

Wintering and Grazing Yearling Steers

The Most Efficient Level of Winter Protein Feeding for Yearling Steers Wintered and Summer Grazed on Bluestem Pasture, 1952-53.

PROJECT 253-4

E. F. Smith, F. H. Baker, R. F. Cox, and L. A. Holland

Yearling steers have been successfully wintered at this station on dry bluestem pasture for the past five winters by feeding 1½ to 2 pounds of cottonseed or soybean oilmeal per head daily. The objective of this test is to determine if the level of winter protein feeding may be reduced without affecting the yearly performance of the steers.

Twenty head of good quality Hereford yearling steers, 10 head to a lot, were used in this study. They originated in southeastern Colorado and were purchased as calves in the fall of 1951 for 42 cents a pound. They were used in summer grazing tests on bluestem pasture in 1952. From November 1 until December 31, 1952, when this test started, they were on bluestem pasture supplemented with 1 pound of soybean pellets. During the winter phase of this test, the steers were moved from pasture to pasture every 15 days to minimize any differences due to pastures. The winter pastures in which the steers were grazed were of such size as to vary the stocking rate from 6 to 19 acres per head. All pastures used in the winter had sufficient grass remaining on them for winter use, although they were stocked at a normal rate for the summer of 1952.

In addition to dry winter bluestem pasture, the following amounts of protein were fed:

Lot 1—1 pound of soybean pellets per head daily.

Lot 2—2 pounds of soybean pellets per head daily.

The steers were grazed together during the summer of 1953 after the different winter treatments.

Observation

1. On the basis of the combined winter and summer gain, the most effective level of protein supplement was 1 pound of soybean pellets per head daily. It took 124 pounds of pellets to produce an additional 15 pounds of gain in Lot 2.

Table 3.—Wintering and Grazing Yearling Steers.

Phase 1—Wintering—December 31, 1952-May 4, 1953—124 days.

Lot number	1	2
No. of steers per lot	10	10
Management	Fed 1 lb. soybean pellets	Fed 2 lbs. soybean pellets
Initial wt. per steer	718	720
Final wt. per steer	784	832
Gain per steer	66	112
Daily gain per steer	.53	.90
Daily ration per steer:		
Soybean pellets ¹	1.00	2.02
Prairie hay ²	1.39	1.39
Minerals ³	.22	.20

Salt	.06	.05
Dry bluestem pasture	Free choice	Free choice
Feed cost per steer ⁴	\$11.31	\$16.36

Phase 2—Summer Grazing—May 4, 1953-August 3, 1953—91 days.

Initial wt. per steer	784	832
Final wt. per steer	1003	1020
Gain per steer	219	188
Daily gain per steer	2.41	2.07

Summary of Phases 1 and 2

Initial wt. per steer	718	720
Final wt. per steer	1003	1020
Gain per steer	285	300
Daily gain per steer	1.33	1.40
Total feed cost per steer	\$27.31	\$32.36
Feed cost per cwt. gain	\$ 9.60	\$10.78

1. Soybean pellets were discontinued April 18, 1953.
2. Prairie hay was fed only when snow covered the grass.
3. Minerals were 2 parts steamed bonemeal and 1 part salt.
4. Feed prices: Soybean pellets, \$95 a ton; prairie hay, \$25 a ton; minerals, \$5 cwt.; salt, \$12 a ton.

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, 1953.

PROJECT 253-4

E. F. Smith, F. H. Baker, and R. F. Cox

The nutritive value of bluestem pasture usually begins to decline rapidly after midsummer. This test is concerned with the effect of feeding a protein supplement after midsummer on cattle gains and condition.

Three years of this work have been summarized in Circular 297.

Experimental Procedure

Twenty head of good quality two-year-old Hereford steers were used in this test. They were wintered on dry bluestem pasture and then grazed together until August 5, when this test started.

The steers were divided into two uniform lots and grazed on bluestem pasture with the following treatment from August 5, 1953, to October 23, 1953:

Lot 1—No supplement.

Lot 2—Two pounds of soybean pellets per head daily.

Observations

1. The 38 pounds of beef produced in Lot 2 as a result of feeding two pounds of soybean pellets per head daily was just enough to pay for the 158 pounds of pellets required to produce this additional gain.

2. Lot 2, fed soybean pellets, appeared fleshier as judged by a committee of animal husbandmen.