

Fattening Lambs

tested in two feeding trials

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The fattening of lambs on a low-roughage ration was studied in two experiments to determine whether sheep as cattle can be fattened on rations with low-fiber content.

Rations containing 5% and 30% alfalfa hay were compared in the first experiment. Steamed rolled barley, protein supplements, fat as stabilized tallow, and minerals comprised the remaining portion of the rations. Approximately twice as much fiber was present in the 30% alfalfa hay ration as in the 5% alfalfa hay ration. Both rations were unusually high in protein to allow a comparison of low- and medium-fiber rations.

Daily gains were significantly reduced when the low-hay or fiber ration was fed. This was partially caused by a longer adjustment period to bring the animals on feed. But the reduction in gain was compensated, to a large extent, by a higher dressing percentage for the lambs fed the low-fiber ration. The carcasses produced were exactly the same in weight—58.4 pounds—indicating that the difference in gain was due to rumen fill. No difference was found in carcass grade.

Though less feed was consumed by the lambs fed the low-fiber ration, feed utili-

zation efficiency was reduced as compared to lambs on higher-fiber ration.

In the second experiment the lambs were divided into three lots. The lambs in Lot 1 were fed a low-fiber ration and compared to the lambs in Lot 2 and in Lot 3 that were fed a higher-fiber ration in both the milled and pelleted form. The lambs in Lot 1 received steamed rolled barley and a supplement devised to satisfy further protein, vitamin and mineral needs not supplied by the barley. The lambs in Lot 2 received a mixed milled ration and those in Lot 3 received a Sudan and alfalfa hay pellet mixed with steamed rolled barley.

There were no significant differences in daily gain among the lots. However, less feed was consumed per day by the lambs in Lot 1, on the low-fiber ration, as in the first experiment but in the second experiment there was an improvement in efficiency of feed utilization. Also, there was an improvement in dressing percent for Lot 1 but little difference in carcass grade.

In both experiments, more time and care were required to accustom the lambs to the low-fiber ration than for the lambs on the other rations. From 10 to 14 days were required to bring the animals on feed. It proved necessary to have the low-fiber ration available to the animals at all times. When twice-a-day feeding was attempted, difficulty was experienced in maintaining high feed intake.

There may be situations when an essentially all-concentrate ration has advantages over a ration containing more hay. The high-concentrate ration requires less storage space and less labor in preparation and in feeding. Also, concentrates in California are often a cheaper source of net energy than roughages. A third situation would be when lamb producers and feeders need to finish lambs more rapidly than is possible under range or pasture conditions in order to take advantage of earlier marketing, or to avoid the deleterious effect

of oncoming wet weather in the fall. Lambs being produced on the range or irrigated pasture may be approaching a choice finish but the range or pasture might not be sufficient to finish the lambs to the desired grade. In such a case, it would not be difficult to fatten the lambs on an essentially all-concentrate, low-fiber ration because little milling equipment would be needed. Possibly the lambs could be self-fed barley on the range or pasture and not placed in dry lot. Steam rolling the barley might not be necessary, as sheep chew whole grain sufficiently for complete digestion.

The current experiments show that it is possible to feed fattening lambs a ration composed of 90% to 95% concentrate and little hay. Satisfactory gains can be obtained on a low-fiber—6%—7% crude fiber—ration. Yield of carcass or dressing percent was higher for sheep fed the low-fiber rations.

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Comparison of Low- and High-Concentrate Rations for Fattening Lambs Experiment I

Ration	Lot 1 5 lambs	Lot 2 5 lambs
Alfalfa hay, %	5.0	30.0
Barley, %	70.5	46.5
Soybean oil meal, %	15.0	15.0
Cottonseed meal, %	5.0	5.0
Fat, %	2.0	2.0
Dicalcium phosphate, %	2.0	1.0
Salt, %	0.5	0.5
Estimated TDN, %	77.9	71.7
Crude fiber, %	6.9	12.7
Days on experiment	63	63
Initial wt., lb.	78	76
Daily gain, lb.	0.45*	0.58
Daily feed, lb.	2.75	3.03
Feed per lb. gain, lb.	6.1	5.4
Carcass data:		
Dressing %	55.0	52.4
Grade		
Prime	1	1
Choice	4	4

* Significant difference.

Comparison of Low- and High-Concentrate Rations for Fattening Lambs Experiment II

Ration	Lot 1 6 lambs	Lot 2 6 lambs	Lot 3 6 lambs
Alfalfa hay, %	..	50	22.2 ³
Sudan hay, %	44.4 ³
Barley, %	90.7	30	33.3
Molasses dried beet pulp, %	..	20	..
Supplement, % ¹	9.3 ²
Estimated TDN	76.1	63.4	59.5
Crude fiber, %	6.2	19.0	20.7
Days on experiment	49	49	49
Initial wt., lb.	70.0	74	74.5
Daily gain, lb.	0.51	0.45	0.51
Daily feed, lb.	2.55	2.79	3.44
Feed per lb. gain, lb.	5.04	6.22	6.69
Carcass data:			
Dressing %	50.9	48.6	49.2
Grade			
Choice	5	6	6
Good	1

¹ Supplement consisted of 57% cottonseed meal, 20% dehydrated alfalfa, 10% cane molasses, 7% calcium carbonate and 6% trace-mineralized salt.

² This level amounted to 0.14 lb. per sheep daily.

³ Alfalfa and Sudan hay were mixed and pelleted.