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Staff Paper

2002 Business Analysis Summary Dairy Farms

Eric Wittenberg
And
Christopher Wolf

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

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by

Eric Wittenberg
and
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2002 Michigan Dairy Farm Business Analysis Summary

by
Eric Wittenberg and Christopher Wolf¹

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¹ Co-workers in the TelFarm project were: R. Betz, L. Borton, R. Clark, G. Kole, T. Purdy, W. Schauer, D. Stein, and V. Varner with the assistance of Michigan State University Extension Agents. AgriSolutions co-workers were Kelly Tobin, Steve Eshelman, Janice Raymond, Tiffany Aldrich, Anne Gerke, Kathleen Spranger, and Lynette Wood. Farm Credit Services of Wisconsin co-worker was Steve Zimmerman.

Executive Summary

This report summarizes the financial and production records of 150 dairy farms from throughout 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/MicroTel project, the Farm Credit Service system, or by AgriSolutions in Michigan. The values were pooled into averages for reporting purposes. The farms are larger than would be the average of all dairy farms in Michigan. Farm records checked for accuracy. While considerable variation in the data exist, average values are reported in the summary tables and discussion that follows.

Data Sorting

The 2002 Business Summary uses different sort criteria than previous summaries. In the past, farm financial data were sorted on Net Farm Income (NFI) which is a dollar measure of profit. For 2002, the sort uses the Rate of Return to Assets (ROA) which is a measure of profitability adjusted for value of assets. The switch from using net farm income to rate of return on assets for sorting does not change the average values across all farms but does affect the average of the low 25% and average of the high 25% farm results.

ROA is calculated as the operating profit and interest paid divided by the average total farm asset value. Rate of return on assets is a measure of how much profit the farm business assets generated. Accounting for total farm assets allows for a meaningful comparison across all farm sizes as well as for farms with differing debt level and amounts of hired labor. ROA reveals how both equity and borrow money is performing.

Summary of Results

In 2002, the average dairy farm in the business analysis had 206 cows producing an average of 20,251 pounds of milk per cow (Table 1). Milk price, based on gross income, averaged \$12.47/cwt.

Table 1. Average 2002 Michigan Dairy Farm Characteristics

Average number of cows	206
Milk sold per cow (pounds)	20,251
Average price of milk sold (\$/cwt)	12.47
Total acres owned	451
Total crop acres	757
Number of farms	150

An income statement calculates profit, measured by net farm income. The net farm income value is the return to operator unpaid management, labor and capital invested. Net farm income in 2002 averaged \$31,635 across all 150 farms. This average somewhat obscures a large range of net farm income values. For example, the farms in the top 25 percent of the net farm income distribution averaged \$119,940 while those in the bottom 25 percent had -\$64,923. The average does illustrate that 2002 was a financially difficult year.

Gross cash farm income averaged \$705,145 in 2002. The largest component of these revenues were milk sales which averaged \$556,285. Government payments helped alleviate some of the milk sales shortfall in 2002 as they averaged \$43,294. This increase was likely related to the Milk Income Loss Contract payments.

Average total cash expenses were \$589,830 in 2002 and average net cash farm income was \$115,314. With much less taxable income, dairy farms were not able to build inventories by prepaying feed and supplies in 2002 with the result being that inventory change was -\$18,757.

Table 2. Average 2002 Michigan Dairy Farm Income Statement

	2002
	(\$)
Gross cash farm income	705,145
Total cash expense	589,830
Net cash farm income	115,314
Inventory change*	-18,757
Depreciation and capital adjustments*	-64,923
Net farm income	31,635

*Changes calculated as ending value minus beginning value.

To put the profit values in perspective, we can calculate profitability ratios (Table 3). Rate of return on assets (ROA) is the farm operating profit (calculated as net farm income from operations plus interest paid less any unpaid labor or management) divided by average total farm asset value. ROA is calculated as if the farm had no debt. It is the return to the total assets. Using this measure farms with high debt or low debt can be compared on an equal basis. The average 2002 dairy farm ROA was 3.2 percent which was 58 percent below the 2001 ROA of 7.6 percent. Return on Equity is the return with the interest expense included in the expenses divided by the Farm business equity. ROE was also down on average across Michigan dairy farms in 2002. Operating profit margin measures the dollars of profit generated per dollar of revenue. In 2002, Michigan dairy farms generated 11 cents of operating profit per dollar of revenue. This was less than half the average operating profit margin in 2000 and 2001. Asset turnover is the gross farm revenues divided by average asset value. Asset turnover measures the efficiency with which total farm assets generate revenue. This value declined slightly in 2002 to an average of 29.3 percent.

Table 3. Average Michigan Dairy Farm Profitability Indicators, 2000-2002

	2000	2001	2002
	(percent)		
Rate of return on assets*	7.1	7.6	3.2
Rate of return on equity	7.1	8.1	2.1
Operating profit margin	21.4	22.3	11.0
Asset turnover rate*	33.3	33.9	29.3

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

Per Unit Income and Expenses

Tables 4 and 5 give the average income and expenses per hundredweight (cwt.) of milk and per cow. 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.

Only income items related to the dairy herd are included in the first section. Milk sales accounted for 82 percent of milk income items on average. Government payments includes all farm government payments—not just those related to the dairy herd. It was not possible to separate crop payments from dairy payments. Given the very low milk prices in 2002, it is likely that many farms received a large portion of government payments in the form of the Milk Income Loss Contract (MILC) and were, in fact, related to the milking herd.

Table 4 contains the average income and expense items across all 150 dairy farms in the 2002 summary while Table 5 displays the average income and expense items for farms that reported that item. For example, all farms had milk income so that income is identical in the tables. In contrast, only some farms reported BST expense so that item is larger when averaged only across those farms with that expense.

By reporting the income and expense items averaged two ways in the tables, it allows for comparison of individual items with farms that had that item. These tables 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 bottom of Tables 4 and 5 presents crop related expenses divided by the total cropped acres. To accurately calculate a crop cost of production would require labor and management—among other—expenses that were not separated out in the financial records.

Table 4. Average income and expenses across all farms*, 2002

Income Items:	Per cwt.	Per Cow
Milk	\$12.50	\$2,524.35
Cull Cows and Calves	\$0.75	\$149.01
Dairy Steers	\$0.16	\$31.78
Dairy Heifers	\$0.14	\$26.99
Government Payments	\$1.34	\$258.48
Other Cash Income	\$0.31	\$62.17
Expense Items:	Per cwt.	Per Cow
Purchased Feeds	\$3.45	\$703.48
Breeding Fees	\$ 0.11	\$23.22
Veterinary	\$0.42	\$88.10
BST	\$0.06	\$14.07
Livestock Supplies	\$0.71	\$140.82
DHIA	\$0.02	\$3.47
Milk & Livestock Mkt. & Trucking	\$0.73	\$144.49
Interest	\$0.96	\$175.38
Fuel and Oil	\$0.42	\$81.08
Repairs	\$0.97	\$189.66
Custom Hire	\$0.39	\$82.20
Hired Labor	\$2.31	\$477.24
Leases	\$0.20	\$40.11
Real Estate Taxes	\$0.22	\$42.70
Farm Insurance	\$0.32	\$58.23
Utilities	\$0.40	\$77.45
Dues, Professional Fees	\$0.13	\$24.99
Miscellaneous	\$0.25	\$52.74
Machinery Depreciation	\$1.11	\$216.85
Building Depreciation	\$0.51	\$102.36
Expense Items per Cropped Acre:	Per Acre	
Seed	\$16.69	
Fertilizer	\$23.34	
Crop Chemicals	\$14.75	
Crop Insurance	\$0.37	
Crop Miscellaneous	\$3.98	
Land Rent	\$31.25	

* All income and expense items averaged across all 150 farms whether they had this income or expense item or not.

Table 5. Average income and expenses across farms with that item*, 2002

Income Items:	Per cwt.	Per Cow
Milk	\$12.50	\$2,524.35
Cull Cows and Calves	\$0.76	\$149.01
Dairy Steers	\$0.52	\$103.63
Dairy Heifers	\$0.45	\$86.14
Government Payments	\$1.34	\$258.48
Other Cash Income	\$0.32	\$63.87
Total Income	\$15.20	\$3,051.78
Expense Items:	Per cwt.	Per Cow
Purchased Feeds	\$3.45	\$703.48
Breeding Fees	\$0.14	\$30.03
Veterinary	\$0.43	\$89.90
BST	\$0.28	\$65.94
Livestock Supplies	\$0.72	\$143.69
DHIA	\$0.10	\$19.30
Milk & Livestock Mkt. & Trucking	\$0.73	\$145.46
Interest	\$1.00	\$182.69
Fuel and Oil	\$0.42	\$81.08
Repairs	\$0.98	\$190.94
Custom Hire	\$0.42	\$88.71
Hired Labor	\$2.42	\$500.61
Leases	\$0.36	\$73.37
Real Estate Taxes	\$0.25	\$49.27
Farm Insurance	\$0.32	\$58.62
Utilities	\$0.40	\$77.97
Dues, Professional Fees	\$0.14	\$25.67
Miscellaneous	\$0.27	\$56.92
Machinery Depreciation	\$1.12	\$218.31
Building Depreciation	\$0.56	\$112.07
Expense Items per Cropped Acre:	Per Acre	
Seed	\$17.26	
Fertilizer	\$24.15	
Crop Chemicals	\$16.15	
Crop Insurance	\$1.17	
Crop Miscellaneous	\$8.41	
Land Rent	\$36.62	

* Income and expense items averaged only across farms with that item. For example, all dairy farms had milk income but only some reported BST expense. Thus, milk income is the same as in Table 4 while BST is \$0.28/cwt across farms with that expense compared to \$0.06/cwt across all farms.

Results by Herd Size

To further facilitate financial comparisons and benchmarking, the financial summaries were divided into herd size categories. The smallest size category, 22 to 99 cows, includes 38 herds. The medium size category, 100 to 249 cows, includes 74 herds. The largest size category, 250 or more cows, contains the remaining 38 herds.

Table 6 displays some average characteristics by herd size category. As expected, average milk production per cow is correlated with herd size across the size categories. Milk price is slightly higher for the medium and large herds. The smallest herds operated more than six acres per cow; the medium herds 4.5 acres/cow; and the largest category 2.8 acres/cow.

Table 6. Average 2002 Michigan Dairy Farm Characteristics by Herd Size Category

	22-99 cows	100-249 cows	250+ cows
Average number of cows	65	152	453
Milk sold per cow (pounds)	18,045	20,127	22,698
Average price of milk sold (\$/cwt)	12.34	12.54	12.50
Total acres owned	300	414	665
Total crop acres	392	679	1,274
Number of farms	38	74	38

Table 7 is the average farm income statement by herd size. Net farm income represents the returns to unpaid factors (e.g., labor). The smallest farms returned \$17,624; the medium farms \$42,707; and the largest farms \$24,373. The largest single difference in explaining the decline in net farm income from the medium to the large herd size was a \$70,271 average decline in inventory value for the large farms.

Table 7. Average 2002 Michigan Dairy Farm Income Statement by Herd Size

	22-99 cows	100-249 cows	250+ cows
	(\$)	(\$)	(\$)
Gross cash farm income	207,777	504,945	1,587,106
Total cash expense	166,884	414,622	1,349,362
Net cash farm income	40,893	90,323	237,744
Inventory change *	-3,038	-124	-70,271
Depreciation and capital adjustments*	-20,232	-47,492	-143,100
Net farm income	17,624	42,707	24,373

*Changes calculated as ending value minus beginning value.

Table 8 compares profitability measures across herd size with assets valued at market value. ROA was highest on the smallest farms in 2002. The smallest farms realized the largest average operating profit margin but had the smallest average asset turnover rate. In contrast, the larger farms had higher average asset turnover but smaller profit margins. Keep in mind that larger farms tend to have less unpaid factors so that the expenses reported are closer to a true economic cost of production. If the unpaid labor and management on the smaller farms was properly reimbursed, the profit margin would be smaller than the average value reported.

Table 8. Average Michigan Dairy Farm Profitability Indicators by Herd Size

	22-99	100-249	250+
	cows	cows	cows
	(percent)		
Rate of return on assets*	4.9	3.4	2.6
Rate of return on equity	4.3	2.6	1.0
Operating profit margin	25.6	12.6	7.9
Asset turnover rate*	19.2	27.3	33.5

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

A. Financial Summary Information, All 150 Farms

Table 9 **Crop Production and Marketing Summary**
Michigan Dairy, All sizes, 2002
(Farms Sorted By Rate of Return on Assets - Cost)

	Avg. Of All Farms	Low 25%	High 25%
Dairy			
Number of farms	150	37	38
Average number of Cows	206	154	195
Milk production per Cow, lbs.	20,251	18,734	21,037
Average milk price per cwt.,	\$12.48	\$12.36	\$12.52
Acreage Summary			
Total acres owned	451	418	411
Total crop acres	757	622	796
Crop acres owned	351	325	323
Crop acres cash rented	406	297	473
Crop acres share rented	0	-	-
Total pasture acres	2	1	1
Average Price Received (Cash Sales Only)			
Wheat, Winter per bushel	3.25	3.28	3.14
Corn per bushel	2.16	2.16	2.18
Soybeans per bushel	4.48	4.73	4.09
Hay, Mixed per ton	54.31	-	-
Straw per ton	19.01	-	-
Hay, Alfalfa per ton	48.48	-	-
Oats per bushel	2.20	-	2.28
Corn Silage per ton	23.39	-	-
Haylage, Mixed per ton	31.64	-	-
Barley per bushel	2.03	-	-

Table 10

Farm Income Statement

Michigan Dairy, All sizes, 2002
(Farms Sorted By Rate of Return on Assets - Cost)

	Avg. Of All Farms	Low 25%	High 25%
Number of farms	150	37	38
Cash Farm Income			
Barley	140	171	56
Beans, Navy	336	-	1,319
Cordwood	82	318	-
Corn	9,358	4,694	11,855
Corn Silage	599	973	1,194
Hay, Alfalfa	371	322	223
Hay, Mixed	850	781	637
Haylage, Alfalfa	106	92	-
Haylage, Mixed	429	778	203
Oats	251	-	633
Soybeans	13,765	7,329	20,821
Straw	198	411	228
Sugar Beets	2,352	771	4,041
Timber	50	202	-
Wheat, Spring	119	-	-
Wheat, Winter	4,247	2,565	4,599
Wheat, Seed	393	-	1,540
Other crops	87	-	288
Miscellaneous crop income	149	-	66
Beef, Background Beef	593	-	2,324
Dairy, Milk	556,285	387,088	529,059
Dairy, Dairy Calves	5,034	5,088	3,530
Dairy Heifers (for sale)	1,515	1,192	1,296
Dairy Replacement Heifers	1,516	837	1,028
Dairy Steers	5,308	2,881	8,343
Hogs, Farrow-Fin, Raised Hogs	605	-	381
Hogs, Weaning to Finish	72	-	283
CCC market loan gain	0	-	-
Cull breeding livestock	26,426	17,696	22,912
Misc. livestock income	233	225	13
Direct & CC govt payments	4,073	-	7,842
Other government payments	39,221	34,499	42,715
Custom work income	3,545	1,135	3,235
Patronage dividends, cash	6,425	3,292	5,916
Insurance income	6,620	5,189	11,891
Cash from hedging accts	504	-	1,484
Contract livestock income	926	-	3,632
Other farm income	12,361	6,062	6,957
Gross Cash Farm Income	705,145	484,593	700,540

Table 10 (continued)

Farm Income Statement

Michigan Dairy, All sizes, 2002

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

	Avg. Of All Farms	Low 25%	High 25%
Number of farms	150	37	38
Cash Farm Expense			
Seed	12,616	8,636	12,345
Fertilizer	18,460	10,307	25,571
Crop chemicals	10,265	5,967	8,929
Crop insurance	379	117	230
Drying fuel	152	-	116
Crop miscellaneous	1,149	509	631
Feeder livestock purchase	2,260	-	7,222
Livestock purchased feed	148,111	120,623	135,120
Breeding fees	5,379	2,955	5,263
Veterinary	19,954	17,555	15,575
BST	3,337	3,369	2,266
Livestock supplies	26,541	18,372	23,745
DHIA	724	265	647
Livestock leases	1,623	713	210
Livestock utilities	372	354	687
Livestock hauling and trucking	2,650	1,502	2,176
Marketing	25,006	18,346	24,563
Bedding	1,352	990	43
Livestock miscellaneous	199	-	250
Interest	33,775	32,138	37,343
Packaging and supplies	1,269	-	498
Purchased feed	347	-	-
Fuel & oil	14,916	11,513	16,182
Repairs	35,304	26,237	37,280
Custom hire	19,170	13,422	15,966
Hired labor	117,848	87,302	100,016
Land rent	24,203	15,124	33,742
Machinery & bldg leases	6,107	3,752	7,397
Real estate taxes	7,350	6,320	8,823
Personal property taxes	133	135	204
Farm insurance	10,226	8,152	12,983
Utilities	14,294	12,028	14,143
Hauling and trucking	45	-	169
Dues & professional fees	4,211	4,489	4,375
Miscellaneous	20,103	10,620	23,676
Total cash expense	589,830	441,812	578,386
Net cash farm income	115,314	42,780	122,154
Inventory Changes			
Crops and feed	6,004	599	25,564
Market livestock	-28	-400	-862
Accounts receivable	-4,223	-4,624	7,292
Prepaid expenses and supplies	-13,370	-8,531	1,201
Accounts payable	-7,141	-15,306	-2,074
Total inventory change	-18,757	-28,261	31,121
Net operating profit	96,558	14,519	153,275
Depreciation and Other Capital Adjustments			
Breeding livestock	-2,451	-27,663	23,438
Machinery and equipment	-43,214	-36,960	-37,137
Buildings and improvements	-20,909	-13,261	-21,420
Other farm capital	1,651	-262	1,785
Total depr. and other capital adj	-64,923	-78,147	-33,334
Net farm income	31,635	-63,628	119,940

Table 11**Inventory Changes**

Michigan Dairy, All sizes, 2002
(Farms Sorted By Rate of Return on Assets - Cost)

	Avg. Of All Farms	Low 25%	High 25%
Number of farms	150	37	38
Net cash farm income	115,314	42,780	122,154
Crops and Feed			
Ending inventory	142,463	100,903	153,298
Beginning inventory	136,459	100,304	127,734
Inventory change	6,004	599	25,564
Market Livestock			
Ending inventory	11,437	6,052	17,064
Beginning inventory	11,464	6,451	17,926
Inventory change	-28	-400	-862
Accts Receivable & Other Current Assets			
Ending inventory	37,445	20,584	50,984
Beginning inventory	41,668	25,208	43,691
Inventory change	-4,223	-4,624	7,292
Prepaid Expenses and Supplies			
Ending inventory	20,794	7,381	20,979
Beginning inventory	34,163	15,912	19,778
Inventory change	-13,370	-8,531	1,201
Accounts Payable & Accrued Expenses			
Beginning inventory	15,016	19,674	14,707
Ending inventory	22,156	34,980	16,781
Inventory change	-7,141	-15,306	-2,074
Total inventory change	-18,757	-28,261	31,121
Net operating profit	96,558	14,519	153,275

Table 12 Depreciation and Other Capital Adjustments
Michigan Dairy, All sizes, 2002
(Farms Sorted By Rate of Return on Assets - Cost)

	Avg. Of All Farms	Low 25%	High 25%
Number of farms	150	37	38
Net operating profit	96,558	14,519	153,275
Breeding Livestock			
Ending inventory	412,514	299,798	392,026
Capital sales	3,358	2,504	1,447
Beginning inventory	389,281	303,564	357,745
Capital purchases	29,042	26,401	12,291
Depreciation, capital adjust.	-2,451	-27,663	23,438
Machinery and Equipment			
Ending inventory	175,683	119,388	210,325
Capital sales	1,712	1,348	2,805
Beginning inventory	170,913	123,336	179,889
Capital purchases	49,696	34,361	70,378
Depreciation, capital adjust.	-43,214	-36,960	-37,137
Buildings and Improvements			
Ending inventory	195,850	129,085	191,638
Capital sales	40	-	158
Beginning inventory	158,401	117,918	178,315
Capital purchases	58,398	24,428	34,901
Depreciation, capital adjust.	-20,909	-13,261	-21,420
Other Capital Assets			
Ending inventory	36,945	35,426	23,411
Capital sales	3,873	6,208	3,751
Beginning inventory	30,443	27,528	17,747
Capital purchases	8,724	14,367	7,630
Depreciation, capital adjust.	1,651	-262	1,785
Total depreciation, capital adj.	-64,923	-78,147	-33,334
Net farm income	31,635	-63,628	119,940

Table 13**Profitability Measures**

Michigan Dairy, All sizes, 2002
 (Farms Sorted By Rate of Return on Assets - Cost)

	Avg. Of All Farms	Low 25%	High 25%
Number of farms	150	37	38
Profitability (assets valued at cost)			
Net farm income	31,635	-63,628	119,940
Labor and management earnings	-6,314	-84,052	83,938
Rate of return on assets	-0.1 %	-9.4 %	7.6 %
Rate of return on equity	-5.6 %	-34.8 %	9.0 %
Operating profit margin	-0.1 %	-25.3 %	14.9 %
Asset turnover rate	45.1 %	37.0 %	50.8 %
Interest on farm net worth	37,949	20,423	36,002
Farm interest expense	34,281	33,245	38,167
Value of operator lbr and mgmt.	66,603	53,579	66,506
Return on farm assets	-688	-83,963	91,602
Average farm assets	1,227,446	897,132	1,207,144
Return on farm equity	-34,968	-117,208	53,435
Average farm equity	629,375	337,236	592,025
Value of farm production	554,077	331,882	613,630
	Avg. Of All Farms	Low 25%	High 25%
Number of farms	150	37	38
Profitability (assets valued at market)			
Net farm income	93,059	-1,210	170,796
Labor and management earnings	15,779	-57,191	97,286
Rate of return on assets	3.2 %	-1.4 %	7.7 %
Rate of return on equity	2.1 %	-5.9 %	8.5 %
Operating profit margin	11.0 %	-6.5 %	23.2 %
Asset turnover rate	29.3 %	22.2 %	33.3 %
Interest on farm net worth	77,280	55,981	73,510
Farm interest expense	34,281	33,245	38,167
Value of operator lbr and mgmt.	66,603	53,579	66,506
Return on farm assets	60,737	-21,545	142,458
Average farm assets	1,892,280	1,492,911	1,840,293
Return on farm equity	26,457	-54,790	104,291
Average farm equity	1,288,007	933,015	1,225,175
Value of farm production	554,077	331,882	613,630

Table 14**Liquidity Measures**

Michigan Dairy, All sizes, 2002
 (Farms Sorted By Rate of Return on Assets - Cost)

	Avg. Of All Farms	Low 25%	High 25%
Number of farms	150	37	38
Liquidity (cash)			
Net cash farm income	115,314	42,780	122,154
Net nonfarm income	11,917	8,386	24,942
Family living and taxes	60,482	38,202	63,876
Real estate principal payments	19,113	15,167	17,319
Cash available for interm. debt	47,636	-2,202	65,901
Average intermediate debt	198,809	157,379	201,330
Years to turnover interm. debt	4.2	**	3.1
Expense as a % of income	84 %	91 %	83 %
Interest as a % of income	5 %	7 %	5 %
Liquidity (accrual)			
Total accrual farm income	706,898	480,169	732,534
Total accrual operating expense	610,341	465,650	579,259
Net accrual operating income	96,558	14,519	153,275
Net nonfarm income	11,917	8,386	24,942
Family living and taxes	60,482	38,202	63,876
Real estate principal payments	19,113	15,167	17,319
Available for intermediate debt	28,880	-30,464	97,022
Average intermediate debt	198,809	157,379	201,330
Years to turnover interm. debt	6.9	**	2.1
Expense as a % of income	86 %	97 %	79 %
Interest as a % of income	5 %	7 %	5 %

** Income insufficient to meet debt servicing requirements

Table 15

Balance Sheet at Cost Values
Michigan Dairy, All sizes, 2002
(Farms Sorted By Rate of Return on Assets - Cost)

	Avg. Of All Farms		Low 25%		High 25%	
Number of farms	150		37		38	
	Beginning	Ending	Beginning	Ending	Beginning	Ending
Assets						
Current Farm Assets						
Cash and checking balance	21,349	21,445	17,915	15,103	17,220	20,019
Prepaid expenses & supplies	34,163	20,794	15,912	7,381	19,778	20,979
Growing crops	8,315	9,184	4,097	4,884	8,669	10,044
Accounts receivable	31,589	25,057	20,810	15,318	29,873	31,051
Hedging accounts	102	591	0	0	323	907
Crops held for sale or feed	135,469	141,331	100,304	100,903	127,030	151,972
Crops under government loan	990	1,132	0	0	704	1,326
Market livestock held for sale	11,464	11,437	6,451	6,052	17,926	17,064
Other current assets	1,662	2,614	301	382	4,826	8,982
Total current farm assets	245,103	233,583	165,791	150,024	226,350	262,344
Intermediate Farm Assets						
Breeding livestock	389,281	412,514	303,564	299,798	357,745	392,026
Machinery and equipment	170,899	175,538	123,336	119,388	179,889	209,811
Titled vehicles	14	145	0	0	0	515
Other intermediate assets	24,706	29,521	25,077	31,914	13,069	15,981
Total intermediate farm assets	584,899	617,718	451,977	451,101	550,704	618,332
Long Term Farm Assets						
Farm land	197,380	208,796	161,669	160,735	172,255	202,242
Buildings and improvements	158,401	195,850	117,918	129,085	178,315	191,638
Other long-term assets	5,737	7,424	2,452	3,512	4,677	7,431
Total long-term farm assets	361,518	412,070	282,039	293,332	355,247	401,310
Total Farm Assets	1,191,521	1,263,371	899,807	894,457	1,132,301	1,281,986
Total Nonfarm Assets	71,946	73,938	44,301	52,371	93,042	85,510
Total Assets	1,263,466	1,337,309	944,107	946,828	1,225,343	1,367,497
Liabilities						
Current Farm Liabilities						
Accrued interest	2,092	2,597	1,448	2,555	2,980	3,805
Accounts payable	12,934	19,549	18,266	32,386	11,726	12,976
Current notes	62,553	78,110	52,887	61,713	58,977	58,843
Government crop loans	976	987	0	0	659	1,053
Principal due on term debt	50,059	49,128	42,883	36,374	43,442	46,286
Total current farm liabilities	128,614	150,371	115,483	133,028	117,786	122,963
Total intermediate farm liab.	153,925	180,733	116,991	145,958	162,329	185,183
Total long term farm liabilities	273,724	308,773	294,963	313,368	300,712	341,266
Total farm liabilities	556,263	639,878	527,437	592,354	580,827	649,411
Total nonfarm liabilities	6,521	5,114	1,209	1,223	13,016	7,710
Total liabilities	562,784	644,991	528,646	593,577	593,843	657,121
Net worth (farm and nonfarm)	700,682	692,318	415,462	353,251	631,500	710,376
Net worth change		-8,365		-62,211		78,876
Ratio Analysis						
Current farm liabilities / assets	52 %	64 %	70 %	89 %	52 %	47 %
Curr. & interm farm liab. / assets	34 %	39 %	38 %	46 %	36 %	35 %
Long term farm liab. / assets	76 %	75 %	105 %	107 %	85 %	85 %
Total debt to asset ratio	45 %	48 %	56 %	63 %	48 %	48 %

Table 16

Balance Sheet at Market Values
Michigan Dairy, All sizes, 2002
(Farms Sorted By Rate of Return on Assets - Cost)

	Avg. Of All Farms		Low 25%		High 25%	
Number of farms	150		37		38	
	Beginning	Ending	Beginning	Ending	Beginning	Ending
Assets						
Current Farm Assets						
Cash and checking balance	21,349	21,445	17,915	15,103	17,220	20,019
Prepaid expenses & supplies	34,163	20,794	15,912	7,381	19,778	20,979
Growing crops	8,315	9,184	4,097	4,884	8,669	10,044
Accounts receivable	31,589	25,057	20,810	15,318	29,873	31,051
Hedging accounts	102	591	0	0	323	907
Crops held for sale or feed	135,469	141,331	100,304	100,903	127,030	151,972
Crops under government loan	990	1,132	0	0	704	1,326
Market livestock held for sale	11,464	11,437	6,451	6,052	17,926	17,064
Other current assets	1,662	2,614	301	382	4,826	8,982
Total current farm assets	245,103	233,583	165,791	150,024	226,350	262,344
Intermediate Farm Assets						
Breeding livestock	404,189	428,459	303,547	299,798	357,750	394,681
Machinery and equipment	341,285	357,688	292,657	305,715	366,448	407,513
Titled vehicles	289	458	405	324	0	745
Other intermediate assets	26,704	31,523	25,102	31,985	13,346	16,603
Total intermediate farm assets	772,466	818,128	621,711	637,822	737,543	819,541
Long Term Farm Assets						
Farm land	579,835	626,087	523,600	560,475	516,806	568,633
Buildings and improvements	219,820	270,269	148,496	165,980	253,883	281,280
Other long-term assets	8,374	10,894	4,779	7,143	5,441	8,766
Total long-term farm assets	808,028	907,250	676,875	733,599	776,130	858,679
Total Farm Assets	1,825,598	1,958,962	1,464,377	1,521,445	1,740,023	1,940,564
Total Nonfarm Assets	120,931	130,039	60,468	76,575	135,762	126,464
Total Assets	1,946,529	2,089,000	1,524,845	1,598,019	1,875,785	2,067,028
Liabilities						
Current Farm Liabilities						
Accrued interest	2,092	2,597	1,448	2,555	2,980	3,805
Accounts payable	12,934	19,549	18,266	32,386	11,726	12,976
Current notes	62,553	78,110	52,887	61,713	58,977	58,843
Government crop loans	976	987	0	0	659	1,053
Principal due on term debt	50,059	49,128	42,883	36,374	43,442	46,286
Total current farm liabilities	128,614	150,371	115,483	133,028	117,786	122,963
Total intermediate farm liabs	153,925	180,733	116,991	145,958	162,329	185,183
Total long term farm liabilities	273,724	308,773	294,963	313,368	300,712	341,266
Total farm liabilities	556,263	639,878	527,437	592,354	580,827	649,411
Total nonfarm liabilities	6,521	5,114	1,209	1,223	13,016	7,710
Total liabs excluding deferreds	562,784	644,991	528,646	593,577	593,843	657,121
Total deferred liabilities	6,134	6,223	0	0	0	0
Total liabilities	568,918	651,215	528,646	593,577	593,843	657,121
Retained earnings	700,682	692,318	415,462	353,251	631,500	710,376
Market valuation equity	676,928	745,468	580,738	651,192	650,442	699,532
Net worth (farm and nonfarm)	1,377,610	1,437,786	996,199	1,004,442	1,281,942	1,409,907
Net worth excluding deferreds	1,383,745	1,444,009	996,199	1,004,442	1,281,942	1,409,907
Net worth change		60,175		8,243		127,966
Ratio Analysis						
Current farm liabilities / assets	52 %	64 %	70 %	89 %	52 %	47 %
Curr. & interm farm liab. / assets	28 %	31 %	30 %	35 %	29 %	28 %
Long term farm liab. / assets	34 %	34 %	44 %	43 %	39 %	40 %
Total debt to asset ratio	29 %	31 %	35 %	37 %	32 %	32 %
Debt to assets excl deferreds	29 %	31 %	35 %	37 %	32 %	32 %

Table 17**Statement Of Cash Flows**

Michigan Dairy, All sizes, 2002
(Farms Sorted By Rate of Return on Assets - Cost)

	Avg. Of All Farms	Low 25%	High 25%
Number of farms	150	37	38
Beginning cash (farm & nonfarm)	22,812	18,141	19,493
Cash From Operating Activities			
Gross cash farm income	705,145	484,593	700,540
Net nonfarm income	11,917	8,386	24,942
Total cash farm expense	-589,830	-441,812	-578,386
Apparent family living expense	-55,531	-34,394	-58,426
Income and social security tax	-4,951	-3,809	-5,449
Cash from operations	66,749	12,964	83,220
Cash From Investing Activities			
Sale of breeding livestock	3,358	2,504	1,447
Sale of machinery & equipment	1,712	1,348	2,805
Sale of titled vehicles	-	-	-
Sale of farm land	2,000	6,403	-
Sale of farm buildings	40	-	158
Sale of other farm assets	3,873	6,208	3,751
Sale of nonfarm assets	1,278	310	1,500
Purchase of breeding livestock	-29,042	-26,401	-12,291
Purchase of machinery & equip.	-49,696	-34,361	-70,378
Purchase of titled vehicles	-	-	-
Purchase of farm land	-12,755	-	-22,632
Purchase of farm buildings	-58,398	-24,428	-34,901
Purchase of other farm assets	-8,724	-14,367	-7,630
Purchase of nonfarm assets	-3,875	-8,057	-1,689
Cash from investing activities	-150,229	-90,842	-139,859
Cash From Financing Activities			
Money borrowed	212,081	186,297	202,016
Cash gifts and inheritances	10,424	25,011	2,845
Principal payments	-136,488	-135,273	-140,850
Dividends paid	-	-	-
Gifts given	-2,205	-726	-4,795
Cash from financing activities	83,812	75,309	59,215
Net change in cash balance	333	-2,568	2,576
Ending cash (farm & nonfarm)	23,145	15,573	22,069

Table 18**Financial Standards Measures**

Michigan Dairy, All sizes, 2002
 (Farms Sorted By Rate of Return on Assets - Cost)

	Avg. Of All Farms	Low 25%	High 25%
Number of farms	150	37	38
Liquidity			
Current ratio	1.55	1.13	2.13
Working capital	83,212	16,996	139,382
Solvency (market)			
Farm debt to asset ratio	33 %	39 %	33 %
Farm equity to asset ratio	67 %	61 %	67 %
Farm debt to equity ratio	49 %	64 %	50 %
Profitability (cost)			
Rate of return on farm assets	-0.1 %	-9.4 %	7.6 %
Rate of return on farm equity	-5.6 %	-34.8 %	9.0 %
Operating profit margin	-0.1 %	-25.3 %	14.9 %
Net farm income	31,635	-63,628	119,940
Repayment Capacity			
Term debt coverage ratio	95 %	14 %	200 %
Capital replacement margin	-3,683	-60,516	71,560
Efficiency			
Asset turnover rate (cost)	45.1 %	37.0 %	50.8 %
Operating expense ratio	81.5 %	90.1 %	73.9 %
Depreciation expense ratio	9.2 %	16.3 %	4.6 %
Interest expense ratio	4.8 %	6.9 %	5.2 %
Net farm income ratio	4.5 %	-13.3 %	16.4 %

Table 19 **Operator and Labor Information**
Michigan Dairy, All sizes, 2002
(Farms Sorted By Rate of Return on Assets - Cost)

	Avg. Of All Farms	Low 25%	High 25%
Number of farms	150	37	38
Operator Information			
Average number of operators	1.6	1.6	1.7
Average age of operators	50.9	49.6	49.2
Average number of years farming	26.7	25.1	24.4
Results Per Operator			
Working capital	50,710	10,481	84,071
Total assets (market)	1,273,051	985,445	1,246,779
Total liabilities	396,855	366,039	396,359
Net worth (market)	876,197	619,406	850,420
Net worth excl deferred liabs	879,989	619,406	850,420
Gross farm income	430,789	296,104	441,846
Total farm expense	411,510	335,342	369,501
Net farm income	19,278	-39,237	72,345
Net nonfarm income	7,262	5,172	15,044
Family living & tax withdrawals	36,858	23,558	38,528
Total acres owned	274.6	257.9	247.7
Total crop acres	461.5	383.8	480.1
Crop acres owned	213.9	200.6	194.8
Crop acres cash rented	247.4	183.2	285.3
Crop acres share rented	0.2	-	-
Total pasture acres	1.2	0.4	0.6
Labor Analysis			
Number of farms	149	37	38
Total unpaid labor hours	5,046	4,780	4,797
Total hired labor hours	9,533	7,258	9,244
Total labor hours per farm	14,580	12,038	14,041
Unpaid hours per operator	3,075	2,948	2,893
Value of farm production / hour	38.00	27.57	43.70
Net farm income / unpaid hour	6.27	-13.31	25.00
Partnerships			
Number of farms	47	8	12
Number of operators	2.2	2.4	2.7
Owner withdrawals per farm	-	-	-
Withdrawals per operator	-	-	-
Corporations			
Number of farms	9	3	4
Number of operators	2.3	-	-

Table 20

Financial Summary

Michigan Dairy, All sizes, 2002
(Farms Sorted By Rate of Return on Assets - Cost)

	Avg. Of All Farms	Low 25%	High 25%
Number of farms	150	37	38
Income Statement			
Gross cash farm income	705,145	484,593	700,540
Total cash farm expense	589,830	441,812	578,386
Net cash farm income	115,314	42,780	122,154
Inventory change	-18,757	-28,261	31,121
Depreciation and capital adjust	-64,923	-78,147	-33,334
Net farm income	31,635	-63,628	119,940
Profitability (cost)			
Labor and management earnings	-6,314	-84,052	83,938
Rate of return on assets	-0.1 %	-9.4 %	7.6 %
Rate of return on equity	-5.6 %	-34.8 %	9.0 %
Operating profit margin	-0.1 %	-25.3 %	14.9 %
Asset turnover rate	45.1 %	37.0 %	50.8 %
Profitability (market)			
Labor and management earnings	15,779	-57,191	97,286
Rate of return on assets	3.2 %	-1.4 %	7.7 %
Rate of return on equity	2.1 %	-5.9 %	8.5 %
Operating profit margin	11.0 %	-6.5 %	23.2 %
Asset turnover rate	29.3 %	22.2 %	33.3 %
Liquidity			
Term debt coverage ratio	95.3 %	13.9 %	199.6 %
Expense as a percent of income	86.3 %	97.0 %	79.1 %
Interest as a percent of income	4.8 %	6.9 %	5.2 %
Solvency (cost)			
Number of farms	149	37	38
Ending farm assets	1,263,371	894,457	1,281,986
Ending farm liabilities	639,878	592,354	649,411
Ending total assets	1,337,309	946,828	1,367,497
Ending total liabilities	644,991	593,577	657,121
Ending net worth	692,318	353,251	710,376
Net worth change	-8,365	-62,211	78,876
Ending farm debt to asset ratio	51 %	66 %	51 %
Beg total debt to asset ratio	45 %	56 %	48 %
End total debt to asset ratio	48 %	63 %	48 %
Solvency (market)			
Number of farms	149	37	38
Ending farm assets	1,958,962	1,521,445	1,940,564
Ending farm liabilities	646,124	592,354	649,411
Ending total assets	2,089,000	1,598,019	2,067,028
Ending total liabilities	651,215	593,577	657,121
Ending net worth	1,437,786	1,004,442	1,409,907
Net worth change	60,175	8,243	127,966
Ending farm debt to asset ratio	33 %	39 %	33 %
Beg total debt to asset ratio	29 %	35 %	32 %
End total debt to asset ratio	31 %	37 %	32 %
Nonfarm Information			
Net nonfarm income	11,917	8,386	24,942
Farms reporting living expenses	5	-	-
Total family living expense	46,242	-	-
Total living, invest, & capital	64,028	-	-
Crop Acres			
Total acres owned	451	418	411
Total crop acres	757	622	796
Total crop acres owned	351	325	323
Total crop acres cash rented	406	297	473
Total crop acres share rented	0	-	-

B. Financial Summary Information, Herds with 22-99 Cows

Table 21 **Crop Production and Marketing Summary**
 Michigan Dairy, 22-99 Cows, 2002
 (Farms Sorted By Rate of Return on Assets - Cost)

	Avg. Of All Farms	Low 25%	High 25%
Dairy			
Number of farms	38	9	10
Average number of Cows	65	52	74
Milk production per Cow, lbs.	18,045	16,943	18,066
Average milk price per cwt.,	\$12.34	\$12.10	\$12.34
Acreage Summary			
Total acres owned	300	333	252
Total crop acres	392	413	392
Crop acres owned	223	248	201
Crop acres cash rented	168	166	190
Crop acres share rented	-	-	-
Total pasture acres	1	3	-
Average Price Received (Cash Sales Only)			
Soybeans per bushel	4.82	-	-
Corn per bushel	2.08	-	-
Wheat, Winter per bushel	3.13	-	-
Hay, Mixed per ton	69.09	-	-
Hay, Alfalfa per ton	42.71	-	-

Table 22**Farm Income Statement**

Michigan Dairy, 22-99 Cows, 2002
(Farms Sorted By Rate of Return on Assets - Cost)

	Avg. Of All Farms	Low 25%	High 25%
Number of farms	38	9	10
Cash Farm Income			
Corn	3,569	5,066	7,075
Corn Silage	218	-	330
Corn, Ear	158	-	-
Hay, Alfalfa	471	1,136	606
Hay, Mixed	1,303	704	80
Oats	47	-	179
Soybeans	6,098	9,127	6,798
Sugar Beets	714	3,015	-
Timber	196	-	-
Wheat, Winter	2,158	5,216	3,270
Miscellaneous crop income	127	-	69
Beef, Finish Beef Calves	162	-	-
Dairy, Milk	145,333	104,616	164,441
Dairy, Dairy Calves	1,475	1,070	1,721
Dairy Heifers (for sale)	1,998	586	3,703
Dairy Replacement Heifers	2,263	-	55
Dairy Steers	1,274	1,136	981
Cull breeding livestock	8,009	5,061	8,778
Misc. livestock income	17	-	42
Direct & CC govt payments	1,479	-	804
Other government payments	18,479	17,656	21,119
Custom work income	743	136	1,937
Patronage dividends, cash	998	1,154	1,475
Insurance income	3,895	13,204	614
Contract livestock income	3,632	-	13,800
Other farm income	2,960	2,284	3,520
Gross Cash Farm Income	207,777	171,166	241,398

Table 22 (continued)

Farm Income Statement

Michigan Dairy, 22-99 Cows, 2002

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

	Avg. Of All Farms	Low 25%	High 25%
Number of farms	38	9	10
Cash Farm Expense			
Seed	5,322	3,557	5,488
Fertilizer	5,535	3,813	5,351
Crop chemicals	2,618	3,163	2,670
Crop insurance	142	146	52
Drying fuel	79	-	161
Crop hauling and trucking	51	-	194
Feeder livestock purchase	1,409	-	-
Purchased feed	38,578	29,281	41,769
Breeding fees	1,308	357	1,176
Veterinary	4,389	3,075	5,721
BST	672	17	724
Livestock supplies	8,725	7,932	9,682
DHIA	304	172	168
Livestock utilities	1,085	1,002	1,602
Livestock hauling and trucking	707	1,189	-
Marketing	8,838	6,206	9,626
Interest	16,181	24,160	21,494
Fuel & oil	5,517	5,058	7,335
Repairs	14,402	12,908	15,692
Custom hire	4,641	1,239	3,709
Hired labor	18,402	15,714	23,012
Land rent	7,077	6,978	6,571
Machinery & bldg leases	1,859	2,081	2,435
Real estate taxes	3,358	1,958	4,506
Personal property taxes	166	450	68
Farm insurance	4,720	6,234	4,133
Utilities	4,652	3,569	5,731
Hauling and trucking	171	-	642
Dues & professional fees	1,927	1,733	2,493
Miscellaneous	4,049	2,774	6,081
Total cash expense	166,884	144,768	188,286
Net cash farm income	40,893	26,399	53,112
Inventory Changes			
Crops and feed	5,015	-9,868	2,572
Market livestock	683	-78	-403
Accounts receivable	-3,532	-9,452	223
Prepaid expenses and supplies	-4,292	-11,906	-785
Accounts payable	-911	-1,161	-222
Total inventory change	-3,038	-32,466	1,385
Net operating profit	37,855	-6,067	54,497
Depreciation and Other Capital Adjustments			
Breeding livestock	1,645	-13,841	23,153
Machinery and equipment	-13,989	-11,643	-10,986
Buildings and improvements	-5,697	-5,527	-6,101
Other farm capital	-2,190	-11,360	705
Total depr. and other capital adj	-20,232	-42,371	6,770
Net farm income	17,624	-48,438	61,267

Table 23**Inventory Changes**

Michigan Dairy, 22-99 Cows, 2002
(Farms Sorted By Rate of Return on Assets - Cost)

	Avg. Of All Farms	Low 25%	High 25%
Number of farms	38	9	10
Net cash farm income	40,893	26,399	53,112
Crops and Feed			
Ending inventory	52,258	40,103	50,831
Beginning inventory	47,243	49,971	48,259
Inventory change	5,015	-9,868	2,572
Market Livestock			
Ending inventory	5,506	2,756	2,753
Beginning inventory	4,823	2,833	3,155
Inventory change	683	-78	-403
Accts Receivable & Other Current Assets			
Ending inventory	8,780	10,929	7,145
Beginning inventory	12,312	20,381	6,922
Inventory change	-3,532	-9,452	223
Prepaid Expenses and Supplies			
Ending inventory	4,293	6,787	1,650
Beginning inventory	8,586	18,693	2,435
Inventory change	-4,292	-11,906	-785
Accounts Payable & Accrued Expenses			
Beginning inventory	5,128	4,781	9,612
Ending inventory	6,040	5,942	9,834
Inventory change	-911	-1,161	-222
Total inventory change	-3,038	-32,466	1,385
Net operating profit	37,855	-6,067	54,497

Table 24 Depreciation and Other Capital Adjustments
Michigan Dairy, 22-99 Cows, 2002
(Farms Sorted By Rate of Return on Assets - Cost)

	Avg. Of All Farms	Low 25%	High 25%
Number of farms	38	9	10
Net operating profit	37,855	-6,067	54,497
Breeding Livestock			
Ending inventory	133,328	104,710	167,852
Capital sales	4,547	594	4,617
Beginning inventory	133,862	118,472	145,174
Capital purchases	2,368	672	4,142
Depreciation, capital adjust.	1,645	-13,841	23,153
Machinery and Equipment			
Ending inventory	42,944	35,590	40,724
Capital sales	258	89	480
Beginning inventory	44,794	38,893	46,514
Capital purchases	12,397	8,429	5,676
Depreciation, capital adjust.	-13,989	-11,643	-10,986
Buildings and Improvements			
Ending inventory	51,054	24,859	104,328
Capital sales	-	-	-
Beginning inventory	49,595	26,417	107,093
Capital purchases	7,156	3,969	3,336
Depreciation, capital adjust.	-5,697	-5,527	-6,101
Other Capital Assets			
Ending inventory	11,631	12,268	14,683
Capital sales	915	-	1,509
Beginning inventory	9,278	8,302	10,546
Capital purchases	5,458	15,325	4,941
Depreciation, capital adjust.	-2,190	-11,360	705
Total depreciation, capital adj.	-20,232	-42,371	6,770
Net farm income	17,624	-48,438	61,267

Table 25**Profitability Measures**

Michigan Dairy, 22-99 Cows, 2002
 (Farms Sorted By Rate of Return on Assets - Cost)

	Avg. Of All Farms	Low 25%	High 25%
Number of farms	38	9	10
Profitability (assets valued at cost)			
Net farm income	17,624	-48,438	61,267
Labor and management earnings	5,837	-58,006	49,386
Rate of return on assets	-3.0 %	-14.7 %	7.3 %
Rate of return on equity	-15.6 %	-60.9 %	7.8 %
Operating profit margin	-7.5 %	-61.1 %	15.3 %
Asset turnover rate	39.8 %	24.0 %	47.7 %
Interest on farm net worth	11,786	9,568	11,881
Farm interest expense	16,042	24,349	21,254
Value of operator lbr and mgmt.	46,483	42,299	48,170
Return on farm assets	-12,817	-66,387	34,350
Average farm assets	430,850	452,236	471,844
Return on farm equity	-28,859	-90,737	13,096
Average farm equity	184,842	148,975	167,571
Value of farm production	171,601	108,646	225,174
	Avg. Of All Farms	Low 25%	High 25%
Number of farms	38	9	10
Profitability (assets valued at market)			
Net farm income	74,390	66,037	86,117
Labor and management earnings	35,511	25,827	50,966
Rate of return on assets	4.9 %	4.9 %	6.7 %
Rate of return on equity	4.3 %	3.5 %	6.5 %
Operating profit margin	25.6 %	44.3 %	26.3 %
Asset turnover rate	19.2 %	11.2 %	25.3 %
Interest on farm net worth	38,880	40,210	35,151
Farm interest expense	16,042	24,349	21,254
Value of operator lbr and mgmt.	46,483	42,299	48,170
Return on farm assets	43,949	48,087	59,200
Average farm assets	894,004	973,427	890,119
Return on farm equity	27,907	23,738	37,946
Average farm equity	647,996	670,167	585,846
Value of farm production	171,601	108,646	225,174

Table 26

Liquidity Measures

Michigan Dairy, 22-99 Cows, 2002
(Farms Sorted By Rate of Return on Assets - Cost)

	Avg. Of All Farms	Low 25%	High 25%
Number of farms	38	9	10
Liquidity (cash)			
Net cash farm income	40,893	26,399	53,112
Net nonfarm income	7,944	6,020	6,131
Family living and taxes	33,905	20,092	40,702
Real estate principal payments	8,695	7,975	13,901
Cash available for interm. debt	6,238	4,352	4,641
Average intermediate debt	58,843	58,108	72,276
Years to turnover interm. debt	9.4	13.4	15.6
Expense as a % of income	80 %	85 %	78 %
Interest as a % of income	8 %	14 %	9 %
Liquidity (accrual)			
Total accrual farm income	209,943	151,768	243,790
Total accrual operating expense	172,088	157,835	189,294
Net accrual operating income	37,855	-6,067	54,497
Net nonfarm income	7,944	6,020	6,131
Family living and taxes	33,905	20,092	40,702
Real estate principal payments	8,695	7,975	13,901
Available for intermediate debt	3,200	-28,114	6,025
Average intermediate debt	58,843	58,108	72,276
Years to turnover interm. debt	18.4	**	12.0
Expense as a % of income	82 %	104 %	78 %
Interest as a % of income	8 %	16 %	9 %

** Income insufficient to meet debt servicing requirements

Table 27

Balance Sheet at Cost Values
Michigan Dairy, 22-99 Cows, 2002
(Farms Sorted By Rate of Return on Assets - Cost)

	Avg. Of All Farms		Low 25%		High 25%	
Number of farms	38		9		10	
	Beginning	Ending	Beginning	Ending	Beginning	Ending
Assets						
Current Farm Assets						
Cash and checking balance	6,267	7,322	5,211	7,508	7,800	14,391
Prepaid expenses & supplies	8,586	4,293	18,693	6,787	2,435	1,650
Growing crops	3,524	4,003	3,166	4,602	3,462	3,275
Accounts receivable	8,571	4,300	17,216	6,327	2,900	2,700
Hedging accounts	0	0	0	0	0	0
Crops held for sale or feed	47,243	52,258	49,971	40,103	48,259	50,831
Crops under government loan	0	0	0	0	0	0
Market livestock held for sale	4,823	5,506	2,833	2,756	3,155	2,753
Other current assets	217	477	0	0	560	1,170
Total current farm assets	79,231	78,160	97,090	68,083	68,572	76,770
Intermediate Farm Assets						
Breeding livestock	133,862	133,328	118,472	104,710	145,174	167,852
Machinery and equipment	44,794	42,944	38,893	35,590	46,514	40,724
Titled vehicles	0	0	0	0	0	0
Other intermediate assets	4,859	6,203	3,166	3,611	5,864	9,777
Total intermediate farm assets	183,515	182,475	160,532	143,911	197,552	218,353
Long Term Farm Assets						
Farm land	111,881	115,945	186,813	182,973	80,717	80,717
Buildings and improvements	49,595	51,054	26,417	24,859	107,093	104,328
Other long-term assets	4,419	5,428	5,136	8,657	4,682	4,905
Total long-term farm assets	165,895	172,426	218,366	216,489	192,492	189,950
Total Farm Assets	428,640	433,060	475,988	428,483	458,616	485,073
Total Nonfarm Assets	41,988	46,787	18,167	41,952	68,711	66,203
Total Assets	470,628	479,847	494,155	470,435	527,327	551,276
Liabilities						
Current Farm Liabilities						
Accrued interest	1,626	1,487	1,371	1,560	4,004	3,763
Accounts payable	3,541	4,514	3,572	4,218	5,608	6,071
Current notes	23,756	25,174	9,652	9,215	44,284	42,885
Government crop loans	0	0	0	0	0	0
Principal due on term debt	16,421	13,370	18,685	10,745	20,452	21,768
Total current farm liabilities	45,344	44,545	33,280	25,739	74,347	74,488
Total intermediate farm liabs	51,187	52,456	43,873	57,650	69,576	59,981
Total long term farm liabilities	146,366	152,119	220,683	225,294	160,724	169,432
Total farm liabilities	242,897	249,120	297,837	308,684	304,646	303,901
Total nonfarm liabilities	2,531	1,195	3,804	0	1,030	296
Total liabilities	245,428	250,315	301,640	308,684	305,676	304,197
Net worth (farm and nonfarm)	225,200	229,532	192,514	161,752	221,651	247,079
Net worth change		4,332		-30,763		25,428
Ratio Analysis						
Current farm liabilities / assets	57 %	57 %	34 %	38 %	108 %	97 %
Curr. & interm farm liab. / assets	37 %	37 %	30 %	39 %	54 %	46 %
Long term farm liab. / assets	88 %	88 %	101 %	104 %	83 %	89 %
Total debt to asset ratio	52 %	52 %	61 %	66 %	58 %	55 %

Table 28

Balance Sheet at Market Values
Michigan Dairy, 22-99 Cows, 2002
(Farms Sorted By Rate of Return on Assets - Cost)

	Avg. Of All Farms		Low 25%		High 25%	
Number of farms	38		9		10	
	Beginning	Ending	Beginning	Ending	Beginning	Ending
Assets						
Current Farm Assets						
Cash and checking balance	6,267	7,322	5,211	7,508	7,800	14,391
Prepaid expenses & supplies	8,586	4,293	18,693	6,787	2,435	1,650
Growing crops	3,524	4,003	3,166	4,602	3,462	3,275
Accounts receivable	8,571	4,300	17,216	6,327	2,900	2,700
Hedging accounts	0	0	0	0	0	0
Crops held for sale or feed	47,243	52,258	49,971	40,103	48,259	50,831
Crops under government loan	0	0	0	0	0	0
Market livestock held for sale	4,823	5,506	2,833	2,756	3,155	2,753
Other current assets	217	477	0	0	560	1,170
Total current farm assets	79,231	78,160	97,090	68,083	68,572	76,770
Intermediate Farm Assets						
Breeding livestock	133,888	133,330	118,472	104,710	145,194	167,852
Machinery and equipment	164,266	164,768	152,856	153,689	161,215	158,320
Titled vehicles	395	316	1,667	1,333	0	0
Other intermediate assets	5,438	6,759	3,166	3,611	7,738	11,562
Total intermediate farm assets	303,987	305,174	276,161	263,343	314,146	337,734
Long Term Farm Assets						
Farm land	379,870	430,779	494,572	586,722	319,620	335,680
Buildings and improvements	94,647	101,479	61,859	65,177	157,446	160,684
Other long-term assets	5,676	9,006	10,260	23,587	4,682	4,905
Total long-term farm assets	480,193	541,264	566,691	675,486	481,748	501,269
Total Farm Assets	863,411	924,597	939,942	1,006,912	864,466	915,772
Total Nonfarm Assets	84,494	93,253	57,701	81,486	101,328	100,341
Total Assets	947,905	1,017,850	997,643	1,088,398	965,794	1,016,114
Liabilities						
Current Farm Liabilities						
Accrued interest	1,626	1,487	1,371	1,560	4,004	3,763
Accounts payable	3,541	4,514	3,572	4,218	5,608	6,071
Current notes	23,756	25,174	9,652	9,215	44,284	42,885
Government crop loans	0	0	0	0	0	0
Principal due on term debt	16,421	13,370	18,685	10,745	20,452	21,768
Total current farm liabilities	45,344	44,545	33,280	25,739	74,347	74,488
Total intermediate farm liabs	51,187	52,456	43,873	57,650	69,576	59,981
Total long term farm liabilities	146,366	152,119	220,683	225,294	160,724	169,432
Total farm liabilities	242,897	249,120	297,837	308,684	304,646	303,901
Total nonfarm liabilities	2,531	1,195	3,804	0	1,030	296
Total liabs excluding deferreds	245,428	250,315	301,640	308,684	305,676	304,197
Total deferred liabilities	0	0	0	0	0	0
Total liabilities	245,428	250,315	301,640	308,684	305,676	304,197
Retained earnings	225,200	229,532	192,514	161,752	221,651	247,079
Market valuation equity	477,277	538,003	503,488	617,963	438,467	464,838
Net worth (farm and nonfarm)	702,477	767,535	696,003	779,714	660,118	711,917
Net worth excluding deferreds	702,477	767,535	696,003	779,714	660,118	711,917
Net worth change		65,058		83,712		51,799
Ratio Analysis						
Current farm liabilities / assets	57 %	57 %	34 %	38 %	108 %	97 %
Curr. & interm farm liab. / assets	25 %	25 %	21 %	25 %	38 %	32 %
Long term farm liab. / assets	30 %	28 %	39 %	33 %	33 %	34 %
Total debt to asset ratio	26 %	25 %	30 %	28 %	32 %	30 %
Debt to assets excl deferreds	26 %	25 %	30 %	28 %	32 %	30 %

Table 29

Statement Of Cash Flows

Michigan Dairy, 22-99 Cows, 2002
(Farms Sorted By Rate of Return on Assets - Cost)

	Avg. Of All Farms	Low 25%	High 25%
Number of farms	38	9	10
Beginning cash (farm & nonfarm)	8,455	5,233	8,620
Cash From Operating Activities			
Gross cash farm income	207,777	171,166	241,398
Net nonfarm income	7,944	6,020	6,131
Total cash farm expense	-166,884	-144,768	-188,286
Apparent family living expense	-31,164	-18,772	-37,151
Income and social security tax	-2,741	-1,320	-3,551
Cash from operations	14,933	12,327	18,541
Cash From Investing Activities			
Sale of breeding livestock	4,547	594	4,617
Sale of machinery & equipment	258	89	480
Sale of titled vehicles	-	-	-
Sale of farm land	5,263	22,222	-
Sale of farm buildings	-	-	-
Sale of other farm assets	915	-	1,509
Sale of nonfarm assets	-	-	-
Purchase of breeding livestock	-2,368	-672	-4,142
Purchase of machinery & equip.	-12,397	-8,429	-5,676
Purchase of titled vehicles	-	-	-
Purchase of farm land	-4,131	-	-
Purchase of farm buildings	-7,156	-3,969	-3,336
Purchase of other farm assets	-5,458	-15,325	-4,941
Purchase of nonfarm assets	-7,494	-24,027	-650
Cash from investing activities	-28,021	-29,519	-12,138
Cash From Financing Activities			
Money borrowed	43,667	53,897	62,878
Cash gifts and inheritances	11,613	8,111	1,570
Principal payments	-38,286	-42,427	-64,580
Dividends paid	-	-	-
Gifts given	-1,947	-	-500
Cash from financing activities	15,047	19,580	-632
Net change in cash balance	1,959	2,388	5,771
Ending cash (farm & nonfarm)	10,414	7,621	14,391

Table 30**Financial Standards Measures**

Michigan Dairy, 22-99 Cows, 2002
 (Farms Sorted By Rate of Return on Assets - Cost)

	Avg. Of All Farms	Low 25%	High 25%
Number of farms	38	9	10
Liquidity			
Current ratio	1.75	2.65	1.03
Working capital	33,615	42,343	2,282
Solvency (market)			
Farm debt to asset ratio	27 %	31 %	33 %
Farm equity to asset ratio	73 %	69 %	67 %
Farm debt to equity ratio	37 %	44 %	50 %
Profitability (cost)			
Rate of return on farm assets	-3.0 %	-14.7 %	7.3 %
Rate of return on farm equity	-15.6 %	-60.9 %	7.8 %
Operating profit margin	-7.5 %	-61.1 %	15.3 %
Net farm income	17,624	-48,438	61,267
Repayment Capacity			
Term debt coverage ratio	85 %	6 %	97 %
Capital replacement margin	-5,020	-38,917	-1,199
Efficiency			
Asset turnover rate (cost)	39.8 %	24.0 %	47.7 %
Operating expense ratio	74.3 %	88.0 %	68.9 %
Depreciation expense ratio	9.6 %	27.9 %	-2.8 %
Interest expense ratio	7.6 %	16.0 %	8.7 %
Net farm income ratio	8.4 %	-31.9 %	25.1 %

Table 31 **Operator and Labor Information**
Michigan Dairy, 22-99 Cows, 2002
(Farms Sorted By Rate of Return on Assets - Cost)

	Avg. Of All Farms	Low 25%	High 25%
Number of farms	38	9	10
Operator Information			
Average number of operators	1.4	1.2	1.4
Average age of operators	49.5	47.6	48.0
Average number of years farming	25.0	21.8	26.0
Results Per Operator			
Working capital	23,655	34,645	1,630
Total assets (market)	716,265	890,508	725,796
Total liabilities	176,148	252,559	217,283
Net worth (market)	540,117	637,948	508,512
Net worth excl deferred liabs	540,117	637,948	508,512
Gross farm income	147,738	124,174	174,136
Total farm expense	135,336	163,805	130,374
Net farm income	12,402	-39,631	43,762
Net nonfarm income	5,590	4,925	4,379
Family living & tax withdrawals	23,859	16,439	29,073
Total acres owned	211.3	272.2	179.9
Total crop acres	275.6	338.0	279.8
Crop acres owned	157.2	202.5	143.8
Crop acres cash rented	118.4	135.5	136.0
Crop acres share rented	-	-	-
Total pasture acres	0.6	2.3	-
Labor Analysis			
Number of farms	38	9	10
Total unpaid labor hours	4,706	4,552	4,538
Total hired labor hours	1,826	1,597	2,192
Total labor hours per farm	6,532	6,150	6,730
Unpaid hours per operator	3,311	3,725	3,241
Value of farm production / hour	26.27	17.67	33.46
Net farm income / unpaid hour	3.75	-10.64	13.50
Partnerships			
Number of farms	9	1	2
Number of operators	2.1	-	-
Owner withdrawals per farm	-	-	-
Withdrawals per operator	-	-	-

Table 32

Financial Summary

Michigan Dairy, 22-99 Cows, 2002
(Farms Sorted By Rate of Return on Assets - Cost)

	Avg. Of All Farms	Low 25%	High 25%
Number of farms	38	9	10
Income Statement			
Gross cash farm income	207,777	171,166	241,398
Total cash farm expense	166,884	144,768	188,286
Net cash farm income	40,893	26,399	53,112
Inventory change	-3,038	-32,466	1,385
Depreciation and capital adjust	-20,232	-42,371	6,770
Net farm income	17,624	-48,438	61,267
Profitability (cost)			
Labor and management earnings	5,837	-58,006	49,386
Rate of return on assets	-3.0 %	-14.7 %	7.3 %
Rate of return on equity	-15.6 %	-60.9 %	7.8 %
Operating profit margin	-7.5 %	-61.1 %	15.3 %
Asset turnover rate	39.8 %	24.0 %	47.7 %
Profitability (market)			
Labor and management earnings	35,511	25,827	50,966
Rate of return on assets	4.9 %	4.9 %	6.7 %
Rate of return on equity	4.3 %	3.5 %	6.5 %
Operating profit margin	25.6 %	44.3 %	26.3 %
Asset turnover rate	19.2 %	11.2 %	25.3 %
Liquidity			
Term debt coverage ratio	84.7 %	6.3 %	97.0 %
Expense as a percent of income	82.0 %	104.0 %	77.6 %
Interest as a percent of income	7.6 %	16.0 %	8.7 %
Solvency (cost)			
Number of farms	38	9	10
Ending farm assets	433,060	428,483	485,073
Ending farm liabilities	249,120	308,684	303,901
Ending total assets	479,847	470,435	551,276
Ending total liabilities	250,315	308,684	304,197
Ending net worth	229,532	161,752	247,079
Net worth change	4,332	-30,763	25,428
Ending farm debt to asset ratio	58 %	72 %	63 %
Beg total debt to asset ratio	52 %	61 %	58 %
End total debt to asset ratio	52 %	66 %	55 %
Solvency (market)			
Number of farms	38	9	10
Ending farm assets	924,597	1,006,912	915,772
Ending farm liabilities	249,120	308,684	303,901
Ending total assets	1,017,850	1,088,398	1,016,114
Ending total liabilities	250,315	308,684	304,197
Ending net worth	767,535	779,714	711,917
Net worth change	65,058	83,712	51,799
Ending farm debt to asset ratio	27 %	31 %	33 %
Beg total debt to asset ratio	26 %	30 %	32 %
End total debt to asset ratio	25 %	28 %	30 %
Nonfarm Information			
Net nonfarm income	7,944	6,020	6,131
Crop Acres			
Total acres owned	300	333	252
Total crop acres	392	413	392
Total crop acres owned	223	248	201
Total crop acres cash rented	168	166	190
Total crop acres share rented	-	-	-

C. Financial Summary Information, Herds with 100-249 Cows

Table 33 **Crop Production and Marketing Summary**
Michigan Dairy, 100-249 Cows, 2002
(Farms Sorted By Rate of Return on Assets - Cost)

	Avg. Of All Farms	Low 25%	High 25%
Dairy			
Number of farms	74	18	19
Average number of Cows	152	147	149
Milk production per Cow, lbs.	20,127	18,996	20,785
Average milk price per cwt.,	\$12.54	\$12.31	\$12.58
Acreage Summary			
Total acres owned	414	416	321
Total crop acres	679	660	584
Crop acres owned	316	320	242
Crop acres cash rented	362	339	342
Crop acres share rented	1	1	-
Total pasture acres	1	-	2
Average Price Received (Cash Sales Only)			
Corn per bushel	2.05	-	2.27
Wheat, Winter per bushel	3.29	3.44	3.09
Soybeans per bushel	4.62	-	4.53
Hay, Mixed per ton	41.50	-	-
Straw per ton	19.77	-	-
Hay, Alfalfa per ton	52.28	-	-
Oats per bushel	2.07	-	-

Table 34

Farm Income Statement
Michigan Dairy, 100-249 Cows, 2002
(Farms Sorted By Rate of Return on Assets - Cost)

	Avg. Of All Farms	Low 25%	High 25%
Number of farms	73	18	19
Cash Farm Income			
Barley	266	352	111
Cordwood	47	167	-
Corn	9,500	6,946	7,271
Corn Silage	493	2,001	-
Hay, Alfalfa	400	94	329
Hay, Mixed	587	913	-
Haylage, Mixed	659	1,600	-
Oats	288	-	433
Soybeans	10,114	12,894	5,340
Straw	264	840	26
Sunflowers	34	-	132
Wheat, Spring	242	-	-
Wheat, Winter	3,850	2,172	4,362
Other crops	150	-	576
Miscellaneous crop income	186	78	-
Dairy, Milk	386,299	335,061	399,518
Dairy, Dairy Calves	3,100	4,434	2,947
Dairy Heifers (for sale)	1,591	2,158	824
Dairy Replacement Heifers	1,399	939	380
Dairy Steers	5,822	4,266	7,129
Hogs, Farrow-Fin, Raised Hogs	198	-	762
Hogs, Weaning to Finish	147	-	566
CCC market loan gain	1	-	-
Cull breeding livestock	19,948	18,900	19,117
Misc. livestock income	257	462	-72
Direct & CC govt payments	2,457	-	2,186
Other government payments	38,756	37,144	39,148
Custom work income	3,741	4,494	831
Patronage dividends, cash	3,760	2,558	3,907
Insurance income	3,580	1,623	3,311
Cash from hedging accts	732	-	2,833
Other farm income	6,076	4,502	4,846
Gross Cash Farm Income	504,945	444,599	506,811

Table 34 (continued)

Farm Income Statement

Michigan Dairy, 100-249 Cows, 2002
(Farms Sorted By Rate of Return on Assets - Cost)

	Avg. Of All Farms	Low 25%	High 25%
Number of farms	73	18	19
Cash Farm Expense			
Seed	9,720	8,715	7,563
Fertilizer	14,832	11,670	13,598
Crop chemicals	8,142	6,527	7,563
Crop insurance	223	97	410
Drying fuel	210	-	-
Crop miscellaneous	1,095	862	848
Feeder livestock purchase	1,283	-	4,930
Livestock purchased feed	103,916	111,319	90,240
Breeding fees	3,849	3,039	4,656
Veterinary	13,030	14,400	12,723
BST	1,741	1,421	904
Livestock supplies	20,800	19,471	17,378
DHIA	510	116	550
Livestock leases	420	1,466	70
Livestock utilities	194	-	744
Hauling and trucking	713	-	1,340
Marketing	20,274	17,866	21,260
Bedding	291	702	87
Interest	22,707	21,377	21,701
Packaging and supplies	259	-	995
Purchased feed	708	-	-
Fuel & oil	12,696	11,756	10,999
Repairs	27,373	24,193	24,471
Custom hire	10,504	6,238	11,592
Hired labor	76,976	86,098	68,526
Land rent	16,164	13,323	19,242
Machinery & bldg leases	5,621	2,806	9,119
Real estate taxes	5,823	6,554	4,260
Personal property taxes	171	32	297
Farm insurance	8,221	8,020	8,648
Utilities	10,640	10,448	10,215
Dues & professional fees	3,874	4,477	3,489
Hedging account deposits	49	-	187
Miscellaneous	11,593	8,112	9,985
Total cash expense	414,622	401,106	388,589
Net cash farm income	90,323	43,493	118,222
Inventory Changes			
Crops and feed	7,960	-49	29,806
Market livestock	740	-392	2,212
Accounts receivable	439	1,200	2,208
Prepaid expenses and supplies	-5,914	-9,419	-1,008
Accounts payable	-3,349	-8,646	3,407
Total inventory change	-124	-17,307	36,625
Net operating profit	90,199	26,186	154,848
Depreciation and Other Capital Adjustments			
Breeding livestock	809	-33,870	15,753
Machinery and equipment	-34,669	-31,563	-30,296
Buildings and improvements	-14,970	-11,078	-13,312
Other farm capital	1,337	3,574	-262
Total depr. and other capital adj	-47,492	-72,938	-28,116
Net farm income	42,707	-46,752	126,731

Table 35**Inventory Changes**

Michigan Dairy, 100-249 Cows, 2002
 (Farms Sorted By Rate of Return on Assets - Cost)

	Avg. Of All Farms	Low 25%	High 25%
Number of farms	73	18	19
Net cash farm income	90,323	43,493	118,222
Crops and Feed			
Ending inventory	116,073	91,137	136,065
Beginning inventory	108,114	91,186	106,259
Inventory change	7,960	-49	29,806
Market Livestock			
Ending inventory	12,691	10,521	11,642
Beginning inventory	11,951	10,913	9,430
Inventory change	740	-392	2,212
Accts Receivable & Other Current Assets			
Ending inventory	26,109	22,608	23,143
Beginning inventory	25,670	21,408	20,935
Inventory change	439	1,200	2,208
Prepaid Expenses and Supplies			
Ending inventory	11,265	9,652	13,942
Beginning inventory	17,178	19,071	14,950
Inventory change	-5,914	-9,419	-1,008
Accounts Payable & Accrued Expenses			
Beginning inventory	9,704	7,158	9,242
Ending inventory	13,053	15,804	5,835
Inventory change	-3,349	-8,646	3,407
Total inventory change	-124	-17,307	36,625
Net operating profit	90,199	26,186	154,848

Table 36 Depreciation and Other Capital Adjustments
Michigan Dairy, 100-249 Cows, 2002
(Farms Sorted By Rate of Return on Assets - Cost)

	Avg. Of All Farms	Low 25%	High 25%
Number of farms	73	18	19
Net operating profit	90,199	26,186	154,848
Breeding Livestock			
Ending inventory	329,329	275,867	316,994
Capital sales	1,192	1,875	455
Beginning inventory	318,024	301,101	284,645
Capital purchases	11,688	10,512	17,051
Depreciation, capital adjust.	809	-33,870	15,753
Machinery and Equipment			
Ending inventory	146,257	116,189	163,322
Capital sales	1,334	1,974	1,234
Beginning inventory	139,619	115,496	136,596
Capital purchases	42,640	34,229	58,255
Depreciation, capital adjust.	-34,669	-31,563	-30,296
Buildings and Improvements			
Ending inventory	126,784	104,334	150,543
Capital sales	-	-	-
Beginning inventory	123,021	102,763	145,738
Capital purchases	18,733	12,649	18,117
Depreciation, capital adjust.	-14,970	-11,078	-13,312
Other Capital Assets			
Ending inventory	25,800	41,470	25,372
Capital sales	3,758	7,248	6,289
Beginning inventory	21,175	31,827	21,808
Capital purchases	7,046	13,317	10,114
Depreciation, capital adjust.	1,337	3,574	-262
Total depreciation, capital adj.	-47,492	-72,938	-28,116
Net farm income	42,707	-46,752	126,731

Table 37**Profitability Measures**

Michigan Dairy, 100-249 Cows, 2002
 (Farms Sorted By Rate of Return on Assets - Cost)

	Avg. Of All Farms	Low 25%	High 25%
Number of farms	73	18	19
Profitability (assets valued at cost)			
Net farm income	42,707	-46,752	126,731
Labor and management earnings	8,638	-74,655	90,442
Rate of return on assets	0.6 %	-8.4 %	8.8 %
Rate of return on equity	-3.1 %	-20.4 %	10.4 %
Operating profit margin	1.3 %	-23.8 %	18.4 %
Asset turnover rate	42.7 %	35.4 %	47.9 %
Interest on farm net worth	34,069	27,904	36,290
Farm interest expense	23,279	23,306	21,646
Value of operator lbr and mgmt.	60,570	48,070	63,582
Return on farm assets	5,416	-71,516	84,795
Average farm assets	960,053	847,563	963,092
Return on farm equity	-17,863	-94,822	63,149
Average farm equity	567,518	463,827	604,826
Value of farm production	409,694	300,167	461,620
	Avg. Of All Farms	Low 25%	High 25%
Number of farms	73	18	19
Profitability (assets valued at market)			
Net farm income	89,075	-6,612	152,813
Labor and management earnings	22,709	-66,885	88,246
Rate of return on assets	3.4 %	-2.3 %	7.7 %
Rate of return on equity	2.6 %	-5.4 %	8.3 %
Operating profit margin	12.6 %	-10.5 %	24.0 %
Asset turnover rate	27.3 %	21.6 %	32.2 %
Interest on farm net worth	66,366	60,273	64,567
Farm interest expense	23,279	23,306	21,646
Value of operator lbr and mgmt.	60,570	48,070	63,582
Return on farm assets	51,783	-31,377	110,877
Average farm assets	1,501,092	1,388,284	1,434,382
Return on farm equity	28,504	-54,683	89,231
Average farm equity	1,106,097	1,004,547	1,076,117
Value of farm production	409,694	300,167	461,620

Table 38

Liquidity Measures

Michigan Dairy, 100-249 Cows, 2002
(Farms Sorted By Rate of Return on Assets - Cost)

	Avg. Of All Farms	Low 25%	High 25%
Number of farms	73	18	19
Liquidity (cash)			
Net cash farm income	90,323	43,493	118,222
Net nonfarm income	5,227	8,188	3,984
Family living and taxes	52,533	47,388	69,297
Real estate principal payments	13,949	14,994	6,509
Cash available for interm. debt	29,069	-10,701	46,400
Average intermediate debt	131,693	144,324	136,808
Years to turnover interm. debt	4.5	**	2.9
Expense as a % of income	82 %	90 %	77 %
Interest as a % of income	4 %	5 %	4 %
Liquidity (accrual)			
Total accrual farm income	514,084	445,357	541,037
Total accrual operating expense	423,884	419,171	386,189
Net accrual operating income	90,199	26,186	154,848
Net nonfarm income	5,227	8,188	3,984
Family living and taxes	52,533	47,388	69,297
Real estate principal payments	13,949	14,994	6,509
Available for intermediate debt	28,945	-28,008	83,025
Average intermediate debt	131,693	144,324	136,808
Years to turnover interm. debt	4.5	**	1.6
Expense as a % of income	82 %	94 %	71 %
Interest as a % of income	5 %	5 %	4 %

** Income insufficient to meet debt servicing requirements

Table 39

Balance Sheet at Cost Values
Michigan Dairy, 100-249 Cows, 2002
(Farms Sorted By Rate of Return on Assets - Cost)

	Avg. Of All Farms		Low 25%		High 25%	
Number of farms	73		18		19	
	Beginning	Ending	Beginning	Ending	Beginning	Ending
Assets						
Current Farm Assets						
Cash and checking balance	19,563	21,428	19,747	18,065	12,550	13,481
Prepaid expenses & supplies	17,178	11,265	19,071	9,652	14,950	13,942
Growing crops	7,665	8,532	5,431	6,245	7,100	7,813
Accounts receivable	17,369	17,060	16,026	16,310	13,464	14,345
Hedging accounts	96	251	0	0	371	966
Crops held for sale or feed	106,093	113,764	91,186	91,137	104,852	133,414
Crops under government loan	2,020	2,310	0	0	1,407	2,651
Market livestock held for sale	11,951	12,691	10,913	10,521	9,430	11,642
Other current assets	540	266	-49	53	0	19
Total current farm assets	182,476	187,566	162,325	151,981	164,124	198,273
Intermediate Farm Assets						
Breeding livestock	318,024	329,329	301,101	275,867	284,645	316,994
Machinery and equipment	139,619	145,989	115,496	116,189	136,596	162,292
Titled vehicles	0	268	0	0	0	1,029
Other intermediate assets	15,321	18,595	30,019	39,295	19,297	22,171
Total intermediate farm assets	472,965	494,181	446,615	431,351	440,538	502,486
Long Term Farm Assets						
Farm land	157,900	162,156	145,886	145,886	153,068	165,699
Buildings and improvements	123,021	126,784	102,763	104,334	145,738	150,543
Other long-term assets	5,853	7,205	1,809	2,176	2,512	3,201
Total long-term farm assets	286,774	296,145	250,458	252,396	301,318	319,444
Total Farm Assets	942,215	977,892	859,398	835,728	905,980	1,020,203
Total Nonfarm Assets	79,855	81,046	83,134	87,741	137,412	124,736
Total Assets	1,022,070	1,058,937	942,532	923,469	1,043,392	1,144,939
Liabilities						
Current Farm Liabilities						
Accrued interest	2,279	2,850	1,228	3,156	1,008	953
Accounts payable	7,426	10,203	5,931	12,648	8,234	4,882
Current notes	55,993	64,116	43,268	58,275	44,609	43,942
Government crop loans	1,993	2,015	0	0	1,318	2,105
Principal due on term debt	35,432	29,631	41,022	31,798	22,571	26,990
Total current farm liabilities	103,122	108,814	91,448	105,877	77,741	78,872
Total intermediate farm liabs	104,385	118,724	98,602	142,146	104,332	132,977
Total long term farm liabilities	162,053	187,973	161,515	167,885	146,992	175,617
Total farm liabilities	369,560	415,512	351,566	415,908	329,065	387,465
Total nonfarm liabilities	7,656	5,918	583	3,182	26,033	15,420
Total liabilities	377,216	421,430	352,148	419,089	355,097	402,885
Net worth (farm and nonfarm)	644,854	637,507	590,384	504,380	688,295	742,055
Net worth change		-7,347		-86,004		53,760
Ratio Analysis						
Current farm liabilities / assets	57 %	58 %	56 %	70 %	47 %	40 %
Curr. & interm farm liab. / assets	32 %	33 %	31 %	43 %	30 %	30 %
Long term farm liab. / assets	57 %	63 %	64 %	67 %	49 %	55 %
Total debt to asset ratio	37 %	40 %	37 %	45 %	34 %	35 %

Table 40

Balance Sheet at Market Values
Michigan Dairy, 100-249 Cows, 2002
(Farms Sorted By Rate of Return on Assets - Cost)

	Avg. Of All Farms		Low 25%		High 25%	
Number of farms	73		18		19	
	Beginning	Ending	Beginning	Ending	Beginning	Ending
Assets						
Current Farm Assets						
Cash and checking balance	19,563	21,428	19,747	18,065	12,550	13,481
Prepaid expenses & supplies	17,178	11,265	19,071	9,652	14,950	13,942
Growing crops	7,665	8,532	5,431	6,245	7,100	7,813
Accounts receivable	17,369	17,060	16,026	16,310	13,464	14,345
Hedging accounts	96	251	0	0	371	966
Crops held for sale or feed	106,093	113,764	91,186	91,137	104,852	133,414
Crops under government loan	2,020	2,310	0	0	1,407	2,651
Market livestock held for sale	11,951	12,691	10,913	10,521	9,430	11,642
Other current assets	540	266	-49	53	0	19
Total current farm assets	182,476	187,566	162,325	151,981	164,124	198,273
Intermediate Farm Assets						
Breeding livestock	318,024	329,329	301,101	275,867	284,645	316,994
Machinery and equipment	315,902	326,292	310,799	308,491	322,743	346,876
Titled vehicles	0	388	0	0	0	1,489
Other intermediate assets	19,085	22,379	30,019	39,389	19,191	22,646
Total intermediate farm assets	653,011	678,388	641,918	623,747	626,579	688,005
Long Term Farm Assets						
Farm land	459,290	494,718	452,723	481,214	374,461	404,227
Buildings and improvements	157,367	171,680	119,053	137,400	195,027	208,157
Other long-term assets	8,102	9,586	4,031	2,176	4,038	5,872
Total long-term farm assets	624,759	675,984	575,806	620,790	573,526	618,256
Total Farm Assets	1,460,247	1,541,937	1,380,049	1,396,518	1,364,229	1,504,534
Total Nonfarm Assets	130,598	135,842	113,968	134,428	188,747	173,835
Total Assets	1,590,845	1,677,779	1,494,018	1,530,946	1,552,976	1,678,369
Liabilities						
Current Farm Liabilities						
Accrued interest	2,279	2,850	1,228	3,156	1,008	953
Accounts payable	7,426	10,203	5,931	12,648	8,234	4,882
Current notes	55,993	64,116	43,268	58,275	44,609	43,942
Government crop loans	1,993	2,015	0	0	1,318	2,105
Principal due on term debt	35,432	29,631	41,022	31,798	22,571	26,990
Total current farm liabilities	103,122	108,814	91,448	105,877	77,741	78,872
Total intermediate farm liabs	104,385	118,724	98,602	142,146	104,332	132,977
Total long term farm liabilities	162,053	187,973	161,515	167,885	146,992	175,617
Total farm liabilities	369,560	415,512	351,566	415,908	329,065	387,465
Total nonfarm liabilities	7,656	5,918	583	3,182	26,033	15,420
Total liabs excluding deferreds	377,216	421,430	352,148	419,089	355,097	402,885
Total deferred liabilities	2,592	2,239	0	0	0	0
Total liabilities	379,808	423,669	352,148	419,089	355,097	402,885
Retained earnings	644,854	637,507	590,384	504,380	688,295	742,055
Market valuation equity	566,182	616,603	551,486	607,477	509,584	533,430
Net worth (farm and nonfarm)	1,211,037	1,254,111	1,141,870	1,111,857	1,197,879	1,275,485
Net worth excluding deferreds	1,213,629	1,256,349	1,141,870	1,111,857	1,197,879	1,275,485
Net worth change		43,074		-30,012		77,606
Ratio Analysis						
Current farm liabilities / assets	57 %	58 %	56 %	70 %	47 %	40 %
Curr. & interm farm liab. / assets	25 %	26 %	24 %	32 %	23 %	24 %
Long term farm liab. / assets	26 %	28 %	28 %	27 %	26 %	28 %
Total debt to asset ratio	24 %	25 %	24 %	27 %	23 %	24 %
Debt to assets excl deferreds	24 %	25 %	24 %	27 %	23 %	24 %

Table 41**Statement Of Cash Flows**

Michigan Dairy, 100-249 Cows, 2002
(Farms Sorted By Rate of Return on Assets - Cost)

	Avg. Of All Farms	Low 25%	High 25%
Number of farms	73	18	19
Beginning cash (farm & nonfarm)	21,410	19,747	12,603
Cash From Operating Activities			
Gross cash farm income	504,945	444,599	506,811
Net nonfarm income	5,227	8,188	3,984
Total cash farm expense	-414,622	-401,106	-388,589
Apparent family living expense	-47,254	-40,496	-65,267
Income and social security tax	-5,279	-6,893	-4,031
Cash from operations	43,017	4,293	52,909
Cash From Investing Activities			
Sale of breeding livestock	1,192	1,875	455
Sale of machinery & equipment	1,334	1,974	1,234
Sale of titled vehicles	-	-	-
Sale of farm land	836	-	-
Sale of farm buildings	-	-	-
Sale of other farm assets	3,758	7,248	6,289
Sale of nonfarm assets	897	470	3,000
Purchase of breeding livestock	-11,688	-10,512	-17,051
Purchase of machinery & equip.	-42,640	-34,229	-58,255
Purchase of titled vehicles	-	-	-
Purchase of farm land	-10,008	-	-12,632
Purchase of farm buildings	-18,733	-12,649	-18,117
Purchase of other farm assets	-7,046	-13,317	-10,114
Purchase of nonfarm assets	-2,553	-5,929	-1,611
Cash from investing activities	-84,650	-65,070	-106,802
Cash From Financing Activities			
Money borrowed	163,100	183,087	224,415
Cash gifts and inheritances	3,088	1,984	4,863
Principal payments	-122,236	-124,709	-173,297
Dividends paid	-	-	-
Gifts given	-441	-1,268	-105
Cash from financing activities	43,511	59,094	55,877
Net change in cash balance	1,878	-1,682	1,984
Ending cash (farm & nonfarm)	23,288	18,064	14,587

Table 42**Financial Standards Measures**

Michigan Dairy, 100-249 Cows, 2002
 (Farms Sorted By Rate of Return on Assets - Cost)

	Avg. Of All Farms	Low 25%	High 25%
Number of farms	73	18	19
Liquidity			
Current ratio	1.72	1.44	2.51
Working capital	78,752	46,104	119,401
Solvency (market)			
Farm debt to asset ratio	27 %	30 %	26 %
Farm equity to asset ratio	73 %	70 %	74 %
Farm debt to equity ratio	37 %	42 %	35 %
Profitability (cost)			
Rate of return on farm assets	0.6 %	-8.4 %	8.8 %
Rate of return on farm equity	-3.1 %	-20.4 %	10.4 %
Operating profit margin	1.3 %	-23.8 %	18.4 %
Net farm income	42,707	-46,752	126,731
Repayment Capacity			
Term debt coverage ratio	111 %	8 %	244 %
Capital replacement margin	6,119	-56,538	66,305
Efficiency			
Asset turnover rate (cost)	42.7 %	35.4 %	47.9 %
Operating expense ratio	77.9 %	88.9 %	67.4 %
Depreciation expense ratio	9.2 %	16.4 %	5.2 %
Interest expense ratio	4.5 %	5.2 %	4.0 %
Net farm income ratio	8.3 %	-10.5 %	23.4 %

Table 43

Operator and Labor Information
Michigan Dairy, 100-249 Cows, 2002
(Farms Sorted By Rate of Return on Assets - Cost)

	Avg. Of All Farms	Low 25%	High 25%
Number of farms	73	18	19
Operator Information			
Average number of operators	1.7	1.7	1.7
Average age of operators	51.1	51.1	48.8
Average number of years farming	26.2	25.5	22.9
Results Per Operator			
Working capital	47,708	27,662	68,746
Total assets (market)	1,016,414	918,568	966,334
Total liabilities	256,662	251,453	231,964
Net worth (market)	759,752	667,114	734,370
Net worth excl deferred liabs	761,108	667,114	734,370
Gross farm income	311,437	267,214	311,506
Total farm expense	285,564	295,265	238,540
Net farm income	25,872	-28,051	72,966
Net nonfarm income	3,167	4,913	2,294
Family living & tax withdrawals	31,825	28,433	39,898
Total acres owned	250.7	249.6	184.9
Total crop acres	411.2	395.9	336.3
Crop acres owned	191.4	192.2	139.3
Crop acres cash rented	219.4	203.3	197.1
Crop acres share rented	0.4	0.4	-
Total pasture acres	0.8	-	1.2
Labor Analysis			
Number of farms	73	18	19
Total unpaid labor hours	5,025	4,267	5,045
Total hired labor hours	6,724	6,499	6,090
Total labor hours per farm	11,750	10,766	11,135
Unpaid hours per operator	3,044	2,560	2,905
Value of farm production / hour	34.87	27.88	41.46
Net farm income / unpaid hour	8.50	-10.96	25.12
Partnerships			
Number of farms	22	3	8
Number of operators	2.3	-	2.6
Owner withdrawals per farm	-	-	-
Withdrawals per operator	-	-	-

Table 44

Financial Summary
Michigan Dairy, 100-249 Cows, 2002
(Farms Sorted By Rate of Return on Assets - Cost)

	Avg. Of All Farms	Low 25%	High 25%
Number of farms	73	18	19
Income Statement			
Gross cash farm income	504,945	444,599	506,811
Total cash farm expense	414,622	401,106	388,589
Net cash farm income	90,323	43,493	118,222
Inventory change	-124	-17,307	36,625
Depreciation and capital adjust	-47,492	-72,938	-28,116
Net farm income	42,707	-46,752	126,731
Profitability (cost)			
Labor and management earnings	8,638	-74,655	90,442
Rate of return on assets	0.6 %	-8.4 %	8.8 %
Rate of return on equity	-3.1 %	-20.4 %	10.4 %
Operating profit margin	1.3 %	-23.8 %	18.4 %
Asset turnover rate	42.7 %	35.4 %	47.9 %
Profitability (market)			
Labor and management earnings	22,709	-66,885	88,246
Rate of return on assets	3.4 %	-2.3 %	7.7 %
Rate of return on equity	2.6 %	-5.4 %	8.3 %
Operating profit margin	12.6 %	-10.5 %	24.0 %
Asset turnover rate	27.3 %	21.6 %	32.2 %
Liquidity			
Term debt coverage ratio	110.5 %	7.7 %	244.2 %
Expense as a percent of income	82.5 %	94.1 %	71.4 %
Interest as a percent of income	4.5 %	5.2 %	4.0 %
Solvency (cost)			
Number of farms	73	18	19
Ending farm assets	977,892	835,728	1,020,203
Ending farm liabilities	415,512	415,908	387,465
Ending total assets	1,058,937	923,469	1,144,939
Ending total liabilities	421,430	419,089	402,885
Ending net worth	637,507	504,380	742,055
Net worth change	-7,347	-86,004	53,760
Ending farm debt to asset ratio	42 %	50 %	38 %
Beg total debt to asset ratio	37 %	37 %	34 %
End total debt to asset ratio	40 %	45 %	35 %
Solvency (market)			
Number of farms	73	18	19
Ending farm assets	1,541,937	1,396,518	1,504,534
Ending farm liabilities	417,795	415,908	387,465
Ending total assets	1,677,779	1,530,946	1,678,369
Ending total liabilities	423,669	419,089	402,885
Ending net worth	1,254,111	1,111,857	1,275,485
Net worth change	43,074	-30,012	77,606
Ending farm debt to asset ratio	27 %	30 %	26 %
Beg total debt to asset ratio	24 %	24 %	23 %
End total debt to asset ratio	25 %	27 %	24 %
Nonfarm Information			
Net nonfarm income	5,227	8,188	3,984
Farms reporting living expenses	5	-	-
Total family living expense	23,648	-	-
Total living, invest, & capital	37,647	-	-
Crop Acres			
Total acres owned	414	416	321
Total crop acres	679	660	584
Total crop acres owned	316	320	242
Total crop acres cash rented	362	339	342
Total crop acres share rented	1	1	-

D. Financial Summary Information, Herds with 250+ Cows

Table 45 **Crop Production and Marketing Summary**
 Michigan Dairy, 250 Plus Cows, 2002
 (Farms Sorted By Rate of Return on Assets - Cost)

	Avg. Of All Farms	Low 25%	High 25%
Dairy			
Number of farms	38	9	10
Average number of Cows	453	402	365
Milk production per Cow, lbs.	22,698	20,531	21,688
Average milk price per cwt.,	\$12.50	\$12.59	\$12.56
Acreage Summary			
Total acres owned	665	648	579
Total crop acres	1,274	1,020	1,395
Crop acres owned	540	544	506
Crop acres cash rented	734	477	889
Crop acres share rented	-	-	-
Total pasture acres	4	-	-
Average Price Received (Cash Sales Only)			
Wheat, Winter per bushel	3.25	-	-
Soybeans per bushel	4.35	-	-
Corn per bushel	2.28	-	-

Table 46

Farm Income Statement

Michigan Dairy, 250 Plus Cows, 2002
(Farms Sorted By Rate of Return on Assets - Cost)

	Avg. Of All Farms	Low 25%	High 25%
Number of farms	38	9	10
Cash Farm Income			
Beans, Navy	1,319	-	5,010
Cordwood	231	975	-
Corn	14,874	3,927	20,660
Corn Silage	1,183	-	4,208
Hay, Alfalfa	214	-	-
Hay, Mixed	903	758	2,369
Haylage, Alfalfa	414	378	-
Haylage, Mixed	415	-	770
Oats	386	-	1,403
Soybeans	28,444	497	52,091
Straw	237	15	816
Sugar Beets	8,472	-	15,357
Wheat, Winter	7,099	1,532	5,299
Wheat, Seed	1,540	-	5,851
Miscellaneous crop income	42	-	-
Beef, Background Beef	2,324	-	8,833
Dairy, Milk	1,293,788	1,047,431	989,752
Dairy, Dairy Calves	12,309	12,023	5,871
Dairy Heifers (for sale)	884	-	3,360
Dairy Replacement Heifers	994	1,534	1,491
Dairy Steers	8,354	1,437	10,820
Hogs, Farrow-Fin, Raised Hogs	1,990	8,401	-
Cull breeding livestock	57,288	44,349	39,436
Misc. livestock income	241	30	-
Direct & CC govt payments	9,771	-	24,840
Other government payments	60,855	57,632	58,984
Custom work income	5,970	2,870	5,551
Patronage dividends, cash	16,973	10,351	13,498
Insurance income	15,186	5,576	37,290
Cash from hedging accts	571	-	256
Other farm income	33,836	13,247	15,037
Gross Cash Farm Income	1,587,106	1,212,965	1,328,850

Table 46 (continued)

Farm Income Statement

Michigan Dairy, 250 Plus Cows, 2002

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

	Avg. Of All Farms	Low 25%	High 25%
Number of farms	38	9	10
Cash Farm Expense			
Seed	25,474	16,150	26,601
Fertilizer	38,356	19,890	56,763
Crop chemicals	21,993	10,106	14,554
Crop insurance	916	389	10
Drying fuel	115	-	278
Irrigation energy	262	-	-
Crop custom hire	376	-	-
Crop marketing	127	-	-
Crop miscellaneous	2,376	470	698
Feeder livestock purchase	4,987	-	18,075
Purchased feed	342,544	331,129	258,493
Breeding fees	12,389	6,406	8,416
Veterinary	48,822	49,934	25,957
BST	9,068	10,121	3,807
Livestock supplies	55,387	41,686	40,469
DHIA	1,552	686	446
Livestock leases	5,556	-	368
Hauling and trucking	8,315	3,932	5,724
Livestock marketing	50,262	44,623	38,804
Bedding	4,709	2,668	-
Livestock miscellaneous	746	-	945
Interest	72,630	83,466	74,729
Packaging and supplies	4,454	-	-
Fuel & oil	28,582	24,537	29,763
Repairs	71,443	61,131	73,914
Custom hire	50,347	59,585	34,675
Hired labor	295,810	239,453	200,003
Land rent	56,772	28,022	79,850
Machinery & bldg leases	11,289	9,589	8,497
Real estate taxes	14,276	13,527	18,414
Personal property taxes	27	-	101
Farm insurance	19,582	14,860	26,183
Utilities	30,956	30,704	26,862
Dues & professional fees	7,143	8,434	6,371
Hedging account deposits	132	-	-
Miscellaneous	51,588	35,803	65,570
Total cash expense	1,349,362	1,147,301	1,145,341
Net cash farm income	237,744	65,663	183,508
Inventory Changes			
Crops and feed	3,236	-5,067	24,764
Market livestock	-2,213	-222	-9,270
Accounts receivable	-13,868	-10,329	22,717
Prepaid expenses and supplies	-36,770	-5,539	3,157
Accounts payable	-20,656	-47,361	-8,277
Total inventory change	-70,271	-68,518	33,091
Net operating profit	167,473	-2,855	216,600
Depreciation and Other Capital Adjustments			
Breeding livestock	-12,810	-35,879	36,349
Machinery and equipment	-88,853	-81,987	-61,443
Buildings and improvements	-47,532	-31,652	-45,456
Other farm capital	6,095	2,648	7,076
Total depr. and other capital adj	-143,100	-146,869	-63,474
Net farm income	24,373	-149,724	153,125

Table 47**Inventory Changes**

Michigan Dairy, 250 Plus Cows, 2002
(Farms Sorted By Rate of Return on Assets - Cost)

	Avg. Of All Farms	Low 25%	High 25%
Number of farms	38	9	10
Net cash farm income	237,744	65,663	183,508
Crops and Feed			
Ending inventory	283,363	225,494	255,604
Beginning inventory	280,127	230,561	230,839
Inventory change	3,236	-5,067	24,764
Market Livestock			
Ending inventory	14,957	4,535	34,770
Beginning inventory	17,170	4,757	44,040
Inventory change	-2,213	-222	-9,270
Accts Receivable & Other Current Assets			
Ending inventory	87,889	39,925	134,348
Beginning inventory	101,757	50,255	111,631
Inventory change	-13,868	-10,329	22,717
Prepaid Expenses and Supplies			
Ending inventory	55,599	9,592	46,779
Beginning inventory	92,369	15,131	43,622
Inventory change	-36,770	-5,539	3,157
Accounts Payable & Accrued Expenses			
Beginning inventory	35,107	61,615	24,069
Ending inventory	55,763	108,976	32,347
Inventory change	-20,656	-47,361	-8,277
Total inventory change	-70,271	-68,518	33,091
Net operating profit	167,473	-2,855	216,600

Table 48 Depreciation and Other Capital Adjustments
Michigan Dairy, 250 Plus Cows, 2002
(Farms Sorted By Rate of Return on Assets - Cost)

	Avg. Of All Farms	Low 25%	High 25%
Number of farms	38	9	10
Net operating profit	167,473	-2,855	216,600
Breeding Livestock			
Ending inventory	851,503	795,440	661,974
Capital sales	6,331	6,785	-
Beginning inventory	781,587	748,298	618,695
Capital purchases	89,057	89,806	6,930
Depreciation, capital adjust.	-12,810	-35,879	36,349
Machinery and Equipment			
Ending inventory	364,953	242,909	403,340
Capital sales	3,893	2,172	5,652
Beginning inventory	357,149	254,029	330,195
Capital purchases	100,550	73,039	140,239
Depreciation, capital adjust.	-88,853	-81,987	-61,443
Buildings and Improvements			
Ending inventory	473,324	300,667	325,769
Capital sales	158	-	600
Beginning inventory	335,173	262,005	282,299
Capital purchases	185,841	70,314	89,526
Depreciation, capital adjust.	-47,532	-31,652	-45,456
Other Capital Assets			
Ending inventory	83,668	75,926	26,730
Capital sales	7,054	10,766	794
Beginning inventory	69,413	66,395	14,884
Capital purchases	15,214	17,649	5,564
Depreciation, capital adjust.	6,095	2,648	7,076
Total depreciation, capital adj.	-143,100	-146,869	-63,474
Net farm income	24,373	-149,724	153,125

Table 49

Profitability Measures
Michigan Dairy, 250 Plus Cows, 2002
(Farms Sorted By Rate of Return on Assets - Cost)

	Avg. Of All Farms	Low 25%	High 25%
Number of farms	38	9	10
Profitability (assets valued at cost)			
Net farm income	24,373	-149,724	153,125
Labor and management earnings	-46,461	-181,087	102,504
Rate of return on assets	0.0 %	-7.6 %	6.9 %
Rate of return on equity	-6.2 %	-44.9 %	8.2 %
Operating profit margin	0.1 %	-18.1 %	12.8 %
Asset turnover rate	48.1 %	41.7 %	53.6 %
Interest on farm net worth	70,834	31,363	50,621
Farm interest expense	73,655	84,149	74,733
Value of operator lbr and mgmt.	97,131	84,908	83,886
Return on farm assets	898	-150,483	143,973
Average farm assets	2,524,918	1,989,419	2,101,496
Return on farm equity	-72,757	-234,632	69,240
Average farm equity	1,180,567	522,721	843,689
Value of farm production	1,213,920	830,339	1,126,842
	Avg. Of All Farms	Low 25%	High 25%
Number of farms	38	9	10
Profitability (assets valued at market)			
Net farm income	119,382	-63,588	254,341
Labor and management earnings	-16,483	-154,988	143,412
Rate of return on assets	2.6 %	-2.2 %	7.9 %
Rate of return on equity	1.0 %	-9.7 %	9.2 %
Operating profit margin	7.9 %	-7.7 %	21.8 %
Asset turnover rate	33.5 %	27.8 %	36.3 %
Interest on farm net worth	135,865	91,399	110,928
Farm interest expense	73,655	84,149	74,733
Value of operator lbr and mgmt.	97,131	84,908	83,886
Return on farm assets	95,907	-64,347	245,188
Average farm assets	3,628,368	2,990,020	3,106,610
Return on farm equity	22,252	-148,496	170,455
Average farm equity	2,264,424	1,523,322	1,848,803
Value of farm production	1,213,920	830,339	1,126,842

Table 50

Liquidity Measures

Michigan Dairy, 250 Plus Cows, 2002
(Farms Sorted By Rate of Return on Assets - Cost)

	Avg. Of All Farms	Low 25%	High 25%
Number of farms	38	9	10
Liquidity (cash)			
Net cash farm income	237,744	65,663	183,508
Net nonfarm income	28,741	11,449	84,503
Family living and taxes	102,328	44,458	73,742
Real estate principal payments	41,224	35,498	38,332
Cash available for interm. debt	122,933	-2,844	155,937
Average intermediate debt	467,283	438,145	361,988
Years to turnover interm. debt	3.8	**	2.3
Expense as a % of income	85 %	95 %	86 %
Interest as a % of income	5 %	7 %	6 %
Liquidity (accrual)			
Total accrual farm income	1,574,261	1,197,346	1,367,061
Total accrual operating expense	1,406,788	1,200,201	1,150,462
Net accrual operating income	167,473	-2,855	216,600
Net nonfarm income	28,741	11,449	84,503
Family living and taxes	102,328	44,458	73,742
Real estate principal payments	41,224	35,498	38,332
Available for intermediate debt	52,662	-71,363	189,028
Average intermediate debt	467,283	438,145	361,988
Years to turnover interm. debt	8.9	**	1.9
Expense as a % of income	89 %	100 %	84 %
Interest as a % of income	5 %	7 %	5 %

** Income insufficient to meet debt servicing requirements

Table 51

Balance Sheet at Cost Values
Michigan Dairy, 250 Plus Cows, 2002
(Farms Sorted By Rate of Return on Assets - Cost)

	Avg. Of All Farms		Low 25%		High 25%	
Number of farms	38		9		10	
	Beginning	Ending	Beginning	Ending	Beginning	Ending
Assets						
Current Farm Assets						
Cash and checking balance	39,862	35,600	35,277	23,353	29,550	32,432
Prepaid expenses & supplies	92,369	55,599	15,131	9,592	43,622	46,779
Growing crops	14,357	15,616	8,726	7,271	12,326	15,934
Accounts receivable	81,926	61,179	40,195	30,813	81,003	83,878
Hedging accounts	214	1,833	0	508	525	1,610
Crops held for sale or feed	280,127	283,363	230,561	225,494	230,839	255,604
Crops under government loan	0	0	0	0	0	0
Market livestock held for sale	17,170	14,957	4,757	4,535	44,040	34,770
Other current assets	5,261	9,260	1,333	1,333	17,778	32,927
Total current farm assets	531,286	477,409	335,980	302,899	459,682	503,932
Intermediate Farm Assets						
Breeding livestock	781,587	851,503	748,298	795,440	618,695	661,974
Machinery and equipment	357,093	364,897	254,029	242,909	330,195	403,340
Titled vehicles	56	56	0	0	0	0
Other intermediate assets	62,580	73,828	66,263	75,794	7,613	10,328
Total intermediate farm assets	1,201,316	1,290,283	1,068,589	1,114,143	956,503	1,075,641
Long Term Farm Assets						
Farm land	345,923	378,448	297,145	297,145	246,772	328,722
Buildings and improvements	335,173	473,324	262,005	300,667	282,299	325,769
Other long-term assets	6,833	9,841	132	132	7,271	16,402
Total long-term farm assets	687,929	861,613	559,282	597,944	536,342	670,893
Total Farm Assets	2,420,531	2,629,305	1,963,852	2,014,986	1,952,527	2,250,466
Total Nonfarm Assets	86,350	87,435	10,626	12,144	12,142	12,142
Total Assets	2,506,881	2,716,740	1,974,477	2,027,130	1,964,669	2,262,608
Liabilities						
Current Farm Liabilities						
Accrued interest	2,199	3,224	1,862	2,546	3,557	3,560
Accounts payable	32,908	52,539	59,753	106,431	20,513	28,786
Current notes	113,953	157,930	122,828	144,833	97,126	99,678
Government crop loans	0	0	0	0	0	0
Principal due on term debt	113,377	124,714	109,354	115,429	86,827	83,542
Total current farm liabilities	262,437	338,407	293,797	369,238	208,022	215,566
Total intermediate farm liabs	351,171	426,510	352,892	367,728	302,589	328,136
Total long term farm liabilities	613,438	696,738	747,644	802,096	683,705	777,595
Total farm liabilities	1,227,046	1,461,656	1,394,333	1,539,062	1,194,316	1,321,298
Total nonfarm liabilities	8,329	7,487	0	0	0	0
Total liabilities	1,235,376	1,469,142	1,394,333	1,539,062	1,194,316	1,321,298
Net worth (farm and nonfarm)	1,271,506	1,247,597	580,144	488,068	770,353	941,310
Net worth change		-23,908		-92,076		170,957
Ratio Analysis						
Current farm liabilities / assets	49 %	71 %	87 %	122 %	45 %	43 %
Curr. & interm farm liab. / assets	35 %	43 %	46 %	52 %	36 %	34 %
Long term farm liab. / assets	89 %	81 %	134 %	134 %	127 %	116 %
Total debt to asset ratio	49 %	54 %	71 %	76 %	61 %	58 %

Table 52

Balance Sheet at Market Values
Michigan Dairy, 250 Plus Cows, 2002
(Farms Sorted By Rate of Return on Assets - Cost)

	Avg. Of All Farms		Low 25%		High 25%	
Number of farms	38		9		10	
	Beginning	Ending	Beginning	Ending	Beginning	Ending
Assets						
Current Farm Assets						
Cash and checking balance	39,862	35,600	35,277	23,353	29,550	32,432
Prepaid expenses & supplies	92,369	55,599	15,131	9,592	43,622	46,779
Growing crops	14,357	15,616	8,726	7,271	12,326	15,934
Accounts receivable	81,926	61,179	40,195	30,813	81,003	83,878
Hedging accounts	214	1,833	0	508	525	1,610
Crops held for sale or feed	280,127	283,363	230,561	225,494	230,839	255,604
Crops under government loan	0	0	0	0	0	0
Market livestock held for sale	17,170	14,957	4,757	4,535	44,040	34,770
Other current assets	5,261	9,260	1,333	1,333	17,778	32,927
Total current farm assets	531,286	477,409	335,980	302,899	459,682	503,932
Intermediate Farm Assets						
Breeding livestock	840,017	914,020	748,214	795,440	618,695	672,064
Machinery and equipment	567,066	610,921	444,790	495,806	591,339	707,715
Titled vehicles	737	737	0	0	0	0
Other intermediate assets	62,605	73,852	66,366	75,897	7,613	10,328
Total intermediate farm assets	1,470,425	1,599,530	1,259,371	1,367,143	1,217,647	1,390,106
Long Term Farm Assets						
Farm land	997,693	1,060,084	983,244	1,015,056	801,325	904,375
Buildings and improvements	464,968	628,454	342,657	373,425	421,108	491,372
Other long-term assets	11,593	15,295	132	132	7,271	16,402
Total long-term farm assets	1,474,254	1,703,833	1,326,033	1,388,613	1,229,704	1,412,149
Total Farm Assets	3,475,964	3,780,772	2,921,385	3,058,655	2,907,033	3,306,187
Total Nonfarm Assets	138,437	155,677	144,444	201,518	61,545	57,700
Total Assets	3,614,401	3,936,449	3,065,829	3,260,173	2,968,578	3,363,887
Liabilities						
Current Farm Liabilities						
Accrued interest	2,199	3,224	1,862	2,546	3,557	3,560
Accounts payable	32,908	52,539	59,753	106,431	20,513	28,786
Current notes	113,953	157,930	122,828	144,833	97,126	99,678
Government crop loans	0	0	0	0	0	0
Principal due on term debt	113,377	124,714	109,354	115,429	86,827	83,542
Total current farm liabilities	262,437	338,407	293,797	369,238	208,022	215,566
Total intermediate farm liabs	351,171	426,510	352,892	367,728	302,589	328,136
Total long term farm liabilities	613,438	696,738	747,644	802,096	683,705	777,595
Total farm liabilities	1,227,046	1,461,656	1,394,333	1,539,062	1,194,316	1,321,298
Total nonfarm liabilities	8,329	7,487	0	0	0	0
Total liabs excluding deferreds	1,235,376	1,469,142	1,394,333	1,539,062	1,194,316	1,321,298
Total deferred liabilities	19,073	20,101	0	0	0	0
Total liabilities	1,254,449	1,489,244	1,394,333	1,539,062	1,194,316	1,321,298
Retained earnings	1,271,506	1,247,597	580,144	488,068	770,353	941,310
Market valuation equity	1,088,446	1,199,608	1,091,352	1,233,043	1,003,908	1,101,279
Net worth (farm and nonfarm)	2,359,952	2,447,205	1,671,496	1,721,111	1,774,262	2,042,589
Net worth excluding deferreds	2,379,025	2,467,307	1,671,496	1,721,111	1,774,262	2,042,589
Net worth change		87,253		49,616		268,327
Ratio Analysis						
Current farm liabilities / assets	49 %	71 %	87 %	122 %	45 %	43 %
Curr. & interm farm liab. / assets	31 %	37 %	41 %	44 %	30 %	29 %
Long term farm liab. / assets	42 %	41 %	56 %	58 %	56 %	55 %
Total debt to asset ratio	35 %	38 %	45 %	47 %	40 %	39 %
Debt to assets excl deferreds	34 %	37 %	45 %	47 %	40 %	39 %

Table 53**Statement Of Cash Flows**

Michigan Dairy, 250 Plus Cows, 2002
(Farms Sorted By Rate of Return on Assets - Cost)

	Avg. Of All Farms	Low 25%	High 25%
Number of farms	38	9	10
Beginning cash (farm & nonfarm)	39,862	35,277	29,550
Cash From Operating Activities			
Gross cash farm income	1,587,106	1,212,965	1,328,850
Net nonfarm income	28,741	11,449	84,503
Total cash farm expense	-1,349,362	-1,147,301	-1,145,341
Apparent family living expense	-95,798	-42,989	-64,029
Income and social security tax	-6,530	-1,470	-9,713
Cash from operations	164,157	32,654	194,269
Cash From Investing Activities			
Sale of breeding livestock	6,331	6,785	-
Sale of machinery & equipment	3,893	2,172	5,652
Sale of titled vehicles	-	-	-
Sale of farm land	971	4,102	-
Sale of farm buildings	158	-	600
Sale of other farm assets	7,054	10,766	794
Sale of nonfarm assets	3,290	333	-
Purchase of breeding livestock	-89,057	-89,806	-6,930
Purchase of machinery & equip.	-100,550	-73,039	-140,239
Purchase of titled vehicles	-	-	-
Purchase of farm land	-26,658	-	-54,000
Purchase of farm buildings	-185,841	-70,314	-89,526
Purchase of other farm assets	-15,214	-17,649	-5,564
Purchase of nonfarm assets	-2,795	-278	-3,357
Cash from investing activities	-398,417	-226,928	-292,570
Cash From Financing Activities			
Money borrowed	475,840	410,317	259,127
Cash gifts and inheritances	22,079	85,431	-
Principal payments	-262,068	-312,949	-140,422
Dividends paid	-	-	-
Gifts given	-5,852	-449	-17,522
Cash from financing activities	229,998	182,350	101,182
Net change in cash balance	-4,262	-11,924	2,882
Ending cash (farm & nonfarm)	35,600	23,353	32,432

Table 54**Financial Standards Measures**

Michigan Dairy, 250 Plus Cows, 2002
 (Farms Sorted By Rate of Return on Assets - Cost)

	Avg. Of All Farms	Low 25%	High 25%
Number of farms	38	9	10
Liquidity			
Current ratio	1.41	0.82	2.34
Working capital	139,002	-66,339	288,366
Solvency (market)			
Farm debt to asset ratio	39 %	50 %	40 %
Farm equity to asset ratio	61 %	50 %	60 %
Farm debt to equity ratio	64 %	101 %	67 %
Profitability (cost)			
Rate of return on farm assets	0.0 %	-7.6 %	6.9 %
Rate of return on farm equity	-6.2 %	-44.9 %	8.2 %
Operating profit margin	0.1 %	-18.1 %	12.8 %
Net farm income	24,373	-149,724	153,125
Repayment Capacity			
Term debt coverage ratio	86 %	9 %	211 %
Capital replacement margin	-22,756	-149,728	144,295
Efficiency			
Asset turnover rate (cost)	48.1 %	41.7 %	53.6 %
Operating expense ratio	84.7 %	93.2 %	78.7 %
Depreciation expense ratio	9.1 %	12.3 %	4.6 %
Interest expense ratio	4.7 %	7.0 %	5.5 %
Net farm income ratio	1.5 %	-12.5 %	11.2 %

Table 55**Operator and Labor Information**

Michigan Dairy, 250 Plus Cows, 2002
(Farms Sorted By Rate of Return on Assets - Cost)

	Avg. Of All Farms	Low 25%	High 25%
Number of farms	38	9	10
Operator Information			
Average number of operators	1.8	2.1	1.7
Average age of operators	51.9	51.1	48.8
Average number of years farming	29.3	29.3	25.3
Results Per Operator			
Working capital	75,458	-31,424	169,627
Total assets (market)	2,136,930	1,544,293	1,978,757
Total liabilities	808,447	729,029	777,234
Net worth (market)	1,328,483	815,263	1,201,523
Net worth excl deferred liabs	1,339,395	815,263	1,201,523
Gross farm income	854,599	567,164	804,154
Total farm expense	841,367	638,086	714,080
Net farm income	13,231	-70,922	90,074
Net nonfarm income	15,602	5,423	49,708
Family living & tax withdrawals	55,550	21,059	43,378
Total acres owned	360.9	306.8	340.8
Total crop acres	691.7	483.2	820.6
Crop acres owned	293.1	257.5	297.8
Crop acres cash rented	398.6	225.7	522.7
Crop acres share rented	-	-	-
Total pasture acres	2.2	-	-
Labor Analysis			
Number of farms	38	9	10
Total unpaid labor hours	5,302	5,718	4,760
Total hired labor hours	22,257	20,255	18,605
Total labor hours per farm	27,559	25,973	23,365
Unpaid hours per operator	2,878	2,708	2,800
Value of farm production / hour	44.05	31.97	48.23
Net farm income / unpaid hour	4.60	-26.19	32.17
Partnerships			
Number of farms	17	3	3
Number of operators	2.2	-	-
Owner withdrawals per farm	-	-	-
Withdrawals per operator	-	-	-
Corporations			
Number of farms	5	2	2
Number of operators	2.0	-	-

Table 56

Financial Summary

Michigan Dairy, 250 Plus Cows, 2002
(Farms Sorted By Rate of Return on Assets - Cost)

	Avg. Of All Farms	Low 25%	High 25%
Number of farms	38	9	10
Income Statement			
Gross cash farm income	1,587,106	1,212,965	1,328,850
Total cash farm expense	1,349,362	1,147,301	1,145,341
Net cash farm income	237,744	65,663	183,508
Inventory change	-70,271	-68,518	33,091
Depreciation and capital adjust	-143,100	-146,869	-63,474
Net farm income	24,373	-149,724	153,125
Profitability (cost)			
Labor and management earnings	-46,461	-181,087	102,504
Rate of return on assets	0.0 %	-7.6 %	6.9 %
Rate of return on equity	-6.2 %	-44.9 %	8.2 %
Operating profit margin	0.1 %	-18.1 %	12.8 %
Asset turnover rate	48.1 %	41.7 %	53.6 %
Profitability (market)			
Labor and management earnings	-16,483	-154,988	143,412
Rate of return on assets	2.6 %	-2.2 %	7.9 %
Rate of return on equity	1.0 %	-9.7 %	9.2 %
Operating profit margin	7.9 %	-7.7 %	21.8 %
Asset turnover rate	33.5 %	27.8 %	36.3 %
Liquidity			
Term debt coverage ratio	86.0 %	9.5 %	211.4 %
Expense as a percent of income	89.4 %	100.2 %	84.2 %
Interest as a percent of income	4.7 %	7.0 %	5.5 %
Solvency (cost)			
Number of farms	38	9	10
Ending farm assets	2,629,305	2,014,986	2,250,466
Ending farm liabilities	1,461,656	1,539,062	1,321,298
Ending total assets	2,716,740	2,027,130	2,262,608
Ending total liabilities	1,469,142	1,539,062	1,321,298
Ending net worth	1,247,597	488,068	941,310
Net worth change	-23,908	-92,076	170,957
Ending farm debt to asset ratio	56 %	76 %	59 %
Beg total debt to asset ratio	49 %	71 %	61 %
End total debt to asset ratio	54 %	76 %	58 %
Solvency (market)			
Number of farms	38	9	10
Ending farm assets	3,780,772	3,058,655	3,306,187
Ending farm liabilities	1,481,762	1,539,062	1,321,298
Ending total assets	3,936,449	3,260,173	3,363,887
Ending total liabilities	1,489,244	1,539,062	1,321,298
Ending net worth	2,447,205	1,721,111	2,042,589
Net worth change	87,253	49,616	268,327
Ending farm debt to asset ratio	39 %	50 %	40 %
Beg total debt to asset ratio	35 %	45 %	40 %
End total debt to asset ratio	38 %	47 %	39 %
Nonfarm Information			
Net nonfarm income	28,741	11,449	84,503
Crop Acres			
Total acres owned	665	648	579
Total crop acres	1,274	1,020	1,395
Total crop acres owned	540	544	506
Total crop acres cash rented	734	477	889
Total crop acres share rented		-	-