New Mexico State University Agricultural Experiment Station U.S. Department of Agriculture

Clayton Livestock Research Center

PROGRESS REPORT

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A COMPARISON OF GROWING CATTLE ON WHEAT PASTURE AND IN THE FEEDLOT PRIOR TO FINISHING

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In a wheat pasture program decisions often must be made concerning when to take the cattle off pasture and place them on a finishing ration. One may also wish to consider the alternatives of feeding the cattle a growing ration in the drylot or to start the finishing ration immediately following the grazing period. Because of the lack of quantitative production data on these alternatives trials were conducted at the Clayton Livestock Research Center to obtain information in this area.

Three hundred seventy-three male calves of mixed breeding (No. 1 Okies) weighing 350 lb were shipped from Florida to Clayton. Following 56 days during which the calves were processed and allowed to recover from shipping and receiving stresses and diseases the calves were divided into 5 groups and placed on the treatments shown in the table below. Those cattle which had not achieved the desired weight on wheat pasture at the end of the graze out (June 1) were continued on the 50% concentrate growing ration until that weight was reached. As the cattle reached slaughter condition they were shipped to the packing plant and carcass data collected.

Treatment designation	Treatment description
85C - 400	High energy (85% concentrates) finishing ration continuous to slaughter.
50C - 600	Fed a 50% concentrate growing ration in the feedlot until reaching 600 pounds, then the 85% concentrate finishing ration to slaughter.
50C - 800	Fed the 50% concentrate growing ration to a weight of 800 pounds, then placed on the finishing ration to slaughter.
WP - 600	On wheat pasture to a weight of 600 pounds then the finishing ration to slaughter.
WP - 800	On wheat pasture to a weight of 800 pounds then the finishing ration to slaughter.

[1]Appreciation is expressed to Glover Packing Company, Roswell, and to Leonard Woody of the USDA Grading Service for cooperation in this study.

Slaughter condition was judged to have been reached when fat thickness over the rib was approximately .5 inch measured ultrasonically. This resulted in carcasses with little differences among the 5 treatments.

The performance data and costs are presented in the table below. The cattle placed on the high energy finishing ration immediately following the receiving period required the least number of days to reach slaughter condition, gained faster and converted feed to gain more efficiently and cheaply than those on any of the growing programs prior to finishing.

In this test the most profitable program was going directly on a high energy ration. The next most profitable program was growing o wheat pasture to 600 pounds then finishin in the feedlot. The least profitable was to grow the calves to 800 pounds in the feedlot prior to finishing. One should apply his own costs to these data to determine which program might be most profitable for him.

Treatment designation	No. of cattle	Days fed	Daily feed intake	Daily weight gain	Feed per lb gain	Cost per lb gain	Value of gain over cost [1]
			lb	lb	lb	¢	$
85C - 400	74	229	19.26	2.69	7.16	43.03	135.34
50C - 600	75	239	20.67	2.53	8.17	47.65	104.97
50C - 800	75	284	22.84	2.27	10.06	58.68	40.76
WP - 600	75	289	-	2.23	-	46.43	119.59
WP - 800	74	302	-	2.08	-	52.34	79.50
No growing program	74	229	19.26	2.69	7.16	43.03	135.34
Grown on 50C	150	262	21.76	2.40	9.07	53.41	72.87
Grown on wheat pasture	149	296	-	2.16	-	49.42	99.55
Finishing started at 400 lb	74	229	19.26	2.69	7.16	43.03	135.34
Finishing started at 600 lb	150	264	-	2.38	-	47.12	112.28
Finishing started at 800 lb	149	293	-	2.18	-	55.59	60.13

[1] The 50% and 85% concentrate rations costs were 5.65¢ and 6.01¢ per pound respectively. Wheat pasture was charged at $2.50 per cwt. per month and the weight gain valued at 65¢ per pound.

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