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Cost and Return From Feeding Cattle 1971 - 1972

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1971-1972

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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 48 lots of feeder cattle on Southwestern Minnesota farms in the 1971-1972 feeding season. This information was obtained from records kept by 34 members of the Southwestern Minnesota Farm Management Association under the supervision of Erlin Weness and one member of the Southeastern Minnesota Farm Management Association under the supervision of Harvey Bjerke. In addition, three lot records were 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.

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

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 1971 and 1972. 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	1971	1972
Alfalfa hay, per ton	\$20.00	\$21.00
Oats or hay silage, per ton	6.50	6.50
Corn silage, per ton	7.25	7.25
Corn grain, per bushel	1.17	1.08
Oats, per bushel	.62	.64
Soybean meal, per 100 pounds	5.00	6.35

FEEDING DATA

Tables 2 and 3 present average data for each feeding program and report performance of individual lots in 1971-1972. 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, 1971-1972

Item	Average of 29 lots	Average by return over feed cost		
		15 high	14 low	
<u>Number and weight of cattle fed</u>				
1. Date of purchase	-	-	-	
2. Number of head bought	148	138	158	
3. Sex	-	-	-	
4. Days on farm	296	292	300	
5. Percent death loss	1.8	1.2	2.4	
6. Average sales weight, lbs.	991	1009	973	
7. Average purchase weight, lbs.	<u>443</u>	<u>440</u>	<u>446</u>	
8. Gain per head, lbs.	548	569	527	
9. Gain per head per day, lbs.	1.9	1.9	1.8	
10. Pounds of beef produced	77298	75603	79117	
<u>Feed used</u>				
	<u>Head</u>	<u>Cwt.</u>	<u>Cwt.</u>	<u>Cwt.</u>
11. Corn (bu/head) (lbs/cwt gain)*	60	636	592	684
12. Small grain (bu/head) (lbs/cwt)	1	8	11	4
13. Commercial feed, lbs.	301	<u>57</u>	<u>51</u>	<u>64</u>
14. Total concentrates, lbs.	3718	701	654	752
15. Legume hay, lbs.	898	164	146	183
16. Other hay, lbs.	<u>51</u>	<u>9</u>	<u>16</u>	<u>1</u>
17. Total hay, lbs.	949	173	162	184
18. Corn silage, lbs.	3085	609	474	755
19. Grass or oat silage, lbs.	<u>18</u>	<u>3</u>	<u>4</u>	<u>1</u>
20. Total silage, lbs.	3103	612	478	756
<u>Price of cattle</u>				
	<u>Head</u>	<u>Cwt.</u>	<u>Cwt.</u>	<u>Cwt.</u>
21. Price paid	\$169.33	\$38.44	\$38.66	\$38.21
22. Price received	\$343.82	\$34.62	\$34.78	\$34.44
<u>Cost and return per lot</u>				
	<u>Lot</u>	<u>Lot</u>	<u>Lot</u>	<u>Lot</u>
23. Total value produced	\$24074	\$24086	\$24060	
24. Total feed cost	<u>15032</u>	<u>12993</u>	<u>17216</u>	
25. Total return over feed	\$ 9042	\$11093	\$ 6844	
<u>Cost and return per head and per cwt.</u>				
	<u>Head</u>	<u>Cwt.</u>	<u>Cwt.</u>	<u>Cwt.</u>
26. Value produced	\$171.83	\$32.01	\$32.45	\$31.55
27. Feed cost	<u>107.97</u>	<u>20.42</u>	<u>17.76</u>	<u>23.28</u>
28. Return over feed cost	\$ 63.86	\$11.59	\$14.69	\$ 8.27
29. Return per \$100 of feed cost		\$162	\$184	\$138

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

Table 2. Feed costs and returns from long-fed calves, 1971-1972 (continued)

Item	Average by size of lot		Heifers*
	15 high	14 low	13 lots
<u>Number and weight of cattle fed</u>			
1. Date of purchase	-	-	-
2. Number of head bought	224	67	168
3. Sex	-	-	Heifers
4. Days on farm	293	300	278
5. Percent death loss	2.4	1.1	1.3
6. Average sales weight, lbs.	968	1016	938
7. Average purchase weight, lbs.	441	444	447
8. Gain per head, lbs.	527	572	491
9. Gain per head per day, lbs.	1.8	1.9	1.8
10. Pounds of beef produced	114535	37405	78901
<u>Feed used</u>			
11. Corn, lbs.	Cwt. 636	Cwt. 636	Cwt. 663
12. Small grain, lbs.	9	7	14
13. Commercial feed, lbs.	59	54	64
14. Total concentrates, lbs.	704	697	741
15. Legume hay, lbs.	139	191	133
16. Other hay, lbs.	4	14	5
17. Total hay, lbs.	143	205	138
18. Corn silage, lbs.	904	294	545
19. Grass or oat silage, lbs.	1	5	-
20. Total silage, lbs.	905	299	545
<u>Price of cattle</u>			
21. Price paid	Cwt. \$38.60	Cwt. \$38.28	Cwt. \$36.62
22. Price received	\$34.31	\$34.95	\$34.02
<u>Cost and return per lot</u>			
23. Total value produced	Lot \$35351	Lot \$11991	Lot \$25027
24. Total feed cost	22308	7236	16265
25. Total return over feed	\$13043	\$ 4755	\$ 8762
<u>Cost and return per cwt.</u>			
26. Value produced	Cwt. \$31.52	Cwt. \$32.55	Cwt. \$32.26
27. Feed cost	20.92	19.90	20.76
28. Return over feed cost	\$10.60	\$12.65	\$11.50
29. Return for \$100 of feed cost	\$157	\$166	\$158

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

Table 2. Feed costs and returns from long-fed calves, 1971-1972 (continued)

Individual lot numbers							
	1	2	3	4	5	6	7
1.	Sept 71	Jan 72	Nov 71	Nov 71	Oct 71	Nov 71	Oct 71
2.	100	28	15	150	411	283	130
3.	Heifers	Mixed	Steers	Steers	Mixed	Heifers	Heifers
4.	296	338	274	298	309	276	306
5.	2.0	3.6	0.0	0.0	1.2	2.5	1.5
6.	940	1120	1073	1130	974	912	1000
7.	<u>452</u>	<u>480</u>	<u>405</u>	<u>436</u>	<u>412</u>	<u>426</u>	<u>417</u>
8.	488	640	668	694	562	486	583
9.	1.6	1.9	2.4	2.3	1.8	1.8	1.9
10.	46990	16820	10020	104080	225785	131100	73755
	<u>Cwt.</u>	<u>Cwt.</u>	<u>Cwt.</u>	<u>Cwt.</u>	<u>Cwt.</u>	<u>Cwt.</u>	<u>Cwt.</u>
11.	419	711	616	452	412	537	486
12.	7	-	-	3	5	-	4
13.	<u>48</u>	<u>12</u>	<u>72</u>	<u>35</u>	<u>45</u>	<u>48</u>	<u>76</u>
14.	474	723	688	490	462	585	566
15.	319	541	188	53	285	12	149
16.	-	-	<u>18</u>	<u>8</u>	-	<u>41</u>	-
17.	319	541	206	61	285	53	149
18.	809	-	-	782	565	603	407
19.	-	-	-	-	-	-	-
20.	809	-	-	782	565	603	407
	<u>Cwt.</u>	<u>Cwt.</u>	<u>Cwt.</u>	<u>Cwt.</u>	<u>Cwt.</u>	<u>Cwt.</u>	<u>Cwt.</u>
21.	\$36.40	\$33.19	\$44.04	\$42.40	\$39.97	\$37.15	\$37.00
22.	\$36.95	\$35.77	\$36.25	\$35.17	\$35.27	\$34.66	\$34.72
	<u>Lot</u>	<u>Lot</u>	<u>Lot</u>	<u>Lot</u>	<u>Lot</u>	<u>Lot</u>	<u>Lot</u>
23.	\$17618	\$ 6362	\$ 3159	\$31882	\$71681	\$42435	\$24368
24.	8532	3447	1444	14721	34616	21696	13254
25.	\$ 9086	\$ 2915	\$ 1715	\$17161	\$37065	\$20739	\$11114
	<u>Cwt.</u>	<u>Cwt.</u>	<u>Cwt.</u>	<u>Cwt.</u>	<u>Cwt.</u>	<u>Cwt.</u>	<u>Cwt.</u>
26.	\$37.49	\$37.82	\$31.53	\$30.63	\$31.75	\$32.37	\$33.04
27.	<u>16.37</u>	<u>20.49</u>	<u>14.41</u>	<u>14.14</u>	<u>15.33</u>	<u>16.55</u>	<u>17.97</u>
28.	\$21.12	\$17.33	\$17.12	\$16.49	\$16.42	\$15.82	\$15.07
29.	\$206	\$185	\$219	\$217	\$207	\$196	\$184

Table 2. Feed costs and returns from long-fed calves, 1971-1972 (continued)

Item	Individual lot numbers			
	8	9	10	11
<u>Number and weight of cattle fed</u>				
1. Date of purchase	May 71	Oct 71	Oct 71	Dec 71
2. Number of head bought	146	120	207	30
3. Sex	Heifers	Steers	Heifers	Mixed
4. Days on farm	228	339	308	312
5. Percent death loss	0.7	0.8	2.9	0.0
6. Average sales weight, lbs.	885	1077	961	1035
7. Average purchase weight, lbs.	457	397	418	457
8. Gain per head, lbs.	428	680	543	578
9. Gain per head per day, lbs.	1.9	2.0	1.8	1.9
10. Pounds of beef produced	61720	80595	106775	17361
<u>Feed used</u>				
11. Corn, lbs.	Cwt. 583	Cwt. 537	Cwt. 545	Cwt. 710
12. Small grain, lbs.	76	-	8	-
13. Commercial feed, lbs.	51	58	65	40
14. Total concentrates, lbs.	710	595	618	750
15. Legume hay, lbs.	60	60	109	12
16. Other hay, lbs.	-	7	-	144
17. Total hay, lbs.	60	67	109	156
18. Corn silage, lbs.	758	263	515	651
19. Grass or oat silage, lbs.	-	62	-	-
20. Total silage, lbs.	758	325	515	651
<u>Price of cattle</u>				
21. Price paid	Cwt. \$34.46	Cwt. \$42.58	Cwt. \$37.60	Cwt. \$35.70
22. Price received	\$30.04	\$34.33	\$33.72	\$33.80
<u>Cost and return per lot</u>				
23. Total value produced	Lot \$20597	Lot \$23744	Lot \$32657	Lot \$ 5608
24. Total feed cost	11952	12515	18020	3303
25. Total return over feed	\$ 8645	\$11229	\$14637	\$ 2305
<u>Cost and return per cwt.</u>				
26. Value produced	Cwt. \$33.37	Cwt. \$29.46	Cwt. \$30.58	Cwt. \$32.30
27. Feed cost	19.36	15.53	16.87	19.02
28. Return over feed cost	\$14.01	\$13.93	\$13.71	\$13.28
29. Return per \$100 of feed cost	\$172	\$190	\$181	\$170

Table 2. Feed costs and returns from long-fed calves, 1971-1972 (continued)

Individual lot numbers							
	12	13	14	15	16	17	18
1.	Oct 71	Dec 71	Oct 71	Nov 71	Dec 71	Oct 71	Jan 72
2.	125	18	94	218	403	165	44
3.	Heifers	Mixed	Heifers	Mixed	Mixed	Mixed	Heifers
4.	308	255	257	282	290	377	283
5.	1.6	0.0	1.1	0.0	1.7	0.6	0.0
6.	991	1005	964	1064	1029	1127	930
7.	<u>439</u>	<u>495</u>	<u>484</u>	<u>427</u>	<u>457</u>	<u>421</u>	<u>432</u>
8.	552	510	480	637	572	706	498
9.	1.8	2.0	1.9	2.3	2.0	1.9	1.8
10.	66951	9185	44190	138715	223106	115470	21919
	<u>Cwt.</u>	<u>Cwt.</u>	<u>Cwt.</u>	<u>Cwt.</u>	<u>Cwt.</u>	<u>Cwt.</u>	<u>Cwt.</u>
11.	698	630	949	593	522	650	682
12.	38	-	21	-	1	-	-
13.	<u>62</u>	<u>64</u>	<u>55</u>	<u>30</u>	<u>70</u>	<u>52</u>	<u>52</u>
14.	798	694	1025	623	593	702	734
15.	49	243	81	36	183	157	219
16.	<u>24</u>	-	-	-	<u>18</u>	-	-
17.	73	243	81	36	201	157	219
18.	-	16	362	1375	365	1077	-
19.	-	-	-	-	20	-	-
20.	-	<u>16</u>	<u>362</u>	<u>1375</u>	<u>385</u>	<u>1077</u>	-
	<u>Cwt.</u>	<u>Cwt.</u>	<u>Cwt.</u>	<u>Cwt.</u>	<u>Cwt.</u>	<u>Cwt.</u>	<u>Cwt.</u>
21.	\$37.67	\$42.92	\$34.60	\$44.22	\$45.84	\$39.95	\$35.34
22.	\$33.73	\$36.29	\$35.05	\$36.02	\$35.35	\$34.90	\$33.49
	<u>Lot</u>	<u>Lot</u>	<u>Lot</u>	<u>Lot</u>	<u>Lot</u>	<u>Lot</u>	<u>Lot</u>
23.	\$20417	\$ 2743	\$15695	\$42329	\$62558	\$36785	\$ 6991
24.	<u>12386</u>	<u>1699</u>	<u>10669</u>	<u>26646</u>	<u>37745</u>	<u>24027</u>	<u>4736</u>
25.	\$ 8031	\$ 1044	\$ 5026	\$15683	\$24813	\$12758	\$ 2255
	<u>Cwt.</u>	<u>Cwt.</u>	<u>Cwt.</u>	<u>Cwt.</u>	<u>Cwt.</u>	<u>Cwt.</u>	<u>Cwt.</u>
26.	\$30.49	\$29.86	\$35.52	\$30.51	\$28.04	\$31.86	\$31.90
27.	<u>18.50</u>	<u>18.49</u>	<u>24.15</u>	<u>19.21</u>	<u>16.92</u>	<u>20.81</u>	<u>21.61</u>
28.	\$11.99	\$11.37	\$11.37	\$11.30	\$11.12	\$11.05	\$10.29
29.	\$165	\$161	\$147	\$159	\$166	\$153	\$148

Table 2. Feed costs and returns from long-fed calves, 1971-1972 (continued)

Item	Individual lot numbers			
	19	20	21	22
<u>Number and weight of cattle fed</u>				
1. Date of purchase	Dec 71	Dec 71	Nov 71	Dec 71
2. Number of head bought	201	48	90	154
3. Sex	Heifers	Mixed	Mixed	Heifers
4. Days on farm	333	244	354	245
5. Percent death loss	0.5	2.1	0.0	4.5
6. Average sales weight, lbs.	964	933	1148	896
7. Average purchase weight, lbs.	<u>419</u>	<u>400</u>	<u>436</u>	<u>499</u>
8. Gain per head, lbs.	545	533	712	397
9. Gain per head per day, lbs.	1.6	2.2	2.0	1.6
10. Pounds of beef produced	107570	24635	64085	54910
<u>Feed used</u>				
	<u>Cwt.</u>	<u>Cwt.</u>	<u>Cwt.</u>	<u>Cwt.</u>
11. Corn, lbs.	569	538	527	849
12. Small grain, lbs.	-	-	10	14
13. Commercial feeds, lbs.	<u>69</u>	<u>59</u>	<u>62</u>	<u>77</u>
14. Total concentrates, lbs.	638	597	599	940
15. Legume hay, lbs.	98	162	300	114
16. Other hay, lbs.	-	-	-	-
17. Total hay, lbs.	<u>98</u>	<u>162</u>	<u>300</u>	<u>114</u>
18. Corn silage, lbs.	1010	-	437	963
19. Grass or oat silage, lbs.	-	-	-	-
20. Total silage, lbs.	1010	-	437	963
<u>Price of cattle</u>				
	<u>Cwt.</u>	<u>Cwt.</u>	<u>Cwt.</u>	<u>Cwt.</u>
21. Price paid	\$38.52	\$35.00	\$43.34	\$34.38
22. Price received	\$33.86	\$35.89	\$33.40	\$34.54
<u>Cost and return per lot</u>				
	<u>Lot</u>	<u>Lot</u>	<u>Lot</u>	<u>Lot</u>
23. Total value produced	\$32498	\$ 9013	\$17506	\$19083
24. Total feed cost	<u>21435</u>	<u>6729</u>	<u>11672</u>	<u>14191</u>
25. Total return over feed	\$11063	\$ 2284	\$ 5834	\$ 4892
<u>Cost and return per cwt.</u>				
	<u>Cwt.</u>	<u>Cwt.</u>	<u>Cwt.</u>	<u>Cwt.</u>
26. Value produced	\$30.21	\$36.58	\$27.32	\$34.75
27. Feed cost	<u>19.93</u>	<u>27.31</u>	<u>18.21</u>	<u>25.84</u>
28. Return over feed cost	\$10.28	\$ 9.27	\$ 9.11	\$ 8.91
29. Return per \$100 of feed cost	\$152	\$134	\$150	\$134

Table 2. Feed costs and returns from long-fed calves, 1971-1972 (continued)

		Individual lot numbers						
		23	24	25	26	27	28	29
1.	Nov 71	Oct 71	Oct 71	Dec 71	Nov 71	Oct 71	Varied	
2.	38	50	186	361	131	134	205	
3.	Mixed	Steers	Steers	Heifers	Heifers	Mixed	Heifers	
4.	307	324	323	265	262	348	251	
5.	2.7	0.0	6.5	3.9	1.5	7.5	1.5	
6.	1002	1014	1088	927	893	740	931	
7.	<u>477</u>	<u>450</u>	<u>482</u>	<u>434</u>	<u>461</u>	<u>392</u>	<u>478</u>	
8.	525	564	606	493	432	348	453	
9.	1.7	1.7	1.9	1.9	1.6	1.0	1.8	
10.	18948	28220	99705	165060	54752	39245	90026	
	<u>Cwt.</u>	<u>Cwt.</u>	<u>Cwt.</u>	<u>Cwt.</u>	<u>Cwt.</u>	<u>Cwt.</u>	<u>Cwt.</u>	
11.	611	794	660	924	604	857	779	
12.	-	11	1	-	9	10	5	
13.	<u>30</u>	<u>72</u>	<u>43</u>	<u>25</u>	<u>96</u>	<u>77</u>	<u>109</u>	
14.	641	877	704	949	709	944	893	
15.	88	262	293	125	299	173	90	
16.	-	-	-	-	-	-	-	
17.	<u>88</u>	<u>262</u>	<u>293</u>	<u>125</u>	<u>299</u>	<u>173</u>	<u>90</u>	
18.	1034	142	792	666	395	3088	600	
19.	-	-	-	-	-	-	-	
20.	<u>1034</u>	<u>142</u>	<u>792</u>	<u>666</u>	<u>395</u>	<u>3088</u>	<u>600</u>	
	<u>Cwt.</u>	<u>Cwt.</u>	<u>Cwt.</u>	<u>Cwt.</u>	<u>Cwt.</u>	<u>Cwt.</u>	<u>Cwt.</u>	
21.	\$37.64	\$40.45	\$37.94	\$39.68	\$39.13	\$33.57	\$34.19	
22.	\$34.60	\$35.00	\$33.33	\$34.77	\$34.37	\$36.29	\$32.37	
	<u>Lot</u>	<u>Lot</u>	<u>Lot</u>	<u>Lot</u>	<u>Lot</u>	<u>Lot</u>	<u>Lot</u>	
23.	\$ 6006	\$ 8650	\$29091	\$49694	\$15940	\$15668	\$27362	
24.	<u>4505</u>	<u>6420</u>	<u>21411</u>	<u>37689</u>	<u>12402</u>	<u>13577</u>	<u>24486</u>	
25.	\$ 1501	\$ 2230	\$ 7680	\$12005	\$ 3538	\$ 2091	\$ 2876	
	<u>Cwt.</u>	<u>Cwt.</u>	<u>Cwt.</u>	<u>Cwt.</u>	<u>Cwt.</u>	<u>Cwt.</u>	<u>Cwt.</u>	
26.	\$31.70	\$30.65	\$29.17	\$30.11	\$29.11	\$39.92	\$30.39	
27.	<u>23.78</u>	<u>22.75</u>	<u>21.47</u>	<u>22.83</u>	<u>22.65</u>	<u>34.59</u>	<u>27.20</u>	
28.	\$ 7.92	\$ 7.90	\$ 7.70	\$ 7.28	\$ 6.46	\$ 5.33	\$ 3.19	
29.	\$133	\$135	\$136	\$132	\$128	\$115	\$112	

Table 3. Feed costs and returns from short-fed yearlings, 1971-1972

Item	Average of 19 lots	Average by return over feed cost		
		10 high	9 low	
<u>Number and weight of cattle fed</u>				
1. Date of purchase	-	-	-	
2. Number of head bought	134	169	94	
3. Sex	-	-	-	
4. Days on farm	230	237	224	
5. Percent death loss	0.6	0.7	0.5	
6. Average sales weight, lbs.	1082	1092	1070	
7. Average purchase weight, lbs.	<u>619</u>	<u>606</u>	<u>634</u>	
8. Gain per head, lbs.	463	486	436	
9. Gain per head per day, lbs.	2.0	2.1	2.0	
10. Pounds of beef produced	60692	79344	39968	
<u>Feed used</u>				
	<u>Head</u>	<u>Cwt.</u>	<u>Cwt.</u>	<u>Cwt.</u>
11. Corn (bu/head)(lbs/cwt gain)*	52	663	587	748
12. Small grain (bu/head)(lbs/cwt)	1	4	3	5
13. Commercial feed, lbs.	225	<u>52</u>	<u>36</u>	<u>70</u>
14. Total concentrates, lbs.	3183	719	626	823
15. Legume hay, lbs.	836	175	178	171
16. Other hay, lbs.	<u>47</u>	<u>9</u>	<u>13</u>	<u>5</u>
17. Total hay, lbs.	883	184	191	176
18. Corn silage, lbs.	1828	401	470	326
19. Grass or oat silage, lbs.	<u>62</u>	<u>13</u>	<u>24</u>	<u>-</u>
20. Total silage, lbs.	1890	414	494	326
<u>Price of cattle</u>				
	<u>Head</u>	<u>Cwt.</u>	<u>Cwt.</u>	<u>Cwt.</u>
21. Price paid	\$211.73	\$34.56	\$34.39	\$34.75
22. Price received	\$371.53	\$34.33	\$35.03	\$33.54
<u>Cost and return per lot</u>				
		<u>Lot</u>	<u>Lot</u>	<u>Lot</u>
23. Total value produced		\$21069	\$28858	\$12414
24. Total feed cost		<u>10979</u>	<u>13544</u>	<u>8128</u>
25. Total return over feed		\$10090	\$15314	\$ 4286
<u>Cost and return per head and per cwt.</u>				
	<u>Head</u>	<u>Cwt.</u>	<u>Cwt.</u>	<u>Cwt.</u>
26. Value produced	\$158.52	\$35.02	\$36.39	\$33.51
27. Feed cost	<u>88.42</u>	<u>19.77</u>	<u>17.52</u>	<u>22.28</u>
28. Return over feed cost	\$ 70.10	\$15.25	\$18.87	\$11.23
29. Return per \$100 of feed cost		\$183	\$210	\$153

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

Table 3. Feed costs and returns from short-fed yearlings, 1971-1972 (continued)

	Average by size of lot		Individual lot numbers				
	10 high	9 low	30	31	32	33	34
1.	-	-	Oct 71	Nov 71	Dec 71	Oct 71	Oct 71
2.	206	54	103	629	44	33	151
3.	-	-	Steers	Heifers	Mixed	Mixed	Steers
4.	217	247	213	213	285	283	270
5.	1.0	0.2	0.0	1.1	0.0	0.0	0.0
6.	1053	1113	1208	960	1224	968	1156
7.	<u>612</u>	<u>626</u>	<u>711</u>	<u>506</u>	<u>665</u>	<u>550</u>	<u>515</u>
8.	<u>441</u>	<u>487</u>	<u>497</u>	<u>454</u>	<u>559</u>	<u>418</u>	<u>641</u>
9.	2.1	2.0	2.3	2.1	2.0	1.5	2.4
10.	91087	26921	51170	278705	24620	13795	96770
	<u>Cwt.</u>	<u>Cwt.</u>	<u>Cwt.</u>	<u>Cwt.</u>	<u>Cwt.</u>	<u>Cwt.</u>	<u>Cwt.</u>
11.	627	702	372	542	571	828	454
12.	4	4	-	1	-	23	2
13.	<u>52</u>	<u>52</u>	<u>26</u>	<u>58</u>	<u>45</u>	<u>-</u>	<u>61</u>
14.	683	758	398	601	616	851	517
15.	90	269	496	8	238	217	62
16.	<u>12</u>	<u>7</u>	<u>-</u>	<u>-</u>	<u>-</u>	<u>-</u>	<u>14</u>
17.	102	276	496	8	238	217	76
18.	595	186	156	824	243	145	930
19.	<u>-</u>	<u>27</u>	<u>239</u>	<u>-</u>	<u>-</u>	<u>-</u>	<u>-</u>
20.	595	213	395	824	243	145	930
	<u>Cwt.</u>	<u>Cwt.</u>	<u>Cwt.</u>	<u>Cwt.</u>	<u>Cwt.</u>	<u>Cwt.</u>	<u>Cwt.</u>
21.	\$35.32	\$33.70	\$34.58	\$34.68	\$30.66	\$30.00	\$40.40
22.	\$34.52	\$34.11	\$36.03	\$36.64	\$34.28	\$33.99	\$37.56
	<u>Lot</u>	<u>Lot</u>	<u>Lot</u>	<u>Lot</u>	<u>Lot</u>	<u>Lot</u>	<u>Lot</u>
23.	\$28858	\$ 9076	\$19506	\$108354	\$ 9497	\$ 5414	\$34138
24.	<u>13544</u>	<u>4794</u>	<u>7838</u>	<u>48045</u>	<u>4281</u>	<u>2703</u>	<u>15482</u>
25.	\$15314	\$ 4282	\$11668	\$ 60309	\$ 5216	\$ 2711	\$18656
	<u>Cwt.</u>	<u>Cwt.</u>	<u>Cwt.</u>	<u>Cwt.</u>	<u>Cwt.</u>	<u>Cwt.</u>	<u>Cwt.</u>
26.	\$34.31	\$35.81	\$38.12	\$38.88	\$38.57	\$39.24	\$35.27
27.	<u>19.18</u>	<u>20.43</u>	<u>15.32</u>	<u>17.24</u>	<u>17.39</u>	<u>19.59</u>	<u>15.99</u>
28.	\$15.13	\$15.38	\$22.80	\$21.64	\$21.18	\$19.65	\$19.28
29.	\$182	\$184	\$249	\$226	\$222	\$200	\$220

Table 3. Feed costs and returns from short-fed yearlings, 1971-1972 (continued)

Item	Individual lot numbers			
	35	36	37	38
<u>Number and weight of cattle fed</u>				
1. Date of purchase	Sep 71	Sep 71	Feb 72	Dec 71
2. Number of head bought	196	108	36	207
3. Sex	Mixed	Heifers	Steers	Steers
4. Days on farm	158	274	241	295
5. Percent death loss	0.5	3.7	0.0	1.0
6. Average sales weight, lbs.	1006	922	1162	1182
7. Average purchase weight, lbs.	660	530	628	514
8. Gain per head, lbs.	346	392	534	668
9. Gain per head per day, lbs.	2.2	1.4	2.2	2.3
10. Pounds of beef produced	66827	38575	19240	135995
<u>Feed used</u>				
11. Corn, lbs.	Cwt. 587	Cwt. 751	Cwt. 553	Cwt. 537
12. Small grain, lbs.	-	-	-	-
13. Commercial feed, lbs.	53	29	6	42
14. Total concentrates, lbs.	640	780	559	579
15. Legume hay, lbs.	248	-	364	23
16. Other hay, lbs.	-	54	52	14
17. Total hay, lbs.	248	54	416	37
18. Corn silage, lbs.	407	1055	-	447
19. Grass or oat silage, lbs.	-	-	-	-
20. Total silage, lbs.	407	1055	-	447
<u>Price of cattle</u>				
21. Price paid	Cwt. \$30.92	Cwt. \$35.12	Cwt. \$33.59	Cwt. \$39.24
22. Price received	\$33.17	\$36.86	\$32.67	\$34.57
<u>Cost and return per lot</u>				
23. Total value produced	Lot \$25072	Lot \$15213	Lot \$ 6076	Lot \$42057
24. Total feed cost	12368	8520	2919	20560
25. Total return over feed	\$12704	\$ 6693	\$ 3157	\$21497
<u>Cost and return per cwt.</u>				
26. Value produced	Cwt. \$37.52	Cwt. \$39.44	Cwt. \$31.58	Cwt. \$30.93
27. Feed cost	18.51	22.09	15.17	15.12
28. Return over feed cost	\$19.01	\$17.35	\$16.41	\$15.81
29. Return per \$100 of feed cost	\$203	\$179	\$208	\$205

Table 3. Feed costs and returns from short-fed yearlings, 1971-1972 (continued)

	39	40	41	42	43	44
1.	Oct 71	Jul 71	Dec 71	Sep 71	Aug 71	Dec 71
2.	201	47	40	113	172	70
3.	Steers	Heifers	Heifers	Heifers	Steers	Steers
4.	136	169	213	91	201	354
5.	1.0	2.1	0.0	0.9	0.0	0.0
6.	1128	964	992	982	1164	1263
7.	<u>780</u>	<u>650</u>	<u>612</u>	<u>758</u>	<u>746</u>	<u>530</u>
8.	348	314	380	224	418	733
9.	2.5	1.9	1.8	2.5	2.1	2.1
10.	67745	13810	15190	24325	71905	51290
	<u>Cwt.</u>	<u>Cwt.</u>	<u>Cwt.</u>	<u>Cwt.</u>	<u>Cwt.</u>	<u>Cwt.</u>
11.	671	781	947	691	658	528
12.	-	-	13	-	-	-
13.	<u>43</u>	<u>191</u>	<u>47</u>	<u>59</u>	<u>28</u>	<u>26</u>
14.	714	972	1007	750	686	554
15.	120	-	263	107	-	342
16.	<u>-</u>	<u>-</u>	<u>-</u>	<u>-</u>	<u>34</u>	<u>12</u>
17.	120	-	263	107	34	354
18.	490	340	263	329	656	-
19.	<u>-</u>	<u>-</u>	<u>-</u>	<u>-</u>	<u>-</u>	<u>-</u>
20.	490	340	263	329	656	-
	<u>Cwt.</u>	<u>Cwt.</u>	<u>Cwt.</u>	<u>Cwt.</u>	<u>Cwt.</u>	<u>Cwt.</u>
21.	\$34.66	\$31.75	\$33.44	\$30.95	\$34.70	\$42.81
22.	\$34.56	\$34.36	\$35.41	\$31.60	\$34.66	\$35.08
	<u>Lot</u>	<u>Lot</u>	<u>Lot</u>	<u>Lot</u>	<u>Lot</u>	<u>Lot</u>
23.	\$23252	\$ 5540	\$ 5975	\$ 8245	\$24868	\$15120
24.	<u>12727</u>	<u>3466</u>	<u>3789</u>	<u>4979</u>	<u>15260</u>	<u>8916</u>
25.	\$10525	\$ 2074	\$ 2186	\$ 3266	\$ 9608	\$ 6204
	<u>Cwt.</u>	<u>Cwt.</u>	<u>Cwt.</u>	<u>Cwt.</u>	<u>Cwt.</u>	<u>Cwt.</u>
26.	\$34.32	\$40.12	\$39.33	\$33.90	\$34.58	\$29.48
27.	<u>18.78</u>	<u>25.10</u>	<u>24.94</u>	<u>20.47</u>	<u>21.22</u>	<u>17.38</u>
28.	\$15.54	\$15.02	\$14.39	\$13.43	\$13.36	\$12.10
29.	\$183	\$160	\$158	\$166	\$163	\$170

Table 3. Feed costs and returns from short-fed yearlings, 1971-1972 (continued)

Item	Individual lot numbers			
	45	46	47	48
<u>Number and weight of cattle fed</u>				
1. Date of purchase	Apr 72	Nov 71	Oct 71	Dec 71
2. Number of head bought	98	145	14	143
3. Sex	Heifers	Heifers	Steers	Heifers
4. Days on farm	229	192	234	336
5. Percent death loss	0.0	0.7	0.0	0.7
6. Average sales weight, lbs.	1014	984	1221	1049
7. Average purchase weight, lbs.	539	611	752	505
8. Gain per head, lbs.	475	373	469	544
9. Gain per head per day, lbs.	2.1	1.9	2.0	1.6
10. Pounds of beef produced	46610	53160	6570	76860
<u>Feed used</u>				
	<u>Cwt.</u>	<u>Cwt.</u>	<u>Cwt.</u>	<u>Cwt.</u>
11. Corn, lbs.	447	774	1292	610
12. Small grain, lbs.	-	-	-	33
13. Commercial feed, lbs.	60	52	71	94
14. Total concentrates, lbs.	507	826	1363	737
15. Legume hay, lbs.	43	282	457	48
16. Other hay, lbs.	-	-	-	-
17. Total hay, lbs.	43	282	457	48
18. Corn silage, lbs.	528	-	-	814
19. Grass or oat silage, lbs.	-	-	-	-
20. Total silage, lbs.	528	-	-	814
<u>Price of cattle</u>				
	<u>Cwt.</u>	<u>Cwt.</u>	<u>Cwt.</u>	<u>Cwt.</u>
21. Price paid	\$38.50	\$33.88	\$28.01	\$38.67
22. Price received	\$32.42	\$32.81	\$32.75	\$32.77
<u>Cost and return per lot</u>				
	<u>Lot</u>	<u>Lot</u>	<u>Lot</u>	<u>Lot</u>
23. Total value produced	\$11908	\$16496	\$ 2651	\$20925
24. Total feed cost	6999	11342	2234	16164
25. Total return over feed	\$ 4909	\$ 5154	\$ 417	\$ 4761
<u>Cost and return per cwt.</u>				
	<u>Cwt.</u>	<u>Cwt.</u>	<u>Cwt.</u>	<u>Cwt.</u>
26. Value produced	\$25.55	\$31.03	\$40.35	\$27.22
27. Feed cost	15.02	21.34	34.00	21.03
28. Return over feed cost	\$10.53	\$ 9.69	\$ 6.35	\$ 6.19
29. Return per \$100 of feed cost	\$170	\$145	\$119	\$129

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:

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

Total feed cost \$ _____

Other costs - estimated

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

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

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

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

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

(c) Total cost per head \$ _____

STEP 2. Determine selling price you need to cover costs.

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

STEP 3. Your estimated sales value

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

Profit per head \$ _____

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

Item	Long-fed calves			
	1969-70 average 35 lots	1970-71 average 22 lots	1971-72 average 29 lots	Three year average
<u>Number and weight of cattle fed</u>				
Number of head bought	141	157	148	149
Days on farm	296	287	296	293
Percent death loss	1.3	1.3	1.8	1.5
Average sales weight, lbs.	976	967	991	978
Average purchase weight, lbs.	<u>435</u>	<u>444</u>	<u>443</u>	<u>441</u>
Gain per head, lbs.	<u>541</u>	<u>523</u>	<u>548</u>	<u>537</u>
Gain per head per day, lbs.	1.8	1.8	1.9	1.8
Pounds of beef produced per lot	73611	78563	77298	76490
<u>Feed used per 100 pounds gain</u>				
Corn, lbs.	544	543	636	574
Small grain, lbs.	8	9	8	8
Commercial feed, lbs.	<u>53</u>	<u>57</u>	<u>57</u>	<u>56</u>
Total concentrates, lbs.	<u>605</u>	<u>609</u>	<u>701</u>	<u>638</u>
Legume hay, lbs.	187	151	164	167
Other hay, lbs.	<u>8</u>	<u>4</u>	<u>9</u>	<u>7</u>
Total hay, lbs.	<u>195</u>	<u>155</u>	<u>173</u>	<u>174</u>
Silage, lbs.	592	635	612	613
<u>Price of cattle</u>				
Price paid per 100 pounds	\$32.90	\$33.88	\$38.44	\$35.07
Price received per 100 pounds	\$28.27	\$31.56	\$34.62	\$31.48
<u>Cost and return per 100 pounds gain</u>				
Value produced	\$24.58	\$29.68	\$32.01	\$28.76
Feed cost	<u>18.53</u>	<u>18.73</u>	<u>20.42</u>	<u>19.23</u>
Return over feed cost	<u>\$ 6.05</u>	<u>\$10.95</u>	<u>\$11.59</u>	<u>\$ 9.53</u>
Return per \$100 of feed cost	\$133	\$158	\$162	\$151

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

Item	Short-fed yearlings			
	1969-70 average 13 lots	1970-71 average 19 lots	1971-72 average 19 lots	Three year average
<u>Number and weight of cattle</u>				
Number of head bought	87	90	134	104
Days on farm	192	212	230	211
Percent death loss	1.3	1.5	0.6	1.1
Average sales weight, lbs.	1078	1044	1082	1068
Average purchase weight, lbs.	<u>706</u>	<u>634</u>	<u>619</u>	<u>653</u>
Gain per head, lbs.	372	410	463	415
Gain per head per day, lbs.	1.9	2.0	2.0	2.0
Pounds of beef produced per lot	31832	37431	60692	43318
<u>Feed used per 100 pounds gain</u>				
Corn, lbs.	667	766	663	699
Small grain, lbs.	6	10	4	7
Commercial feed, lbs.	<u>42</u>	<u>57</u>	<u>52</u>	<u>50</u>
Total concentrates, lbs.	715	833	719	756
Legume hay, lbs.	270	203	175	216
Other hay, lbs.	<u>1</u>	<u>4</u>	<u>9</u>	<u>5</u>
Total hay, lbs.	271	207	184	221
Silage, lbs.	327	474	414	405
<u>Price of cattle</u>				
Price paid per 100 pounds	\$29.91	\$31.28	\$34.56	\$31.92
Price received per 100 pounds	\$28.50	\$31.51	\$34.33	\$31.45
<u>Cost and returns per 100 pounds gain</u>				
Value produced	\$25.92	\$31.44	\$35.02	\$30.79
Feed cost	<u>19.76</u>	<u>23.53</u>	<u>19.77</u>	<u>21.02</u>
Return over feed cost	\$ 6.16	\$ 7.91	\$15.25	\$ 9.77
Return per \$100 of feed cost	\$131	\$134	\$183	\$149

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 = 441 lbs. @ \$35.07 per cwt.¹ \$154.66

(b) Feed and other costs per head (537 pounds gain)

<u>Feed</u>	<u>Amount fed</u> ²	<u>Price</u> ³	<u>Cost</u>	
Corn	55.0 bu.	\$ 1.12	\$61.60	
Oats	1.3 bu.	.63	.82	
Supplement	301.0 lbs.	.055	16.56	
All hay	0.5 tons	20.50	10.25	
Silage	1.6 tons	7.25	11.60	
Total feed cost				100.83

Other costs (estimated)

Death loss: \$154.66 x 1.5% 2.32

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

Interest: \$154.66 (original cost per head) x 8% 9.90
(number of days on farm = 293 - .8 year)

Miscellaneous costs: 537 lbs. gain x \$1.50 per cwt. 8.06

Other overhead costs for equipment and shelter 8.06
(537 lbs. gain x \$1.50 per cwt.)

(c) Total cost per head \$298.83

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

$$\frac{\text{Total cost per head}}{\text{Number of cwt. sold}} = \frac{\$298.83}{9.78} = \$30.56 = \text{net selling price needed to cover all costs}$$

(marketing costs are not covered so "net" means farm price after market costs are covered)

1. Gain in weight and price based on data in table 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.

