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**2005 Michigan Feeder Steers Business  
Analysis Summary**

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and  
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Staff Paper 2006-31

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## **2005 Michigan Feeder Steer Business Analysis Summary**

2005 Michigan TelFarm and Farm Credit Services Data  
Staff Paper No. 06-31

By

Eric Wittenberg  
and  
Roy Black

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## 2005 Michigan Feeder Steer Farm Business Analysis Summary

by  
Eric Wittenberg and Roy Black<sup>1</sup>

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#### *Average of 5 Feeder Steers Farms*

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<sup>1</sup> Co-workers in the TelFarm project were: R. Betz, L. Borton, B. Battel, W. Schauer, D. Stein, and V. Varner with the assistance of Michigan State University Extension Agents. Farm Credit Services of Michigan co-workers were Kelly Tobin, Steve Eshelman, Janice Raymond, Tiffany Aldrich, Anne Gerke, Kathleen Spranger, Sonya Pentecost, and Lynette Wood. Farm Credit Services of Wisconsin co-worker was Steve Zimmerman.

## Executive Summary

This report summarizes the financial and production records of 5 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 2005 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 2005, the average feeder steer farm in the business analysis sold 386 head with an average price per head of \$1,037 (Table 1); the average price per hundredweight was \$95.58. The total acres owned averaged 359 and the total cropped acres averaged 800. The total feeder steer farms used in this report were 5.

**Table 1. Average Michigan Feeder Steer Farm Characteristics, 2002-2005**

	2002	2003	2004	2005
Average number of head	1352	454	464	386
Average price sold (\$/head)	833	965	1094	1037
Average price sold (\$/cwt.)	79.25	78.57	90.40	95.58
Total acres owned	535	535	227	359
Total crop acres	1213	1213	809	800
Number of farms	10	10	8	5

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 2005 averaged \$87,242, (Table 2). This average somewhat obscures a very large range of net farm income values. For example, the net farm income median was \$43,932, while the range was a negative \$-9,210 to \$264,405. The standard deviation was \$109,533 for 2005.

Gross cash farm income averaged \$625,544 in 2005. The two largest components of these revenues were finished beef calves which averaged \$123,487 and finish yearling steers which averaged \$256,792. The third largest revenue was corn which averaged \$88,953. Government payments added additional revenue, which averaged \$49,289.

Average total cash expenses were \$493,224 in 2005 and average net cash farm income was \$132,320. Inventory changes, crops and feed, market livestock, prepaid expenses and supplies, and accounts receivable increased slightly and average total inventories change was \$24,295. Depreciation for 2004 averaged a negative \$69,373. In 2005, the net farm income averaged \$87,242.

**Table 2. Average Michigan Feeder Steer Farm Income Statement, 2002-2005**

	2002	2003	2004	2005
	(\$)	(\$)	(\$)	(\$)
Gross cash farm income	1,354,980	639,717	706,377	625,544
- Total cash expense	<u>1,172,214</u>	<u>587,662</u>	<u>645,108</u>	<u>493,224</u>
= Net cash farm income	182,766	52,054	61,269	132,320
+ Inventory change	-187,760	82,616	21,244	24,295
+ Depreciation and capital adjustments	<u>-61,818</u>	<u>-33,346</u>	<u>-49,913</u>	<u>-69,373</u>
= Net farm income	-66,812	101,325	32,599	87,242

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 2005 (Table 3) feeder steer farm's ROA was 2.7 percent which was 33 percent decrease over the 2004 average ROA of 4.0 percent. Return on equity had similar loses, ROE for 2005 was 2.5 percent and for 2004 was 4.2, a 40 percent decrease. The operating profit margin for 2005, feeder steer farms generated 14.7 cents of profit per dollar of revenue. Asset turnover ratio in 2005 was 18.4 percent, a slight decline over 2004, meaning that the farm assets were a little less efficient in 2005. All profitability measures for 2005 declined over 2004.

**Table 3. Average Michigan Feeder Steer Farm Profitability Indicators, 2002-2005**

	2002	2003	2004	2005
	(%)	(%)	(%)	(%)
Rate of return on assets*	-2.1	8.0	4.0	2.7
Rate of return on equity	-5.7	10.4	4.2	2.5
Operating profit margin	-9.9	34.3	19.2	14.7
Asset turnover rate*	20.7	23.5	20.7	18.4

\* Assets valued at market value.

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Table 4                      Crop Production and Marketing Summary  
   **Michigan Feeder Steers, 2005**  
   (Farms Sorted By Rate of Return on Assets - Mkt)

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	Avg. Of All Farms
Number of farms	5
Acreage Summary	
Total acres owned	359
Total crop acres	800
Crop acres owned	340
Crop acres cash rented	460
Crop acres share rented	-
Total pasture acres	6

Average Price Received (Cash Sales Only)



Table 5

Farm Income Statement  
**Michigan Feeder Steers, 2005**  
(Farms Sorted By Rate of Return on Assets - Mkt)

	Avg. Of All Farms
Number of farms	5
Cash Farm Income	
Cordwood	422
Corn	88,953
Corn, Seed	902
Hay, Alfalfa	320
Hay, Mixed	3,177
Oats	1,957
Rye	965
Soybeans	13,400
Straw	1,345
Wheat, Winter	5,288
Beef Cow-Calf, Beef Calves	23,647
Beef, Finish Beef Calves	123,487
Beef, Finish Yrlg Steers	256,792
Dairy Steer Finishing	31,780
Hogs, Feeder Pigs, Feeder Pigs	176
Sheep, Market Lambs, Mkt Lambs	1,200
Cull breeding livestock	5,878
Direct & CC govt payments	20,631
Other government payments	28,658
Custom work income	1,221
Patronage dividends, cash	26
Other farm income	15,319
Gross Cash Farm Income	625,544

Table 5

## Farm Income Statement (Continued)

**Michigan Feeder Steers, 2005**

(Farms Sorted By Rate of Return on Assets - Mkt)

	Avg. Of All Farms
Number of farms	5
Cash Farm Expense	
Seed	17,887
Fertilizer	36,979
Crop chemicals	24,122
Crop supplies	122
Crop hauling and trucking	244
Crop miscellaneous	470
Feeder livestock purchase	231,507
Purchased feed	41,083
Breeding fees	366
Veterinary	6,587
Livestock supplies	6,497
Livestock leases	110
Livestock hauling and trucking	952
Marketing	1,038
Interest	14,860
Fuel & oil	15,824
Repairs	18,428
Custom hire	5,938
Hired labor	22,996
Land rent	23,042
Machinery leases	290
Real estate taxes	5,539
Personal property taxes	1,963
Farm insurance	8,533
Utilities	3,708
Dues & professional fees	2,609
Hedging account deposits	64
Miscellaneous	1,465
Total cash expense	493,224
Net cash farm income	132,320
Inventory Changes	
Crops and feed	-1,222
Market livestock	2,428
Accounts receivable	1,348
Prepaid expenses and supplies	23,330
Accounts payable	-1,589
Total inventory change	24,295
Net operating profit	156,616
Depreciation and Other Capital Adjustments	
Breeding livestock	400
Machinery and equipment	-60,166
Buildings and improvements	-9,798
Other farm capital	191
Total depr. and other capital adj	-69,373
Net farm income	87,242

Table 6

Inventory Changes  
**Michigan Feeder Steers, 2005**  
(Farms Sorted By Rate of Return on Assets - Mkt)

	Avg. Of All Farms
Number of farms	5
Net cash farm income	132,320
Crops and Feed	
Ending inventory	97,275
Beginning inventory	98,497
Inventory change	-1,222
Market Livestock	
Ending inventory	264,899
Beginning inventory	262,472
Inventory change	2,428
Accts Receivable & Other Current Assets	
Ending inventory	24,274
Beginning inventory	22,925
Inventory change	1,348
Prepaid Expenses and Supplies	
Ending inventory	37,864
Beginning inventory	14,534
Inventory change	23,330
Accounts Payable & Accrued Expenses	
Beginning inventory	7,221
Ending inventory	8,810
Inventory change	-1,589
Total inventory change	24,295
Net operating profit	156,616

Table 7

Depreciation and Other Capital Adjustments  
**Michigan Feeder Steers, 2005**  
(Farms Sorted By Rate of Return on Assets - Mkt)

	Avg. Of All Farms
Number of farms	5
Net operating profit	156,616
Breeding Livestock	
Ending inventory	43,260
Capital sales	-
Beginning inventory	41,340
Capital purchases	1,520
Depreciation, capital adjust.	400
Machinery and Equipment	
Ending inventory	67,737
Capital sales	2,400
Beginning inventory	85,545
Capital purchases	44,759
Depreciation, capital adjust.	-60,166
Buildings and Improvements	
Ending inventory	28,492
Capital sales	-
Beginning inventory	31,475
Capital purchases	6,816
Depreciation, capital adjust.	-9,798
Other Capital Assets	
Ending inventory	9,885
Capital sales	-
Beginning inventory	8,399
Capital purchases	1,294
Depreciation, capital adjust.	191
Total depreciation, capital adj.	-69,373
Net farm income	87,242

Table 8

Profitability Measures  
**Michigan Feeder Steers, 2005**  
(Farms Sorted By Rate of Return on Assets - Mkt)

	Avg. Of All Farms
Number of farms	5
Profitability (assets valued at cost)	
Net farm income	87,242
Labor and management earnings	64,309
Rate of return on assets	7.4 %
Rate of return on equity	11.9 %
Operating profit margin	16.7 %
Asset turnover rate	44.3 %
Interest on farm net worth	22,934
Farm interest expense	15,044
Value of operator lbr and mgmt.	42,840
Return on farm assets	59,447
Average farm assets	803,028
Return on farm equity	44,402
Average farm equity	373,429
Value of farm production	355,908

	Avg. Of All Farms
Number of farms	5
Profitability (assets valued at market)	
Net farm income	80,208
Labor and management earnings	-10,253
Rate of return on assets	2.7 %
Rate of return on equity	2.5 %
Operating profit margin	14.7 %
Asset turnover rate	18.4 %
Interest on farm net worth	90,460
Farm interest expense	15,044
Value of operator lbr and mgmt.	42,840
Return on farm assets	52,412
Average farm assets	1,938,677
Return on farm equity	37,368
Average farm equity	1,507,674
Value of farm production	355,908

Table 9

Liquidity Measures  
**Michigan Feeder Steers, 2005**  
(Farms Sorted By Rate of Return on Assets - Mkt)

	Avg. Of All Farms
Number of farms	5
Liquidity (cash)	
Net cash farm income	132,320
Net nonfarm income	26,176
Family living and taxes	66,489
Principal due on long term debt	9,876
Cash available for interm. debt	82,130
Average intermediate debt	197,653
Years to turnover interm. debt	2.4
Expense as a % of income	79 %
Interest as a % of income	2 %
Working capital to gross income	60 %
Liquidity (accrual)	
Total accrual farm income	628,098
Total accrual operating expense	471,483
Net accrual operating income	156,616
Net nonfarm income	26,176
Family living and taxes	66,489
Principal due on long term debt	9,876
Available for intermediate debt	106,426
Average intermediate debt	197,653
Years to turnover interm. debt	1.9
Expense as a % of income	75 %
Interest as a % of income	2 %
Working capital to gross income	60 %

Table 10

Balance Sheet at Cost Values  
**Michigan Feeder Steers, 2005**  
(Farms Sorted By Rate of Return on Assets - Mkt)

	Avg. Of All Farms	
Number of farms	5	
	Beginning	Ending
<b>Assets</b>		
Current Farm Assets		
Cash and checking balance	6,511	10,077
Prepaid expenses & supplies	14,534	37,864
Growing crops	6,318	5,618
Accounts receivable	13,763	15,481
Hedging accounts	0	0
Crops held for sale or feed	98,497	97,275
Crops under government loan	0	0
Market livestock held for sale	262,472	264,899
Other current assets	2,844	3,175
Total current farm assets	404,939	434,390
Intermediate Farm Assets		
Breeding livestock	41,340	43,260
Machinery and equipment	72,837	56,237
Titled vehicles	12,708	11,500
Other intermediate assets	5,742	7,036
Total intermediate farm assets	132,627	118,034
Long Term Farm Assets		
Farm land	225,297	225,297
Buildings and improvements	31,475	28,492
Other long-term assets	2,657	2,848
Total long-term farm assets	259,429	256,638
Total Farm Assets	796,995	809,061
Total Nonfarm Assets	12,568	8,265
Total Assets	809,563	817,327
<b>Liabilities</b>		
Current Farm Liabilities		
Accrued interest	400	584
Accounts payable	6,821	8,226
Current notes	39,833	37,537
Government crop loans	0	0
Principal due on term debt	18,166	13,137
Total current farm liabilities	65,220	59,484
Total intermediate farm liabs	198,079	184,447
Total long term farm liabilities	183,812	168,156
Total farm liabilities	447,111	412,087
Total nonfarm liabilities	0	0
Total liabilities	447,111	412,087
Net worth (farm and nonfarm)	362,451	405,240
Net worth change		42,789
<b>Ratio Analysis</b>		
Current farm liabilities / assets	16 %	14 %
Curr. & interm farm liab. / assets	49 %	44 %
Long term farm liab. / assets	71 %	66 %
Total debt to asset ratio	55 %	50 %

Table 11

Balance Sheet at Market Values  
**Michigan Feeder Steers, 2005**  
(Farms Sorted By Rate of Return on Assets - Mkt)

	Avg. Of All Farms	
Number of farms	5	
	Beginning	Ending
<b>Assets</b>		
Current Farm Assets		
Cash and checking balance	6,511	10,077
Prepaid expenses & supplies	14,534	37,864
Growing crops	6,318	5,618
Accounts receivable	13,763	15,481
Hedging accounts	0	0
Crops held for sale or feed	98,497	97,275
Crops under government loan	0	0
Market livestock held for sale	262,472	264,899
Other current assets	2,844	3,175
Total current farm assets	404,939	434,390
Intermediate Farm Assets		
Breeding livestock	43,350	45,960
Machinery and equipment	346,603	329,515
Titled vehicles	19,808	27,040
Other intermediate assets	5,742	7,036
Total intermediate farm assets	415,503	409,551
Long Term Farm Assets		
Farm land	1,078,343	1,058,089
Buildings and improvements	34,794	36,240
Other long-term assets	2,657	2,848
Total long-term farm assets	1,115,794	1,097,177
Total Farm Assets	1,936,237	1,941,118
Total Nonfarm Assets	53,272	92,815
Total Assets	1,989,508	2,033,933
<b>Liabilities</b>		
Current Farm Liabilities		
Accrued interest	400	584
Accounts payable	6,821	8,226
Current notes	39,833	37,537
Government crop loans	0	0
Principal due on term debt	18,166	13,137
Total current farm liabilities	65,220	59,484
Total intermediate farm liabs	198,079	184,447
Total long term farm liabilities	183,812	168,156
Total farm liabilities	447,111	412,087
Total nonfarm liabilities	0	0
Total liabs excluding deferreds	447,111	412,087
Total deferred liabilities	1,480	1,329
Total liabilities	448,591	413,416
Retained earnings	362,451	405,240
Market valuation equity	1,178,466	1,215,277
Net worth (farm and nonfarm)	1,540,917	1,620,517
Net worth excluding deferreds	1,542,397	1,621,846
Net worth change		79,600
<b>Ratio Analysis</b>		
Current farm liabilities / assets	16 %	14 %
Curr. & interm farm liab. / assets	32 %	29 %
Long term farm liab. / assets	16 %	15 %
Total debt to asset ratio	23 %	20 %
Debt to assets excl deferreds	22 %	20 %



Table 12

Statement Of Cash Flows  
**Michigan Feeder Steers, 2005**  
(Farms Sorted By Rate of Return on Assets - Mkt)

	Avg. Of All Farms
Number of farms	5
Beginning cash (farm & nonfarm)	6,511
Cash From Operating Activities	
Gross cash farm income	625,544
Net nonfarm income	26,176
Total cash farm expense	-493,224
Apparent family living expense	-64,213
Income and social security tax	-2,276
Cash from operations	92,006
Cash From Investing Activities	
Sale of breeding livestock	-
Sale of machinery & equipment	2,400
Sale of titled vehicles	-
Sale of farm land	-
Sale of farm buildings	-
Sale of other farm assets	-
Sale of nonfarm assets	724
Purchase of breeding livestock	-1,520
Purchase of machinery & equip.	-44,759
Purchase of titled vehicles	-
Purchase of farm land	-
Purchase of farm buildings	-6,816
Purchase of other farm assets	-1,294
Purchase of nonfarm assets	-2,836
Cash from investing activities	-54,100
Cash From Financing Activities	
Money borrowed	41,752
Cash gifts and inheritances	2,274
Principal payments	-78,366
Dividends paid	-
Gifts given	-
Cash from financing activities	-34,340
Net change in cash balance	3,567
Ending cash (farm & nonfarm)	10,077

Table 13

Financial Standards Measures  
**Michigan Feeder Steers, 2005**  
(Farms Sorted By Rate of Return on Assets - Mkt)

	Avg. Of All Farms
Number of farms	5
Liquidity	
Current ratio	7.30
Working capital	374,907
Solvency (market)	
Farm debt to asset ratio	21 %
Farm equity to asset ratio	79 %
Farm debt to equity ratio	27 %
Profitability (cost)	
Rate of return on farm assets	7.4 %
Rate of return on farm equity	11.9 %
Operating profit margin	16.7 %
Net farm income	87,242
Repayment Capacity	
Term debt coverage ratio	274 %
Capital replacement margin	98,136
Efficiency	
Asset turnover rate (cost)	44.3 %
Operating expense ratio	72.7 %
Depreciation expense ratio	11.0 %
Interest expense ratio	2.4 %
Net farm income ratio	13.9 %

Table 14

## Operator and Labor Information

**Michigan Feeder Steers, 2005**

(Farms Sorted By Rate of Return on Assets - Mkt)

	Avg. Of All Farms
Number of farms	5
Operator Information	
Average number of operators	1.2
Average age of operators	56.4
Average number of years farming	31.0
Results Per Operator	
Working capital	312,422
Total assets (market)	1,694,944
Total liabilities	344,513
Net worth (market)	1,350,431
Net worth excl deferred liabs	1,351,539
Gross farm income	523,415
Total farm expense	450,713
Net farm income	72,702
Net nonfarm income	21,813
Family living & tax withdrawals	55,408
Total acres owned	298.8
Total crop acres	666.9
Crop acres owned	283.2
Crop acres cash rented	383.7
Crop acres share rented	-
Total pasture acres	4.7
Labor Analysis	
Number of farms	5
Total unpaid labor hours	4,159
Total hired labor hours	1,669
Total labor hours per farm	5,828
Unpaid hours per operator	3,466
Value of farm production / hour	61.07
Net farm income / unpaid hour	20.98
Average hourly hired labor wage	12.71

Table 15

Financial Summary  
**Michigan Feeder Steers, 2005**  
(Farms Sorted By Rate of Return on Assets - Mkt)

	Avg. Of All Farms
Number of farms	5
Income Statement	
Gross cash farm income	625,544
Total cash farm expense	493,224
Net cash farm income	132,320
Inventory change	24,295
Depreciation and capital adjust	-69,373
Net farm income	87,242
Profitability (cost)	
Labor and management earnings	64,309
Rate of return on assets	7.4 %
Rate of return on equity	11.9 %
Operating profit margin	16.7 %
Asset turnover rate	44.3 %
Profitability (market)	
Labor and management earnings	-10,253
Rate of return on assets	2.7 %
Rate of return on equity	2.5 %
Operating profit margin	14.7 %
Asset turnover rate	18.4 %
Liquidity	
Ending current ratio	7.30
Ending working capital	374,907
End working capital to gross inc	59.9 %
Term debt coverage ratio	273.6 %
Expense as a percent of income	75.1 %
Interest as a percent of income	2.4 %
Solvency (cost)	
Number of farms	5
Ending farm assets	809,061
Ending farm liabilities	412,087
Ending total assets	817,327
Ending total liabilities	412,087
Ending net worth	405,240
Net worth change	42,789
Ending farm debt to asset ratio	51 %
Beg total debt to asset ratio	55 %
End total debt to asset ratio	50 %
Solvency (market)	
Number of farms	5
Ending farm assets	1,941,118
Ending farm liabilities	413,416
Ending total assets	2,033,933
Ending total liabilities	413,416
Ending net worth	1,620,517
Net worth change	79,600
Ending farm debt to asset ratio	21 %
Beg total debt to asset ratio	23 %
End total debt to asset ratio	20 %
Nonfarm Information	
Net nonfarm income	26,176
Crop Acres	
Total acres owned	359
Total crop acres	800
Total crop acres owned	340
Total crop acres cash rented	460
Total crop acres share rented	-