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Richard C. Shane
South Dakota State University

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Winter Rations for Pregnant Beef Heifers

by

Richard C. Shane
Assistant Professor
of Economics

Common rations for over-wintering pregnant heifers are high in forages such as corn silage, alfalfa hay or wild hay. The question producers often ask is whether or not "cheaper" rations can be used for wintering pregnant heifers.

Over the winter of 1980, in a joint effort with F.R. Vigil of SDSU's Plant Science Department and Donald Huber, manager of the Pasture Research Center at Norbeck, SD, several different rations--including some that are not common--were fed to pregnant heifers (see Table 1). The heifers' beginning weights were about 800

pounds, and they were on feed for 100 days. All of the heifers were in good shape after the feeding experiment and no ration group experienced major calving problems. However, heifers fed the oat straw-based ration had two abortions and one calf born dead. It appears that if managers are considering a straw-based ration, supplementation with something other than just oat grain is required. A possible explanation for the calf losses is that a straw-based ration may be deficient in Vitamin A.

Since all of the rations produced heifers of similar quality, the cost of feed per head per day should be a deciding factor when planning ahead for the type of feed to put up for the winter. Using 1980 market value and 1976-1980 average prices for feed, it was determined that the corn and oat silage rations cost the least per head per day, with oat silage having a slight edge (see Figure 1). The oat straw-based ration was third in cost, but would involve a few additional cents if it were supplemented with

Table 1. Performance of Pregnant Heifers Fed Six Different Overwintering Rations. (December 12, 1979-March 21, 1980--100 Feed Days)*

	Ration					
	Brome-Alfalfa	Oat Hay	Oat Straw Oat Grain	Corn Silage	Oat Silage	Oat Grain Brome-Alfalfa
Number of Animals	14	18	15	16	16	17
Calves Born	14	18	12	16	16	16
Initial Full Wt, lb	803	808	788	813	816	816
Final Full Wt, lb	948	962	902	954	920	995
Average Daily Gain, lb	1.45	1.54	1.14	1.42	1.04	1.79
Average Daily Ration (lbs)						
<u>As Fed</u>						
Ration Base**	26.56	33.49	14.57	38.30	39.79	11.14
Oat Grain	2.85	2.20	9.59		2.15	
Soybean Meal				1.00		
Brome-Alfalfa						20.98
<u>Dry</u>						
Ration Base*	22.96	27.96	11.97	13.38	12.46	10.23
Oat Grain	2.66	1.72	8.68		2.08	
Soybean Meal				.89		
Brome-Alfalfa						18.24

*All calculations based on a single year's data.

**Indicates the principal component being tested, corresponds to what is indicated at the top of each column.

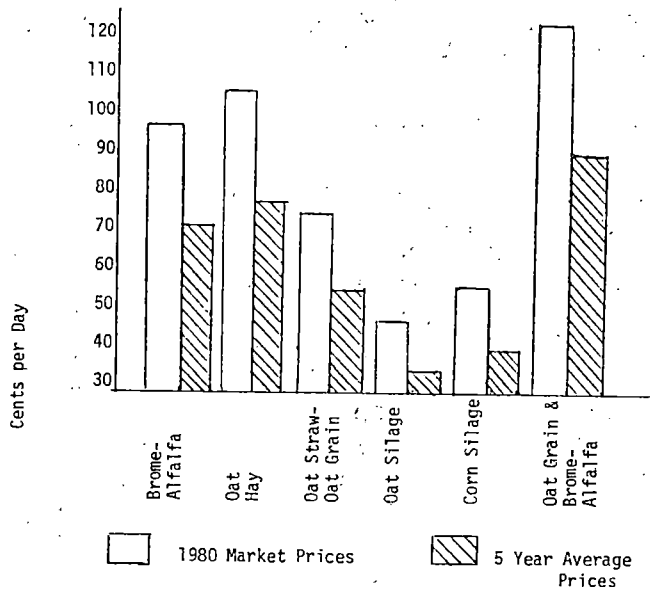


FIGURE 1. Feed Costs per Day

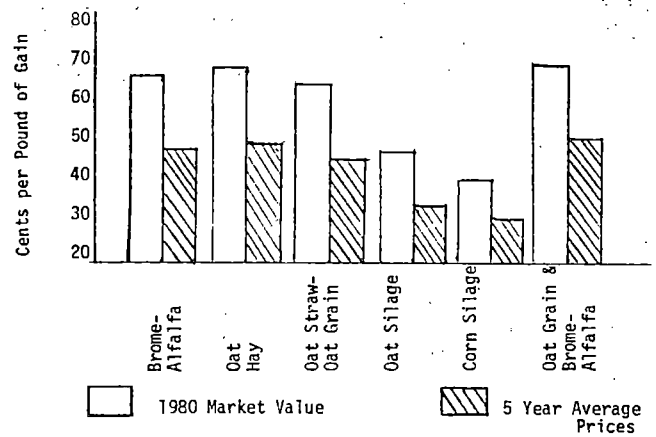


FIGURE 2. Feed Costs per Pound of Gain

Vitamin A: The results of this feeding test show the use of brome-alfalfa and oat grain to be an expensive way to winter heifers.

When feed costs per pound of grain were figured, the corn silage ration edged out the oat silage ration as the "cheapest" feed (see Figure 2). In addition, heifers fed corn silage averaged 1.42 lb. of grain per day, whereas those fed oat silage gained only 1.04 lb. per day. The hay-based rations were by far the most expensive.

Certainly every producer will not have all of these possible feeds available and everyone's costs will vary. However, managers feeding rations high in silage appear to have a distinct cost advantage over those feeding alfalfa-brome rations. The manager with both silage and hay producing capabilities should consider the possibility of more silage in the ration and the sale of hay. Of course, the relative prices of corn and hay will change over time and occasionally it may be cheaper to feed more hay and harvest less silage.

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