



Cost and Return From Feeding Cattle

1969-1970

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INTRODUCTION

The return over feed costs from feeder cattle fluctuates from year to year and from farm to farm. The variation in returns is accounted for primarily by two factors: (1) gross margin per hundredweight gain in weight, and (2) the feed cost per hundredweight gain in weight. This is emphasized by this study of costs and returns for 48 lots of feeder cattle on Southern Minnesota farms in the 1969-1970 feeding season. This information was obtained from records kept by 34 members of the Southwestern Minnesota Farm Management Association under the supervision of Erlin Weness and two members of the Southeastern Minnesota Farm Management Association under the supervision of Harvey Bjerke. In addition, one lot record was secured from Kermit Kleene, agriculture instructor in the New Ulm Public Schools. The purpose of this report is to make available data regarding the average results from feeding operations, to provide examples of individual lot records, and to show the relative importance of feeding efficiency and price spread in cattle feeding.

The data presented cover averages of individual lots of cattle from purchase as feeders to sale as fat cattle. Two different programs are presented: (1) long-fed calves and (2) short-fed yearlings. Cattle purchased at less than 500 pounds are classified as "long-fed calves" and those bought at heavier weights are classified as "short-fed yearlings."

Simple arithmetic averages are used throughout the report. In computing group averages, each lot was given equal weight regardless of the number of animals in it.

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Table 1. Price Paid, Prices Received and Gross Margin Standards for 1969-1970

Purchase month	Steer calves			Heifer calves			Yearling steers		
	Price ₁ paid	Price ₂ recd.	Gross margin	Price ₁ paid	Price ₂ recd.	Gross margin	Price ₁ paid	Price ₂ recd.	Gross margin
1969									
July	\$38.52	\$29.78	\$23.51	\$35.15	\$28.87	\$25.77	\$33.25	\$28.34	\$19.75
August	37.47	29.99	24.63	33.00	29.29	26.32	31.61	29.13	24.79
September	37.91	31.08	26.18	32.90	29.74	27.20	31.29	30.55	29.25
October	37.85	29.90	24.19	32.00	30.18	28.72	31.15	30.75	30.05
November	37.28	29.16	23.32	31.40	28.79	26.70	31.13	29.60	26.92
December	37.80	28.44	21.72	31.33	27.70	24.79	32.38	29.87	25.48
1970									
January	38.82	27.05	18.60	33.80	27.27	22.04	32.83	31.00	27.80
February	40.55	26.43	16.30	34.92	25.85	18.59	34.44	29.90	21.95
March	41.74	28.20	15.48	36.84	25.18	15.85	35.85	29.16	17.45
April	41.31	31.72	24.84	37.10	27.61	20.00	35.01	28.44	16.94
May	42.44	31.56	23.81	37.38	30.56	25.10	35.00	27.05	13.14
June	43.48	32.25	24.20	37.96	30.62	24.75	34.92	26.31	11.24

1. Prices paid are average Kansas City quotations for choice grade feeders plus \$2.00 to cover transportation and buying costs on calves.

2. Prices received are average choice finished cattle prices in South St. Paul 10 months later for steer calves, 9 months later for heifers, and 6 months later for yearlings.

3. The gross margin figure is calculated by subtracting the purchase cost of the feeder animal from the sales value of the finished animal and dividing by the hundredweights of gain. The standards shown in the table assume the following buy-sell weights: 430-1030 for steer calves, 400-900 for heifer calves, and 700-1100 for yearlings.

PRICES PAID, PRICES RECEIVED AND GROSS MARGINS

Gross margin per hundred pounds of gain is a major indicator of profitability in cattle feeding. This figure represents the "price received" for your product. It is determined primarily by the price paid for feeders and the price received for finished cattle. It is, therefore, a good indicator of the success you had in "buying low and selling high."

Table 1 provides some standards with which you can compare your buying-selling results. Compare your gross margin results (line 24, table 3 or 4) with those shown for cattle of similar age and sex purchased the same month. The standards are calculated on the basis of buying choice feeders and selling choice fat cattle after weight gains of 600 pounds for steer calves, 500 pounds for heifer calves, and 400 pounds for yearling steers.

Did you do as well as these standards? Other factors which influence the gross margin figure besides your buying and selling skill are your ability to up-grade animals in the feedlot and the amount of gain. Also, the figures in table 1 assume a specified selling month. If you desire a more specific gross margin standard for your situation, you can calculate one as outlined in footnote 3, using your buy-sell weights and the appropriate buy-sell prices from table 1.

The average yearly prices at which the principal feeds used in cattle feeding were charged on the farms studied are shown in table 2 for 1969 and 1970. The farm raised feeds are valued at average prices on the farm. Purchased feeds are listed at the prices paid for them. Feeds for which there is no established market, such as corn silage, are valued on the basis of their feeding value relative to similar feeds for which a market price is available. Corn is priced on a dry corn basis. High moisture corn is adjusted to a dry corn basis in the lot summary information.

Table 2. Average annual feed prices

Feed	1969	1970
Alfalfa hay, per ton	\$20.00	\$20.00
Timothy or brome hay, per ton	11.60	11.60
Oats or hay silage, per ton	6.50	6.50
Corn silage, per ton	7.25	7.25
Corn grain, per bushel	1.05	1.15
Oats, per bushel	.56	.60
Soybean meal, per 100 pounds	5.00	5.00
Pasture, per month per head	4.00	4.00

FEEDING DATA

Tables 3 and 4 present average data for each feeding program and report performance of individual lots in 1969-1970. The numbers and weights of cattle fed, total pounds produced, and feed costs and returns are given for the average lot in each of the two feeding programs. Per head and per hundred pounds gain averages are calculated for feed consumption, cattle prices, and feed costs and returns.

Net returns or profits in cattle feeding are the results of sales income minus costs. The major items of cost are purchase cost of cattle and the feed they consume. Profits result when the total of these, plus other costs, is less than the amount received for the cattle.

In tables 3 and 4, "value produced" (lines 25 and 28) is calculated by subtracting total purchase cost from the total sales and dividing by the number of head sold and the hundredweights of gain. The figure in line 28 differs from the gross margin figure only when there is some death loss.

The per hundredweight figures in lines 28-30 are determined on the basis of net gain figures. Thus, death loss affects quantity and value of feed as well as the value produced figures. When some animals die, this weight loss comes out of total gain, thereby increasing feed cost per hundredweight of net gain. (An alternate way of showing this loss would be to enter a separate item on death loss.)

Return per \$100 of feed cost (line 31) is obtained by dividing the total value produced by the total feed cost.

Table 3. Feed costs and returns from long-fed calves, 1969-1970

Item	Average of 35 lots	Average by return over feed cost		
		17 high	17 low	
<u>Number and weight of cattle fed</u>				
1. Date of purchase	-	-	-	
2. Number of head bought	141	169	114	
3. Sex	-	-	-	
4. Days on farm	296	289	301	
5. Days on pasture	1.2	-	2.5	
6. Percent death loss	1.3	1.4	1.2	
7. Average purchase weight, lbs.	435	439	432	
8. Average sales weight, lbs.	976	970	985	
9. Gain per head, lbs.	541	531	553	
10. Gain per head per day, lbs.	1.8	1.8	1.8	
11. Pounds of beef produced	73611	87528	59661	
<u>Feed used</u>				
	<u>Head</u>	<u>Cwt.</u>	<u>Cwt.</u>	<u>Cwt.</u>
12. Corn (bu/head) (lbs/cwt gain)*	52	544	471	617
13. Small grain (bu/head) (lbs/cwt)	5	8	8	8
14. Commercial feed, lbs.	280	53	58	47
15. Total concentrates, lbs.	3220	605	537	672
16. Legume hay, lbs.	972	187	185	199
17. Other hay, lbs.	41	8	13	3
18. Total hay, lbs.	1013	195	198	202
19. Corn silage, lbs.	3177	592	558	660
20. Grass or oat silage, lbs.	86	14	21	5
21. Total silage, lbs.	3263	606	579	665
<u>Price of cattle</u>				
	<u>Head</u>	<u>Cwt.</u>	<u>Cwt.</u>	<u>Cwt.</u>
22. Price paid	\$143.05	\$32.90	\$32.88	\$32.82
23. Price received	275.64	28.27	29.13	27.43
24. Gross margin per cwt. gain		24.62	26.26	23.10
<u>Cost and return</u>				
	<u>Lot</u>	<u>Lot</u>	<u>Lot</u>	<u>Lot</u>
25. Total value produced	\$18118	\$22656	\$13670	
26. Total feed cost	12817	14521	11168	
27. Total return over feed	5301	8135	2502	
<u>Cost and return</u>				
	<u>Head</u>	<u>Cwt.</u>	<u>Cwt.</u>	<u>Cwt.</u>
28. Value produced	\$130.61	\$24.58	\$26.23	\$23.06
29. Feed cost	98.61	18.53	17.10	20.12
30. Return over feed cost	32.00	6.05	9.13	2.94
31. Return per \$100 of feed cost		\$136	\$156	\$116

* All cwt. calculations are per hundred pounds net gain in weight.

Table 3. Feed costs and returns from long-fed calves, 1969-1970 (continued)

Item	Average by size of lot		Individual lot numbers	
	17 high	17 low	1	2
<u>Number and weight of cattle fed</u>				
1. Date of purchase	-	-	Nov 69	Nov 69
2. Number of head bought	228	56	192	414
3. Sex	-	-	Heifers	Heifers
4. Days on farm	296	295	278	240
5. Days on pasture	-	2.5	-	-
6. Percent death loss	2.0	0.7	1.0	2.9
7. Average purchase weight, lbs.	439	433	457	486
8. Average sales weight, lbs.	984	965	955	926
9. Gain per head, lbs.	545	532	498	440
10. Gain per head per day, lbs.	1.8	1.8	1.8	1.8
11. Pounds of beef produced	118730	28726	93635	171129
<u>Feed used</u>				
	<u>Cwt.</u>	<u>Cwt.</u>	<u>Cwt.</u>	<u>Cwt.</u>
12. Corn, lbs.	477	609	353	491
13. Small grain, lbs.	8	7	7	2
14. Commercial feed, lbs.	59	50	74	81
15. Total concentrates, lbs.	544	666	434	574
16. Legume hay, lbs.	144	225	205	6
17. Other hay, lbs.	1	15	-	-
18. Total hay, lbs.	145	240	205	6
19. Corn silage, lbs.	564	653	854	813
20. Grass or oat silage, lbs.	24	5	-	-
21. Total silage, lbs.	588	658	854	813
<u>Price of cattle</u>				
	<u>Cwt.</u>	<u>Cwt.</u>	<u>Cwt.</u>	<u>Cwt.</u>
22. Price paid	\$33.71	\$31.97	\$33.00	\$30.70
23. Price received	28.74	27.84	30.94	30.41
24. Gross margin per cwt. gain	24.79	24.54	29.03	30.10
<u>Cost and return</u>				
	<u>Lot</u>	<u>Lot</u>	<u>Lot</u>	<u>Lot</u>
25. Total value produced	\$29302	\$ 7061	\$27165	\$51461
26. Total feed cost	19945	5772	13864	29783
27. Total return over feed	9357	1289	13301	22678
<u>Cost and return</u>				
	<u>Cwt.</u>	<u>Cwt.</u>	<u>Cwt.</u>	<u>Cwt.</u>
28. Value produced	\$24.74	\$24.51	\$29.01	\$30.07
29. Feed cost	16.95	20.24	14.81	16.82
30. Return over feed cost	7.79	4.27	14.20	13.25
31. Return per \$100 of feed cost	\$148	\$125	\$196	\$179

Table 3. Feed costs and returns from short-fed calves, 1969-70 (continued)

Individual lot numbers						
	3	4	5	6	7	8
1.	Nov 69	Nov 69	Oct 69	Nov 69	Nov 69	Nov 69
2.	81	33	104	185	153	197
3.	Heifers	Mixed	Heifers	Steers	Mixed	Heifers
4.	208	326	300	302	312	288
5.	-	-	-	-	-	-
6.	1.2	0.0	1.9	0.5	0.0	1.5
7.	488	426	381	474	425	396
8.	925	1022	889	1027	1109	927
9.	437	596	508	553	684	531
10.	2.1	1.8	1.7	1.8	2.2	1.8
11.	34440	19680	51068	101331	104605	101950
	<u>Cwt.</u>	<u>Cwt.</u>	<u>Cwt.</u>	<u>Cwt.</u>	<u>Cwt.</u>	<u>Cwt.</u>
12.	556	569	541	367	362	404
13.	-	-	5	7	1	7
14.	42	21	86	67	48	40
15.	598	590	632	441	411	451
16.	195	-	137	215	136	65
17.	51	42	-	-	-	12
18.	246	42	137	215	136	77
19.	-	711	-	632	325	701
20.	-	-	-	-	-	71
21.	-	711	-	632	325	772
	<u>Cwt.</u>	<u>Cwt.</u>	<u>Cwt.</u>	<u>Cwt.</u>	<u>Cwt.</u>	<u>Cwt.</u>
22.	\$30.78	\$31.87	\$31.70	\$36.51	\$34.59	\$32.29
23.	29.60	28.60	28.52	30.17	27.54	28.21
24.	28.26	26.27	26.14	24.76	23.15	25.20
	<u>Lot</u>	<u>Lot</u>	<u>Lot</u>	<u>Lot</u>	<u>Lot</u>	<u>Lot</u>
25.	\$ 9728	\$ 5170	\$13302	\$25023	\$24218	\$25578
26.	5893	2998	7791	14122	13397	15312
27.	3835	2172	5511	10901	10821	10266
	<u>Cwt.</u>	<u>Cwt.</u>	<u>Cwt.</u>	<u>Cwt.</u>	<u>Cwt.</u>	<u>Cwt.</u>
28.	\$28.25	\$26.27	\$26.05	\$24.69	\$23.15	\$25.09
29.	17.11	15.23	15.26	13.94	12.81	15.02
30.	11.14	11.04	10.79	10.75	10.34	10.07
31.	\$165	\$172	\$171	\$178	\$181	\$167

Table 3. Feed costs and returns from long-fed calves, 1969-1970 (continued)

Item	Individual lot numbers		
	9	10	11
<u>Number and weight of cattle fed</u>			
1. Date of purchase	Nov 69	Oct 69	Nov 69
2. Number of head bought	366	140	189
3. Sex	Mixed	Steers	Steers
4. Days on farm	313	310	345
5. Days on pasture	-	-	-
6. Percent death loss	4.9	2.9	2.1
7. Average purchase weight, lbs.	406	433	426
8. Average sales weight, lbs.	1007	956	1220
9. Gain per head, lbs.	601	523	794
10. Gain per head per day, lbs.	1.9	1.7	2.3
11. Pounds of beef produced	202100	69345	145147
<u>Feed used</u>			
	<u>Cwt.</u>	<u>Cwt.</u>	<u>Cwt.</u>
12. Corn, lbs.	449	452	429
13. Small grain, lbs.	7	5	4
14. Commercial feed, lbs.	54	59	31
15. Total concentrates, lbs.	510	516	464
16. Legume hay, lbs.	89	392	62
17. Other hay, lbs.	2	-	9
18. Total hay, lbs.	91	392	71
19. Corn silage, lbs.	460	923	566
20. Grass or oat silage, lbs.	214	-	73
21. Total silage, lbs.	674	923	639
<u>Price of cattle</u>			
	<u>Cwt.</u>	<u>Cwt.</u>	<u>Cwt.</u>
22. Price paid	\$34.52	\$36.00	\$34.24
23. Price received	28.39	31.59	26.65
24. Gross margin per cwt. gain	24.29	27.91	22.56
<u>Cost and return</u>			
	<u>Lot</u>	<u>Lot</u>	<u>Lot</u>
25. Total value produced	\$48279	\$19228	\$32564
26. Total feed cost	32193	13746	21588
27. Total return over feed	16086	5482	10976
<u>Cost and return</u>			
	<u>Cwt.</u>	<u>Cwt.</u>	<u>Cwt.</u>
28. Value produced	\$23.89	\$27.73	\$22.43
29. Feed cost	15.93	19.82	14.87
30. Return over feed cost	7.96	7.91	7.56
31. Return per \$100 of feed cost	\$150	\$140	\$151

Table 3. Feed costs and returns from long-fed calves, 1969-1970 (continued)

Individual lot numbers						
	12	13	14	15	16	17
1.	Sept 69	Nov 69	Oct 69	Nov 69	Dec 69	Oct 69
2.	63	202	96	257	111	85
3.	Steers	Heifers	Heifers	Mixed	Mixed	Mixed
4.	239	301	263	273	313	295
5.	-	-	-	-	-	-
6.	0.0	0.5	1.0	1.9	0.9	0.0
7.	460	414	470	474	385	467
8.	821	912	872	980	1022	921
9.	361	498	402	506	637	454
10.	1.5	1.7	1.5	1.8	2.0	1.5
11.	22793	99740	37710	125065	69645	38591
	<u>Cwt.</u>	<u>Cwt.</u>	<u>Cwt.</u>	<u>Cwt.</u>	<u>Cwt.</u>	<u>Cwt.</u>
12.	555	105	557	647	574	594
13.	-	10	25	28	26	6
14.	79	64	64	81	24	72
15.	634	179	646	756	624	672
16.	237	144	578	128	258	295
17.	105	-	-	-	9	-
18.	342	144	578	128	267	295
19.	303	1103	743	640	43	674
20.	-	-	-	-	-	-
21.	303	1103	743	640	43	674
	<u>Cwt.</u>	<u>Cwt.</u>	<u>Cwt.</u>	<u>Cwt.</u>	<u>Cwt.</u>	<u>Cwt.</u>
22.	\$32.19	\$32.90	\$30.53	\$31.94	\$34.89	\$30.28
23.	29.88	28.49	30.06	29.95	27.45	28.72
24.	26.95	24.85	28.82	28.06	22.94	27.11
	<u>Lot</u>	<u>Lot</u>	<u>Lot</u>	<u>Lot</u>	<u>Lot</u>	<u>Lot</u>
25.	\$ 6143	\$24738	\$11125	\$35031	\$15937	\$10464
26.	4495	17740	8645	26865	11394	8025
27.	1648	6998	2480	8166	4543	2439
	<u>Cwt.</u>	<u>Cwt.</u>	<u>Cwt.</u>	<u>Cwt.</u>	<u>Cwt.</u>	<u>Cwt.</u>
28.	\$26.95	\$24.80	\$29.50	\$28.01	\$22.88	\$27.11
29.	19.72	17.78	22.92	21.48	16.36	20.79
30.	7.23	7.02	6.58	6.53	6.52	6.32
31.	\$137	\$139	\$129	\$130	\$140	\$130

Table 3. Feed costs and returns from long-fed calves, 1969-1970 (continued)

Item	Individual lot numbers		
	18	19	20
<u>Number and weight of cattle fed</u>			
1. Date of purchase	Nov 69	Nov 69	Nov 69
2. Number of head bought	153	302	252
3. Sex	*Heifers	Heifers	Heifers
4. Days on farm	315	288	281
5. Days on pasture	-	-	-
6. Percent death loss	2.6	1.0	2.8
7. Average purchase weight, lbs.	395	417	432
8. Average sales weight, lbs.	903	933	946
9. Gain per head, lbs.	508	516	514
10. Gain per head per day, lbs.	1.6	1.8	1.8
11. Pounds of beef produced	74160	153070	122931
<u>Feed used</u>			
	<u>Cwt.</u>	<u>Cwt.</u>	<u>Cwt.</u>
12. Corn, lbs.	545	602	528
13. Small grain, lbs.	6	19	16
14. Commercial feed, lbs.	83	67	37
15. Total concentrates, lbs.	634	688	581
16. Legume hay, lbs.	11	177	161
17. Other hay, lbs.	-	-	-
18. Total hay, lbs.	11	177	161
19. Corn silage, lbs.	8	483	905
20. Grass or oat silage, lbs.	59	-	-
21. Total silage, lbs.	67	483	905
<u>Price of cattle</u>			
	<u>Cwt.</u>	<u>Cwt.</u>	<u>Cwt.</u>
22. Price paid	\$34.49	\$33.00	\$33.39
23. Price received	27.80	29.18	28.59
24. Gross margin per cwt. gain	22.61	26.09	24.57
<u>Cost and return</u>			
	<u>Lot</u>	<u>Lot</u>	<u>Lot</u>
25. Total value produced	\$16571	\$39840	\$29925
26. Total feed cost	11885	30258	22281
27. Total return over feed	4686	9582	7644
<u>Cost and return</u>			
	<u>Cwt.</u>	<u>Cwt.</u>	<u>Cwt.</u>
28. Value produced	\$22.34	\$26.03	\$24.34
29. Feed cost	16.02	19.77	18.12
30. Return over feed cost	6.32	6.26	6.22
31. Return per \$100 of feed cost	\$139	\$132	\$134

Table 3. Feed costs and returns from long-fed calves, 1969-1970 (continued)

Individual lot numbers						
	21	22	23	24	25	26
1.	Dec 69	Dec 69	Jan 70	Dec 69	Nov 69	Nov 69
2.	12	155	13	115	458	74
3.	Mixed	Mixed	Mixed	Heifers	Mixed	Steers
4.	252	272	236	269	320	383
5.	-	-	-	-	-	-
6.	0.0	1.9	0.0	1.7	1.5	1.4
7.	510	486	400	408	487	418
8.	995	958	918	892	1044	1111
9.	485	472	518	484	557	693
10.	1.9	1.7	2.2	1.8	1.7	1.8
11.	5815	70300	6740	53840	247560	51320
	<u>Cwt.</u>	<u>Cwt.</u>	<u>Cwt.</u>	<u>Cwt.</u>	<u>Cwt.</u>	<u>Cwt.</u>
12.	548	640	571	676	471	587
13.	19	-	-	10	7	11
14.	64	38	40	49	69	32
15.	631	678	611	735	547	630
16.	299	222	326	188	157	218
17.	-	-	-	-	-	49
18.	299	222	326	188	157	267
19.	138	413	-	297	461	-
20.	-	-	-	-	-	-
21.	138	413	-	297	461	-
	<u>Cwt.</u>	<u>Cwt.</u>	<u>Cwt.</u>	<u>Cwt.</u>	<u>Cwt.</u>	<u>Cwt.</u>
22.	\$37.06	\$29.32	\$32.00	\$30.89	\$35.31	\$35.00
23.	31.12	27.13	26.46	28.20	28.05	27.06
24.	24.87	24.89	22.18	24.13	21.67	22.89
	<u>Lot</u>	<u>Lot</u>	<u>Lot</u>	<u>Lot</u>	<u>Lot</u>	<u>Lot</u>
25.	\$ 1446	\$17428	\$ 1495	\$13915	\$53238	\$11432
26.	1089	13358	1110	10872	39777	9208
27.	357	4070	385	3043	13461	2224
	<u>Cwt.</u>	<u>Cwt.</u>	<u>Cwt.</u>	<u>Cwt.</u>	<u>Cwt.</u>	<u>Cwt.</u>
28.	\$24.87	\$24.79	\$22.18	\$25.84	\$21.50	\$22.28
29.	18.73	19.00	16.47	20.19	16.06	17.95
30.	6.14	5.79	5.71	5.65	5.44	4.33
31.	\$133	\$130	\$135	\$128	\$134	\$124

Table 3. Feed costs and returns from long-fed calves, 1969-1970 (continued)

Item	Individual lot numbers		
	27	28	29
<u>Number and weight of cattle fed</u>			
1. Date of purchase	Varied	Nov 69	Varied
2. Number of head bought	77	24	54
3. Sex	Steers	Mixed	Mixed
4. Days on farm	302	309	385
5. Days on pasture	-	-	42
6. Percent death loss	2.6	0.0	1.8
7. Average purchase weight, lbs.	406	409	397
8. Average sales weight, lbs.	1039	1012	1146
9. Gain per head, lbs.	633	603	749
10. Gain per head per day, lbs.	2.1	2.0	1.9
11. Pounds of beef produced	46725	14468	39279
<u>Feed used</u>			
	<u>Cwt.</u>	<u>Cwt.</u>	<u>Cwt.</u>
12. Corn, lbs.	637	410	585
13. Small grain, lbs.	5	-	41
14. Commercial feed, lbs.	40	68	72
15. Total concentrates, lbs.	682	478	698
16. Legume hay, lbs.	265	59	237
17. Other hay, lbs.	-	-	-
18. Total hay, lbs.	265	59	237
19. Corn silage, lbs.	514	1182	1222
20. Grass or oat silage, lbs.	85	-	-
21. Total silage, lbs.	599	1182	1222
<u>Price of cattle</u>			
	<u>Cwt.</u>	<u>Cwt.</u>	<u>Cwt.</u>
22. Price paid	\$34.46	\$33.68	\$25.92
23. Price received	27.94	27.81	26.63
24. Gross margin per cwt. gain	23.80	23.83	26.99
<u>Cost and return</u>			
	<u>Lot</u>	<u>Lot</u>	<u>Lot</u>
25. Total value produced	\$11020	\$ 3448	\$10610
26. Total feed cost	9386	2975	9433
27. Total return over feed	1634	473	1177
<u>Cost and return</u>			
	<u>Cwt.</u>	<u>Cwt.</u>	<u>Cwt.</u>
28. Value produced	\$23.58	\$23.83	\$27.01
29. Feed cost	20.08	20.56	24.01
30. Return over feed cost	3.50	3.27	3.00
31. Return per \$100 of feed cost	\$117	\$116	\$112

Table 3. Feed costs and returns from long-fed calves, 1969-1970 (concluded)

Individual lot numbers						
	30	31	32	33	34	35
1.	Feb 70	Mar 69	Dec 69	Jan 70	Jan 70	Dec 69
2.	51	19	153	39	24	108
3.	Heifers	Mixed	Steers	Mixed	Mixed	Heifers
4.	288	298	317	296	280	349
5.	-	-	-	-	-	-
6.	2.0	0.0	3.9	0.0	0.0	0.0
7.	405	405	447	450	450	423
8.	980	910	1026	959	1012	871
9.	575	505	579	509	562	448
10.	2.0	1.7	1.8	1.7	2.0	1.3
11.	28336	9600	82490	19850	13480	48440
	<u>Cwt.</u>	<u>Cwt.</u>	<u>Cwt.</u>	<u>Cwt.</u>	<u>Cwt.</u>	<u>Cwt.</u>
12.	559	875	591	813	738	661
13.	-	-	-	-	-	-
14.	10	-	55	42	57	62
15.	569	875	646	855	795	723
16.	-	417	84	60	341	165
17.	9	-	-	-	-	-
18.	9	417	84	60	341	165
19.	1104	-	-	1562	1499	1445
20.	-	-	-	-	-	-
21.	1104	-	-	1562	1499	1445
	<u>Cwt.</u>	<u>Cwt.</u>	<u>Cwt.</u>	<u>Cwt.</u>	<u>Cwt.</u>	<u>Cwt.</u>
22.	\$35.31	\$28.25	\$40.00	\$31.11	\$32.00	\$31.30
23.	25.40	24.77	27.37	28.86	27.18	24.64
24.	18.41	21.99	17.64	29.18	23.32	18.37
	<u>Lot</u>	<u>Lot</u>	<u>Lot</u>	<u>Lot</u>	<u>Lot</u>	<u>Lot</u>
25.	\$ 5149	\$ 2111	\$13939	\$ 5355	\$ 3144	\$ 8898
26.	4704	1980	13023	5437	3674	11288
27.	445	131	916	-82	-530	-2390
	<u>Cwt.</u>	<u>Cwt.</u>	<u>Cwt.</u>	<u>Cwt.</u>	<u>Cwt.</u>	<u>Cwt.</u>
28.	\$18.17	\$21.99	\$16.90	\$26.98	\$23.32	\$18.37
29.	16.60	20.63	15.79	27.39	27.25	23.30
30.	1.57	1.36	1.11	-.41	-3.93	-4.93
31.	\$109	\$107	\$107	\$ 98	\$ 85	\$ 79

Table 4. Feed costs and returns from short-fed yearlings, 1969-1970

Item	Average of 13 lots	Individual lot numbers		
		36	37	
<u>Number and weight of cattle fed</u>				
1. Date of purchase	-	Sept 69	Sept 69	
2. Number of head bought	87	102	20	
3. Sex	-	Heifers	Steers	
4. Days on farm	192	181	213	
5. Days on pasture	-	-	-	
6. Percent death loss	1.3	1.0	0.0	
7. Average purchase weight, lbs.	706	638	625	
8. Average sales weight, lbs.	1094	1009	1087	
9. Gain per head, lbs.	388	371	462	
10. Gain per head per day, lbs.	1.9	2.0	2.2	
11. Pounds of beef produced	31832	36845	9230	
<u>Feed used</u>				
	<u>Head</u>	<u>Cwt.</u>	<u>Cwt.</u>	<u>Cwt.</u>
12. Corn (bu/head) (lbs/cwt gain)	43	667	637	467
13. Small grain (bu/head) (lbs/cwt)	1	6	-	60
14. Commercial feed, lbs.	153	42	43	16
15. Total concentrates, lbs.	2611	715	680	543
16. Legume hay, lbs.	910	270	380	281
17. Other hay, lbs.	6	1	-	-
18. Total hay, lbs.	916	271	380	281
19. Corn silage, lbs.	1196	304	-	-
20. Grass or oat silage, lbs.	92	23	-	-
21. Total silage, lbs.	1288	327	-	-
<u>Price of cattle</u>				
	<u>Head</u>	<u>Cwt.</u>	<u>Cwt.</u>	<u>Cwt.</u>
22. Price paid	\$211.13	\$29.91	\$27.50	\$26.51
23. Price received	310.06	28.50	29.76	26.91
24. Gross margin per cwt. gain		25.92	33.10	27.43
<u>Cost and return</u>				
	<u>Lot</u>	<u>Lot</u>	<u>Lot</u>	
25. Total value produced	\$ 7811	\$12226	\$ 2532	
26. Total feed cost	5891	6817	1250	
27. Total return over feed	1920	5409	1282	
<u>Cost and return</u>				
	<u>Head</u>	<u>Cwt.</u>	<u>Cwt.</u>	<u>Cwt.</u>
28. Value produced	\$98.00	\$25.92	\$33.18	\$27.43
29. Feed cost	71.69	19.76	18.50	13.54
30. Return over feed cost	26.31	6.16	14.68	13.89
31. Return per \$100 of feed cost		\$142	\$179	\$203

Table 4. Feed costs and returns from short-fed yearlings, 1969-1970 (cont'd)

Individual lot numbers							
	38	39	40	41	42	43	44
1.	June 69	Oct 69	Aug 69	Dec 69	Jan 70	Sept 69	Aug 69
2.	29	188	160	55	21	67	139
3.	Steers	Mixed	Heifers	Mixed	Steers	Steers	Steers
4.	268	239	187	240	148	220	171
5.	-	-	-	-	-	-	-
6.	0.0	0.0	1.2	4.0	4.8	4.5	0.0
7.	631	736	631	542	971	690	809
8.	1190	1140	951	1105	1230	1144	1212
9.	559	404	320	563	259	454	403
10.	2.1	1.7	1.7	2.3	1.8	2.1	1.1
11.	16212	75865	49227	29720	4223	26998	56020
	<u>Cwt.</u>	<u>Cwt.</u>	<u>Cwt.</u>	<u>Cwt.</u>	<u>Cwt.</u>	<u>Cwt.</u>	<u>Cwt.</u>
12.	534	436	613	482	796	838	703
13.	3	-	-	-	-	-	-
14.	25	46	44	39	-	60	26
15.	562	482	657	521	796	898	729
16.	271	233	95	240	1231	96	69
17.	-	-	-	-	-	-	5
18.	271	233	95	240	1231	96	74
19.	370	329	1012	219	-	600	701
20.	-	-	-	-	-	-	207
21.	370	329	1012	219	-	600	908
	<u>Cwt.</u>	<u>Cwt.</u>	<u>Cwt.</u>	<u>Cwt.</u>	<u>Cwt.</u>	<u>Cwt.</u>	<u>Cwt.</u>
22.	\$31.18	\$31.16	\$29.19	\$29.94	\$26.07	\$29.76	\$31.50
23.	29.88	29.15	28.93	27.04	28.14	29.23	29.45
24.	28.42	25.48	28.38	24.20	33.04	28.43	25.32
	<u>Lot</u>	<u>Lot</u>	<u>Lot</u>	<u>Lot</u>	<u>Lot</u>	<u>Lot</u>	<u>Lot</u>
25.	\$ 4607	\$19330	\$13973	\$ 6897	\$ 1451	\$ 7644	\$14187
26.	2561	11129	9300	4541	1212	6307	11459
27.	2046	8201	4673	2356	239	1337	2728
	<u>Cwt.</u>	<u>Cwt.</u>	<u>Cwt.</u>	<u>Cwt.</u>	<u>Cwt.</u>	<u>Cwt.</u>	<u>Cwt.</u>
28.	\$28.42	\$25.48	\$28.38	\$23.21	\$34.36	\$28.31	\$25.32
29.	15.80	14.67	18.89	15.28	28.70	23.36	20.45
30.	12.62	10.81	9.49	7.93	5.66	4.95	4.87
31.	\$180	\$174	\$150	\$151	\$120	\$121	\$124

Table 4. Feed costs and returns from short-fed yearlings, 1969-1970 (cont'd)

Item	Individual lot numbers			
	45	46	47	48
<u>Number and weight of cattle fed</u>				
1. Date of purchase	Dec 69	May 70	Mar 70	May 70
2. Number of head bought	32	61	113	144
3. Sex	Steers	Heifers	Steers	Heifers
4. Days on farm	169	118	180	165
5. Days on pasture	-	-	-	-
6. Percent death loss	0.0	0.0	0.0	1.4
7. Average purchase weight, lbs.	855	690	756	601
8. Average sales weight, lbs.	1167	945	1170	872
9. Gain per head, lbs.	312	255	414	271
10. Gain per head per day, lbs.	1.8	2.2	2.3	1.6
11. Pounds of beef produced	9975	15535	46755	37215
<u>Feed used</u>				
	<u>Cwt.</u>	<u>Cwt.</u>	<u>Cwt.</u>	<u>Cwt.</u>
12. Corn, lbs.	1005	721	649	792
13. Small grain, lbs.	16	-	-	-
14. Commercial feed, lbs.	91	57	24	72
15. Total concentrates, lbs.	1112	778	673	864
16. Legume hay, lbs.	190	348	57	17
17. Other hay, lbs.	-	-	13	-
18. Total hay, lbs.	190	348	70	17
19. Corn silage, lbs.	-	-	336	392
20. Grass or oat silage, lbs.	-	-	88	-
21. Total silage, lbs.	-	-	424	392
<u>Price of cattle</u>				
	<u>Cwt.</u>	<u>Cwt.</u>	<u>Cwt.</u>	<u>Cwt.</u>
22. Price paid	\$26.81	\$30.50	\$36.51	\$32.26
23. Price received	28.14	28.21	28.43	27.18
24. Gross margin per cwt. gain	31.80	22.00	13.68	15.86
<u>Cost and return</u>				
	<u>Lot</u>	<u>Lot</u>	<u>Lot</u>	<u>Lot</u>
25. Total value produced	\$ 3172	\$ 3418	\$ 6395	\$ 5716
26. Total feed cost	2801	3316	8054	7832
27. Total return over feed	371	102	-1659	-2116
<u>Cost and return</u>				
	<u>Cwt.</u>	<u>Cwt.</u>	<u>Cwt.</u>	<u>Cwt.</u>
28. Value produced	\$31.80	\$22.00	\$13.68	\$15.36
29. Feed cost	28.08	21.35	17.22	21.04
30. Return over feed cost	3.72	.65	-3.54	-5.68
31. Return per \$100 of feed cost	\$113	\$103	\$ 79	\$ 73

DETERMINING PROFIT PROSPECTS

Profit prospects for the coming feeding season can be calculated by using the work sheet below. Past records of feed requirements over a period of years for comparable types of cattle fed to similar weights and finish should be used as a basis for the calculations. Feeders will want to use their own estimates of labor, feed, and other costs when records are available. For farmers who do not have records, the averages shown in table 5 of this report will provide data which can be used.

An illustration using some of the average data from this publication is presented on page 20.

PROFIT PROSPECTS WORK SHEET

STEP 1. Determine cost of producing finished animal

(a) Original cost per head: _____ (wt) x \$ _____ (price) = \$ _____

(b) Feed and other costs per head:

<u>Feed</u>	<u>Amount fed</u>	<u>Price</u>	<u>Cost</u>
Corn, bu.	_____	_____	_____
Small grain, bu.	_____	_____	_____
Supplement, lbs.	_____	_____	_____
All hay, tons	_____	_____	_____
Silage, tons	_____	_____	_____
Total feed cost			\$ _____

Other costs - estimated

Death loss: \$ _____ (original cost) x _____ (% death loss) \$ _____

Labor cost: _____ (hrs per head) x \$ _____ (per hour) \$ _____

Interest: \$ _____ (original cost per head) x _____ %
 (interest rate for number
 of months on feed) \$ _____

Miscellaneous costs: _____ (lbs gain) x \$1.50 per cwt. \$ _____

Other overhead costs for equipment and shelter:
 _____ (lbs gain) x \$1.50 per cwt. \$ _____

(c) Total cost per head \$ _____

STEP 2. Determine selling price you need to cover costs

Divide: $\frac{\text{total cost per head}}{\text{sales weight in cwt.}} = \frac{\$ \text{_____}}{\text{cwt.}}$ \$ _____

STEP 3. Your estimated sales value

_____ cwt. x \$ _____ (your estimated price) \$ _____

Profit per head \$ _____

Table 5. A three-year comparison of feeder cattle feed costs and returns

Item	Long-fed calves			Three year average
	1967-68 average 28 lots	1968-69 average 34 lots	1969-70 average 35 lots	
<u>Number and weight of cattle fed</u>				
Number of head bought	138	132	141	137
Days on farm	287	308	296	297
Days on pasture	9	2	1	4
Percent death loss	1.2	2.5	1.3	1.7
Average purchase weight, lbs.	439	425	435	433
Average sales weight, lbs.	956	957	976	963
Gain per head, lbs.	517	532	541	530
Gain per head per day, lbs.	1.8	1.7	1.8	1.8
Pounds of beef produced per lot	72227	68971	73611	71603
<u>Feed used per 100 pounds gain</u>				
Corn, lbs.	514	650	544	569
Small grain, lbs.	9	22	8	13
Commercial feed, lbs.	<u>46</u>	<u>59</u>	<u>53</u>	<u>53</u>
Total concentrates, lbs.	569	731	605	635
Legume hay, lbs.	143	169	187	166
Other hay, lbs.	<u>7</u>	<u>12</u>	<u>8</u>	<u>9</u>
Total hay, lbs.	150	181	195	175
Silage, lbs.	577	458	592	642
<u>Price of cattle</u>				
Price paid per 100 pounds	\$27.18	\$28.60	\$32.90	\$29.56
Price received per 100 pounds	25.38	27.73	28.27	27.13
Gross margin per 100 pounds gain	23.85	27.04	24.62	25.14
<u>Cost and returns per 100 pounds gain</u>				
Value produced	\$24.05	\$27.25	\$24.58	\$25.29
Feed cost	<u>15.94</u>	<u>19.03</u>	<u>18.53</u>	<u>17.83</u>
Return over feed cost	\$ 8.11	\$ 8.22	\$ 6.05	\$ 7.46
Return per \$100 of feed cost	\$147	\$148	\$136	\$144

Table 5. A three-year comparison of feeder cattle feed costs and returns

Item	Short-fed yearlings			
	1967-68 average 8 lots	1968-69 average 10 lots	1969-70 average 13 lots	Three year average
<u>Number and weight of cattle</u>				
Number of head bought	74	84	87	82
Days on farm	206	189	192	196
Days on pasture	1	26	-	9
Percent death loss	0.9	1.7	1.3	1.3
Average purchase weight, lbs.	680	590	706	659
Average sales weight, lbs.	1089	1017	1078	1061
Gain per head, lbs.	409	427	372	402
Gain per head per day, lbs.	2.0	2.2	1.9	2.0
Pounds of beef produced per lot	30507	34276	31832	32220
<u>Feed used per 100 pounds gain</u>				
Corn, lbs.	664	675	667	669
Small grain, lbs.	-	10	6	5
Commercial feed, lbs.	46	43	42	43
Total concentrates, lbs.	<u>710</u>	<u>728</u>	<u>715</u>	<u>717</u>
Legume hay, lbs.	222	238	270	243
Other hay, lbs.	8	1	1	3
Total hay, lbs.	<u>230</u>	<u>239</u>	<u>271</u>	<u>246</u>
Silage, lbs.	574	710	327	537
<u>Price of cattle</u>				
Price paid per 100 pounds	\$25.29	\$27.39	\$29.91	\$27.53
Price received per 100 pounds	25.60	27.22	28.50	27.11
Gross margin per 100 pounds gain	26.11	26.99	25.92	26.36
<u>Cost and returns per 100 pounds gain</u>				
Value produced	\$26.15	\$26.77	\$25.92	\$26.28
Feed cost	<u>19.28</u>	<u>20.78</u>	<u>19.76</u>	<u>19.94</u>
Return over feed cost	<u>\$ 6.87</u>	<u>\$ 5.99</u>	<u>\$ 6.16</u>	<u>\$ 6.34</u>
Return per \$100 of feed cost	\$136	\$134	\$142	\$137

Example of Determination of Total Cost and Necessary Selling Price for Steer Calves

STEP 1. Determine cost of producing finished animal

(a) Original cost per head = 433 lbs. @ \$29.56 per cwt.¹ \$128.00

(b) Feed and other costs per head - 530 pounds gain

<u>Feed</u>	<u>Amount fed</u> ²	<u>Price</u> ³	<u>Cost</u>
Corn	53.9 bu.	\$ 1.20	\$64.68
Oats	2.2 bu.	.60	1.32
Supplement	281.0 lbs.	.05	14.05
All hay	.5 tons	20.00	10.00
Silage	1.5 tons	8.00	12.00

Total feed cost 102.05

Other costs - estimated

Death loss: \$128.00 x 1.7% 2.18

Labor cost: 5.0⁴ hours per head x \$3.00 per hour (100 head basis) 15.00

Interest: \$128.00 (original cost per head) x 8% 8.29
(number of days on farm = 297 = .81 year)

Miscellaneous costs: 530 lbs. gain x \$1.50 per cwt. 7.95

Other overhead costs for equipment and shelter 7.95
(530 lbs. gain x \$1.50 per cwt.)

(c) Total cost per head \$271.42

STEP 2. Determine net selling price needed to cover all costs

$$\frac{\text{Total cost per head}}{\text{Number of cwt. sold}} = \frac{\$271.42}{9.63} = \$28.18 = \text{net selling price needed to cover all costs}$$
 (marketing costs are not covered so "net" means farm price after market costs are covered)

1. Gain in weight and price based on data in table 5 for the three-year average period.

2. Based on data contained in table 5.

3. Based on data contained in table 2.

4. Adapted from Cattle Feeder's Planning Guide, University of Minnesota Extension Service, FM-30, September 1966.