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**2010 Michigan Upper Peninsula Dairy  
Business Analysis Summary**

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Staff Paper 2011-12

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# 2010 Michigan Upper Peninsula Dairy Farm Business Analysis Summary

Staff Paper No. 2011-12, December 2011

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, C. Talley, 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, Sonya Pentecost, and Lynette Wood. Farm Credit Services of Wisconsin co-worker was Steve Zimmerman.

This report summarizes the financial and production records of 16 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 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 2010, the average UP dairy farm in the business analysis had 155 cows producing an average of 19,623 pounds of milk per cow (Table 1). Milk price received averaged \$16.67/cwt. The total average acres owned were 778 and the average cropped acres were 913.

**Table 1. Average Michigan UP Dairy Farm Characteristics, 2006-2010**

	2006	2007	2008	2009	2010
Average number of cows	149	150	153	164	155
Milk sold per cow (pounds)	19,543	18,240	17,897	19,454	19,623
Average price of milk sold (\$/cwt)	13.50	19.05	19.42	13.26	16.67
Total acres owned	655	676	671	708	778
Total crop acres	756	786	783	843	913
Number of farms	27	24	23	18	16

Net farm income is the return to operator unpaid management, labor and capital invested. Net farm income in 2010 averaged a \$87,794 (Table 2). The median was \$46,588 and the standard deviation was \$112,376 across the 16 dairy farms.

**Table 2. Average Michigan UP Dairy Farm Income Statement, 2006-2010**

	2006	2007	2008	2009	2010
	(\$)	(\$)	(\$)	(\$)	(\$)
Gross cash farm income	531,643	673,978	701,117	609,927	655,469
- Total cash expense	<u>437,583</u>	<u>536,890</u>	<u>538,514</u>	<u>537,808</u>	<u>536,460</u>
= Net cash farm income	94,060	137,088	162,602	72,119	119,008
+ Inventory change*	16,610	12,378	17,513	-66,354	34,914
+ Depreciation and capital adjustments*	<u>-78,541</u>	<u>-65,476</u>	<u>-85,333</u>	<u>-60,085</u>	<u>-66,128</u>
= Net farm income	32,129	83,990	94,783	-54,320	87,794

\*Changes calculated as ending value minus beginning value.

Gross cash farm income averaged \$655,469 in 2010. The largest component of these revenues was milk sales, which averaged \$510,911. The second largest revenue was cull breeding livestock at \$44,142 and third was other government payments at \$23,069. Average total cash expenses were \$536,460 and average net cash farm income was \$119,008. Inventory changes were a \$34,914, on average farms were building inventories, while depreciation and capital adjustments averaged \$66,128. The net farm income value is the return to operator unpaid management, labor and capital invested averaged \$87,794 in 2010, the second highest average in the last five years (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 2010 dairy farm ROA (Market) was a 4.3 percent and return on equity was 4.2 percent (Table 3). 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 2010, Michigan's UP dairy farms generated 18.1 cents of profit per dollar of revenue. Asset turnover is a measure of efficiency defined as the gross farm revenues divided by average asset value. Asset turnover measures the efficiency with which farm assets generate revenue. This value increased from 2009 to 2010 to an average of 23.9 percent.

**Table 3. Average Michigan UP Dairy Farm Profitability Indicators, 2006-2010**

	2006	2007	2008	2009	2010
	(%)	(%)	(%)	(%)	(%)
Rate of return on assets*	4.1	4.7	6.1	-0.8	4.3
Rate of return on equity	3.5	4.3	6.2	-2.8	4.2
Operating profit margin	17.4	12.0	23.2	-4.5	18.1
Asset turnover rate*	23.4	27.7	26.1	18.4	23.9

\* 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 16 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 \$4.86 cwt. and hired labor was the second largest at \$2.64/cwt and family living was third at \$2.35/cwt. Repairs, Fuel and Oil, Interest, Depreciation, Leases, and milk marketing and trucking combined were also significant expenses for 2010.

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\*, 2010**

<b>Income Items:</b>	<b>Per cwt.</b>	<b>Per Cow</b>
Milk	\$16.67	\$3,265.38
Cull Cows and Calves	\$1.84	\$330.45
Dairy Steers	\$1.01	\$194.20
Dairy Heifers	\$0.21	\$39.76
Government Payments	\$0.89	\$170.54
Patronage Dividends, cash	\$0.10	\$16.20
Crop Sales	\$1.14	\$200.72
Other Cash Income	\$2.07	\$343.01
<b>Expense Items:</b>	<b>Per cwt.</b>	<b>Per Cow</b>
Purchased Feeds	\$4.86	\$959.26
Breeding Fees	\$ 0.23	\$46.15
Veterinary	\$0.41	\$81.95
Livestock Supplies	\$0.81	\$147.53
DHIA	\$0.07	\$12.53
Milk & Livestock Mkt. & Trucking	\$1.14	\$219.15
Interest	\$1.11	\$211.09
Fuel and Oil	\$1.38	\$257.09
Repairs	\$1.40	\$264.60
Custom Hire	\$0.54	\$99.10
Hired Labor	\$2.64	\$518.73
Leases	\$0.71	\$132.56
Real Estate Taxes	\$0.36	\$70.02
Farm Insurance	\$0.61	\$101.70
Utilities	\$0.64	\$121.38
Dues, Professional Fees	\$0.19	\$37.58
Miscellaneous	\$0.20	\$36.02
Machinery Depreciation	\$1.41	\$265.99
Building Depreciation	\$0.83	\$155.91
Family Living	\$2.35	\$441.47
<b>Expense Items per Cropped Acre:</b>	<b>Per Acre</b>	
Seed	\$26.83	
Fertilizer	\$37.38	
Crop Chemicals	\$18.45	
Crop Insurance	\$0.84	
Crop Miscellaneous	\$1.46	
Land Rent	\$20.70	

All income and expense items averaged across all 16 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

**2010 UP Dairy Farms**

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

	Avg. Of All Farms	High 25%
Dairy		
Number of farms	16	5
Average numbers of cows	155	222
Milk production per cow lbs.,	19,623	20,170
Average milk price per cwt.,	\$16.67	\$16.95
Acreage Summary		
Total acres owned	778	709
Total crop acres	913	879
Crop acres owned	532	533
Crop acres cash rented	381	346
Crop acres share rented	-	-
Total pasture acres	-	-
Percent crop acres owned	58 %	61 %

Table 6

## Farm Income Statement

**2010 UP Dairy Farms**

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

	Avg. Of All Farms	High 25%
Number of farms	16	5
Cash Farm Income		
Barley	783	-
Corn	8,867	23,495
Hay, Alfalfa	2,490	3,928
Hay, Mixed	2,940	-
Haylage, Mixed	252	-
Straw	88	132
Dairy, Milk	510,911	761,619
Dairy, Dairy Calves	653	1,272
Dairy Heifers (for sale)	951	1,136
Dairy Replacement Heifers	323	-
Dairy Finishing	6,159	10,849
Dairy Feeder	9,641	12,541
User Added Livestock, User Added	1,256	-
Cull breeding livestock	44,142	46,060
Other government payments	23,069	42,838
Custom work income	13,841	3,060
Patronage dividends, cash	401	-
Insurance income	12,762	31,790
Other farm income	15,939	18,173
Gross Cash Farm Income	655,469	956,893



Table 6

## Farm Income Statement (Continued)

**2010 UP Dairy Farms**

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

	Avg. Of All Farms	High 25%
Number of farms	16	5
Cash Farm Expense		
Seed	21,045	38,099
Fertilizer	27,491	52,855
Crop chemicals	4,714	8,300
Crop insurance	117	-
Storage	796	2,549
Crop miscellaneous	355	-
Purchased feed	140,054	139,515
Breeding fees	5,682	9,888
Veterinary	13,521	25,986
Livestock supplies	2,607	-
DHIA	130	-
Hauling and trucking	19,988	24,064
Marketing	8,969	11,669
Bedding	2,569	7,363
Interest	30,484	37,804
Supplies	18,275	35,497
Fuel & oil	38,991	57,536
Repairs	37,881	49,304
Custom hire	18,192	46,747
Hired labor	80,327	119,138
Land rent	6,328	12,616
Machinery leases	5,917	-
Real estate taxes	9,811	14,782
Farm insurance	12,592	23,019
Utilities	16,968	22,291
Dues & professional fees	5,351	5,610
Miscellaneous	7,304	5,071
Total cash expense	536,460	749,702
Net cash farm income	119,008	207,191
Inventory Changes		
Prepays and supplies	-4,910	-17,714
Accounts receivable	42	-3,438
Hedging accounts	-	-
Other current assets	417	2,275
Crops and feed	40,665	100,916
Market livestock	4,846	8,660
Breeding livestock	-1,055	45,867
Other assets	804	2,584
Accounts payable	-5,895	-30,372
Accrued interest	-	-
Total inventory change	34,914	108,779
Net operating profit	153,922	315,970
Depreciation		
Machinery and equipment	-38,788	-64,539

Titled vehicles	-	-
Buildings and improvements	-27,340	-55,562
Total depreciation	-66,128	-120,101
Net farm income from operations	87,794	195,868
Gain or loss on capital sales	-	-
Net farm income	87,794	195,868

Table 7

Inventory Changes  
**2010 UP Dairy Farms**  
(Farms Sorted By Rate of Return on Assets - Mkt)

	Avg. Of All Farms	High 25%
Number of farms	16	5
Net cash farm income	119,008	207,191
Crops and Feed		
Ending inventory	149,938	260,102
Beginning inventory	109,273	159,186
Inventory change	40,665	100,916
Market Livestock		
Ending inventory	20,605	35,220
Beginning inventory	15,758	26,560
Inventory change	4,846	8,660
Accts Receivable		
Ending inventory	26,391	34,571
Beginning inventory	26,349	38,009
Inventory change	42	-3,438
Prepaid Expenses and Supplies		
Ending inventory	11,753	22,784
Beginning inventory	16,663	40,497
Inventory change	-4,910	-17,714
Hedging Activities		
Ending inventory	222	712
Withdrawals	-	-
Beginning inventory	222	712
Deposits	-	-
Gain or loss	-	-
Other Current Assets		
Ending inventory	2,730	2,275
Beginning inventory	2,313	0
Inventory change	417	2,275
Breeding Livestock		
Ending inventory	411,364	629,255
Capital sales	597	-
Beginning inventory	403,306	576,150
Capital purchases	9,710	7,238
Depreciation, capital adjust	-1,055	45,867
Other Capital Assets		
Ending inventory	173,965	36,188
Capital sales	1,225	-
Beginning inventory	171,249	27,598
Capital purchases	3,137	6,006
Depreciation, capital adjust	804	2,584
Accounts Payable		
Beginning inventory	59,951	72,003
Ending inventory	65,847	102,375
Inventory change	-5,895	-30,372
Accrued Interest		
Beginning inventory	2	-
Ending inventory	2	-
Inventory change	-	-
Total inventory change	34,914	108,779
Net operating profit	153,922	315,970

Table 8

Depreciation  
**2010 UP Dairy Farms**  
(Farms Sorted By Rate of Return on Assets - Mkt)

	Avg. Of All Farms	High 25%
Number of farms	16	5
Net operating profit	153,922	315,970
Machinery and Equipment		
Ending inventory	105,188	146,389
Capital sales	2,295	-
Beginning inventory	99,215	132,568
Capital purchases	47,056	78,360
Depreciation, capital adjust.	-38,788	-64,539
Titled Vehicles		
Ending inventory	-	-
Capital sales	-	-
Beginning inventory	-	-
Capital purchases	-	-
Depreciation, capital adjust.	-	-
Buildings and Improvements		
Ending inventory	148,362	246,018
Capital sales	-	-
Beginning inventory	161,698	277,358
Capital purchases	14,005	24,221
Depreciation, capital adjust.	-27,340	-55,562
Total depreciation, capital adj.	-66,128	-120,101
Net farm income from operations	87,794	195,868
Gain or loss on capital sales	-	-
Net farm income	87,794	195,868

Table 9

## Profitability Measures

**2010 UP Dairy Farms**

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

	Avg. Of All Farms	High 25%
Number of farms	16	5
Profitability (assets valued at cost)		
Net farm income from operations	87,794	195,868
Rate of return on assets	7.0 %	12.1 %
Rate of return on equity	9.5 %	19.1 %
Operating profit margin	15.7 %	20.1 %
Asset turnover rate	44.3 %	60.1 %
Farm interest expense	30,484	37,804
Value of operator lbr and mgmt.	30,219	38,000
Return on farm assets	88,060	195,673
Average farm assets	1,263,251	1,618,693
Return on farm equity	57,575	157,868
Average farm equity	603,412	826,410
Value of farm production	559,848	972,827
	Avg. Of All Farms	High 25%
Number of farms	16	5
Profitability (assets valued at market)		
Net farm income from operations	101,208	235,829
Rate of return on assets	4.3 %	8.3 %
Rate of return on equity	4.2 %	9.7 %
Operating profit margin	18.1 %	24.2 %
Asset turnover rate	23.9 %	34.3 %
Farm interest expense	30,484	37,804
Value of operator lbr and mgmt.	30,219	38,000
Return on farm assets	101,474	235,633
Average farm assets	2,346,387	2,837,211
Return on farm equity	70,990	197,829
Average farm equity	1,686,548	2,044,929
Value of farm production	559,848	972,827

Table 10

## Liquidity &amp; Repayment Capacity Measures

**2010 UP Dairy Farms**

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

	Avg. Of All Farms	High 25%
Number of farms	16	5
Liquidity		
Current ratio	1.30	1.90
Working capital	52,519	185,583
Working capital to gross inc	7.5 %	16.7 %
Current assets	230,092	391,350
Current liabilities	177,573	205,767
Gross revenues (accrual)	699,914	1,112,383
Repayment capacity		
Net farm income from operations	87,794	195,868
Depreciation	66,128	120,101
Personal income	11,495	18,787
Family living/owner withdrawals	-59,342	-67,381
Payments on personal debt	-	-
Income taxes paid	-1,371	-803
Interest on term debt	36,034	42,101
Capital debt repayment capacity	140,738	308,673
Scheduled term debt payments	-61,392	-66,021
Capital debt repayment margin	79,346	242,652
Cash replacement allowance	-20,947	-36,422
Replacement margin	58,399	206,230
Term debt coverage ratio	2.29	4.68
Replacement coverage ratio	1.71	3.01

Table 11

## Balance Sheet at Cost Values

**2010 UP Dairy Farms**

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

	Avg. Of All Farms		High 25%	
Number of farms	16		5	
	Beginning	Ending	Beginning	Ending
<b>Assets</b>				
<b>Current Farm Assets</b>				
Cash and checking balance	26,766	18,454	26,554	35,686
Prepaid expenses & supplies	16,663	11,753	40,497	22,784
Growing crops	306	1,579	0	1,375
Accounts receivable	26,349	26,391	38,009	34,571
Hedging accounts	222	222	712	712
Crops held for sale or feed	109,273	149,938	159,186	260,102
Crops under government loan	0	0	0	0
Market livestock held for sale	15,758	20,605	26,560	35,220
Other current assets	2,008	1,151	0	900
Total current farm assets	197,345	230,092	291,518	391,350
<b>Intermediate Farm Assets</b>				
Breeding livestock	403,306	411,364	576,150	629,255
Machinery and equipment	99,215	105,188	132,568	146,389
Titled vehicles	0	0	0	0
Other intermediate assets	4,084	4,246	400	400
Total intermediate farm assets	506,604	520,798	709,118	776,044
<b>Long Term Farm Assets</b>				
Farm land	211,389	213,329	241,497	241,497
Buildings and improvements	161,698	148,362	277,358	246,018
Other long-term assets	167,166	169,720	27,198	35,788
Total long-term farm assets	540,253	531,410	546,054	523,303
Total Farm Assets	1,244,202	1,282,300	1,546,690	1,690,697
Total Nonfarm Assets	54,645	56,596	81,563	87,488
Total Assets	1,298,847	1,338,896	1,628,253	1,778,185
<b>Liabilities</b>				
<b>Current Farm Liabilities</b>				
Accrued interest	2	2	0	0
Accounts payable	59,951	65,847	72,003	102,375
Current notes	89,363	83,537	73,622	74,720
Government crop loans	0	0	0	0
Principal due on term debt	25,358	28,188	23,920	28,671
Total current farm liabilities	174,675	177,573	169,545	205,767
Total intermediate farm liabs	227,291	205,144	307,073	170,835
Total long term farm liabilities	257,847	277,149	316,897	414,449
Total farm liabilities	659,812	659,866	793,515	791,051
Total nonfarm liabilities	0	0	0	0
Total liabilities	659,812	659,866	793,515	791,051
Net worth (farm and nonfarm)	639,034	679,031	834,738	987,134
Net worth change		39,996		152,396
Percent net worth change		6 %		18 %
<b>Ratio Analysis</b>				
Current farm liabilities / assets	89 %	77 %	58 %	53 %
Intermediate farm liab. / assets	45 %	39 %	43 %	22 %
Long term farm liab. / assets	48 %	52 %	58 %	79 %
Total debt to asset ratio	51 %	49 %	49 %	44 %

Table 12

## Balance Sheet at Market Values

**2010 UP Dairy Farms**

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

	Avg. Of All Farms		High 25%	
Number of farms	16		5	
	Beginning	Ending	Beginning	Ending
<b>Assets</b>				
<b>Current Farm Assets</b>				
Cash and checking balance	26,766	18,454	26,554	35,686
Prepaid expenses & supplies	16,663	11,753	40,497	22,784
Growing crops	306	1,579	0	1,375
Accounts receivable	26,349	26,391	38,009	34,571
Hedging accounts	222	222	712	712
Crops held for sale or feed	109,273	149,938	159,186	260,102
Crops under government loan	0	0	0	0
Market livestock held for sale	15,758	20,605	26,560	35,220
Other current assets	2,008	1,151	0	900
Total current farm assets	197,345	230,092	291,518	391,350
<b>Intermediate Farm Assets</b>				
Breeding livestock	403,306	411,364	576,150	629,255
Machinery and equipment	343,159	348,127	515,560	521,043
Titled vehicles	0	0	0	0
Other intermediate assets	21,084	21,246	400	400
Total intermediate farm assets	767,549	780,737	1,092,110	1,150,698
<b>Long Term Farm Assets</b>				
Farm land	864,784	867,284	754,128	754,128
Buildings and improvements	321,771	322,586	582,300	601,200
Other long-term assets	169,182	171,445	25,171	31,819
Total long-term farm assets	1,355,737	1,361,315	1,361,599	1,387,147
Total Farm Assets	2,320,631	2,372,143	2,745,227	2,929,195
<b>Total Nonfarm Assets</b>	139,564	141,690	145,315	152,240
<b>Total Assets</b>	2,460,194	2,513,833	2,890,542	3,081,435
<b>Liabilities</b>				
<b>Current Farm Liabilities</b>				
Accrued interest	2	2	0	0
Accounts payable	59,951	65,847	72,003	102,375
Current notes	89,363	83,537	73,622	74,720
Government crop loans	0	0	0	0
Principal due on term debt	25,358	28,188	23,920	28,671
Total current farm liabilities	174,675	177,573	169,545	205,767
<b>Total intermediate farm liabs</b>	227,291	205,144	307,073	170,835
<b>Total long term farm liabilities</b>	257,847	277,149	316,897	414,449
<b>Total farm liabilities</b>	659,812	659,866	793,515	791,051
<b>Total nonfarm liabilities</b>	0	0	0	0
<b>Total liabs excluding deferreds</b>	659,812	659,866	793,515	791,051
<b>Total deferred liabilities</b>	0	0	0	0
<b>Total liabilities</b>	659,812	659,866	793,515	791,051
<b>Retained earnings</b>	639,034	679,031	834,738	987,134
<b>Market valuation equity</b>	1,161,348	1,174,937	1,262,289	1,303,250
<b>Net worth (farm and nonfarm)</b>	1,800,382	1,853,967	2,097,028	2,290,384
<b>Net worth excluding deferreds</b>	1,800,382	1,853,967	2,097,028	2,290,384
<b>Net worth change</b>		53,585		193,356
<b>Percent net worth change</b>		3 %		9 %
<b>Ratio Analysis</b>				
Current farm liabilities / assets	89 %	77 %	58 %	53 %
Intermediate farm liab. / assets	30 %	26 %	28 %	15 %
Long term farm liab. / assets	19 %	20 %	23 %	30 %
Total debt to asset ratio	27 %	26 %	27 %	26 %
Debt to assets excl deferreds	27 %	26 %	27 %	26 %



Table 13

## Statement Of Cash Flows

**2010 UP Dairy Farms**

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

	Avg. Of All Farms	High 25%
Number of farms	16	5
Beginning cash (farm & nonfarm)	26,766	26,554
Cash Provided By Operating Activities		
Gross cash farm income	655,469	956,893
Total cash farm expense	-536,460	-749,702
Net cash from hedging transactions	-	-
Cash provided by operating	119,008	207,191
Cash Provided By Investing Activities		
Sale of breeding livestock	597	-
Sale of machinery & equipment	2,295	-
Sale of titled vehicles	-	-
Sale of farm land	-	-
Sale of farm buildings	-	-
Sale of other farm assets	1,225	-
Sale of nonfarm assets	-	-
Purchase of breeding livestock	-9,710	-7,238
Purchase of machinery & equip.	-47,056	-78,360
Purchase of titled vehicles	-	-
Purchase of farm land	-2,120	-
Purchase of farm buildings	-14,005	-24,221
Purchase of other farm assets	-3,137	-6,006
Purchase of nonfarm assets	-	-
Cash provided by investing	-71,911	-115,825
Cash Provided By Financing Activities		
Money borrowed	83,973	134,285
Principal payments	-89,815	-167,121
Personal income	11,495	18,787
Family living/owner withdrawals	-59,342	-67,381
Income and social security tax	-1,371	-803
Capital contributions	-	-
Capital distributions	-	-
Dividends paid	-	-
Cash gifts and inheritances	1,275	-
Gifts given	-1,625	-
Other cash flows	-	-
Cash provided by financing	-55,410	-82,233
Net change in cash balance	-8,313	9,132
Ending cash (farm & nonfarm)	18,454	35,686

Table 14

## Financial Standards Measures

**2010 UP Dairy Farms**

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

	Avg. Of All Farms	High 25%
Number of farms	16	5
Liquidity		
Current ratio	1.30	1.90
Working capital	52,519	185,583
Working capital to gross inc	7.5 %	16.7 %
Solvency (market)		
Farm debt to asset ratio	28 %	27 %
Farm equity to asset ratio	72 %	73 %
Farm debt to equity ratio	0.39	0.37
Profitability (cost)		
Rate of return on farm assets	7.0 %	12.1 %
Rate of return on farm equity	9.5 %	19.1 %
Operating profit margin	15.7 %	20.1 %
Net farm income	87,794	195,868
EBIDTA	184,406	353,774
Repayment Capacity		
Capital debt repayment capacity	140,738	308,673
Capital debt repayment margin	79,346	242,652
Replacement margin	58,399	206,230
Term debt coverage ratio	2.29	4.68
Replacement coverage ratio	1.71	3.01
Efficiency		
Asset turnover rate (cost)	44.3 %	60.1 %
Operating expense ratio	73.7 %	68.2 %
Depreciation expense ratio	9.4 %	10.8 %
Interest expense ratio	4.4 %	3.4 %
Net farm income ratio	12.5 %	17.6 %

Table 15

## Operator and Labor Information

**2010 UP Dairy Farms**

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

	Avg. Of All Farms	High 25%
Number of farms	16	5
Operator Information		
Average number of operators	1.6	1.8
Average age of operators	53.5	53.3
Average number of years farming	27.4	26.9
Results Per Operator		
Working capital	32,319	103,102
Total assets (market)	1,546,974	1,711,908
Total liabilities	406,071	439,473
Net worth (market)	1,140,903	1,272,436
Net worth excl deferred liabs	1,140,903	1,272,436
Gross farm income	430,717	617,990
Total farm expense	376,689	509,175
Net farm income from operations	54,027	108,816
Net nonfarm income	7,074	10,437
Family living & tax withdrawals	37,362	37,880
Total acres owned	479.0	393.9
Total crop acres	562.0	488.3
Crop acres owned	327.3	295.9
Crop acres cash rented	234.7	192.4
Crop acres share rented	-	-
Total pasture acres	-	-
Labor Analysis		
Number of farms	16	5
Total unpaid labor hours	4,419	5,000
Total hired labor hours	4,861	5,100
Total labor hours per farm	9,280	10,100
Unpaid hours per operator	2,719	2,778
Value of farm production / hour	60.33	96.32
Net farm income / unpaid hour	19.87	39.17
Average hourly hired labor wage	16.53	23.36
Partnerships & LLCs		
Number of farms	7	3
Number of operators	2.0	-
Owner withdrawals per farm	-	-
Withdrawals per operator	-	-

Table 16

Financial Summary  
**2010 UP Dairy Farms**  
(Farms Sorted By Rate of Return on Assets - Mkt)

	Avg. Of All Farms	High 25%
Number of farms	16	5
Income Statement		
Gross cash farm income	655,469	956,893
Total cash farm expense	536,460	749,702
Net cash farm income	119,008	207,191
Inventory change	34,914	108,779
Depreciation	-66,128	-120,101
Net farm income from operations	87,794	195,868
Gain or loss on capital sales	-	-
Average net farm income	87,794	195,868
Median net farm income	49,588	168,130
Profitability (cost)		
Rate of return on assets	7.0 %	12.1 %
Rate of return on equity	9.5 %	19.1 %
Operating profit margin	15.7 %	20.1 %
Asset turnover rate	44.3 %	60.1 %
Profitability (market)		
Rate of return on assets	4.3 %	8.3 %
Rate of return on equity	4.2 %	9.7 %
Operating profit margin	18.1 %	24.2 %
Asset turnover rate	23.9 %	34.3 %
Liquidity & Repayment (end of year)		
Current assets	230,092	391,350
Current liabilities	177,573	205,767
Current ratio	1.30	1.90
Working capital	52,519	185,583
Working capital to gross inc	7.5 %	16.7 %
Term debt coverage ratio	2.29	4.68
Replacement coverage ratio	1.71	3.01
Solvency (end of year at cost)		
Number of farms	16	5
Total farm assets	1,282,300	1,690,697
Total farm liabilities	659,866	791,051
Total assets	1,338,896	1,778,185
Total liabilities	659,866	791,051
Net worth	679,031	987,134
Net worth change	39,996	152,396
Farm debt to asset ratio	51 %	47 %
Total debt to asset ratio	49 %	44 %
Solvency (end of year at market)		
Number of farms	16	5
Total farm assets	2,372,143	2,929,195
Total farm liabilities	659,866	791,051
Total assets	2,513,833	3,081,435
Total liabilities	659,866	791,051
Net worth	1,853,967	2,290,384
Net worth change	53,585	193,356
Farm debt to asset ratio	28 %	27 %
Total debt to asset ratio	26 %	26 %
Nonfarm Information		
Net nonfarm income	11,495	18,787
Crop Acres		
Total acres owned	778	709
Total crop acres	913	879
Total crop acres owned	532	533
Total crop acres cash rented	381	346
Total crop acres share rented	-	-