

Nutritive Value of Forages as Affected by Soil and Climatic Differences (Project 430-progress report)

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This is a progress report on the fourth test to measure differences in the performance of beef steers in various parts of Kansas due to location, soil climate, rainfall and/or local feed. Forty-eight Hereford steer calves averaging 458 pounds from Warner's Ranch in Barber county were used. The management and feeding were the same as in previous tests. Analyses of the feedstuff are shown in table 16 and the results of the wintering phase in table 17. Results of other steers (purebred and crossbred) being handled in a similar manner at Colby and Garden City are shown in table 18.

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1. Colby
  2. Garden City
  3. Mound Valley

Table 16  
Feedstuff Analyses, 1965-66

	% Moisture	% Dry matter	% Protein	% Ash	% Ether extract	% Crude fiber	% N.F.E.	Carotene mgs. per lb.
Colby:								
Sorghum silage	69.50	30.50	1.43	2.57	0.81	6.97	18.72	1.0
Alfalfa hay	5.59	94.41	12.80	9.04	1.92	34.12	36.53	25.0
Sorghum grain	9.51	90.49	6.68	1.64	2.15	2.05	77.97	----
Garden City:								
Sorghum silage	68.80	31.20	1.23	3.29	0.86	7.39	18.43	1.5
Alfalfa hay	12.13	87.87	14.45	9.92	1.99	29.74	31.77	26.9
Sorghum grain	12.89	87.11	7.13	1.44	3.07	2.33	73.14	----
Manhattan:								
Sorghum silage	62.10	37.90	1.78	2.86	1.02	7.99	24.25	1.8
Alfalfa hay	11.95	88.05	11.61	7.66	1.48	26.37	40.93	21.7
Sorghum grain	14.02	85.98	7.09	1.61	1.93	2.47	72.88	----
Mound Valley:								
Sorghum silage	50.90	49.10	1.60	3.39	0.97	12.30	30.84	2.0
Alfalfa hay	6.79	93.21	16.08	7.43	1.58	32.03	36.09	18.0
Sorghum grain	13.95	86.05	6.03	1.45	2.50	2.48	73.60	----

Table 17  
 Feedlot results for Wintering Phase. November 19, 1965, to March 11,  
 1966 - 112 days.

Location	COLBY		GARDEN CITY		MANHATTAN		MOUND VALLEY	
Lot number	1	2	1	2	1	2	1	2
No. steers per lot	6	6	6	6	6	6	6	6
Av. initial wt., lb.	458.3	457.5	458.3	459.2	464.2	452.5	466.7	451.7
Av. final wt., lb.	600.7	606.8	610.5	628.2	595.0	580.8	604.8	581.2
Av. daily gain, lb.	1.27	1.33	1.36	1.51	1.17	1.15	1.23	1.16
Av. daily ration, lb:								
Sorghum silage	27.7	27.1	25.2	26.4	19.2	19.2	16.9	16.6
Alfalfa hay	3.9	4.6	5.0	5.0	4.7	4.6	4.9	4.6
Feed per cwt. gain								
lb:								
Sorghum silage	2177	2035	1854	1752	1648	1676	1366	1438
Alfalfa hay	308	344	368	331	403	402	396	402
Total dry matter								
per cwt. gain lb.	955	946	901	838	980	989	1040	1081
Feed cost per cwt.								
gain <sup>1</sup>	\$12.56	\$12.52	\$12.02	\$11.14	\$11.63	\$11.73	\$10.41	\$10.78

1. Sorghum silage \$8 per ton, Alfalfa hay \$25 per ton.

Table 18

Feedlot results for Wintering Phase. November 19, 1965, to March 11, 1966 - 112 days.

Location	COLBY		GARDEN CITY	
	3	4	3	4
Lot number				
Animals, steers	Shorthorn	Shorthorn X Hereford	Charolais X Hereford	Charolais X Hereford
No. animals per lot	6	6	6	6
Av. initial wt., lb.	478.2	464.3	454.2	458.3
Av. final wt., lb.	614.7	589.8	696.3	689.8
Av. daily gain, lb.	1.22	1.12	2.16	2.07
Av. daily ration, lb:				
Sorghum silage	31.6	29.3	34.7	34.8
Alfalfa hay	4.0	4.3	5.0	5.0
Alfalfa pellets	-----	-----	-----	-----
Feed per cwt. gain, lb:				
Sorghum silage	2596	2616	1607	1684
Alfalfa hay	328	379	231	---
Alfalfa pellets	---	---	---	242
Total dry matter/ cwt. gain, lb.	1102	1156	704	738
Feed cost/cwt. gain <sup>1</sup>	\$14.48	\$15.20	\$ 9.32	\$ 9.77

1. Sorghum silage \$8 per ton, Alfalfa hay \$25 per ton.