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GRASS FED BEEF

Current and future differences between feed grain prices and cattle prices seem to indicate that we may be forced into a beef production system utilizing all or nearly all roughage rations. With today's fast, efficient hay handling equipment, producing and feeding high quality hay make it possible to produce "grass" fat beef, using only limited amounts of concentrates in the ration.

This trial is designed in three phases, the calf wintering phase, the summer grazing phase and the feedlot finishing phase, to take steer calves from weaning to slaughter.

In the wintering phase Hereford and Hereford-Angus crossbred calves were fed a limited grain-high roughage growing ration to produce gains of 1.25 to 1.50 pounds per day. Actual average daily gain this year was 1.27 pounds. The wintering ration, bunk fed, included: 3 pounds oats, 2 pounds alfalfa, 9.8 pounds tame hay and 0.2 pound mineral mix. Gains and costs for the wintering phase are summarized in table 6.

The pasture phase is a three pasture grazing system using crested wheatgrass for spring and early summer, native range in mid and late summer and Russian wildrye for fall grazing. Beginning on May 1, the pasture phase lasted until November 13, a period of 196 days. Average daily gain for the entire grazing period was 1.23 pounds. Details of performance on the different pasture periods are shown in table 7.

At the end of the grazing period in November the steers were allotted at random for the finishing phase with each lot including 6 crossbred and 6 straightbred steers. Both lots were self fed chopped hay and minerals. In addition, one lot was fed ground oats at the rate of one percent of liveweight until the lot averaged 900 pounds. From 900 pounds to finish weight ground barley was fed at the one percent rate.

These steers were scheduled to be marketed at two weights, a light weight of about 975 pounds and a normal

market weight of about 1070 pounds. This was done to provide a comparison of both lots sold under weight constant and time constant conditions. Steers were selected at random for each marketing period at the beginning of the finishing phase. Details of performance in the feedlot are shown in table 8 and 9. Table 10 summarizes the entire trial from weaning to slaughter.

Summary: Results from this trial show that these steers can be fed to acceptable carcass weights and grades on an all roughage ration.

Feeding the tow lots of steers to equal weights of about 1000 pounds required 42 more days in the feedlot, and feed costs were slightly higher for the hay fed steers. There was no difference in carcass grade at this slaughter weight but the grain fed steers dressed out about 30 pounds more carcass.

On an equal weight basis of 1050 pounds the grain fed steers reached market weight 56 days earlier. The hay fed steers graded slightly better than the grain fed group, but here again the carcass weight was heavier for the grain fed group. In this comparison feed costs were slightly lower for the hay fed steers.

Table 6 - Gains - calf wintering phase, 1973-74

	BWF	Hereford
Initial weight, Nov. 30, lbs.	367	374
Spring weight, May 1, lbs.	552	583
Days fed	152	152
Average daily gain, lbs.	1.21	1.37

Table 7 - Gains - pasture phase, 1974

	BWF	Hereford
Crested wheatgrass		
May 1, lbs.	552	583
June 25, lbs.	636	673
Avg. daily gain, lbs.	1.53	1.64
Native range		
Sept. 4, lbs.	766	781
Avg. daily gain, lbs.	1.83	1.51
Russian wildrye		
Nov. 13, lbs.	803	817
Avg. daily gain, lbs.	0.52	0.52
Total gain on grass, lbs.	251	234
Grazing period, days	196	196
Average daily gain, lbs.	1.28	1.19

Table 8 - Gain, carcass, and feed data - short fed drylot phase, 1974-75

	1% Grain ration		Chopped hay ration	

	BWF	Hereford	BWF	Hereford
Initial wt., lbs.	799	813	781	833
Final wt., lbs.	990	1013	968	1035
Days fed	110	110	152	152
Avg. daily gain, lbs.	1.73	1.81	1.23	1.33
Carcass wt., lbs.	550	555	511	536
Dressing %	56	55	53	52
USDA grade	1 ch. 2 gd.	3 gd.	1 ch. 2 gd.	3 gd.
Selling price	March 4, 1975		April 16, 1975	
	ch. $54.50 - gd. $50.50		Ch. $66.00 - gd. $62.00	
Avg. carcass value, $	284.90	280.44	323.42	332.73
Avg. feed cost, $	89.03	89.03	94.73	94.73
Return over feed, $	195.87	191.41	228.69	238.00

Table 9. Gain, carcass and feed data - long fed drylot phase, 1974-75

	1% Grain ration		Chopped hay ration	
	BWF	Hereford	BWF	Hereford
Initial wt., lbs.	818	811	813	810
Final wt., lbs.	1073	1048	1035	1060

Days fed	152	152	208	208
Avg. daily gain, lbs.	1.68	1.56	1.07	1.20
Carcass wt., lbs.	607	591	564	563
Dressing %	57	56	55	53
USDA grade	2 ch. 1 gd	3 gd.	3 ch.	3 gd.
Selling price	April 16, 1975		June 11, 1975	
	ch. $66 - gd. $62		ch. $81 - gd. $73	
Avg. carcass value, $	391.51	366.21	457.11	411.23
Avg. feed cost, $	134.72	134.72	129.82	129.82
Return over feed, $	256.79	231.49	327.29	281.41

Table 10 - Summary, grass fed beef - weaning to slaughter, 1973-75

	Short fed 1% grain	Long fed 1% grain	Short fed grass	Long fed grass
Avg. initial cost of 370 lb. calf @ .65/lb.	$240.50	$240.50	$240.50	$240.50
Avg. wintering cost - feed only, Phase I	50.54	50.54	50.54	50.54

Avg. pasture cost @ $8/acre, Phase II	23.33	23.33	23.33	23.33
Avg. feed cost - feedlot finishing, Phase III	89.03	134.72	94.73	129.82
Cost of calf and feed[1]	403.40	449.09	409.10	444.19
Actual carcass value	282.67	378.86	328.08	434.17
Calculated carcass value[2]	346.47	380.32	328.21	363.65
Loss - cost less actual carcass value	120.73	70.23	80.91	10.02

[1]Does not include cost for labor, fixed cost for facilities and equipment, interest on investment or death loss charges.

[2]Carcass value calculated using $67.16/cwt for choice grade and $61.83/cwt for good grade to show production effects, by eliminating price differences at different marketing dates.

Table 11 - Average daily feed consumption - drylot phase

	Short fed 1% grain	Long fed 1% grain	Short fed grass	Long fed grass
Oats, lbs.	5.20	3.76	---	---
Barley, lbs.	3.40	5.48	---	---
Tame hay, lbs.	14.20	13.19	26.5	26.6
Total/hd/day, lbs.	22.8	23.2	26.5	26.6

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