

Wheat Pasture Studies with Western Feeder Lambs

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Thousands of lambs are fattened on wheat pasture in Oklahoma and adjoining areas during years that it is available. Lambs grazing lush wheat pasture make excellent gains at much lower cost per unit of gain than can be obtained in the feed lot. However, good wheat pasture is available only in years of adequate rainfall. Under conditions of moderate wheat pasture, lambs may not carry enough finish to bring the top slaughter price. Thus, the producer who utilizes wheat pasture needs information on feeding and management practices which are best adapted to the type of season encountered.

To obtain information on these problems, a study was initiated at the Ft. Reno Station in the fall of 1952. During the past six years, wheat pasture has been available for grazing three years.

Procedure

Two hundred and fifty, grade Western feeder lambs were used in this study. The preliminary treatment of these lambs was discussed in the report, "Trucking versus Rail Shipment of Lambs."

The lambs were started on their experimental rations October 31.

The treatments used were as follows: fifty lambs per lot; one-half the lambs of each lot implanted with 6 mg. of stilbestrol.*

- Lot 1. Wheat pasture (10 acres), no supplemental feed.
- Lot 2. Wheat pasture (8.7 acres) and combine maize (1.3 acres).
- Lot 3. Wheat pasture (10 acres), only for the first 64 days, with $\frac{3}{4}$ pound of milo per lamb daily the last 24 days.
- Lot 4. Wheat pasture (10 acres) plus $\frac{3}{4}$ lb. milo per lamb daily the entire period (88 days).
- Lot 5. Combine maize (3.3 acres, planted July 15) and volunteer wheat. This provided the only feed for the first 34 days; during the remaining 54 days, the lambs grazed this 3.3 acres of pasture during the day and were allowed access to a self-feeder at night. The mixture used was 45% milo, 5% molasses, and 50% alfalfa hay.

A mineral mix of 85% salt, 15% steamed bone meal was available to the lambs of all lots. The $\frac{3}{4}$ pound of milo per lamb for Lot 3 and the $\frac{3}{4}$ lb. for Lot 4 were fed once daily in the evening.

Individual weights following an overnight period without access to feed and water were taken at the beginning and the end of the trial. The lambs were sold on the Oklahoma City market, January 28. Marketing data included shrinkage, selling price, carcass grade, and yield.

* The Stilbestrol implants were supplied by Norden Laboratories, Lincoln, Nebraska.

Table 1.—Weight gains, rations fed, and financial results obtained with fattening lambs on wheat pasture.
(88 days, October 31, 1957 — January 31, 1958)

Treatment	W. P. (10 acres)	W. P. (8.7 acres) maize field (1.3 acres)	W. P. (10 acres) + ¾ lb. milo last 24 days	W. P. (10 acres) + ¾ lb. milo entire period	3.3 acres of com- bine maize + volunteer wheat pasture for 34 days then self-fed mixture
Lot No.	1	2	3	4	5
No. lambs/lot	50	50 ¹	50	50	50 ¹
Initial wt.	70.2	70	69.9	69.8	69.9
Av. daily gain	.39	.36	.37	.39	.40
Financial Results (\$)					
Av. selling price/cwt.	24	24	24	24	24
Total value/lamb minus shrink	24.28	23.76	23.76	24.19	24.43
Initial cost ²	17.05	17.01	16.98	16.96	16.98
Miscellaneous cost ³	.75	.75	.75	.75	.75
Feed cost/lamb ⁴	1.55	1.55	1.86	2.85	4.03
Profit per lamb ⁵	4.93	4.45	4.17	3.63	2.67
Carcass grade	3.7	4	3.7	4.3	3.6
Dressing percentage	48	48.9	47.3	49.5	46.2

¹ Two lambs in Lot 2 and 1 lamb in Lot 5 died; reason unknown.

² Initial cost; \$21 cwt. F.O.B. Roswell; \$24.3 on experiment, which includes freight, commission, feed and death loss. (15 lambs out of 500 died before experiment began)

³ Includes cost of drenching, vaccinating, transportation to market, and marketing costs.

⁴ Wheat pasture charge of 50¢ per lamb per month; also includes cost of supplemental feeds.

⁵ Does not include death loss after experiment began. (3 lambs) Also does not include Gov. incentive in wool.

⁶ Carcass grade—Numerical values of 6, 5, 4, 3, 2, and 1 were assigned to the grades of Av. Choice, Low Choice, high good Av. good, Low good, and high utility; respectively.

Table 2.—The effects of Stilbestrol implant on feed lot performance, yield, and carcass grade

Treatment	W. P. (10 acres)		W. P. (8.7 acres) maize field (1.3 acres)		W. P. (10 acres) + ¾ lb. milo last 24 days		W. P. (10 acres) + ¾ lb. milo entire period		3.3 acres of combine maize + volunteer wheat pasture for 34 days then self-fed mixture ¹	
	without	with	without	with	without	with	without	with	without	with
No. of lambs	25	25	25	25	25	25	25	25	25	25
Total gain (lbs.)	30.4	38	33.3	31	30.6	34.3	30.6	37.8	31.2	38.9
Percentage Increase		+25		- 7.4		+12		+24		+25
Yield (%) ²	47.4	47.7	49.2	48.7	47.5	47.0	49.8	49.2	46.3	46.0
U. S. Carcass Grade ³	3.8	3.6	3.8	4.2	3.8	3.6	4.5	4.1	3.7	3.5

¹ Mixture used: 45% milo, 5% molasses, 50% alfalfa hay, ground and mixed.

² Yield—Hot carcass weight—2% + ave. market weight.

³ Carcass grade—Numerical values of 6, 5, 4, 3, 2, and 1 were assigned to the grades of ave. choice, low choice, high good, ave. good, low good, and high utility; respectively.

Average weight gains, marketing data and financial results are shown in Table 1. The effects of stilbestrol are shown in Table 2.

Observations

The average daily gains of all lambs grazing wheat pasture were very satisfactory (.39, .36, .37, and .39 pound per lamb daily for Lots 1, 2, 3, and 4, respectively). Wheat pasture alone gave slightly better results than a combination of wheat pasture and a maize field (compare Lots 1 and 2). Supplemental feeding (Lot 1 vs. Lot 3 or 4) did not increase gains. However, the lambs supplemented with $\frac{3}{4}$ pound milo per head daily during the entire period were fatter as indicated by carcass grade and dressing percentage.

The wheat pasture was grazed at a rate of 5 lambs per acre. On the basis of total gains of the Lot 1 lambs (1710 pounds) minus actual shrink to market (155 pounds) times market price (\$24/cwt.), the wheat pasture was worth approximately \$37 per acre during the 88-day grazing season.

The lambs of Lot 5 (50 lambs grazed 3.3 acres of combine maize with volunteer wheat pasture for 34 days, and then self-fed on this pasture 45% ground milo, 5% molasses, and 50% ground alfalfa hay for the remaining 54 days) also made very satisfactory gains. During the first 34 days, the lambs gained 8.5 pounds per lamb or .25 pound per day. During the remaining 54 days on pasture, the lambs consumed 2.5 pounds of the mixture per head daily and gained .47 pound per lamb per day. On the basis of the total gains during the first 34 days, this 3.3 acres returned approximately \$30 per acre. The pasture was of some value during the remaining 54 days since only 5.3 pounds of mixture were required per pound of gain.

The Effects of Stilbestrol Implants

The results are shown in Table 2. Stilbestrol increased gains in four out of five treatments. In three treatments, the increase approximated 25%. No explanation can be given why stilbestrol depressed growth rate in Lot 2. Most of the growth response for Lots 1, 3, 4, and 5 occurred during the first 60 days. Stilbestrol implants decreased dressing percentage very slightly in four lots out of five treated. Carcass grade was also lowered slightly (less than $\frac{1}{3}$ grade) by stilbestrol implants in four lots out of five. Stilbestrol as an implant has not been approved by the Federal Food and Drug Administration for use with lambs.

Trucking Versus Rail Shipment of Feeder Lambs

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During the past five years, it has been noted that feeder lambs shipped via rail from the range area of Texas or New Mexico to the