

10. Cost of feed per 100 pounds gain	\$ 14.62	\$ 14.46	\$ 12.97
11. Total feed cost per steer	21.49	21.11	21.53

PHASE II—GRAZING AS YEARLINGS
May 1, 1949 to October 15, 1949—167 days

12. Initial weight per steer	574	588	620
13. Final weight per steer	762	790	834
14. Gain per steer	188	202	214
15. Daily gain per steer	1.13	1.21	1.28
16. Cost of grazing per steer (bluestem pasture)	\$ 12.00	\$ 12.00	\$ 12.00
17. Cost of 100 pounds of pasture gain	6.38	5.94	5.61

PHASE III—WINTERING AS YEARLINGS
October 15, 1949 to April 15, 1950—182 days

18. Initial weight per steer	762	790	834
19. Final weight per steer	924	984	1040
20. Gain per steer	162	194	206
21. Daily gain per steer .....	.89	1.07	1.13
22. Daily ration per steer, pounds			
Soybean meal	1.01	1.01	1.01
Sorghum silage	37.76	42.64	41.19
Prairie hay	4.06	4.02	4.67
23. Feed required for 100 pounds gain, pounds:			
Soybean meal	113.58	94.85	89.32
Sorghum silage	4242.10	3999.85	3639.22
Prairie hay	456.17	377.47	412.52
24. Cost of feed per 100 pounds gain	\$ 21.26	\$ 19.19	\$ 18.09
25. Total feed cost per steer	34.43	37.22	37.26

SUMMARY OF PHASES I, II, AND III
November 29, 1948 to April 15, 1950—502 days

26. Initial weight per steer	427	442	454
27. Final weight per steer	924	984	1040
28. Gain per steer	497	542	586
29. Daily gain per steer .....	.99	1.08	1.17
30. Feed required per 100 pounds gain			
Soybean meal	67.81	62.18	57.51
Silage	1983.84	1994.87	1796.81
Prairie hay	314.77	272.92	283.46
31. Feed cost per 100 pounds gain	\$ 13.66	\$ 12.98	\$ 12.08
32. Total feed cost per steer	67.92	70.33	70.79
33. Appraised value per cwt. on May 5, 1950			

Project 253-1: Wintering and Grazing Steer Calves

METHODS OF WINTERING STEER CALVES THAT ARE TO BE GRAZED A FULL SEASON AND SOLD OFF OF GRASS
1949-1950

Ed F. Smith, D. L. Good, R. F. Cox
INTRODUCTION

It is a well known fact that thin steers usually gain more on grass than fleshy steers. However, information is available about the total gain, winter and summer, of steers wintered at different levels and then grazed on bluestem pasture. The primary objective of this test is to determine how steer calves should be wintered that are to be grazed a full season on bluestem pasture and sold off of grass. This is a report on the wintering phase, prior to going to grass for the 1950 season.

EXPERIMENTAL PROCEDURE

Five lots of good quality Hereford steer calves, 10 head to a lot, were used in this study. All were fed in dry lots, except Lot 1 which was fed on dry bluestem pasture. The different lots received the following rations from November 25, 1949, to April 15, 1950.

Lot 1—Bluestem pasture and 2 pounds of soybean pellets per head daily.

Lot 2—Silage and 1 pound of soybean pellets per head daily.

Lot 3—Prairie hay and 1 pound of soybean pellets per head daily.

Lot 4—Prairie hay, 2 pounds of corn and 1 pound of soybean pellets per head daily.

Lot 5—Prairie hay, 4 pounds of corn and 1 pound of soybean pellets per head daily.

All lots will be grazed on bluestem pasture a full season in 1950.

OBSERVATIONS

1. Lot 1 wintered on bluestem pasture and fed 2 pounds of soybean pellets per head daily made a gain of .79 pound per head daily. The winter was exceptionally mild with very little rain or snow. The pasture in which these calves were wintered is a creek bottom bluestem pasture with considerable bluegrass in it.
2. The calves in Lot 2 fed silage and 1 pound of soybean pellets gained 1.13 pounds per head daily, about the same gain made by the calves in Lot 3 fed prairie hay and 1 pound of soybean pellets, which was 1.11 pounds per head daily.
3. Two pounds of corn fed in Lot 4 increased the gain .21 of a pound per head daily and 4 pounds of corn fed in Lot 5 increased gain .45 of a pound per head daily over the gain in Lot 3, fed prairie hay and 1 pound of soybean pellets, per head daily.
4. About one-half ton of prairie hay in addition to the soybean pellets was required to produce 100 pounds of gain in Lot 3, and about 1 1/4 tons of silage in addition to soybean pellets were required to produce 100 pounds of gain in Lot 2.

TABLE 1. METHODS OF WINTERING STEER CALVES THAT ARE TO BE GRAZED A FULL SEASON AND SOLD OFF OF GRASS

PHASE I—WINTERING					
November 25, 1949, to April 15, 1950—141 days					
1. Lot number	1	2	3	4	5
2. Number of steers per lot..	10	9	9	10	10
3. Place of wintering	Bluestem Pasture	Dry Lot	Dry Lot	Dry Lot	Dry Lot

4. Average initial weight	431	430	434	432	432
5. Average final weight	543	590	591	618	652
6. Average gain..	112	160	157	186	220
7. Average daily gain .....	.79	1.13	1.11	1.32	1.56
8. Average daily ration, pounds:					
Ground shelled corn				2.00	4.00
Soybean pellets	2.00	1.00	1.00	1.00	1.00
Prairie hay ¹ ..	.04		12.24	10.84	9.83
Silage		28.23			
Bluestem pasture	Ad lib				
Salt .....	.07	.06	.06	.06	.06
9. Feed required for 100 pounds of gain:					
Ground shelled corn				151.61	256.36
Soybean pellets	251.79	88.13	89.91	75.81	64.09
Prairie hay ..	5.36		1099.57	821.88	630.05
Silage		2487.50			
Salt	9.02	5.50	5.17	4.65	3.64
10. Cost of feed per 100 pounds gain	\$ 14.89	\$ 11.30	\$ 10.55	\$ 11.59	\$ 12.24
11. Total feed cost per steer	\$ 16.67	\$ 18.08	\$ 16.56	\$ 21.56	\$ 26.92
12. Initial cost per steer at \$24.50 per cwt.	\$105.60	\$105.35	\$106.33	\$105.84	\$105.84
13. Initial cost per steer plus feed cost	\$122.27	\$123.43	\$122.89	\$127.40	\$132.76
14. Necessary selling price per cwt. to cover initial cost plus feed cost	\$ 22.52	\$ 20.92	\$ 20.79	\$ 20.61	\$ 20.36
15. Appraised value per cwt. on May 5, 1950 ..					

- (1) Prairie hay was fed to Lot 1 only when snow covered the grass.
(2) Feed prices: Ground shelled corn, \$1.25 bu.; Soybean pellets, \$75 per ton; Prairie hay, \$13 per ton; Silage, \$6.50 per ton; Bluestem pasture, \$6 for the winter season; Salt, \$12 per ton.

Project 253-2: Wintering, Grazing and Fattening Heifers

FATTENING HEIFERS FOR THE SUMMER OR EARLY FALL MARKET 1948-1949

Ed F. Smith - Don L. Good - A. G. Pickett

INTRODUCTION

The purpose of this experiment is to develop a desirable system or systems of fattening heifer calves similar to the Deferred Full Feeding system for steer calves. The system developed for good quality steer calves consists of three phases (1) producing 225 to 250 pounds of gain during the winter, which usually requires the feeding of four to five pounds of grain per head daily; (2) grazing 90 days without grain; (3) full feeding 100 days in the dry lot. The results of several prior trials at this station with heifer calves were considered before planning this experiment.

Some of the problems which it is hoped this experiment will answer are: (1) How well should heifer calves be wintered that are going to be full fed following the winter period or full fed after a short period on grass? (2) Wintering, followed by full feeding vs. wintering, early summer grazing and then full feeding. (3) Should the full feeding of grain take place on grass or in the dry lot?

This is the second of a series of three tests. The first was reported at the 1949 Livestock Feeders' Day. Eighty good quality Hereford heifer calves were purchased for use in this test October 23, 1948, at \$26.50 per cwt. They were handled as follows.

EXPERIMENTAL PROCEDURE

Lot 1 - Wintered on atlas silage, prairie hay, dehydrated alfalfa pellets, 2 pounds of corn and then full fed 105 days in dry lot.

Lot 2 - Wintered on atlas silage, prairie hay, soybean oil meal, 2 pounds of corn and then full fed corn 105 days on brome grass.

Lot 3 - Wintered on atlas silage, prairie hay, dehydrated brome grass pellets and 2 pounds of corn; grazed from April 18 to June 1 on brome grass and full fed corn on brome grass from June 1 to July 1 at which time they were moved to dry lot and full fed until September 18, a total of 109 days on full feed.

Lot 4 - Wintered on atlas silage, prairie hay, cottonseed meal and 2 pounds of corn; grazed from May 1 to July 18 on bluestem pasture and then full fed corn on bluestem pasture for 103 days.

Lot 5 - Wintered on atlas silage, prairie hay, linseed meal and 2 pounds of corn; grazed from May 1 to July 18 on bluestem pasture and then full fed in the dry lot for 103 days.

Lot 6 - Wintered on atlas silage, prairie hay and cottonseed meal; grazed from May 1 to July 18 on bluestem pasture and then full fed corn on bluestem grass for 103 days.

Lot 7 - Wintered on atlas silage, prairie hay and cottonseed meal; grazed from May 1 to July 18 on bluestem grass and then full fed for 103 days in dry lot.

Lot 8 - Wintered on atlas silage, prairie hay and cottonseed meal; grazed on bluestem pasture from May 1 to August 15; fed 1½ pounds of soybean pellets per head daily in addition to the grass from July 18 to August 15; and then full fed 75 days in a dry lot.

OBSERVATIONS

Wintering Phase:

1. Approximately 2 pounds of corn fed per head daily in Lots 2, 4 and 5 increased the gain per head daily about one quarter of a pound over Lots 6, 7 and 8 where no corn was fed.