SUPPLEMENTING COWS WITH BARLEY PELLETS
TO IMPROVE REPRODUCTIVE PERFORMANCE

One method of increasing calf weaning weight is to have a maximum number of calves born during the first three weeks of the calving season. Experimental trials at Crawford, Nebraska have shown increased conception rates when cows are gaining weight during the breeding season. Feeding barley pellets to cows on pasture will increase their energy intake and allow a gain in condition. This extra gain should improve their ability to cycle and conceive on a regular, timely basis.

A trial was started in the spring of 1967 to evaluate the practice of feeding 3 pounds of pelleted barley per cow per day for three weeks prior to the start of breeding in late June.

In this trial, Hereford cows and first calf heifers were turned on a crested wheatgrass pasture fertilized with 25 pounds actual nitrogen in early May. The cows and heifers were divided into two nearly equal herds. One herd was supplemented with 3 pounds of pelleted barley (15 percent protein) per head per day. They were fed for approximately three weeks before breeding, which normally started about June 20.

The trial has been continued for four years. Only three years data is available on the breeding record. Table 17 shows the cow performance, and Table 18 shows the three year breeding record.

**Table 17.   Record of Weights of Cows and Heifers on Spring Pasture With
and Without Supplemental Feeding.**

	1967	1968	1969	1970	Avg.
Weights of animals on pasture without supplement					
Avg. initial weight	991.2	955.7	941.3	1014.8	975.8
Avg. weight end of feeding	1070.2	1028.8	976.1	1063.0	1034.5
Avg. weight at weaning	1121.1	1092.1	1089.3	1142.7	1111.3
Avg. weight gain during supplemental period	79.8	73.1	34.8	48.2	58.7
Avg. weight gain entire period	129.9	136.4	148.0	127.9	135.5
Weights of animals on pasture with supplement					
Avg. initial weight	973.0	952.6	953.5	1013.8	973.2
Avg. weight end of feeding	1050.8	1042.8	1038.5	1060.5	1048.2
Avg. weight at weaning	1106.4	1095.3	1117.1	1132.9	1112.9
Avg. weight gain during supplemental period	77.8	90.2	83.3	46.7	75.0
Avg. weight gain entire period	133.4	142.7	163.6	119.1	139.7

The supplemented cows received 3 pounds supplement per head per day for 21 days. Cost of supplement was $3.10 per hundredweight. Thus it cost $1.95 to supplement each cow.

Table 18. **Breeding Record of Cows and Heifers on Spring Pasture
With and Without Supplemental Feeding.**

	1968		1969		1970		
	Cows	Heifers	Cows	Heifers	Cows	Heifers	Percent
Cows and heifers without supplement							
Settled 1st cycle	15	5	15	4	28	7	64.3
Settled 2nd cycle	8	1	12	3	5	1	26.1
Settled after 2nd cycle	4	1	2	1	3	-	9.6
Cows and heifers with supplement							
Settled 1st cycle	24	6	17	5	24	7	75.4
Settled 2nd cycle	4	-	10	2	5	-	19.1
Settled after 2nd cycle	3	-	2	-	1	-	5.5

Summary

Supplemental feeding failed to improve cow weight gains in 1970. This could be explained by the excellent crested wheatgrass pasture available, with energy apparently not lacking. Over the four year period, the supplemented cows have gained 16 pounds more per head during the supplemental feeding period.

The three year breeding record shows that 75.4 percent of the supplemented cows conceived during the first cycle while only 64.3 percent of those not supplemented conceived during the same period.

Approximately 10 percent more calves were conceived during the first cycle of breeding in the supplemented lot. These calves would average about 30 pounds more at weaning due to their added age. Also, approximately 4 percent less calves were dropped in the third cycle or later in the herd supplemented with pellets.

During this trial, the spring and summer pasture conditions at the Dickinson Experiment Station have been excellent, and thus the results obtained by supplemental feeding should be considered minimal.

Under conditions of poor spring grazing or when grazing native pasture too early the results could be expected to be more dramatic and profitable.