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## Value of Shelter for Growing and Finishing Cattle

L. B. Embry  
*South Dakota State University*

R. M. Luther

J. F. Fredrikson

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South Dakota State University  
Brookings, South Dakota

Department of Animal Science  
Agricultural Experiment Station

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Value of Shelter for Growing  
and Finishing Cattle

L. B. Embry, R. M. Luther and J. F. Fredrikson

In an experiment which involved a study of sulfur additions to supplements with high levels of urea fed with corn silage and with ground ear corn, four diet treatments were replicated with inside or outside feeding. Results for this aspect of the experiment are summarized for this report.

Procedures

Eight pens each with 15 head initially were used in the experiment. There were four outside pens which measured 56 ft. x 64 ft. The pens were equipped with fence-line feed bunks and an automatic, electrically heated waterer. Each pen had a 10-ft. concrete apron adjacent to the feed bunk and a concrete runway from this apron to the waterer. A bedding mound was provided with corn cobs and straw used for bedding as necessary.

Another four pens of cattle were fed inside an east-west oriented shed. This shed measured 38 ft. x 100 ft. and was divided into equal size pens with 25 ft. x 50 ft. outside pens for each to the north or south. Both inside and outside areas were paved with concrete, and the cattle were allowed free choice to inside and outside loafing and bedding areas. Only the inside area was bedded with straw as necessary.

The experiment consisted of a corn silage feeding phase of 124 days and a ground ear corn feeding phase of 189 days.

Results

Results of the corn silage phase from January 22 to May 26 are shown in table 1. Rate of gain was only slightly less for the outside cattle. They consumed more feed and had higher feed requirements (6%) than the inside cattle. For each 100 lb. of gain this amounted to 113 lb. of corn silage and 4 lb. protein supplement. At prices of \$8 per ton for corn silage and \$80 per ton for protein supplement, feed cost per 100 lb. of gain would have been increased by 61 cents during this phase of the experiment.

During the ground ear corn feeding phase from May 26 to December 1, steers in the outside pens gained faster than those fed inside the shed. They also consumed more feed and had slightly higher feed requirements (2.8%). This amounted to 28 lb. of ground ear corn but 5 lb. less protein supplement per 100 lb. of gain. At feed prices of \$24 per ton for ear corn and \$80 per ton for protein supplement, this would amount to about 24 cents more cost per 100 lb. of gain for the cattle fed outside.

Summary

Steers fed for 124 days (January 22 to May 26) on a corn silage diet gained only slightly less when fed in outside pens in comparison to steers fed inside

a shed with access to an outside paved area. The steers fed outside consumed more feed and required 6.0% more feed per pound of gain. This would have resulted in about 61 cents more feed cost per 100 lb. of gain using typical prices for the feeds.

When fed ground ear corn diets for 189 days (May 26 to December 1), steers fed outside gained at a slightly faster rate than the inside cattle. They consumed more feed and required about 2.8% more feed per pound of gain. Increased cost of the gains under conditions of this phase of the experiment would amount to about 24 cents per 100 lb. of gain at typical prices for the feeds.

Differences in rate of gain and feed requirements would not justify any large expenditure for type of housing involved under conditions of this experiment. Labor, bedding, condition of the cattle, manure disposal and problems likely to be encountered with winter storms and spring mud under the two systems should be taken into consideration.

Table 1. Inside or Outside Feeding for Beef Steers  
Fed Corn Silage Diets  
(January 22 to May 26, 1970 - 124 Days)

	Inside	Outside
Number of steers	60	60
Avg. init. wt., lb.	416	416
Avg. final wt., lb.	663	643
Avg. daily gain, lb.	1.90	1.83
Avg. daily feed, lb.		
Corn silage	34.89	35.66
Supplement	1.97	1.97
Feed/100 lb. gain, lb.		
Corn silage	1836	1949
Supplement	104	108

a shed with access to an outside paved area. The steers fed outside consumed more feed and required 6.0% more feed per pound of gain. This would have resulted in about 61 cents more feed cost per 100 lb. of gain using typical prices for the feeds.

When fed ground ear corn diets for 189 days (May 26 to December 1), steers fed outside gained at a slightly faster rate than the inside cattle. They consumed more feed and required about 2.8% more feed per pound of gain. Increased cost of the gains under conditions of this phase of the experiment would amount to about 24 cents per 100 lb. of gain at typical prices for the feeds.

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Feed/100 lb. gain, lb.		
Corn silage	1836	1949
Supplement	104	108

Table 2. Inside or Outside Feeding for Beef Steers  
Fed Ground Ear Corn Diets  
(May 26 to December 1, 1970 - 189 Days)

	Inside	Outside
Number of steers	58	56
Avg. init. wt., lb.	661	645
Avg. final wt., lb.	1044	1063
Avg. daily gain, lb.	2.08	2.21
Avg. daily feed, lb.		
Ground ear corn	15.21	16.77
Supplement	1.95	1.97
Feed/100 lb. gain, lb.		
Ground ear corn	731	759
Supplement	94	89