

Project 253-4: Wintering and Grazing Yearling Steers

Methods of Wintering Yearling Steers on Bluestem Pasture, 1951-52.

E. F. Smith, R. F. Cox, and S. B. Fausher

This test is to determine if yearling steers can be wintered satisfactorily on dry bluestem pasture. Different methods of feeding protein supplements are being tested.

Experimental Procedure

Thirty head of good quality, about 750-pound, Hereford yearling steers were used in the test which was started December 7, 1951. The steers were purchased in the spring of 1951 and had been grazed on bluestem pasture during the summer and fall. They carried a moderate amount of flesh. They lost some flesh during October and November when they were on grass alone prior to the start of winter tests. The steers were sprayed twice with B.H.C. for lice. All of the pastures in which the steers were wintered had been grazed the previous summer at normal stocking rates, but a plentiful supply of dry grass remained. From 6 to 13 acres of pasture were allowed each steer.

The 30 steers were divided into three lots of 10 steers each and received the following supplements in addition to dry bluestem pasture from December 7, 1951, to April 29, 1952.

Lot 1—2 pounds of cottonseed oil meal pellets daily, salt, and mineral (bonemeal and salt).

Lot 2—4 pounds of cottonseed oil meal pellets every other day (average 2 pounds a day), salt, and mineral (bonemeal and salt).

Lot 3—Cottonseed oil meal and salt self-fed, and mineral (bonemeal and salt). (The salt was mixed with the cottonseed oil meal to limit its consumption and make it possible to self-feed the cottonseed oil meal. This mixture was fed in a self-feeder.) The cottonseed oil meal pellets were fed on the ground.

Observations

1. The most satisfactory method of wintering in this test was feeding cottonseed oil meal pellets every day. Feeding every other day in Lot 2 resulted in slightly less winter and summer gain combined, as compared to feeding each day. Self-feeding a salt and protein mixture produced considerably less yearly gain and is of questionable value as measured here.

2. Steer gains for the winter period were low, although weather conditions were favorable for wintering on dry grass in 1951-52 except during the month of December and the first week in March.

Table 22.—Wintering and Grazing Yearling Steers

Phase I—Wintering—December 7, 1951, to April 29, 1952—144 days.

1. Lot number	1	2	3
2. Number of steers per lot	10	10	10
3. Management	Fed cottonseed pellets daily	Fed cottonseed pellets every other day	Self-fed cottonseed meal and salt mixed
4. Initial weight per steer	745	741	746
5. Final weight per steer	759	733	717
6. Gain or loss per steer	14	-8	-29
7. Daily gain or loss per steer	.10	-.06	-.20

8. Daily ration per steer:			
Cottonseed oil meal or pellets	2.01	2.01	2.03
Salt	.08	.09	.61
Mineral ¹	.14	.10	.04
Prairie hay ²	1.28	1.24	1.20
Dry bluestem pasture	Free choice	Free choice	Free choice
9. Feed cost per steer ³	\$19.90	\$19.60	\$19.89

Phase II—Grazing—April 29 to July 21, 1952—85 days.

10. Initial weight per steer	759	733	717
11. Final weight per steer	929	909	893
12. Gain per steer	170	176	176
13. Daily gain per steer	2.00	2.07	2.07

Summary of Phases I and II

14. Initial weight per steer	745	741	746
15. Final weight per steer	929	909	893
16. Gain per steer	184	168	147
17. Daily gain per steer	.80	.73	.64
18. Total feed cost per steer	\$49.90	\$49.60	\$49.89
19. Feed cost per 100 lbs. gain	\$27.11	\$29.52	\$33.93
20. Appraised value per cwt.	\$24.00	\$24.00	\$24.00
21. Loss per steer ⁴	\$87.69	\$90.79	\$96.67

1. Mineral was 2 parts steamed bonemeal to 1 part salt.
2. Prairie hay was fed only when snow covered the grass.
3. Feed prices: Cottonseed oil meal or pellets, \$100.00 ton; salt, \$12.00 ton; mineral, \$5.00 cwt.; prairie hay, \$15.00 ton; dry bluestem pasture, \$.75 per head per month; bluestem pasture, \$30.00 per head for summer season.
4. In computing loss per steer, initial cost was estimated at \$35.00 cwt.

Project 253-4: Wintering and Grazing Yearling Steers

Methods of Wintering Yearling Steers on Dry Bluestem Pasture. Four-Year Summary, 1948-52.

E. F. Smith, R. F. Cox, and A. G. Pickett

The object of this test was to compare different protein supplements and methods of feeding them to yearling steers on dry bluestem pasture during the winter. The steers were good to choice quality Hereford yearlings. They were wintered in pastures that were stocked at a normal rate during the previous summer; however, a plentiful supply of dry dead grass was available for each of the lots during the years in which these tests were conducted. From 6 to 19 acres of grass were allowed per steer for the winter. In each year except 1951-52 the steers were purchased in the fall in moderately thin flesh. In 1951-52 the steers were purchased in the spring of 1951 and grazed on

bluestem pasture during the summer. In the fall of 1951 when started on this test they carried a moderate amount of flesh. The wintering period of the four-year test extended from mid-December until the latter part of April and averaged 138 days in length. Each lot received a supplement in addition to dry bluestem pasture as follows:

Lots 1 and 4: 2 pounds of soybean pellets per head daily except in 1948-49, Lot 1 received 1½ pounds; in 1951-52 Lot 4 was fed cottonseed cake;

Lots 2 and 5: 4 pounds of soybean pellets per head every other day—average 2 pounds per day—except in 1948-49, Lot 2 received 3 pounds; in 1951-52 Lot 5 was fed cottonseed cake;

Lot 3: 6.8 pounds of alfalfa hay per head daily (ranged from 6.1-7.32 pounds);

Lot 6: Soybean oil meal and salt self-fed; the salt was mixed with the soybean oil meal to limit its consumption and make it possible to self-feed the soybean oil meal. The proportions of soybean oil meal and salt varied from 100 pounds of soybean oil meal and 35 pounds of salt up to 45 pounds of salt per 100 pounds of meal to limit meal consumption to 2 pounds per head daily. In 1951-52 cottonseed oil meal was fed.

The summer grazing period extended from the latter part of April until mid-July and averaged 85 days in length. Following this early-summer grazing period, the steers were relotted and used in summer caking tests until about October 1. This has added about 100-125 pounds to the weight of each steer and is not reported here.

Observations

1. At the close of winter, the steers were in a healthy, strong but thin condition under all methods of wintering tested.
2. Feeding soybean pellets every other day appears to be as satisfactory as feeding every day in these tests as measured by winter and summer gains combined.
3. Neither alfalfa hay nor the self-fed soybean oil meal and salt mixture were quite the equal of soybean pellets fed each day or every other day.

Table 23.—Wintering and Grazing Yearling Steers on Bluestem Pasture—Summary 1948-49, 1949-50, 1950-51, 1951-52.

	Phase I—Wintering (1948-51, 139 days average) (1949-52, 137 days average)					
	1	2	3	4	5	6
1. Lot number	30	29	30	30	30	30
2. Number steers in lot	30	29	30	30	30	30
3. Management	Fed soybean pellets daily	Fed soybean pellets every other day	Fed alfalfa hay	Fed soybean pellets daily	1949-52 soybean pellets every other day	Self-fed soybean oil meal and salt mixed together
4. Initial weight per steer	685	685	687	684	682	685
5. Final weight per steer	748	739	722	742	731	708
6. Gain per steer	63	54	35	58	49	23
7. Daily gain per steer	0.45	0.39	0.25	0.42	0.36	0.17
8. Daily ration per steer:						
Soybean oil meal pellets	1.83	1.85	.....	2.01	2.02	1.95
Alfalfa hay .....	.....	.....	6.77	.....	.....	.....
Prairie hay .....	.98	1.07	.58	.79	.78	.86
Salt .....	.10	.08	.04	.12	.11	.63
Mineral .....	.01	.01	.01	.05	.04	.03
Dry bluestem pasture	Ad lib	Ad lib	Ad lib	Ad lib	Ad lib	Ad lib
9. Total feed cost per steer	\$15.49	\$15.69	\$13.75	\$16.31	\$16.26	\$16.24
Phase II—Grazing (1948-51, 86 days average) (1949-52, 84 days average)						
10. Initial weight per steer	748	739	722	742	731	708
11. Final weight per steer	934	929	906	905	901	881
12. Gain per steer	186	190	184	163	170	173
13. Daily gain per steer	2.16	2.21	2.14	1.94	2.05	2.07
Phase III—Summary of Phases I and II						
14. Total gain per steer (all phases)	249	244	219	221	219	196
15. Average daily gain per steer (all phases)	1.11	1.09	0.97	1.00	.99	.89
16. Total feed cost per steeri	\$32.82	\$33.02	\$31.08	\$33.64	\$33.59	\$33.57
17. Feed cost per 100 lbs. gain	13.18	\$13.53	\$14.14	\$15.22	\$15.34	\$17.13
1. Feed prices: Soybean meal or pellets, \$83.33 per ton; alfalfa hay, \$20.00 per ton; prairie hay, \$13.67 per ton; dry bluestem pasture, \$.75 per head per month; summer bluestem, \$17.33 per head for the season; salt, \$12.00 per ton; mineral (2 parts steamed bonemeal to 1 part salt), \$5.25 cwt.						