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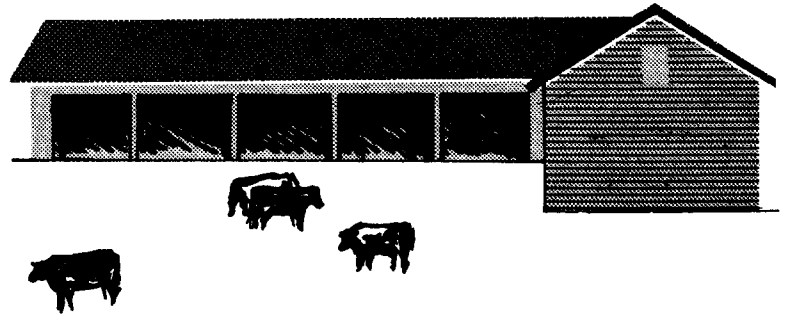
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Cost and Return From Feeding Cattle

1968-1969

Cooperating agencies:

University of Minnesota, Institute of Agriculture

United States Department of Agriculture, Economic Research Service

DEPARTMENT OF AGRICULTURAL ECONOMICS

INSTITUTE OF AGRICULTURE

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COST AND RETURN FROM FEEDING CATTLE
1968-1969

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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) value produced per cwt. gain in weight, and (2) the feed cost per cwt. gain in weight. This is emphasized by this study of costs and returns for 44 lots of feeder cattle on 37 Southern Minnesota farms in the 1967-1968 feeding season. This information was obtained from records kept by 33 members of the Southwestern Minnesota Farm Management Association under the supervision of Erlin Weness and three 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 feeder cattle production.

The data presented cover averages of individual lots of cattle from purchase as feeders to sale as fat cattle. Two different programs are represented: (1) long-fed cattle and (2) short-fed cattle. Cattle on feed 240 days or less are classified as "short-fed" and those fed for longer periods than 240 days as "long-fed."

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.

* The authors are indebted to Janet B. Otis for her assistance in the preparation of this report.

PRICES

Monthly 1970 prices of feeder calves at South St. Paul from January 1968 through March 1970 are shown in Figure 1. Southern Minnesota farmers secure their feeder cattle from a variety of sources but the South St. Paul quotations are representative of price trends during this period.

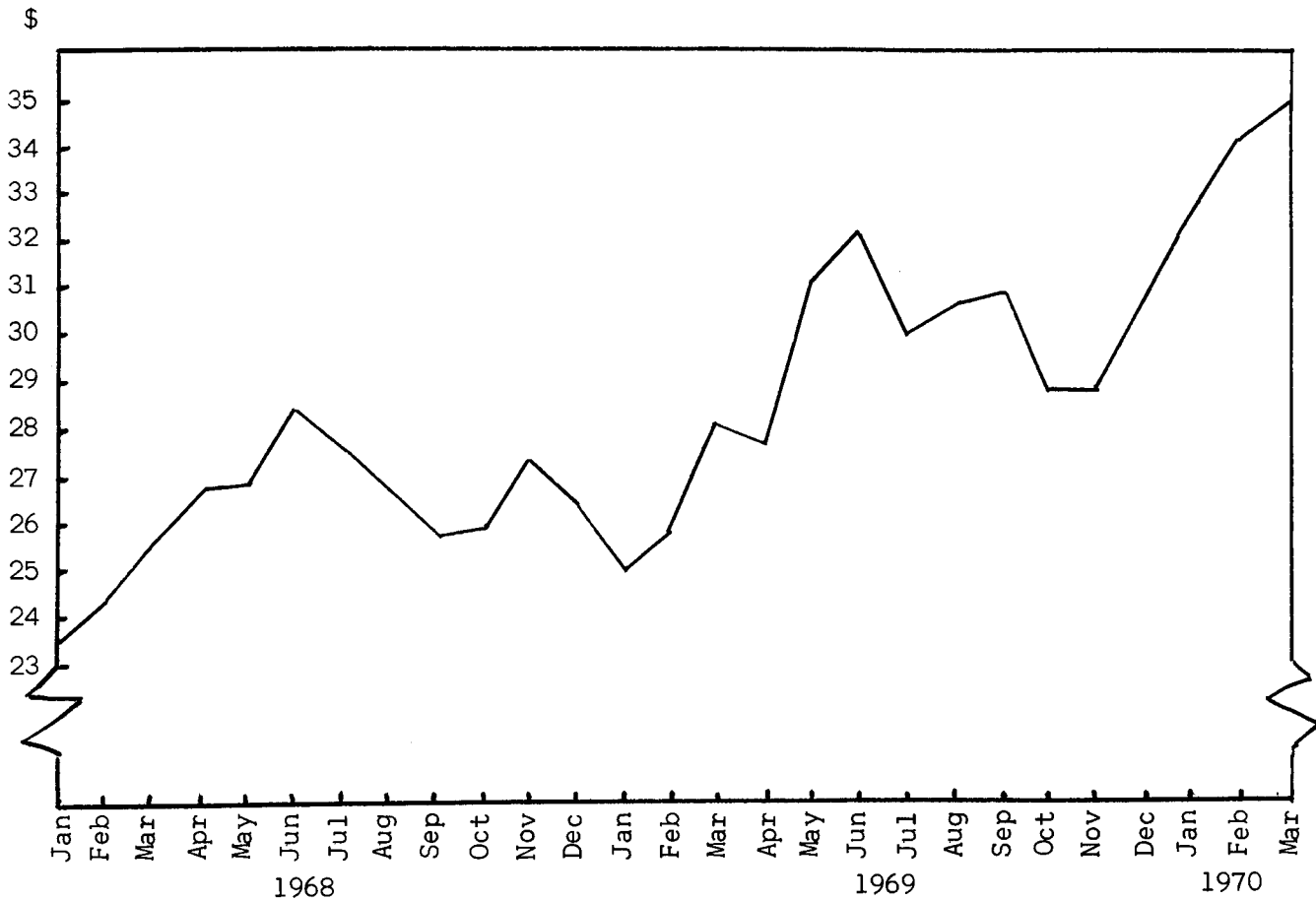


Figure 1. Average monthly prices paid per 100 pounds of feeder calves, South St. Paul, January 1968 - March 1970 (compiled from Market News - Livestock Division, USDA, Consumer and Marketing Service, 1968-1970).

The average yearly prices at which the principal feeds used in cattle feeding were charged on the farms studied are shown in Table 1 for 1968 and 1969. 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 1. Average annual feed prices

Feed	1968	1969
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	1.02	1.05
Oats, per bushel	.62	.56
Soybean meal, per 100 pounds	5.10	5.00
Pasture, per month per head	4.00	4.00

FEEDING DATA

Tables 2 and 3 present average data for each feeding program and report performance of individual lots in 1968-1969. 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 result 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 2 and 3, "value produced" (line 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.

Two factors contribute to return over feed cost: price margin on weight bought and gain in weight from feeding. The contribution of each factor is illustrated on lines 31 and 32. Return from feeding (line 31) measures gain, which is simply selling price minus the feed cost per 100 pounds of gain. Return from price spread (line 32) measures the price margin (selling price minus purchase price) plus the effect of the death loss. The return per \$100 feed cost (line 33) is obtained by dividing the total value produced by the total feed cost.

Table 2. Feed costs and returns from long-fed cattle, 1968-1969

Item	Average of		Individual lot nos.	
	34 lots		1	2
<u>Number and weight of cattle fed</u>				
1. Date of purchase	-		Oct 68	Varied
2. Number of head bought	132		75	170
3. Days on farm	308		253	255
4. Days on pasture	1.6		-	-
5. Percent death loss	2.5		4.0	3.5
6. Average purchase weight, lbs.	425		346	534
7. Average sales weight, lbs.	957		754	1034
8. Gain per head, lbs.	532		408	500
9. Gain per head per day, lbs.	1.7		1.6	2.0
10. Pounds of beef produced	68971		28337	78775
<u>Feed used</u>				
	<u>Head</u>	<u>Cwt.</u>	<u>Cwt.</u>	<u>Cwt.</u>
11. Corn (bu/head) (lbs/cwt.gain)*	59	650	667	505
12. Small grain (bu/head) (lbs/cwt)	4	22	-	20
13. Commercial feed, lbs.	300	59	98	27
14. Total concentrates, lbs.	3731	731	765	552
15. Legume hay, lbs.	830	169	109	159
16. Other hay, lbs.	78	12	-	-
17. Total hay, lbs.	908	181	109	159
18. Corn silage, lbs.	2393	441	-	294
19. Grass or oat silage, lbs.	93	17	-	-
20. Total silage, lbs.	2486	458	-	294
21. Pasture, days	1.6	0.3	-	-
<u>Price of cattle</u>				
	<u>Head</u>	<u>Cwt.</u>	<u>Cwt.</u>	<u>Cwt.</u>
22. Price paid	\$121.33	\$28.60	\$28.47	\$28.57
23. Price received	265.47	27.73	31.98	28.70
24. Price spread or gross margin	144.14	-.87	+3.51	+.13
<u>Cost and return</u>				
	<u>Lot</u>		<u>Lot</u>	<u>Lot</u>
25. Total value produced	\$18485		\$ 9974	\$22729
26. Total feed cost	12094		5248	11090
27. Total return over feed	6391		4726	11639
<u>Cost and return</u>				
	<u>Head</u>	<u>Cwt.</u>	<u>Cwt.</u>	<u>Cwt.</u>
28. Value produced	\$140.79	\$27.25	\$35.20	\$28.85
29. Feed costs	97.72	19.03	18.52	14.08
30. Return over feed cost	43.07	8.22	16.68	14.77
31. Return over feed cost from feeding		8.70	13.46	14.62
32. Return over feed cost from price spread		-.48	3.22	.15
33. Return per \$100 of feed cost		\$148	\$190	\$205

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

Table 2. Feed costs and returns from long-fed cattle, 1968-1969 (continued)

		Individual lot numbers					
		3	4	5	6	7	8
1.	Dec 68		Nov 68	Oct 68	Nov 68	Nov 68	Dec 68
2.	34		134	88	185	296	204
3.	264		266	298	241	304	275
4.	-		-	-	-	-	-
5.	5.9		1.5	1.1	.5	6.4	5.4
6.	494		389	441	412	404	490
7.	926		870	898	877	1017	1011
8.	432		481	457	465	613	521
9.	1.6		1.8	1.5	1.9	2.0	1.9
10.	12848		62615	40218	85046	162085	95053
	<u>Cwt.</u>		<u>Cwt.</u>	<u>Cwt.</u>	<u>Cwt.</u>	<u>Cwt.</u>	<u>Cwt.</u>
11.	581		802	510	499	513	530
12.	-		38	2	3	4	26
13.	77		60	73	39	53	67
14.	658		900	585	541	570	623
15.	140		128	264	105	57	84
16.	-		-	-	18	9	-
17.	140		128	264	123	66	84
18.	-		332	602	729	587	648
19.	-		-	-	-	-	210
20.	-		332	602	729	587	858
21.	-		-	-	-	-	-
	<u>Cwt.</u>		<u>Cwt.</u>	<u>Cwt.</u>	<u>Cwt.</u>	<u>Cwt.</u>	<u>Cwt.</u>
22.	\$23.01		\$24.98	\$26.63	\$28.55	\$29.87	\$27.98
23.	26.35		28.42	28.19	28.24	28.36	28.34
24.	+3.34		+3.44	+1.56	-.31	-1.51	+.36
	<u>Lot</u>		<u>Lot</u>	<u>Lot</u>	<u>Lot</u>	<u>Lot</u>	<u>Lot</u>
25.	\$ 3948		\$19595	\$11940	\$23779	\$42853	\$27303
26.	2095		10885	6940	13989	24608	16648
27.	1853		8710	5000	9790	18245	10655
	<u>Cwt.</u>		<u>Cwt.</u>	<u>Cwt.</u>	<u>Cwt.</u>	<u>Cwt.</u>	<u>Cwt.</u>
28.	\$30.73		\$31.29	\$29.69	\$27.96	\$26.44	\$28.72
29.	16.31		17.38	17.26	16.45	15.18	17.51
30.	14.42		13.91	12.43	11.51	11.26	11.21
31.	10.04		11.04	10.93	11.79	13.18	10.83
32.	4.38		2.87	1.50	-.28	-1.92	.38
33.	\$188		\$180	\$172	\$169	\$174	\$164

Table 2. Feed costs and returns from long-fed cattle, 1968-1969 (continued)

Item	Individual lot numbers		
	9	10	11
<u>Number and weight of cattle fed</u>			
1. Date of purchase	May 68	Nov 68	Varied
2. Number of head bought	56	126	91
3. Days on farm	297	317	305
4. Days on pasture	-	-	-
5. Percent death loss	1.8	0.0	0.0
6. Average purchase weight, lbs.	556	495	393
7. Average sales weight, lbs.	931	1055	946
8. Gain per head, lbs.	375	560	553
9. Gain per head per day, lbs.	1.3	1.8	1.8
10. Pounds of beef produced	20045	70575	50381
<u>Feed used</u>			
	<u>Cwt.</u>	<u>Cwt.</u>	<u>Cwt.</u>
11. Corn, lbs./cwt. gain	594	635	628
12. Small grain, lbs.	20	-	-
13. Commercial feed, lbs.	92	62	91
14. Total concentrates, lbs.	706	697	719
15. Legume hay, lbs.	309	156	71
16. Other hay, lbs.	-	-	-
17. Total hay, lbs.	309	156	71
18. Corn silage, lbs.	-	128	969
19. Grass or oat silage, lbs.	-	-	-
20. Total silage, lbs.	-	128	969
21. Pasture, days	-	-	-
<u>Price of cattle</u>			
	<u>Cwt.</u>	<u>Cwt.</u>	<u>Cwt.</u>
22. Price paid	\$25.98	\$30.00	\$26.47
23. Price received	27.67	29.13	29.16
24. Price spread or gross margin	+1.69	-.87	+2.69
<u>Cost and return</u>			
	<u>Lot</u>	<u>Lot</u>	<u>Lot</u>
25. Total value produced	\$ 6074	\$20018	\$15653
26. Total feed cost	3864	12424	10342
27. Total return over feed	2210	7594	5311
<u>Cost and return</u>			
	<u>Cwt.</u>	<u>Cwt.</u>	<u>Cwt.</u>
28. Value produced	\$30.30	\$28.36	\$31.07
29. Feed costs	19.27	17.60	20.53
30. Return over feed cost	11.03	10.76	10.54
31. Return over feed cost from feeding	8.40	11.53	8.63
32. Return over feed cost from price spread	2.63	-.77	1.91
33. Return per \$100 of feed cost	\$157	\$161	\$151

Table 3. Feed costs and returns from long-fed cattle, 1968-1969 (continued)

		Individual lot numbers					
		12	13	14	15	16	17
1.	Dec 67		Oct 68	Varied	Nov 68	Nov 68	Sept 68
2.	27		188	181	228	444	83
3.	452		330	336	338	342	355
4.	-		-	-	-	-	-
5.	0.0		4.3	0.6	0.9	2.7	1.2
6.	350		431	396	413	418	270
7.	802		1105	1007	1095	1005	829
8.	452		674	611	682	587	559
9.	1.0		2.0	1.8	2.0	1.7	1.6
10.	12190		117870	109657	153170	248430	45565
	<u>Cwt.</u>		<u>Cwt.</u>	<u>Cwt.</u>	<u>Cwt.</u>	<u>Cwt.</u>	<u>Cwt.</u>
11.	532		325	535	510	531	330
12.	87		99	15	2	21	28
13.	25		74	60	31	46	48
14.	644		498	610	543	598	406
15.	295		187	139	95	93	307
16.	-		-	-	12	-	-
17.	295		187	139	107	93	307
18.	-		899	255	478	632	790
19.	-		-	-	-	-	-
20.	-		899	255	478	632	790
21.	-		-	-	-	--	-
	<u>Cwt.</u>		<u>Cwt.</u>	<u>Cwt.</u>	<u>Cwt.</u>	<u>Cwt.</u>	<u>Cwt.</u>
22.	\$22.92		\$32.29	\$29.25	\$30.82	\$31.44	\$32.21
23.	24.77		28.84	27.22	27.24	27.71	27.34
24.	+1.85		-3.45	-2.03	-3.58	-3.73	-4.87
	<u>Lot</u>		<u>Lot</u>	<u>Lot</u>	<u>Lot</u>	<u>Lot</u>	<u>Lot</u>
25.	\$ 3194		\$31199	\$28401	\$38347	\$61911	\$11371
26.	1920		19049	17223	23221	39192	7357
27.	1274		12150	11178	15126	22719	4014
	<u>Cwt.</u>		<u>Cwt.</u>	<u>Cwt.</u>	<u>Cwt.</u>	<u>Cwt.</u>	<u>Cwt.</u>
28.	\$26.20		\$26.47	\$25.90	\$25.04	\$24.92	\$24.96
29.	15.75		16.16	15.70	15.16	15.78	16.15
30.	10.45		10.31	10.20	9.88	9.14	8.81
31.	9.02		12.68	11.52	12.08	11.93	11.19
32.	1.43		-2.37	-1.32	-2.20	-2.79	-2.38
33.	\$166		\$164	\$165	\$165	\$158	\$155

Table 2. Feed costs and returns from long-fed cattle, 1968-1969 (continued)

Item	Individual lot numbers		
	18	19	20
<u>Number and weight of cattle fed</u>			
1. Date of purchase	Dec 68	Nov 68	Oct 68
2. Number of head bought	115	50	245
3. Days on farm	359	322	274
4. Days on pasture	-	-	-
5. Percent death loss	0.0	0.0	5.3
6. Average purchase weight, lbs.	344	456	495
7. Average sales weight, lbs.	1053	1048	1028
8. Gain per head, lbs.	709	592	533
9. Gain per head per day, lbs.	2.0	1.8	1.9
10. Pounds of beef produced	81615	29610	117250
<u>Feed used</u>			
	<u>Cwt.</u>	<u>Cwt.</u>	<u>Cwt.</u>
11. Corn, lbs./cwt. gain	587	654	773
12. Small grain, lbs.	51	11	30
13. Commercial feed, lbs.	29	50	56
14. Total concentrates, lbs.	667	715	859
15. Legume hay, lbs.	16	34	147
16. Other hay, lbs.	198	-	17
17. Total hay, lbs.	214	34	164
18. Corn silage, lbs.	93	169	1192
19. Grass or oat silage, lbs.	-	-	-
20. Total silage, lbs.	93	169	1192
21. Pasture, days	-	-	-
<u>Price of cattle</u>			
	<u>Cwt.</u>	<u>Cwt.</u>	<u>Cwt.</u>
22. Price paid	\$31.07	\$32.50	\$29.12
23. Price received	26.99	28.15	28.27
24. Price spread or gross margin	-4.08	-4.35	-.85
<u>Cost and return</u>			
	<u>Lot</u>	<u>Lot</u>	<u>Lot</u>
25. Total value produced	\$20415	\$ 7344	\$32104
26. Total feed cost	13231	4759	22073
27. Total return over feed	7184	2585	10031
<u>Cost and return</u>			
	<u>Cwt.</u>	<u>Cwt.</u>	<u>Cwt.</u>
28. Value produced	\$25.01	\$24.80	\$27.38
29. Feed costs	16.21	16.07	18.83
30. Return over feed cost	8.80	8.73	8.55
31. Return over feed cost from feeding	10.78	12.08	9.44
32. Return over feed cost from price spread	-1.98	-3.35	-.89
33. Return per \$100 of feed cost	\$154	\$154	\$145

Table 2. Feed costs and returns from long-fed cattle, 1968-1969 (continued)

		Individual lot numbers					
		21	22	23	24	25	26
1.	Nov 68	Oct 68	July 68	Nov 68	Nov 68	Varied	
2.	118	160	202	425	33	19	
3.	335	316	291	324	312	370	
4.	-	-	-	-	-	-	
5.	0.8	7.5	7.9	3.0	0.0	0.0	
6.	413	397	461	377	394	334	
7.	908	959	954	934	982	955	
8.	495	562	493	557	588	621	
9.	1.5	1.8	1.7	1.7	1.9	1.7	
10.	57500	78325	84215	224350	19400	11801	
	<u>Cwt.</u>	<u>Cwt.</u>	<u>Cwt.</u>	<u>Cwt.</u>	<u>Cwt.</u>	<u>Cwt.</u>	<u>Cwt.</u>
11.	643	493	804	585	780	520	
12.	83	49	7	-	-	-	
13.	60	83	75	76	27	49	
14.	786	625	886	661	807	569	
15.	52	337	19	29	-	42	
16.	25	-	-	-	79	59	
17.	77	337	19	29	79	101	
18.	49	664	941	784	598	1195	
19.	-	-	-	107	-	-	
20.	49	664	941	891	598	1195	
21.	-	-	-	-	-	-	
	<u>Cwt.</u>	<u>Cwt.</u>	<u>Cwt.</u>	<u>Cwt.</u>	<u>Cwt.</u>	<u>Cwt.</u>	<u>Cwt.</u>
22.	\$27.81	\$27.27	\$31.33	\$27.07	\$29.81	\$29.59	
23.	26.71	27.34	30.70	26.46	27.69	28.20	
24.	-1.10	+0.07	-.63	-.61	-2.12	-1.39	
	<u>Lot</u>	<u>Lot</u>	<u>Lot</u>	<u>Lot</u>	<u>Lot</u>	<u>Lot</u>	<u>Lot</u>
25.	\$14820	\$21462	\$25267	\$58397	\$ 5095	\$ 3239	
26.	10121	15118	18552	40626	3588	2380	
27.	4699	6344	6715	17771	1507	859	
	<u>Cwt.</u>	<u>Cwt.</u>	<u>Cwt.</u>	<u>Cwt.</u>	<u>Cwt.</u>	<u>Cwt.</u>	<u>Cwt.</u>
28.	\$25.77	\$27.40	\$30.00	\$26.03	\$26.26	\$27.45	
29.	17.60	19.30	22.03	18.11	18.49	20.17	
30.	8.17	8.10	7.97	7.92	7.77	7.28	
31.	9.11	8.04	8.67	8.35	9.20	8.03	
32.	-.94	.06	-.70	-.43	-1.43	-.75	
33.	\$146	\$142	\$136	\$144	\$142	\$136	

Table 2. Feed costs and returns from long-fed cattle, 1968-1969 (continued)

Item	Individual lot numbers		
	27	28	29
<u>Number and weight of cattle fed</u>			
1. Date of purchase	Varied	Dec 68	Nov 68
2. Number of head bought	50	141	80
3. Days on farm	256	303	293
4. Days on pasture	-	-	-
5. Percent death loss	0.0	3.5	1.2
6. Average purchase weight, lbs.	459	434	453
7. Average sales weight, lbs.	910	973	915
8. Gain per head, lbs.	451	539	462
9. Gain per head per day, lbs.	1.8	3.5	1.6
10. Pounds of beef produced	22555	71135	36000
<u>Feed used</u>			
	<u>Cwt.</u>	<u>Cwt.</u>	<u>Cwt.</u>
11. Corn, lbs./cwt. gain	679	567	808
12. Small grain, lbs.	-	-	4
13. Commercial feed, lbs.	65	4	83
14. Total concentrates, lbs.	744	571	895
15. Legume hay, lbs.	303	239	228
16. Other hay, lbs.	-	-	-
17. Total hay, lbs.	303	239	228
18. Corn silage, lbs.	221	770	344
19. Grass or oat silage, lbs.	-	169	-
20. Total silage, lbs.	221	939	344
21. Pasture, days	-	-	-
<u>Price of cattle</u>			
	<u>Cwt.</u>	<u>Cwt.</u>	<u>Cwt.</u>
22. Price paid	\$27.04	\$30.86	\$27.15
23. Price received	26.43	26.28	27.20
24. Price spread or gross margin	-.61	-4.58	+.05
<u>Cost and return</u>			
	<u>Lot</u>	<u>Lot</u>	<u>Lot</u>
25. Total value produced	\$ 5822	\$15884	\$ 9808
26. Total feed cost	4676	12477	8268
27. Total return over feed	1146	3407	1540
<u>Cost and return</u>			
	<u>Cwt.</u>	<u>Cwt.</u>	<u>Cwt.</u>
28. Value produced	\$25.81	\$22.33	\$27.25
29. Feed costs	20.73	17.54	22.97
30. Return over feed cost	5.08	4.79	4.28
31. Return over feed cost from feeding	5.70	8.74	4.23
32. Return over feed cost from price spread	-.62	-3.95	.05
33. Return per \$100 of feed cost	\$124	\$127	\$119

Table 2. Feed costs and returns from long-fed cattle, 1968-1969 (concluded)

	Individual lot numbers				
	30	31	32	33	34
1.	Dec 68	Varied	Jan 69	Nov 68	Varied
2.	94	66	15	32	28
3.	355	296	279	284	259
4.	-	53	-	-	-
5.	2.1	4.5	0.0	9.4	0.0
6.	412	429	350	471	552
7.	996	1003	930	907	935
8.	584	574	580	436	383
9.	1.6	1.9	2.1	1.5	1.5
10.	52940	34875	8695	11225	10715
	<u>Cwt.</u>	<u>Cwt.</u>	<u>Cwt.</u>	<u>Cwt.</u>	<u>Cwt.</u>
11.	709	927	911	1175	1252
12.	38	18	-	108	-
13.	89	14	123	31	58
14.	836	959	1034	1314	1310
15.	340	166	172	606	327
16.	-	-	-	-	-
17.	340	166	172	606	327
18.	336	373	-	-	-
19.	-	-	-	-	-
20.	336	373	-	-	-
21.	-	-	-	-	-
	<u>Cwt.</u>	<u>Cwt.</u>	<u>Cwt.</u>	<u>Cwt.</u>	<u>Cwt.</u>
22.	\$27.53	\$33.62	\$30.00	\$23.49	\$27.73
23.	26.64	29.08	27.79	25.38	25.88
24.	-.89	-4.54	-2.21	+1.89	-1.85
	<u>Lot</u>	<u>Lot</u>	<u>Lot</u>	<u>Lot</u>	<u>Lot</u>
25.	\$13765	\$ 8858	\$ 2300	\$ 3134	\$ 2486
26.	11911	8257	2246	3561	3265
27.	1854	601	54	-427	-779
	<u>Cwt.</u>	<u>Cwt.</u>	<u>Cwt.</u>	<u>Cwt.</u>	<u>Cwt.</u>
28.	\$26.00	\$25.39	\$26.45	\$27.92	\$23.20
29.	22.50	23.67	25.83	31.72	30.47
30.	3.50	1.72	.62	-3.80	-7.27
31.	4.14	5.41	1.96	-6.34	-4.59
32.	-.64	-3.69	-1.34	2.54	-2.68
33.	\$116	\$107	\$102	\$ 88	\$ 76

Table 3. Feed costs and returns from short-fed cattle, 1968-1969

Item	Average of 10 lots	Individual lot nos. 35	
<u>Number and weight of cattle fed</u>			
1. Date of purchase		Oct 58	
2. Number of head bought	84	51	
3. Days on farm	189	214	
4. Days on pasture	25.9	-	
5. Percent death loss	1.7	0.0	
6. Average purchase weight, lbs.	590	636	
7. Average sales weight, lbs.	1017	1072	
8. Gain per head, lbs.	427	436	
9. Gain per head per day, lbs.	2.2	2.0	
10. Pounds of beef produced	34276	22210	
<u>Feed used</u>			
	<u>Head</u>	<u>Cwt.</u>	<u>Cwt.</u>
11. Corn (bu/head) (lbs/cwt gain)	51	675	848
12. Small grain (bu/head) (lbs/cwt)	1	10	-
13. Commercial feed, lbs.	178	43	63
14. Total concentrates, lbs.	3053	728	911
15. Legume hay, lbs.	971	238	52
16. Other hay, lbs.	3	1	-
17. Total hay, lbs.	974	239	52
18. Corn silage, lbs.	2811	710	475
19. Grass or oat silage, lbs.	-	-	-
20. Total silage, lbs.	2811	710	475
21. Pasture days	25.9	3.0	-
<u>Price of cattle</u>			
	<u>Head</u>	<u>Cwt.</u>	<u>Cwt.</u>
22. Price paid	\$160.95	\$27.39	\$22.08
23. Price received	276.67	27.22	29.76
24. Price spread or gross margin	115.72	-.17	+7.68
<u>Cost and return</u>			
	<u>Lot</u>	<u>Lot</u>	<u>Lot</u>
25. Total value produced	\$ 9166	\$ 9103	
26. Total feed cost	7195	5283	
27. Total return over feed	1971	3820	
<u>Cost and return</u>			
	<u>Head</u>	<u>Cwt.</u>	<u>Cwt.</u>
28. Value produced	\$112.97	\$26.77	\$40.99
29. Feed costs	86.43	20.78	23.79
30. Return over feed cost	26.54	5.99	17.20
31. Return over feed cost from feeding		6.44	5.97
32. Return over feed cost from price spread		-.45	11.23
33. Return per \$100 of feed cost		\$134	\$172

Table . Feed costs and returns from short-fed cattle, 1968-1969 (continued)

		Individual lot numbers					
		36	37	38	39	40	41
1.	Sept 68	Varied	Mar 68	Aug 68	Varied	Oct 68	
2.	43	42	49	132	246	76	
3.	174	217	222	188	215	183	
4.	89	-	-	-	-	-	
5.	0.0	0.0	2.0	1.5	2.8	1.3	
6.	685	443	788	638	528	458	
7.	1069	860	1268	1066	956	1060	
8.	384	417	480	428	428	602	
9.	2.2	1.9	2.2	2.3	2.0	3.3	
10.	16520	17505	22267	54365	98447	44690	
	<u>Cwt.</u>	<u>Cwt.</u>	<u>Cwt.</u>	<u>Cwt.</u>	<u>Cwt.</u>	<u>Cwt.</u>	<u>Cwt.</u>
11.	519	521	664	507	883	769	
12.	22	-	-	-	8	10	
13.	21	35	63	24	37	34	
14.	562	556	727	531	928	813	
15.	103	115	153	102	148	412	
16.	-	-	-	8	-	-	
17.	103	115	153	110	148	412	
18.	-	1087	1257	491	902	-	
19.	-	-	-	-	-	-	
20.	-	1087	1257	491	902	-	
21.	12	-	-	-	-	-	
	<u>Cwt.</u>	<u>Cwt.</u>	<u>Cwt.</u>	<u>Cwt.</u>	<u>Cwt.</u>	<u>Cwt.</u>	<u>Cwt.</u>
22.	\$26.23	\$26.47	\$24.04	\$28.66	\$27.73	\$30.00	
23.	28.21	26.07	25.58	25.51	28.02	28.40	
24.	+1.98	-.40	+1.54	-3.15	+.29	-1.60	
	<u>Lot</u>	<u>Lot</u>	<u>Lot</u>	<u>Lot</u>	<u>Lot</u>	<u>Lot</u>	<u>Lot</u>
25.	\$ 5246	\$ 4490	\$ 6294	\$11216	\$27959	\$12205	
26.	2428	2892	4809	7939	22750	9987	
27.	2818	1598	1485	3277	5209	2218	
	<u>Cwt.</u>	<u>Cwt.</u>	<u>Cwt.</u>	<u>Cwt.</u>	<u>Cwt.</u>	<u>Cwt.</u>	<u>Cwt.</u>
28.	\$31.76	\$25.65	\$28.27	\$20.63	\$28.40	\$27.31	
29.	14.70	16.52	21.60	14.60	23.11	22.35	
30.	17.06	9.13	6.67	6.03	5.29	4.96	
31.	13.51	9.55	3.98	10.91	4.91	6.05	
32.	3.55	-.42	2.69	-4.88	.38	-1.09	
33.	\$216	\$155	\$131	\$141	\$123	\$122	

Table 3. Feed costs and returns from short-fed cattle, 1968-1969 (concluded)

Item	Individual lot numbers		
	42	43	44
<u>Number and weight of cattle fed</u>			
1. Date of purchase	Sept 68	May 69	June 69
2. Number of head bought	87	61	50
3. Days on farm	187	147	201
4. Days on pasture	170	-	-
5. Percent death loss	5.7	0.0	4.0
6. Average purchase weight, lbs.	440	689	594
7. Average sales weight, lbs.	817	1055	945
8. Gain per head, lbs.	377	366	351
9. Gain per head per day, lbs.	2.0	2.5	1.7
10. Pounds of beef produced	28745	22345	15670
<u>Feed used</u>			
	<u>Cwt.</u>	<u>Cwt.</u>	<u>Cwt.</u>
11. Corn (lbs/cwt gain)	460	753	830
12. Small grain, lbs.	57	-	-
13. Commercial feed, lbs.	65	39	51
14. Total concentrates, lbs.	582	792	881
15. Legume hay, lbs.	390	242	659
16. Other hay, lbs.	-	--	-
17. Total hay, lbs.	390	242	659
18. Corn silage, lbs.	1976	-	914
19. Grass or oat silage, lbs.	-	-	-
20. Total silage, lbs.	1976	-	914
21. Pasture, days	18	-	-
<u>Price of cattle</u>			
	<u>Cwt.</u>	<u>Cwt.</u>	<u>Cwt.</u>
22. Price paid	\$26.39	\$31.75	\$30.53
23. Price received	27.64	26.87	26.08
24. Price spread or gross margin	+1.25	-4.88	-4.45
<u>Cost and return</u>			
	<u>Lot</u>	<u>Lot</u>	<u>Lot</u>
25. Total value produced	\$ 8427	\$ 3954	\$ 2767
26. Total feed cost	7691	4091	4076
27. Total return over feed	736	-137	-1309
<u>Cost and return</u>			
	<u>Cwt.</u>	<u>Cwt.</u>	<u>Cwt.</u>
28. Value produced	\$29.32	\$17.70	\$17.66
29. Feed costs	26.76	18.31	26.01
30. Return over feed cost	2.56	-.61	-8.35
31. Return over feed cost from feeding	.88	8.56	.07
32. Return over feed cost from price spread	1.68	-9.17	-8.42
33. Return per \$100 of feed cost	\$110	\$ 97	\$ 68

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 4 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 18.

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

Other costs - estimated

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 \$1.10 (per cwt.) \$ _____

Other overhead costs for equipment and shelter:
 _____ (lbs gain) x \$1.20 (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 sale value of steer

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

Profit per head \$ _____

Table 4. A three-year comparison of feeder cattle feed costs and returns

Item	Long-fed cattle			Three year average
	1966-67 average 42 lots	1967-68 average 28 lots	1968-69 average 34 lots	
<u>Number and weight of cattle fed</u>				
Number of head bought	118	138	132	129
Days on farm	303	287	308	299
Days on pasture	3	9	2	5
Percent death loss	1.8	1.2	2.5	1.8
Average purchase weight, lbs.	453	439	425	439
Average sales weight, lbs.	1027	956	957	980
Gain per head, lbs.	574	517	532	541
Gain per head per day, lbs.	1.9	1.8	1.7	1.8
Pounds of beef produced per lot	64212	72227	68971	68469
<u>Feed used per 100 pounds gain</u>				
Corn, lbs.	542	514	650	568
Small grain, lbs.	11	9	22	14
Commercial feed, lbs.	47	46	59	51
Total concentrates, lbs.	600	569	731	633
Legume hay, lbs.	203	143	169	171
Other hay, lbs.	22	7	12	14
Total hay, lbs.	225	150	181	185
Silage, lbs.	434	577	458	490
Pasture, days	0.8	0.5	0.3	0.5
<u>Price of cattle</u>				
Price paid per 100 lbs.	\$27.48	\$27.18	\$28.60	\$27.75
Price received per 100 lbs.	25.06	25.38	27.73	26.06
Price spread per 100 lbs.	-2.42	-1.0	-.87	-1.69
<u>Cost and returns per 100 pounds gain</u>				
Value produced	\$23.28	\$24.05	\$27.25	\$24.86
Feed costs	17.89	15.94	19.03	17.62
Return over feed costs	\$ 5.39	\$ 8.11	\$ 8.22	\$ 7.24
Return over feed cost from feeding	\$ 7.17	\$ 9.44	\$ 8.70	\$ 8.44
Return over feed cost from price spread	-1.78	-1.33	-.48	-1.20
Return per \$100 feed cost	\$131	\$147	\$148	\$142

Table 4. A three-year comparison of feeder cattle feed costs and returns (concl.)

Item	Short-fed cattle			
	1966-67 average 8 lots	1967-68 average 8 lots	1968-69 average 10 lots	Three year average
<u>Number and weight of cattle fed</u>				
Number of head bought	88	74	84	82
Days on farm	204	206	189	200
Days on pasture	12	1	26	13
Percent death loss	0.3	0.9	1.7	1.0
Average purchase weight, lbs.	633	680	590	634
Average sales weight, lbs.	1043	1089	1017	1049
Gain per head, lbs.	410	409	427	415
Gain per head per day, lbs.	2.0	2.0	2.2	2.1
Pounds of beef produced per lot	36246	30507	34276	33676
<u>Feed used per 100 pounds gain</u>				
Corn, lbs.	609	664	675	649
Small grain, lbs.	1	-	10	4
Commercial feed, lbs.	<u>46</u>	<u>46</u>	<u>43</u>	<u>45</u>
Total concentrates, lbs.	656	710	728	698
Legume hay, lbs.	163	222	238	208
Other hay, lbs.	<u>3</u>	<u>8</u>	<u>1</u>	<u>4</u>
Total hay, lbs.	166	230	239	212
Silage, lbs.	335	574	710	540
Pasture, days	3.7	-	3.0	2.2
<u>Price of cattle</u>				
Price paid per 100 pounds	\$25.32	\$25.29	\$27.39	\$26.00
Price received per 100 pounds	23.42	25.60	27.22	25.41
Price spread per 100 pounds	-1.90	.31	-.17	-.59
<u>Cost and returns per 100 pounds gain</u>				
Value produced	\$20.51	\$26.15	\$26.77	\$24.48
Feed costs	<u>18.80</u>	<u>19.28</u>	<u>20.78</u>	<u>19.62</u>
Return over feed costs	\$ 1.71	\$ 6.87	\$ 5.99	\$ 4.86
Return over feed cost from feeding	\$ 4.62	\$ 6.32	\$ 6.44	\$ 5.79
Return over feed cost from price spread	-2.91	.55	-.45	-.9
Return per \$100 feed cost	\$109	\$136	\$134	\$126

Example of Determination of Total Cost and Necessary Selling Price for Long-fed Cattle

STEP 1. Determine cost of producing finished animal

(a) Original cost per head = 439 lbs. @ \$27.75 per cwt.¹ \$121.82

(b) Feed and other costs per head 541 lbs. gain

<u>Feed cost</u>	<u>Amount fed</u> ²	<u>Price</u> ³	<u>Cost</u>
Corn, bu.	53.8 bu.	\$1.05	\$56.49
Oats, bu.	2.3 bu.	.56	1.29
Supplement, lbs.	270 lbs.	.05	13.50
All hay, tons	.46 tons	20.00	9.20
Silage, tons	1.3 tons	7.25	9.42
Pasture, days	8 days	.13	1.04
Total feed cost			90.94

Other costs - estimated

Labor cost: 7.0 hours per head x \$2.50 per hour (100 head basis)	17.50
Interest: \$121.82 (original cost per head) x 8% (number of days on farm = 299 = .82 year)	7.99
Miscellaneous costs: 541 lbs. gain x \$1.10 per cwt. (includes only variable costs)	5.95
Other overhead costs for equipment and shelter (541 lbs gain x \$1.20 per cwt.)	6.49

(c) Total cost per head \$250.69

STEP 2. Determine selling price farmer must receive to cover all costs

$$\frac{\text{Total cost per head}}{\text{Number of cwt. sold}} = \frac{\$250.69}{9.80} = \$25.58 = \text{price needed to cover all costs}$$

1. Gain in weight and price based on data in table 4 for the three-year average period.

2. Based on data contained in table 4.

3. Based on data contained in table 1.

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