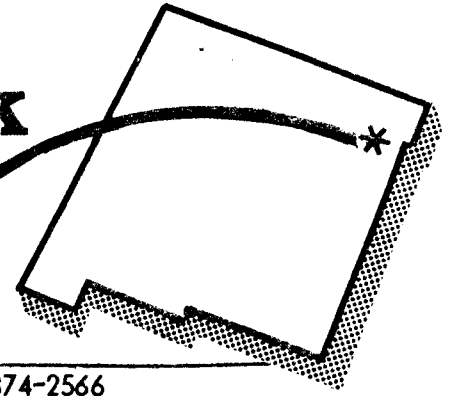




Clayton Livestock Research Center

PROGRESS REPORT



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RECEIVING FEED FOR YEARLING CATTLE

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Previous studies have shown that the receiving feed for highly stressed calves should contain from 50 to 75% concentrates. Sickness is usually lower on all-roughage feeds but performance and net returns are greater on the higher energy receiving feeds. Providing free choice grass hay for the first week together with the higher energy milled feeds usually will reduce the sickness level. The feeding program now in routine use at this Center for receiving stressed calves consists of a 75% concentrate milled feed fed free choice for 4 weeks with free choice grass hay fed the first week. The 75% concentrate was chosen

over a 50% concentrate feed because of convenience of handling and a lower cost per unit of energy.

It is a common belief that the receiving feed for yearling cattle should not be as high in energy as that for calves. However, little research has been done on receiving rations for yearlings. The study reported herein was designed to provide information in this area.

Two loads (167 head) of medium and large frame, Nos. 1 and 2 yearling steers were trucked from Florida to this Center for the

Table 1. Composition of milled feeds

Ingredient	Percent concentrates		
	50	75	85
		Percent	
Alfalfa	43.0	18.0	10.0
Cottonseed hulls	7.0	7.0	5.0
Flaked milo	25.2	47.2	66.45
Hominy feed	7.0	7.0	4.2
Soybean meal	5.3	7.2	-
Fat	3.0	3.0	3.0
Molasses	7.0	7.0	7.0
Urea	-	.5	.85
Limestone	-	.5	.85
Dicalcium phosphate	.5	.6	.65
TM salt	.5	.5	.5
Ammonium sulfate	.5	.5	.5
Premis	1.0 ^a	1.0 ^a	1.0 ^a

^aPremix provided 2 million units vitamin A, and 8g of baccitracin MD per ton of finished feed.

^bPremix provided 2 million units vitamin A, 30g rumensin and 15g tylosin per ton of finished feed.

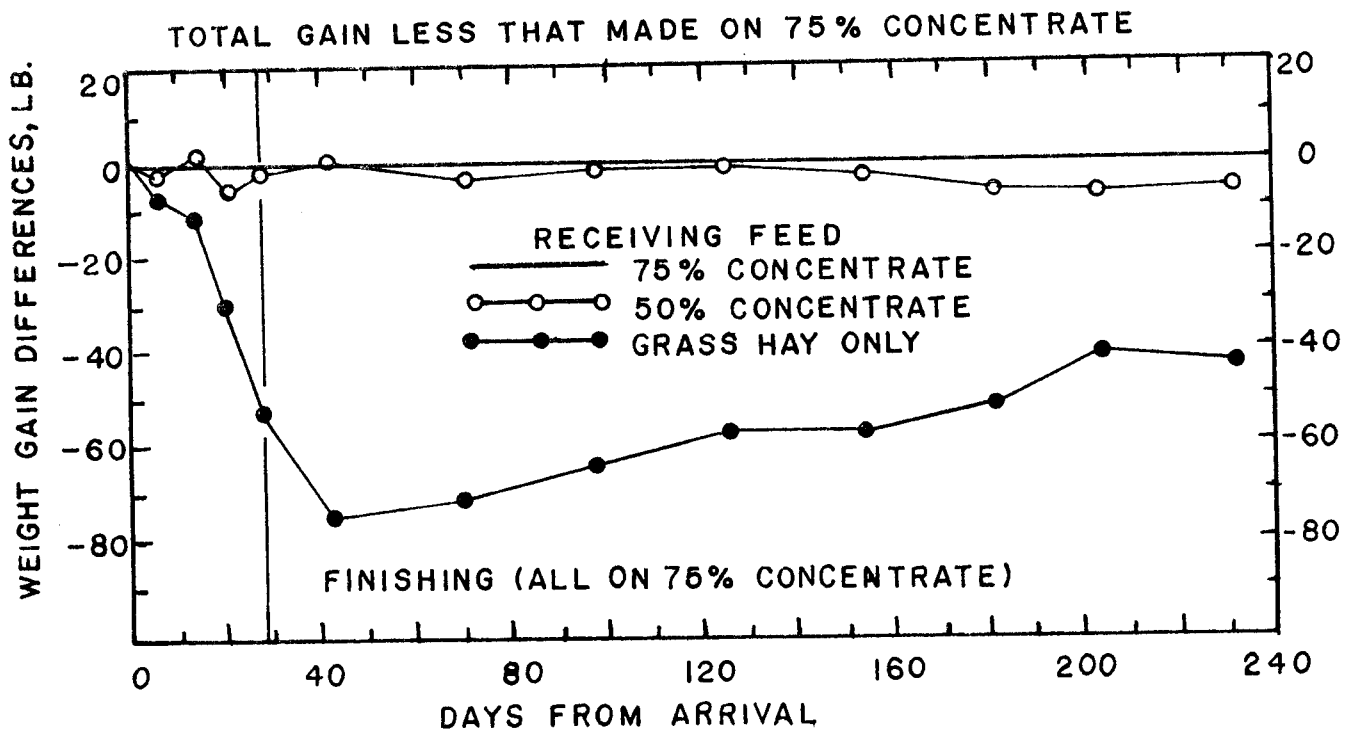
trial. The time in transit was 40 hours and the purchase to arrival shrink was 10%. Free access to hay and water was allowed overnight and the cattle were processed the following morning. Processing consisted of weighing, ear tagging, implanting, vaccination for IBR-PI₃ and 4-way blackleg, administering 500,000 units vitamin A, injection of LA-200® at 9mg/lb administering 37.5g of sulfadimethoxine (Albon SR®), worming and branding. Dipping was delayed for 28 days. Immediately following processing the cattle were allowed free access to one of three receiving rations consisting of (1) native grass hay alone for 4 weeks, (2) the 50% concentrate milled feed shown in

table 1 for 4 weeks plus grass hay for the first week only or (3) the 75% concentrate milled feed shown in table 1 for 4 weeks plus grass hay for the first week only. Following the 4-week receiving period all cattle were fed a 50% concentrate diet for 2 weeks then an 85% concentrate milled feed (table 1) to slaughter. All cattle were slaughtered 232 days from arrival.

There were no significant differences in the sickness observed on the three receiving feeds (table 2). Treatment levels were low in all groups, probably due to the preventive medication administered at time of processing. Although the differences were

Table 2. Health data

Item	Receiving feed		
	Grass hay only for 4 weeks	50% concentrate plus grass hay first week	75% concentrate plus grass hay first week
Total number in group	56	55	56
Purchase weight, lb.	555	537	549
Number treated	4	5	6
Total treatment days	15	19	18
Treatment days/sick calf	3.8	3.8	3.0
Treatment days/total calves	.27	.35	.32
Deads	0	1	1



not statistically significant, the slightly larger number treated and death loss on the two higher energy rations are consistent with previous observations that morbidity tends to increase with increasing energy in the receiving feed. However, this is modified by providing free choice grass hay the first week along with the milled feed.

In the accompanying figure a plot is made of the differences in weight gains of the cattle fed hay alone or the 50% concentrate ration and those received on the 75% concentrate milled feed. Throughout the receiving and finishing period the gains made by

cattle received on both milled rations are nearly equal. After the entire 232 days gains made by these two groups differed by only 5 lb. Cattle received on grass hay alone never compensated fully for the poor gains made during the 4-week receiving period, remaining 43 lb. behind the 75% concentrate group after 232 days. This confirms the work previously reported with calves received on similar nutritional programs.

Daily feed intake, weight gains and feed conversions by period and the cost data are presented in table 3. The significantly

Table 3. Feed consumption and performance by period

Item	Receiving feed		
	Grass hay only for 4 weeks	50% concentrate plus grass hay first week	75% concentrate plus grass hay first week
<u>Receiving period (28 days):</u>			
Daily feed intake, lb.	9.60 ^a	12.81 ^b	12.31 ^b
Daily gain from purchase, lb.	-.75 ^a	1.07 ^b	1.14 ^b
Feed per pound gain, lb.	--	11.97	10.80
Total gain from purchase, lb.	-21 ^a	30 ^b	32 ^b
<u>Finishing period (204) days):</u>			
Daily feed intake, lb.	17.35	17.63	17.83
Daily weight gains, lb.	2.50	2.44	2.46
Feed per pound gain, lb.	6.94	7.23	7.25
Total weight gain, lb.	511	497	501
<u>Entire 232 days:</u>			
Daily feed intake, lb.	16.41	17.05 ^b	17.16 ^b
Daily gain from purchase, lb.	2.11 ^a	2.27 ^b	2.30 ^b
Feed per pound gain, lb.	7.78	7.51	7.46
Total weight gain, lb.	490 ^a	527 ^b	533 ^b
<u>Carcass data:</u>			
Hot carcass weight, lb.	683 ^a	694 ^b	708 ^c
Dressing percent	65.4	65.3	65.4
Quality grade score ¹⁾	11.2	10.8	11.3
Yield grade	2.1	2.2	2.2
<u>Costs and returns:</u>			
Purchase weight, lb.	554	536	550
Purchase price, \$ ²⁾	350.35	338.97	347.82
Feed cost, \$ ³⁾	268.38	283.62	286.66
Interest, \$	43.18	42.79	43.66
Total cost, \$	661.91	665.38	678.14
Final net weight, lb.	1044	1063	1083
Selling price, \$ ⁴⁾	670.77	682.98	695.83
Net return, \$	8.86	17.60	17.69

1) 13 = choice, 12 = low choice, 11 = high good, 10 = good

2) \$63.24/cwt. actual purchase price delivered

3) Ingredient cost plus \$15/ton

4) \$64.25/cwt. actual selling price on final net weight.

abc Means having unlike superscripts differ at odds of 99 to 1.

greater gains made by the cattle received on the 50 and 75% concentrate rations carried through to the end of the entire 232 days, although the cattle received on hay alone gained slightly more during the 204-day finishing period. The only significant difference in the carcass data was the larger hot carcass weight of the cattle received on higher energy feeds. No differences occurred in dressing percent, quality grade or yield grade. The average quality grade for all groups was high good.

Because of the greater gain made by cattle received on the two higher energy rations a greater net return was realized from these two groups.

The data contained in this report indicate that yearling cattle respond to energy level in the receiving feed similar to calves and that it may not be necessary to receive calves and yearlings on different nutritional programs.

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