

The Effects of Stilbestrol Implants

The results are shown in Table 2. Previous work indicated that a 15 percent to 25 percent increase in gain could be expected from using a 6 milligram implant. Thus in this experiment, a 3 milligram implant was compared to a 6 milligram implant. As indicated in Table 2, the 6 milligram implant gave slightly better results than the 3 milligrams implant in 4 lots out of 6. No side effects were noted.

A 3 mg stilbestrol implant has been approved by the Federal Food and Drug Administration for use with lambs.

TABLE 2. The effects of stilbestrol implant on feedlot Performance.

Lot No.	No. of Days on Feed	Total Gain Per Lamb	
		3 mg.	6 mg.
1	82	34.4	37.9
2	82	40.5	37.8
3	82	30.7	32.2
4	82	40.9	43.0
5	68	41.8	43.3
6	82	37.6	36.6
Average for all lots		37.7	38.5

Comparison of Two Methods of Preparing Barley For Fattening Steer Calves

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A number of experiments have been conducted on grinding or rolling barley in fattening rations. With the increase in pelleting or cubing feeds, it appears that this method of preparation might be superior to other conventional methods.

Preliminary tests comparing rolled versus pelleted milo indicate an advantage in feed efficiency from pelleting the grain for fattening calves. Other stations have reported favorable results with pelleting barley for swine. Accordingly, an experiment was designed with beef calves in which the effect of steam rolling or "crimping" was compared to fine grinding and pelleting barley.

Procedure

Forty-four Hereford and Angus steer and heifer calves, which were to be fed out for carcass information in connection with a breeding project, were divided into 4 lots of 11 calves each on the basis of breed, sex, age, weight and feeder grade. Each lot contained 7 steers and 5 heifers.

All calves were hand-fed, once daily, 1.5 pounds of cottonseed meal, 1.0 pound of chopped alfalfa hay, and 8.0 pounds of sorghum silage per head, with a 2 parts salt and one part bone meal mineral mixture, free choice. Two lots of calves received crimped barley and two lots received pelleted barley (3/8's inch cube). The barley was hand-fed until the calves were safely on full-feed (a period of about 4 weeks). At this time, self-feeders containing either crimped or pelleted barley were placed in the lots and the calves were allowed to consume the grain according to appetite.

At present, the trial is still in progress, but results for the first 144 days are summarized in this report. Final data, including carcass information, will be obtained about May 1.

Results

A summary of results obtained to date are shown in Table 1. Performance between duplicate lots of calves were quite uniform. Calves of Lots 1 and 3, fed crimped barley, consumed 12 percent more grain and gained 15 percent faster than calves of Lots 2 and 4 receiving the finely ground and pelleted barley. The barley required per cwt. gain was slightly more for the pelleted product, and the requirements for other ingredients in the ration were increased because of lower gains. Feed costs per cwt. gain were 10.7 percent greater for calves fed the pelleted product.

It is of interest to note that two cases of founder occurred during the trial, both among calves fed the crimped grain. The pelleted barley shattered to some extent in the trough of the self-feeder and was variable in hardness from batch to batch. Calves seemed to prefer the crimped product, as evidenced by greater daily feed consumption when offered in self-feeders.

Thus, there appeared to be no advantage to fine grinding and pelleting barley—in contrast to tests at this station (reported elsewhere) and at Kansas with sorghum grain. It would seem logical to suppose that a higher-fiber grain, such as barley, would respond more favorably to pelleting than milo, but the reverse appeared to be the case in this trial.

The effect of fine grinding and pelleting as it influences appetite, rate of passage of feed through the digestive tract, fermentation in the paunch, and energy expended in order to digest the feed are poorly understood at present.

TABLE 1. Effect of crimping vs. fine grinding and pelleting barley for fattening steer calves (144 days, trial still in progress.)

Lot No.	Crimped Barley		Pelleted Barley	
	1	3	2	4
No. of calves ¹	10	10	10	11
Ave. weights (lb.)				
Initial 10/24/58	393	403	404	404
144 days, 3/17/59	730	741	705	689
Total gain	337	338	301	285
Ave. daily gain	2.34	2.35	2.09	1.98
Ave. daily ration (lb.)				
Crimped barley	9.43	9.74		
Pelleted barley			8.56	8.58
Cottonseed meal	1.5	1.5	1.5	1.5
Chopped alfalfa	1.0	1.0	1.0	1.0
Sorghum silage	8.2	8.2	8.2	8.2
2-1 minerals (free choice)	.03	.03	.03	.03
Feed required/cwt. gain (lb.)				
Barley	403	414	410	433
Cottonseed meal	64	64	72	76
Chopped alfalfa	43	43	48	51
Sorghum silage	350	349	392	414
Feed cost/cwt. gain (\$) ²	14.49	14.78	15.76	16.65

¹ One calf foundered in each of Lots 1 and 3 and were removed from the data. One calf in Lot 2 died suddenly of unknown cause.

² A charge of \$3.00 per ton for crimping and \$6.00 for pelleting was made in computing feed cost per cwt. gain.

Summary

Results of a feeding trial still in progress, comparing crimped (steam rolled) to finely ground and pelleted barley for fattening beef calves indicate that fine grinding and pelleting of this grain reduces feed intake and rate of gain. An increase was observed in the amount of grain required and feed cost per cwt. gain.