Summary

In two pilot trials, weaner calves out of two-year-old dams which had been wintered at either Low or High feed levels have been fattened out in drylot to study the effects of pre-weaning nutritional levels on subsequent gains and carcass composition.

Results from the first trial with heifer calves, which differed on the average by 121 lbs. at weaning, show a tendency for Low plane calves to recover in the 10-month post-weaning period. At 17 months of age, however, the yearling heifers still differed by 85 lbs. in body weight. Live animal and carcass measurements showed that total recovery had not been achieved. At this age cattle out of Low plane dams lacked 28 lbs. in lean, 26 lbs. in fat, and 11 lbs. in bone tissues, as compared to those from dams more liberally fed. In the first trial, the rate of gain during the fattening period favored calves out of Low Plane dams. Feed efficiency in both trials to date has been better for the Low reared calves.

To the stockman who purchases calves at weaning, a retarded plane of nutrition may not be detrimental in terms of expected gains and efficiency of feed conversion, although a long period until slaughter may be necessary. But to the producer who winters and then feeds out his own calves, the advantage of a better plane of nutrition prior to weaning in terms of carcass weight produced is obvious. Also, in the development of maximum lean in the carcass of the beef animal, it is apparent that low planes of nutrition during fetal life and prior to weaning may exert an effect far beyond the pre-weaning period.

Fattening Lambs During the Summer

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

Many Oklahoma lambs, born during February and March, fail to reach market weight by the middle of June and are sold as feeder lambs. Due to the heat during the summer months, few of these lambs are fattened. Selling these lambs as feeder lambs or carrying them over until fall for feeding as quite an economic loss to the state. With the ration improvements in recent years, it was considered desirable to test the feasibility of feeding lambs in dry-lot during the summer.

Procedure

Crossbred lambs (Dorset, Hampshire, or Suffolk x Rambouillet) born in January and February were used in this experiment. The lambs were weaned on April 17 and grazed on small grain pasture until the beginning of the fattening trial. These were the slow gainers out of approximately 100 winter-born lambs.

On July 7, 15 lambs were allotted to each of the following dry-lot treatments:

Lot 1. 45 percent ground milo, 5 percent molasses, and 50 percent ground alfalfa hay.

Lot 2. Same ration as fed Lot 1, pelleted.

Lot 3. 60 percent ground milo, 5 percent molasses, and 35 percent ground alfalfa hay.

Lot 4. Same ration as fed Lot 3, pelleted.

Table 1.—Weight Gains, Rations Fed, and Financial Results Obtained With Fattening Lambs Self-fed in Dry-lot.

Treatment:	45% milo 5% molasses 50% alf. hay ground & mixed	Same as 1 Pelleted	60% milo 5% molasses 35% alf. hay ground & mixed	Same as 3 Pelleted
Lot Number:	1	2	3	4
No. of lambs per lot	15	15	15[1]	15
Initial weight	66.3	66.5	66.7	67.5
Avg. no. days on feed	69.0	63.0	64.0	67.0
Average daily gain	.44	.53	.49	.47
Avg. daily feed intake	2.36	3.29	2.94	2.98
Feed per lamb	163.0	207.0	188.0	200.0
Lbs. feed per lb. gain	5.40	6.23	6.12	6.98
Financial results				
Avg. purchase price ¢	13.0	13.0	13.0	13.0
Avg. selling price ¢	16.5	16.5	16.5	16.5
Total value per lamb $	15.96	16.52	16.12	16.34
Initial cost per lamb $	8.62	8.65	8.67	8.71
Feed cost per lamb $	3.39	4.82	3.93	4.66
Misc. cost $[2]	1.00	1.00	1.00	1.00
Profit per lamb $	2.95	2.05	2.52	1.97

[1]One lamb died, cause unknown.
[2]Includes cost of transportation, marketing, and drenching.

Table 2.—The Effect of Shearing Lambs During the Summer on Rate of Gain

Lot Number	1		2		3		4	
	Sheared	Not Sheared	Sheared	Not Sheared	Sheared	Not Sheared	Sheared	Not Sheared
No. of lambs per lot	7	8	8	7	7	8	8	7
Avg. daily gain	.50	.39	.56	.50	.59	.40	.54	.39

All rations contained 2 lbs. of Aurofax 10 and 10 lbs. of salt per ton. Approximately one-half of the lambs of each lot was sheared on the first day of the trial. The lambs were started on feed gradually and turned loose on self-feeders after five days.

During the first week of the trial all the lambs were drenched with phenothiazine and implanted with 3 mg. of stilbestrol.

Individual weights following an overnight period without access to feed and water was taken at the beginning and at the end of the trial. Intermediate weights without shrinking the lambs were taken at approximately 30 day intervals. The lambs were weighed off the experiment and shipped to Oklahoma City market as they reached 100 lbs.

Average weight gains, feed consumed, feed per cwt. gain, market data, and financial results are shown in Table 1. The effect of shearing lambs during the summer on rate of gain is shown in Table 2. Chemical analysis of the ration is found in Table 3.

Table 3.—Chemical Analysis of Feed

Ration	D.M.	Protein	Mineral Matter
1 and 2	90.29	11.00	4.39
3 and 4	90.69	11.88	5.43

Results

The lambs of all lots made excellent gains during the dry-lot feeding period of July, August, and early September. Average daily gains were comparable to lambs fed during the fall and winter. The feed

required per pound of gain was less than is normally required. This may be a reflection of the younger age lambs used in this experiment as compared to Southwestern feeder lambs. The lambs were fed in the same barn that is used for winter feeding trials.

The average response of the two rations was essentially the same on rate of gain. The lambs fed the standard ration (45 percent ground milo, 5 percent molasses, and 50 percent ground alfalfa hay) required less feed per pound of gain.

Pelleting the ration increased gains slightly with the standard ration. A slight decrease in gain was noted on the higher energy ration. Less feed per pound of gain was required with the mixed ration than the pelleted ration.

Shearing the lambs increased gains in each lot. The overall response from shearing was a 30 percent increase in rate of gain.

Although the summer of 1961 was not extremely hot, this study would indicate that lambs can be successfully fed in Oklahoma during the summer months. The lambs returned a profit of approximately $2 to $3 per head.

Observations on the Early Weaning of Creep Fed Lambs

Joe V. Whiteman, C. W. Nichols,
D. G. Brothers, and Gene Kennedy

There are many times when it is desirable to wean lambs before the usual four or five months of age. A lamb's rumen is fully developed at 8 to 10 weeks of age and he can efficiently utilize pasture and other feed at that time. If the ewe is not giving much milk, it is a waste of good feed to allow her to eat twice as much good pasture as her lamb and give the lamb little milk. This is especially important if there is a shortage of pasture. Lambs get internal parasites by grazing on the same pastures with adult sheep during warm, wet weather. Consequently, spring born lambs can be kept relatively parasite free by weaning them before the warm, wet weather starts.

During the past four years lambs have been weaned at the Ft. Reno Livestock Research Station at varying weights and ages to measure the influence of such weaning on their subsequent gain and market grade.