

FATTENING HEIFERS FOR THE SUMMER OR EARLY FALL MARKET

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Experiment IV - 1947-1948

1. Without Pasture
2. With Pasture
 - A. Full feeding on grass after grazing 100 days.
 - B. Full feeding in dry lot after grazing 100 days.
 - C. Feeding protein supplement on grass and full feeding later.
3. Comparing dehydrated Brome grass, dehydrated alfalfa pellets and mustard seed meal with cottonseed meal, soybean meal and linseed meal as a protein supplement for wintering heifer calves.

INTRODUCTION

Three preceding tests with heifer calves have been completed. The third test used pasture for the first time. Wintering with and without grain and then grazing together until August 2 followed by full feeding in dry lot and on grass has been the procedure followed.

With the experimental pasture more completely developed, plans are to make a more detailed comparison of dry lot versus pasture full feeding. The feeding of cottonseed meal on grass will also be used where heifers are to be full fed later.

EXPERIMENTAL PROCEDURE

Eight lots of heifers are being used in the current test. All eight lots have been wintered on a daily ration of 20 pounds Atlas sorgo silage, full access to prairie hay in racks, and a protein supplement. Dehydrated Brome grass and dehydrated alfalfa pellets and a combination of dehydrated Brome grass and cottonseed meal were compared with the standard oil seed meals and with mustard seed meal. In addition to the above ration, lots 1 to 6 inclusive received 2 pounds ground shell corn.

Lot 4 will be finished in the dry lot without going to grass. Lot 5 will be full fed on Brome grass pasture. Lots 1, 2, 3, 6, 7, and lot 8 will be grazed together on bluestem pasture until August 1. The six lots of heifers will then be used to compare dry lot full feeding, full feeding on grass, and feeding a protein supplement on grass before full feeding.

Lots 4 and 5 were started last fall on 1 pound of the dehydrated Brome grass and 1 pound dehydrated alfalfa pellets respectively and then increased to 2 pounds on January 6 when weights showed these lots were not making gains comparable to the lot being fed 1 pound cottonseed meal.

The purpose was to determine the amount of these dehydrated feeds required to equal 1 pound of cottonseed meal or other comparable oil seed meals as a protein supplement.

OBSERVATIONS

1. All eight lots of heifers made exceptionally good gains.
2. Cottonseed meal, soybean meal, linseed meal and mustard seed meal fed as protein supplements produced approximately the same gain in wintering heifers.
3. Results of this test indicate it would take 2 pounds of the dehydrated Brome grass or alfalfa pellets to equal 1 pound of the oil seed meals as protein supplements. After these dehydrated feeds were increased to 2 pounds daily per heifer the gain was only slightly less than for the oil seed meals.
4. Feeding 2 pounds of these dehydrated feeds resulted in a small decrease in total roughage consumption.
5. There was no apparent difference in condition or bloom between lots 1 to 5, inclusive, or lots 6 to 8 inclusive.
6. Results of this winter phase are only incidental. Final results after grazing and full feeding are the main objectives of this test.
7. Necessary selling price to pay initial heifer cost and feed costs are relatively low considering high feed costs. Relatively high gains are largely responsible and emphasize the importance of rate of gain in determining cost of production.

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Phase I - Wintering
November 11, 1947 to April 13, 1948 - 154 Days

1-Lot Number	1	2	3	4	5	6	7	8
2-Number of heifers in lot	10	10	10	10	10	10	10	10
3-Ration fed	Silage Prairie hay Cotton- seed meal Corn	Silage Prairie hay Soybean meal Corn	Silage Prairie hay Linseed meal Corn	Silage Prairie hay Dehyd. alfalfa pellets Corn	Silage Prairie hay Dehyd. Brome grass Corn	Silage Prairie hay Mustard seed meal	Silage Prairie hay Cotton- seed meal	Silage Prairie hay Cotton- seed meal Dehyd. Brome grass
4-Average daily ration								
Silage	19.96	19.96	19.96	19.96	19.96	19.96	19.96	19.96
Prairie hay	4.74	4.72	4.82	3.91	4.84	4.98	5.01	4.80
Ground corn	1.98	1.98	1.98	1.98	1.98			
Cottonseed meal	1.01						1.00	.51
Soybean meal		1.01						
Linseed meal			1.01					
Dehyd. alfalfa pellets				1.69				
Dehyd. Brome grass					1.68			.68
5-Average initial weight	408	406	405	404	404	406	406	404
6-Average final weight	650	645	653	627	632	607	600	590
7-Total gain per heifer	242	239	248	223	228	201	194	186
8-Average daily gain	1.56	1.54	1.60	1.44	1.48	1.30	1.25	1.20
9-Feed required for 100 pounds gain:								
Silage	1272.87	1288.88	1242.02	1381.57	1348.24	1529.35	1584.53	1657.14
Prairie hay	302.73	305.07	288.00	270.69	293.20	381.69	398.09	398.49
Ground corn	126.70	128.30	123.63	137.52	134.21			
Cottonseed meal	64.76						79.89	42.85
Soybean meal		65.40						
Linseed meal			63.03					
Dehyd. alfalfa pellets				117.30				
Dehyd. Brome grass					114.03			52.02
Mustard seed meal						77.11		

10-Cost of feed for 100 pounds gain	14.81 \$ 15.65	13.72 \$ 15.83	14.94 \$ 15.20	18.69 \$ 16.55	18.11 \$ 16.36	14.38 \$ 12.38	12.52 \$ 12.84	\$ 12.82 14.71
11-Feed cost per heifer	\$ 37.80 ²⁵³²	\$ 37.78 ²⁵¹⁰	\$ 37.65 ²⁵⁴⁰	\$ 36.85 ²⁵¹⁵	\$ 37.31 ²⁵¹⁶	\$ 24.87 ^{19.28}	\$ 24.91 ^{19.28}	\$ 23.70-19.28
12-Initial cost of heifers at \$21.50 per cwt.	121.70 \$ 87.72	122.70 \$ 87.29	122.60 \$ 87.07	118.19 \$ 86.86	118.19 \$ 86.86	118.19 \$ 87.29	119.25 \$ 87.29	116.80 \$ 86.86
13-Heifer cost plus feed cost	\$125.52 ^{147.22}	\$125.05 ^{147.80}	\$124.72 ^{149.00}	\$123.71 ^{144.74}	\$124.17 ^{145.32}	\$112.16 ^{129.47}	\$112.20 ^{133.33}	\$110.65 ^{135.88}
14-Necessary selling price per cwt. to pay for feed and initial cost	23.53 \$ 19.33	22.88 \$ 19.40	23.38 \$ 19.11	24.62 \$ 19.75	24.34 \$ 19.65	23.70 \$ 18.48	22.94 \$ 18.70	23.80 \$ 18.77
15-Appraised value per cwt. May 1, 1948								

FEED PRICES: Ground shelled corn, \$2.40 per bushel; Cottonseed meal, soybean meal, linseed meal, mustard-seed-meal, \$100 per ton; Dehydrated alfalfa pellets, dehydrated Brome grass, \$60 per ton; Prairie hay, \$15 per ton; Silage, \$7.50 per ton.

PROTEIN ANALYSIS: Dehydrated alfalfa pellets, 19.94%; dehydrated Brome grass, 20.9%.