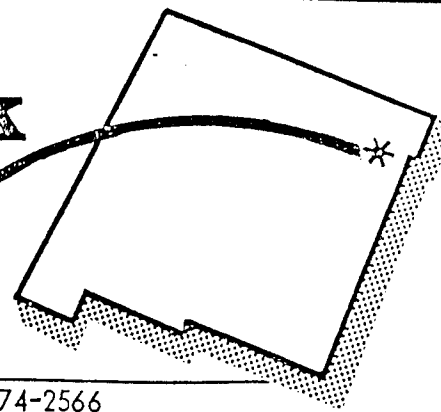




Clayton Livestock Research Center

PROGRESS REPORT



Route 1 Box 109 Clayton, New Mexico 88415 Tel. (505) 374-2566

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LIMITED ALFALFA OR MEADOW HAY FED WITH A 75% CONCENTRATE MILLED FEED FOR RECEIVING CALVES

Glen P. Lofgreen, J. K. Elliott, Michael G. Shafer and Brent J. Ward

Earlier studies have shown that sickness in newly received calves increases with increasing energy level in the receiving feed. However, since weight gains also increase,

medication cost expressed per pound of gain usually has declined with increasing energy level. Lowest medication cost per head has been observed with hay alone as the starting

Item	75% concentrate milled feed		
	alone	plus alfalfa hay for the first week	plus native hay for the first week
Number of calves	109	110	107
Health			
Percent of calves treated for BRD ¹	41 ^b	37 ^{ab}	30 ^a
Total sick days	248 ^b	201 ^{ab}	143 ^a
Sick days per calf purchased	2.3 ^b	1.8 ^{ab}	1.3 ^a
Number of returns	7	5	0
Number of deads	1	0	1
Performance			
First week:			
Daily feed intake, lb			
75% concentrate milled feed	2.94	1.52	2.04
Hay	0	3.35	3.05 ^b
Totals	2.94 ^a	4.87 ^b	5.09 ^b
Daily weight gain from arrival, lb	1.46 ^a	3.37 ^b	3.76 ^b
Entire 4-week receiving period:			
Daily feed intake, lb	8.15 ^a	9.01 ^b	8.68 ^{ab}
Daily gain from arrival, lb	2.08	2.23	1.99
Days required to regain purchase weight	14	16	15
Daily gain from purchase weight, lb	1.02	1.12	.90
Feed per pound gain, lb	7.99	8.04	9.64
Costs			
Medication, \$ per head on all calves ²	5.73	5.07	4.38
Medication cost per pound gain, ¢	20.06	16.17	17.38
Feed cost per pound gain, ¢ ³	55.93	54.63	65.59
Total cost per pound gain over purchase wt., ¢	75.99	70.80	82.97

¹Bovine respiratory disease.

²Includes preventive and treatment medication and chute charges.

³75% concentrate @ \$120 per ton + \$20. Hay @ \$85 per ton + \$10.

⁴Means in the same row with different letters are significantly different.

particular effective in reducing medication costs. However, weight gains have been poor on grass hay alone and medication cost per pound of gain has been high when grass hay made up the entire receiving ration. In consideration of these findings a trial was conducted to determine if limited grass or alfalfa hay plus a 75% concentrate milled feed would be effective in reducing sickness while maintaining a good rate of growth.

One hundred and twenty seven Florida calves weighing 360 lb and 199 native steer calves weighing 425 lb were involved in the study. Both groups arrived at the Center in October and were started on three receiving rations after processing. The control group of 109 head received a 75% concentrate milled feed only for 4 weeks. Another group of 110 head received the same milled feed plus alfalfa hay limited to the first week and the milled feed only for the rest of the 4 week period. Group three received the flaked milo milled feed plus free choice meadow (grass) hay for one week then the milled feed only for the next three weeks. All calves were processed the day following arrival. Processing and medication procedures were comparable for all groups.

results are shown in the accompanying tab. Providing either alfalfa or grass hay during the first week increased total feed intake. While the consumption of the milled feed reduced the intake of hay more than compensated for the decrease so that the total energy consumption was increased. Weight gain during the first week was also stimulated free choice hay. How much of the increase in gain of the two groups fed hay is due to fill is uncertain. The gains made over the entire 28-day receiving period are not influenced by fill since all calves received the same ration after the first week. Although the differences were not statistically significant, the calves fed alfalfa during the first week gained the most weight over the entire receiving period while those fed the meadow hay gained the least. Even though the greatest reduction in sickness was achieved in the group fed meadow hay the cheapest gain was made by the group fed alfalfa hay during the first week.

The results of this study indicate that the limited use of hay together with a high energy milled feed it is possible to obtain reduced sickness and still maintain suitable weight gains during the receiving periods.

We are pleased to currently have a local cooperator furnishing a load of cattle for use in research at the Center. Anyone interested in such an arrangement is encouraged to contact Dr. Lofgreen.

A. B. Nelson

A. B. Nelson, Head
Department of Animal and Range Sciences

Agricultural Experiment Station
NEW MEXICO STATE UNIVERSITY
Las Cruces, New Mexico 88003

L. S. Pope, Director

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