

The Value of Grain Added to Sorghum Silage at Ensiling, 1965-66
(Project 623)

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This experiment was to determine the value of sorghum grain, whole and ground, added to sorghum silage at 15% of the forage green weight at ensiling. The design was as follows:

Treatment 1 - No grain.

Treatment 2 - Ground sorghum grain fed when silage was fed.

Treatment 3 - Whole sorghum grain added to silage while ensiling, with water added to bring the silage back to original moisture content.

Treatment 4 - Ground sorghum grain added to silage while ensiling and water added to bring silage moisture content to original.

Sorghum silage (Frontier 210) was fed according to appetite. The sterile variety produced only 2 to 3 bushels of grain per acre. An attempt was made to equalize dry matter content of the silage by adding 28% water while ensiling, when sorghum grain was added. Where grain was fed or added to the silage, it was added on the basis of 15% of the silage's weight.

Two trials were conducted. In one the steers were fed in groups of 12, in the other they were fed individually, 3 to a treatment. They were choice Hereford steer calves obtained in Barber county, Kansas.

Added grain increased daily gain and dry matter consumption but dry matter per pound of gain remained about the same.

The steers seemed to perform equally well whether the grain was fed with the silage or added while ensiling as whole or ground grain.

title of report
 described ration all received
 Lot 4 + Lot 6 performance
 cattle out
 Lot 5 + Lot 3 - Ind. fed

Table 9

The value of grain added to sorghum silage while ensiling, December 22, 1965, to March 24, 1966
 92 days.

Gains are less with
 whole grain

	Steers, group fed				Steers, individually fed			
	Sorghum silage	Ground grain added to feeding	Whole grain added to silage when ensiled	Ground grain added to silage when ensiled	Sorghum silage	Ground grain added at feeding	Whole grain added to silage when ensiled	Ground grain added to silage when ensiled
Lot no	3	4	5	6	1	1A	2	2A
Number of steers	12	12	12	12	3	3	3	3
Initial weight, lb.	429	430	433	433	435	434	439	436
<i>140 days out</i> Average daily gain, lb.	611 1.62	675 2.08	639 1.86	663 1.95	582 1.34	643 1.83	630 1.83	667 1.97
<i>140 days</i> Average daily ration, lb.	1.32	1.76	1.49	1.66	1.09	1.52	1.41	1.67
Sorghum silage, regular	32	26	--	--	30	24	--	--
Sorghum silage, grain added at 15% of green weight plus water to replace original moisture	--	--	32	32	--	--	29	29
Ground sorghum grain, lb.	--	3.9	--	--	--	3.8	--	--
Soybean oil meal, lb.	1.25	1.25	1.25	1.25	1.25	1.25	1.25	1.25
Salt, free choice								
Dry matter in silage, %	27.1	27.1	33.2	32.5	27.1	27.1	33.2	32.5
Dry matter consumed per head, daily lb.	9.8	11.6	11.7	11.5	9.3	11.0	10.7	10.5
Dry matter required per lb. of gain, lb.	6.0	5.6	6.3	5.9	6.9	6.0	5.8	5.3