

Summary of Phases I, II, and III

| | | | |
|---|----------|----------|----------|
| 26. Total gain per heifer (all phases) | 504 | 478 | 450 |
| 27. Daily gain per heifer (all phases) | 1.51 | 1.43 | 1.35 |
| 28. Feed cost per cwt. gain | \$25.98 | \$25.00 | \$25.32 |
| 29. Total cost of feed per heifer | \$130.96 | \$119.48 | \$113.94 |
| 30. Initial cost per heifer @ \$40.00 cwt. | \$192.80 | \$192.00 | \$191.60 |
| 31. Feed cost plus heifer cost | \$323.76 | \$311.48 | \$305.54 |
| 32. Selling price per cwt. at market | \$29.50 | \$29.50 | \$28.50 |
| 33. Selling price per heifer | \$279.95 | \$273.76 | \$254.40 |
| 34. Loss per heifer | \$43.81 | \$37.72 | \$51.14 |
| 35. Percent shrink in shipping to market | 3.63 | 3.13 | 3.87 |
| 36. Dressing percent | 60.8 | 59.8 | 59.1 |
| 37. Carcass grades, U.S.: | | | |
| Low prime | 1 | | |
| High choice | 4 | 4 | |
| Average choice | 1 | 1 | 2 |
| Low choice | 2 | 4 | 6 |
| High good | 2 | | |
| Average good | | 1 | 1 |

1. Wintering period for Lot 1, December 11, 1951, to May 5, 1952; Lot 2, December 11, 1951, to April 22, 1952; Lot 3, December 11, 1951, to April 26, 1952.
2. Fed only when snow covered the grass.
3. Fed for about two weeks while breaking the heifers to eat pellets.
4. Mineral was 2 parts steamed bonemeal and 1 part salt.
5. Feed prices: Milo grain, \$2.80 cwt.; Corn, \$1.90 bu.; Cottonseed oil cake or pellets, \$100.00 ton; Prairie hay, \$15.00 ton; Alfalfa hay, \$25.00 ton; Sorghum silage, \$6.50 ton; Dry bluestem pasture, .50 per head per month; Winter brome pasture, \$1.00 per head per month; Summer bluestem and brome, \$25.00 per head for the summer season; Salt and limestone, \$12.00 ton.

Project 253-4: 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.

Ed F. Smith, 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 oil meal per head daily. The objective of this test is to determine if the level of protein feeding may be reduced without affecting the yearly performance of the steers. This is a report of only the wintering phase of this test. The steers will be grazed together during the summer of 1953 and will be sold off grass as feeder steers in the fall.

Experimental Procedure

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 this test the steers were moved from pasture to pasture every 15 days to minimize any differences due to pastures. The 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 this winter test had sufficient grass remaining on them for winter use, although they were stocked at a normal rate for the summer of 1952.

Observations

The gain made by both lots of steers was larger than would be expected, compared with past years' results. The steers in Lot 12 fed 1 pound of soybean pellets per head daily gained considerably less than the Lot 6 steers fed 2 pounds. However, they wintered in strong, thrifty condition. The winter was mild with the exception of three snowstorms; one the latter part of November covered the grass for about three weeks. The results of the level of protein feeding studied here can best be evaluated at the close of the summer grazing season in 1953.

Table 19.—Wintering and Grazing Yearling Steers.

Phase I—Wintering—December 31, 1952, to April 1, 1953—91 days.

| | | |
|---|---|--|
| 1. Lot number | 6 | 12 |
| 2. Number steers per lot | 10 | 10 |
| 3. Method of feeding | 2 pounds soybean pellets daily on dry grass | 1 pound soybean pellets daily on dry grass |
| 4. Initial weight per steer | 720 | 718 |
| 5. Final weight per steer | 816 | 785 |
| 6. Gain per steer | 96 | 67 |
| 7. Daily gain per steer | 1.06 | .74 |
| 8. Daily ration per steer: | | |
| Soybean oil meal pellets | 2.01 | 1.00 |
| Mineral (bonemeal and salt) | .19 | .18 |
| Salt | .05 | .04 |
| Dry bluestem pasture | ad lib | ad lib |
| Prairie hay | 1.65 | 1.65 |
| 9. Feed cost per steer ¹ | \$13.71 | \$9.30 |

1. Feed prices may be found on the last page of this publication.

Project 253-3: The Effect of Grazing Systems on Livestock and Vegetation

Comparison of Different Methods of Managing Bluestem Pastures, 1952.

E. F. Smith and K. L. Anderson

The objectives of this experiment are to determine the effects of different stocking rates, deferred grazing, and burning on livestock gains, productivity of pastures, and the bluestem vegetation itself.