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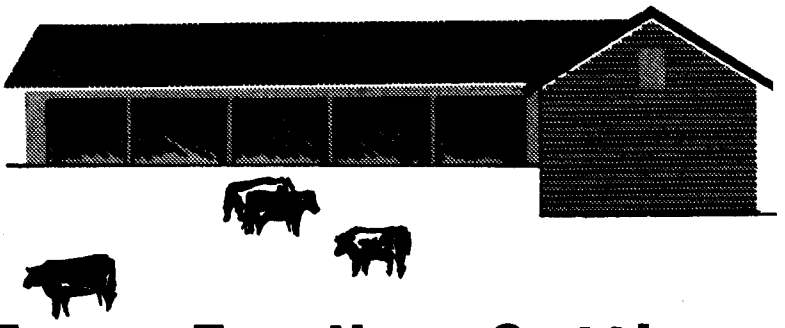

Cost and Return From Feeding Cattle

1970 - 1971

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COST AND RETURN FROM FEEDING CATTLE
1970-1971

Barbara B. Miller and T. R. Nodland

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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) total value produced 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 41 lots of feeder cattle on Southwestern Minnesota farms in the 1970-1971 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. 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 500 pounds or less 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 irregardless of the number of animals.

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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 1970 and 1971. 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	1970	1971
Alfalfa hay, per ton	$20.00	$20.00
Oats or hay silage, per ton	6.50	6.50
Corn silage, per ton	7.25	7.25
Corn grain, per bushel	1.15	1.17
Oats, per bushel	.60	.62
Soybean meal, per 100 pounds	5.00	5.00

FEEDING DATA

Tables 2 and 3 present average data for each feeding program and report performance of individual lots in 1970-1971. 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.

"Value produced" (lines 23 and 26) is calculated by subtracting total purchase cost from the total sales and dividing by the number of head sold and the hundredweights of gain. 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 29) is obtained by dividing the total value produced by the total feed cost.

Table 2. Feed costs and returns from long-fed calves, 1970-1971

Item	Average of 22 lots		Average by return over feed cost	
			11 high	11 low
Number and weight of cattle fed				
1. Date of purchase	-		-	-
2. Number of head bought	157		199	115
3. Sex	-		-	-
4. Days on farm	287		276	298
5. Percent death loss	1.3		1.3	1.3
6. Average sales weight, lbs.	967		982	951
7. Average purchase weight, lbs.	444		459	428
8. Gain per head, lbs.	523		523	523
9. Gain per head per day, lbs.	1.8		1.9	1.8
10. Pounds of beef produced	78563		97891	59237
Feed used	Head	Cwt.	Cwt.	Cwt.
11. Corn (bu/head) (lbs/cwt gain)*	50	543	535	552
12. Small grain (bu/head) (lbs/cwt)	2	9	10	8
13. Commercial feed, lbs.	285	57	57	57
14. Total concentrates, lbs.	3150	609	602	617
15. Legume hay, lbs.	804	151	106	196
16. Other hay, lbs.	28	4	1	7
17. Total hay, lbs.	832	155	107	203
18. Corn silage, lbs.	3272	634	617	651
19. Grass or oat silage, lbs.	5	1	2	-
20. Total silage, lbs.	3277	635	619	651
Price of cattle	Head	Cwt.	Cwt.	Cwt.
21. Price paid	$149.89	$33.88	$33.05	$34.71
22. Price received	$305.21	$31.56	$32.08	$31.03
Cost and return per lot	Lot		Lot	Lot
23. Total value produced	$23797		$30957	$16637
24. Total feed cost	14418		17626	11210
25. Total return over feed	$ 9379		$13331	$ 5427
Cost and return per head and per cwt.	Head	Cwt.	Cwt.	Cwt.
26. Value produced	$153.39	$29.68	$31.36	$28.00
27. Feed cost	96.84	18.73	18.04	19.42
28. Return over feed cost	$ 56.55	$10.95	$13.32	$ 8.58
29. Return per $100 of feed cost		$158	$174	$144

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

Table 2. Feed costs and returns from long-fed calves, 1970-1971 (continued)

Item	Average by size of lot		Heifers*
	11 high	11 low	13 lots
Number and weight of cattle fed			
1. Date of purchase	-	-	-
2. Number of head bought	231	83	177
3. Sex	-	-	Heifers
4. Days on farm	280	294	273
5. Percent death loss	1.4	1.2	1.3
6. Average sales weight, lbs.	974	960	935
7. Average purchase weight, lbs.	451	436	450
8. Gain per head, lbs.	523	524	485
9. Gain per head per day, lbs.	1.9	1.8	1.8
10. Pounds of beef produced	115584	41545	82686
Feed used	Cwt.	Cwt.	Cwt.
11. Corn, lbs.	548	539	541
12. Small grain, lbs.	7	11	13
13. Commercial feed, lbs.	55	59	64
14. Total concentrates, lbs.	610	609	618
15. Legume hay, lbs.	126	176	119
16. Other hay, lbs.	1	24	1
17. Total hay, lbs.	127	200	120
18. Corn silage, lbs.	640	629	723
19. Grass or oat silage, lbs.	2	-	-
20. Total silage, lbs.	642	629	723
Price of cattle	Cwt.	Cwt.	Cwt.
21. Price paid	$34.16	$33.60	$32.77
22. Price received	$32.03	$31.09	$31.54
Cost and return per lot	Lot	Lot	Lot
23. Total value produced	$35512	$12082	$25575
24. Total feed cost	20940	7896	15351
25. Total return over feed	$14572	$ 4186	$10224
Cost and return per cwt.	Cwt.	Cwt.	Cwt.
26. Value produced	$30.39	$28.97	$30.53
27. Feed cost	18.35	19.11	18.95
28. Return over feed cost	$12.04	$ 9.86	$11.58
29. Return per $100 of feed cost	$166	$152	$163

* There are not sufficient cases to show averages for steers or mixed lots.

Table 2. Feed costs and returns from long-fed calves, 1970-71 (continued)

	Individual lot numbers					
	1	2	3	4	5	6
1.	Nov 70	Nov 70	Nov 70	Dec 70	Nov 70	Feb 71
2.	87	470	257	357	330	105
3.	Heifers	Heifers	Heifers	Mixed	Heifers	Heifers
4.	282	231	231	275	267	278
5.	1.1	0.8	1.2	1.1	1.5	1.0
6.	965	934	902	1041	943	964
7.	500	498	478	470	419	434
8.	465	436	424	571	524	530
9.	1.6	1.9	1.8	2.1	2.0	1.9
10.	39460	201450	109510	199750	162365	54715
	Cwt.	Cwt.	Cwt.	Cwt.	Cwt.	Cwt.
11.	454	474	569	520	545	358
12.	-	1	-	5	6	15
13.	68	67	38	50	82	45
14.	522	542	607	575	633	418
15.	309	7	19	102	135	93
16.	-	0	11	-	-	-
17.	309	7	30	102	135	93
18.	507	1091	689	474	456	1296
19.	-	-	-	20	-	-
20.	507	1091	689	494	456	1296
	Cwt.	Cwt.	Cwt.	Cwt.	Cwt.	Cwt.
21.	$30.36	$30.22	$32.69	$35.74	$33.50	$36.64
22.	$32.24	$31.99	$31.41	$32.83	$32.41	$32.27
	Lot	Lot	Lot	Lot	Lot	Lot
23.	$13542	$68606	$32871	$60691	$51105	$15640
24.	6968	36951	17966	33556	29649	8680
25.	$ 6574	$31655	$14905	$27135	$21456	$ 6960
	Cwt.	Cwt.	Cwt.	Cwt.	Cwt.	Cwt.
26.	$34.32	$34.06	$30.02	$30.38	$31.48	$28.59
27.	17.66	18.35	16.41	16.80	18.26	15.87
28.	$16.66	$15.71	$13.61	$13.58	$13.22	$12.72
29.	$194	$186	$183	$181	$172	$180

Table 2. Feed costs and returns from long-fed calves, 1970-1971 (continued)

Item	Individual lot numbers	
	7	8
Number and weight of cattle fed		
1. Date of purchase	Dec 70	Dec 70
2. Number of head bought	120	168
3. Sex	Heifers	Steers
4. Days on farm	315	355
5. Percent death loss	0.8	4.2
6. Average sales weight, lbs.	1048	1102
7. Average purchase weight, lbs.	456	467
8. Gain per head, lbs.	592	635
9. Gain per head per day, lbs.	1.9	1.8
10. Pounds of beef produced	69910	99025
Feed used	Cwt.	Cwt.
11. Corn, lbs.	469	667
12. Small grain, lbs.	36	-
13. Commercial feed, lbs.	57	37
14. Total concentrates, lbs.	562	704
15. Legume hay, lbs.	57	201
16. Other hay, lbs.	-	-
17. Total hay, lbs.	57	201
18. Corn silage, lbs.	858	808
19. Grass or oat silage, lbs.	-	-
20. Total silage, lbs.	858	808
Price of cattle	Cwt.	Cwt.
21. Price paid	$33.00	$34.07
22. Price received	$31.55	$33.93
Cost and return per lot	Lot	Lot
23. Total value produced	$21263	$33488
24. Total feed cost	12371	20932
25. Total return over feed	$ 8892	$12556
Cost and return per cwt.	Cwt.	Cwt.
26. Value produced	$30.41	$33.82
27. Feed cost	17.69	21.14
28. Return over feed cost	$12.72	$12.68
29. Return per $100 of feed cost	$171	$160

Table 2. Feed costs and returns from long-fed calves, 1970-1971 (continued)

	Individual lot numbers					
	9	10	11	12	13	14
1.	Dec 70	Jan 71	Dec 70	Nov 70	Nov 70	Oct 70
2.	168	139	122	35	203	184
3.	Steers	Heifers	Heifers	Mixed	Heifers	Steers
4.	355	227	268	312	310	315
5.	0.0	2.2	0.0	0.0	2.0	0.0
6.	1015	918	967	1007	957	1028
7.	373	490	464	450	425	436
8.	642	428	503	557	532	592
9.	2.1	1.9	1.9	1.8	1.7	1.9
10.	22460	56735	61435	19510	104160	108950
	Cwt.	Cwt.	Cwt.	Cwt.	Cwt.	Cwt.
11.	498	633	692	689	479	517
12.	4	-	42	-	15	-
13.	43	83	60	46	59	35
14.	545	716	794	735	553	552
15	9	152	85	-	127	292
16.	18	-	-	82	-	-
17.	27	152	85	82	127	292
18.	614	-	-	815	912	331
19.	-	-	-	-	-	-
20.	614	-	-	815	912	331
	Cwt.	Cwt.	Cwt.	Cwt.	Cwt.	Cwt.
21.	$32.61	$31.69	$33.00	$33.02	$33.75	$37.09
22.	$30.98	$31.24	$32.06	$32.15	$31.04	$31.76
	Lot	Lot	Lot	Lot	Lot	Lot
23.	$ 6743	$17417	$19163	$ 6137	$29990	$30324
24.	3958	10795	12057	3914	18572	18775
25.	$ 2785	$ 6622	$ 7106	$ 2223	$11418	$11549
	Cwt.	Cwt.	Cwt.	Cwt.	Cwt.	Cwt.
26.	$30.02	$30.70	$31.19	$31.45	$28.79	$27.83
27.	17.62	19.03	19.62	20.06	17.83	17.23
28.	$12.40	$11.67	$11.57	$11.39	$10.96	$10.60
29.	$170	$161	$159	$157	$161	$162

Table 2. Feed costs and returns from long-fed calves, 1970-1971 (continued

Item	Individual lot numbers	
	15	16
Number and weight of cattle fed		
1. Date of purchase	Oct 70	Dec 70
2. Number of head bought	79	80
3. Sex	Steers	Steers
4. Days on farm	194	322
5. Percent death loss	1.3	0.0
6. Average sales weight, lbs.	819	1138
7. Average purchase weight, lbs.	453	466
8. Gain per head, lbs.	366	672
9. Gain per head per day, lbs.	1.9	2.1
10. Pounds of beef produced	28090	53815
Feed used	Cwt.	Cwt.
11. Corn, lbs.	272	478
12. Small grain, lbs.	-	18
13. Commercial feeds, lbs.	70	35
14. Total concentrates, lbs.	342	531
15. Legume hay, lbs.	185	468
16. Other hay, lbs.	-	-
17. Total hay, lbs.	185	468
18. Corn silage, lbs.	299	-
19. Grass or oat silage, lbs.	-	-
20. Total silage, lbs.	299	-
Price of cattle	Cwt.	Cwt.
21. Price paid	$35.72	$38.00
22. Price received	$30.28	$31.38
Cost and return per lot	Lot	Lot
23. Total value produced	$ 6556	$14420
24. Total feed cost	3695	8946
25. Total return over feed	$ 2861	$ 5474
Cost and return per cwt.	Cwt.	Cwt.
26. Value produced	$23.34	$26.79
27. Feed cost	13.15	16.62
28. Return over feed cost	$10.19	$10.17
29. Return per $100 of feed cost	$177	$161

Table 2. Feed costs and returns from long-fed calves, 1970-1971 (continued)

	Individual lot numbers					
	17	18	19	20	21	22
1.	Oct 70	Oct 70	Oct 70	Jan 71	Dec 70	Nov 70
2.	151	103	160	110	110	59
3.	Steers	Heifers	Heifers	Heifers	Heifers	Steers
4.	309	290	290	328	230	377
5.	0.7	1.0	1.2	2.0	2.7	3.4
6.	1030	889	888	891	890	930
7.	423	431	393	428	438	562
8.	607	458	495	463	452	368
9.	2.0	1.6	1.7	1.4	2.0	1.5
10.	90575	46305	77465	44455	46970	31315
	Cwt.	Cwt.	Cwt.	Cwt.	Cwt.	Cwt.
11.	442	442	485	713	726	833
12.	7	21	-	13	14	-
13.	48	64	47	61	103	55
14.	497	527	532	787	843	888
15.	237	324	26	-	209	287
16.	-	-	-	-	-	-
17.	237	324	26	-	209	287
18.	729	821	1549	900	324	447
19.	-	-	-	-	-	-
20.	729	821	1549	900	324	447
	Cwt.	Cwt.	Cwt.	Cwt.	Cwt.	Cwt.
21.	$38.96	$33.78	$35.08	$31.10	$31.23	$34.10
22.	$32.21	$31.86	$31.47	$29.70	$30.79	$28.74
	Lot	Lot	Lot	Lot	Lot	Lot
23.	$24864	$13910	$22114	$12604	$14252	$ 7838
24.	15865	9325	15221	9373	11634	7994
25.	$ 8999	$ 4585	$ 6893	$ 3231	$ 2618	$ -156
	Cwt.	Cwt.	Cwt.	Cwt.	Cwt.	Cwt.
26.	$27.45	$30.04	$28.55	$28.35	$30.34	$25.03
27.	17.51	20.14	19.65	21.08	24.77	25.53
28.	$ 9.94	$ 9.90	$ 8.90	$ 7.27	$ 5.57	$-0.50
29.	$157	$149	$145	$134	$122	$ 98

Table 3. Feed costs and returns from short-fed yearlings, 1970-1971

Item	Average of 19 lots		Average by return over feed cost	
			10 high	9 low
Number and weight of cattle fed				
1. Date of purchase	-		-	-
2. Number of head bought	90		103	75
3. Sex	-		-	-
4. Days on farm	212		223	199
5. Percent death loss	1.5		0.5	2.7
6. Average sales weight, lbs.	1044		1072	1013
7. Average purchase weight, lbs.	634		631	636
8. Gain per head, lbs.	410		441	377
9. Gain per head per day, lbs.	2.0		2.0	1.9
10. Pounds of beef produced	37431		46252	27630
Feed used	Head	Cwt.	Cwt.	Cwt.
11. Corn (bu/head)(lbs/cwt gain)*	54	766	716	820
12. Small grain (bu/head) (lbs/cwt)	1	10	5	17
13. Commercial feed, lbs.	228	57	42	73
14. Total concentrates, lbs.	3305	833	763	910
15. Legume hay, lbs.	767	203	176	234
16. Other hay, lbs.	19	4	7	-
17. Total hay, lbs.	786	207	183	234
18. Corn silage, lbs.	2011	474	489	456
19. Grass or oat silage, lbs.	-	-	-	-
20. Total silage, lbs.	2011	474	489	456
Price of cattle	Head	Cwt.	Cwt.	Cwt.
21. Price paid	$196.04	$31.28	$31.44	$31.11
22. Price received	$325.96	$31.51	$32.41	$30.51
Cost and return per lot	Lot		Lot	Lot
23. Total value produced	$11849		$15224	$ 8100
24. Total feed cost	8165		9422	6769
25. Total return over feed	$ 3684		$ 5802	$ 1331
Cost and return per head and per cwt.	Head	Cwt.	Cwt.	Cwt.
26. Value produced	$127.38	$31.44	$33.05	$29.66
27. Feed cost	93.05	23.53	21.26	26.05
28. Return over feed cost	$ 34.33	$ 7.91	$11.79	$ 3.61
29. Return per $100 of feed cost		$134	$155	$114

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

Table 3. Feed costs and returns from short-fed yearlings, 1970-1971 (continued)

	Average by size of lot		Individual lot numbers				
	10 high	9 low	23	24	25	26	27
1.	-	-	Nov 70	Dec 70	Jan 71	Sept 70	Oct 70
2.	132	43	114	197	41	151	129
3.	-	-	Heifers	Steers	Mixed	Steers	Steers
4.		210	174	250	224	197	190
5.	0.8	2.2	1.8	0.0	0.0	0.7	0.0
6.	1058	1028	982	1117	1189	1108	1231
7.	635	632	664	595	648	720	753
8.	423	396	318	522	541	388	478
9.	2.0	1.9	1.8	2.1	2.4	0.7	2.5
10.	55776	17047	34355	118191	22200	57465	61690
	Cwt.	Cwt.	Cwt.	Cwt.	Cwt.	Cwt.	Cwt.
11.	746	787	725	559	681	725	753
12.	13	7	-	-	-	-	-
13.	57	57	59	50	42	22	49
14.	816	851	784	609	723	747	802
15.	133	280	221	28	211	34	353
16.	2	6	-	6	45	14	-
17.	135	286	221	34	256	48	353
18.	504	440	-	569	216	630	389
19.	-	-	-	-	-	-	-
20.	504	440	-	569	216	630	389
	Cwt.	Cwt.	Cwt.	Cwt.	Cwt.	Cwt.	Cwt.
21.	$32.28	$30.18	$26.40	$32.23	$30.05	$32.75	$32.10
22.	$32.61	$30.28	$31.94	$32.26	$30.85	$31.79	$32.61
	Lot	Lot	Lot	Lot	Lot	Lot	Lot
23.	$17802	$ 5236	$15162	$38160	$ 7062	$17232	$20609
24.	11932	3981	7072	18372	4421	11214	14468
25.	$ 5870	$ 1255	$ 8090	$19788	$ 2641	$ 6018	$ 6141
	Cwt.	Cwt.	Cwt.	Cwt.	Cwt.	Cwt.	Cwt.
26.	$32.28	$30.51	$44.13	$32.29	$31.81	$29.98	$33.41
27.	22.03	25.20	20.58	15.54	19.91	19.51	23.46
28.	$10.25	$ 5.31	$23.55	$16.75	$11.90	$10.47	$ 9.95
29.	$150	$125	$214	$208	$160	$153	$142

Table 3. Feed costs and returns from short-fed yearlings 1970-1971 (continued)

Item	Individual lot numbers			
	28	29	30	31
Number and weight of cattle fed				
1. Date of purchase	Oct 70	Jan 71	Oct 70	Mar 71
2. Number of head bought	127	59	75	76
3. Sex	Steers	Heifers	Mixed	Heifers
4. Days on farm	190	221	268	212
5. Percent death loss	0.0	1.7	0.0	0.0
6. Average sales weight, lbs.	1171	924	987	949
7. Average purchase weight, lbs.	766	518	570	559
8. Gain per head, lbs.	405	406	417	390
9. Gain per head per day, lbs.	1.8	1.8	1.6	1.8
10. Pounds of beef produced	51045	23015	31260	29606
Feed used	Cwt.	Cwt.	Cwt.	Cwt.
11. Corn, lbs.	821	713	566	865
12. Small grain, lbs.	-	-	-	45
13. Commercial feed, lbs.	68	25	61	29
14. Total concentrates, lbs.	889	738	627	939
15. Legume hay, lbs.	150	269	-	263
16. Other hay, lbs.	-	-	8	-
17. Total hay, lbs.	150	269	8	263
18. Corn silage, lbs.	832	852	1402	-
19. Grass or oat silage, lbs.	-	-	-	-
20. Total silage, lbs.	832	852	1402	-
Price of cattle	Cwt.	Cwt.	Cwt.	Cwt.
21. Price paid	$31.49	$31.30	$30.83	$31.46
22. Price received	$38.19	$31.75	$31.63	$31.35
Cost and return per lot	Lot	Lot	Lot	Lot
23. Total value produced	$17727	$ 7445	$10234	$ 9236
24. Total feed cost	12827	5320	7472	6636
25. Total return over feed	$ 4900	$ 2125	$ 2762	$ 2600
Cost and return per cwt.	Cwt.	Cwt.	Cwt.	Cwt.
26. Value produced	$34.73	$32.35	$32.74	$31.20
27. Feed cost	25.13	23.12	23.90	22.42
28. Return over feed cost	$ 9.60	$ 9.23	$ 8.84	$ 8.78
29. Return per $100 of feed cost	$138	$140	$137	$139

Table 3. Feed costs and returns from short-fed yearlings, 1970-1971 (continued)

	Individual lot numbers					
	32	33	34	35	36	37
1.	Jan 71	Apr 71	Nov 70	Jan 71	Mar 71	Oct 70
2.	62	90	86	26	82	44
3.	Steers	Steers	Mixed	Steers	Heifers	Steers
4.	265	225	255	212	185	83
5.	0.0	0.0	1.2	11.5	2.4	0.0
6.	1065	1148	1016	1052	936	1190
7.	522	578	539	604	606	970
8.	543	570	477	448	330	220
9.	2.0	2.5	1.9	2.1	1.8	2.6
10.	33689	51309	40060	8470	25215	9730
	Cwt.	Cwt.	Cwt.	Cwt.	Cwt.	Cwt.
11.	755	742	634	727	801	719
12.	-	-	8	-	17	-
13.	18	50	133	69	51	37
14.	773	792	775	796	869	756
15.	226	19	50	307	119	103
16.	-	-	-	-	-	-
17.	226	19	50	307	119	103
18.	-	507	849	-	476	-
19.	-	-	-	-	-	-
20.	-	507	849	-	476	-
	Cwt.	Cwt.	Cwt.	Cwt.	Cwt.	Cwt.
21.	$35.78	$36.97	$34.34	$34.71	$32.15	$27.20
22.	$31.72	$32.88	$32.61	$33.00	$31.06	$27.06
	Lot	Lot	Lot	Lot	Lot	Lot
23.	$ 9374	$14746	$12264	$ 2527	$ 7293	$ 2577
24.	6418	10321	9925	1872	5881	2144
25.	$ 2956	$ 4425	$ 2339	$ 655	$ 1412	$ 433
	Cwt.	Cwt.	Cwt.	Cwt.	Cwt.	Cwt.
26.	$27.82	$28.74	$30.61	$29.83	$28.92	$26.48
27.	19.05	20.12	24.77	22.10	23.32	22.03
28.	$ 8.77	$ 8.62	$ 5.84	$ 7.73	$ 5.60	$ 4.45
29.	$146	$ $143	$124	$135	$124	$120

Table 3. Feed costs and returns from short-fed yearlings, 1970-1971 (continued)

Item	Individual lot numbers			
	38	39	40	41
Number and weight of cattle fed				
1. Date of purchase	Variable	Feb 71	Sep 70	Jul 70
2. Number of head bought	29	267	26	26
3. Sex	Mixed	Heifers	Mixed	Steers
4. Days on farm	180	215	220	215
5. Percent death loss	6.9	2.2	0.0	0.0
6. Average sales weight, lbs.	814	927	983	1048
7. Average purchase weight, lbs.	509	573	602	744
8. Gain per head, lbs.	305	354	381	304
9. Gain per head per day, lbs.	1.7	1.6	1.7	1.4
10. Pounds of beef produced	7230	88825	9955	7880
Feed used	Cwt.	Cwt.	Cwt.	Cwt.
11. Corn, lbs.	1072	835	1041	809
12. Small grain, lbs.	-	63	-	61
13. Commercial feed, lbs.	112	60	132	16
14. Total concentrates, lbs.	1184	958	1173	886
15. Legume hay, lbs.	332	95	341	736
16. Other hay, lbs.	-	-	-	-
17. Total hay, lbs.	332	95	341	736
18. Corn silage, lbs.	-	788	1487	-
19. Grass or oat silage, lbs.	-	-	-	-
20. Total silage, lbs.	-	788	1487	-
Price of cattle	Cwt.	Cwt.	Cwt.	Cwt.
21. Price paid	$27.66	$32.95	$26.92	$27.13
22. Price received	$30.53	$31.43	$30.82	$25.16
Cost and return per lot	Lot	Lot	Lot	Lot
23. Total value produced	$ 2630	$25589	$ 3675	$ 1600
24. Total feed cost	2379	22600	3719	2081
25. Total return over feed	$ 251	$ 2989	$ -44	$ -481
Cost and return per cwt.	Cwt.	Cwt.	Cwt.	Cwt.
26. Value produced	$36.37	$28.81	$36.92	$20.31
27. Feed cost	32.90	25.44	37.36	26.41
28. Return over feed cost	$ 3.47	$ 3.37	$-0.44	$-6.10
29. Return per $100 of feed cost	$111	$113	$ 99	$ 77

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.

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:

Feed	Amount fed	Price	Cost
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: $\frac{\text{total cost per head}}{\text{sales weight in cwt.}}$ = $_____ / cwt. $_____

STEP 3. Your estimated sales value

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

Profit per head . . . . . $_____

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

Item	Long-fed calves			
	1968-69 average 34 lots	1969-70 average 35 lots	1970-71 average 22 lots	Three year average
Number and weight of cattle fed				
Number of head bought	132	141	157	143
Days on farm	308	296	287	297
Percent death loss	2.5	1.3	1.3	1.7
Average sales weight, lbs.	957	976	967	967
Average purchase weight, lbs.	425	435	444	435
Gain per head, lbs.	532	541	523	532
Gain per head per day, lbs.	1.7	1.8	1.8	1.8
Pounds of beef produced per lot	68971	73611	78563	73714
Feed used per 100 pounds gain				
Corn, lbs.	650	544	543	579
Small grain, lbs.	22	8	9	13
Commercial feed, lbs.	59	53	57	56
Total concentrates, lbs.	731	605	609	648
Legume hay, lbs.	169	187	151	169
Other hay, lbs.	12	8	4	8
Total hay, lbs.	181	195	155	177
Silage, lbs.	458	592	635	562
Price of cattle				
Price paid per 100 pounds	$28.60	$32.90	$33.88	$31.79
Price received per 100 pounds	27.73	28.27	31.56	29.19
Cost and returns per 100 pounds gain				
Value produced	$27.25	$24.58	$29.68	$27.17
Feed cost	19.03	18.53	18.73	18.76
Return over feed cost	$ 8.22	$ 6.05	$10.95	$ 8.41
Return per $100 of feed cost	$143	$133	$158	$145

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

Item	Short-fed yearlings			
	1968-69 average 10 lots	1969-70 average 13 lots	1970-71 average 19 lots	Three year average
Number and weight of cattle				
Number of head bought	84	87	90	88
Days on farm	189	192	212	198
Percent death loss	1.7	1.3	1.5	1.5
Average sales weight, lbs.	1017	1078	1044	1046
Average purchase weight, lbs.	590	706	634	643
Gain per head, lbs.	427	372	410	403
Gain per head per day, lbs.	2.2	1.9	2.0	2.0
Pounds of beef produced per lot	34276	31832	37431	34513
Feed used per 100 pounds gain				
Corn, lbs.	675	667	766	703
Small grain, lbs.	10	6	10	9
Commercial feed, lbs.	43	42	57	47
Total concentrates, lbs.	728	715	833	759
Legume hay, lbs.	238	270	203	237
Other hay, lbs.	1	1	4	2
Total hay, lbs.	239	271	207	239
Silage, lbs.	710	327	474	504
Price of cattle				
Price paid per 100 pounds	$27.39	$29.91	$31.28	$29.53
Price received per 100 pounds	$27.22	$28.50	$31.51	$29.08
Cost and returns per 100 pounds gain				
Value produced	$26.77	$25.92	$31.44	$28.04
Feed cost	20.78	19.76	23.53	21.36
Return over feed cost	$ 5.99	$ 6.16	$ 7.91	$ 6.68
Return per $100 of feed cost	$129	$131	$134	$131

Example of Determination of Total Cost and Necessary Selling Price for Long-Fed Calves

STEP 1. Determine cost of producing finished animal

(a) Original cost per head = 435 lbs. @ $31.79 per cwt.[1] $138.29

(b) Feed and other costs per head (532 pounds gain)

Feed	Amount fed[2]	Price[3]	Cost
Corn	55.0 bu.	$ 1.17	$64.35
Oats	2.2 bu.	.60	1.32
Supplement	298.0 lbs.	.05	14.90
All hay	.5 tons	20.00	10.00
Silage	1.5 tons	7.25	10.88

Total feed cost 101.45

Other costs (estimated)

Death loss: $138.29 x 1.7% 2.35

Labor cost: 5.0[4] hours per head x $3.00 per hour (100 head basis) 15.00

Interest: $138.29 (original cost per head) x 8% 8.96
(number of days on farm = 297 = .81 year)

Miscellaneous costs: 532 lbs. gain x $1.50 per cwt. 7.98

Other overhead costs for equipment and shelter 7.98
(532 lbs. gain x $1.50 per cwt.)

(c) Total cost per head $282.01

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

$$\frac{\text{Total cost per head}}{\text{Number of cwt. sold}} = \frac{\$282.01}{9.67} = \$29.16$$ = net selling price needed to cover all costs (marketing costs are not covered so "net" means farm price after market costs are covered)

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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.