

1 p.m.

Awards to Beef Production Contest Winners, Tommy Benton, Agricultural Commissioner, Chamber of Commerce, Kansas City, and Extension Animal Husbandry staff

1:50 p.m.

Review of Experiments (continued), Animal Husbandry staff

2:40 p.m.

Questions

3 p.m.

Adjournment

6:30 p.m.

Banquet for visiting stockmen and ladies, Kansas State Union, by Block and Bridle Club

Honoring Distinguished Livestock Men

FOR THE LADIES

Friday, May 1, 1964

6:30 p.m.

Dinner, Gillett Hotel (Make reservations with Mrs. R. F. Cox, 421 Edgerton, Manhattan)

Presiding, Mrs. Walter Broadie, Ashland, Kansas, President, Kansas Cow Belles

Saturday, May 2, 1964

9:30 a.m.

Coffee, Justin Hall (Home Economics Building), Animal Husbandry ladies

10:30 a.m.

Demonstrations, Students, College of Home Economics, Kansas State University

12 noon

Lunch, Animal Husbandry Arena

6:30 p.m.

Block and Bridle Banquet (See general program)

Sheep

Heritabilities, Genetic and Phenotypic Correlations between Carcass and Live Animal Traits in Sheep.

C. S. Menzies, J. D. Wheat, D. L. Mackintosh, and D. H. Kropf

Data were collected on 94 lambs of known breeding born the fall of 1962. The lambs were from ewes in the original fine-wool flock sired by eight unrelated Suffolk yearling rams. This was the ewes' fourth lamb crop.

All lambs were creep fed a pelleted ration consisting of 45% dehydrated alfalfa, 45% sorghum grain, 7.5% molasses, and 2.5% soybean oil meal. The ration contained 10 to 15 mgs. Aureomycin per pound. Lambs were weaned and weighed at 60 days of age. When they weighed approximately 95 pounds, they were sheared and these measurements obtained: length of right fore cannon, circumference of right fore cannon, length of rump, width at second lumbar vertebra, and circumference of right rear leg. All lambs were then slaughtered and various quality factors influencing carcass grade were scored by a representative of the Federal Grading Service. Loin eye area, fat thickness, and weight of trimmed wholesale cuts were obtained; the racks were dissected into fat, lean, bone, overflow and intercostal muscle, and the loins were sent to the home economics department of the Agricultural Experiment Station for additional analyses.

Twelve Hampshire ram lambs were obtained at approximately 3 months of age and performance tested the spring of 1962 (see 1963 Feeders' Day Report). Ten of the rams were used on the ewe flock during the summer of 1963; the resulting lambs are being slaughtered this spring. One half of the male lambs in each sire group were left as intact males. Lambs are otherwise being handled similar to the 1962-63 lamb crop.

Eleven more Hampshire ram lambs were obtained when they were approximately 3 months of age from breeders during the spring of 1963. After a two-week adjustment period the rams were sheared and individually self-fed the same ration used to creep feed crossbred lambs. After 100 days, when all were fed together (1.5 pounds grain and alfalfa hay), they were again placed in individual pens where they were self-fed a pelleted ration of 65% dehydrated alfalfa, 25% sorghum grain, 5% soybean meal and 5% molasses, for another 90 days. These rams will be used to breed ewes during the summer of 1964.

Results and Discussion

Uncorrected data for 1962-63 lambs sired by Suffolk rams are reported in Table 1. Performance data on ram lambs tested during 1962 were reported in 1963 Feeders' Day Report and data on rams tested during 1963-64 are reported in Table 2.

There was a variation of 23 days between sire group in age of lambs at slaughter and a variation of up to .15 square inch in loin eye area.

Hampshire ram lambs made more efficient gains during the first 90 days than during the last period. They were carrying considerable finish when started on the last test period. Rate and efficiency of gain varied widely but correlation between performance during first and last 90-day periods appears to be small.

Table 1
Uncorrected¹ data for 1962-63 lambs sired by 8 Suffolk rams.

Ram no.	1	2	3	4	5	6	7	8
Wt. of rams	197	178	317	192	150	206	257	138
No. of lambs	15	10	14	9	9	12	14	11
Av. days age at slaughter	148.8	150.4	140.3	134.7	143.0	146.7	137.8	127.4
Av. slaughter wt., lbs.	94.9	95.8	97.3	94.2	96.1	96.8	96.4	97.0
Av. loin eye area	2.17	2.25	2.26	2.19	2.29	2.27	2.14	2.19

1. Not corrected for sex or type of birth.

Table 2
Performance data on Hampshire rams tested during 1963-64.

Ram	Birth wt., lbs., type of birth	Lbs. gain 60 days 6/3-9/3	Lbs. gain per cent. gain	Lbs. gain 100 days 9/1-12/10	Lbs. gain 90 days 12/10-3/10	Lbs. feed per cent. gain	Wt. 2/10, lbs.	Wt. per day age, lbs.
Abbott 515 ¹	138	35	1011.4	38	42	1399.5	209	.50
Abischwede 12	118	35	1005.1	30	33	1396.9	191	.48
Cox 1698	11.3T	53	644.9	30	33	1542.4	188	.44
Eberle 521	118	34	1041.2	33	46	1080.4	191	.49
Eberle 530	138	45	702.0	33	53	1063.8	215	.60
Gilmore 6323	148	41	847.3	32	48	1141.7	209	.50
K.S.U. 6312	7.8T	40	816.2	27	42	1569.0	215	.54
K.S.U. 6328	11.58	41	866.2	38	40	1257.5	214	.52
Newell 214	10T/8	47	771.3	32	57	978.9	223	.55
McCosh 339	138	33	829.2	38	74	1032.4	233	.63
McCosh 378	118	40	990.9	41				

1. S = single; T = twin, and T/S means born twin, raised single.

2. Died from obstructed intestine 1-1-64.

Animal Fat in Fattening Lamb Rations

C. S. Menzies

Animal fats often are added in small amounts (1-2%) to mixed commercial feeds primarily to reduce dustiness and to lubricate machinery. High-energy poultry rations often contain higher levels of animal fat. This test was conducted to obtain more information on fat's value when added to fattening lamb rations.

Experimental Procedure

Forty-two weaned ewe and wether Rambouillet and Suffolk x Rambouillet crossbred lambs were sheared and divided into two lots. Lambs were self-fed 3/16" pelleted rations. The ration fed Lot 1 consisted of 35% sorghum grain, 45% alfalfa hay, 10% soybean meal, and 10% stabilized animal fat. Lot 2 was fed a ration containing 45% sorghum grain, 45% alfalfa hay, and 10% soybean meal. Fat used was chiefly beef tallow rendered by the meats division of the Animal Husbandry Department. It had been stabilized by adding an antioxidant. Pellets were made by the University feed mill.

There was considerable variation in age and weight (22 pounds to 90 pounds) of lambs at the beginning of the test, June 12. Twenty-three lambs were marketed July 8 after 25 days on feed. Remaining lambs were fed until July 13.

Results and Discussion

Results are presented in Table 3. Lambs fed the ration containing fat ate less, gained just as fast as control lambs, and consequently made more efficient gains (21% less feed required per cwt. gain). There were no digestive disturbances due to added fat. However, this was a very short-term feeding trial (28 days).

Table 3
Results from adding animal fat to lamb fattening rations.

Treatment	10% fat	Control
Days on feed	28.1	28.4
No. of lambs	21	21
Av. initial wt., lbs.	63.1	64.7
Av. final wt., lbs.	76.7	78.1
Av. total gain, lbs.	13.6	13.4
Av. daily gain, lbs.	.482	.471
Daily feed per lamb, lbs.	2.53	3.14
Av. feed per cwt. gain, lbs.	524.6	666.2
Av. feed cost per cwt. gain ¹	\$12.06	\$12.46

1. Feed prices used were: ground sorghum grain, \$1.75 per cwt.; animal fat, 6¢ per lb.; ground alfalfa hay, \$25 per ton; and soybean meal, \$74 per ton. Mixing and pelleting cost, \$3 per ton. With these charges the control pellet cost \$37.40 per ton and the pellet containing 10% fat, \$45.90 per ton.

Effects of Heating and Pelleting of Rations and of Hay Particle Size on Lamb Performance and Ratio of Ruminal VFA (Project 236).

C. S. Menzies, D. Richardson, N. A. Ansari, R. F. Cox, C. W. Deyoe, and H. B. Pfost

Recent research indicates that heat treatment of concentrates and roughages and particle size of feed ingredients may affect cattle and sheep feedlot performance by changing the ratio of acetic and propionic acids produced in the rumen. Previous work at this station showed that pelleting complete lamb rations increased gain and improved feed efficiency. Both increased feed consumption of pelleted rations and improved performance from pelleting, with feed consumption nearly equal, resulted