

Table 4
Effects of Feeding a Protein Supplement During the Latter Part of the Grazing Season to Yearling Steers on Bluestem Pasture.

August 2 to October 17, 1955—76 days.

Lot number	1	2	3
Number steers per lot	12	12	12
	No	2 pounds	2 pounds
	supple-	soybean	corn
	ment	pellets	
Management			
Initial wt. per steer	802	806	803
Final wt. per steer	880	925	897
Gain per steer	78	119	94
Daily gain per steer	1.03	1.57	1.24
Gain in lbs. contributed to feeding soybean pellets or corn		41	16
Total soybean pellets or corn fed per steer, lbs.:			
Soybeans		152	
Corn			152
Gain per steer by periods:			
August 2-September 2	51	28	49
September 2-October 1	2	51	7
October 1-October 17	25	40	38
Total gain August 2-October 17	78	119	94

Level of Winter Protein Supplementation for Steer Calves Both Wintered and Summer Grazed on Bluestem Pasture, 1955-56.

PROJECT 253-1

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This is a progress report of the wintering phase of the third trial of this experiment. The results of the other two tests are reported in Circular 308 and elsewhere in this publication. The test is designed to study the level of protein supplementation most desirable for wintering steer calves to be sold off summer grass as stocker or feeder yearlings. Results of the experiment are measured by the combined winter and summer performance of the steers.

Experimental Procedure

Thirty good-quality Hereford steer calves purchased from the Williams Ranches near Lovington, N. M., were used in the test. They were the heaviest steer calves of 256 purchased. They were divided on the basis of weight into three lots of 10 calves each and grazed together on a 190-acre bluestem pasture during the winter. Each morning they were gathered and divided into three feeding pens to receive their supplements. The treatment assigned to each lot was as follows:

Lot 12A—One pound of soybean oil meal pellets per head daily.

Lot 12B—Two pounds of soybean oil meal pellets per head daily.

Lot 12C—One pound of soybean oil meal pellets and 1 pound of corn per head daily.

All had free choice of dry bluestem pasture, salt, and mineral (steamed bonemeal and salt).

Observations

Results in this test are measured on the basis of winter and summer performance combined. This is a progress report on only the wintering phase. It is interesting to note that at this stage 1 pound of a 41 percent protein concentrate is apparently not enough supplemental feed for calves wintered on dry bluestem pasture. This has been true on the basis of the combined winter and summer gain in the two previous trials.

Table 5
Level of Protein Supplementation for Steer Calves Wintered on Dry Bluestem Pasture, 1955-56.

Phase 1, January 4, 1956, to April 7, 1956—93 days.

Lot number	12A	12B	12C
Number steers	10	10	9
Initial wt. per steer, lbs.	581	590	591
Final wt. per steer, lbs.	604	647	634
Gain per steer, lbs.	23	57	43
Daily gain per steer, lbs.	.25	.61	.46
Daily ration per steer, lbs.:			
Soybean oil meal pellets	1.0	2.0	1.0
Ground corn			1.0
Prairie and alfalfa hay ¹	1.0	1.0	1.0
Dry bluestem pasture			
Salt		Free choice, all lots	
Mineral (bonemeal and salt)		Free choice, all lots	
Feed cost per steer, ² \$	6.26	9.52	8.96

1. Fed only when snow covered the grass.
 2. Feed prices may be found inside back cover. \$1 was charged per steer for mineral and salt.

The Value of Dry Bluestem Pasture and a Comparison of Supplements for Heifer Calves in a Wintering, Grazing, and Fattening Program, 1955-56.

PROJECT 253-2

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Circular 320 from this station contains a three-year summary comparing heifers wintered in dry lot with heifers wintered on dry grass and the effect of this winter treatment on their total performance in a wintering, grazing, and fattening program. The results of this test showed the heifers wintered on dry grass gained 32 pounds less for the year, had a lower dressing percentage, graded lower, and sold for about \$1 a hundred less than heifers wintered in dry lot. However, the heifers wintered on dry grass returned as much money above feed costs as the heifers wintered in dry lot, due primarily to lower winter feed costs and high summer grass gains.

In this test the plane of nutrition has been raised slightly for the heifers wintered on dry grass, to acquire some of the desirable characteristics associated with dry-lot wintering, but still maintaining low winter feed costs. In addition different levels of protein supplementation are being compared.

Experimental Procedure

Thirty head of good-quality Hereford heifer calves purchased from the Williams Ranches at Lovington, N. M., were used in the test. They were divided on the basis of weight and quality into three lots of 10 calves each and assigned to the following treatments:

Lot 4—Wintered in dry lot on sorghum silage, 3 pounds of alfalfa hay, and 1½ pounds of corn per head daily, to be grazed on bluestem pasture from May 1 until August 1, fattened to choice grade in dry lot starting August 1.

Lot 7—Wintered on dry bluestem pasture, 3 pounds of alfalfa hay, and 1½ pounds of corn per head daily, to be grazed on bluestem pasture until August 1, fattened to choice grade in dry lot starting August 1.

Lot 8—Wintered on dry bluestem pasture and 6 pounds of alfalfa hay per head daily, to be grazed on bluestem pasture until August 1, fattened to choice grade in dry lot starting August 1.