Interval of Feeding Supplemental Protein to Range Beef Cows

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Cattlemen recognize the need for providing supplemental protein during the winter months for cattle grazing dry native grass. A generally accepted practice is to feed twice the daily allowance every other day in order to reduce the labor necessary. Early tests at Oklahoma and Kansas have indicated that such a practice is satisfactory. Another practice which will result in a saving of labor is the self-feeding of mixtures of salt and protein supplement or other feeds with the salt serving as the regulator of consumption.

Weekly feeding of the total ration for sheep in certain sections of Australia during a drouth has satisfactorily furnished a subsistence ration for sheep. Currently, there is considerable interest concerning whether or not range beef cattle can be given supplemental feed at intervals as long as one week without adversely affecting production.

Nebraska workers have shown that heifer calves, weighing about 400 lbs. at the start of the test, gained satisfactorily during a 141-day winter feeding season when fed an average of 4 lbs. of alfalfa hay per head daily as a supplement to dry range grass whether the feeding interval was daily, twice weekly, or weekly. At the Texas station, heifer calves were fed ground hegari stover and cottonseed hulls as the roughage free-choice and hand-fed an average of 14 lbs. of cottonseed cake per head at three feeding intervals. The 111-day gains for calves fed 2 lbs. daily, a total of 14 lbs. in three equal feedings, and 7 lbs. twice weekly were 165, 152, and 170 lbs., respectively.

In 1960-61 at the Oklahoma station, yearling heifers were fed an average of 2 lbs. of pelleted cottonseed meal per head daily at intervals of two, four, and six days. The 137-day winter losses were 2, 8, and 26 lbs. for those fed 4 lbs. every two days, 8 lbs. every four days, and 12 lbs. every six days, respectively.

Preliminary results using spring-calving cows are presented here.

Procedure

Sixty two-year-old grade Hereford cows were divided into three lots of 20 on November 13, 1961 and allowed to graze the dry native grass at the Lake Blackwell experimental range area. They were fed an average of 2½ lbs. of pelleted cottonseed meal per head per day. Those in Lot 1 were fed an average of 5 lbs. per head every other day, those in Lot 2 were fed 10 lbs. every fourth day, and those in Lot 3 were fed 15 lbs. every sixth day. A mineral mixture of 2 lbs. salt and 1 lb. steamed bonemeal was available in all pastures.

Results

A summary of the weight gains is given in Table 1. In the 81-day period between November 13 and February 3, which was the date of the last weighing before the first calves were born, the cows fed an average of 5 lbs. of pelleted cottonseed meal every other day lost 100 lbs. per head. When the feeding interval was increased to four days (Lot 2) the cows lost only 59 lbs. When fed every six days (Lot 3) the loss was 95 lbs. Although there was considerable variation among the cows, the losses were greatest for those fed every two days and those fed every six days. The least loss was for those fed every four days. Weight losses of the cows during the remainder of the winter, weight gains during the summer, and weaning weights of calves will be available for use as measures of the value of the feeding system in October, 1962. Recommendations should not be made on the basis of the preliminary data available at this time.

Table 1.—Weight Gains of Cows Fed Pelleted Cottonseed Meal at Two, Four, and Six-Day Intervals (Preliminary Results 1961-62).

Lot Number Interval Between Feedings Pounds Cottonseed Meal per Head per Feeding	1 Two Days 4	2 Four Days 8	3 Six Days 12
Number of cows per lot	20	20	20
Average weight per cow, lbs.			
Initial 11-17-61	961	971	991
Winter 2-3-62	861	912	896
Gain (81 days)	—100	—59	—95

Fattening Cattle on "All Barley" Rations in Oklahoma

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Drylot fattening of steers and heifers has increased sharply in Oklahoma to the point where we now feed about 160,000 head yearly. Two types of feeding operations are most important to Oklahoma; the large commercial feedlot, with a capacity of over 1000 head, and the small farmer-feeder. The large feeder specializes in cattle feeding and usually purchases all grain and roughage. The small feeder makes use of his home-grown feeds, but may work through a "grain bank" where his feed can be stored and processed. Some feeders have a complete mixed ration from a local feed mill delivered to the self-feeder.