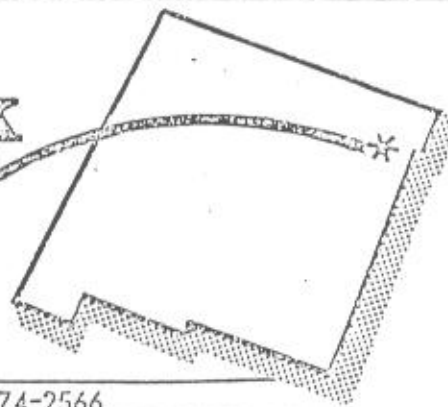




# Clayton Livestock Research Center

## PROGRESS REPORT



Route 1 Box 109

Clayton, New Mexico 88415

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Progress Report 2 (July, 1978)

### INFLUENCE OF FREE CHOICE ALFALFA HAY ON NEWLY RECEIVED CALVES

Progress Report No. 1 (May, 1978) presented the results of the effects of energy level in rations of newly received calves. This report tells of the influence of free choice alfalfa hay on the sickness, death loss and performance of newly received calves.

Five hundred fourteen calves shipped from Florida were involved in the study. Half of the calves receiving each of three receiving rations (25, 50 or 75% concentrates) were provided free choice hay, while the other

half were fed only the milled ration. The performance of the two groups over a 27-day receiving period is shown in table 1. Providing free choice alfalfa hay resulted in a significant reduction in death loss, an increase in daily feed intake, an increased rate of gain and an improved feed conversion. These factors resulted in the pay weight being regained 16 days faster than those not receiving the hay and cutting the cost of the gain approximately in half.

Table 1. Effect of free choice alfalfa hay during a 27-day period

Item	No alfalfa	Free choice alfalfa
Number of calves	258	256
Mean purchase weight, lb	368	370
Days to regain pay weight	38	22
Death loss, %	5.0 <sup>b</sup>	2.7 <sup>a</sup>
Calves treated, %	85	83
Average days treated	5	5
Returns, %	18.7	18.0
Medication cost per head, \$	3.77	3.80
Daily feed intake, lb		
Milled ration	8.92	6.11
Alfalfa hay	0	3.87 <sup>b</sup>
Totals	8.92 <sup>a</sup>	9.98 <sup>b</sup>
Daily gain from arrival, lb	1.01 <sup>a</sup>	1.82 <sup>b</sup>
Feed per pound gain, lb	8.83 <sup>b</sup>	5.48 <sup>a</sup>
Cost per pound gain, ¢		
Feed	51.92	26.60
Processing and medication	18.46	10.30
Totals	70.38	36.90

<sup>a, b</sup> Means in appropriate comparisons having different superscripts are significantly different.

Because of the bulky nature of the hay, one wonders if the large increase in weight gain might be due to rumen fill. To answer this question the hay was removed and all calves fed only their milled ration for another 27 days. This would allow the rumen fill to become equalized. The daily gain for the entire 54 days was 1.56 for the controls and 1.81 for those which received free choice alfalfa for the first 27 days. Thus, part of the advantage of the hay was undoubtedly due to fill, but even after this effect was eliminated there was still a .25 lb per day advantage for the hay group. The response

by week is shown below. This shows that even though there was a response to free choice alfalfa in each of the four weeks, it was statistically significant only during the first two weeks. Further studies will be necessary to determine how long the free choice hay should be provided.

Week	No alfalfa	Free choice alfalfa
	daily gain, lb	
1 (6 days)	-1.02 <sup>a</sup>	.92 <sup>b</sup>
2	1.94 <sup>a</sup>	2.57 <sup>b</sup>
3	1.97	2.24
4	1.16	1.50

These reports will be prepared periodically by Dr. Glen Lofgreen, Superintendent, Clayton Livestock Research Center, and will be mailed to you upon request. If a copy of this report was mailed to you, your name is already on our mailing list. If you did not receive a copy by mail, please call or write to the address on this report or the Department of Animal and Range Sciences, New Mexico State University, Las Cruces, New Mexico 88003.

Open house and dedication of the Clayton Livestock Research Center will be held on October 10, 1978. Open house will be at 10:00 a.m. A free lunch will be served at noon and dedication will follow at 1:00 p.m.

A tour of the Fort Stanton Experimental Ranch will begin at 9:00 a.m. on August 30, 1978. Lunch will be provided through the courtesy of Worley Mills, Inc. Dedication of facilities will be at 1:15 p.m.

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