

twin heifers, while a high degree of fatness induced in mature cows had little influence on productivity in one trial. It should be emphasized that these results are preliminary and based on very few animals. Conclusions are not justified until further results are obtained.

Aureomycin Studies with Fattening Lambs in Dry Lot

Robert L. Noble, Kenneth Urban, Richard Pittman,
and George Waller, Jr.

Previous work (M.P. 51) with fattening lambs revealed a 10-15 increase in gain and feed efficiency by the addition of aureomycin to the ration. However, no work has been reported concerning the effects of aureomycin by other means of administration. This report concerns the effects of aureomycin on rate of gain and feed efficiency when used as a feed ingredient, mixed with the salt, or added to the water.

Procedure

Sixty grade Western feeder lambs were used in this experiment. These lambs were the heavy end of the 600 lambs purchased. The average initial weight after shearing was from 88 to 90 pounds. The preliminary treatment was the same as reported in the pasture study (Fattening trials with feeder lambs on small grain pasture).

The treatments used were as follows: (15 lambs per lot)

- Lot 1. Basal ration—45 percent milo, 5 percent molasses, 50 percent alfalfa hay, ground and mixed.
- Lot 2. Basal plus 20 grams of aureomycin per ton of feed; to supply approximately 30 milligrams of aureomycin per lamb per day.
- Lot 3. Basal ration plus aureomycin in salt; (3 pounds of Aureofax 10 mixed with 37 pounds of salt) to supply approximately 30 milligrams of aureomycin per lamb daily.
- Lot 4. Basal ration plus soluble aureomycin in water; to supply approximately 30 milligrams per day.

All lambs were implanted with a 6 milligram stilbestrol implant*; salt was available to the lambs of all lots.

Individual weights following an overnight period without access

* The stilbestrol was supplied by Pfizer and Company.

to feed and water were taken at the beginning and at the end of the trial. The lambs were sold on the Oklahoma City Market, January 6. Marketing data included shrinkage and selling price. Unfortunately, carcass grades and yield could not be obtained. Average weight gains, marketing data, and financial results are shown in Table 1.

TABLE 1. Aureomycin studies with fattening lambs in dry lot (42 days, November 25, 1958-January 7, 1959).

Treatment	Basal	Basal + aureomycin in feed ¹	Basal + aureomycin in salt ¹	Basal + aureomycin in water ¹
No. lambs/lot	15	15	15	15
Lot No.	1	2	3	4
Initial wt.	88.6	89.6	89.3	88.0
Final wt.	101.9	107.4	109.9	102.0
Av. daily gain	.32	.42	.49	.33
Av. daily ration mixture	4.0	4.1	4.1	3.7
Lbs. of feed/lb. of gain	12.5	9.7	8.5	11.5
Financial Results (\$)				
Av. purchase price/cwt. delivered ²	23.1	23.1	23.1	23.1
Av. selling price/cwt.	17.5	17.5	17.5	17.5
Net return on wool ³	.41	.41	.41	.41
Total value per lamb ⁴	17.61	18.66	18.84	17.91
Initial cost per lamb	20.47	20.70	20.63	20.33
Misc. cost ⁵	1.00	1.00	1.00	1.00
Feed cost per lamb ⁶	3.17	3.29	3.31	2.96
Loss per lamb	7.03	6.33	6.20	6.41
Shrinkage to mkt. (lbs.)	3.6	3.1	4.6	2.0

¹ Lot 2, 20 grams of aureomycin per ton of feed; Lot 3, 3 lbs. of Aureofax 10 mixed with 37 lbs. of salt; Lot 4, soluble aureomycin in water to supply approx. 30mg./day.

² 22¢ F.O.B. Roswell, N. M.; buying charges and transportation, 92¢ each or \$1.10 per cwt.

³ 4.54 lbs. of wool per lamb @ 42¢ per lb., which includes gov. incentive=\$1.91 minus 50¢ for shearing and \$1.00 for price paid for wool (22¢ x 4.54).

⁴ Includes net wool return and deducts actual shrinkage to market.

⁵ Includes 50¢ per lamb for marketing, 25¢ per lamb for vaccinating and drenching, and 25¢ per head for transportation to market.

⁶ Mixed ration, \$37.20 per ton, which includes cost of grinding and mixing (\$6 per ton), but does not include cost of aureomycin.

Observations

The average daily gains of the lambs of all four lots were satisfactory (.32, .42, .49, and .33 pound per lamb daily for Lots 1, 2, 3, and 4 respectively). Aureomycin as a feed ingredient increased average daily gain by .1 pound, and with aureomycin in salt the increase was .17 pound. The addition of soluble aureomycin to the drinking water did not improve gains.

The feed required per cwt. gain was high for all lots—perhaps due to the heavy initial weight. However, aureomycin increased feed efficiency in each case. The response was the greatest when aureomycin was added to the salt or mixed with the food.

All lots of lambs lost from \$6.00 to \$7.00 per head due to negative margin of 5½ cents per pound.

Wheat Pasture Studies with Western Feeder Lambs

Robert L. Noble, Kenneth Urban, Richard Pittman,
and George Waller, Jr.

During years of adequate rainfall, thousands of lambs are fattened on wheat pasture in Oklahoma and adjoining areas. Lambs grazing lush wheat pasture make excellent gains at a much lower cost per unit of gain than can be obtained in the feed lot.

Recent work at the Ft. Reno Station indicates that during most years, lambs grazing wheat pasture will return as sizeable profit, but perhaps the most important aspect in the utilization of wheat pasture or other fall and winter pastures is not the profit per animal unit but how much return can be expected per acre of pasture.

Previous Work

Previous work at the Ft. Reno Station (M.P. 34, M.P. 45, and M.P. 51) indicates that a net gain of approximately 170 pounds per acre can be expected over a 90-day grazing period using a stocking rate of 5 lambs per acre. With a break even or positive margin, a net return of \$25 to \$35 per acre of wheat pasture could be expected.

Feeding one-half to three-quarters pound of milo per lamb daily during the entire grazing season has increased gains slightly and improved carcass grade and yield. But in only one year out of three have the supplemented lambs returned more profit than those receiving only wheat pasture. The increased gains have not been enough to offset the additional cost of feed unless the supplemented lambs are sold for \$1.00 to \$1.50 more per cwt.

In observing the conditions of the wheat pasture at the end of the grazing season, it was felt that the stocking rate could be increased if supplemental feed was used. In this year's work, a stocking rate of 10 lambs per acre with and without supplement (1 pound of milo per lamb, daily) was compared to 10 lambs per acre with and without supplement.