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2007 Michigan Dairy Grazing Farm Business Analysis Summary

Eric Wittenberg And Christopher Wolf

Staff Paper 2008-5

December, 2008







Department of Agricultural, Food, and Resource Economics MICHIGAN STATE UNIVERSITY East Lansing, Michigan 48824

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Staff Paper No. 2008-5, December 2008

By

Eric Wittenberg and Christopher Wolf¹

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¹ 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. Greenstone Farm Credit Services co-workers were Kelly Tobin, Steve Eshelman, Janice Raymond, 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 7 dairy grazing farms from across Michigan. These 7 farms indicated that they grazed dairy cows at least three months of the year and that grazing provided more than 30 percent of the forage consumed during the year. To be included, the farms must have produced at least 50 percent of gross cash farm income from milk and dairy animal 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 checked for accuracy. While considerable variation in the data exists, average values are reported in the summary tables and discussion that follows.

In 2006, the average size dairy farm in the business analysis had 133 cows producing an average of 15,906 pounds of milk per cow (Table 1). Milk price, based on gross income, averaged \$20.01/cwt. The average cropped acres per cow for the 7 dairy grazing farms was 3.9.

Table 1. Average Michigan Dairy Grazing Farm Characteristics, 2003-2007

Tuble 1. 11 veruge whemgan bany Grazing Latin Characteristics, 2000 2007					
	2003	2004	2005	2006	2007
Average number of cows	114	115	115	132	133
Milk sold per cow (pounds)	16,392	16,030	15,869	16,869	15,906
Average price of milk sold (\$/cwt)	\$12.81	16.75	\$15.87	\$13.71	20.01
Total acres owned	417	342	364	379	379
Total crop acres	479	424	401	547	525
Cropped acres per Cow	4.2	3.7	3.5	4.1	3.9
Number of farms	9	10	11	7	7

Net farm income is the return to operator unpaid management, labor and capital invested. Net farm income in 2007 averaged \$131,139 (Table 2). The median was \$86,923 and the standard deviation was \$76,627. Gross cash farm income averaged \$476,717 in 2007. The largest component of these revenues was milk sales, which averaged \$425,620. Average total cash expenses were \$383,724 and average net cash farm income was \$92,993. Inventory value increased by \$54,905. Depreciation and capital adjustments averaged a negative \$16,758.

Table 2. Average Michigan Dairy Grazing Farm Income Statement, 2003-2007

	2003	2004	2005	2006	2007
	(\$)	(\$)	(\$)	(\$)	(\$)
Gross cash farm income	297,148	357,317	340,678	388,894	476,717
- Total cash expense	262,301	296,245	271,132	300,764	383,724
= Net cash farm income	34,847	61,072	69,545	88,130	92,993
+ Inventory change*	-3,637	36,288	-10,651	5,101	54,905
+ Depreciation + capital adjustments*	<u>-14,060</u>	<u>-19,486</u>	<u>-17,788</u>	-33,990	<u>-16,758</u>
= Net farm income	17,150	77,873	41,106	59,241	131,139

^{*}Changes calculated as ending value minus beginning value.

To put the profit values in perspective, we calculate profitability ratios. Rate of return on assets (ROA) is the farm operating profit (equal to net farm income plus interest expense less value of operator labor and management) divided by average total farm asset value (valued at current market value). Rate of return on assets is a measure of how much profit the farm business assets generated. The average 2007 dairy farm ROA (Market) was 9.5 percent, increase of 50 percent over 2006 (Table 3). Return on equity tells a similar story. Operating profit margin 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. In 2007, Michigan dairy grazing farms generated 31.3 cents of profit per dollar of revenue. Asset turnover is the gross farm revenues divided by average asset value. Asset turnover measures the efficiency with which farm assets generate revenue. This value increased in 2007 to an average of 30.4 percent.

Table 3. Average Michigan Dairy Grazing Farm Profitability Indicators, 2003-2007

	2003	2004	2005	2006	2007
	(%)	(%)	(%)	(%)	(%)
Rate of return on assets*	0.1	5.2	3.2	6.4	9.5
Rate of return on equity	-1.4	5.7	2.8	7.6	11.7
Operating profit margin	0.6	20.9	15.4	25.2	31.3
Asset turnover rate*	25.7	24.8	21.1	25.4	30.4

^{*} Assets valued at **market** value

Per Unit Income and Expenses

Table 4 displays average income and expenses items per hundredweight (cwt.) of milk and per cow across 7 dairy grazing farms. Both income and expenses were adjusted to an accrual basis where detailed financial information was provided. Average, accrual adjusted income and expenses per cropped acre are also included.

Income items related to the dairy herd are included in the first section. Government payments include all farm government payments—not just those related to the dairy herd. It was not possible to separate crop payments from dairy payments. *This table should not be interpreted as an estimate of the true cost of producing milk*. All farm sales are not included in the income items—only those that are related to the milking herd. Also, unpaid factors, including labor, management and capital, are not accounted for in the expense items. In addition, the allocation of resources amongst farm enterprises is not accurately reflected leaving the milking herd as the residual claimant on all expenses (especially labor costs).

The largest expense was purchased feed at \$5.35/cwt, family living averaged \$2.23 for second, repairs and machinery depreciation averaged \$1.58/cwt and \$1.52 respectively for third place, and hired labor was the forth largest at \$1.05/cwt. Interest, and milk marketing and trucking combined were also significant expenses in 2007

The bottom of Tables 4 presents crop related expenses divided by the total cropped acres. To accurately calculate a crop cost of production requires labor and management (among other) expenses that were not separated out in the financial records.

Table 4. Average income and expenses across all grazing farms*, 2007

Income Items:	Per cwt.	Per Cow
Milk	\$20.01	\$3178.86
Cull Cows and Calves	\$1.23	\$201.25
Dairy Steers	\$0.25	\$31.29
Dairy Heifers	\$0.33	\$56.01
Government Payments	\$0.32	\$37.86
Patronage Dividends, cash	\$0.07	\$11.00
Crop Sales	\$0.49	\$84.94
Other Cash Income	\$0.01	\$1.48
Expense Items:	Per cwt.	Per Cow
Purchased Feeds	\$5.35	\$856.43
Breeding Fees	\$ 0.15	\$24.56
Veterinary	\$0.46	\$72.57
BST	N/A	N/A
Livestock Supplies	\$0.68	\$109.57
DHIA	\$0.03	\$2.50
Milk & Livestock Mkt. & Trucking	\$0.79	\$126.57
Interest	\$1.02	\$164.43
Fuel and Oil	\$1.01	\$159.57
Repairs	\$1.58	\$256.02
Custom Hire	\$0.84	\$141.93
Hired Labor	\$1.05	\$177.14
Leases	\$0.05	\$7.74
Real Estate Taxes	\$0.45	\$73.01
Farm Insurance	\$0.28	\$44.41
Utilities	\$0.56	\$87.57
Dues, Professional Fees	\$0.16	\$25.15
Miscellaneous	\$0.60	\$107.43
Machinery Depreciation	\$1.52	\$239.65
Building Depreciation	\$0.79	\$128.50
Family Living	\$2.23	\$337.86
Expense Items per Cropped Acre:	Per Acre	
Seed	\$21.00	
Fertilizer	\$38.42	
Crop Chemicals	\$1.24	
Crop Insurance	\$0.07	
Crop Miscellaneous	\$1.40	
Land Rent	\$15.71	

[•] All income and expense items averaged across all 7 farms whether or not they had that income or expense item. Other cash income includes custom work, insurance claims, and miscellaneous income.

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Table 5 Crop Production and Marketing Summary 2007 MI Dairy Grazing Farms (Farms Sorted By Rate of Return on Assets - Mkt)

	Avg. Of All Farms
Dairy	7
Number of farms Average number of cows,	7 133
Milk production per cow lbs.,	15,906
Average milk price per cwt.,	\$20.01
Acreage Summary	
Total acres owned	379
Total crop acres	525
Crop acres owned	288
Crop acres cash rented	237
Crop acres share rented	_
Total pasture acres	42

Farm Income Statement 2007 MI Dairy Grazing Farms

	Avg. Of All Farms
Number of farms	7
Cash Farm Income Corn Hay, Alfalfa Hay, Mixed Wheat, Winter Beef Replacement Heifers Dairy, Milk Dairy, Dairy Calves Dairy Heifers (for sale) Dairy Steer Finishing Cull breeding livestock Direct & CC govt payments Other government payments Custom work income Patronage dividends, cash	508 200 5,638 2,011 256 425,620 2,433 1,879 4,376 29,166 2,585 4,032 108 1,174
Insurance income Other farm income Gross Cash Farm Income	455 -3,725 476,717

Farm Income Statement (Continued) 2007 MI Dairy Grazing Farms

	Avg. Of All Farms
Number of farms	7
Cash Farm Expense	
Seed	9,368
Fertilizer	16,912
Crop chemicals	585
Crop insurance	58
Crop custom hire Crop miscellaneous	2,289 867
Feeder livestock purchase	100
Purchased feed	115,266
Breeding fees	3,348
Veterinary	10,759
Supplies	14,171
DHIA	412
Livestock custom hire	146
Livestock hired labor	12,413
Livestock hauling and trucking	3,370
Marketing	11,447
Bedding	67
Livestock miscellaneous	579
Interest	24,029
Fuel & oil	23,183
Repairs	39,723
Custom hire	19,974
Hired labor	17,622
Land rent	11,001
Machinery leases Real estate taxes	1,307 8,841
Farm insurance	5,201
Utilities	11,489
Hauling and trucking	100
Dues & professional fees	2,887
Miscellaneous	16,211
Total cash expense	383,724
Net cash farm income	92,993
Inventory Changes	
Crops and feed	9,295
Market livestock	-3,349
Accounts receivable	41,023
Prepaid expenses and supplies	5,332
Accounts payable	2,603
Total inventory change	54,905
Net operating profit	147,897
Depreciation and Other Capital Adjust	
Breeding livestock	25,221
Machinery and equipment	-33,757
Buildings and improvements	-12,732
Other farm capital	4,510
Total depr. and other capital adj	-16,758
Net farm income	131,139

Table 7 Inventory Changes 2007 MI Dairy Grazing Farms (Farms Sorted By Rate of Return on Assets - Mkt)

	Avg. Of All Farms
Number of farms	7
Net cash farm income	92,993
Crops and Feed Ending inventory Beginning inventory Inventory change	89,558 80,262 9,295
Market Livestock Ending inventory Beginning inventory Inventory change	1,820 5,169 -3,349
Accts Receivable & Other Current Asset Ending inventory Beginning inventory Inventory change	63,919 22,897 41,023
Prepaid Expenses and Supplies Ending inventory Beginning inventory Inventory change	21,575 16,243 5,332
Accounts Payable & Accrued Expenses Beginning inventory Ending inventory Inventory change	18,788 16,185 2,603
Total inventory change	54,905
Net operating profit	147,897

Table 8 Depreciation and Other Capital Adjustments 2007 MI Dairy Grazing Farms (Farms Sorted By Rate of Return on Assets - Mkt)

	Avg. Of All Farms
Number of farms	7
Net operating profit	147,897
Breeding Livestock Ending inventory Capital sales	319,786 -
Beginning inventory Capital purchases Depreciation, capital adjust.	292,396 2,169 25,221
Machinery and Equipment Ending inventory	78,039
Capital sales Beginning inventory Capital purchases	150 90,577 21,369
Depreciation, capital adjust.	-33,757
Buildings and Improvements Ending inventory Capital sales	125,905
Beginning inventory Capital purchases Depreciation, capital adjust.	89,994 48,642 -12,732
Other Capital Assets	,
Ending inventory Capital sales Beginning inventory Capital purchases Depreciation, capital adjust.	28,463 1,409 21,054 4,308 4,510
Total depreciation, capital adj.	-16,758
Net farm income	131,139

Profitability Measures 2007 MI Dairy Grazing Farms

	Avg. Of All Farms
Number of farms	7
Profitability (assets valued at cost) Net farm income Labor and management earnings Rate of return on assets Rate of return on equity Operating profit margin Asset turnover rate	131,139 97,159 10.9 % 15.7 % 26.0 % 41.8 %
Interest on farm net worth Farm interest expense Value of operator lbr and mgmt. Return on farm assets Average farm assets Return on farm equity Average farm equity Value of farm production	33,980 24,035 42,442 112,733 1,037,507 88,697 566,341 433,540
	Avg. Of All Farms
Number of farms	7
Profitability (assets valued at market Net farm income Labor and management earnings Rate of return on assets Rate of return on equity Operating profit margin Asset turnover rate	154,241 96,867 9.5 % 11.7 % 31.3 % 30.4 %
Interest on farm net worth Farm interest expense Value of operator lbr and mgmt. Return on farm assets Average farm assets Return on farm equity Average farm equity Value of farm production	57,373 24,035 42,442 135,834 1,427,386 111,799 956,220 433,540

Liquidity Measures 2007 MI Dairy Grazing Farms (Farms Sorted By Rate of Return on Assets - Mkt)

	Avg. Of All Farms
Number of farms	7
Liquidity (cash) Net cash farm income Net nonfarm income Family living and taxes Principal due on long term debt Cash available for interm. debt Average intermediate debt	92,993 3,077 33,938 9,198 52,933 109,499
Years to turnover interm. debt Expense as a % of income Interest as a % of income Working capital to gross income	2.1 80 % 5 % 30 %
Liquidity (accrual) Total accrual farm income Total accrual operating expense Net accrual operating income Net nonfarm income Family living and taxes Principal due on long term debt Available for intermediate debt Average intermediate debt	523,686 375,789 147,897 3,077 33,938 9,198 107,838 109,499
Years to turnover interm. debt Expense as a % of income Interest as a % of income Working capital to gross income	1.0 72 % 5 % 27 %

Table 11 Balance Sheet at Cost Values 2007 MI Dairy Grazing Farms (Farms Sorted By Rate of Return on Assets - Mkt)

Avg. Of All Farms

7

Number	٥f	farme	

	Reginning	Ending
Assets	ведтинтид	Ending
Current Farm Assets		
Cash and checking balance	13,580	22,483
Prepaid expenses & supplies	16,243	
Growing crops	8,286	
Accounts receivable	13,784	
Hedging accounts	13,764	
	80,262	
Crops held for sale or feed		
Crops under government loan Market livestock held for sale	0 5,169	
Other current assets	0	
Total current farm assets	138,150	199,356
Intermediate Farm Assets		
Breeding livestock	292,396	319,786
Machinery and equipment	86,021	
Titled vehicles	4,556	
Other intermediate assets	9,613	
Total intermediate farm assets	202 506	414,565
Total Intermediate farm assets	392,300	414,505
Long Term Farm Assets		
Farm land	345,647	345,647
Buildings and improvements	89,994	345,647 125,905
Other long-term assets	11,441	11,723
Total long-term farm assets	447,083	11,723 483,275
Total Farm Assets		1,097,195
	211,012	1,00,,100
Total Nonfarm Assets	94,034	98,067
	94,034	
Total Nonfarm Assets Total Assets	94,034	98,067
Total Nonfarm Assets Total Assets Liabilities	94,034	98,067
Total Nonfarm Assets Total Assets Liabilities Current Farm Liabilities	94,034 1,071,853	98,067 1,195,263
Total Nonfarm Assets Total Assets Liabilities Current Farm Liabilities Accrued interest	94,034 1,071,853 2,907	98,067 1,195,263 2,913
Total Nonfarm Assets Total Assets Liabilities Current Farm Liabilities Accrued interest Accounts payable	94,034 1,071,853 2,907 15,882	98,067 1,195,263 2,913 13,272
Total Nonfarm Assets Total Assets Liabilities Current Farm Liabilities Accrued interest Accounts payable Current notes	94,034 1,071,853 2,907 15,882 12,856	98,067 1,195,263 2,913 13,272 10,861
Total Nonfarm Assets Total Assets Liabilities Current Farm Liabilities Accrued interest Accounts payable Current notes Government crop loans	94,034 1,071,853 2,907 15,882 12,856 0	98,067 1,195,263 2,913 13,272 10,861 0
Total Nonfarm Assets Total Assets Liabilities Current Farm Liabilities Accrued interest Accounts payable Current notes Government crop loans Principal due on term debt	94,034 1,071,853 2,907 15,882 12,856 0 26,815	98,067 1,195,263 2,913 13,272 10,861 0 31,586
Total Nonfarm Assets Total Assets Liabilities Current Farm Liabilities Accrued interest Accounts payable Current notes Government crop loans	94,034 1,071,853 2,907 15,882 12,856 0	98,067 1,195,263 2,913 13,272 10,861 0 31,586
Total Nonfarm Assets Total Assets Liabilities Current Farm Liabilities Accrued interest Accounts payable Current notes Government crop loans Principal due on term debt Total current farm liabilities	94,034 1,071,853 2,907 15,882 12,856 0 26,815 58,460	98,067 1,195,263 2,913 13,272 10,861 0 31,586 58,633
Total Nonfarm Assets Total Assets Liabilities Current Farm Liabilities Accrued interest Accounts payable Current notes Government crop loans Principal due on term debt Total current farm liabilities Total intermediate farm liabs	94,034 1,071,853 2,907 15,882 12,856 0 26,815 58,460	98,067 1,195,263 2,913 13,272 10,861 0 31,586 58,633
Total Nonfarm Assets Total Assets Liabilities Current Farm Liabilities Accrued interest Accounts payable Current notes Government crop loans Principal due on term debt Total current farm liabilities Total intermediate farm liabs Total long term farm liabilities	94,034 1,071,853 2,907 15,882 12,856 0 26,815 58,460 90,862 310,873	98,067 1,195,263 2,913 13,272 10,861 0 31,586 58,633 89,262 334,244
Total Nonfarm Assets Total Assets Liabilities Current Farm Liabilities Accrued interest Accounts payable Current notes Government crop loans Principal due on term debt Total current farm liabilities Total intermediate farm liabs	94,034 1,071,853 2,907 15,882 12,856 0 26,815 58,460	98,067 1,195,263 2,913 13,272 10,861 0 31,586 58,633 89,262 334,244
Total Nonfarm Assets Total Assets Liabilities Current Farm Liabilities Accrued interest Accounts payable Current notes Government crop loans Principal due on term debt Total current farm liabilities Total intermediate farm liabs Total long term farm liabilities	94,034 1,071,853 2,907 15,882 12,856 0 26,815 58,460 90,862 310,873 460,195	98,067 1,195,263 2,913 13,272 10,861 0 31,586 58,633 89,262 334,244 482,138 1,284
Total Nonfarm Assets Total Assets Liabilities Current Farm Liabilities Accrued interest Accounts payable Current notes Government crop loans Principal due on term debt Total current farm liabilities Total intermediate farm liabs Total long term farm liabilities Total farm liabilities	94,034 1,071,853 2,907 15,882 12,856 0 26,815 58,460 90,862 310,873 460,195	98,067 1,195,263 2,913 13,272 10,861 0 31,586 58,633 89,262 334,244 482,138
Total Nonfarm Assets Total Assets Liabilities Current Farm Liabilities Accrued interest Accounts payable Current notes Government crop loans Principal due on term debt Total current farm liabilities Total intermediate farm liabs Total long term farm liabilities Total nonfarm liabilities Total nonfarm liabilities Total liabilities	94,034 1,071,853 2,907 15,882 12,856 0 26,815 58,460 90,862 310,873 460,195 1,645 461,839	98,067 1,195,263 2,913 13,272 10,861 0 31,586 58,633 89,262 334,244 482,138 1,284 483,422
Total Nonfarm Assets Total Assets Liabilities Current Farm Liabilities Accrued interest Accounts payable Current notes Government crop loans Principal due on term debt Total current farm liabilities Total intermediate farm liabs Total long term farm liabilities Total farm liabilities Total nonfarm liabilities Total nonfarm and nonfarm)	94,034 1,071,853 2,907 15,882 12,856 0 26,815 58,460 90,862 310,873 460,195	98,067 1,195,263 2,913 13,272 10,861 0 31,586 58,633 89,262 334,244 482,138 1,284 483,422 711,841
Total Nonfarm Assets Total Assets Liabilities Current Farm Liabilities Accrued interest Accounts payable Current notes Government crop loans Principal due on term debt Total current farm liabilities Total intermediate farm liabs Total long term farm liabilities Total nonfarm liabilities Total nonfarm liabilities Total liabilities	94,034 1,071,853 2,907 15,882 12,856 0 26,815 58,460 90,862 310,873 460,195 1,645 461,839	98,067 1,195,263 2,913 13,272 10,861 0 31,586 58,633 89,262 334,244 482,138 1,284 483,422
Total Nonfarm Assets Total Assets Liabilities Current Farm Liabilities Accrued interest Accounts payable Current notes Government crop loans Principal due on term debt Total current farm liabilities Total intermediate farm liabs Total long term farm liabilities Total farm liabilities Total nonfarm liabilities Total nonfarm and nonfarm Net worth (farm and nonfarm)	94,034 1,071,853 2,907 15,882 12,856 0 26,815 58,460 90,862 310,873 460,195 1,645 461,839	98,067 1,195,263 2,913 13,272 10,861 0 31,586 58,633 89,262 334,244 482,138 1,284 483,422 711,841
Total Nonfarm Assets Total Assets Liabilities Current Farm Liabilities Accrued interest Accounts payable Current notes Government crop loans Principal due on term debt Total current farm liabilities Total intermediate farm liabs Total long term farm liabilities Total farm liabilities Total nonfarm liabilities Total nonfarm liabilities Net worth (farm and nonfarm) Net worth change Ratio Analysis	94,034 1,071,853 2,907 15,882 12,856 0 26,815 58,460 90,862 310,873 460,195 1,645 461,839 610,014	98,067 1,195,263 2,913 13,272 10,861 0 31,586 58,633 89,262 334,244 482,138 1,284 483,422 711,841 101,827
Total Nonfarm Assets Total Assets Liabilities Current Farm Liabilities Accrued interest Accounts payable Current notes Government crop loans Principal due on term debt Total current farm liabilities Total intermediate farm liabs Total long term farm liabilities Total nonfarm liabilities Total nonfarm and nonfarm Net worth (farm and nonfarm) Net worth change Ratio Analysis Current farm liabilities / assets	94,034 1,071,853 2,907 15,882 12,856 0 26,815 58,460 90,862 310,873 460,195 1,645 461,839 610,014	98,067 1,195,263 2,913 13,272 10,861 0 31,586 58,633 89,262 334,244 482,138 1,284 483,422 711,841 101,827
Total Nonfarm Assets Total Assets Liabilities Current Farm Liabilities Accrued interest Accounts payable Current notes Government crop loans Principal due on term debt Total current farm liabilities Total intermediate farm liabs Total long term farm liabilities Total farm liabilities Total nonfarm liabilities Total nonfarm liabilities Total nonfarm liabilities Current farm and nonfarm) Net worth change Ratio Analysis Current farm liabilities / assets Curr. & interm farm liab. / assets	94,034 1,071,853 2,907 15,882 12,856 0 26,815 58,460 90,862 310,873 460,195 1,645 461,839 610,014	98,067 1,195,263 2,913 13,272 10,861 0 31,586 58,633 89,262 334,244 482,138 1,284 483,422 711,841 101,827
Total Nonfarm Assets Total Assets Liabilities Current Farm Liabilities Accrued interest Accounts payable Current notes Government crop loans Principal due on term debt Total current farm liabilities Total intermediate farm liabs Total long term farm liabilities Total nonfarm liabilities Total nonfarm and nonfarm Net worth (farm and nonfarm) Net worth change Ratio Analysis Current farm liabilities / assets	94,034 1,071,853 2,907 15,882 12,856 0 26,815 58,460 90,862 310,873 460,195 1,645 461,839 610,014	98,067 1,195,263 2,913 13,272 10,861 0 31,586 58,633 89,262 334,244 482,138 1,284 483,422 711,841 101,827

Balance Sheet at Market Values 2007 MI Dairy Grazing Farms

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

Avg. Of All Farms

Number	Οİ	iarms	

	Beginning	Ending
Assets	55	
Current Farm Assets		
Cash and checking balance	13,580	22,483
Prepaid expenses & supplies	16,243	21,575
Growing crops	8,286	9,278
Accounts receivable	13,784	54,499
Hedging accounts	827	
Crops held for sale or feed	80,262	89,558
Crops under government loan	0	0
Market livestock held for sale	5,169	
Other current assets	0	0
Total current farm assets	138,150	199,356
Intermediate Farm Assets		
Breeding livestock	292,396	319,786
Machinery and equipment	211,632	
Titled vehicles	6,929	
Other intermediate assets	9,720	
Total intermediate farm assets	520,678	
	,	•
Long Term Farm Assets		
Farm land	521,537	526,844
Buildings and improvements		204,481
Other long-term assets	11,441	11,723
Total long-term farm assets		743,048
Total Farm Assets	1,356,147	1,498,625
Total Nonfarm Assets	191,310	196,662
Total Assets		1,695,287
Liabilities Current Farm Liabilities	2 907	2 013
Current Farm Liabilities Accrued interest	2,907 15,882	
Current Farm Liabilities Accrued interest Accounts payable	15,882	13,272
Current Farm Liabilities Accrued interest Accounts payable Current notes	15,882 12,856	13,272 10,861
Current Farm Liabilities Accrued interest Accounts payable Current notes Government crop loans	15,882 12,856 0	13,272 10,861 0
Current Farm Liabilities Accrued interest Accounts payable Current notes	15,882 12,856	13,272 10,861 0 31,586
Current Farm Liabilities Accrued interest Accounts payable Current notes Government crop loans Principal due on term debt Total current farm liabilities	15,882 12,856 0 26,815 58,460	13,272 10,861 0 31,586 58,633
Current Farm Liabilities Accrued interest Accounts payable Current notes Government crop loans Principal due on term debt Total current farm liabilities Total intermediate farm liabs	15,882 12,856 0 26,815 58,460 90,862	13,272 10,861 0 31,586 58,633
Current Farm Liabilities Accrued interest Accounts payable Current notes Government crop loans Principal due on term debt Total current farm liabilities Total intermediate farm liabs Total long term farm liabilities	15,882 12,856 0 26,815 58,460 90,862 310,873	13,272 10,861 0 31,586 58,633 89,262 334,244
Current Farm Liabilities Accrued interest Accounts payable Current notes Government crop loans Principal due on term debt Total current farm liabilities Total intermediate farm liabs	15,882 12,856 0 26,815 58,460 90,862	13,272 10,861 0 31,586 58,633 89,262 334,244
Current Farm Liabilities Accrued interest Accounts payable Current notes Government crop loans Principal due on term debt Total current farm liabilities Total intermediate farm liabs Total long term farm liabilities	15,882 12,856 0 26,815 58,460 90,862 310,873	13,272 10,861 0 31,586 58,633 89,262 334,244 482,138
Current Farm Liabilities Accrued interest Accounts payable Current notes Government crop loans Principal due on term debt Total current farm liabilities Total intermediate farm liabs Total long term farm liabilities Total farm liabilities	15,882 12,856 0 26,815 58,460 90,862 310,873 460,195	13,272 10,861 0 31,586 58,633 89,262 334,244 482,138
Current Farm Liabilities Accrued interest Accounts payable Current notes Government crop loans Principal due on term debt Total current farm liabilities Total intermediate farm liabs Total long term farm liabilities Total farm liabilities Total nonfarm liabilities	15,882 12,856 0 26,815 58,460 90,862 310,873 460,195	13,272 10,861 0 31,586 58,633 89,262 334,244 482,138 1,284 483,422
Current Farm Liabilities Accrued interest Accounts payable Current notes Government crop loans Principal due on term debt Total current farm liabilities Total intermediate farm liabs Total long term farm liabilities Total farm liabilities Total nonfarm liabilities Total liabs excluding deferreds	15,882 12,856 0 26,815 58,460 90,862 310,873 460,195 1,645 461,839	13,272 10,861 0 31,586 58,633 89,262 334,244 482,138 1,284 483,422 0
Current Farm Liabilities Accrued interest Accounts payable Current notes Government crop loans Principal due on term debt Total current farm liabilities Total intermediate farm liabs Total long term farm liabilities Total farm liabilities Total nonfarm liabilities Total liabs excluding deferreds Total deferred liabilities Total liabilities	15,882 12,856 0 26,815 58,460 90,862 310,873 460,195 1,645 461,839 0 461,839	13,272 10,861 0 31,586 58,633 89,262 334,244 482,138 1,284 483,422 0 483,422
Current Farm Liabilities Accrued interest Accounts payable Current notes Government crop loans Principal due on term debt Total current farm liabilities Total intermediate farm liabs Total long term farm liabilities Total farm liabilities Total nonfarm liabilities Total liabs excluding deferreds Total deferred liabilities Total liabilities Retained earnings	15,882 12,856 0 26,815 58,460 90,862 310,873 460,195 1,645 461,839 0 461,839	13,272 10,861 0 31,586 58,633 89,262 334,244 482,138 1,284 483,422 0 483,422
Current Farm Liabilities Accrued interest Accounts payable Current notes Government crop loans Principal due on term debt Total current farm liabilities Total intermediate farm liabs Total long term farm liabilities Total farm liabilities Total nonfarm liabilities Total liabs excluding deferreds Total deferred liabilities Total liabilities Retained earnings Market valuation equity	15,882 12,856 0 26,815 58,460 90,862 310,873 460,195 1,645 461,839 0 461,839 610,014 475,604	13,272 10,861 0 31,586 58,633 89,262 334,244 482,138 1,284 483,422 0 483,422 711,841 500,025
Current Farm Liabilities Accrued interest Accounts payable Current notes Government crop loans Principal due on term debt Total current farm liabilities Total intermediate farm liabs Total long term farm liabilities Total farm liabilities Total nonfarm liabilities Total liabs excluding deferreds Total deferred liabilities Total liabilities Retained earnings Market valuation equity Net worth (farm and nonfarm)	15,882 12,856 0 26,815 58,460 90,862 310,873 460,195 1,645 461,839 0 461,839 610,014 475,604 1,085,618	13,272 10,861 0 31,586 58,633 89,262 334,244 482,138 1,284 483,422 0 483,422 711,841 500,025 1,211,865
Current Farm Liabilities Accrued interest Accounts payable Current notes Government crop loans Principal due on term debt Total current farm liabilities Total intermediate farm liabs Total long term farm liabilities Total farm liabilities Total nonfarm liabilities Total liabs excluding deferreds Total deferred liabilities Total liabilities Retained earnings Market valuation equity	15,882 12,856 0 26,815 58,460 90,862 310,873 460,195 1,645 461,839 0 461,839 610,014 475,604 1,085,618	13,272 10,861 0 31,586 58,633 89,262 334,244 482,138 1,284 483,422 0 483,422 711,841 500,025
Current Farm Liabilities Accrued interest Accounts payable Current notes Government crop loans Principal due on term debt Total current farm liabilities Total intermediate farm liabs Total long term farm liabilities Total farm liabilities Total nonfarm liabilities Total liabs excluding deferreds Total deferred liabilities Total liabilities Retained earnings Market valuation equity Net worth (farm and nonfarm) Net worth excluding deferreds Net worth change	15,882 12,856 0 26,815 58,460 90,862 310,873 460,195 1,645 461,839 0 461,839 610,014 475,604 1,085,618	13,272 10,861 0 31,586 58,633 89,262 334,244 482,138 1,284 483,422 0 483,422 711,841 500,025 1,211,865 1,211,865
Current Farm Liabilities Accrued interest Accounts payable Current notes Government crop loans Principal due on term debt Total current farm liabilities Total intermediate farm liabs Total long term farm liabilities Total farm liabilities Total nonfarm liabilities Total liabs excluding deferreds Total deferred liabilities Retained earnings Market valuation equity Net worth (farm and nonfarm) Net worth excluding deferreds Net worth change Ratio Analysis	15,882 12,856 0 26,815 58,460 90,862 310,873 460,195 1,645 461,839 0 461,839 610,014 475,604 1,085,618 1,085,618	13,272 10,861 0 31,586 58,633 89,262 334,244 482,138 1,284 483,422 0 483,422 711,841 500,025 1,211,865 1,211,865 1,211,865 1,214,865
Current Farm Liabilities Accrued interest Accounts payable Current notes Government crop loans Principal due on term debt Total current farm liabilities Total intermediate farm liabs Total long term farm liabilities Total farm liabilities Total nonfarm liabilities Total liabs excluding deferreds Total liabs excluding deferreds Total liabilities Retained earnings Market valuation equity Net worth (farm and nonfarm) Net worth excluding deferreds Net worth change Ratio Analysis Current farm liabilities / assets	15,882 12,856 0 26,815 58,460 90,862 310,873 460,195 1,645 461,839 0 461,839 610,014 475,604 1,085,618 1,085,618	13,272 10,861 0 31,586 58,633 89,262 334,244 482,138 1,284 483,422 711,841 500,025 1,211,865 1,211,865 1,211,865
Current Farm Liabilities Accrued interest Accounts payable Current notes Government crop loans Principal due on term debt Total current farm liabilities Total intermediate farm liabs Total long term farm liabilities Total farm liabilities Total nonfarm liabilities Total liabs excluding deferreds Total deferred liabilities Total liabilities Retained earnings Market valuation equity Net worth (farm and nonfarm) Net worth excluding deferreds Net worth change Ratio Analysis Current farm liabilities / assets Curr. & interm farm liab. / assets	15,882 12,856 0 26,815 58,460 90,862 310,873 460,195 1,645 461,839 610,014 475,604 1,085,618 1,085,618	13,272 10,861 0 31,586 58,633 89,262 334,244 482,138 1,284 483,422 711,841 500,025 1,211,865 1,211,865 1,211,865 1,26,248
Current Farm Liabilities Accrued interest Accounts payable Current notes Government crop loans Principal due on term debt Total current farm liabilities Total intermediate farm liabs Total long term farm liabilities Total farm liabilities Total nonfarm liabilities Total liabs excluding deferreds Total deferred liabilities Total liabilities Retained earnings Market valuation equity Net worth (farm and nonfarm) Net worth excluding deferreds Net worth change Ratio Analysis Current farm liabilities / assets Curr. & interm farm liab. / assets Long term farm liab. / assets	15,882 12,856 0 26,815 58,460 90,862 310,873 460,195 1,645 461,839 0 461,839 610,014 475,604 1,085,618 1,085,618	13,272 10,861 0 31,586 58,633 89,262 334,244 482,138 1,284 483,422 711,841 500,025 1,211,865 1,211,865 1,211,865 1,26,248
Current Farm Liabilities Accrued interest Accounts payable Current notes Government crop loans Principal due on term debt Total current farm liabilities Total intermediate farm liabs Total long term farm liabilities Total farm liabilities Total nonfarm liabilities Total liabs excluding deferreds Total deferred liabilities Total liabilities Retained earnings Market valuation equity Net worth (farm and nonfarm) Net worth excluding deferreds Net worth change Ratio Analysis Current farm liabilities / assets Curr. & interm farm liab. / assets	15,882 12,856 0 26,815 58,460 90,862 310,873 460,195 1,645 461,839 610,014 475,604 1,085,618 1,085,618	13,272 10,861 0 31,586 58,633 89,262 334,244 482,138 1,284 483,422 711,841 500,025 1,211,865 1,211,865 1,211,865 1,26,248

Statement Of Cash Flows 2007 MI Dairy Grazing Farms

	Avg. Of
	All Farms
Number of farms	7
Deginning goah (form (nonform)	13,580
Beginning cash (farm & nonfarm)	13,500
Cash From Operating Activities	
Gross cash farm income	476,717
Net nonfarm income	3,077
Total cash farm expense	-383,724
Apparent family living expense	-32,527
Income and social security tax	-1,410
Cash from operations	62,132
Cash From Investing Activities	
Sale of breeding livestock	150
Sale of machinery & equipment Sale of titled vehicles	150
Sale of titled vehicles Sale of farm land	
Sale of farm buildings	-
Sale of farm bulldings Sale of other farm assets	1,409
Sale of nonfarm assets	3,885
Purchase of breeding livestock	-2,169
Purchase of machinery & equip.	-21,369
Purchase of titled vehicles	21,307
Purchase of farm land	_
Purchase of farm buildings	-48,642
Purchase of other farm assets	-4,308
Purchase of nonfarm assets	-1,143
Cash from investing activities	-72,187
5	•
Cash From Financing Activities	
Money borrowed	79,638
Cash gifts and inheritances	4,531
Principal payments	-55,453
Dividends paid	-
Gifts given	-6,900
Cash from financing activities	21,816
Net change in cash balance	11,761
Ending cash (farm & nonfarm)	25,341

Financial Standards Measures 2007 MI Dairy Grazing Farms (Farms Sorted By Rate of Return on Assets - Mkt) Table 14

	Avg. Of All Farms
Number of farms	7
Liquidity Current ratio Working capital	3.40 140,723
Solvency (market) Farm debt to asset ratio Farm equity to asset ratio Farm debt to equity ratio	32 % 68 % 47 %
Profitability (cost) Rate of return on farm assets Rate of return on farm equity Operating profit margin Net farm income	10.9 % 15.7 % 26.0 % 131,139
Repayment Capacity Term debt coverage ratio Capital replacement margin	308 % 90,221
Efficiency Asset turnover rate (cost) Operating expense ratio Depreciation expense ratio Interest expense ratio Net farm income ratio	41.8 % 67.2 % 3.2 % 4.6 % 25.0 %

Table 15 Operator and Labor Information 2007 MI Dairy Grazing Farms (Farms Sorted By Rate of Return on Assets - Mkt)

	Avg. Of All Farms
Number of farms	7
Operator Information Average number of operators Average age of operators Average number of years farming	1.3 53.6 30.3
Results Per Operator Working capital Total assets (market) Total liabilities Net worth (market) Net worth excl deferred liabs	109,452 1,318,557 375,995 942,562 942,562
Gross farm income Total farm expense Net farm income	407,311 305,314 101,997
Net nonfarm income Family living & tax withdrawals	2,393 26,396
Total acres owned Total crop acres Crop acres owned Crop acres cash rented Crop acres share rented Total pasture acres	295.1 408.3 224.0 184.3 - 32.4
Labor Analysis Number of farms Total unpaid labor hours Total hired labor hours Total labor hours per farm Unpaid hours per operator Value of farm production / hour Net farm income / unpaid hour Average hourly hired labor wage	7 3,860 2,215 6,075 3,002 71.36 33.97 13.50

Financial Summary 2007 MI Dairy Grazing Farms

	Avg. Of All Farms
Number of farms	7
Income Statement Gross cash farm income Total cash farm expense Net cash farm income Inventory change Depreciation and capital adjust Average net farm income Median net farm income	476,717 383,724 92,993 54,905 -16,758 131,139 86,923
Profitability (cost) Labor and management earnings Rate of return on assets Rate of return on equity Operating profit margin Asset turnover rate Profitability (market)	97,159 10.9 % 15.7 % 26.0 % 41.8 %
Labor and management earnings Rate of return on assets Rate of return on equity Operating profit margin Asset turnover rate	96,867 9.5 % 11.7 % 31.3 % 30.4 %
Liquidity Ending current ratio Ending working capital End working capital to gross inc Term debt coverage ratio Expense as a percent of income Interest as a percent of income	3.40 140,723 29.5 % 307.7 % 71.8 % 4.6 %
Solvency (cost) Number of farms Ending farm assets Ending farm liabilities Ending total assets Ending total liabilities Ending net worth Net worth change Ending farm debt to asset ratio Beg total debt to asset ratio End total debt to asset ratio Solvency (market)	7 1,097,195 482,138 1,195,263 483,422 711,841 101,827 44 % 43 % 40 %
Number of farms Ending farm assets Ending farm liabilities Ending total assets Ending total liabilities Ending total liabilities Ending net worth Net worth change Ending farm debt to asset ratio Beg total debt to asset ratio End total debt to asset ratio Nonfarm Information Net nonfarm income	7 1,498,625 482,138 1,695,287 483,422 1,211,865 126,248 32 % 30 % 29 %
Crop Acres Total acres owned Total crop acres Total crop acres owned Total crop acres cash rented Total crop acres share rented	379 525 288 237