

Staff Paper

2004 Business Analysis Summary Feeder Steers

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2004 Michigan Feeder Steer Business Analysis Summary

2004 Michigan TelFarm and Farm Credit Services Data
Staff Paper No. 05-15

By

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and
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2004 Michigan Feeder Steer Farm Business Analysis Summary

by

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Executive Summary

This report summarizes the financial and production records of 8 Michigan feeder steer farms. To be included, the farms must have produced at least 50 percent of gross cash farm income from feeder steer sales. The records came from Michigan State University's TelFarm project and the Farm Credit Service system in Michigan. The values were pooled into averages for reporting purposes.

Farm records were included if a farm financial summary was completed on 2004 data including beginning and ending balance sheets, plus income and expenses. The data were checked to verify that cash discrepancy was less than 10% of gross cash inflow and that debt discrepancy was less than \$1,000. While considerable variation in the data exists, average values are reported in the summary tables below.

Summary of Results

In 2004, the average feeder steer farm in the business analysis sold 464 head with an average price per head of \$1,094 (Table 1); the average price per hundredweight was \$90.40. The total acres owned averaged 227 and the total cropped acres averaged 809. The total feeder steer farms used in this report were 8.

Table 1. Average Michigan Feeder Steer Farm Characteristics, 2002-2004

	2002	2003	2004
Average number of head	1352	454	464
Average price sold (\$/head)	833	965	1094
Average price sold (\$/cwt.)		78.57	90.40
Total acres owned	535	535	227
Total crop acres	1213	1213	809
Number of farms	10	10	8

An income statement calculates profits, which are net farm income in this case. The net farm income value is the return to operator unpaid management, labor and capital invested. Net farm income in 2004 averaged \$32,599, (Table 2). This average somewhat obscures a very large range of net farm income values. For example, the net farm income median was \$27,299, while the range was a negative \$-195,289 to \$169,312. The standard deviation was \$113,446 for 2004.

Gross cash farm income averaged \$706,377 in 2004. The two largest components of these revenues were beef, custom fed, averaged \$226,236 and beef, finish yearling steers, averaged

\$155,853. The third largest revenue was beef, finish beef calves at \$110,179. Government payments added additional revenue, which averaged \$35,128.

Average total cash expenses were \$645,108 in 2004 and average net cash farm income was \$61,269. Inventory changes, crops and feed, market livestock, prepaid expenses and supplies, and accounts receivable increased slightly and average total inventories change was \$21,244. Depreciation for 2004 averaged a negative \$49,913. In 2004, the net farm income averaged \$32,599.

Table 2. Average Michigan Feeder Steer Farm Income Statement, 2002-2004

	2002	2003	2004
		(\$)	
Gross cash farm income	1,354,980	639,717	706,377
- <u>Total cash expense</u>	<u>1,172,214</u>	<u>587,662</u>	<u>645,108</u>
= Net cash farm income	182,766	52,054	61,269
+ Inventory change	-187,760	82,616	21,244
+ <u>Depreciation and capital adjustments</u>	<u>-61,818</u>	<u>-33,346</u>	<u>-49,913</u>
= Net farm income	-66,812	101,325	32,599

Four key financial performance indicators are presented in Table 3. The rate of on assets (ROA) is calculated as the net farm income plus interest minus the value of unpaid labor and management divided by the average total farm asset. ROA indicates the farm earnings, as a percentage of invested assets and ROA provides the key summary performance indicator for your farm. The rate of return on equity (ROE) is calculated as the net farm income plus interest minus the value of unpaid labor and management divided by the total net farm worth. ROE represents the farms earnings on net worth and is expressed as a percentage of own equity capital. Ideally the ROE should be greater than the ROA indicating that money is being made on borrowed capital (conversely which is the case in Table 3). Operating profit margin (OPM) is the operating profit (as defined in ROA above) divided by gross revenues. Operating profit margin measures the dollars of profit generated per dollar of revenue. The return on assets depends on asset turnover rate (ATR), which is the gross farm revenues divided by average asset value. Asset turnover measures the efficiency with which farm assets generate revenue.

The average 2004 (Table 3) feeder steer farm's ROA was 4.0 percent which was 50 percent decrease over the 2003 average ROA of 8.0 percent. Return on equity had similar losses, ROE for 2004 was 4.2 percent and for 2003 was 10.4, a 59 percent decrease. The operating profit margin for 2004, feeder steer farms generated 19.2 cents of profit per dollar of revenue. Asset turnover ratio in 2004 was 20.7 percent, a slight decline over 2003, meaning that the farm assets were a little less efficient then in 2003. All profitability measures for 2004 declined over 2003. It should be noted that the profitability indicators for the three years in Table 3 were calculated from the same 8 or 9 feeder steer farms, providing a more meaningful analysis over time.

Table 3. Average Michigan Feeder Steer Farm Profitability Indicators, 2002-2004

	2002	2003	2004
	(percent)		
Rate of return on assets*	-2.1	8.0	4.0
Rate of return on equity	-5.7	10.4	4.2
Operating profit margin	-9.9	34.3	19.2
Asset turnover rate*	20.7	23.5	20.7

* Assets valued at market value.

Table 4

Crop Production and Marketing Summary
2004 MI Feeder Steer Business Analysis Summary
(Farms Sorted By Rate of Return on Assets - Mkt)

	Avg. Of All Farms
Number of farms	8
Acreage Summary	
Total acres owned	227
Total crop acres	809
Crop acres owned	198
Crop acres cash rented	611
Crop acres share rented	-
Total pasture acres	3
Average Price Received (Cash Sales Only)	
Corn per bushel	2.30
Soybeans per bushel	6.04
Wheat, Winter per bushel	3.06

Table 5

Farm Income Statement

2004 MI Feeder Steer Business Analysis Summary
(Farms Sorted By Rate of Return on Assets - Mkt)

	Avg. Of All Farms
Number of farms	8
Cash Farm Income	
Canola	496
Cherries	5,702
Corn	40,833
Corn Silage	2,999
CRP	351
Hay, Alfalfa	5,560
Hay, Mixed	716
Oats	437
Rye	795
Soybeans	31,509
Straw	851
Wheat, Winter	21,135
Beef Cow-Calf, Beef Calves	2,424
Beef, Custom Fed	226,236
Beef, Finish Beef Calves	110,179
Beef, Finish Yrlg Steers	155,853
Dairy Steers	8,494
Hogs, Farrow-Fin, Raised Hogs	32,230
Sheep, Lamb Finishing	1,076
Hogs, Weaning to Finish	556
Cull breeding livestock	1,229
Misc. livestock income	16
Direct & CC govt payments	21,801
Other government payments	13,327
Custom work income	6,576
Patronage dividends, cash	132
Insurance income	7,327
Other farm income	7,535
Gross Cash Farm Income	706,377

Table 5

Farm Income Statement (Continued)
2004 MI Feeder Steer Business Analysis Summary
(Farms Sorted By Rate of Return on Assets - Mkt)

	Avg. Of All Farms
Number of farms	8
Cash Farm Expense	
Seed	30,869
Fertilizer	53,661
Crop chemicals	17,260
Drying fuel	1,222
Hauling and trucking	323
Crop marketing	250
Crop miscellaneous	1,227
Feeder livestock purchase	287,713
Purchased feed	41,631
Breeding fees	281
Veterinary	5,371
Supplies	3,518
Livestock marketing	6,466
Interest	19,594
Packaging and supplies	88
Fuel & oil	17,017
Repairs	17,943
Custom hire	21,543
Hired labor	42,412
Land rent	37,081
Machinery leases	4,258
Real estate taxes	4,994
Farm insurance	11,522
Utilities	6,051
Dues & professional fees	8,471
Miscellaneous	4,342
Total cash expense	645,108
Net cash farm income	61,269
Inventory Changes	
Crops and feed	2,318
Market livestock	16,664
Accounts receivable	63
Prepaid expenses and supplies	2,195
Accounts payable	3
Total inventory change	21,244
Net operating profit	82,512
Depreciation and Other Capital Adjustments	
Breeding livestock	850
Machinery and equipment	-43,132
Buildings and improvements	-9,135
Other farm capital	1,504
Total depr. and other capital adj	-49,913
Net farm income	32,599

Table 6

Inventory Changes

2004 MI Feeder Steer Business Analysis Summary
(Farms Sorted By Rate of Return on Assets - Mkt)

	Avg. Of All Farms
Number of farms	8
Net cash farm income	61,269
Crops and Feed	
Ending inventory	144,352
Beginning inventory	142,033
Inventory change	2,318
Market Livestock	
Ending inventory	290,979
Beginning inventory	274,315
Inventory change	16,664
Accts Receivable & Other Current Assets	
Ending inventory	10,440
Beginning inventory	10,377
Inventory change	63
Prepaid Expenses and Supplies	
Ending inventory	19,043
Beginning inventory	16,848
Inventory change	2,195
Accounts Payable & Accrued Expenses	
Beginning inventory	8,988
Ending inventory	8,984
Inventory change	3
Total inventory change	21,244
Net operating profit	82,512

Table 7

Depreciation and Other Capital Adjustments
2004 MI Feeder Steer Business Analysis Summary
(Farms Sorted By Rate of Return on Assets - Mkt)

	Avg. Of All Farms
Number of farms	8
Net operating profit	82,512
Breeding Livestock	
Ending inventory	10,425
Capital sales	8
Beginning inventory	9,239
Capital purchases	344
Depreciation, capital adjust.	850
Machinery and Equipment	
Ending inventory	115,677
Capital sales	3,351
Beginning inventory	129,421
Capital purchases	32,739
Depreciation, capital adjust.	-43,132
Buildings and Improvements	
Ending inventory	86,907
Capital sales	3,025
Beginning inventory	73,694
Capital purchases	25,373
Depreciation, capital adjust.	-9,135
Other Capital Assets	
Ending inventory	12,417
Capital sales	2,905
Beginning inventory	13,818
Capital purchases	-
Depreciation, capital adjust.	1,504
Total depreciation, capital adj.	-49,913
Net farm income	32,599

Table 8

Profitability Measures
2004 MI Feeder Steer Business Analysis Summary
(Farms Sorted By Rate of Return on Assets - Mkt)

	Avg. Of All Farms
Number of farms	8
Profitability (assets valued at cost)	
Net farm income	32,599
Labor and management earnings	7,791
Rate of return on assets	1.8 %
Rate of return on equity	-0.6 %
Operating profit margin	4.4 %
Asset turnover rate	42.1 %
Interest on farm net worth	24,808
Farm interest expense	19,668
Value of operator lbr and mgmt.	34,982
Return on farm assets	17,285
Average farm assets	943,108
Return on farm equity	-2,383
Average farm equity	386,317
Value of farm production	396,928

	Avg. Of All Farms
Number of farms	8
Profitability (assets valued at market)	
Net farm income	91,578
Labor and management earnings	10,003
Rate of return on assets	4.0 %
Rate of return on equity	4.2 %
Operating profit margin	19.2 %
Asset turnover rate	20.7 %
Interest on farm net worth	81,575
Farm interest expense	19,668
Value of operator lbr and mgmt.	34,982
Return on farm assets	76,265
Average farm assets	1,917,328
Return on farm equity	56,596
Average farm equity	1,359,582
Value of farm production	396,928

Table 9

Liquidity Measures

2004 MI Feeder Steer Business Analysis Summary
(Farms Sorted By Rate of Return on Assets - Mkt)

	Avg. Of All Farms
Number of farms	8
Liquidity (cash)	
Net cash farm income	61,269
Net nonfarm income	16,914
Family living and taxes	30,569
Principal due on long term debt	11,068
Cash available for interm. debt	36,545
Average intermediate debt	75,795
Years to turnover interm. debt	2.1
Expense as a % of income	91 %
Interest as a % of income	3 %
Working capital to gross income	37 %
Liquidity (accrual)	
Total accrual farm income	725,422
Total accrual operating expense	642,910
Net accrual operating income	82,512
Net nonfarm income	16,914
Family living and taxes	30,569
Principal due on long term debt	11,068
Available for intermediate debt	57,789
Average intermediate debt	75,795
Years to turnover interm. debt	1.3
Expense as a % of income	89 %
Interest as a % of income	3 %
Working capital to gross income	36 %

Table 10

Balance Sheet at Cost Values
2004 MI Feeder Steer Business Analysis Summary
(Farms Sorted By Rate of Return on Assets - Mkt)

	Avg. Of All Farms	
Number of farms	8	
	Beginning	Ending
Assets		
Current Farm Assets		
Cash and checking balance	33,345	16,766
Prepaid expenses & supplies	16,848	19,043
Growing crops	7,334	7,333
Accounts receivable	2,762	2,826
Hedging accounts	0	0
Crops held for sale or feed	142,033	144,352
Crops under government loan	0	0
Market livestock held for sale	274,315	290,979
Other current assets	281	281
Total current farm assets	476,918	481,579
Intermediate Farm Assets		
Breeding livestock	9,239	10,425
Machinery and equipment	123,796	107,734
Titled vehicles	5,625	7,943
Other intermediate assets	9,772	9,772
Total intermediate farm assets	148,432	135,874
Long Term Farm Assets		
Farm land	238,110	238,012
Buildings and improvements	73,694	86,907
Other long-term assets	4,046	2,645
Total long-term farm assets	315,850	327,563
Total Farm Assets	941,200	945,016
Total Nonfarm Assets	12,002	16,161
Total Assets	953,202	961,176
Liabilities		
Current Farm Liabilities		
Accrued interest	455	529
Accounts payable	8,533	8,455
Current notes	159,584	168,387
Government crop loans	0	0
Principal due on term debt	29,165	40,759
Total current farm liabilities	197,736	218,130
Total intermediate farm liabs	71,756	44,386
Total long term farm liabilities	294,814	286,760
Total farm liabilities	564,306	549,276
Total nonfarm liabilities	0	0
Total liabilities	564,306	549,276
Net worth (farm and nonfarm)	388,897	411,900
Net worth change		23,003
Ratio Analysis		
Current farm liabilities / assets	41 %	45 %
Curr. & interm farm liab. / assets	43 %	43 %
Long term farm liab. / assets	93 %	88 %
Total debt to asset ratio	59 %	57 %

Table 11

Balance Sheet at Market Values
2004 MI Feeder Steer Business Analysis Summary
(Farms Sorted By Rate of Return on Assets - Mkt)

	Avg. Of All Farms	
Number of farms	8	
	Beginning	Ending
Assets		
Current Farm Assets		
Cash and checking balance	33,345	16,766
Prepaid expenses & supplies	16,848	19,043
Growing crops	7,334	7,333
Accounts receivable	2,762	2,826
Hedging accounts	0	0
Crops held for sale or feed	142,033	144,352
Crops under government loan	0	0
Market livestock held for sale	274,315	290,979
Other current assets	281	281
Total current farm assets	476,918	481,579
Intermediate Farm Assets		
Breeding livestock	12,596	14,619
Machinery and equipment	367,133	373,648
Titled vehicles	3,750	12,380
Other intermediate assets	9,772	9,772
Total intermediate farm assets	393,251	410,419
Long Term Farm Assets		
Farm land	905,347	925,868
Buildings and improvements	106,398	128,186
Other long-term assets	4,046	2,645
Total long-term farm assets	1,015,791	1,056,698
Total Farm Assets	1,885,960	1,948,696
Total Nonfarm Assets	146,454	152,020
Total Assets	2,032,413	2,100,715
Liabilities		
Current Farm Liabilities		
Accrued interest	455	529
Accounts payable	8,533	8,455
Current notes	159,584	168,387
Government crop loans	0	0
Principal due on term debt	29,165	40,759
Total current farm liabilities	197,736	218,130
Total intermediate farm liabs	71,756	44,386
Total long term farm liabilities	294,814	286,760
Total farm liabilities	564,306	549,276
Total nonfarm liabilities	0	0
Total liabs excluding deferreds	564,306	549,276
Total deferred liabilities	984	925
Total liabilities	565,289	550,201
Retained earnings	388,897	411,900
Market valuation equity	1,078,227	1,138,614
Net worth (farm and nonfarm)	1,467,124	1,550,514
Net worth excluding deferreds	1,468,107	1,551,439
Net worth change		83,390
Ratio Analysis		
Current farm liabilities / assets	41 %	45 %
Curr. & interm farm liab. / assets	31 %	29 %
Long term farm liab. / assets	29 %	27 %
Total debt to asset ratio	28 %	26 %
Debt to assets excl deferreds	28 %	26 %

Table 12

Statement Of Cash Flows

2004 MI Feeder Steer Business Analysis Summary
(Farms Sorted By Rate of Return on Assets - Mkt)

	Avg. Of All Farms
Number of farms	8
Beginning cash (farm & nonfarm)	33,345
Cash From Operating Activities	
Gross cash farm income	706,377
Net nonfarm income	16,914
Total cash farm expense	-645,108
Apparent family living expense	-28,962
Income and social security tax	-1,607
Cash from operations	47,613
Cash From Investing Activities	
Sale of breeding livestock	8
Sale of machinery & equipment	3,351
Sale of titled vehicles	-
Sale of farm land	-
Sale of farm buildings	3,025
Sale of other farm assets	2,905
Sale of nonfarm assets	-
Purchase of breeding livestock	-344
Purchase of machinery & equip.	-32,739
Purchase of titled vehicles	-
Purchase of farm land	-
Purchase of farm buildings	-25,373
Purchase of other farm assets	-
Purchase of nonfarm assets	-
Cash from investing activities	-49,166
Cash From Financing Activities	
Money borrowed	148,373
Cash gifts and inheritances	-
Principal payments	-163,399
Dividends paid	-
Gifts given	-
Cash from financing activities	-15,026
Net change in cash balance	-16,580
Ending cash (farm & nonfarm)	16,766

Table 13

Financial Standards Measures
2004 MI Feeder Steer Business Analysis Summary
(Farms Sorted By Rate of Return on Assets - Mkt)

	Avg. Of All Farms
Number of farms	8
Liquidity	
Current ratio	2.21
Working capital	263,448
Solvency (market)	
Farm debt to asset ratio	28 %
Farm equity to asset ratio	72 %
Farm debt to equity ratio	39 %
Profitability (cost)	
Rate of return on farm assets	1.8 %
Rate of return on farm equity	-0.6 %
Operating profit margin	4.4 %
Net farm income	32,599
Repayment Capacity	
Term debt coverage ratio	192 %
Capital replacement margin	39,692
Efficiency	
Asset turnover rate (cost)	42.1 %
Operating expense ratio	85.9 %
Depreciation expense ratio	6.9 %
Interest expense ratio	2.7 %
Net farm income ratio	4.5 %

Table 14

Operator and Labor Information
2004 MI Feeder Steer Business Analysis Summary
(Farms Sorted By Rate of Return on Assets - Mkt)

	Avg. Of All Farms
Number of farms	8
Operator Information	
Average number of operators	1.4
Average age of operators	56.5
Average number of years farming	34.8
Results Per Operator	
Working capital	191,599
Total assets (market)	1,527,793
Total liabilities	400,146
Net worth (market)	1,127,647
Net worth excl deferred liabs	1,128,319
Gross farm income	527,579
Total farm expense	503,871
Net farm income	23,708
Net nonfarm income	12,301
Family living & tax withdrawals	22,232
Total acres owned	165.0
Total crop acres	588.2
Crop acres owned	143.9
Crop acres cash rented	444.3
Crop acres share rented	-
Total pasture acres	2.2
Labor Analysis	
Number of farms	8
Total unpaid labor hours	3,995
Total hired labor hours	2,245
Total labor hours per farm	6,240
Unpaid hours per operator	2,905
Value of farm production / hour	63.61
Net farm income / unpaid hour	8.16
Average hourly hired labor wage	18.97

Table 15

Financial Summary
2004 MI Feeder Steer Business Analysis Summary
(Farms Sorted By Rate of Return on Assets - Mkt)

	Avg. Of All Farms
Number of farms	8
Income Statement	
Gross cash farm income	706,377
Total cash farm expense	645,108
Net cash farm income	61,269
Inventory change	21,244
Depreciation and capital adjust	-49,913
Net farm income	32,599
Profitability (cost)	
Labor and management earnings	7,791
Rate of return on assets	1.8 %
Rate of return on equity	-0.6 %
Operating profit margin	4.4 %
Asset turnover rate	42.1 %
Profitability (market)	
Labor and management earnings	10,003
Rate of return on assets	4.0 %
Rate of return on equity	4.2 %
Operating profit margin	19.2 %
Asset turnover rate	20.7 %
Liquidity	
Ending current ratio	2.21
Ending working capital	263,448
End working capital to gross inc	37.3 %
Term debt coverage ratio	192.1 %
Expense as a percent of income	88.6 %
Interest as a percent of income	2.7 %
Solvency (cost)	
Number of farms	8
Ending farm assets	945,016
Ending farm liabilities	549,276
Ending total assets	961,176
Ending total liabilities	549,276
Ending net worth	411,900
Net worth change	23,003
Ending farm debt to asset ratio	58 %
Beg total debt to asset ratio	59 %
End total debt to asset ratio	57 %
Solvency (market)	
Number of farms	8
Ending farm assets	1,948,696
Ending farm liabilities	550,201
Ending total assets	2,100,715
Ending total liabilities	550,201
Ending net worth	1,550,514
Net worth change	83,390
Ending farm debt to asset ratio	28 %
Beg total debt to asset ratio	28 %
End total debt to asset ratio	26 %
Nonfarm Information	
Net nonfarm income	16,914
Crop Acres	
Total acres owned	227
Total crop acres	809
Total crop acres owned	198
Total crop acres cash rented	611
Total crop acres share rented	-