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Rations for Performance Testing Bulls
on a 140-day Gain Trial

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Miles McKee, J. D. Evans and R. R. Schalles

Twenty-six Angus, Hereford, and Shorthorn bull calves were started on feed November 16, 1970, to study differences in protein content of rations. The bulls were from 184 to 302 days old. They were randomly assigned within breeds to one of three grain rations (see table 45) and individually fed free choice. The prairie hay they would clean up in 30 minutes was fed twice a day. They went from their pens into a large lot to exercise together approximately four hours a day.

Results of the gains are listed in table 46. Two were removed for health reasons midway through the test. The remaining bulls were halter broken, fitted, and shown in the Little American Royal for six weeks during the test by Kansas State University students. During this fitting period, ADG gains on bulls dropped below 1 pound a day. Gains on ration B or C did not differ significantly but both were significantly superior to ration A. Efficiencies of gain by the bulls from the three rations did not differ significantly.

Semen of the bulls was evaluated at the end of the test. Semen was collected by electro-ejaculation. Two bulls were aspermic; six produced semen questionable for range breeding, and 16 bulls produced semen satisfactory for range breeding. Semen production did not differ by ration.

Table 45. Grain ration for 140-day test of weight gained by bulls in test.

	Rations		
	A	B	C
Rolled oats, lbs.	1600.0	1455.0	1334.0
Steam flaked milo, lbs.	397.6	360.6	331.6
Soybean meal, lbs.	0	91.0	166.0
Dehydrated alfalfa, lbs.	0	91.0	166.0
Trace minerals, lbs.	1.0	1.0	1.0
Vitamin A, lbs.	0.8	0.8	0.8
Aurofac 10, lbs.	0.6	0.6	0.6
TDN content, %	76.8	76.3	75.9
Crude protein, %	11.35	13.41	14.76

Table 46. Response of bull calves to indicated ration, 140-day test.

	Rations		
	A	B	C
No. of bulls	7	8	9
Average age going on test, days	235	230	234
Average weight going on test, lbs.	519	467	497
Average weight off test, lbs.	810	863	872
ADG on test, lbs.	2.08	2.59	2.68
Lbs. grain/lbs. gain	6.41	5.58	5.91