

Table 62 (Continued).

Daily ration per steer, lbs.:		
Soybean cake	1.00	2.00
Prairie hay*	1.83	1.83
Dry bluestem pasture	Free choice	Free choice
Salt	Free choice	Free choice
Mineral (bone meal and salt)	Free choice	Free choice
Feed cost per steer	\$11.22	\$17.24

* Fed only when snow covered the grass.

Wintering and Grazing Yearling Steers

Effect of Feeding a Protein Supplement During the Latter Part of the Grazing Season to Two-year-old Steers on Bluestem Pasture, 1954.

PROJECT 253-4

F. H. Baker, E. F. Smith, R. F. Cox, and D. L. Good

The nutritive value of bluestem pasture decreases materially after midsummer. Lower protein as well as certain other nutrients is known to be involved in the reduced value of the grass. This experiment was designed to determine the effect of feeding protein supplement after midsummer on cattle gains and condition.

Experimental Procedure

Twenty head of good quality two-year-old Hereford steers were used. They were wintered and summered on bluestem pasture until August 4, when this test was initiated.

The steers were divided into two uniform lots and grazed on bluestem pasture with the following treatment from August 4, 1954, to October 15, 1954:

Lot 1—No supplement.

Lot 2—2 pounds of cottonseed cake per head daily.

Observations

1. The 21 pounds of beef produced in Lot 2 as a result of protein supplementation was not enough to pay for the 144 pounds of cake required to produce this additional gain.

2. The cattle fed cake appeared fleshier, as judged by a committee of animal husbandmen.

Table 63.—Effect of feeding a protein supplement during the latter part of the grazing season to two-year-old steers on bluestem pasture, 1954.

(Aug. 4-Oct. 15, 1954—72 days)

Lot number	1	2
Number steers in lot	10	10
Cottonseed cake fed per steer daily, lbs.	0	2
Initial wt. per steer, lbs.	1087	1087
Final wt. per steer, lbs.	1183	1204
Gain per steer, lbs.	96	117
Daily gain per steer, lbs.	1.33	1.63
Gain in wt. contributed to cottonseed cake, lbs.	0	21
Total cottonseed cake fed per steer, lbs.	0	144

Table 63 (Continued).

Gain per steer by periods:		
Aug. 4-Sept. 3	35	23
Sept. 3-Oct. 2	42	71
Oct. 2-Oct. 23	19	23

Wintering, Grazing, and Fattening Steer Calves

1. The Value of Trace Minerals in a Wintering and Fattening Ration.¹ 2. Self-feeding Grain in Dry Lot Versus Self-feeding on Bluestem pasture.

PROJECT 253-6

F. H. Baker, E. F. Smith, C. S. Menzies, and R. F. Cox

This is a progress report of the wintering phase of the third trial of this experiment. Following this phase the steers will be grazed on bluestem pasture 90 days and then full-fed grain 100 days. One objective of the test is to determine the value of trace minerals (copper, cobalt, iron, manganese, iodine, and zinc) on the performance of steers in a wintering and a fattening ration. A second objective is to compare self-feeding grain in dry lot to self-feeding grain on grass during the full-feeding phase of the deferred full-feeding program.

Experimental Procedure

Thirty choice Hereford steer calves, 10 head to a lot, are being used. Eight steers of each lot were obtained in a shipment from the Lonker Ranch near Medicine Lodge, Kan. The remaining two steers of each lot were obtained from the Currie Ranch near Westmoreland, Kan. The system of management planned for each lot of steers follows:

Lot 15—Wintered on sorghum silage, 4 pounds of grain, and 1 pound of 41 percent protein concentrate per head daily, free access to mineral (bone meal and salt) and salt; bluestem pasture May 1 to August 1; self-fed grain on bluestem pasture after August 1 to choice grade.

Lot 10—Wintered on sorghum silage, 4 pounds of grain, and 1 pound of protein concentrate per head daily, free access to mineral (bone meal and salt) and salt; grazed on bluestem pasture May 1 to August 1; self-fed grain in dry lot after August 1 to choice grade.

Lot 9—Wintered on sorghum silage, 4 pounds of grain, and 1 pound of protein concentrate per head daily; free access to mineral (bone meal and salt) and salt; grazed on bluestem pasture, May 1 to August 1; self-fed grain in dry lot from August 1 until they grade choice. Trace minerals are being supplied to this lot of steers during the wintering and fattening phases of the test.

Observations

No differences due to treatment were apparent among the lots. The difference in gain between Lots 15 and 10, handled identically, demonstrates the variability in cattle gains.

Table 64.—The value of trace minerals in a wintering ration for steer calves.

Management	Standard ration	Standard ration	Trace minerals ¹
Lot number	15	10	9
Number of steers per lot	10	10	10
Av. initial wt., lbs.	457	454	456

1. The trace mineral premix used was supplied by the Calcium Carbonate Corporation, Chicago, Ill.