bulls of Zebu breeding in winter test only and were probably adversely affected by winter conditions, gained less than one pound a day.

Heavier bulls at the start of the test gained slightly less than lighter bulls, probably because the heavier bulls were fatter at the start of the test. Older bulls tended to gain faster than younger bulls. The average starting weight was 600 lbs. at an average age of 255 days.

Height at the shoulder was obtained when the bulls had been in test 112 days. The average height was 43.3 inches. Continental breeds were tallest; British breeds intermediate; Santa Gertrudis, shortest.

Adjusted 205-day weight had very little relation to performance on test. Varied managements of herds before delivery of bulls to be tested likely are the reason. However, weaning weight ratio was positively related to performance on test. Calves with heaviest weaning weights in a herd had higher gains on test.

Table 5.1. Average Daily Gains by Bulls in Seven Kansas Bull Tests, Beloit, Kansas, 1971-74.

Test	No. bulls tested	0-56 days A.D.G.	56-112 days A.D.G.	112-140 days A.D.G.	140-day A.D.G.
1	122	3.34	2.81	2.47	2.95
2	155	2.47	2.61	3.10	2.65
3	159	3.51	3.30	1.68	3.06
4	279	2.49	2.30	1.10	2.14
5	149	3.49	2.71	2.01	2.89
6	440	2.50	2.23	2.68	2.43
7	144	3.61	2.99	3.35	3.31
Breeds:					
Simmental	401	3.45	3.26	2.78	3.24
Angus	391	2.85	2.75	2.23	2.68
Hereford	205	2.83	2.93	2.31	2.77
Charolais	203	3.34	3.04	2.60	3.07
Polled Hereford	95	2.80	2.97	2.40	2.79
Chianina	66	3.24	3.70	2.78	3.23
Limousin	47	3.19	3.11	3.07	3.13
Santa Gertrudis	12	1.67	0.03	0.56	0.79
Maine Anjou	11	3.74	1.28	2.83	2.57