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Staff Paper

2003 Business Analysis Summary Feeder Steers

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2003 Michigan Feeder Steer Business Analysis Summary

2003 Michigan TelFarm and Farm Credit Services Data
Staff Paper No. 04-24

By

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and
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2003 Michigan Feeder Steer Farm Business Analysis Summary
 by
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Executive Summary

This report summarizes the financial and production records of 10 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/MicroTel project, the Farm Credit Service system, or by AgriSolutions in Michigan. The values were pooled into averages for reporting purposes.

Farm records were included if a farm financial summary was completed on 2003 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 2003, the average feeder steer farm in the business analysis sold 454 head with an average price per head of \$965 (Table 1), the average price per hundredweight was \$78.57. The total acres owned averaged 535 and the total cropped acres averaged 1213. The total feeder steer farms used in this report were 10.

Table 1. Average 2003 Michigan Feeder Steer Farm Characteristics

	2003
Average number of head	454
Average price sold (\$/head)	965
Average price sold (\$/cwt.)	78.57
Total acres owned	535
Total crop acres	1213
Number of farms	10

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 2003 averaged \$101,325, (Table 2). This average somewhat obscures a very large range of net farm income values. For example, the net farm income median was \$87,267, while the range was \$11,196 to \$247,890. The standard deviation was \$73,350 for 2003.

Gross cash farm income averaged \$639,717 in 2003. The largest component of these revenues were beef, finish yearling steers, these sales averaged \$265,258. The second largest of the

revenues were finish beef calves, at \$117,641 and the third largest revenue was custom work at \$59,288. Government payments added additional revenue of \$30,354.

Average total cash expenses were \$587,662 in 2003 and average net cash farm income was \$52,054. Inventory changes, crops and feed, market livestock, prepaid expenses and supplies increased while accounts receivable decreased slightly, on average these farms were able to build inventories. The average total inventories change was \$82,616.

Table 2. Average 2003 Michigan Feeder Steer Farm Income Statement

	2003
	(\$)
Gross cash farm income	639,717
Total cash expense	587,662
Net cash farm income	52,054
Inventory change	82,616
Depreciation and capital adjustments	-33,346
Net farm income	101,325

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 2003 (Table 3) feeder steer farm's ROA was 11.9 percent which was 261 percent increase over the 2002 average ROA of a negative 7.4 percent. Return on equity had similar gains, ROE for 2003 was 29.0 percent and for 2002 was a negative 29.5, at 198 percent improvement. The operating profit margin for 2003, feeder steer farms generated 23.5 cents of profit per dollar of revenue. Asset turnover ratio in 2003 was 50.4 percent, a slight improvement over 2002, meaning that the farm assets were a little more efficient then in 2002. All profitability measures for 2003 improved over 2002. It should be noted that the profitability indicators for the four years in Table 3 were calculated from the same 10 feeder steer farms, providing a more meaningful analysis over time.

Table 3. Average Michigan Feeder Steer Farm Profitability Indicators, 2000-2003

	2000	2001	2002	2003
	(percent)			
Rate of return on assets*	6.7	1.7	-7.4	11.9
Rate of return on equity	10.5	-0.6	-29.5	29.0
Operating profit margin	17.7	4.3	-18.9	23.5
Asset turnover rate*	37.7	40.8	39.1	50.4

* Assets valued at **cost** value (rather than market value).

Table 4

Crop Production and Marketing Summary
Michigan Feeder Steers, 2003
(Farms Sorted By Rate of Return on Assets - Mkt)

	Avg. Of All Farms
Number of farms	10
Acreage Summary	
Total acres owned	535
Total crop acres	1312
Crop acres owned	281
Crop acres cash rented	538
Crop acres share rented	-
Total pasture acres	3
Average Price Received (Cash Sales Only)	
Wheat, Winter per bushel	3.22
Soybeans per bushel	5.90

Table 5

Farm Income Statement
Michigan Feeder Steers, 2003
(Farms Sorted By Rate of Return on Assets - Mkt)

	Avg. Of All Farms
Number of farms	10
Cash Farm Income	
Cordwood	1,723
Corn	31,037
Hay, Alfalfa	218
Hay, Mixed	969
Hay, Mixed Alfalfa/Grass	215
Oats	3,100
Rye	510
Soybeans	48,935
Straw	855
Timber	1,576
Wheat, Winter	16,223
Beef Cow-Calf, Beef Calves	2,369
Beef, Background Beef	1,574
Beef, Finish Beef Calves	117,641
Beef, Finish Yrlg Steers	265,258
Hogs, Farrow-Fin, Raised Hogs	15,174
Hogs, Feeder Pigs, Feeder Pigs	30
Sheep, Market Lambs, Mkt Lambs	687
Beef, Finish Cull Cows	6,435
Cull breeding livestock	799
Misc. livestock income	20,405
Direct & CC govt payments	999
Other government payments	30,354
Custom work income	59,288
Insurance income	7,943
Other farm income	5,401
Gross Cash Farm Income	639,717

Table 5, (continued)

Farm Income Statement

Michigan Feeder Steers, 2003

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

	Avg. Of All Farms
Number of farms	10
Cash Farm Expense	
Seed	29,185
Fertilizer	36,606
Crop chemicals	24,448
Drying fuel	1,214
Crop custom hire	927
Crop hauling and trucking	350
Crop marketing	1,360
Crop miscellaneous	286
Feeder livestock purchase	236,204
Purchased feed	59,673
Breeding fees	536
Veterinary	6,818
Livestock supplies	3,275
Livestock hired labor	153
Livestock hauling and trucking	1,083
Livestock marketing	4,777
Interest	23,715
Packaging and supplies	424
Fuel & oil	17,525
Repairs	19,913
Custom hire	11,958
Hired labor	40,898
Land rent	32,902
Machinery & bldg leases	80
Real estate taxes	5,042
Farm insurance	12,462
Utilities	5,437
Hauling and trucking	63
Dues & professional fees	7,017
Miscellaneous	3,335
Total cash expense	587,662
Net cash farm income	52,054
Inventory Changes	
Crops and feed	14,155
Market livestock	50,351
Accounts receivable	-596
Prepaid expenses and supplies	13,702
Accounts payable	5,004
Total inventory change	82,616
Net operating profit	134,670
Depreciation and Other Capital Adjustments	
Breeding livestock	-552
Machinery and equipment	-33,272
Buildings and improvements	-7,286
Other farm capital	7,765
Total depr. and other capital adj	-33,346
Net farm income	101,325

Table 6

Inventory Changes
Michigan Feeder Steers, 2003
(Farms Sorted By Rate of Return on Assets - Mkt)

	Avg. Of All Farms
Number of farms	10
Net cash farm income	52,054
Crops and Feed	
Ending inventory	138,812
Beginning inventory	124,657
Inventory change	14,155
Market Livestock	
Ending inventory	231,289
Beginning inventory	180,938
Inventory change	50,351
Accts Receivable & Other Current Assets	
Ending inventory	7,760
Beginning inventory	8,357
Inventory change	-596
Prepaid Expenses and Supplies	
Ending inventory	24,021
Beginning inventory	10,319
Inventory change	13,702
Accounts Payable & Accrued Expenses	
Beginning inventory	58,543
Ending inventory	53,540
Inventory change	5,004
Total inventory change	82,616
Net operating profit	134,670

Table 7

Depreciation and Other Capital Adjustments
Michigan Feeder Steers, 2003
(Farms Sorted By Rate of Return on Assets - Mkt)

	Avg. Of All Farms
Number of farms	10
Net operating profit	134,670
Breeding Livestock	
Ending inventory	37,157
Capital sales	144
Beginning inventory	37,590
Capital purchases	263
Depreciation, capital adjust.	-552
Machinery and Equipment	
Ending inventory	131,303
Capital sales	2,248
Beginning inventory	101,885
Capital purchases	64,937
Depreciation, capital adjust.	-33,272
Buildings and Improvements	
Ending inventory	69,631
Capital sales	-
Beginning inventory	72,809
Capital purchases	4,109
Depreciation, capital adjust.	-7,286
Other Capital Assets	
Ending inventory	31,054
Capital sales	-
Beginning inventory	23,290
Capital purchases	-
Depreciation, capital adjust.	7,765
Total depreciation, capital adj.	-33,346
Net farm income	101,325

Table 8

Profitability Measures
Michigan Feeder Steers, 2003
(Farms Sorted By Rate of Return on Assets - Mkt)

	Avg. Of All Farms
Number of farms	10
Profitability (assets valued at cost)	
Net farm income	101,325
Labor and management earnings	81,618
Rate of return on assets	11.9 %
Rate of return on equity	36.4 %
Operating profit margin	24.0 %
Asset turnover rate	49.8 %
Interest on farm net worth	19,707
Farm interest expense	23,357
Value of operator lbr and mgmt.	27,035
Return on farm assets	97,646
Average farm assets	817,202
Return on farm equity	74,290
Average farm equity	204,107
Value of farm production	407,199
	Avg. Of All Farms
Number of farms	10
Profitability (assets valued at market)	
Net farm income	143,172
Labor and management earnings	75,998
Rate of return on assets	8.0 %
Rate of return on equity	10.4 %
Operating profit margin	34.3 %
Asset turnover rate	23.5 %
Interest on farm net worth	67,174
Farm interest expense	23,357
Value of operator lbr and mgmt.	27,035
Return on farm assets	139,493
Average farm assets	1,733,450
Return on farm equity	116,137
Average farm equity	1,119,568
Value of farm production	407,199

Table 9

Liquidity Measures
Michigan Feeder Steers, 2003
(Farms Sorted By Rate of Return on Assets - Mkt)

	Avg. Of All Farms
Number of farms	10
Liquidity (cash)	
Net cash farm income	52,054
Net nonfarm income	3,284
Family living and taxes	23,362
Real estate principal payments	6,743
Cash available for interm. debt	25,234
Average intermediate debt	180,491
Years to turnover interm. debt	7.2
Expense as a % of income	92 %
Interest as a % of income	4 %
Liquidity (accrual)	
Total accrual farm income	703,627
Total accrual operating expense	568,956
Net accrual operating income	134,670
Net nonfarm income	3,284
Family living and taxes	23,362
Real estate principal payments	6,743
Available for intermediate debt	107,850
Average intermediate debt	180,491
Years to turnover interm. debt	1.7
Expense as a % of income	81 %
Interest as a % of income	3 %

Table 10

Balance Sheet at Cost Values
Michigan Feeder Steers, 2003
(Farms Sorted By Rate of Return on Assets - Mkt)

	Avg. Of All Farms	
Number of farms	10	
	Beginning	Ending
Assets		
Current Farm Assets		
Cash and checking balance	30,903	34,477
Prepaid expenses & supplies	10,319	24,021
Growing crops	5,396	4,410
Accounts receivable	2,735	3,126
Hedging accounts	0	0
Crops held for sale or feed	124,657	138,812
Crops under government loan	0	0
Market livestock held for sale	180,938	231,289
Other current assets	225	225
Total current farm assets	355,172	436,359
Intermediate Farm Assets		
Breeding livestock	37,590	37,157
Machinery and equipment	101,885	126,803
Titled vehicles	0	4,500
Other intermediate assets	20,000	27,818
Total intermediate farm assets	159,475	196,277
Long Term Farm Assets		
Farm land	168,687	169,468
Buildings and improvements	72,809	69,631
Other long-term assets	3,290	3,237
Total long-term farm assets	244,785	242,336
Total Farm Assets	759,433	874,972
Total Nonfarm Assets	15,453	21,072
Total Assets	774,886	896,044
Liabilities		
Current Farm Liabilities		
Accrued interest	3,529	3,171
Accounts payable	55,015	50,369
Current notes	133,354	157,455
Government crop loans	0	0
Principal due on term debt	16,729	32,038
Total current farm liabilities	208,626	243,032
Total intermediate farm liabs	186,909	138,981
Total long term farm liabilities	207,903	240,739
Total farm liabilities	603,438	622,752
Total nonfarm liabilities	0	0
Total liabilities	603,438	622,752
Net worth (farm and nonfarm)	171,448	273,292
Net worth change		101,845
Ratio Analysis		
Current farm liabilities / assets	59 %	56 %
Curr. & interm farm liab. / assets	77 %	60 %
Long term farm liab. / assets	85 %	99 %
Total debt to asset ratio	78 %	70 %

Table 11

Balance Sheet at Market Values
Michigan Feeder Steers, 2003
(Farms Sorted By Rate of Return on Assets - Mkt)

	Avg. Of All Farms	
Number of farms	10	
	Beginning	Ending
Assets		
Current Farm Assets		
Cash and checking balance	30,903	34,477
Prepaid expenses & supplies	10,319	24,021
Growing crops	5,396	4,410
Accounts receivable	2,735	3,126
Hedging accounts	0	0
Crops held for sale or feed	124,657	138,812
Crops under government loan	0	0
Market livestock held for sale	180,938	231,289
Other current assets	225	225
Total current farm assets	355,172	436,359
Intermediate Farm Assets		
Breeding livestock	38,580	38,197
Machinery and equipment	438,802	464,407
Titled vehicles	0	7,500
Other intermediate assets	20,400	28,218
Total intermediate farm assets	497,782	538,322
Long Term Farm Assets		
Farm land	697,386	727,651
Buildings and improvements	101,127	106,576
Other long-term assets	3,290	3,237
Total long-term farm assets	801,803	837,463
Total Farm Assets	1,654,757	1,812,143
Total Nonfarm Assets	81,711	87,035
Total Assets	1,736,468	1,899,179
Liabilities		
Current Farm Liabilities		
Accrued interest	3,529	3,171
Accounts payable	55,015	50,369
Current notes	133,354	157,455
Government crop loans	0	0
Principal due on term debt	16,729	32,038
Total current farm liabilities	208,626	243,032
Total intermediate farm liabs	186,909	138,981
Total long term farm liabilities	207,903	240,739
Total farm liabilities	603,438	622,752
Total nonfarm liabilities	0	0
Total liabs excluding deferreds	603,438	622,752
Total deferred liabilities	787	787
Total liabilities	604,225	623,539
Retained earnings	171,448	273,292
Market valuation equity	960,795	1,002,348
Net worth (farm and nonfarm)	1,132,242	1,275,640
Net worth excluding deferreds	1,133,029	1,276,427
Net worth change		143,398
Ratio Analysis		
Current farm liabilities / assets	59 %	56 %
Curr. & interm farm liab. / assets	46 %	39 %
Long term farm liab. / assets	26 %	29 %
Total debt to asset ratio	35 %	33 %
Debt to assets excl deferreds	35 %	33 %

Table 12

Statement Of Cash Flows
Michigan Feeder Steers, 2003
(Farms Sorted By Rate of Return on Assets - Mkt)

	Avg. Of All Farms
Number of farms	10
Beginning cash (farm & nonfarm)	30,903
Cash From Operating Activities	
Gross cash farm income	639,717
Net nonfarm income	3,284
Total cash farm expense	-587,662
Apparent family living expense	-20,094
Income and social security tax	-3,268
Cash from operations	31,976
Cash From Investing Activities	
Sale of breeding livestock	144
Sale of machinery & equipment	2,248
Sale of titled vehicles	-
Sale of farm land	11,975
Sale of farm buildings	-
Sale of other farm assets	-
Sale of nonfarm assets	41
Purchase of breeding livestock	-263
Purchase of machinery & equip.	-64,937
Purchase of titled vehicles	-
Purchase of farm land	-853
Purchase of farm buildings	-4,109
Purchase of other farm assets	-
Purchase of nonfarm assets	-350
Cash from investing activities	-56,104
Cash From Financing Activities	
Money borrowed	236,788
Cash gifts and inheritances	3,684
Principal payments	-212,470
Dividends paid	-
Gifts given	-300
Cash from financing activities	27,701
Net change in cash balance	3,574
Ending cash (farm & nonfarm)	34,477

Table 13

Financial Standards Measures
Michigan Feeder Steers, 2003
(Farms Sorted By Rate of Return on Assets - Mkt)

	Avg. Of All Farms
Number of farms	10
Liquidity	
Current ratio	1.80
Working capital	193,327
Solvency (market)	
Farm debt to asset ratio	34 %
Farm equity to asset ratio	66 %
Farm debt to equity ratio	52 %
Profitability (cost)	
Rate of return on farm assets	11.9 %
Rate of return on farm equity	36.4 %
Operating profit margin	24.0 %
Net farm income	101,325
Repayment Capacity	
Term debt coverage ratio	203 %
Capital replacement margin	59,810
Efficiency	
Asset turnover rate (cost)	49.8 %
Operating expense ratio	77.5 %
Depreciation expense ratio	4.7 %
Interest expense ratio	3.3 %
Net farm income ratio	14.4 %

Table 14

Operator and Labor Information
Michigan Feeder Steers, 2003
(Farms Sorted By Rate of Return on Assets - Mkt)

	Avg. Of All Farms
Number of farms	10
Operator Information	
Average number of operators	1.3
Average age of operators	55.7
Average number of years farming	33.1
Results Per Operator	
Working capital	148,713
Total assets (market)	1,460,907
Total liabilities	479,645
Net worth (market)	981,262
Net worth excl deferred liabs	981,867
Gross farm income	541,251
Total farm expense	463,309
Net farm income	77,942
Net nonfarm income	2,526
Family living & tax withdrawals	17,971
Total acres owned	172.9
Total crop acres	629.5
Crop acres owned	216.0
Crop acres cash rented	413.5
Crop acres share rented	-
Total pasture acres	2.6
Labor Analysis	
Number of farms	10
Total unpaid labor hours	3,193
Total hired labor hours	2,182
Total labor hours per farm	5,375
Unpaid hours per operator	2,456
Value of farm production / hour	75.76
Net farm income / unpaid hour	31.73

Table 15

Financial Summary
Michigan Feeder Steers, 2003
(Farms Sorted By Rate of Return on Assets - Mkt)

	Avg. Of All Farms
Number of farms	10
Income Statement	
Gross cash farm income	639,717
Total cash farm expense	587,662
Net cash farm income	52,054
Inventory change	82,616
Depreciation and capital adjust	-33,346
Net farm income	101,325
Profitability (cost)	
Labor and management earnings	81,618
Rate of return on assets	11.9 %
Rate of return on equity	36.4 %
Operating profit margin	24.0 %
Asset turnover rate	49.8 %
Profitability (market)	
Labor and management earnings	75,998
Rate of return on assets	8.0 %
Rate of return on equity	10.4 %
Operating profit margin	34.3 %
Asset turnover rate	23.5 %
Liquidity	
Ending current ratio	1.80
Ending working capital	193,327
End working capital to gross inc	30.2 %
Term debt coverage ratio	202.5 %
Expense as a percent of income	80.9 %
Interest as a percent of income	3.3 %
Solvency (cost)	
Number of farms	10
Ending farm assets	874,972
Ending farm liabilities	622,752
Ending total assets	896,044
Ending total liabilities	622,752
Ending net worth	273,292
Net worth change	101,845
Ending farm debt to asset ratio	71 %
Beg total debt to asset ratio	78 %
End total debt to asset ratio	70 %
Solvency (market)	
Number of farms	10
Ending farm assets	1,812,143
Ending farm liabilities	623,539
Ending total assets	1,899,179
Ending total liabilities	623,539
Ending net worth	1,275,640
Net worth change	143,398
Ending farm debt to asset ratio	34 %
Beg total debt to asset ratio	35 %
End total debt to asset ratio	33 %
Nonfarm Information	
Net nonfarm income	3,284
Crop Acres	
Total acres owned	225
Total crop acres	818
Total crop acres owned	281
Total crop acres cash rented	538
Total crop acres share rented	-