

**KEDLOR OR SOYBEAN OILMEAL AS A PROTEIN SOURCE  
FOR COWS WINTERED ON HAY AND STRAW**

Previous work at the Dickinson Experiment Station has shown that up to two-thirds of the hay in a wintering ration can be replaced by straw plus supplemental protein without affecting the production of the cow or the growth rate of the calf. When wintering cows are fed low quality feeds, it becomes essential to provide adequate protein so the rumen microflora can remain plentiful and active in the conversion of these low quality roughage feeds into usable energy.

Soybean oilmeal contains 44 percent protein and 78 percent total digestible nutrients. Kedlor is a biuret product similar to urea that contains 230 percent protein by no energy. Kedlor has a slower release of ammonia in the rumen and is therefore less toxic to feed to cattle than urea. Approximately 0.2 pounds of Kedlor will provide the same amount of nitrogen as will on pound of soybean oilmeal.

A trial was started in November, 1969 to compare 230 percent Kedlor with 44 percent soybean oilmeal as a protein supplement for beef cows wintered on a ration of 7 pounds crested-wheat hay and chopped wheat straw (free choice) plus minerals.

Table 19 shows the results of first year's trial. The average feed consumed and feed costs are shown in Table 20.

**Table 19. Comparing Kedlor With Soybean Oilmeal as a Source of Protein  
For Beef Cows Wintered on High Straw Rations.**

	Kedlor Lot		Soybean oilmeal Lot	
Number cows	40			
Days wintered	113			
Avg. weight, November 26, 1969	1077.9		1066.3	
Avg. weight, March 19, 1970	1116.2		1100.7	
Avg. gain	38.3		34.4	
Avg. daily gain	0.34		0.30	
Avg. calf birth weight	(36 calves)	76.0	(40 calves)	77.7

**Table 20. Average Ration Fed and Cost Per Cow Wintered on Either Kedlor  
or Soybean Oilmeal Protein Supplements.**

	Kedlor ration		Soybean oilmeal ration	
Chopped wheat straw	12.4 lbs.			
Crested-brome hay	7.0 lbs.			
Barley (rolled)	1.8 lbs. <sup>1/</sup>		2.0 lbs. <sup>2/</sup>	
Kedlor	0.2 lb.		-	
Minerals	0.2 lb.		0.2 lb.	
Soybean oilmeal	-		1.0 lb.	
Avg. cost per cow per day	19.4¢		19.7¢	
Cost per cow for 113 days	\$21.97		\$22.29	

## **Summary**

From on year's data, it would appear that 0.2 pounds of Keldor plus one pound of rolled barley would substitute for one pound of 44 percent soybean oilmeal.

There did not appear to be any adverse effects on calf birth weights or livability. At the prices used in this report, both rations were satisfactory from a cost standpoint.

Kedlor has poor palatability and could be likened to nitrogen fertilizer, in appearance and apparently taste. No adverse symptoms of toxicity were observed at the levels of Kedlor fed in this trial. Since Kedlor appears to provide the necessary protein (nitrogen) to supplement poor quality roughage, a mixture of Kedlor and minerals could possibly be self fed to cattle grazing late fall and winter pasture with good results. More work is planned to study this possibility.