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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 |