

Table 31 (Continued)

Low good	1	1	1
Av. grade ^a	12.90	12.63	13.00
Av. marbling score ^c	7.10	7.18	6.90
Av. fat thickness score ^b	3.5	3.81	4.09
Av. rib eye size, score ^d	4.6	4.54	4.36
Av. firmness score ¹⁰	3.7	3.45	3.72

6. Average grade was based on low prime, 16; high choice, 15; average choice, 14; low choice, 13; high good, 12; average good, 11.

7. Marbling score was based on: moderate, 5; modest, 6; small amount, 7; slight amount, 8.

8. Fat thickness score at 12th rib based on: moderate, 3; modest, 4; slightly thin, 5.

9. Rib eye score size was based on: moderately large, 3; modestly large, 4; slightly small, 5.

10. Firmness of rib eye was based on: firm, 2; moderately firm, 3; modestly firm, 4; slightly firm, 5.

Relationship of Summer Gains of Yearling Steers on Bluestem Pastures with Feeder Grade, Shade of Color, Weight at the Start of the Grazing Season and Previous Winter Gain, 1956-57 (Project 253-2-5).

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Feeder grade, shade of color, and weight are some factors considered by cattlemen who purchase or produce yearling steers to pasture. The objective of this study is to determine the relationship of summer gains of yearling steers on bluestem pastures with feeder grade, shade of color, weight at the start of the grazing season and previous winter gain.

Experimental Procedure

Data were gathered on Hereford steers which were used in pasture utilization studies. In the fall of 1955, 136 steer calves were purchased and wintered 170 days in dry-lot on sorghum silage, alfalfa hay and two pounds of sorghum grain per head daily. The summer grazing period was from April 25 to October 1, 1956. The 155 steers used in the 1957 grazing season were purchased in the fall of 1956 and wintered in dry-lot on sorghum silage, a limited amount of alfalfa hay and one pound of protein concentrate per head daily. The 1957 summer grazing period was from April 27 to October 3.

In April of each year the steers were individually scored for feeder grade and shade of red by five animal husbandmen working independently. Feeder grades were the USDA grades fancy, choice, good, medium, common. Each grade was further subdivided into high, middle, and low. A numerical grade of 18 was assigned to high fancy, 17 to middle fancy, 16 to low fancy, etc. The average of the five feeder grades for each steer (as scored by the animal husbandmen) was computed for statistical analysis. The average of the five color scores for each steer was computed for statistical analysis. Shade of red scores were dark, medium, and light; each shade of red score was further subdivided into three subdivisions. Very dark was assigned a numerical value of 9, medium dark was assigned a grade of 8, etc.

Results

Since the steers were allotted to several pastures and some received hormone implants, correlations were computed within treatment within pasture. The correlations are listed in Table 32.

The correlation between feeder grade and summer gain was practically zero in both years. This indicates that feeder grade is not a good indicator of summer gain. Therefore, the advantage in purchasing high-grading yearlings to summer graze on bluestem pasture would not be in increased gains but would be in having higher grading steers at the end of the grazing season than if lower grading steers were purchased.

The correlation between color and summer gain was practically zero

Table 32

Correlations of Summer Gains with Feeder Grade, Color Score, Winter Gain and Weight at the Start of the Grazing Season by Years.

	1956	1957
Feeder grade	-.03	.07
Color score	-.05	.06
Winter gain	-.20
Weight	-.32	.04

in both years. On the basis of these results one cannot claim an advantage in summer gains for a particular shade of red. The advantage of purchasing cattle of a particular shade of red would lie in the possible increase in sale price of these steers when sold to feed-lot operators who prefer cattle of that shade of red.

The correlation between previous winter gain and summer gains (-.20 in 1956) indicates that the steers making low winter gains tended to compensate with higher summer gains. Previous winter gain of each steer was not obtained for the steers grazed during 1957.

The correlation between beginning weight and summer gain (-.32 in 1956) shows that light-weight steers at the start of the summer grazing period tended to make larger gains than the heavier steers. In 1957, the correlation was .04, which is so nearly zero that there appeared to be no real difference in the gains made by cattle of different weights.

Feedlot Performance of Steers Implanted with Stilbestrol¹ Prior to the Grazing Season (Project 253-4).

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Experimental evidence indicates that beef steers implanted with low levels of stilbestrol before going to grass will make increased gains during the grazing season. The test reported herein was designed to measure the performance of such implanted steers on a fattening ration in dry-lot after the grazing season.

Experimental Procedure

Animals used in this study were selected from a group of 150 Hereford steers used in grazing studies during the summer of 1957. One group of 10 steers had been implanted with 24 mgs. of stilbestrol in April 1957. The other group of 10 steers was among those serving as controls in the summer grazing studies. Both groups of 10 animals averaged nearly 775 pounds in weight when put on feed. The steers were brought to a full feed of grain during a four-week period of hand feeding. Thereafter, they had sorghum grain before them at all times. The alfalfa hay fed was limited to the amount consumed without waste. Each morning 10 pounds of soybean oil meal containing 10 mgs. of stilbestrol per pound was scattered over the grain bunk in each lot.

Warm water was available to the animals at all times from automatic waterers. Salt was available to the animals at all times. A mixture of bonemeal and salt was also available.

Observations

1. Animals in both groups made excellent gains throughout the 100-day period. The previously implanted animals made somewhat greater gains than the control animals.

2. No feeding problems were encountered with either group. There were no cases of bloat, serious scouring or any other evidence of digestive disturbances.

¹ Stilbosol premix containing diethylstilbestrol supplied by Eli Lilly and Co.