

Level of Vitamin A in Beef Steer Rations: Wintering Phase. Progress Report (Project 567).

D. Richardson, E. F. Smith, L. Dunn, L. H. Harbers, and T. F. Buamah

Sixty Hereford steer calves were divided into six equal lots. Sorghum silage ad lib. and 1 pound of soybean oil meal per head daily were fed to all lots. Half of the animals (Lots 7, 8, and 9) received 8 pounds of sorghum grain per head daily; the other half (Lots 10, 11, and 12), 4 pounds per head daily. This phase of the test was to measure performance on two levels of grain and prepare the animals for the fattening phase. At the beginning of the fattening phase, the animals were reallocated to six lots of 10 with five animals from the 8-pound level of grain and five from the 4-pound level. Objectives of the fattening phase are to study:

1. 0, 15,000 and 30,000 units of added vitamin A per head daily added to a basal sorghum silage, sorghum grain and supplement ration.
2. Performance with 10 or 20 pounds of silage in ration.
3. Level of wintering ration on subsequent performance.

Results are shown in Table 32.

Table 32

Level of sorghum grain in steer calf wintering ration results, November 12, 1963, to March 6, 1964—115 days.

Lot no.	7	8	9	10	11	12
No. steers per lot	10	10	10	10	10	10
Av. initial wt., lbs.	489.5	486.0	486.5	487.0	487.0	487.5
Av. final wt., lbs.	751.3	745.0	763.0	730.5	737.0	732.0
Av. daily gain, lbs.	2.28	2.25	2.40	2.12	2.17	2.13
Av. daily ration, lbs.:						
Sorghum silage	24.2	24.3	24.3	29.8	29.7	29.7
Sorghum grain	7.9	7.9	7.9	4.0	4.0	4.0
Soybean oil meal	1.0	1.0	1.0	1.0	1.0	1.0
Feed per cwt. gain, lbs.:						
Sorghum silage	1063.0	1077.0	1010.0	1405.0	1368.0	1399.0
Sorghum grain	344.3	348.3	326.2	188.9	184.0	188.1
Soybean oil meal	43.9	44.4	41.6	47.2	46.0	47.0
Feed cost per cwt. gain	\$11.97	\$12.12	\$11.35	\$10.28	\$10.02	\$10.24

Nutritive Value of Forages as Affected by Soil and Climatic Differences (Project 430).

D. Richardson, E. E. Banbury,¹ A. B. Erhart,² F. E. Davidson,³ Grady Williams,² E. F. Smith, D. C. Loper, L. H. Harbers, and R. F. Cox

It is generally thought that performance of cattle may differ in various parts of the state due to location, soil, climate, rainfall and/or feed produced. This project is an attempt to determine whether such differences exist and, if so, to measure them.

Forty-eight Hereford steer calves from the same herd and averaging 448 pounds were divided as uniformly as possible into four lots of 12 animals. One lot was assigned to each of four locations: Colby, Garden City, Manhattan, and Mound Valley. Uniform size concrete lots with sheds are being used at each location. The animals were subdivided into two groups of six animals. The wintering ration consisted of locally grown sorghum silage fed to limit of appetite and 5 pounds of locally grown second cutting of alfalfa hay per head daily. At the end of the wintering phase, silage was gradually decreased and removed from the ration. At the same time, locally grown sorghum grain was introduced and gradually increased until the grain was self-fed. Salt was the only added mineral throughout the entire test. Analyses of the feeds used are shown in Table 34.

Results and Observations

Results of the first test are shown in Table 33. Satisfactory and economical performance was obtained at all locations. There were differences in the performance of animals at the various locations in both the wintering and fattening phases; however, one test is not sufficient to determine whether the differences were real. The test will be repeated several times.

1. Superintendent, Colby Station.
2. Superintendent, Garden City Station.
3. Superintendent, Mound Valley Station.