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# ***Staff Paper***

## **2004 Michigan Upper Peninsula Dairy Business Analysis Summary**

Eric Wittenberg  
And  
Christopher Wolf

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

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## 2004 Michigan Upper Peninsula Dairy Farm Business Analysis Summary

Staff Paper No. 05-12, October 2005

By

Eric Wittenberg and Christopher Wolf<sup>1</sup>

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

## Executive Summary

This report summarizes the financial and production records of 23 dairy farms across the Upper Peninsula (UP) of Michigan. To be included, the farms must have produced at least 50 percent of gross cash farm income from milk and dairy animal sales. The farms in this report were located throughout Michigan. The records came from Michigan State University's TelFarm project and Farm Credit Service system in Michigan. Farm records checked for accuracy. While considerable variation in the data exists, average values are reported in the summary tables and discussion that follows.

In 2004, the average UP dairy farm in the business analysis had 138 cows producing an average of 18,501 pounds of milk per cow (Table 1). Milk price, based on gross income, averaged \$16.96/cwt. The total average acres owned were 624 and the average cropped acres were 789.

**Table 1. Average Michigan UP Dairy Farm Characteristics, 2000-2004**

	2000	2001	2002	2003	2004
Average number of cows	126	127	132	135	138
Milk sold per cow (pounds)	18,008	17,313	17,827	18,804	18,501
Average price of milk sold (\$/cwt)	12.54	15.09	12.62	12.69	16.96
Total acres owned	611	607	586	642	624
Total crop acres	310	710	678	808	789
Number of farms	19	26	22	19	23

Net farm income is the return to operator unpaid management, labor and capital invested. Net farm income in 2004 averaged \$85,442 (Table 2). The median was \$71,529 and the standard deviation was \$64,788 across the 23 dairy farms.

**Table 2. Average Michigan UP Dairy Farm Income Statement, 2000-2004**

	2000	2001	2002	2003	2004
			(\$)		
Gross cash farm income	384,350	406,122	379,892	411,907	539,446
- Total cash expense	<u>293,888</u>	<u>310,704</u>	<u>309,284</u>	<u>319,825</u>	<u>413,969</u>
= Net cash farm income	90,462	95,417	70,608	92,082	125,478
+ Inventory change*	-24,326	2,031	5,560	2,988	21,143
+ Depreciation and capital adjustments*	<u>-47,734</u>	<u>-44,102</u>	<u>-48,450</u>	<u>-49,328</u>	<u>-61,178</u>
= Net farm income	18,402	53,346	27,808	45,742	85,442

\*Changes calculated as ending value minus beginning value.

Gross cash farm income averaged \$539,446 in 2004. The largest component of these revenues was milk sales, which averaged \$450,843. The second largest revenue was cull breeding livestock at \$24,627. Average total cash expenses were \$413,969 and average net cash farm income was \$125,478. Inventory changes were a \$21,143 while depreciation and capital

adjustments averaged a negative \$61,178. The net farm income value is the return to operator unpaid management, labor and capital invested averaged \$85,442 in 2004, (Table 2).

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 2004 dairy farm ROA (Market) was 11.4 percent, which was improved over recent years, (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 2004, Michigan's UP dairy farms generated 38.7 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 2004 to an average of 29.5 percent.

**Table 3. Average Michigan UP Dairy Farm Profitability Indicators, 2000-2004**

	2000	2001	2002	2003	2004
	(percent)				
Rate of return on assets*	-0.8	2.8	-1.9	2.9	11.4
Rate of return on equity	-8.0	0.1	-7.0	2.5	14.3
Operating profit margin	-2.0	6.4	-4.7	12.8	38.7
Asset turnover rate*	41.0	44.2	41.4	22.7	29.5

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

### *Per Unit Income and Expenses*

Table 4 displays average income and expenses items per hundredweight (cwt) of milk and per cow across 23 UP dairy 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 \$4.64/cwt. and hired labor was the second largest at \$2.29/cwt. Depreciation, livestock supplies, repairs and milk marketing and trucking combined were also significant expenses for 2004.

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 Upper Peninsula farms\*, 2004**

<b>Income Items:</b>	<b>Per cwt.</b>	<b>Per Cow</b>
Milk	\$16.96	\$3,132.54
Cull Cows and Calves	\$0.99	\$178.66
Dairy Steers	\$0.52	\$94.79
Dairy Heifers	\$0.06	\$10.08
Government Payments	\$0.54	\$100.03
Patronage Dividends, cash	\$0.02	\$4.64
Crop Sales	\$0.23	\$39.09
Other Cash Income	\$1.10	\$191.53
<b>Expense Items:</b>	<b>Per cwt.</b>	<b>Per Cow</b>
Purchased Feeds	\$4.64	\$866.34
Breeding Fees	\$ 0.15	\$22.80
Veterinary	\$0.40	\$74.08
BST	\$0.04	\$7.64
Livestock Supplies	\$0.80	\$139.86
DHIA	\$0.01	\$1.85
Milk & Livestock Mkt. & Trucking	\$0.83	\$147.41
Interest	\$0.66	\$116.39
Fuel and Oil	\$0.77	\$138.92
Repairs	\$1.16	\$204.86
Custom Hire	\$0.30	\$57.15
Hired Labor	\$2.29	\$433.13
Leases	\$0.06	\$12.05
Real Estate Taxes	\$0.30	\$53.17
Farm Insurance	\$0.31	\$54.87
Utilities	\$0.47	\$84.46
Dues, Professional Fees	\$0.18	\$31.53
Miscellaneous	\$0.29	\$54.47
Machinery Depreciation	\$1.99	\$371.05
Building Depreciation	\$0.78	\$149.35
<b>Expense Items per Cropped Acre:</b>	<b>Per Acre</b>	
Seed	\$14.06	
Fertilizer	\$23.01	
Crop Chemicals	\$9.66	
Crop Insurance	\$0.33	
Crop Miscellaneous	\$0.28	
Land Rent	\$11.75	

\* All income and expense items averaged across all 23 farms whether they had this income or expense item or not. Other cash income includes custom work, insurance claims, and miscellaneous income.

Table 5

Crop Production and Marketing Summary  
**2004 Upper Peninsula Dairy Business Analysis Summary**  
 (Farms Sorted By Rate of Return on Assets - Mkt)

	Avg. Of All Farms	Low 25%	High 25%
Dairy			
Number of farms	23	7	6
Average number of Cows,	138	127	212
Milk production per Cow, lbs.	18,501	18,524	19,646
Average milk price per cwt.,	\$16.96	\$16.63	\$17.10
Acreage Summary			
Total acres owned	624	638	898
Total crop acres	789	783	1,096
Crop acres owned	470	405	811
Crop acres cash rented	319	378	286
Crop acres share rented	-	-	-
Total pasture acres	-	-	-
Average Price Received (Cash Sales Only)			
Hay, Alfalfa per ton	59.24	-	-



Table 6

## Farm Income Statement

**2004 Upper Peninsula Dairy Business Analysis Summary**

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

	Avg. Of All Farms	Low 25%	High 25%
Number of farms	23	7	6
Cash Farm Income			
Barley	282	927	-
Corn	33	109	-
Corn Silage	283	929	-
Hay, Alfalfa	1,815	2,716	-
Hay, Mixed	1,704	88	-
Rye	31	102	-
Straw	262	509	-
Beef Cow-Calf, Beef Calves	265	-	1,015
Dairy, Milk	450,843	400,309	727,393
Dairy, Dairy Calves	386	-	851
Dairy Heifers (for sale)	115	-	-
Dairy Replacement Heifers	1,234	107	4,481
Dairy Steers	6,930	16,397	1,385
Sheep, Market Lambs, Mkt Lambs	290	-	1,113
Cull breeding livestock	24,627	26,074	34,886
Misc. livestock income	6,795	3,116	5,649
Direct & CC govt payments	10,099	10,322	8,445
Other government payments	3,882	2,476	11,300
Custom work income	3,345	8,109	2,767
Patronage dividends, cash	961	92	3,378
Insurance income	12,683	23,308	10,202
Other farm income	12,582	9,512	30,163
Gross Cash Farm Income	539,446	505,200	843,028

Table 6

## Farm Income Statement (Continued)

**2004 Upper Peninsula Dairy Business Analysis Summary**

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

	Avg. Of All Farms	Low 25%	High 25%
Number of farms	23	7	6
Cash Farm Expense			
Seed	10,261	12,861	13,209
Fertilizer	17,803	18,840	16,019
Crop chemicals	7,832	8,581	14,460
Crop insurance	288	57	1,039
Crop custom hire	787	446	-
Crop miscellaneous	685	840	437
Feeder livestock purchase	449	-	-
Purchased feed	133,182	127,838	210,460
Breeding fees	3,010	2,035	3,685
Veterinary	10,858	8,121	18,433
BST	1,413	2,345	2,680
Supplies	18,088	14,694	30,862
DHIA	117	157	-
Livestock utilities	632	833	1,056
Hauling and trucking	8,891	8,292	9,237
Marketing	7,623	5,975	13,741
Bedding	1,858	5,064	562
Interest	15,256	18,181	21,908
Fuel & oil	20,460	19,922	29,588
Repairs	27,672	31,666	36,189
Custom hire	10,467	4,979	32,755
Hired labor	69,387	60,507	135,090
Land rent	7,413	9,157	9,080
Machinery & bldg leases	1,720	3,875	33
Real estate taxes	7,063	5,864	11,964
Personal property taxes	92	301	-
Farm insurance	7,428	8,671	10,580
Utilities	10,877	9,696	18,717
Dues & professional fees	3,735	4,155	4,015
Miscellaneous	8,622	4,278	18,950
Total cash expense	413,969	398,234	664,747
Net cash farm income	125,478	106,966	178,281
Inventory Changes			
Crops and feed	9,840	-21,988	38,182
Market livestock	3,243	3,719	6,708
Accounts receivable	5,609	2,178	5,868
Prepaid expenses and supplies	1,167	3,950	802
Accounts payable	1,283	-4,921	-723
Total inventory change	21,143	-17,063	50,837
Net operating profit	146,621	89,903	229,118
Depreciation and Other Capital Adjustments			
Breeding livestock	16,164	3,989	31,251
Machinery and equipment	-51,660	-44,132	-74,109
Buildings and improvements	-26,096	-14,917	-49,122
Other farm capital	413	326	892
Total depr. and other capital adj	-61,178	-54,734	-91,088
Net farm income	85,442	35,169	138,030

Table 7

## Inventory Changes

**2004 Upper Peninsula Dairy Business Analysis Summary**

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

	Avg. Of All Farms	Low 25%	High 25%
Number of farms	23	7	6
Net cash farm income	125,478	66,380	178,281
Crops and Feed			
Ending inventory	92,507	39,731	149,588
Beginning inventory	82,666	60,811	111,407
Inventory change	9,840	-21,080	38,182
Market Livestock			
Ending inventory	17,110	8,200	12,693
Beginning inventory	13,867	3,754	5,985
Inventory change	3,243	4,446	6,708
Accts Receivable & Other Current Assets			
Ending inventory	25,485	15,273	29,851
Beginning inventory	19,876	13,819	23,983
Inventory change	5,609	1,454	5,868
Prepaid Expenses and Supplies			
Ending inventory	7,789	444	2,294
Beginning inventory	6,622	605	1,492
Inventory change	1,167	-161	802
Accounts Payable & Accrued Expenses			
Beginning inventory	6,056	-	6,384
Ending inventory	4,773	6,897	7,106
Inventory change	1,283	-6,897	-723
Total inventory change	21,143	-22,237	50,837
Net operating profit	146,621	44,143	229,118

Table 8

Depreciation and Other Capital Adjustments  
**2004 Upper Peninsula Dairy Business Analysis Summary**  
(Farms Sorted By Rate of Return on Assets - Mkt)

	Avg. Of All Farms	Low 25%	High 25%
Number of farms	23	7	6
Net operating profit	146,621	44,143	229,118
Breeding Livestock			
Ending inventory	321,075	240,610	538,200
Capital sales	1,050	-	4,027
Beginning inventory	298,611	229,250	488,912
Capital purchases	7,350	160	22,064
Depreciation, capital adjust.	16,164	11,200	31,251
Machinery and Equipment			
Ending inventory	102,400	92,394	139,172
Capital sales	1,101	200	2,423
Beginning inventory	108,263	95,823	150,585
Capital purchases	46,898	19,470	65,120
Depreciation, capital adjust.	-51,660	-22,699	-74,109
Buildings and Improvements			
Ending inventory	143,138	90,383	247,288
Capital sales	-	-	-
Beginning inventory	141,677	100,014	265,838
Capital purchases	27,557	1,866	30,572
Depreciation, capital adjust.	-26,096	-11,497	-49,122
Other Capital Assets			
Ending inventory	53,586	17,169	148,659
Capital sales	-	-	-
Beginning inventory	27,756	14,742	53,701
Capital purchases	25,417	1,971	94,067
Depreciation, capital adjust.	413	456	892
Total depreciation, capital adj.	-61,178	-22,540	-91,088
Net farm income	85,442	21,603	138,030

Table 9

## Profitability Measures

**2004 Upper Peninsula Dairy Business Analysis Summary**

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

	Avg. Of All Farms	Low 25%	High 25%
Number of farms	23	7	6
Profitability (assets valued at cost)			
Net farm income	85,442	21,603	138,030
Labor and management earnings	58,424	9,727	96,018
Rate of return on assets	6.2 %	-0.4 %	8.0 %
Rate of return on equity	8.5 %	-13.1 %	12.8 %
Operating profit margin	12.1 %	-1.0 %	15.6 %
Asset turnover rate	51.5 %	41.9 %	51.5 %
Interest on farm net worth	27,018	11,876	42,012
Farm interest expense	15,256	21,891	21,908
Value of operator lbr and mgmt.	47,268	46,227	48,700
Return on farm assets	53,431	-2,732	111,239
Average farm assets	855,295	649,166	1,387,382
Return on farm equity	38,174	-24,624	89,331
Average farm equity	448,197	188,243	700,206
Value of farm production	440,672	272,104	714,577
	Avg. Of All Farms	Low 25%	High 25%
Number of farms	23	7	6
Profitability (assets valued at market)			
Net farm income	202,670	19,835	519,810
Labor and management earnings	137,501	-20,376	429,266
Rate of return on assets	11.4 %	-0.4 %	22.4 %
Rate of return on equity	14.3 %	-3.9 %	31.2 %
Operating profit margin	38.7 %	-1.7 %	69.0 %
Asset turnover rate	29.5 %	24.1 %	32.5 %
Interest on farm net worth	65,169	40,210	90,544
Farm interest expense	15,256	21,891	21,908
Value of operator lbr and mgmt.	47,268	46,227	48,700
Return on farm assets	170,658	-4,501	493,018
Average farm assets	1,493,240	1,131,094	2,196,248
Return on farm equity	155,402	-26,392	471,110
Average farm equity	1,086,142	670,171	1,509,071
Value of farm production	440,672	272,104	714,577

Table 10

## Liquidity Measures

**2004 Upper Peninsula Dairy Business Analysis Summary**

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

	Avg. Of All Farms	Low 25%	High 25%
Number of farms	23	7	6
Liquidity (cash)			
Net cash farm income	125,478	66,380	178,281
Net nonfarm income	10,309	13,379	15,189
Family living and taxes	49,263	36,415	73,007
Principal due on long term debt	8,389	14,103	8,939
Cash available for interm. debt	78,135	29,241	111,525
Average intermediate debt	140,933	171,282	252,953
Years to turnover interm. debt	1.8	5.9	2.3
Expense as a % of income	77 %	82 %	79 %
Interest as a % of income	3 %	6 %	3 %
Liquidity (accrual)			
Total accrual farm income	558,139	352,106	893,785
Total accrual operating expense	411,518	307,963	664,667
Net accrual operating income	146,621	44,143	229,118
Net nonfarm income	10,309	13,379	15,189
Family living and taxes	49,263	36,415	73,007
Principal due on long term debt	8,389	14,103	8,939
Available for intermediate debt	99,278	7,004	162,362
Average intermediate debt	140,933	171,282	252,953
Years to turnover interm. debt	1.4	24.5	1.6
Expense as a % of income	74 %	87 %	74 %
Interest as a % of income	3 %	6 %	2 %

Table 11

Balance Sheet at Cost Values  
**2004 Upper Peninsula Dairy Business Analysis Summary**  
(Farms Sorted By Rate of Return on Assets - Mkt)

	Avg. Of All Farms		Low 25%		High 25%	
Number of farms	23		7		6	
	Beginning	Ending	Beginning	Ending	Beginning	Ending
<b>Assets</b>						
<b>Current Farm Assets</b>						
Cash and checking balance	9,617	6,608	4,074	2,612	22,416	21,262
Prepaid expenses & supplies	6,622	7,789	605	444	1,492	2,294
Growing crops	244	195	1,122	897	0	0
Accounts receivable	18,139	24,627	12,577	14,256	18,527	27,562
Hedging accounts	0	0	0	0	0	0
Crops held for sale or feed	82,666	92,507	60,811	39,731	111,407	149,588
Crops under government loan	0	0	0	0	0	0
Market livestock held for sale	13,867	17,110	3,754	8,200	5,985	12,693
Other current assets	1,493	663	120	120	5,456	2,288
Total current farm assets	132,649	149,499	83,063	66,260	165,282	215,688
<b>Intermediate Farm Assets</b>						
Breeding livestock	298,611	321,075	229,250	240,610	488,912	538,200
Machinery and equipment	108,263	102,400	95,823	92,394	150,585	139,172
Titled vehicles	0	0	0	0	0	0
Other intermediate assets	7,321	32,010	224	200	22,946	116,919
Total intermediate farm assets	414,195	455,485	325,297	333,204	662,443	794,291
<b>Long Term Farm Assets</b>						
Farm land	100,208	131,729	132,855	135,770	126,054	235,387
Buildings and improvements	141,677	143,138	100,014	90,383	265,838	247,288
Other long-term assets	20,435	21,576	14,518	16,969	30,754	31,740
Total long-term farm assets	262,319	296,442	247,387	243,122	422,647	514,415
Total Farm Assets	809,163	901,426	655,747	642,586	1,250,371	1,524,393
Total Nonfarm Assets	33,212	34,296	37,006	35,429	60,332	61,396
Total Assets	842,374	935,723	692,753	678,015	1,310,703	1,585,789
<b>Liabilities</b>						
<b>Current Farm Liabilities</b>						
Accrued interest	1	1	0	0	0	0
Accounts payable	6,055	4,772	0	6,897	6,384	7,106
Current notes	60,783	62,852	118,262	107,574	37,727	51,052
Government crop loans	0	0	0	0	0	0
Principal due on term debt	33,218	42,782	49,466	48,061	38,218	79,702
Total current farm liabilities	100,057	110,407	167,728	162,531	82,328	137,860
Total intermediate farm liabs	102,289	125,175	139,067	137,750	153,090	260,529
Total long term farm liabilities	196,481	179,786	161,090	153,679	410,056	330,490
Total farm liabilities	398,827	415,368	467,886	453,960	645,474	728,879
Total nonfarm liabilities	0	0	0	0	0	0
Total liabilities	398,827	415,368	467,886	453,960	645,474	728,879
Net worth (farm and nonfarm)	443,547	520,355	224,868	224,055	665,229	856,910
Net worth change		76,808		-813		191,681
<b>Ratio Analysis</b>						
Current farm liabilities / assets	75 %	74 %	202 %	245 %	50 %	64 %
Curr. & interm farm liab. / assets	37 %	39 %	75 %	75 %	28 %	39 %
Long term farm liab. / assets	75 %	61 %	65 %	63 %	97 %	64 %
Total debt to asset ratio	47 %	44 %	68 %	67 %	49 %	46 %

Table 12

Balance Sheet at Market Values  
**2004 Upper Peninsula Dairy Business Analysis Summary**  
(Farms Sorted By Rate of Return on Assets - Mkt)

	Avg. Of					
	All Farms		Low 25%		High 25%	
Number of farms	23		7		6	
	Beginning	Ending	Beginning	Ending	Beginning	Ending
<b>Assets</b>						
<b>Current Farm Assets</b>						
Cash and checking balance	9,617	6,608	4,074	2,612	22,416	21,262
Prepaid expenses & supplies	6,622	7,789	605	444	1,492	2,294
Growing crops	244	195	1,122	897	0	0
Accounts receivable	18,139	24,627	12,577	14,256	18,527	27,562
Hedging accounts	0	0	0	0	0	0
Crops held for sale or feed	82,666	92,507	60,811	39,731	111,407	149,588
Crops under government loan	0	0	0	0	0	0
Market livestock held for sale	13,867	17,110	3,754	8,200	5,985	12,693
Other current assets	1,493	663	120	120	5,456	2,288
Total current farm assets	132,649	149,499	83,063	66,260	165,282	215,688
<b>Intermediate Farm Assets</b>						
Breeding livestock	298,932	321,265	229,250	240,610	488,912	538,200
Machinery and equipment	233,794	251,020	194,224	193,310	232,567	257,758
Titled vehicles	0	0	0	0	0	0
Other intermediate assets	18,625	43,314	224	200	22,946	116,919
Total intermediate farm assets	551,352	615,599	423,698	434,120	744,425	912,877
<b>Long Term Farm Assets</b>						
Farm land	484,189	595,812	469,280	469,280	718,383	1,122,100
Buildings and improvements	200,435	215,957	148,000	137,000	210,500	242,667
Other long-term assets	19,870	21,120	14,518	16,969	29,757	30,817
Total long-term farm assets	704,494	832,888	631,798	623,249	958,640	1,395,584
Total Farm Assets	1,388,494	1,597,985	1,138,558	1,123,629	1,868,347	2,524,149
Total Nonfarm Assets	57,468	61,414	56,425	63,248	84,038	89,014
Total Assets	1,445,962	1,659,399	1,194,983	1,186,877	1,952,385	2,613,162
<b>Liabilities</b>						
<b>Current Farm Liabilities</b>						
Accrued interest	1	1	0	0	0	0
Accounts payable	6,055	4,772	0	6,897	6,384	7,106
Current notes	60,783	62,852	118,262	107,574	37,727	51,052
Government crop loans	0	0	0	0	0	0
Principal due on term debt	33,218	42,782	49,466	48,061	38,218	79,702
Total current farm liabilities	100,057	110,407	167,728	162,531	82,328	137,860
Total intermediate farm liabs	102,289	125,175	139,067	137,750	153,090	260,529
Total long term farm liabilities	196,481	179,786	161,090	153,679	410,056	330,490
Total farm liabilities	398,827	415,368	467,886	453,960	645,474	728,879
Total nonfarm liabilities	0	0	0	0	0	0
Total liabs excluding deferreds	398,827	415,368	467,886	453,960	645,474	728,879
Total deferred liabilities	0	0	0	0	0	0
Total liabilities	398,827	415,368	467,886	453,960	645,474	728,879
Retained earnings	443,547	520,355	224,868	224,055	665,229	856,910
Market valuation equity	603,587	723,676	502,230	508,862	641,682	1,027,373
Net worth (farm and nonfarm)	1,047,134	1,244,031	727,098	732,916	1,306,911	1,884,283
Net worth excluding deferreds	1,047,134	1,244,031	727,098	732,916	1,306,911	1,884,283
Net worth change		196,897		5,819		577,372
<b>Ratio Analysis</b>						
Current farm liabilities / assets	75 %	74 %	202 %	245 %	50 %	64 %
Curr. & interm farm liab. / assets	30 %	31 %	61 %	60 %	26 %	35 %
Long term farm liab. / assets	28 %	22 %	25 %	25 %	43 %	24 %
Total debt to asset ratio	28 %	25 %	39 %	38 %	33 %	28 %
Debt to assets excl deferreds	28 %	25 %	39 %	38 %	33 %	28 %



Table 13

## Statement Of Cash Flows

**2004 Upper Peninsula Dairy Business Analysis Summary**

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

	Avg. Of All Farms	Low 25%	High 25%
Number of farms	23	7	6
Beginning cash (farm & nonfarm)	9,617	4,074	22,416
Cash From Operating Activities			
Gross cash farm income	539,446	367,286	843,028
Net nonfarm income	10,309	13,379	15,189
Total cash farm expense	-413,969	-300,906	-664,747
Apparent family living expense	-46,804	-34,517	-68,561
Income and social security tax	-2,459	-1,898	-4,446
Cash from operations	86,524	43,344	120,463
Cash From Investing Activities			
Sale of breeding livestock	1,050	-	4,027
Sale of machinery & equipment	1,101	200	2,423
Sale of titled vehicles	-	-	-
Sale of farm land	34,004	-	130,015
Sale of farm buildings	-	-	-
Sale of other farm assets	-	-	-
Sale of nonfarm assets	-	-	-
Purchase of breeding livestock	-7,350	-160	-22,064
Purchase of machinery & equip.	-46,898	-19,470	-65,120
Purchase of titled vehicles	-	-	-
Purchase of farm land	-35,553	-	-127,050
Purchase of farm buildings	-27,557	-1,866	-30,572
Purchase of other farm assets	-25,417	-1,971	-94,067
Purchase of nonfarm assets	-1,137	-719	-1,022
Cash from investing activities	-107,757	-23,985	-203,429
Cash From Financing Activities			
Money borrowed	88,534	85,567	184,924
Cash gifts and inheritances	3,712	-	8,245
Principal payments	-70,710	-106,388	-102,241
Dividends paid	-	-	-
Gifts given	-3,313	-	-9,117
Cash from financing activities	18,223	-20,821	81,811
Net change in cash balance	-3,010	-1,462	-1,154
Ending cash (farm & nonfarm)	6,608	2,612	21,262

Table 14

## Financial Standards Measures

**2004 Upper Peninsula Dairy Business Analysis Summary**

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

	Avg. Of All Farms	Low 25%	High 25%
Number of farms	23	7	6
Liquidity			
Current ratio	1.35	0.41	1.56
Working capital	39,092	-96,271	77,828
Solvency (market)			
Farm debt to asset ratio	26 %	40 %	29 %
Farm equity to asset ratio	74 %	60 %	71 %
Farm debt to equity ratio	35 %	68 %	41 %
Profitability (cost)			
Rate of return on farm assets	6.2 %	-0.4 %	8.0 %
Rate of return on farm equity	8.5 %	-13.1 %	12.8 %
Operating profit margin	12.1 %	-1.0 %	15.6 %
Net farm income	85,442	21,603	138,030
Repayment Capacity			
Term debt coverage ratio	237 %	59 %	254 %
Capital replacement margin	74,129	-28,359	133,082
Efficiency			
Asset turnover rate (cost)	51.5 %	41.9 %	51.5 %
Operating expense ratio	71.0 %	81.2 %	71.9 %
Depreciation expense ratio	11.0 %	6.4 %	10.2 %
Interest expense ratio	2.7 %	6.2 %	2.5 %
Net farm income ratio	15.3 %	6.1 %	15.4 %

Table 15

## Operator and Labor Information

**2004 Upper Peninsula Dairy Business Analysis Summary**

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

	Avg. Of All Farms	Low 25%	High 25%
Number of farms	23	7	6
Operator Information			
Average number of operators	1.6	1.6	1.7
Average age of operators	51.3	48.6	48.3
Average number of years farming	24.8	22.8	20.5
Results Per Operator			
Working capital	24,300	-60,169	46,697
Total assets (market)	1,031,518	741,798	1,567,897
Total liabilities	258,202	283,725	437,327
Net worth (market)	773,317	458,073	1,130,570
Net worth excl deferred liabs	773,317	458,073	1,130,570
Gross farm income	346,951	220,066	536,271
Total farm expense	293,838	206,564	453,453
Net farm income	53,113	13,502	82,818
Net nonfarm income	6,409	8,362	9,113
Family living & tax withdrawals	30,623	22,759	43,804
Total acres owned	387.7	300.3	538.8
Total crop acres	490.2	309.5	657.7
Crop acres owned	292.0	173.0	486.3
Crop acres cash rented	198.2	136.5	171.4
Crop acres share rented	-	-	-
Total pasture acres	-	-	-
Labor Analysis			
Number of farms	23	5	6
Total unpaid labor hours	4,364	4,680	4,075
Total hired labor hours	5,166	3,868	9,497
Total labor hours per farm	9,530	8,548	13,572
Unpaid hours per operator	2,713	2,925	2,445
Value of farm production / hour	46.24	31.83	52.65
Net farm income / unpaid hour	19.58	4.62	33.87
Average hourly hired labor wage	12.33	13.77	11.93
Partnerships & LLCs			
Number of farms	9	2	2
Number of operators	2.0	-	-
Owner withdrawals per farm	-	-	-
Withdrawals per operator	-	-	-

Table 16

## Financial Summary

**2004 Upper Peninsula Dairy Business Analysis Summary**

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

	Avg. Of All Farms	Low 25%	High 25%
Number of farms	23	7	6
Income Statement			
Gross cash farm income	539,446	367,286	843,028
Total cash farm expense	413,969	300,906	664,747
Net cash farm income	125,478	66,380	178,281
Inventory change	21,143	-22,237	50,837
Depreciation and capital adjust	-61,178	-22,540	-91,088
Net farm income	85,442	21,603	138,030
Profitability (cost)			
Labor and management earnings	58,424	9,727	96,018
Rate of return on assets	6.2 %	-0.4 %	8.0 %
Rate of return on equity	8.5 %	-13.1 %	12.8 %
Operating profit margin	12.1 %	-1.0 %	15.6 %
Asset turnover rate	51.5 %	41.9 %	51.5 %
Profitability (market)			
Labor and management earnings	137,501	-20,376	429,266
Rate of return on assets	11.4 %	-0.4 %	22.4 %
Rate of return on equity	14.3 %	-3.9 %	31.2 %
Operating profit margin	38.7 %	-1.7 %	69.0 %
Asset turnover rate	29.5 %	24.1 %	32.5 %
Liquidity			
Ending current ratio	1.35	0.41	1.56
Ending working capital	39,092	-96,271	77,828
End working capital to gross inc	7.2 %	-26.2 %	9.2 %
Term debt coverage ratio	236.8 %	59.2 %	253.8 %
Expense as a percent of income	73.7 %	87.5 %	74.4 %
Interest as a percent of income	2.7 %	6.2 %	2.5 %
Solvency (cost)			
Number of farms	23	5	6
Ending farm assets	901,426	642,586	1,524,393
Ending farm liabilities	415,368	453,960	728,879
Ending total assets	935,723	678,015	1,585,789
Ending total liabilities	415,368	453,960	728,879
Ending net worth	520,355	224,055	856,910
Net worth change	76,808	-813	191,681
Ending farm debt to asset ratio	46 %	71 %	48 %
Beg total debt to asset ratio	47 %	68 %	49 %
End total debt to asset ratio	44 %	67 %	46 %
Solvency (market)			
Number of farms	23	5	6
Ending farm assets	1,597,985	1,123,629	2,524,149
Ending farm liabilities	415,368	453,960	728,879
Ending total assets	1,659,399	1,186,877	2,613,162
Ending total liabilities	415,368	453,960	728,879
Ending net worth	1,244,031	732,916	1,884,283
Net worth change	196,897	5,819	577,372
Ending farm debt to asset ratio	26 %	40 %	29 %
Beg total debt to asset ratio	28 %	39 %	33 %
End total debt to asset ratio	25 %	38 %	28 %
Nonfarm Information			
Net nonfarm income	10,309	13,379	15,189
Crop Acres			
Total acres owned	624	480	898
Total crop acres	789	495	1,096
Total crop acres owned	470	277	811
Total crop acres cash rented	319	218	286
Total crop acres share rented	-	-	-