

EXPERIMENTAL LAMB FEEDING TEST
(First portion of feeding period)
February 2, 1951 to March 30, 1951

Lot number	1	2	3	4	5	6
Ration fed	Corn Alfalfa Hay	Corn Alfalfa Hay	Corn Alfalfa Bicarbonate of Soda	Corn Pelleted Alfalfa	Corn Pelleted Alfalfa	Corn Pelleted Alfalfa Bicarbonate of Soda
Ratio	1 4	1 5.5	1 5.5	1 4	1 5.5	1 5.5
Crude Fiber to T. D. N.	1 4	1 5.5	1 5.5	1 4	1 5.5	1 5.5
Feed per lamb daily						
Corn	1.37	1.62	1.62	1.37	1.62	1.62
Alfalfa	1.45	1.02	1.02	1.45	1.02	1.02
Soda (ounces)	0	0	.2	0	0	.2
Daily gain per lamb	.40	.38	.41	.42	.32	.35

FACTORS INFLUENCING SALT REQUIREMENTS OF SHEEP

Preliminary Report on the Effects of Withholding Salt and the Effects of High and Low Potassium-Sodium Ratios Upon the Feedlot Performance of Lambs.

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Many of the feeder lambs coming into Kansas have not had access to salt for several weeks and some of the lamb feeders do not add salt to their lamb fattening rations because of the possible losses in getting the lambs again accustomed to eating salt. The experimental studies, initiated this year, should indicate whether such a practice results in poorer feedlot performance. The studies should also lead to a clearer understanding of the physiological function of salt in the sheep's diet.

EXPERIMENTAL PROCEDURE

Fifty-four feeder lambs were divided into four lots and treated according to the following plan.

Lot 1 (17 lambs)—Basal ration (1.25 pounds corn and 1.45 pounds chopped alfalfa hay).

Lot 2 (17 lambs)—Basal ration plus salt ad libitum.

Lot 3 (10 lambs)—Basal ration plus potassium bicarbonate sufficient to provide a potassium-sodium ratio of 60:1.

Lot 4 (10 lambs)—Basal ration plus sodium bicarbonate sufficient to provide a potassium-sodium ratio of 2:1.5.

At the conclusion of the test mineral balance studies with three lambs from each lot will be conducted. Balance of sodium, potassium, and chlorine in the lambs from each of these groups will be determined. Blood samples will be taken and analyzed for sodium, potassium, magnesium, calcium, chlorine, bicarbonate, plasma protein, and hemoglobin.

OBSERVATIONS

After 67 days of experimental treatment the following results are indicated:

1. The largest average daily gains (0.33 pound) are shown by the lambs in Lot 2 receiving the basal ration plus salt. The lambs in Lot 1, receiving the basal ration without salt, have gained 0.29 pound per head daily. They have consumed the same amount of corn as the lambs in Lot 1, but have eaten a little less alfalfa hay.

2. The exact potassium-sodium ratios initially planned in Lots 3 and 4 could not be attained. Lot 3 received a potassium-sodium ratio of 57:1 and Lot 4 a potassium-sodium ratio of 2:1.5. Lot 4 gained an average of 0.30 pound per head daily, while Lot 3 gained only 0.23 pound per head daily during the first 67 days of the experimental feeding period. The salt consumption ad libitum in Lot 2 has been 0.04 pound per head daily.

Project Commercial No. 65

Performance of Steers Sired by Bulls of Different Sizes
A Comparison of Hereford Steers Sired by Small, Medium,
and Large Size Bulls

A. D. Weber, D. L. Mackintosh, D. L. Good, E. F. Smith

The Kansas, Oklahoma, and Ohio Agricultural Experiment Stations co-operated in this study, which was supported by grants from the American Hereford Association. The project involved comparisons of steer