



AgEcon SEARCH
RESEARCH IN AGRICULTURAL & APPLIED ECONOMICS

The World's Largest Open Access Agricultural & Applied Economics Digital Library

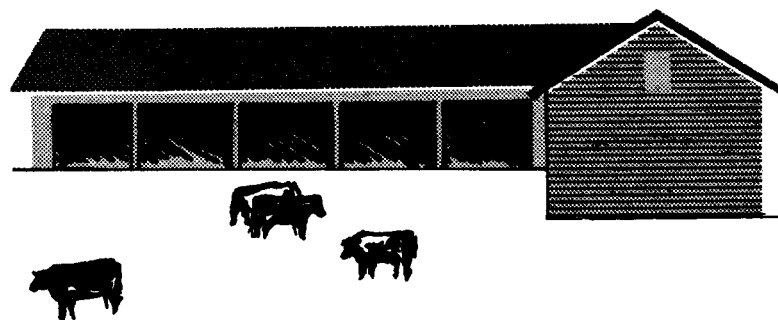
This document is discoverable and free to researchers across the globe due to the work of AgEcon Search.

Help ensure our sustainability.

Give to AgEcon Search

AgEcon Search
<http://ageconsearch.umn.edu>
aesearch@umn.edu

*Papers downloaded from **AgEcon Search** may be used for non-commercial purposes and personal study only. No other use, including posting to another Internet site, is permitted without permission from the copyright owner (not AgEcon Search), or as allowed under the provisions of Fair Use, U.S. Copyright Act, Title 17 U.S.C.*



Cost and Return From Feeding Cattle

1966-1967

Cooperating agencies:

University of Minnesota, Institute of Agriculture

United States Department of Agriculture, Economic Research Service

DEPARTMENT OF AGRICULTURAL ECONOMICS

INSTITUTE OF AGRICULTURE

UNIVERSITY OF MINNESOTA

ST. PAUL, MINNESOTA 55101

FEEDER CATTLE COSTS AND RETURNS
1966-1967

C. L. Pherson and T. R. Nodland

	Page
Introduction	1
Prices	2
Numbers and Weights of Cattle Fed	3
Feeding Data Presented	4
Long-fed Calves, 1966-1967	5
Long-fed Yearlings, 1966-1967	13
Short-fed Yearlings, 1966-1967	16
Comparison of Returns from Price Spread and from Feeding for the Different Cattle Feeding Programs	18
Determining Profit Prospects	19
Feed and Labor Requirements	19
Four-year Comparison of Feeder Cattle Costs and Returns	20
Profit Prospects Work Sheet	23

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) the price spread between the purchase price and the sale price of the cattle, and (2) the feed cost per pound of gain. This is emphasized by this study of costs and returns for 50 lots of feeder cattle on Southern Minnesota farms in the 1966-1967 feeding season. This information was obtained from records kept by members of the Southeastern and Southwestern Minnesota Farm Management Associations and by vocational agriculture instructors. 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 of fat cattle. Three different programs are represented: (1) long-fed calves; (2) long-fed yearlings; and (3) short-fed yearlings. Cattle on feed 240 days or less are classified as "short-fed" and those fed for longer periods than 240 days as "long-fed." All lots with an average weight of 500 or more pounds per head at purchase are classed as 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.

PRICES

Monthly prices of feeder cattle at South St. Paul from January 1966 through May 1968 are shown in Figure 1. Southern Minnesota farmers secure their feeder cattle from a variety of sources but the South St. Paul quotations are reasonably representative of price trends during this period.

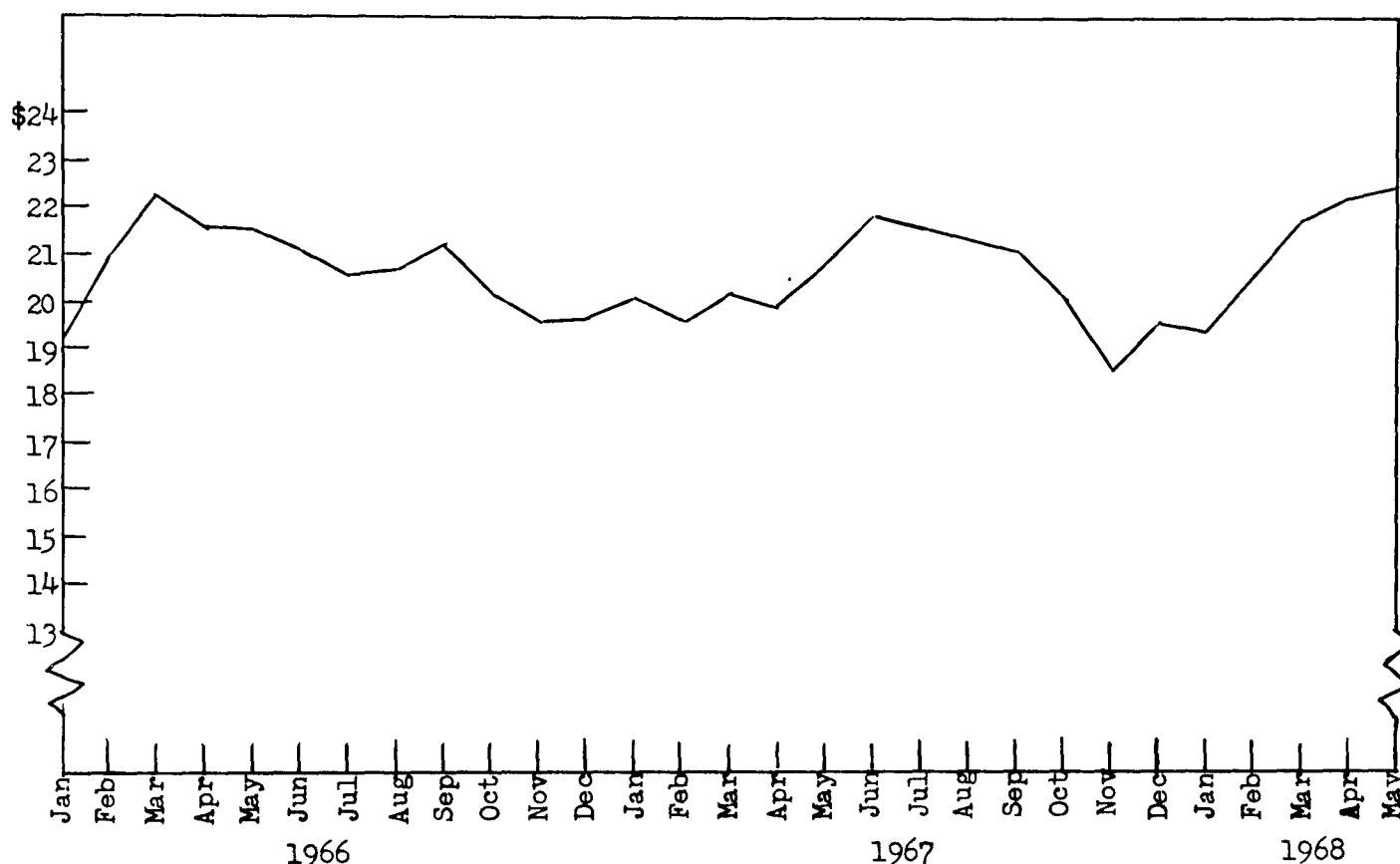


Figure 1. Average monthly prices per 100 pounds of feeders, all weights, South St. Paul, January 1966 - May 1968 (compiled from Market News - Livestock Division, USDA, Consumer and Marketing Service, 1966-1968).

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 1966 and 1967. 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	1966	1967
Alfalfa hay, per ton	\$21.00	\$20.00
Timothy or brome hay, per ton	12.18	11.60
Oats or hay silage, per ton	6.50	6.50
Corn silage, per ton	7.30	7.25
Ear corn, per bushel	1.19	1.10
Oats, per bushel	.66	.63
Soybean meal, per 100 pounds	5.25	5.00
Pasture, per month per head	3.00	4.00

The average purchase and sale prices per 100 pounds of feeder cattle for the years 1963-1967 by type of feeding program are shown in Figure 2.



Figure 2. Average purchase and sales prices per 100 pounds of feeder cattle by feeding program on farms studied, 1963-1967.

NUMBERS AND WEIGHTS OF CATTLE FED

The individual lots of cattle for the 1966-1967 feeding period included a wide range as to numbers per lot, gain per head, and daily gain. The data in Table 2 indicate the range from high to low for each item and also give a comparison between the various feeding programs used by farmers included in this study.

Average death loss was 2.0 percent, 1.3 percent, and 0.3 percent for the long-fed calves, long-fed yearlings, and short-fed yearlings respectively.

Table 2. Range in numbers and weights for individual lots, 1966-1967

Item	31 lots			11 lots		
	long-fed calves			long-fed yearlings		
	Ave.	High	Low	Ave.	High	Low
Number of head in lot	118	304	20	119	308	18
Average purchase weight	407	497	140	584	768	500
Average sale weight	995	1179	838	1119	1218	961
Average gain in weight per head	588	993	400	535	649	450
Average daily gain per head	1.9	2.2	1.5	1.9	2.3	1.6

Item	8 lots		
	short-fed yearlings		
	Ave.	High	Low
Number of head in lot	88	182	19
Average purchase weight	633	744	500
Average sale weight	1043	1250	805
Average gain in weight per head	410	567	262
Average daily gain per head	2.0	2.6	1.6

FEEDING DATA

Tables 3 through 5 present average data for each feeding program and report performance of individual lots in 1966-1967. 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 three 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 price 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, 4, and 5, "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 and gain. The contribution of each factor is illustrated on lines 31 and 32. Return from price spread (line 31) measures the price margin (selling price minus purchase price) plus the effect of the death loss. Return from feeding (line 32) measures gain, which is simply selling price minus the feed cost per 100 pounds of gain. The return per \$100 feed cost (line 33) is obtained by dividing the total value produced by the total feed cost.

Table 3. Feed costs and returns from long-fed calves, 1966-1967

Item	Average of 31 lots	Individual lot numbers 1	
<u>Number and weight of cattle fed</u>			
1. Date of purchase		Oct 66	
2. Number of head bought	118	105	
3. Days on farm	311	339	
4. Days on pasture	2	-	
5. Percent death loss	2.0	1.0	
6. Average purchase weight, lbs.	407	432	
7. Average sales weight, lbs.	995	1137	
8. Gain per head, lbs.	588	705	
9. Gain per head per day, lbs.	1.9	2.1	
10. Pounds of beef produced	65643	72920	
<u>Feed used</u>			
	<u>Head</u>	<u>Cwt.</u>	<u>Cwt.</u>
11. Corn (bu/head) (lbs/cwt gain)*	52.7	513	427
12. Small grain (bu/head)(lbs/cwt)	2.1	11	6
13. Commercial feed, lbs.	265	47	38
14. Total concentrates, lbs.	3280	571	471
15. Legume hay, lbs.	1272	215	102
16. Other hay, lbs.	67	11	42
17. Total dry roughage, lbs.	1339	226	144
18. Corn silage, lbs.	2356	403	384
19. Grass or oat silage, lbs.	50	8	-
20. Total silage, lbs.	2406	411	384
21. Pasture, days	2	0.3	-
<u>Price of cattle</u>			
	<u>Head</u>	<u>Cwt.</u>	<u>Cwt.</u>
22. Price paid	\$114.49	\$28.13	\$30.00
23. Price received	251.34	25.26	26.47
24. Price spread or gross margin	136.85	-2.87	-3.53
<u>Cost and return</u>			
	<u>Lot</u>	<u>Lot</u>	<u>Lot</u>
25. Total value produced	\$15415.45		\$17698.04
26. Total feed cost	10806.27		9753.70
27. Total return over feed	4609.18		7944.34
<u>Cost and return</u>			
	<u>Head</u>	<u>Cwt.</u>	<u>Cwt.</u>
28. Value produced	\$134.66	\$23.18	\$24.27
29. Feed costs	99.32	17.21	13.38
30. Return over feed cost	35.34	5.97	10.89
31. Return over feed cost from price spread		-2.08	-2.20
32. Return over feed cost from feeding		8.05	13.09
33. Return per \$100 of feed cost		\$135	\$181

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

Table 3. Feed costs and returns from long-fed calves, 1966-1967 (continued)

Item	Individual lot numbers		
	2	3	4
<u>Number and weight of cattle fed</u>			
1. Date of purchase	Oct 66	Nov 66	Nov 66
2. Number of head bought	304	203	182
3. Days on farm	316	294	246
4. Days on pasture	-	-	-
5. Percent death loss	1.3	0.5	0.0
6. Average purchase weight, lbs.	402	375	441
7. Average sales weight, lbs.	1044	974	875
8. Gain per head, lbs.	642	599	434
9. Gain per head per day, lbs.	2.0	2.0	1.8
10. Pounds of beef produced	191030	120591	79076
<u>Feed used</u>			
	<u>Cwt.</u>	<u>Cwt.</u>	<u>Cwt.</u>
11. Corn, lbs./cwt. gain	394	503	649
12. Small grain, lbs.	12	3	-
13. Commercial feed, lbs.	43	40	25
14. Total concentrates, lbs.	449	546	674
15. Legume hay, lbs.	164	110	142
16. Other hay, lbs.	-	-	-
17. Total dry roughage, lbs.	164	110	142
18. Corn silage, lbs.	667	488	602
19. Grass or oat silage, lbs.	-	-	-
20. Total silage, lbs.	667	488	602
21. Pasture, days	-	-	-
<u>Price of cattle</u>			
	<u>Cwt.</u>	<u>Cwt.</u>	<u>Cwt.</u>
22. Price paid	\$29.92	\$28.53	\$25.20
23. Price received	26.80	26.22	25.32
24. Price spread or gross margin	-3.12	-2.31	.12
<u>Cost and return</u>			
	<u>Lot</u>	<u>Lot</u>	<u>Lot</u>
25. Total value produced	\$47369.38	\$29871.73	\$20115.65
26. Total feed cost	27726.40	17556.50	12600.04
27. Total return over feed	19642.98	12315.23	7515.61
<u>Cost and return</u>			
	<u>Cwt.</u>	<u>Cwt.</u>	<u>Cwt.</u>
28. Value produced	\$24.80	\$24.77	\$25.44
29. Feed costs	14.52	14.56	15.93
30. Return over feed cost	10.28	10.21	9.51
31. Return over feed cost from price spread	-2.00	-1.45	0.12
32. Return over feed cost from feeding	12.28	11.66	9.39
33. Return per \$100 of feed cost	\$171	\$170	\$160

Table 3. Feed costs and returns from long-fed calves, 1966-1967 (continued)

Individual lot numbers						
	5	6	7	8	9	10
1.	Varied	Oct 66	Apr 67	Dec 66	Jan 66	Nov 66
2.	226	237	38	254	25	61
3.	310	324	221	264	542	308
4.	-	-	-	-	-	-
5.	3.1	0.8	0.0	1.2	0.0	1.6
6.	454	405	483	414	140	453
7.	1095	1007	972	907	1133	1071
8.	641	602	489	493	993	618
9.	2.0	1.8	2.2	1.9	1.8	2.0
10.	137315	140684	18565	122560	24825	36645
11.	<u>Cwt.</u> 530	<u>Cwt.</u> 426	<u>Cwt.</u> 633	<u>Cwt.</u> 502	<u>Cwt.</u> 315	<u>Cwt.</u> 598
12.	-	4	-	7	13	12
13.	35	74	39	58	18	28
14.	565	504	672	567	346	638
15.	176	50	269	136	274	112
16.	-	-	-	-	-	-
17.	176	50	269	136	274	112
18.	131	299	-	294	918	175
19.	-	156	-	-	-	104
20.	131	455	-	294	918	279
21.	-	-	-	-	-	-
22.	<u>Cwt.</u> \$30.16	<u>Cwt.</u> \$31.19	<u>Cwt.</u> \$22.77	<u>Cwt.</u> \$27.58	<u>Cwt.</u> \$25.43	<u>Cwt.</u> \$28.42
23.	26.10	26.21	24.08	26.00	23.58	25.77
24.	-4.06	-4.98	1.31	-1.58	-1.85	-2.65
25.	<u>Lot</u> \$31673.91	<u>Lot</u> \$32092.58	<u>Lot</u> \$4712.15	<u>Lot</u> \$30201.76	<u>Lot</u> \$5789.98	<u>Lot</u> \$8709.15
26.	19117.90	19255.16	3164.30	19996.17	3743.30	5804.00
27.	12556.01	12837.42	1547.85	10205.59	2046.68	2905.15
28.	<u>Cwt.</u> \$23.07	<u>Cwt.</u> \$22.81	<u>Cwt.</u> \$25.38	<u>Cwt.</u> \$24.64	<u>Cwt.</u> \$23.32	<u>Cwt.</u> \$23.77
29.	13.93	13.68	17.04	16.32	15.08	15.84
30.	9.14	9.13	8.34	8.32	8.24	7.93
31.	-3.03	-3.40	1.30	-1.36	-0.26	-2.00
32.	12.17	12.53	7.04	9.68	8.50	9.93
33.	\$166	\$167	\$149	\$151	\$155	\$150

Table 3. Feed costs and returns from long-fed calves, 1966-1967 (continued)

Item	Individual lot numbers		
	11	12	13
<u>Number and weight of cattle fed</u>			
1. Date of purchase	Dec 65	Dec 66	Dec 66
2. Number of head bought	81	150	89
3. Days on farm	385	296	310
4. Days on pasture	-	-	-
5. Percent death loss	2.5	0.0	6.7
6. Average purchase weight, lbs.	414	444	403
7. Average sales weight, lbs.	1059	1025	935
8. Gain per head, lbs.	645	581	532
9. Gain per head per day, lbs.	1.7	2.0	1.7
10. Pounds of beef produced	50115	87075	41735
<u>Feed used</u>			
	<u>Cwt.</u>	<u>Cwt.</u>	<u>Cwt.</u>
11. Corn, lbs./cwt. gain	485	671	164
12. Small grain, lbs.	9	-	-
13. Commercial feed, lbs.	21	59	44
14. Total concentrates, lbs.	515	730	208
15. Legume hay, lbs.	146	209	206
16. Other hay, lbs.	-	-	-
17. Total dry roughage, lbs.	146	209	206
18. Corn silage, lbs.	156	-	1054
19. Grass or oat silage, lbs.	-	-	-
20. Total silage, lbs.	156	-	1054
21. Pasture, days	-	-	-
<u>Price of cattle</u>			
	<u>Cwt.</u>	<u>Cwt.</u>	<u>Cwt.</u>
22. Price paid	\$26.71	\$28.41	\$24.46
23. Price received	23.17	26.28	21.00
24. Price spread or gross margin	-3.54	-2.13	-3.46
<u>Cost and return</u>			
	<u>Lot</u>	<u>Lot</u>	<u>Lot</u>
25. Total value produced	\$10420.95	\$21458.74	\$7526.24
26. Total feed cost	6719.25	15351.60	4644.25
27. Total return over feed	3701.70	6107.14	2881.99
<u>Cost and return</u>			
	<u>Cwt.</u>	<u>Cwt.</u>	<u>Cwt.</u>
28. Value produced	\$20.79	\$24.64	\$18.03
29. Feed costs	13.39	17.62	11.12
30. Return over feed cost	7.40	7.02	6.91
31. Return over feed cost from price spread	-2.38	-1.64	-2.97
32. Return over feed cost from feeding	9.78	8.66	9.88
33. Return per \$100 of feed cost	\$155	\$140	\$162

Table 3. Feed costs and returns from long-fed calves, 1966-1967 (continued)

Individual lot numbers						
	14	15	16	17	18	19
1.	Oct 66	Oct 66	Oct 66	Varied	Nov 66	Oct 66
2.	192	100	112	168	141	100
3.	324	305	275	288	267	336
4.	-	-	-	-	-	-
5.	3.6	1.0	0.0	1.2	2.1	1.0
6.	389	440	466	479	394	391
7.	1024	983	925	1075	955	1042
8.	635	543	459	596	561	651
9.	2.0	1.8	1.7	2.1	2.1	1.9
10.	114805	53355	51393	97945	76240	63995
	<u>Cwt.</u>	<u>Cwt.</u>	<u>Cwt.</u>	<u>Cwt.</u>	<u>Cwt.</u>	<u>Cwt.</u>
11.	492	607	523	417	559	455
12.	30	3	-	13	34	5
13.	47	65	51	32	50	72
14.	569	675	574	462	643	532
15.	113	277	326	147	146	252
16.	139	45	-	3	-	43
17.	252	322	326	150	146	295
18.	784	337	451	560	247	500
19.	-	-	-	-	-	-
20.	784	337	451	560	247	500
21.	-	-	-	-	-	-
	<u>Cwt.</u>	<u>Cwt.</u>	<u>Cwt.</u>	<u>Cwt.</u>	<u>Cwt.</u>	<u>Cwt.</u>
22.	\$29.62	\$27.63	\$25.58	\$30.22	\$26.52	\$33.50
23.	25.63	27.86	25.38	25.41	24.81	27.83
24.	-3.99	0.23	-0.20	-4.81	-1.71	-5.67
	<u>Lot</u>	<u>Lot</u>	<u>Lot</u>	<u>Lot</u>	<u>Lot</u>	<u>Lot</u>
25.	\$26441.70	\$14970.02	\$12941.67	\$21018.11	\$17967.64	\$15590.20
26.	18668.95	11362.95	9477.90	14818.68	13464.24	11910.15
27.	7772.75	3607.07	3463.77	6199.43	4503.40	3680.05
	<u>Cwt.</u>	<u>Cwt.</u>	<u>Cwt.</u>	<u>Cwt.</u>	<u>Cwt.</u>	<u>Cwt.</u>
28.	\$23.03	\$28.06	\$25.18	\$21.46	\$23.57	\$24.36
29.	16.26	21.30	18.44	15.13	17.66	18.61
30.	6.77	6.76	6.74	6.33	5.91	5.75
31.	-2.60	0.20	-0.20	-3.95	-1.24	-3.47
32.	9.37	6.56	6.94	10.28	7.15	9.22
33.	\$142	\$132	\$137	\$142	\$133	\$131

Table 3. Feed costs and returns from long-fed calves, 1966-1967 (continued)

Item	Individual lot numbers		
	20	21	22
<u>Number and weight of cattle fed</u>			
1. Date of purchase	Nov 66	Nov 66	Dec 66
2. Number of head bought	70	50	25
3. Days on farm	343	313	282
4. Days on pasture	-	-	-
5. Percent death loss	2.9	4.0	0.0
6. Average purchase weight, lbs.	408	400	325
7. Average sales weight, lbs.	1066	1057	848
8. Gain per head, lbs.	658	657	523
9. Gain per head per day, lbs.	1.9	2.1	1.9
10. Pounds of beef produced	43885	30760	13075
<u>Feed used</u>			
	Cwt.	Cwt.	Cwt.
11. Corn, lbs./cwt. gain	451	532	703
12. Small grain, lbs.	18	4	-
13. Commercial feed, lbs.	12	57	51
14. Total concentrates, lbs.	481	593	754
15. Legume hay, lbs.	185	423	197
16. Other hay, lbs.	22	-	-
17. Total dry roughage, lbs.	207	423	197
18. Corn silage, lbs.	638	-	-
19. Grass or oat silage, lbs.	-	-	-
20. Total silage, lbs.	638	-	-
21. Pasture, days	-	-	-
<u>Prices of cattle</u>			
	Cwt.	Cwt.	Cwt.
22. Price paid	\$31.50	\$29.31	\$26.90
23. Price received	25.15	25.36	24.92
24. Price spread or gross margin	-6.35	-3.95	-1.98
<u>Cost and return</u>			
	Lot	Lot	Lot
25. Total value produced	\$9219.12	\$7012.68	\$3098.18
26. Total feed cost	6722.86	5614.04	2533.71
27. Total return over feed	2496.26	1398.64	564.47
<u>Cost and return</u>			
	Cwt.	Cwt.	Cwt.
28. Value produced	\$21.01	\$22.80	\$23.70
29. Feed costs	15.32	18.25	19.37
30. Return over feed cost	5.69	4.55	4.33
31. Return over feed cost from price spread	-4.14	-2.56	-1.22
32. Return over feed cost from feeding	9.83	7.11	5.55
33. Return per \$100 of feed cost	\$137	\$125	\$122

Table 3. Feed costs and returns from long-fed calves, 1966-1967 (continued)

Individual lot numbers						
	23	24	25	26	27	28
1.	Feb 67	Nov 66	Sep 66	Jun 66	Varied	Apr 66
2.	103	102	41	20	107	89
3.	221	334	387	222	257	340
4.	-	-	-	-	-	-
5.	2.9	2.0	4.9	0.0	4.7	0.0
6.	474	391	320	415	412	497
7.	905	952	1035	861	838	1043
8.	431	561	715	446	426	546
9.	2.0	1.7	1.8	2.0	1.7	1.6
10.	41585	55272	27245	8915	41447	48630
	<u>Cwt.</u>	<u>Cwt.</u>	<u>Cwt.</u>	<u>Cwt.</u>	<u>Cwt.</u>	<u>Cwt.</u>
11.	590	306	575	437	490	456
12.	-	35	47	7	19	-
13.	55	111	28	47	49	42
14.	645	452	650	491	558	498
15.	245	69	470	426	193	115
16.	48	-	-	-	-	-
17.	293	69	470	426	193	115
18.	-	1639	-	-	439	559
19.	-	-	-	-	-	-
20.	-	1639	-	-	439	559
21.	-	-	-	-	-	-
	<u>Cwt.</u>	<u>Cwt.</u>	<u>Cwt.</u>	<u>Cwt.</u>	<u>Cwt.</u>	<u>Cwt.</u>
22.	\$27.65	\$27.50	\$32.50	\$27.92	\$27.17	\$29.54
23.	25.18	25.11	25.75	23.48	24.80	24.28
24.	-2.47	-2.39	-6.75	-4.44	-2.37	-5.26
	<u>Lot</u>	<u>Lot</u>	<u>Lot</u>	<u>Lot</u>	<u>Lot</u>	<u>Lot</u>
25.	\$9262.30	\$12921.99	\$6129.31	\$1724.15	\$9228.15	\$9477.37
26.	7572.40	10730.32	5111.49	1451.40	8268.50	8479.93
27.	1689.90	2191.67	1017.82	272.75	959.65	997.44
	<u>Cwt.</u>	<u>Cwt.</u>	<u>Cwt.</u>	<u>Cwt.</u>	<u>Cwt.</u>	<u>Cwt.</u>
28.	\$22.27	\$23.38	\$22.50	\$19.33	\$22.26	\$19.49
29.	18.21	19.41	18.76	16.27	19.95	17.44
30.	4.06	3.97	3.74	3.06	2.31	2.05
31.	-2.91	-1.73	-3.25	-4.15	-2.54	-4.79
32.	6.97	5.70	6.99	7.21	4.85	6.84
33.	\$122	\$120	\$120	\$119	\$112	\$112

Table 3. Feed costs and returns from long-fed calves, 1966-1967 (concluded)

Item	Individual lot numbers		
	29	30	31
<u>Number and weight of cattle fed</u>			
1. Date of purchase	Nov 65	Nov 66	Oct 66
2. Number of head bought	52	149	79
3. Days on farm	406	259	336
4. Days on pasture	-	-	60
5. Percent death loss	7.7	0.0	3.8
6. Average purchase weight, lbs.	342	447	380
7. Average sales weight, lbs.	1179	847	985
8. Gain per head, lbs.	837	400	605
9. Gain per head per day, lbs.	2.1	1.5	1.6
10. Pounds of beef produced	38825	59611	44825
<u>Feed used</u>			
	<u>Cwt.</u>	<u>Cwt.</u>	<u>Cwt.</u>
11. Corn, lbs/cwt gain	714	576	714
12. Small grain, lbs.	-	19	39
13. Commercial feed, lbs.	38	46	80
14. Total concentrates, lbs.	752	641	833
15. Legume hay, lbs.	489	201	299
16. Other hay, lbs.	-	6	-
17. Total dry roughages, lbs.	489	207	299
18. Corn silage, lbs.	-	823	352
19. Grass or oat silage, lbs.	-	-	-
20. Total silage, lbs.	-	823	352
21. Pasture, days	-	-	10.0
<u>Price of cattle</u>			
	<u>Cwt.</u>	<u>Cwt.</u>	<u>Cwt.</u>
22. Price paid	\$24.57	\$27.99	\$27.64
23. Price received	24.36	24.75	26.07
24. Price spread or gross margin	-0.21	-3.24	-1.57
<u>Cost and return</u>			
	<u>Lot</u>	<u>Lot</u>	<u>Lot</u>
25. Total value produced	\$9422.95	\$12600.75	\$11213.42
26. Total feed cost	9043.51	12624.71	11706.93
27. Total return over feed	379.44	-23.96	-493.51
<u>Cost and return</u>			
	<u>Cwt.</u>	<u>Cwt.</u>	<u>Cwt.</u>
28. Value produced	\$24.27	\$21.14	\$25.02
29. Feed costs	23.29	21.18	26.12
30. Return over feed cost	0.98	-0.04	-1.10
31. Return over feed cost from price spread	-0.09	-3.61	-1.05
32. Return over feed cost from feeding	1.07	3.57	-0.05
33. Return per \$100 of feed cost	\$104	\$100	\$ 96

Table 4. Feed costs and returns from long-fed yearlings, 1966-1967

Item	Average of 11 lots	Individual lot numbers 32 33	
<u>Number and weight of cattle fed</u>			
1. Date of purchase		Feb 67	Varied
2. Number of head bought	119	93	256
3. Days on farm	280	260	286
4. Days on pasture	4	-	7
5. Percent death loss	1.3	0.0	0.0
6. Average purchase weight, lbs.	584	546	768
7. Average sales weight, lbs.	1119	1148	1218
8. Gain per head, lbs.	535	602	450
9. Gain per head per day, lbs.	1.9	2.3	1.6
10. Pounds of beef produced	60175	55960	115334
<u>Feed used</u>			
	<u>Head</u>	<u>Cwt.</u>	<u>Cwt.</u>
11. Corn (bu/head) (lbs/cwt gain)	58.8	623	577
12. Small grain (bu/head) (lbs/cwt)	1.8	11	-
13. Commercial feed, lbs.	257	48	23
14. Total concentrates, lbs.	3606	682	600
15. Legume hay, lbs.	897	171	138
16. Other hay, lbs.	275	52	-
17. Total dry roughages, lbs.	1172	223	138
18. Corn silage, lbs.	2413	465	486
19. Grass or oat silage, lbs.	145	32	-
20. Total silage, lbs.	2558	497	486
21. Pasture, days	4	0.9	-
<u>Price of cattle</u>			
	<u>Head</u>	<u>Cwt.</u>	<u>Cwt.</u>
22. Price paid	\$149.91	\$25.67	\$28.14
23. Price received	274.27	24.51	25.71
24. Price spread or gross margin	124.36	-1.16	-2.43
<u>Cost and return</u>			
		<u>Cwt.</u>	<u>Cwt.</u>
25. Total value produced	\$14808.43	\$13155.49	\$29990.91
26. Total feed cost	11934.03	9024.40	21592.99
27. Total return over feed	2874.40	4131.09	8397.92
<u>Cost and return</u>			
	<u>Head</u>	<u>Cwt.</u>	<u>Cwt.</u>
28. Value produced	\$123.86	\$23.56	\$23.51
29. Feed costs	104.39	19.79	16.13
30. Return over feed cost	19.47	3.77	7.38
31. Return over feed cost from price spread		-0.95	-2.20
32. Return over feed cost from feeding		4.72	9.58
33. Return per \$100 of feed cost		\$119	\$146

Table 4. Feed costs and returns from long-fed yearlings, 1966-1967 (continued)

Item	Individual lot numbers		
	34	35	36
<u>Number and weight of cattle fed</u>			
1. Date of purchase	Jan 67	Varied	Varied
2. Number of head bought	90	308	261
3. Days on farm	242	262	242
4. Days on pasture	31.0	-	9.8
5. Percent death loss	3.3	0.6	1.9
6. Average purchase weight, lbs.	526	522	753
7. Average sales weight, lbs.	1044	1078	1218
8. Gain per head, lbs.	518	556	465
9. Gain per head per day, lbs.	2.1	2.1	1.9
10. Pounds of beef produced	43540	169180	115334
<u>Feed used</u>			
	<u>Cwt.</u>	<u>Cwt.</u>	<u>Cwt.</u>
11. Corn, lbs/cwt gain	617	656	571
12. Small grain, lbs.	-	-	6
13. Commercial feed, lbs.	43	85	51
14. Total concentrates, lbs.	660	741	628
15. Legume hay, lbs.	115	51	209
16. Other hay, lbs.	-	235	-
17. Total dry roughage, lbs.	115	286	209
18. Corn silage, lbs.	-	262	796
19. Grass or oat silage, lbs.	-	-	208
20. Total silage, lbs.	-	262	1004
21. Pasture, days	6.0	-	2.2
<u>Price of cattle</u>			
	<u>Cwt.</u>	<u>Cwt.</u>	<u>Cwt.</u>
22. Price paid	\$25.53	\$26.60	\$21.21
23. Price received	25.20	26.17	22.77
24. Price spread or gross margin	-0.33	-0.43	1.56
<u>Cost and return</u>			
	<u>Lot</u>	<u>Lot</u>	<u>Lot</u>
25. Total value produced	\$10819.09	\$43607.43	\$29331.41
26. Total feed cost	7842.78	32580.41	24411.06
27. Total return over feed	2976.31	11027.02	4920.35
<u>Cost and return</u>			
	<u>Cwt.</u>	<u>Cwt.</u>	<u>Cwt.</u>
28. Value produced	\$24.85	\$25.78	\$25.43
29. Feed costs	18.02	19.25	21.16
30. Return over feed cost	6.83	6.53	4.27
31. Return over feed cost from price spread	-0.35	-0.39	2.66
32. Return over feed cost from feeding	7.18	6.92	1.61
33. Return per \$100 of feed cost	\$138	\$134	\$120

Table 4. Feed costs and returns from long-fed yearlings, 1966-1967 (concluded)

Individual lot numbers						
	37	38	39	40	41	42
1.	Mar 67	May 66	Sep 66	Dec 65	Jun 66	Nov 66
2.	18	35	29	45	52	123
3.	260	275	304	376	308	270
4.	-	-	-	-	-	-
5.	0.0	0.0	0.0	2.2	1.9	4.1
6.	500	502	631	536	616	523
7.	961	1048	1141	1185	1176	1091
8.	461	546	510	649	560	568
9.	1.8	2.0	1.7	1.7	1.8	2.1
10.	8295	19125	14810	28025	27940	64388
	<u>Cwt.</u>	<u>Cwt.</u>	<u>Cwt.</u>	<u>Cwt.</u>	<u>Cwt.</u>	<u>Cwt.</u>
11.	810	433	501	665	714	791
12.	-	7	3	-	-	96
13.	-	44	53	47	46	86
14.	810	484	557	712	760	973
15.	241	230	263	156	376	35
16.	-	-	-	75	57	-
17.	241	230	263	231	433	35
18.	-	988	1395	372	-	18
19.	-	-	-	-	-	-
20.	-	988	1395	372	-	18
21.	-	-	-	-	-	-
	<u>Cwt.</u>	<u>Cwt.</u>	<u>Cwt.</u>	<u>Cwt.</u>	<u>Cwt.</u>	<u>Cwt.</u>
22.	\$25.00	\$25.51	\$27.25	\$25.48	\$25.50	\$31.31
23.	23.80	23.46	25.60	23.74	23.64	26.73
24.	-1.20	-2.05	-1.65	-1.74	-1.86	-4.58
	<u>Lot</u>	<u>Lot</u>	<u>Lot</u>	<u>Lot</u>	<u>Lot</u>	<u>Lot</u>
25.	\$1867.18	\$4127.20	\$3490.98	\$6234.01	\$6007.89	\$14261.32
26.	1522.90	3369.25	3173.03	5665.56	6165.77	15926.30
27.	344.28	757.95	317.95	568.45	-157.88	-1664.98
	<u>Cwt.</u>	<u>Cwt.</u>	<u>Cwt.</u>	<u>Cwt.</u>	<u>Cwt.</u>	<u>Cwt.</u>
28.	\$22.51	\$21.58	\$23.57	\$22.24	\$21.50	\$22.15
29.	18.36	17.62	21.42	20.22	22.07	24.73
30.	4.15	3.96	2.15	2.02	-0.57	-2.58
31.	-1.29	-1.88	-2.03	-1.50	-2.14	-4.58
32.	5.44	5.84	4.18	3.52	1.57	2.00
33.	\$123	\$122	\$110	\$110	\$ 97	\$ 90

Table 5. Feed costs and returns from short-fed yearlings, 1966-1967

Item	Average of 8 lots	Individual lot numbers 43 44	
<u>Number and weight of cattle fed</u>			
1. Date of purchase		Varied	Feb 66
2. Number of head bought	88	120	19
3. Days on farm	204	207	216
4. Days on pasture	12	18	-
5. Percent death loss	0.3	0.8	0.0
6. Average purchase weight, lbs.	633	744	500
7. Average sales weight, lbs.	1043	1137	1067
8. Gain per head, lbs.	410	393	567
9. Gain per head per day, lbs.	2.0	1.9	2.6
10. Pounds of beef produced	36246	46080	10780
<u>Feed used</u>			
	<u>Head</u>	<u>Cwt.</u>	<u>Cwt.</u>
11. Corn (bu/head) (lbs/cwt gain)	44.3	609	500
12. Small grain, lbs.	0.2	1	-
13. Commercial feed, lbs.	179	46	44
14. Total concentrates, lbs.	2662	656	544
15. Legume hay, lbs.	645	163	56
16. Other hay, lbs.	14	3	19
17. Total dry roughage, lbs.	659	166	75
18. Corn silage, lbs.	1197	290	556
19. Grass or oat silage, lbs.	221	45	-
20. Total silage, lbs.	1418	335	556
21. Pasture, days	12	3.7	-
<u>Price of cattle</u>			
	<u>Head</u>	<u>Cwt.</u>	<u>Cwt.</u>
22. Price paid	\$160.28	\$25.32	\$25.00
23. Price received	244.27	23.42	23.45
24. Price spread or gross margin	83.99	-1.90	-1.55
<u>Cost and return</u>			
		<u>Cwt.</u>	<u>Cwt.</u>
25. Total value produced	\$7431.90	\$12327.01	\$2381.01
26. Total feed cost	7036.32	8686.50	1623.80
27. Total return over feed	395.58	3640.51	757.21
<u>Cost and return</u>			
	<u>Head</u>	<u>Cwt.</u>	<u>Cwt.</u>
28. Value produced	\$83.85	\$20.51	\$22.07
29. Feed costs	76.13	18.80	15.06
30. Return over feed cost	7.72	1.71	7.03
31. Return over feed cost from price spread		-2.91	-1.36
32. Return over feed cost from feeding		4.62	8.39
33. Return per \$100 of feed cost		\$109	\$147

Table 5. Feed costs and returns from short-fed yearlings, 1966-1967 (concluded)

Individual lot numbers						
	45	46	47	48	49	50
1.	Jun 66	Nov 66	Aug 66	Sep 66	Dec 66	Varied
2.	43	71	182	80	59	127
3.	216	196	203	234	126	237
4.	30	51	-	-	-	-
5.	0.0	1.4	0.5	0.0	0.0	0.0
6.	531	590	708	718	543	733
7.	871	906	1160	1153	805	1250
8.	340	316	452	435	262	517
9.	1.6	1.6	2.2	1.9	2.1	2.2
10.	14584	21520	81130	34880	15425	65573
	<u>Cwt.</u>	<u>Cwt.</u>	<u>Cwt.</u>	<u>Cwt.</u>	<u>Cwt.</u>	<u>Cwt.</u>
11.	647	808	492	642	423	713
12.	-	-	-	-	-	8
13.	20	33	38	42	113	42
14.	667	841	530	684	536	763
15.	55	93	141	292	217	110
16.	-	-	-	-	-	1
17.	55	93	141	292	217	111
18.	-	-	235	-	986	540
19.	-	-	148	-	-	313
20.	-	-	383	-	986	753
21.	8.8	16.1	-	-	-	-
	<u>Cwt.</u>	<u>Cwt.</u>	<u>Cwt.</u>	<u>Cwt.</u>	<u>Cwt.</u>	<u>Cwt.</u>
22.	\$25.95	\$24.02	\$25.54	\$28.00	\$21.80	\$26.94
23.	23.10	23.47	23.29	24.36	20.46	23.43
24.	-2.85	-.55	-2.25	-3.64	-1.34	-3.51
	<u>Lot</u>	<u>Lot</u>	<u>Lot</u>	<u>Lot</u>	<u>Lot</u>	<u>Lot</u>
25.	\$2719.37	\$4818.68	\$15986.36	\$6406.85	\$2726.11	\$12089.83
26.	2367.62	4339.89	14953.50	6677.00	3142.95	14499.33
27.	351.75	478.79	1032.86	-270.15	-416.84	-2409.50
	<u>Cwt.</u>	<u>Cwt.</u>	<u>Cwt.</u>	<u>Cwt.</u>	<u>Cwt.</u>	<u>Cwt.</u>
28.	\$18.65	\$22.39	\$19.70	\$18.37	\$17.67	\$18.44
29.	16.23	20.16	18.43	19.14	20.38	22.11
30.	2.42	2.23	1.27	-0.77	-2.71	-3.67
31.	-4.45	-1.08	-3.59	-5.99	-2.79	-4.99
32.	6.87	3.31	4.86	5.22	0.08	1.32
33.	\$115	\$111	\$107	\$ 96	\$ 87	\$ 83

COMPARISON OF RETURNS FROM PRICE SPREAD AND FROM FEEDING
FOR THE DIFFERENT CATTLE FEEDING PROGRAMS

Table 6 compares the three feeding alternatives with respect to price spread, returns over feed costs, average purchase weights, and average gains per head.

Generally, returns from feeding are of most importance in the calf feeding program and become relatively less important for long-fed yearlings and least important for short-fed yearlings. Calves are purchased at lighter weights, are fed for a longer period for more gain in weight and put on gain at less cost per pound.

The return from price spread is of most importance for short-fed yearlings because of their higher initial weight and becomes relatively less important as the purchase weights decrease and the gain in weight increases with the younger and lighter calves. This factor accounts for the low returns to short-fed yearlings in the 1966-1967 feeding period.

Table 6. Returns from price spread and from feeding, 1966-1967

Item	Long-fed calves 31 lots	Long-fed yearlings 11 lots	Short-fed yearlings 8 lots
Price spread per 100 pounds	\$-2.67	\$-1.16	\$-1.90
Return over feed cost from price spread	-2.08	-0.95	-2.91
Return over feed cost from feeding	8.05	4.72	4.62
Return over feed cost per 100 pounds gain	5.97	3.77	1.71
Average purchase weight, pounds	407	584	633
Gain per head, pounds	588	535	410
Gain per head per day, pounds	1.9	1.9	2.0

DETERMINING PROFIT PROSPECTS

The selling price required to cover all costs (feed, interest, buildings, equipment, and miscellaneous cash costs) and provide a return for labor and management depends on three main factors. The factors are (1) the level of feeder cattle prices, (2) the cost of putting on a pound of gain, and (3) the weight and type of cattle fed.

In making an estimate of the future level of feeder cattle prices, the number of cattle on feed and the demand prospects for the various classes of feeder cattle are factors to be considered. Market outlook publications are sources of this type of information.

The cost of putting on a pound of gain depends upon the price of feeds, the weight and finish to which animals are fed, the percent death loss, the efficiency of feed utilization and age of the animals, and the ability of the farmer as a cattle feeder. The feeder must also consider interest, depreciation on buildings and equipment, miscellaneous costs, and labor.

Profit prospects for the coming feeding season can be calculated by using the work sheet on page 23. 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 7 and 8 of this report will provide data which can be used.

Table 7. Average feeder requirements based on 1963-1967 lot averages

Item	Long-fed calves	Long-fed yearlings	Short-fed yearlings
Purchase weight	412	585	669
Gain in weight	563	515	387
Days on farm	317	291	194
Gain per head per day	1.8	1.8	2.0
<u>Requirements per head</u>			
Corn, bu.	54.1	54.1	40.9
Small grain, bu.	2.9	3.0	0.6
Supplement, lbs.	263	238	188
All hay, tons	.67	.71	.41
Silage, tons	1.11	1.30	1.23
Pasture, days	8	11	4
Labor, hours ¹	7.06	5.85	3.90
Interest, percent	6.5	6.5	6.5
<u>Requirements per cwt.</u>			
Miscellaneous costs	\$0.90	\$0.90	\$0.90
Overhead cost for shelter and equipment	.95	.95	.95

1. Source: Johnson, R. G. and T. R. Nodland, "Labor Used in Cattle Feeding," Station Bulletin 451, University of Minnesota Agricultural Experiment Station, March 1960, pp. 12-15. (Based on 100 head per lot.)

Table 8. A four-year comparison of feeder cattle feed costs and returns

Item	Long-fed calves			
	1963-64 average 18 lots	1964-65 average 32 lots	1965-66 average 28 lots	1966-67 average 31 lots
<u>Number and weight of cattle fed</u>				
Number of head bought	90	109	135	118
Days on farm	323	318	317	311
Days on pasture	9	7	12	2
Percent death loss	2.9	0.9	1.4	2.0
Average purchase weight, lbs.	404	415	420	407
Average sales weight, lbs.	972	954	976	995
Gain per head, lbs.	568	539	556	588
Gain per head per day, lbs.	1.8	1.7	1.8	1.9
Pounds of beef produced per lot	48939	58130	73818	65643
<u>Feed used per 100 lbs. gain</u>				
Corn, lbs.	525	555	584	513
Small grain, lbs.	9	31	19	11
Commercial feed, lbs.	39	44	59	47
Total concentrates, lbs.	573	630	662	571
Legume hay, lbs.	313	227	184	215
Other hay and stover, lbs.	-	3	12	11
Total dry roughage, lbs.	313	230	196	226
Silage, lbs.	258	369	557	411
Pasture, days	2	2	3	0.3
<u>Price of cattle</u>				
Price paid per 100 pounds	\$26.33	\$22.02	\$24.80	\$28.13
Price received per 100 pounds	21.90	24.22	24.55	25.26
Price spread per 100 pounds	-4.43	2.20	- .25	-2.87
<u>Cost and returns per 100 pounds gain</u>				
Value produced	\$19.69	\$26.42	\$24.83	\$23.18
Feed costs	15.96	18.17	20.09	17.21
Return over feed costs	\$ 3.73	\$ 8.25	\$ 4.74	\$ 5.97
Return over feed cost from price spread	\$-2.21	\$ 2.20	\$ 0.28	\$-2.08
Return over feed cost from feeding	5.94	6.05	4.46	8.05
Return per \$100 feed cost	\$134	\$150	\$124	\$135
Estimated costs other than feed and labor ⁺	\$3.36	\$2.81	\$2.91	\$2.93
Estimated return to labor and mgmt.	.32	5.44	1.83	3.04

+ Interest charge adjusted according to purchase value and time period lot was held.

* Hasbargen, P. R., and G. A. Pond, "Planning Farms for Increased Profits." University of Minnesota Station Bulletin 445, December 1957, p. 24.

Table 8. A four-year comparison of feeder cattle feed costs and returns (cont'd)

Item	Long-fed yearlings			
	1963-64 average 10 lots	1964-65 average 9 lots	1965-66 average 7 lots	1966-67 average 11 lots
<u>Number and weight of cattle fed</u>				
Number of head bought	91	97	103	119
Days on farm	311	296	276	280
Days on pasture	3	10	3	4
Percent death loss	0.8	0.5	1.5	1.3
Average purchase weight, lbs.	589	592	573	584
Average sales weight, lbs.	1132	1054	1092	1119
Gain per head, lbs.	543	462	519	535
Dain per head per day, lbs.	1.8	1.6	1.9	1.9
Pounds beef produced per lot	48617	58130	51668	60175
<u>Feed used per 100 pounds gain</u>				
Corn, lbs.	613	520	607	623
Small grain, lbs.	5	18	40	11
Commercial feed, lbs.	55	47	39	43
Total concentrates, lbs.	673	585	686	682
Legume hay, lbs.	345	228	209	171
Other hay, lbs.	29	12	35	52
Total dry roughage, lbs.	374	240	244	223
Silage, lbs.	374	570	703	497
Pasture, days	5	2	0.6	0.9
<u>Price of cattle</u>				
Price paid per 100 pounds	\$25.47	\$20.26	\$24.19	\$25.67
Price received per 100 pounds	21.83	23.04	25.47	24.51
Price spread per 100 pounds	-3.64	2.78	1.28	-1.16
<u>Cost and returns per 100 pounds gain</u>				
Value produced	\$18.14	\$27.03	\$27.00	\$23.56
Feed costs	18.42	18.71	21.65	19.79
Return over feed costs	\$-0.28	\$ 8.32	\$ 5.35	\$ 3.77
Return over feed cost from price spread	\$-3.69	\$ 3.99	\$ 1.53	\$-0.95
Return over feed cost from feeding	3.41	4.33	3.82	4.72
Return per \$100 of feed cost	\$ 98	\$145	\$128	\$119
Estimated costs other than feed and labor	\$3.27	\$3.21	\$3.17	\$3.25
Estimated return to mabor and mgmt.	-3.51	5.11	2.18	.52

Table 8. A four-year comparison of feeder cattle feed costs and returns (concl.)

Item	Short-fed yearlings			
	1963-64	1964-65	1965-66	1966-67
	average 15 lots	average 10 lots	average 11 lots	average 8 lots
<u>Number and weight of cattle fed</u>				
Number of head bought	62	72	88	88
Days on farm	195	193	182	204
Days on pasture	-	3	-	12
Percent death loss	0.5	0.8	0.6	0.3
Average purchase weight, lbs.	675	668	700	633
Average sales weight, lbs.	1057	1055	1068	1043
Gain per head, lbs.	382	386	368	410
Gain per head per day, lbs.	2.0	2.0	2.0	2.0
Pounds of beef produced per lot	24298	25369	32146	36246
<u>Feed used per 100 pounds gain</u>				
Corn, lbs.	600	565	685	609
Small grain, lbs.	3	12	2	1
Commercial feed, lbs.	48	51	62	46
Total concentrates, lbs.	<u>651</u>	<u>628</u>	<u>749</u>	<u>656</u>
Legume hay, lbs.	292	162	198	163
Other hay, lbs.	38	10	21	3
Total dry roughage, lbs.	<u>330</u>	<u>172</u>	<u>219</u>	<u>166</u>
Silage, lbs.	633	964	674	335
Pasture, days	-	0.7	-	3.7
<u>Price of cattle</u>				
Price paid per 100 pounds	\$20.73	\$17.83	\$22.79	\$25.32
Price received per 100 pounds	19.82	22.29	24.16	23.42
Price spread per 100 pounds	-0.91	4.46	1.37	-1.90
<u>Cost and returns per 100 pounds gain</u>				
Value produced	\$18.83	\$29.81	\$27.69	\$20.51
Feed costs	<u>18.37</u>	<u>19.74</u>	<u>22.51</u>	<u>18.80</u>
Return over feed costs	\$.46	\$10.07	\$ 5.18	\$ 1.71
Return over feed cost from price spread	\$-0.99	\$ 7.52	\$ 3.53	\$-2.91
Return over feed cost from feeding	1.45	2.55	1.65	4.62
Return per \$100 feed cost	\$102	\$154	\$127	\$109
Estimated costs other than feed and labor	\$2.57	\$3.01	\$3.26	\$3.27
Estimated return to labor and mgmt.	-2.11	7.06	1.92	-1.56

PROFITS PROSPECTS WORK SHEET

STEP 1. Determine cost of producing finished animal²(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 costs³ _____ (lbs gain) x \$0.90 (per cwt.) = \$ _____Other overhead costs for equipment and shelter:³
_____ (lbs gain) x \$0.95 (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 = \$ _____

2. Routhe, Hal, Kenneth H. Thomas and Roger Johnson, "How Does the Level of Feeder Prices Affect Cattle Feeding Profits?" Report, Agricultural Extension Service, University of Minnesota, September 1957.

3. Adapted from Hasbargen, P. R. and G. A. Pond, "Planning Farms for Increased Profits," University of Minnesota Station Bulletin 445, December 1957.

Example of Determination of Total Cost and Necessary Selling Price

Long-fed steer calves - good to choice grade

STEP 1. Determine cost of producing finished animal

(a) Original cost per head = 407 lbs. @ \$28.13 per cwt. \$114.49

(b) Feed and other costs per head 588 lbs. gain

<u>Feed cost</u>	<u>Amount fed</u> ⁴	<u>Price</u>	<u>Cost</u>
Corn, bu.	52.7 bu.	\$1.10	\$57.97
Small grain, bu.	2.1 bu.	.62	1.32
Supplement, lbs.	265 lbs.	.05	13.25
All hay, tons	.67 tons	20.00	13.40
Silage, tons	1.20 tons	7.25	8.70
Pasture, days	2 days	.13	.26

Total feed cost 94.90

Other costs - estimated

Labor cost: 7.06 hours per head x \$2.00 per hour	= 14.12
(100 head basis)	
Interest: \$114.49 (original cost per head) x 6.5%	= 6.33
(number of days on farm = 311 = .85 year)	
Miscellaneous costs: 588 lbs. gain x \$0.90 per cwt.	= 5.29
(includes only variable costs)	
Other overhead costs for equipment and shelter:	= 5.59
588 lbs. gain x \$0.95 per cwt.	

(c) Total cost per head \$240.72

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

$$\frac{\text{Total cost per head}}{\text{Number of cwt. sold}} = \frac{\$240.72}{9.95} = \$24.19$$

4. See table 8 for feed requirements.