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The value of dehydrated alfalfa and delayed grain feeding young cows on winter bluestem

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The Value of Dehydrated Alfalfa and
Delayed Grain Feeding
Young Cows on Winter Bluestem
Pasture, 1965 - 67 (Project 253)

E.F. Smith, D. Richardson, C.L. Drake and M.C. Hall

Two primary objectives of this test were to:

- (1) Compare dehydrated alfalfa with soybean oil meal as a winter supplemental feed on bluestem pasture for young cows to be bred shortly after the winter feeding period.
- (2) Determine any merit in feeding grain the last 50 days of the winter period compared with feeding the same total amount of grain throughout the winter when heifers are to be bred shortly after the winter feeding period.

Each of three treatment groups contained 27 or 28 Hereford heifers, good to choice grade. Their initial average weight was 427 pounds each.

Each of the three treatments contained two groups of 13 or 14 heifers. Three groups, one from each of the three treatments, were pastured together and redivided each day to receive experimental rations. Each of the three remaining groups was pastured separately. The heifers pastured together came from near Paxico, Kansas; the others, maintained in separate pastures, came from near Beaumont, Kansas.

The experimental plan follows:

Treatment 1 -One pound of soybean oil meal and 2 pounds of ground sorghum grain per heifer daily during the entire winter feeding period.

Treatment 2--Soybean oil meal fed at 1.5 pounds per heifer daily until 50 days before the feeding season ended, then ground sorghum grain was fed. The same total amount of sorghum grain as fed under treatment 1 throughout the winter was concentrated during the last 50 days with the soybean oil meal discontinued when grain feeding reached the quantity to supply the same protein in the soybean oil meal. Treatment 3--Dehydrated alfalfa fed at 3.3 pounds and ground sorghum grain at 1 pound per heifer daily during the entire wintering feeding period.

The above three rations were formulated to supply approximately the same amount of protein and total digestible nutrients for the total winter period. In addition each heifer received daily an average of 20,000 I.U. of vitamin A, and 0.05 lb. of monosodium phosphate. Salt was fed free choice. Twelve heifers from each group were implanted with 15 mg. of diethylstilbestrol December 18, 1965, and 6 of the same heifers were reimplanted with 15 mg. diethylstilbestrol March 26, 1966. The treatment was to determine if diethylstilbestrol enlarges the pelvic opening and permits easier calving by two-year-old heifers and to permit observations of its effect on breeding efficiency. That phase will be reported later.

Results

Delaying grain feeding until spring reduced both gain of heifers over the two-year period, and birth weight of the

calves. The average calving date was a few days later for those fed dehydrated alfalfa and a few more heifers fed dehydrated alfalfa had calves that required pulling.

The results to date show no particular merit in delaying grain feeding until spring or of feeding dehydrated alfalfa to young developing heifers on grass.

Table 7
The Value of Dehydrated Alfalfa and Delayed Grain Feeding
Heifers on Winter Bluestem Pasture, Dec. 18, 1965 to Sept. 30, 1967

	Soybean meal and sorghum grain, fed at same rate all winter		Soybean meal and sorghum grain, the grain feeding delayed until spring		Dehydrated alfalfa and sorghum grain	
	12A	15	12C	7B	12B	7A
Pasture number						
No. of heifers	14	14	14	13	14	13
No. of heifers that weaned calves as two yr. olds	10	10	10	10	8	11
Av. wt. of heifers that weaned calves						
December 18, 1965	421	429	415	442	425	433
May 2, 1966	501	489	476	518	487	503
September 30, 1966	741	714	707	734	735	725
May 3, 1967	654	608	607	600	638	599
September 30, 1967	772	743	727	724	768	735
Gain per heifer from Dec. 18, 1965 to Sept. 30, 1967	351	314	312	282	343	302
Av. supplemental winter feed received per heifer daily lbs. ¹						
Ground sorghum grain	2.0	2.0	2.0	2.0	1.0	1.0
Soybean oil meal	1.0	1.0	1.0	1.0		
Dehydrated alfalfa pellets					3.3	3.3
No. of cows pregnant						
October 1966	12	13	12	12	12	11
Percent	85.7	92.8	85.7	92.3	85.7	84.6
October 1967	13	12	12	11	12	13
Percent	92.8	92.3	92.3	91.6	85.7	100.0

Table 7 Cont.

	12A	15	12C	7B	12B	7A
Calving data 1967:						
Av. calving date	3/12	3/12	3/19	3/8	3/26	3/15
No. of calves born	11	13	12	12	10	11
No. of live births	11	10	11	11	8	11
Percent of calves born alive	100%	76.9	91.6	91.6	80	100%
Av. wt. calves born alive	61	60	59	58	62	60
Percent calves pulled	20.0	7.69	25.00	8.33	30.0	9.09
Percent calves dead at birth	0	23.07	8.3	8.3	20	0
Calving difficulty score ²	1.20	1.25	1.66	1.08	1.50	1.18
No. of calves weaned	10	10	10	10	8	11
Percent calf crop weaned	71.4	71.4	71.4	76.9	57.1	84.6
Actual weaning weight	376	348	363	363	341	348
Adjusted weaning weight	403	361	392	389	371	364
Pounds of calf weaned per heifer bred	269	249	260	279	195	294

1 In addition to the feed shown each heifer received an average of 20,000 IU of vitamin A per head daily and 0.05 lbs. of monosodium phosphate.

2 Calving difficulty scores: 1, no assistance rendered; 2, assistance required; 3, pullers or additional assistance required; 4, veterinarian or caesarean required.