

# *Staff Paper*

Business Analysis Summary  
For Dairy Farms

By

Sherrill B. Nott

Staff Paper 97-31

July 1997



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# BUSINESS ANALYSIS SUMMARY FOR DAIRY FARMS

## 1996 Telfarm/MicroTel Data

by

Sherrill B. Nott<sup>1</sup>

### Introduction

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<sup>1</sup>Co-workers in the Telfarm/MicroTel project were: R. Hepp, J. Jones, D. Stein, T. Purdy, S. Harsh, M. Kelsey, R. Betz, G. Schwab, A. Shapley, W. Schauer, and G. Kole with the assistance of MSU Extension Agents in Michigan.

## Data Source

Farm types were assigned using the 1992 Census of Agriculture's Standard Industrial Classification (SIC) definitions. Basically, any farm with 50 percent or more of value of farm sales from one item becomes a farm of that type. Dairy farms have 50 percent or more of value of combined sales from milk and cull dairy livestock.

This report is a summary of the financial and production records kept by dairy farmers enrolled in the Telfarm/MicroTel record program through Michigan State University Extension. Farm records were included if a Finan<sup>2</sup> summary was completed on 1996 data including beginning and ending balance sheets, income and expenses plus crop acres and yields. The summary was included if cash discrepancy was less than 10 % of gross cash inflow, and if the debt discrepancy was less than \$1,000. A few farms were included which met this criteria but were not enrolled in Telfarm.

This report has three purposes: 1) to provide statistical information about the financial results of dairy farms during 1996; 2) to provide production costs for comparative analysis and forward planning; and 3) to provide information on the trends in resource use, income and costs during the last few years. Following trends will be a problem this year, as Telfarm/MicroTel and the Department of Agricultural Economics adopted Finansum,<sup>3</sup> a different software package for doing annual analysis. Some bridging inferences can be drawn from 1995 information. For 1995, the old method of analysis calculation was reported in Agricultural Economics Report Number 589, Business Analysis Summary for Specialized Michigan Dairy Farms, 1995 Telfarm Data. The new method was reported in Staff Paper No. 96-86, Michigan Farm Database, New Directions for 1995; it contains averages of 106 dairy farms calculated with Finansum.

Finansum allows rapid analysis of group averages with some degree of choice over how the results are presented. I chose to show the average of the high or low 25 percent by net income, but only if the 25 percent meant 6 or more farms. A farm was accepted in the average regardless of whether it was a proprietorship, partnership, limited liability company, or corporation. Finansum will produce a variety of report options; I included a subset in the publication.

Added copies of this paper can be printed off from your internet browser equipped with Adobe's Acrobat reader. Go to [www.aec.msu.edu/agecon/](http://www.aec.msu.edu/agecon/) and find the screen area on full text publications. The numerical tables can be printed from [www.msu.edu/user/nott/](http://www.msu.edu/user/nott/)

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<sup>2</sup>Finan = financial analysis, one of the parts of Finpack, a financial software package from the Center for Farm Financial Management at the University of Minnesota.

<sup>3</sup>Finansum provides summarization calculations for data files generated by Finan. It also comes from the Center for Farm Financial Management.

Table 1.

Cow and Crop Production Summary, 1996  
**Michigan Dairy Farms, 48 Counties**  
(Farms sorted by Net Farm Income)

	Average Of All Farms	Average Of Low 25%	Average Of High 25%
<b>Dairy</b>			
Number of farms	146	37	37
Avg. number of Cows	157.6	168.8	241.3
Milk produced per Cow	20221	18843	22819
Percent of barn capacity	94.5	90.8	96.8
Avg. milk price per cwt.	14.87	14.80	14.80
<b>ACREAGE SUMMARY</b>			
Total Acres Owned	452	470	603
Total Crop Acres	601	682	751
Crop Acres Owned	379	400	526
Crop Acres Cash Rented	221	281	222
Crop Acres Share Rented	1	0	3
Total Pasture Acres	2	4	1
<b>AVERAGE PRICE RECEIVED (Cash Sales Only)</b>			
Corn per bu.	3.12	3.25	3.13
Wheat, Winter per bu.	3.59	3.88	3.13
Soybeans per bu.	6.89	6.91	-
Oats per bu.	2.18	-	-
Hay, Mixed per ton	19.82	-	-
Hay, Alfalfa per ton	74.44	-	-
<b>AVERAGE YIELD PER ACRE</b>			
Hay, Alfalfa (ton)	3.78	3.40	4.44
Corn (bu.)	92.45	88.73	105.13
Corn Silage (ton)	11.93	11.25	14.06
Soybeans (bu.)	30.07	29.11	32.75
Haylage, Alfalfa (ton)	5.41	-	-
Wheat, Winter (bu.)	35.86	34.42	38.39
Hay, Grass (ton)	2.74	2.62	2.39
Hay, Mixed (ton)	2.78	-	-
Oats (bu.)	59.66	70.43	-
Hay, Mixed Alfalfa/Grass (ton)	5.47	-	-

**Table 2. FARM INCOME STATEMENT, 1996**  
**Michigan Dairy Farms, 48 Counties**  
(Farms sorted by Net Farm Income)

	Average Of All Farms	Average Of Low 25%	Average Of High 25%
Number of Farms	146	37	37
<b>CASH FARM INCOME</b>			
Asparagus	78	-	-
Barley	3	14	-
Green Beans	199	-	785
Navy Beans	527	170	1368
Cordwood	345	853	-
Corn	8754	13187	8074
Corn Silage	211	172	16
Seed Corn	447	-	-
Cucumbers	146	-	499
Alfalfa Hay	282	52	330
Mixed Hay	781	1224	760
Alfalfa Haylage	136	-	458
Mixed Haylage	503	633	217
Oats	55	75	23
Potatoes	2	7	-
Rye	16	-	62
Soybeans	4824	9654	4527
Speltz	1	3	-
Straw	54	59	23
Sugar Beets	1217	2640	2161
Timber	30	117	-
Spring Wheat	19	-	77
Winter Wheat	2636	4382	2789
Beef Bulls	13	25	-
Beef Calves	89	51	104
Finish Beef Calves	288	98	45
Milk	473763	470807	815003
Dairy Calves	2252	2549	3580
Dairy Heifers (for sale)	416	-	-
Dairy Replacement Heifers	141	90	90
Dairy Steers	6673	11273	6009
Raised Hogs	218	-	-
Finish Feeder Pigs	77	-	25
Boarding Horses	4	18	-
Aquaculture	81	8	81
Finish Cull Cows	33	90	-
Cull breeding livestock	16925	15282	29750
Misc. livestock income	204	62	15
Deficiency payments	1360	2312	1231
CRP payments	132	-	413
Other government payments	8712	10960	11276
Custom work income	1277	1156	930
Patronage dividends, cash	2088	2008	3524
Insurance income	1174	2309	1519
Cash from hedging accts	23	-	-
Other farm income	4463	3353	6778
<b>Gross Cash Farm Income</b>	<b>541674</b>	<b>555690</b>	<b>902545</b>

**Table 2. FARM INCOME STATEMENT, 1996 (Continued)**  
**Michigan Dairy Farms, 48 Counties**  
(Farms sorted by Net Farm Income)

	Average Of All Farms	Average Of Low 25%	Average Of High 25%
Number of Farms	146	37	37
<b>CASH FARM EXPENSE</b>			
Seed	9798	10611	15258
Fertilizer	19401	23149	26239
Crop chemicals	11936	15226	16898
Crop insurance	175	433	116
Drying fuel	241	468	150
Irrigation energy	302	-	601
Crop marketing	67	43	12
Crop miscellaneous	1099	549	2020
Feeder livestock purchase	272	30	7
Purchased feed	132915	142712	241359
Breeding fees	4254	3805	7814
Veterinary	16987	20064	26350
Livestock supplies	16358	18146	24736
Livestock leases	734	252	2300
Livestock marketing	18274	17916	31104
Interest	25888	38806	24505
Fuel & oil	11436	12024	14399
Repairs	29912	33165	40104
Custom hire	8105	9438	12944
Hired labor	67500	70256	114263
Land rent	14327	21815	18203
Machinery & bldg leases	5000	6407	6350
Real estate taxes	4672	4730	5930
Personal property taxes	204	15	259
Farm insurance	7244	9155	8478
Utilities	11900	12922	16886
Dues & professional fees	2900	3765	3297
Hedging account deposits	235	24	795
Miscellaneous	23019	20724	30932
Total cash expense	445156	496650	692308
Net cash farm income	96519	59040	210237
<b>INVENTORY CHANGES</b>			
Crops and feed	-4319	-26512	6677
Market livestock	-1235	-2437	-3130
Accounts receivable	3623	8791	3387
Prepaid expenses and supplies	4858	186	17657
Accounts payable	-1925	-9806	2860
Total inventory change	1002	-29779	27452
Net operating profit	97521	29261	237688
<b>DEPRECIATION AND OTHER CAPITAL ADJUSTMENTS</b>			
Breeding livestock	1127	-14256	10709
Machinery and equipment	-30316	-33476	-49243
Buildings and improvements	-13165	-28404	-8715
Other farm capital	2384	1600	6633
Total depr. and other capital adj	-39970	-74536	-40616
Net farm income	57551	-45275	197072

Table 3. INVENTORY CHANGES, 1996  
**Michigan Dairy Farms, 48 Counties**  
(Farms sorted by Net Farm Income)

	Average Of All Farms	Average Of Low 25%	Average Of High 25%
Number of Farms	146	37	37
Net cash farm income	96519	59040	210237
CROPS AND FEED			
Ending inventory	104170	103983	161917
Beginning inventory	108489	130495	155240
Inventory change	-4319	-26512	6677
MARKET LIVESTOCK			
Ending inventory	6353	9216	5131
Beginning inventory	7588	11653	8260
Inventory change	-1235	-2437	-3130
ACCTS RECEIVABLE & OTHER CURRENT ASSETS			
Ending inventory	19968	24541	33389
Beginning inventory	16344	15750	30002
Inventory change	3623	8791	3387
PREPAID EXPENSES AND SUPPLIES			
Ending inventory	14935	10101	39579
Beginning inventory	10077	9916	21923
Inventory change	4858	186	17657
ACCOUNTS PAYABLE			
Beginning inventory	7670	10196	6338
Ending inventory	9595	20002	3478
Inventory change	-1925	-9806	2860
Total inventory change	1002	-29779	27452
Net operating profit	97521	29261	237688



Table 4. DEPRECIATION AND OTHER CAPITAL ADJUSTMENTS, 1996  
**Michigan Dairy Farms, 48 Counties**  
(Farms sorted by Net Farm Income)

	Average Of All Farms	Average Of Low 25%	Average Of High 25%
Number of Farms	146	37	37
Net operating profit	97521	29261	237688
BREEDING LIVESTOCK			
Ending inventory	252594	298509	354741
Capital sales	4905	12340	4457
Beginning inventory	237350	283258	324224
Capital purchases	19021	41846	24265
Depreciation, capital adj.	1127	-14256	10709
MACHINERY AND EQUIPMENT			
Ending inventory	125568	162820	185415
Capital sales	1360	559	2298
Beginning inventory	120525	149343	184113
Capital purchases	36720	47513	52842
Depreciation, capital adj.	-30316	-33476	-49243
BUILDINGS AND IMPROVEMENTS			
Ending inventory	116374	149326	193598
Capital sales	50	196	-
Beginning inventory	111116	141133	181857
Capital purchases	18472	36793	20456
Depreciation, capital adj.	-13165	-28404	-8715
OTHER CAPITAL ASSETS			
Ending inventory	21910	21829	36768
Capital sales	8456	14673	11132
Beginning inventory	21309	23475	31195
Capital purchases	6673	11427	10072
Depreciation, capital adj.	2384	1600	6633
Total depreciation, capital adj.	-39970	-74536	-40616
Net farm income	57551	-45275	197072

Table 5. **PROFITABILITY AND LIQUIDITY ANALYSIS, 1996**  
**Michigan Dairy Farms, 48 Counties**  
**(Farms sorted by Net Farm Income)**

	Avg. Of All Farms	Avg. Of Low 25 %	Avg. Of High 25 %	Avg. Of All Farms	Avg. Of Low 25 %	Avg. Of High 25 %
Number of Farms	146	37	37	146	37	37
<b>PROFITABILITY</b>						
	----- Cost -----			----- Market -----		
Net farm income	57551	-45275	197072	78315	-16889	232796
Labor and management earnings	28152	-72166	143686	30538	-64856	157753
Rate of return on assets	4.8 %	-5.2 %	13.7 %	5.3 %	-1.7 %	12.9 %
Rate of return on equity	3.0 %	-20.2 %	16.3 %	4.4 %	-7.6 %	14.4 %
Operating profit margin	9.9 %	-13.3 %	25.0 %	15.0 %	-5.8 %	30.2 %
Asset turnover rate	48.9 %	39.3 %	55.0 %	35.4 %	28.7 %	42.5 %
Interest on farm net worth	29399	26890	53386	47777	47967	75043
Farm interest expense	26089	38815	24952	26089	38815	24952
Value of operator lbr and mgmt.	43192	43858	52441	43192	43858	52441
Return on farm assets	40448	-50318	169583	61212	-21932	205307
Average farm assets	834053	962327	1234778	1152241	1319275	1596607
Return on farm equity	14359	-89133	144631	35123	-60747	180355
Average farm equity	482718	441522	889071	796033	798470	1250720
Value of farm production	407683	378534	678823	407683	378534	678823
		Average Of All Farms	Average Of Low 25 %	Average Of High 25 %		
Number of Farms		146	37	37		
<b>LIQUIDITY (Cash)</b>						
Net cash farm income		96519	59040	210237		
Net nonfarm income		5906	8653	3447		
Family living and taxes		54108	32433	108185		
Real estate principal payments		8608	11648	9712		
Cash available for interm. debt		39709	23613	95786		
Average intermediate debt		134300	202017	129254		
Years to turnover interm. debt		3.4	8.6	1.3		
Expense as a % of income		82 %	89 %	77 %		
Interest as a % of income		5 %	7 %	3 %		
<b>LIQUIDITY (Accrual)</b>						
Total accrual farm income		539743	535532	909479		
Total accrual farm expense		442223	506271	671791		
Net accrual operating income		97521	29261	237688		
Net nonfarm income		5906	8653	3447		
Family living and taxes		54108	32433	108185		
Real estate principal payments		8608	11648	9712		
Available for intermediate debt		40711	-6166	123237		
Average intermediate debt		134300	202017	129254		
Years to turnover interm. debt		3.3	**	1.0		
Expense as a % of income		82 %	95 %	74 %		
Interest as a % of income		5 %	7 %	3 %		

\*\* Income insufficient to meet debt servicing requirements

Table 6. **BALANCE SHEET AT COST VALUES, 1996**  
**Michigan Dairy Farms, 48 Counties**  
(Farms sorted by Net Farm Income)

Number of Farms	Average Of All Farms		Average Of Low 25 %		Average Of High 25 %	
	146		37		37	
	Beginning	Ending	Beginning	Ending	Beginning	Ending
<b>ASSETS</b>						
Current Farm Assets						
Cash and checking balance	11850	11586	7786	6639	23103	24071
Prepaid expenses & supplies	10077	14935	9916	10101	21923	39579
Growing crops	6645	7010	9372	9635	7321	7139
Accounts receivable	7044	9550	5100	13218	16015	17715
Hedging accounts	-	-	-	-	-	-
Crops held for sale or feed	107109	102680	127620	100164	152669	161360
Crops under government loan	1380	1490	2875	3819	2571	557
Market livestock held for sale	7588	6353	11653	9216	8260	5131
Other current assets	2655	3408	1278	1687	6666	8535
Total current farm assets	154348	157012	175600	154480	238528	264088
Intermediate Farm Assets						
Breeding livestock	237350	252594	283258	298509	324224	354741
Machinery and equipment	120525	125568	149343	162820	184113	185415
Other intermediate assets	14740	15612	11948	10605	27781	33833
Total intermediate farm assets	372615	393774	444549	471934	536119	573989
Long-Term Farm Assets						
Farm land	173525	176474	181028	183853	234221	240807
Buildings and improvements	111116	116374	141133	149326	181857	193598
Other long-term assets	6569	6299	11527	11224	3414	2936
Total long-term farm assets	291211	299146	333688	344403	419493	437340
Total Farm Assets	818174	849932	953837	970816	1194140	1275417
Total Nonfarm Assets	26849	29583	17946	19464	38151	44076
Total Assets	845024	879515	971784	990280	1232291	1319493
<b>LIABILITIES</b>						
Current Farm Liabilities						
Accrued interest	781	981	1680	1689	440	887
Accounts payable	6890	8614	8515	18313	5899	2591
Current notes	28548	35754	45788	70461	24504	16459
Government crop loans	934	1034	2045	2784	1641	384
Principal due on term debt	31141	33054	50768	51576	30192	33523
Total current farm liabilities	68301	79441	108801	144824	62676	53844
Intermediate Farm Liabilities	109154	113382	165249	160086	102078	114695
Long-term Farm Liabilities	163110	169283	212008	250642	183291	174830
Total Farm Liabilities	340565	362106	486058	555552	348045	343369
Total Nonfarm Liabilities	1021	1865	350	3267	-	-
Total Liabilities	341586	363971	486408	558819	348045	343369
Net Worth (farm and nonfarm)	503437	515544	485376	431461	884246	976124
Net Worth Change		12106		-53915		91878
<b>RATIO ANALYSIS</b>						
Current Farm Liabilities / Assets	44 %	51 %	62 %	94 %	26 %	20 %
Curr. & Interm Farm Liab / Assets	34 %	35 %	44 %	49 %	21 %	20 %
Long Term Farm Liab. / Assets	56 %	57 %	64 %	73 %	44 %	40 %
Total Liabilities / Assets	40 %	41 %	50 %	56 %	28 %	26 %

Table 7. **BALANCE SHEET AT MARKET VALUES, 1996**  
**Michigan Dairy Farms, 48 Counties**  
(Farms sorted by Net Farm Income)

Number of Farms	Average Of All Farms		Average Of Low 25 %		Average Of High 25 %	
	146		37		37	
	Beginning	Ending	Beginning	Ending	Beginning	Ending
<b>ASSETS</b>						
Current Farm Assets						
Cash and checking balance	11850	11586	7786	6639	23103	24071
Prepaid expenses & supplies	10077	14935	9916	10101	21923	39579
Growing crops	6645	7010	9372	9635	7321	7139
Accounts receivable	7044	9550	5100	13218	16015	17715
Hedging accounts	-	-	-	-	-	-
Crops held for sale or feed	107109	102680	127620	100164	152669	161360
Crops under government loan	1380	1490	2875	3819	2571	557
Market livestock held for sale	7588	6353	11653	9216	8260	5131
Other current assets	2655	3408	1278	1687	6666	8535
Total current farm assets	154348	157012	175600	154480	238528	264088
Intermediate Farm Assets						
Breeding livestock	250244	269518	285629	300768	359285	405011
Machinery and equipment	208818	220283	250977	270470	257818	269300
Other intermediate assets	17032	17446	12078	10709	28682	35200
Total intermediate farm assets	476094	507247	548684	581947	645786	709511
Long-Term Farm Assets						
Farm land	398762	409229	455987	472415	514233	526366
Buildings and improvements	85545	94090	96848	113230	132803	148615
Other long-term assets	11059	11096	19473	19887	6756	6530
Total long-term farm assets	495366	514415	572308	605531	653792	681510
Total Farm Assets	1125808	1178674	1296593	1341958	1538106	1655109
Total Nonfarm Assets	40809	45524	23237	27160	47576	56394
Total Assets	1166617	1224198	1319830	1369118	1585682	1711503
<b>LIABILITIES</b>						
Current Farm Liabilities						
Accrued interest	781	981	1680	1689	440	887
Accounts payable	6890	8614	8515	18313	5899	2591
Current notes	28548	35754	45788	70461	24504	16459
Government crop loans	934	1034	2045	2784	1641	384
Principal due on term debt	31141	33054	50768	51576	30192	33523
Total current farm liabilities	68301	79441	108801	144824	62676	53844
Intermediate Farm Liabilities	109154	113382	165249	160086	102078	114695
Long-term Farm Liabilities	163110	169283	212008	250642	183291	174830
Total Farm Liabilities	340565	362106	486058	555552	348045	343369
Total Nonfarm Liabilities	1021	1865	350	3267	-	-
Total Deferred Liabilities	4704	5048	-	-	179	181
Total Liabilities	346290	369020	486408	558819	348224	343550
Net Worth (farm and nonfarm)	820327	855178	833422	810299	1237457	1367953
Net Worth Change		34851		-23123		130496
<b>RATIO ANALYSIS</b>						
Current Farm Liabilities / Assets	44 %	51 %	62 %	94 %	26 %	20 %
Curr. & Interm Farm Liab. / Assets	28 %	29 %	38 %	41 %	19 %	17 %
Long Term Farm Liabilities / Assets	33 %	33 %	37 %	41 %	28 %	26 %
Total Liabilities / Assets	30 %	30 %	37 %	41 %	22 %	20 %

Table 8. STATEMENT OF CASH FLOWS, 1996  
**Michigan Dairy Farms, 48 Counties**  
 Farms sorted by Net Farm Income)

	Average Of All Farms	Average Of Low 25%	Average Of High 25%
Number of Farms	146	37	37
(a) Beginning cash balance (farm & nonfarm)	12374	9386	23103
CASH FROM OPERATING ACTIVITIES			
Gross cash farm income	541674	555690	902545
Net nonfarm income (+)	5906	8653	3447
Total cash farm expense (-)	445156	496650	692308
Apparent family living expense (-)	51031	30265	100587
Income and social security tax (-)	3078	2168	7599
(b) Cash from operations (=)	48316	35261	105498
CASH FROM INVESTING ACTIVITIES			
Sale of breeding livestock	4905	12340	4457
Sale of machinery & equipment (+)	1360	559	2298
Sale of farm land (+)	3503	10297	446
Sale of farm buildings (+)	50	196	-
Sale of other farm assets (+)	8456	14673	11132
Sale of nonfarm assets (+)	744	2437	362
Purchase of breeding livestock (-)	19021	41846	24265
Purchase of machinery & equip. (-)	36720	47513	52842
Purchase of farm land (-)	4190	900	3841
Purchase of farm buildings (-)	18472	36793	20456
Purchase of other farm assets (-)	6673	11427	10072
Purchase of nonfarm assets (-)	1552	1273	4071
(c) Cash from investing activities (=)	-67609	-99251	-96852
CASH FROM FINANCING ACTIVITIES			
Money borrowed	128391	290863	91183
Cash gifts and inheritances (+)	2185	1630	1984
Principal payments (-)	107953	228305	93004
Dividends paid (-)	-	-	-
Gifts given (-)	3022	1198	5605
(d) Cash from financing activities (=)	19601	62990	-5442
(e) Net change in cash balance (b+c+d)	308	-1000	3203
Ending cash balance (farm & nonfarm)	12682	8386	26307

Table 9. FINANCIAL GUIDELINES MEASURES, 1996  
 Michigan Dairy Farms, 48 Counties  
 (Farms sorted by Net Farm Income)

	Average For All Farms		Average For Low 25 %		Average For High 25 %	
Number of Farms	146		37		37	
LIQUIDITY	Beginning	Ending	Beginning	Ending	Beginning	Ending
Current ratio	2.26	1.98	1.61	1.07	3.81	4.90
Working capital	86047	77571	66800	9656	175852	210244
SOLVENCY (Market)	Beginning	Ending	Beginning	Ending	Beginning	Ending
Farm debt to asset ratio	31 %	31 %	37 %	41 %	23 %	21 %
Farm equity to asset ratio	69 %	69 %	63 %	59 %	77 %	79 %
Farm debt to equity ratio	44 %	45 %	60 %	71 %	29 %	26 %
PROFITABILITY	Cost	Market	Cost	Market	Cost	Market
Rate of return on farm assets	4.8 %	5.3 %	-5.2 %	-1.7 %	13.7 %	12.9 %
Rate of return on farm equity	3.0 %	4.4 %	-20.2 %	-7.6 %	16.3 %	14.4 %
Operating profit margin	9.9 %	15.0 %	-13.3 %	-5.8 %	25.0 %	30.2 %
Net farm income	57551	78315	-45275	-16889	197072	232796
REPAYMENT CAPACITY	Cash	Accrual	Cash	Accrual	Cash	Accrual
Term debt coverage ratio	147 %	150 %	71 %	14 %	296 %	368 %
Capital replacement margin	17070	18072	-15613	-45393	75306	102757
EFFICIENCY						
Asset turnover rate (market)	35.4 %		28.7 %		42.5 %	
Operating expense ratio	77.1 %		87.3 %		71.1 %	
Depreciation expense ratio	7.4 %		13.9 %		4.5 %	
Interest expense ratio	4.8 %		7.2 %		2.7 %	
Net farm income ratio	10.7 %		-8.5 %		21.7 %	

LABOR ANALYSIS

	Average For All Farms	Average For Low 25 %	Average For High 25 %
Number of Farms	141	35	35
Total unpaid labor hours	5254	4868	6340
Total hired labor hours	6215	6091	10064
Total labor hours per farm	11469	10960	16404
Value of farm production / hour	34.05	29.32	41.07
Net farm income / unpaid hour	11.12	-8.71	31.37

Table A1. Livestock and Crop Production Summary, 1996  
**Michigan Dairy Farms with 10 to 75 Cows**  
(Farms sorted by Net Farm Income)

	Average Of All Farms	Average Of Low 25%	Average Of High 25%
<b>Dairy</b>			
Number of farms	39	10	10
Avg. number of Cows	54.1	52.0	64.1
Milk produced per Cow	16073	14975	16658
Percent of barn capacity	87.9	84.6	80.0
Avg. milk price per cwt.	14.73	14.52	14.88
<b>ACREAGE SUMMARY</b>			
Total Acres Owned	297	345	312
Total Crop Acres	330	422	372
Crop Acres Owned	213	226	280
Crop Acres Cash Rented	115	194	91
Crop Acres Share Rented	2	2	2
Total Pasture Acres	5	4	3
<b>AVERAGE PRICE RECEIVED (Cash Sales Only)</b>			
Corn per bu.	3.02	3.14	-
Soybeans per bu.	6.80	-	-
Wheat, Winter per bu.	4.05	-	-
<b>AVERAGE YIELD PER ACRE</b>			
Hay, Alfalfa (ton)	3.60	3.22	4.47
Corn (bu.)	74.48	63.81	81.02
Corn Silage (ton)	10.76	10.30	13.88
Soybeans (bu.)	24.96	-	-
Hay, Grass (ton)	2.27	-	-
Hay, Mixed (ton)	2.19	-	-
Wheat, Winter (bu.)	33.65	-	-
Hay, Native Grass (ton)	2.79	-	-
Haylage, Alfalfa (ton)	4.41	-	-
Oats (bu.)	65.32	-	-

Table A2. FARM INCOME STATEMENT, 1996  
**Michigan Dairy Farms with 10 to 75 Cows**  
(Farms sorted by Net Farm Income)

	Average Of All Farms	Average Of Low 25%	Average Of High 25%
Number of Farms	39	10	10
<b>CASH FARM INCOME</b>			
Barley	4	17	-
Corn	4790	8315	10000
Corn Silage	163	636	-
Cucumbers	74	-	-
Alfalfa Hay	483	135	-
Mixed Hay	1115	3861	82
Oats	67	104	157
Potatoes	7	-	-
Soybeans	2794	6918	1698
Speltz	3	10	-
Straw	50	190	6
Timber	111	-	-
Winter Wheat	1801	4194	1631
Beef Bulls	26	-	100
Beef Calves	82	188	130
Milk	127974	113067	158809
Dairy Calves	384	366	113
Dairy Heifers (for sale)	115	-	350
Dairy Steers	2033	6592	40
Boarding Horses	17	65	-
Aquaculture	228	30	-
Cull breeding livestock	6055	6378	5961
Misc. livestock income	269	80	532
Deficiency payments	1843	2659	2331
CRP payments	14	-	-
Other government payments	2678	4208	2416
Custom work income	876	2207	909
Patronage dividends, cash	779	151	1021
Insurance income	713	2355	176
Other farm income	1959	2628	3485
Gross Cash Farm Income	157505	165354	189947



Table A2. FARM INCOME STATEMENT, 1996 (Continued)  
**Michigan Dairy Farms with 10 to 75 Cows**  
(Farms sorted by Net Farm Income)

	Average Of All Farms	Average Of Low 25%	Average Of High 25%
Number of Farms	39	10	10
<b>CASH FARM EXPENSE</b>			
Seed	3522	6045	4501
Fertilizer	8620	14799	11125
Crop chemicals	3647	6646	3725
Crop insurance	196	586	30
Drying fuel	31	119	-
Crop marketing	130	81	423
Crop miscellaneous	346	311	369
Feeder livestock purchase	320	110	1088
Purchased feed	25235	17240	21964
Breeding fees	1057	792	1047
Veterinary	3252	3318	5001
Livestock supplies	3761	3702	4167
Livestock leases	168	581	-
Livestock marketing	5173	5589	5997
Interest	11496	14790	10129
Fuel & oil	4468	4780	6152
Repairs	10966	15427	11440
Custom hire	2461	3454	2469
Hired labor	10752	12086	15938
Land rent	3776	6995	3664
Machinery & bldg leases	1011	2169	591
Real estate taxes	3298	3725	4086
Personal property taxes	187	33	81
Farm insurance	3853	3919	5569
Utilities	5239	5813	5820
Dues & professional fees	1322	804	2109
Hedging account deposits	125	88	400
Miscellaneous	11077	10775	14884
Total cash expense	125487	144778	142769
Net cash farm income	32018	20576	47178
<b>INVENTORY CHANGES</b>			
Crops and feed	-1732	-18207	9528
Market livestock	578	257	758
Accounts receivable	964	256	2337
Prepaid expenses and supplies	-189	-114	-466
Accounts payable	-1290	-3785	-1759
Total inventory change	-1669	-21592	10398
Net operating profit	30349	-1017	57576
<b>DEPRECIATION AND OTHER CAPITAL ADJUSTMENTS</b>			
Breeding livestock	-1723	-6387	1325
Machinery and equipment	-10905	-15978	-6501
Buildings and improvements	-2009	-3130	-2589
Other farm capital	1248	-167	3409
Total depr. and other capital adj	-13389	-25662	-4357
Net farm income	16961	-26679	53219

Table A3. INVENTORY CHANGES, 1996  
**Michigan Dairy Farms with 10 to 75 Cows**  
(Farms sorted by Net Farm Income)

	Average Of All Farms	Average Of Low 25%	Average Of High 25%
Number of Farms	39	10	10
Net cash farm income	32018	20576	47178
CROPS AND FEED			
Ending inventory	45218	50779	63587
Beginning inventory	46950	68985	54059
Inventory change	-1732	-18207	9528
MARKET LIVESTOCK			
Ending inventory	3041	5017	3060
Beginning inventory	2463	4760	2302
Inventory change	578	257	758
ACCTS RECEIVABLE & OTHER CURRENT ASSETS			
Ending inventory	5928	7064	9696
Beginning inventory	4964	6808	7359
Inventory change	964	256	2337
PREPAID EXPENSES AND SUPPLIES			
Ending inventory	802	1296	413
Beginning inventory	991	1410	879
Inventory change	-189	-114	-466
ACCOUNTS PAYABLE			
Beginning inventory	5595	3324	6985
Ending inventory	6885	7109	8745
Inventory change	-1290	-3785	-1759
Total inventory change	-1669	-21592	10398
Net operating profit	30349	-1017	57576

Table A4.

**DEPRECIATION AND OTHER CAPITAL ADJUSTMENTS, 1996**  
**Michigan Dairy Farms with 10 to 75 Cows**  
(Farms sorted by Net Farm Income)

	Average Of All Farms	Average Of Low 25%	Average Of High 25%
Number of Farms	39	10	10
Net operating profit	30349	-1017	57576
<b>BREEDING LIVESTOCK</b>			
Ending inventory	87395	79262	119743
Capital sales	2452	6908	2037
Beginning inventory	87428	85731	115545
Capital purchases	4141	6826	4910
Depreciation, capital adj.	-1723	-6387	1325
<b>MACHINERY AND EQUIPMENT</b>			
Ending inventory	39088	44569	55057
Capital sales	733	195	-
Beginning inventory	39298	45036	43508
Capital purchases	11428	15706	18050
Depreciation, capital adj.	-10905	-15978	-6501
<b>BUILDINGS AND IMPROVEMENTS</b>			
Ending inventory	21603	23514	15150
Capital sales	186	724	-
Beginning inventory	23147	26743	16813
Capital purchases	651	625	926
Depreciation, capital adj.	-2009	-3130	-2589
<b>OTHER CAPITAL ASSETS</b>			
Ending inventory	9718	1740	17369
Capital sales	1109	1029	1935
Beginning inventory	9070	2544	15896
Capital purchases	508	392	-
Depreciation, capital adj.	1248	-167	3409
Total depreciation, capital adj.	-13389	-25662	-4357
Net farm income	16961	-26679	53219

Table A5. PROFITABILITY AND LIQUIDITY ANALYSIS, 1996  
**Michigan Dairy Farms with 10 to 75 Cows**  
(Farms sorted by Net Farm Income)

	Avg. Of All Farms	Avg. Of Low 25 %	Avg. Of High 25 %	Avg. Of All Farms	Avg. Of Low 25 %	Avg. Of High 25 %
Number of Farms	39	10	10	39	10	10
<b>PROFITABILITY</b>						
	----- Cost -----			----- Market -----		
Net farm income	16961	-26679	53219	20660	-30770	45162
Labor and management earnings	7938	-34719	38904	-2648	-57568	14188
Rate of return on assets	0.0 %	-8.8 %	8.4 %	0.7 %	-5.1 %	3.6 %
Rate of return on equity	-9.0 %	-36.0 %	10.4 %	-2.0 %	-10.9 %	2.9 %
Operating profit margin	0.0 %	-23.7 %	18.4 %	2.8 %	-27.0 %	14.0 %
Asset turnover rate	42.9 %	37.1 %	45.5 %	23.0 %	18.9 %	25.7 %
Interest on farm net worth	9023	8040	14315	23308	26797	30974
Farm interest expense	11569	14635	10278	11569	14635	10278
Value of operator lbr and mgmt.	28524	17339	30159	28524	17339	30159
Return on farm assets	6	-29382	33338	3706	-33474	25282
Average farm assets	303163	334276	397362	566301	654871	704564
Return on farm equity	-11563	-44017	23060	-7864	-48109	15003
Average farm equity	127807	122413	222329	387535	443008	516231
Value of farm production	130038	123923	180843	130038	123923	180843
		Average Of All Farms	Average Of Low 25 %	Average Of High 25 %		
Number of Farms		39	10	10		
<b>LIQUIDITY (Cash)</b>						
Net cash farm income		32018	20576	47178		
Net nonfarm income		6093	16520	1550		
Family living and taxes		25265	26561	28425		
Real estate principal payments		3833	4151	3804		
Cash available for interm. debt		9013	6385	16499		
Average intermediate debt		61118	66132	85680		
Years to turnover interm. debt		6.8	10.4	5.2		
Expense as a % of income		80 %	88 %	75 %		
Interest as a % of income		7 %	9 %	5 %		
<b>LIQUIDITY (Accrual)</b>						
Total accrual farm income		157315	147660	202570		
Total accrual farm expense		126966	148677	144994		
Net accrual operating income		30349	-1017	57576		
Net nonfarm income		6093	16520	1550		
Family living and taxes		25265	26561	28425		
Real estate principal payments		3833	4151	3804		
Available for intermediate debt		7344	-15208	26897		
Average intermediate debt		61118	66132	85680		
Years to turnover interm. debt		8.3	**	3.2		
Expense as a % of income		81 %	101 %	72 %		
Interest as a % of income		7 %	10 %	5 %		

\*\* Income insufficient to meet debt servicing requirements

Table A6. **BALANCE SHEET AT COST VALUES, 1996**  
**Michigan Dairy Farms with 10 to 75 Cows**  
(Farms sorted by Net Farm Income)

Number of Farms	Average Of All Farms		Average Of Low 25 %		Average Of High 25 %	
	39		10		10	
	Beginning	Ending	Beginning	Ending	Beginning	Ending
<b>ASSETS</b>						
<b>Current Farm Assets</b>						
Cash and checking balance	1855	3797	2252	5560	3725	7792
Prepaid expenses & supplies	991	802	1410	1296	879	413
Growing crops	2248	2522	3392	2872	1981	3079
Accounts receivable	635	640	469	763	602	517
Hedging accounts	-	-	-	-	-	-
Crops held for sale or feed	46950	45218	68985	50779	54059	63587
Crops under government loan	-	-	-	-	-	-
Market livestock held for sale	2463	3041	4760	5017	2302	3060
Other current assets	2081	2766	2948	3430	4775	6100
Total current farm assets	57223	58786	84215	69716	68323	84548
<b>Intermediate Farm Assets</b>						
Breeding livestock	87428	87395	85731	79262	115545	119743
Machinery and equipment	39298	39088	45036	44569	43508	55057
Other intermediate assets	1796	1407	2375	1571	1291	1170
Total intermediate farm assets	128522	127891	133141	125402	160344	175970
<b>Long-Term Farm Assets</b>						
Farm land	88918	84649	102040	103441	122020	120751
Buildings and improvements	23147	21603	26743	23514	16813	15150
Other long-term assets	7274	8310	170	170	14605	16199
Total long-term farm assets	119340	114562	128953	127125	153438	152100
Total Farm Assets	305085	301240	346309	322243	382105	412619
Total Nonfarm Assets	13606	13386	12932	12593	17970	13824
Total Assets	318691	314626	359241	334836	400075	426442
<b>LIABILITIES</b>						
<b>Current Farm Liabilities</b>						
Accrued interest	702	775	492	337	499	648
Accounts payable	4894	6110	2832	6771	6487	8097
Current notes	17944	18624	19678	25367	15428	17050
Government crop loans	-	-	-	-	-	-
Principal due on term debt	10823	10415	10639	11263	15602	11781
Total current farm liabilities	34363	35924	33641	43739	38016	37576
Intermediate Farm Liabilities	52979	55071	53441	65091	72547	77906
Long-term Farm Liabilities	88053	84321	123719	104095	62553	61467
Total Farm Liabilities	175395	175316	210801	212925	173115	176950
Total Nonfarm Liabilities	2922	2747	1294	1088	2820	2630
Total Liabilities	178317	178063	212095	214012	175935	179580
Net Worth (farm and nonfarm)	140373	136563	147147	120824	224140	246862
Net Worth Change		-3810		-26323		22722
<b>RATIO ANALYSIS</b>						
Current Farm Liabilities / Assets	60 %	61 %	40 %	63 %	56 %	44 %
Curr. & Interm Farm Liab / Assets	47 %	49 %	40 %	56 %	48 %	44 %
Long Term Farm Liab. / Assets	74 %	74 %	96 %	82 %	41 %	40 %
Total Liabilities / Assets	56 %	57 %	59 %	64 %	44 %	42 %

Table A7. **BALANCE SHEET AT MARKET VALUES, 1996**  
**Michigan Dairy Farms with 10 to 75 Cows**  
(Farms sorted by Net Farm Income)

Number of Farms	Average Of All Farms		Average Of Low 25 %		Average Of High 25 %	
	39		10		10	
	Beginning	Ending	Beginning	Ending	Beginning	Ending
<b>ASSETS</b>						
<b>Current Farm Assets</b>						
Cash and checking balance	1855	3797	2252	5560	3725	7792
Prepaid expenses & supplies	991	802	1410	1296	879	413
Growing crops	2248	2522	3392	2872	1981	3079
Accounts receivable	635	640	469	763	602	517
Hedging accounts	-	-	-	-	-	-
Crops held for sale or feed	46950	45218	68985	50779	54059	63587
Crops under government loan	-	-	-	-	-	-
Market livestock held for sale	2463	3041	4760	5017	2302	3060
Other current assets	2081	2766	2948	3430	4775	6100
Total current farm assets	57223	58786	84215	69716	68323	84548
<b>Intermediate Farm Assets</b>						
Breeding livestock	92825	91714	98015	87622	115545	119743
Machinery and equipment	105954	106692	130136	131241	112349	117091
Other intermediate assets	2620	1822	2858	1956	1291	1170
Total intermediate farm assets	201399	200228	231009	220820	229184	238005
<b>Long-Term Farm Assets</b>						
Farm land	271561	269852	326054	324121	359787	355605
Buildings and improvements	23239	23613	21502	18965	13212	13212
Other long-term assets	12952	13749	6170	7170	22828	24422
Total long-term farm assets	307751	307214	353725	350256	395828	393240
Total Farm Assets	566374	566228	668950	640792	693335	715792
Total Nonfarm Assets	25732	27868	34620	34584	24834	28533
Total Assets	592106	594096	703569	675376	718169	744325
<b>LIABILITIES</b>						
<b>Current Farm Liabilities</b>						
Accrued interest	702	775	492	337	499	648
Accounts payable	4894	6110	2832	6771	6487	8097
Current notes	17944	18624	19678	25367	15428	17050
Government crop loans	-	-	-	-	-	-
Principal due on term debt	10823	10415	10639	11263	15602	11781
Total current farm liabilities	34363	35924	33641	43739	38016	37576
Intermediate Farm Liabilities	52979	55071	53441	65091	72547	77906
Long-term Farm Liabilities	88053	84321	123719	104095	62553	61467
Total Farm Liabilities	175395	175316	210801	212925	173115	176950
Total Nonfarm Liabilities	2922	2747	1294	1088	2820	2630
Total Deferred Liabilities	3410	3410	-	-	13300	13300
Total Liabilities	181727	181474	212095	214012	189235	192880
Net Worth (farm and nonfarm)	410378	412622	491475	461364	528934	551445
Net Worth Change		2244		-30111		22511
<b>RATIO ANALYSIS</b>						
Current Farm Liabilities / Assets	60 %	61 %	40 %	63 %	56 %	44 %
Curr. & Interm Farm Liab. / Assets	34 %	35 %	28 %	37 %	37 %	36 %
Long Term Farm Liabilities / Assets	29 %	27 %	35 %	30 %	16 %	16 %
Total Liabilities / Assets	31 %	31 %	30 %	32 %	26 %	26 %

Table A8. STATEMENT OF CASH FLOWS, 1996  
**Michigan Dairy Farms with 10 to 75 Cows**  
(Farms sorted by Net Farm Income)

	Average Of All Farms	Average Of Low 25%	Average Of High 25%
Number of Farms	39	10	10
(a) Beginning cash balance (farm & nonfarm)	1866	2252	3725
CASH FROM OPERATING ACTIVITIES			
Gross cash farm income	157505	165354	189947
Net nonfarm income (+)	6093	16520	1550
Total cash farm expense (-)	125487	144778	142769
Apparent family living expense (-)	24707	25636	28345
Income and social security tax (-)	558	925	80
(b) Cash from operations (=)	12845	10535	20303
CASH FROM INVESTING ACTIVITIES			
Sale of breeding livestock	2452	6908	2037
Sale of machinery & equipment (+)	733	195	-
Sale of farm land (+)	1943	6976	600
Sale of farm buildings (+)	186	724	-
Sale of other farm assets (+)	1109	1029	1935
Sale of nonfarm assets (+)	3	10	-
Purchase of breeding livestock (-)	4141	6826	4910
Purchase of machinery & equip. (-)	11428	15706	18050
Purchase of farm land (-)	-	-	-
Purchase of farm buildings (-)	651	625	926
Purchase of other farm assets (-)	508	392	-
Purchase of nonfarm assets (-)	77	0	100
(c) Cash from investing activities (=)	-10381	-7707	-19415
CASH FROM FINANCING ACTIVITIES			
Money borrowed	39480	62799	41727
Cash gifts and inheritances (+)	2413	2523	5058
Principal payments (-)	41083	64668	39805
Dividends paid (-)	-	-	-
Gifts given (-)	1145	164	3800
(d) Cash from financing activities (=)	-335	490	3179
(e) Net change in cash balance (b+c+d)	2129	3319	4068
Ending cash balance (farm & nonfarm)	3995	5571	7792

Table A9. FINANCIAL GUIDELINES MEASURES, 1996  
**Michigan Dairy Farms with 10 to 75 Cows**  
(Farms sorted by Net Farm Income)

	Average For All Farms		Average For Low 25 %		Average For High 25 %	
Number of Farms	39		10		10	
<b>LIQUIDITY</b>	Beginning	Ending	Beginning	Ending	Beginning	Ending
Current ratio	1.67	1.64	2.50	1.59	1.80	2.25
Working capital	22861	22862	50574	25977	30308	46972
<b>SOLVENCY (Market)</b>	Beginning	Ending	Beginning	Ending	Beginning	Ending
Farm debt to asset ratio	32 %	32 %	32 %	33 %	27 %	27 %
Farm equity to asset ratio	68 %	68 %	68 %	67 %	73 %	73 %
Farm debt to equity ratio	46 %	46 %	46 %	50 %	37 %	36 %
<b>PROFITABILITY</b>	Cost	Market	Cost	Market	Cost	Market
Rate of return on farm assets	0.0 %	0.7 %	-8.8 %	-5.1 %	8.4 %	3.6 %
Rate of return on farm equity	-9.0 %	-2.0 %	-36.0 %	-10.9 %	10.4 %	2.9 %
Operating profit margin	0.0 %	2.8 %	-23.7 %	-27.0 %	18.4 %	14.0 %
Net farm income	16961	20660	-26679	-30770	53219	45162
<b>REPAYMENT CAPACITY</b>	Cash	Accrual	Cash	Accrual	Cash	Accrual
Term debt coverage ratio	114 %	100 %	96 %	-68 %	128 %	192 %
Capital replacement margin	1675	6	-496	-22088	4581	14978
<b>EFFICIENCY</b>						
Asset turnover rate (market)	23.0 %		18.9 %		25.7 %	
Operating expense ratio	73.4 %		90.8 %		66.5 %	
Depreciation expense ratio	8.5 %		17.4 %		2.2 %	
Interest expense ratio	7.4 %		9.9 %		5.1 %	
Net farm income ratio	10.8 %		-18.1 %		26.3 %	

LABOR ANALYSIS

	Average For All Farms	Average For Low 25 %	Average For High 25 %
Number of Farms	38	10	10
Total unpaid labor hours	4527	4555	4891
Total hired labor hours	1395	1489	1555
Total labor hours per farm	5921	6043	6446
Value of farm production / hour	21.79	20.51	28.05
Net farm income / unpaid hour	3.69	-5.86	10.88



Table B1. Livestock and Crop Production Summary, 1996  
**Michigan Dairy Farms with 76 to 120 Cows**  
(Farms sorted by Net Farm Income)

	Average Of All Farms	Average Of Low 25%	Average Of High 25%
	-----	-----	-----
Dairy			
Number of farms	33	8	8
Avg. number of Cows	99.2	97.0	100.2
Milk produced per Cow	18537	16109	20821
Percent of barn capacity	91.7	83.1	94.7
Avg. milk price per cwt.	14.99	14.93	15.17
ACREAGE SUMMARY			
Total Acres Owned	379	336	490
Total Crop Acres	420	395	489
Crop Acres Owned	292	248	408
Crop Acres Cash Rented	127	147	81
Crop Acres Share Rented	0	-	-
Total Pasture Acres	4	-	3
AVERAGE PRICE RECEIVED (Cash Sales Only)			
Corn per bu.	2.88	-	-
Wheat, Winter per bu.	3.82	-	-
AVERAGE YIELD PER ACRE			
Hay, Alfalfa (ton)	3.71	-	4.39
Corn (bu.)	90.61	-	105.81
Corn Silage (ton)	11.14	9.55	13.40
Haylage, Alfalfa (ton)	5.78	-	-
Soybeans (bu.)	28.64	-	-
Wheat, Winter (bu.)	38.65	-	-
Hay, Grass (ton)	2.27	-	-
Corn, Ear (ton)	2.80	-	-
Oats (bu.)	45.06	-	-

Table B2. FARM INCOME STATEMENT, 1996  
**Michigan Dairy Farms with 76 to 120 Cows**  
(Farms sorted by Net Farm Income)

	Average Of All Farms	Average Of Low 25%	Average Of High 25%
Number of Farms	33	8	8
CASH FARM INCOME			
Asparagus	346	-	-
Navy Beans	1322	-	5453
Corn	7699	2624	12488
Corn Silage	46	-	-
Seed Corn	1	-	-
Alfalfa Hay	487	-	1467
Mixed Hay	712	836	1808
Oats	17	-	71
Soybeans	2451	5183	1152
Straw	21	6	81
Spring Wheat	86	-	356
Winter Wheat	1476	-	3943
Finish Beef Calves	50	-	206
Milk	275660	233335	316487
Dairy Calves	1730	1166	1577
Dairy Replacement Heifers	31	126	-
Dairy Steers	3530	9516	3841
Finish Cull Cows	101	418	-
Cull breeding livestock	11153	9955	13926
Misc. livestock income	28	-	48
Deficiency payments	1145	1308	2602
Other government payments	4800	5522	5430
Custom work income	550	1464	305
Patronage dividends, cash	1157	2082	871
Insurance income	187	429	-
Other farm income	2529	2436	604
Gross Cash Farm Income	317317	276407	372717

Table B2. FARM INCOME STATEMENT, 1996 (Continued)  
**Michigan Dairy Farms with 76 to 120 Cows**  
(Farms sorted by Net Farm Income)

	Average Of All Farms	Average Of Low 25%	Average Of High 25%
Number of Farms	33	8	8
<b>CASH FARM EXPENSE</b>			
Seed	6862	6183	8372
Fertilizer	11942	7619	16742
Crop chemicals	7254	6779	8463
Crop insurance	79	257	31
Drying fuel	180	31	229
Crop marketing	10	-24	39
Crop miscellaneous	223	260	8
Feeder livestock purchase	634	-	-
Purchased feed	66214	72389	57608
Breeding fees	2195	2450	2953
Veterinary	7993	6047	8951
Livestock supplies	8739	9605	6772
Livestock marketing	11847	10614	11242
Interest	14626	23881	3342
Fuel & oil	7803	7546	8095
Repairs	18569	15030	15300
Custom hire	4194	4875	1862
Hired labor	30530	30157	27862
Land rent	7232	8335	6349
Machinery & bldg leases	4238	1724	2196
Real estate taxes	3350	4244	3622
Personal property taxes	220	-	859
Farm insurance	4638	5168	5618
Utilities	7456	9063	6231
Dues & professional fees	1747	1813	2238
Hedging account deposits	221	-	910
Miscellaneous	12107	11255	15541
Total cash expense	241101	245300	221437
Net cash farm income	76216	31107	151280
<b>INVENTORY CHANGES</b>			
Crops and feed	-9267	-9458	258
Market livestock	70	-360	-1317
Accounts receivable	918	890	-670
Prepaid expenses and supplies	2898	1313	5716
Accounts payable	879	276	267
Total inventory change	-4502	-7339	4255
Net operating profit	71714	23768	155535
<b>DEPRECIATION AND OTHER CAPITAL ADJUSTMENTS</b>			
Breeding livestock	3227	-11275	4559
Machinery and equipment	-16388	-22324	-11787
Buildings and improvements	-5946	-3434	-9056
Other farm capital	-3005	-7890	328
Total depr. and other capital adj	-22112	-44923	-15956
Net farm income	49602	-21156	139579

Table B3. INVENTORY CHANGES, 1996  
**Michigan Dairy Farms with 76 to 120 Cows**  
(Farms sorted by Net Farm Income)

	Average Of All Farms	Average Of Low 25%	Average Of High 25%
Number of Farms	33	8	8
Net cash farm income	76216	31107	151280
CROPS AND FEED			
Ending inventory	65299	55585	81693
Beginning inventory	74566	65044	81435
Inventory change	-9267	-9458	258
MARKET LIVESTOCK			
Ending inventory	3309	7841	2583
Beginning inventory	3239	8201	3900
Inventory change	70	-360	-1317
ACCTS RECEIVABLE & OTHER CURRENT ASSETS			
Ending inventory	7607	7558	6179
Beginning inventory	6690	6668	6849
Inventory change	918	890	-670
PREPAID EXPENSES AND SUPPLIES			
Ending inventory	5662	3861	9965
Beginning inventory	2764	2548	4249
Inventory change	2898	1313	5716
ACCOUNTS PAYABLE			
Beginning inventory	3673	5049	573
Ending inventory	2794	4773	305
Inventory change	879	276	267
Total inventory change	-4502	-7339	4255
Net operating profit	71714	23768	155535

Table B4. DEPRECIATION AND OTHER CAPITAL ADJUSTMENTS, 1996  
**Michigan Dairy Farms with 76 to 120 Cows**  
(Farms sorted by Net Farm Income)

	Average Of All Farms	Average Of Low 25%	Average Of High 25%
Number of Farms	33	8	8
Net operating profit	71714	23768	155535
BREEDING LIVESTOCK			
Ending inventory	162778	164809	141425
Capital sales	1147	-	2172
Beginning inventory	159375	175694	139038
Capital purchases	1323	391	-
Depreciation, capital adj.	3227	-11275	4559
MACHINERY AND EQUIPMENT			
Ending inventory	65448	74213	69213
Capital sales	831	125	345
Beginning inventory	64906	86187	68538
Capital purchases	17762	10475	12806
Depreciation, capital adj.	-16388	-22324	-11787
BUILDINGS AND IMPROVEMENTS			
Ending inventory	48904	36471	50298
Capital sales	-	-	-
Beginning inventory	48921	35303	47740
Capital purchases	5929	4603	11615
Depreciation, capital adj.	-5946	-3434	-9056
OTHER CAPITAL ASSETS			
Ending inventory	5970	9502	9941
Capital sales	1939	3916	275
Beginning inventory	7922	10272	9602
Capital purchases	2992	11035	287
Depreciation, capital adj.	-3005	-7890	328
Total depreciation, capital adj.	-22112	-44923	-15956
Net farm income	49602	-21156	139579

Table B5. **PROFITABILITY AND LIQUIDITY ANALYSIS, 1996**  
**Michigan Dairy Farms with 76 to 120 Cows**  
(Farms sorted by Net Farm Income)

	Avg. Of All Farms	Avg. Of Low 25 %	Avg. Of High 25 %	Avg. Of All Farms	Avg. Of Low 25 %	Avg. Of High 25 %
Number of Farms	33	8	8	33	8	8
<b>PROFITABILITY</b>						
		----- Cost -----			----- Market -----	
Net farm income	49602	-21156	139579	66104	20270	166828
Labor and management earnings	30602	-34586	116105	33299	-4965	125754
Rate of return on assets	5.1 %	-6.9 %	21.5 %	5.7 %	0.7 %	16.7 %
Rate of return on equity	3.5 %	-28.7 %	24.6 %	5.0 %	-4.3 %	18.0 %
Operating profit margin	10.5 %	-19.5 %	31.3 %	17.3 %	3.0 %	39.9 %
Asset turnover rate	48.4 %	35.3 %	68.6 %	32.9 %	24.6 %	42.0 %
Interest on farm net worth	19000	13430	23474	32804	25235	41074
Farm interest expense	14803	23606	3387	14803	23606	3387
Value of operator lbr and mgmt.	38556	38366	43454	38556	38366	43454
Return on farm assets	25849	-35916	99512	42350	5510	126761
Average farm assets	507373	521063	463442	744949	747909	757612
Return on farm equity	11046	-59522	96125	27548	-18096	123374
Average farm equity	312721	207571	391233	546741	420580	684570
Value of farm production	245415	183815	317940	245415	183815	317940

	Average Of All Farms	Average Of Low 25 %	Average Of High 25 %
Number of Farms	33	8	8
<b>LIQUIDITY (Cash)</b>			
Net cash farm income	76216	31107	151280
Net nonfarm income	6298	15295	2289
Family living and taxes	55631	20527	121900
Real estate principal payments	4473	6545	2178
Cash available for interm. debt	22411	19330	29492
Average intermediate debt	70455	147255	22495
Years to turnover interm. debt	3.1	7.6	0.8
Expense as a % of income	76 %	89 %	59 %
Interest as a % of income	5 %	9 %	1 %
<b>LIQUIDITY (Accrual)</b>			
Total accrual farm income	309037	267479	370989
Total accrual farm expense	237323	243711	215454
Net accrual operating income	71714	23768	155535
Net nonfarm income	6298	15295	2289
Family living and taxes	55631	20527	121900
Real estate principal payments	4473	6545	2178
Available for intermediate debt	17908	11991	33747
Average intermediate debt	70455	147255	22495
Years to turnover interm. debt	3.9	12.3	0.7
Expense as a % of income	77 %	91 %	58 %
Interest as a % of income	5 %	9 %	1 %

Table B6. **BALANCE SHEET AT COST VALUES, 1996**  
**Michigan Dairy Farms with 76 to 120 Cows**  
(Farms sorted by Net Farm Income)

Number of Farms	Average Of All Farms		Average Of Low 25 %		Average Of High 25 %	
	33		8		8	
	Beginning	Ending	Beginning	Ending	Beginning	Ending
<b>ASSETS</b>						
<b>Current Farm Assets</b>						
Cash and checking balance	10882	8499	2440	3212	5637	1710
Prepaid expenses & supplies	2764	5662	2548	3861	4249	9965
Growing crops	5483	5911	5182	4479	6537	6179
Accounts receivable	1113	1619	1410	3079	-	-
Hedging accounts	-	-	-	-	-	-
Crops held for sale or feed	74566	65299	65044	55585	81435	81693
Crops under government loan	-	-	-	-	-	-
Market livestock held for sale	3239	3309	8201	7841	3900	2583
Other current assets	94	77	76	-	313	-
Total current farm assets	98141	90377	84900	78057	102070	102131
<b>Intermediate Farm Assets</b>						
Breeding livestock	159375	162778	175694	164809	139038	141425
Machinery and equipment	64906	65448	86187	74213	68538	69213
Other intermediate assets	5718	4106	10272	9502	3911	4401
Total intermediate farm assets	230000	232332	272153	248524	211487	215039
<b>Long-Term Farm Assets</b>						
Farm land	129360	132642	140964	145755	91184	95705
Buildings and improvements	48921	48904	35303	36471	47740	50298
Other long-term assets	2204	1864	-	-	5691	5540
Total long-term farm assets	180485	183410	176267	182226	144614	151544
Total Farm Assets	508626	506119	533319	508807	458171	468713
Total Nonfarm Assets	29118	34777	26159	42826	38121	42035
Total Assets	537744	540896	559478	551633	496292	510748
<b>LIABILITIES</b>						
<b>Current Farm Liabilities</b>						
Accrued interest	656	833	1632	1356	229	274
Accounts payable	3018	1961	3417	3417	344	31
Current notes	10551	13141	22137	18703	-	-
Government crop loans	-	-	-	-	-	-
Principal due on term debt	17137	17997	29891	31825	6435	8744
Total current farm liabilities	31371	33932	57077	55301	7008	9049
Intermediate Farm Liabilities	61540	54897	129923	117401	19175	16373
Long-term Farm Liabilities	104169	103394	133887	133396	48184	44630
Total Farm Liabilities	197081	192223	320887	306098	74367	70051
Total Nonfarm Liabilities	42	3687	-	13748	-	-
Total Liabilities	197123	195911	320887	319845	74367	70051
Net Worth (farm and nonfarm)	340621	344986	238592	231788	421925	440697
Net Worth Change		4365		-6804		18772
<b>RATIO ANALYSIS</b>						
Current Farm Liabilities / Assets	32 %	38 %	67 %	71 %	7 %	9 %
Curr. & Interm Farm Liab / Assets	28 %	28 %	52 %	53 %	8 %	8 %
Long Term Farm Liab. / Assets	58 %	56 %	76 %	73 %	33 %	29 %
Total Liabilities / Assets	37 %	36 %	57 %	58 %	15 %	14 %

Table B7. BALANCE SHEET AT MARKET VALUES, 1996  
**Michigan Dairy Farms with 76 to 120 Cows**  
(Farms sorted by Net Farm Income)

Number of Farms	Average Of All Farms		Average Of Low 25 %		Average Of High 25 %	
	33		8		8	
	Beginning	Ending	Beginning	Ending	Beginning	Ending
<b>ASSETS</b>						
<b>Current Farm Assets</b>						
Cash and checking balance	10882	8499	2440	3212	5637	1710
Prepaid expenses & supplies	2764	5662	2548	3861	4249	9965
Growing crops	5483	5911	5182	4479	6537	6179
Accounts receivable	1113	1619	1410	3079	-	-
Hedging accounts	-	-	-	-	-	-
Crops held for sale or feed	74566	65299	65044	55585	81435	81693
Crops under government loan	-	-	-	-	-	-
Market livestock held for sale	3239	3309	8201	7841	3900	2583
Other current assets	94	77	76	-	313	-
Total current farm assets	98141	90377	84900	78057	102070	102131
<b>Intermediate Farm Assets</b>						
Breeding livestock	168040	172342	175694	164809	155726	161587
Machinery and equipment	141318	146101	118438	118234	142318	147208
Other intermediate assets	8457	6769	10272	9502	3911	6486
Total intermediate farm assets	317815	325212	304403	292545	301954	315281
<b>Long-Term Farm Assets</b>						
Farm land	261988	270861	298363	311831	298458	310357
Buildings and improvements	48521	52961	33085	52947	24080	35619
Other long-term assets	11573	12450	19063	20625	12150	13125
Total long-term farm assets	322082	336272	350510	385404	334688	359100
Total Farm Assets	738038	751861	739813	756005	738712	776513
Total Nonfarm Assets	40784	46413	28878	46536	39265	43035
Total Assets	778822	798273	768691	802541	777977	819548
<b>LIABILITIES</b>						
<b>Current Farm Liabilities</b>						
Accrued interest	656	833	1632	1356	229	274
Accounts payable	3018	1961	3417	3417	344	31
Current notes	10551	13141	22137	18703	-	-
Government crop loans	-	-	-	-	-	-
Principal due on term debt	17137	17997	29891	31825	6435	8744
Total current farm liabilities	31371	33932	57077	55301	7008	9049
Intermediate Farm Liabilities	61540	54897	129923	117401	19175	16373
Long-term Farm Liabilities	104169	103394	133887	133396	48184	44630
Total Farm Liabilities	197081	192223	320887	306098	74367	70051
Total Nonfarm Liabilities	42	3687	-	13748	-	-
Total Deferred Liabilities	3653	3487	14241	13548	828	838
Total Liabilities	200776	199398	335128	333393	75195	70889
Net Worth (farm and nonfarm)	578046	598875	433564	469148	702781	748659
Net Worth Change		20829		35584		45878
<b>RATIO ANALYSIS</b>						
Current Farm Liabilities / Assets	32 %	38 %	67 %	71 %	7 %	9 %
Curr. & Inter Farm Liab. / Assets	22 %	21 %	48 %	47 %	6 %	6 %
Long Term Farm Liabilities / Assets	32 %	31 %	38 %	35 %	14 %	12 %
Total Liabilities / Assets	26 %	25 %	44 %	42 %	10 %	9 %



Table B8. **STATEMENT OF CASH FLOWS, 1996**  
**Michigan Dairy Farms with 76 to 120 Cows**  
(Farms sorted by Net Farm Income)

	Average Of All Farms	Average Of Low 25%	Average Of High 25%
Number of Farms	33	8	8
(a) Beginning cash balance (farm & nonfarm)	11246	2440	5637
<b>CASH FROM OPERATING ACTIVITIES</b>			
Gross cash farm income	317317	276407	372717
Net nonfarm income (+)	6298	15295	2289
Total cash farm expense (-)	241101	245300	221437
Apparent family living expense (-)	52959	18224	116437
Income and social security tax (-)	2673	2303	5463
(b) Cash from operations (=)	26883	25875	31670
<b>CASH FROM INVESTING ACTIVITIES</b>			
Sale of breeding livestock	1147	-	2172
Sale of machinery & equipment (+)	831	125	345
Sale of farm land (+)	318	-	1313
Sale of farm buildings (+)	-	-	-
Sale of other farm assets (+)	1939	3916	275
Sale of nonfarm assets (+)	548	-	1619
Purchase of breeding livestock (-)	1323	391	-
Purchase of machinery & equip. (-)	17762	10475	12806
Purchase of farm land (-)	848	-	-
Purchase of farm buildings (-)	5929	4603	11615
Purchase of other farm assets (-)	2992	11035	287
Purchase of nonfarm assets (-)	528	-	-
(c) Cash from investing activities (=)	-24599	-22463	-18984
<b>CASH FROM FINANCING ACTIVITIES</b>			
Money borrowed	40512	68463	5988
Cash gifts and inheritances (+)	3180	2619	3199
Principal payments (-)	40890	69418	10036
Dividends paid (-)	-	-	-
Gifts given (-)	7413	2908	15763
(d) Cash from financing activities (=)	-4611	-1244	-16612
(e) Net change in cash balance (b+c+d)	-2326	2168	-3927
Ending cash balance (farm & nonfarm)	8920	4607	1710

Table B9. FINANCIAL GUIDELINES MEASURES, 1996  
**Michigan Dairy Farms with 76 to 120 Cows**  
(Farms sorted by Net Farm Income)

	Average For All Farms		Average For Low 25 %		Average For High 25 %	
Number of Farms	33		8		8	
LIQUIDITY	Beginning	Ending	Beginning	Ending	Beginning	Ending
Current ratio	3.13	2.66	1.49	1.41	14.57	11.29
Working capital	66770	56444	27823	22756	95062	93082
SOLVENCY (Market)	Beginning	Ending	Beginning	Ending	Beginning	Ending
Farm debt to asset ratio	27 %	26 %	45 %	42 %	10 %	9 %
Farm equity to asset ratio	73 %	74 %	55 %	58 %	90 %	91 %
Farm debt to equity ratio	37 %	35 %	83 %	74 %	11 %	10 %
PROFITABILITY	Cost	Market	Cost	Market	Cost	Market
Rate of return on farm assets	5.1 %	5.7 %	-6.9 %	0.7 %	21.5 %	16.7 %
Rate of return on farm equity	3.5 %	5.0 %	-28.7 %	-4.3 %	24.6 %	18.0 %
Operating profit margin	10.5 %	17.3 %	-19.5 %	3.0 %	31.3 %	39.9 %
Net farm income	49602	66104	-21156	20270	139579	166828
REPAYMENT CAPACITY	Cash	Accrual	Cash	Accrual	Cash	Accrual
Term debt coverage ratio	145 %	124 %	91 %	75 %	343 %	384 %
Capital replacement margin	9746	5244	-4016	-11355	25235	29489
EFFICIENCY						
Asset turnover rate (market)	32.9 %		24.6 %		42.0 %	
Operating expense ratio	72.0 %		82.3 %		57.2 %	
Depreciation expense ratio	7.2 %		16.8 %		4.3 %	
Interest expense ratio	4.8 %		8.8 %		0.9 %	
Net farm income ratio	16.1 %		-7.9 %		37.6 %	

LABOR ANALYSIS

	Average For All Farms	Average For Low 25 %	Average For High 25 %
Number of Farms	32	8	7
Total unpaid labor hours	5495	5266	7566
Total hired labor hours	2953	2717	2222
Total labor hours per farm	8449	7984	9788
Value of farm production / hour	28.73	23.02	32.29
Net farm income / unpaid hour	8.75	-4.02	19.21

Table c1. Livestock and Crop Production Summary, 1996  
**Michigan Dairy Farms with 121 to 175 Cows**  
(Farms sorted by Net Farm Income)

	Average Of All Farms	Average Of Low 25%	Average Of High 25%
Dairy			
Number of farms	37	9	9
Avg. number of Cows	148.8	144.3	158.0
Milk produced per Cow	19641	18876	21304
Percent of barn capacity	101.5	108.2	101.4
Avg. milk price per cwt.	14.92	14.54	15.16
ACREAGE SUMMARY			
Total Acres Owned	456	548	478
Total Crop Acres	739	901	777
Crop Acres Owned	386	508	337
Crop Acres Cash Rented	350	393	429
Crop Acres Share Rented	3	-	11
Total Pasture Acres	1	-	3
AVERAGE PRICE RECEIVED (Cash Sales Only)			
Wheat, Winter per bu.	3.60	-	-
Corn per bu.	3.31	-	-
Soybeans per bu.	6.95	-	-
AVERAGE YIELD PER ACRE			
Hay, Alfalfa (ton)	3.75	3.72	3.92
Corn (bu.)	94.64	100.15	104.09
Corn Silage (ton)	10.94	-	12.66
Haylage, Alfalfa (ton)	5.25	-	-
Soybeans (bu.)	29.15	-	-
Wheat, Winter (bu.)	34.30	31.74	-
Hay, Grass (ton)	3.26	-	-
Oats (bu.)	57.36	-	-
Sugar Beets (ton)	15.57	-	-
Barley (bu.)	51.22	-	-

Table C2. FARM INCOME STATEMENT, 1996  
**Michigan Dairy Farms with 121 to 175 Cows**  
(Farms sorted by Net Farm Income)

	Average Of All Farms	Average Of Low 25%	Average Of High 25%
Number of Farms	37	9	9
<b>CASH FARM INCOME</b>			
Barley	9	38	-
Navy Beans	541	-	-
Cordwood	444	-	-
Corn	11010	12612	5726
Corn Silage	602	-	-
Cucumbers	499	-	2052
Alfalfa Hay	145	91	52
Mixed Hay	1239	-	1394
Alfalfa Haylage	133	-	227
Mixed Haylage	1219	-	340
Oats	103	69	32
Soybeans	7869	21364	4020
Straw	133	24	-
Sugar Beets	4801	10853	8883
Winter Wheat	5053	11317	2954
Beef Bulls	25	102	-
Beef Calves	266	-	427
Finish Beef Calves	994	-	-
Milk	436087	396043	510159
Dairy Calves	1255	1055	1126
Dairy Heifers (for sale)	1397	-	-
Dairy Replacement Heifers	444	-	316
Dairy Steers	9847	14309	13864
Raised Hogs	859	-	-
Finish Feeder Pigs	304	-	102
Finish Cull Cows	41	-	-
Cull breeding livestock	17828	15878	21208
Misc. livestock income	22	91	-
Deficiency payments	531	2181	-
CRP payments	93	382	-
Other government payments	11871	15614	10391
Custom work income	2594	942	50
Patronage dividends, cash	2476	2657	3356
Insurance income	2208	7499	119
Cash from hedging accts	90	-	-
Other farm income	5547	4472	3767
Gross Cash Farm Income	528576	517593	590566

Table C2. FARM INCOME STATEMENT, 1996 (Continued)  
**Michigan Dairy Farms with 121 to 175 Cows**  
(Farms sorted by Net Farm Income)

	Average Of All Farms	Average Of Low 25%	Average Of High 25%
Number of Farms	37	9	9
<b>CASH FARM EXPENSE</b>			
Seed	12043	11208	14128
Fertilizer	25643	30137	21935
Crop chemicals	14717	25751	13302
Crop insurance	243	400	443
Drying fuel	372	1529	-
Irrigation energy	181	-	-
Crop marketing	108	442	-
Crop miscellaneous	1985	1415	1807
Feeder livestock purchase	171	103	27
Purchased feed	105876	98063	120849
Breeding fees	4767	6147	5727
Veterinary	14395	14455	17855
Livestock supplies	19099	15600	19663
Livestock leases	324	-	-
Livestock marketing	19183	17357	26565
Interest	25734	31493	14947
Fuel & oil	14528	14066	17115
Repairs	39829	45829	44402
Custom hire	6024	8430	4864
Hired labor	64238	67573	68480
Land rent	16503	18269	19810
Machinery & bldg leases	5240	8791	5409
Real estate taxes	5062	5301	4867
Personal property taxes	180	-	46
Farm insurance	7642	9786	7461
Utilities	11977	10859	13828
Dues & professional fees	4303	5939	2540
Miscellaneous	24040	21982	16160
Total cash expense	444408	470927	462231
Net cash farm income	84169	46665	128335
<b>INVENTORY CHANGES</b>			
Crops and feed	3419	-9254	12836
Market livestock	-84	1215	-11
Accounts receivable	903	-503	3317
Prepaid expenses and supplies	4324	-22	14486
Accounts payable	2521	1255	8183
Total inventory change	11083	-7310	38810
Net operating profit	95251	39356	167145
<b>DEPRECIATION AND OTHER CAPITAL ADJUSTMENTS</b>			
Breeding livestock	2708	-6212	4157
Machinery and equipment	-31006	-24296	-37212
Buildings and improvements	-17287	-34054	-10540
Other farm capital	729	-3119	2622
Total depr. and other capital adj	-44856	-67681	-40973
Net farm income	50395	-28326	126173

Table C3. INVENTORY CHANGES, 1996  
**Michigan Dairy Farms with 121 to 175 Cows**  
(Farms sorted by Net Farm Income)

	Average Of All Farms	Average Of Low 25%	Average Of High 25%
Number of Farms	37	9	9
Net cash farm income	84169	46665	128335
CROPS AND FEED			
Ending inventory	122858	137560	150675
Beginning inventory	119439	146814	137840
Inventory change	3419	-9254	12836
MARKET LIVESTOCK			
Ending inventory	11563	19810	13429
Beginning inventory	11647	18595	13440
Inventory change	-84	1215	-11
ACCTS RECEIVABLE & OTHER CURRENT ASSETS			
Ending inventory	25534	26768	51563
Beginning inventory	24632	27271	48246
Inventory change	903	-503	3317
PREPAID EXPENSES AND SUPPLIES			
Ending inventory	11393	14201	21405
Beginning inventory	7069	14223	6919
Inventory change	4324	-22	14486
ACCOUNTS PAYABLE			
Beginning inventory	11117	14075	9712
Ending inventory	8596	12819	1530
Inventory change	2521	1255	8183
Total inventory change	11083	-7310	38810
Net operating profit	95251	39356	167145

Table C4. DEPRECIATION AND OTHER CAPITAL ADJUSTMENTS, 1996  
**Michigan Dairy Farms with 121 to 175 Cows**  
(Farms sorted by Net Farm Income)

	Average Of All Farms	Average Of Low 25%	Average Of High 25%
Number of Farms	37	9	9
Net operating profit	95251	39356	167145
<b>BREEDING LIVESTOCK</b>			
Ending inventory	234329	236982	236263
Capital sales	1019	2096	132
Beginning inventory	226230	237995	225574
Capital purchases	6409	7294	6664
Depreciation, capital adj.	2708	-6212	4157
<b>MACHINERY AND EQUIPMENT</b>			
Ending inventory	131961	176462	122807
Capital sales	1009	-	1279
Beginning inventory	123602	158099	114046
Capital purchases	40374	42659	47252
Depreciation, capital adj.	-31006	-24296	-37212
<b>BUILDINGS AND IMPROVEMENTS</b>			
Ending inventory	111920	241166	94353
Capital sales	-	-	-
Beginning inventory	112378	239145	99600
Capital purchases	16828	36076	5293
Depreciation, capital adj.	-17287	-34054	-10540
<b>OTHER CAPITAL ASSETS</b>			
Ending inventory	19225	37873	10169
Capital sales	6101	2959	10218
Beginning inventory	18436	40274	7237
Capital purchases	6160	3678	10529
Depreciation, capital adj.	729	-3119	2622
Total depreciation, capital adj.	-44856	-67681	-40973
Net farm income	50395	-28326	126173

Table C5. PROFITABILITY AND LIQUIDITY ANALYSIS, 1996  
**Michigan Dairy Farms with 121 to 175 Cows**  
(Farms sorted by Net Farm Income)

	Avg. Of All Farms	Avg. Of Low 25 %	Avg. Of High 25 %	Avg. Of All Farms	Avg. Of Low 25 %	Avg. Of High 25 %
Number of Farms	37	9	9	37	9	9
<b>PROFITABILITY</b>						
		----- Cost -----		----- Market -----		
Net farm income	50395	-28326	126173	84925	30228	159094
Labor and management earnings	20531	-69426	91018	32052	-37459	96840
Rate of return on assets	3.5 %	-3.7 %	10.6 %	5.2 %	1.1 %	9.4 %
Rate of return on equity	0.8 %	-10.6 %	11.6 %	4.3 %	-1.3 %	9.7 %
Operating profit margin	6.9 %	-10.2 %	17.0 %	14.9 %	4.3 %	23.7 %
Asset turnover rate	51.3 %	35.8 %	62.3 %	35.2 %	25.7 %	39.6 %
Interest on farm net worth	29864	41100	35155	52873	67687	62254
Farm interest expense	25767	31564	15214	25767	31564	15214
Value of operator lbr and mgmt.	46646	44556	57998	46646	44556	57998
Return on farm assets	29515	-41318	83389	64046	17235	116310
Average farm assets	837486	1131031	786070	1221637	1574141	1237711
Return on farm equity	3749	-72882	68175	38279	-14328	101096
Average farm equity	497065	685008	585918	881215	1128118	1037559
Value of farm production	429474	404672	489989	429474	404672	489989

	Average Of All Farms	Average Of Low 25 %	Average Of High 25 %
Number of Farms	37	9	9
<b>LIQUIDITY (Cash)</b>			
Net cash farm income	84169	46665	128335
Net nonfarm income	4700	767	7545
Family living and taxes	47838	34663	60640
Real estate principal payments	7010	9823	6762
Cash available for interm. debt	34021	2946	68479
Average intermediate debt	111906	123048	54522
Years to turnover interm. debt	3.3	41.8	0.8
Expense as a % of income	84 %	91 %	78 %
Interest as a % of income	5 %	6 %	3 %
<b>LIQUIDITY (Accrual)</b>			
Total accrual farm income	532814	509050	606708
Total accrual farm expense	437563	469694	439563
Net accrual operating income	95251	39356	167145
Net nonfarm income	4700	767	7545
Family living and taxes	47838	34663	60640
Real estate principal payments	7010	9823	6762
Available for intermediate debt	45103	-4364	107289
Average intermediate debt	111906	123048	54522
Years to turnover interm. debt	2.5	**	0.5
Expense as a % of income	82 %	92 %	72 %
Interest as a % of income	5 %	6 %	3 %

\*\* Income insufficient to meet debt servicing requirements



Table C6. BALANCE SHEET AT COST VALUES, 1996  
**Michigan Dairy Farms with 121 to 175 Cows**  
(Farms sorted by Net Farm Income)

Number of Farms	Average Of All Farms		Average Of Low 25 %		Average Of High 25 %	
	37		9		9	
	Beginning	Ending	Beginning	Ending	Beginning	Ending
<b>ASSETS</b>						
<b>Current Farm Assets</b>						
Cash and checking balance	10984	10168	16855	17019	7377	7646
Prepaid expenses & supplies	7069	11393	14223	14201	6919	21405
Growing crops	10934	11207	20662	21769	8285	8100
Accounts receivable	10092	10395	3584	1839	31072	33506
Hedging accounts	-	-	-	-	-	-
Crops held for sale or feed	116564	119039	134995	121860	137840	150675
Crops under government loan	2875	3819	11819	15700	-	-
Market livestock held for sale	11647	11563	18595	19810	13440	13429
Other current assets	3606	3932	3025	3159	8889	9957
Total current farm assets	173770	181516	223759	215358	213821	244718
<b>Intermediate Farm Assets</b>						
Breeding livestock	226230	234329	237995	236982	225574	236263
Machinery and equipment	123602	131961	158099	176462	114046	122807
Other intermediate assets	8189	8792	5663	4358	4949	7881
Total intermediate farm assets	358022	375081	401757	417803	344568	366952
<b>Long-Term Farm Assets</b>						
Farm land	168686	172918	222505	232445	97254	106299
Buildings and improvements	112378	111920	239145	241166	99600	94353
Other long-term assets	10247	10433	34611	33515	2288	2288
Total long-term farm assets	291312	295271	496261	507126	199142	202939
Total Farm Assets	823104	851868	1121776	1140286	757532	814609
Total Nonfarm Assets	18839	23340	22497	23013	1213	8889
Total Assets	841943	875209	1144273	1163299	758745	823498
<b>LIABILITIES</b>						
<b>Current Farm Liabilities</b>						
Accrued interest	759	791	2187	2258	348	614
Accounts payable	10358	7804	11888	10562	9365	915
Current notes	37006	36848	35811	48299	37831	9617
Government crop loans	2045	2784	8408	11447	-	-
Principal due on term debt	34106	32178	56358	31372	25957	30647
Total current farm liabilities	84279	80406	114668	103937	73500	41794
Intermediate Farm Liabilities	89745	84355	98028	78914	31232	41083
Long-term Farm Liabilities	157145	184914	211564	284935	93461	119235
Total Farm Liabilities	331169	349674	424260	467786	198193	202112
Total Nonfarm Liabilities	870	1176	1008	44	1567	2456
Total Liabilities	332038	350850	425268	467830	199760	204568
Net Worth (farm and nonfarm)	509905	524359	719005	695469	558985	618930
Net Worth Change		14454		-23536		59944
<b>RATIO ANALYSIS</b>						
Current Farm Liabilities / Assets	49 %	44 %	51 %	48 %	34 %	17 %
Curr. & Interm Farm Liab / Assets	33 %	30 %	34 %	29 %	19 %	14 %
Long Term Farm Liab. / Assets	54 %	63 %	43 %	56 %	47 %	59 %
Total Liabilities / Assets	39 %	40 %	37 %	40 %	26 %	25 %

Table C7. **BALANCE SHEET AT MARKET VALUES, 1996**  
**Michigan Dairy Farms with 121 to 175 Cows**  
(Farms sorted by Net Farm Income)

Number of Farms	Average Of All Farms		Average Of Low 25 %		Average Of High 25 %	
	37		9		9	
	Beginning	Ending	Beginning	Ending	Beginning	Ending
<b>ASSETS</b>						
<b>Current Farm Assets</b>						
Cash and checking balance	10984	10168	16855	17019	7377	7646
Prepaid expenses & supplies	7069	11393	14223	14201	6919	21405
Growing crops	10934	11207	20662	21769	8285	8100
Accounts receivable	10092	10395	3584	1839	31072	33506
Hedging accounts	-	-	-	-	-	-
Crops held for sale or feed	116564	119039	134995	121860	137840	150675
Crops under government loan	2875	3819	11819	15700	-	-
Market livestock held for sale	11647	11563	18595	19810	13440	13429
Other current assets	3606	3932	3025	3159	8889	9957
Total current farm assets	173770	181516	223759	215358	213821	244718
<b>Intermediate Farm Assets</b>						
Breeding livestock	240520	249345	237995	236982	253762	265973
Machinery and equipment	244360	260846	291236	306247	231351	244691
Other intermediate assets	13833	13096	5663	4358	8097	11149
Total intermediate farm assets	498714	523288	534894	547587	493210	521813
<b>Long-Term Farm Assets</b>						
Farm land	407567	430354	589248	645133	377952	407409
Buildings and improvements	96341	103969	143933	161496	100831	100762
Other long-term assets	13598	14156	43776	43098	6898	8009
Total long-term farm assets	517505	548480	776957	849728	485681	516180
Total Farm Assets	1189989	1253284	1535610	1612673	1192712	1282711
Total Nonfarm Assets	47036	52038	43464	42197	17067	26622
Total Assets	1237025	1305322	1579073	1654870	1209779	1309333
<b>LIABILITIES</b>						
<b>Current Farm Liabilities</b>						
Accrued interest	759	791	2187	2258	348	614
Accounts payable	10358	7804	11888	10562	9365	915
Current notes	37006	36848	35811	48299	37831	9617
Government crop loans	2045	2784	8408	11447	-	-
Principal due on term debt	34106	32178	56358	31372	25957	30647
Total current farm liabilities	84279	80406	114668	103937	73500	41794
Intermediate Farm Liabilities	89745	84355	98028	78914	31232	41083
Long-term Farm Liabilities	157145	184914	211564	284935	93461	119235
Total Farm Liabilities	331169	349674	424260	467786	198193	202112
Total Nonfarm Liabilities	870	1176	1008	44	1567	2456
Total Deferred Liabilities	-	-	-	-	-	-
Total Liabilities	332038	350850	425268	467830	199760	204568
Net Worth (farm and nonfarm)	904987	954472	1153805	1187040	1010019	1104765
Net Worth Change		49485		33235		94746
<b>RATIO ANALYSIS</b>						
Current Farm Liabilities / Assets	49 %	44 %	51 %	48 %	34 %	17 %
Curr. & Interm Farm Liab. / Assets	26 %	23 %	28 %	24 %	15 %	11 %
Long Term Farm Liabilities / Assets	30 %	34 %	27 %	34 %	19 %	23 %
Total Liabilities / Assets	27 %	27 %	27 %	28 %	17 %	16 %

Table C8. STATEMENT OF CASH FLOWS, 1996  
**Michigan Dairy Farms with 121 to 175 Cows**  
(Farms sorted by Net Farm Income)

	Average Of All Farms	Average Of Low 25%	Average Of High 25%
Number of Farms	37	9	9
(a) Beginning cash balance (farm & nonfarm)	12719	23433	7932
CASH FROM OPERATING ACTIVITIES			
Gross cash farm income	528576	517593	590566
Net nonfarm income (+)	4700	767	7545
Total cash farm expense (-)	444408	470927	462231
Apparent family living expense (-)	43454	29654	50797
Income and social security tax (-)	4384	5009	9843
(b) Cash from operations (=)	41031	12769	75241
CASH FROM INVESTING ACTIVITIES			
Sale of breeding livestock	1019	2096	132
Sale of machinery & equipment (+)	1009	-	1279
Sale of farm land (+)	6901	26147	-
Sale of farm buildings (+)	-	-	-
Sale of other farm assets (+)	6101	2959	10218
Sale of nonfarm assets (+)	1639	6739	-
Purchase of breeding livestock (-)	6409	7294	6664
Purchase of machinery & equip. (-)	40374	42659	47252
Purchase of farm land (-)	5970	3700	12510
Purchase of farm buildings (-)	16828	36076	5293
Purchase of other farm assets (-)	6160	3678	10529
Purchase of nonfarm assets (-)	2464	1965	8111
(c) Cash from investing activities (=)	-61538	-57431	-78730
CASH FROM FINANCING ACTIVITIES			
Money borrowed	137507	314687	49769
Cash gifts and inheritances (+)	811	675	-
Principal payments (-)	116161	270870	36747
Dividends paid (-)	-	-	-
Gifts given (-)	460	311	375
(d) Cash from financing activities (=)	21697	44181	12647
(e) Net change in cash balance (b+c+d)	1190	-481	9158
Ending cash balance (farm & nonfarm)	13909	22953	17090

Table C9. FINANCIAL GUIDELINES MEASURES, 1996  
**Michigan Dairy Farms with 121 to 175 Cows**  
(Farms sorted by Net Farm Income)

	Average For All Farms		Average For Low 25 %		Average For High 25 %	
Number of Farms	37		9		9	
<b>LIQUIDITY</b>	Beginning	Ending	Beginning	Ending	Beginning	Ending
Current ratio	2.06	2.26	1.95	2.07	2.91	5.86
Working capital	89492	101110	109090	111420	140321	202924
<b>SOLVENCY (Market)</b>	Beginning	Ending	Beginning	Ending	Beginning	Ending
Farm debt to asset ratio	28 %	28 %	28 %	29 %	17 %	16 %
Farm equity to asset ratio	72 %	72 %	72 %	71 %	83 %	84 %
Farm debt to equity ratio	39 %	39 %	38 %	41 %	20 %	19 %
<b>PROFITABILITY</b>	Cost	Market	Cost	Market	Cost	Market
Rate of return on farm assets	3.5 %	5.2 %	-3.7 %	1.1 %	10.6 %	9.4 %
Rate of return on farm equity	0.8 %	4.3 %	-10.6 %	-1.3 %	11.6 %	9.7 %
Operating profit margin	6.9 %	14.9 %	-10.2 %	4.3 %	17.0 %	23.7 %
Net farm income	50395	84925	-28326	30228	126173	159094
<b>REPAYMENT CAPACITY</b>	Cash	Accrual	Cash	Accrual	Cash	Accrual
Term debt coverage ratio	123	159	-69	-97	298	455
Capital replacement margin	6874	17957	-43589	-50898	49078	87888
<b>EFFICIENCY</b>						
Asset turnover rate (market)	35.2 %		25.7 %		39.6 %	
Operating expense ratio	77.3 %		86.1 %		69.9 %	
Depreciation expense ratio	8.4 %		13.3 %		6.8 %	
Interest expense ratio	4.8 %		6.2 %		2.5 %	
Net farm income ratio	9.5 %		-5.6 %		20.8 %	

LABOR ANALYSIS

	Average For All Farms	Average For Low 25 %	Average For High 25 %
Number of Farms	36	8	9
Total unpaid labor hours	5665	5595	6142
Total hired labor hours	6866	7613	8205
Total labor hours per farm	12530	13208	14348
Value of farm production / hour	34.54	31.55	34.15
Net farm income / unpaid hour	9.48	-4.15	20.54

Table D1. Livestock and Crop Production Summary, 1996  
**Michigan Dairy Farms with 176 to 1,200 Cows**  
(Farms sorted by Net Farm Income)

	Average Of All Farms	Average Of Low 25%	Average Of High 25%
Dairy			
Number of farms	36	9	9
Avg. number of Cows	332.3	413.5	467.0
Milk produced per Cow	21665	19842	23431
Percent of barn capacity	93.5	89.4	95.5
Avg. milk price per cwt.	14.84	14.96	14.73
ACREAGE SUMMARY			
Total Crop Acres	937	1036	1274
Crop Acres Owned	641	702	1011
Crop Acres Cash Rented	296	334	263
Crop Acres Share Rented	-	-	-
Total Pasture Acres	0	-	1
AVERAGE PRICE RECEIVED (Cash Sales Only)			
Corn per bu.	3.54	-	-
Soybeans per bu.	6.90	-	-
Wheat, Winter per bu.	3.19	-	-
AVERAGE YIELD PER ACRE			
Corn Silage (ton)	12.93	12.51	15.60
Corn (bu.)	97.82	-	106.94
Hay, Alfalfa (ton)	3.96	-	-
Soybeans (bu.)	33.34	-	-
Haylage, Alfalfa (ton)	5.56	-	-
Wheat, Winter (bu.)	37.92	-	-
Hay, Mixed (ton)	2.53	-	-
Hay, Grass (ton)	3.39	-	-

Table D2. FARM INCOME STATEMENT, 1996  
**Michigan Dairy Farms with 176 to 1,200 Cows**  
(Farms sorted by Net Farm Income)

	Average Of All Farms	Average Of Low 25%	Average Of High 25%
Number of Farms	36	9	9
CASH FARM INCOME			
Green Beans	807	-	3228
Navy Beans	369	-	778
Cordwood	944	3506	-
Corn	11941	30031	15863
Corn Silage	16	-	-
Seed Corn	1812	-	-
Alfalfa Hay	26	66	-
Mixed Hay	34	-	8
Alfalfa Haylage	414	-	936
Mixed Haylage	788	2601	552
Oats	31	-	-
Rye	64	-	255
Soybeans	6200	8285	5287
Straw	8	-	-
Winter Wheat	2195	1692	2351
Finish Beef Calves	101	405	-
Milk	1068440	1227570	1611757
Dairy Calves	5781	8418	7070
Dairy Heifers (for sale)	127	-	-
Dairy Replacement Heifers	89	299	55
Dairy Steers	11505	16024	1422
Aquaculture	83	-	-
Cull breeding livestock	33074	30260	58129
Misc. livestock income	481	-	-
Deficiency payments	1925	3227	2746
CRP payments	425	-	1699
Other government payments	15828	20411	21973
Custom work income	1059	85	3227
Patronage dividends, cash	3944	3150	6795
Insurance income	1549	39	5472
Other farm income	7774	5141	17210
Gross Cash Farm Income	1177836	1361211	1766813

Table D2. FARM INCOME STATEMENT, 1996 (Continued)  
**Michigan Dairy Farms with 176 to 1,200 Cows**  
(Farms sorted by Net Farm Income)

	Average Of All Farms	Average Of Low 25%	Average Of High 25%
Number of Farms	36	9	9
<b>CASH FARM EXPENSE</b>			
Seed	17252	20364	29585
Fertilizer	32041	39321	49230
Crop chemicals	22682	26059	30105
Crop insurance	174	529	39
Drying fuel	397	235	407
Irrigation energy	1038	-	2386
Crop marketing	13	37	-
Crop miscellaneous	1836	438	5092
Purchased feed	335480	417686	479256
Breeding fees	9196	9634	15699
Veterinary	42320	58225	46255
Livestock supplies	34400	47832	51751
Livestock leases	2461	389	8426
Livestock marketing	37637	41542	50439
Interest	51636	92600	52337
Fuel & oil	19292	23221	22532
Repairs	50425	60326	61559
Custom hire	20168	22156	32725
Hired labor	167215	185784	241663
Land rent	30422	54968	33367
Machinery & bldg leases	9739	18947	12149
Real estate taxes	7054	5198	11071
Personal property taxes	239	-	-
Farm insurance	12975	19288	13571
Utilities	23089	27737	29758
Dues & professional fees	4305	6796	5562
Hedging account deposits	614	-	2458
Miscellaneous	44243	42629	68267
Total cash expense	978344	1221940	1355688
Net cash farm income	199492	139270	411125
<b>INVENTORY CHANGES</b>			
Crops and feed	-10217	-68151	12699
Market livestock	-3712	-10185	-1127
Accounts receivable	11519	35899	2580
Prepaid expenses and supplies	12825	751	36737
Accounts payable	-10246	-39733	-10
Total inventory change	168	-81418	50879
Net operating profit	199660	57853	462004
<b>DEPRECIATION AND OTHER CAPITAL ADJUSTMENTS</b>			
Breeding livestock	-3822	-32861	2603
Machinery and equipment	-64350	-74087	-87684
Buildings and improvements	-31025	-75315	-8129
Other farm capital	10311	16432	25171
Total depr. and other capital adj	-88886	-165831	-68039
Net farm income	110774	-107978	393965

Table D3. INVENTORY CHANGES, 1996  
**Michigan Dairy Farms with 176 to 1,200 Cows**  
(Farms sorted by Net Farm Income)

	Average Of All Farms	Average Of Low 25%	Average Of High 25%
Number of Farms	36	9	9
Net cash farm income	199492	139270	411125
CROPS AND FEED			
Ending inventory	186530	183315	297328
Beginning inventory	196747	251466	284628
Inventory change	-10217	-68151	12699
MARKET LIVESTOCK			
Ending inventory	7553	7387	153
Beginning inventory	11265	17572	1281
Inventory change	-3712	-10185	-1127
ACCTS RECEIVABLE & OTHER CURRENT ASSETS			
Ending inventory	40672	61572	53296
Beginning inventory	29153	25673	50716
Inventory change	11519	35899	2580
PREPAID EXPENSES AND SUPPLIES			
Ending inventory	42605	23278	101500
Beginning inventory	29780	22527	64763
Inventory change	12825	751	36737
ACCOUNTS PAYABLE			
Beginning inventory	9391	24020	6520
Ending inventory	19637	63753	6530
Inventory change	-10246	-39733	-10
Total inventory change	168	-81418	50879
Net operating profit	199660	57853	462004



Table D4. DEPRECIATION AND OTHER CAPITAL ADJUSTMENTS, 1996  
**Michigan Dairy Farms with 176 to 1,200 Cows**  
(Farms sorted by Net Farm Income)

	Average Of All Farms	Average Of Low 25%	Average Of High 25%
Number of Farms	36	9	9
Net operating profit	199660	57853	462004
<b>BREEDING LIVESTOCK</b>			
Ending inventory	531137	761657	602109
Capital sales	15137	40285	8423
Beginning inventory	485241	678408	537904
Capital purchases	64856	156395	70025
Depreciation, capital adj.	-3822	-32861	2603
<b>MACHINERY AND EQUIPMENT</b>			
Ending inventory	270705	373779	360569
Capital sales	2923	1872	1810
Beginning inventory	259216	325492	363279
Capital purchases	78762	124246	86784
Depreciation, capital adj.	-64350	-74087	-87684
<b>BUILDINGS AND IMPROVEMENTS</b>			
Ending inventory	284650	380990	510096
Capital sales	-	-	-
Beginning inventory	264198	350414	463126
Capital purchases	51477	105892	55099
Depreciation, capital adj.	-31025	-75315	-8129
<b>OTHER CAPITAL ASSETS</b>			
Ending inventory	52787	42926	113078
Capital sales	25044	55349	27582
Beginning inventory	50134	46035	90433
Capital purchases	17386	35808	25056
Depreciation, capital adj.	10311	16432	25171
Total depreciation, capital adj.	-88886	-165831	-68039
Net farm income	110774	-107978	393965

Table D5. PROFITABILITY AND LIQUIDITY ANALYSIS, 1996  
**Michigan Dairy Farms with 176 to 1,200 Cows**  
(Farms sorted by Net Farm Income)

	Avg. Of All Farms	Avg. Of Low 25 %	Avg. Of High 25 %	Avg. Of All Farms	Avg. Of Low 25 %	Avg. Of High 25 %
Number of Farms	36	9	9	36	9	9
<b>PROFITABILITY</b>	----- Cost -----			----- Market -----		
Net farm income	110774	-107978	393965	140396	-77413	452420
Labor and management earnings	49429	-159748	283246	56347	-153983	322056
Rate of return on assets	5.9 %	-4.5 %	15.6 %	6.2 %	-2.6 %	15.9 %
Rate of return on equity	4.9 %	-21.7 %	18.7 %	5.7 %	-12.3 %	18.6 %
Operating profit margin	12.2 %	-10.9 %	30.6 %	15.7 %	-7.4 %	35.1 %
Asset turnover rate	48.8 %	41.7 %	51.1 %	39.7 %	34.8 %	45.3 %
Interest on farm net worth	61345	51770	110719	84050	76569	130363
Farm interest expense	52176	92983	53906	52176	92983	53906
Value of operator lbr and mgmt.	60982	79591	48807	60982	79591	48807
Return on farm assets	101967	-94586	399064	131590	-64021	457519
Average farm assets	1714781	2083255	2552005	2105999	2496575	2879417
Return on farm equity	49792	-187569	345158	79414	-157004	403613
Average farm equity	1022416	862835	1845313	1400827	1276155	2172725
Value of farm production	836123	868228	1304312	836123	868228	1304312

	Average Of All Farms	Average Of Low 25 %	Average Of High 25 %
Number of Farms	36	9	9
<b>LIQUIDITY (Cash)</b>			
Net cash farm income	199492	139270	411125
Net nonfarm income	6747	6769	2798
Family living and taxes	90984	43963	200669
Real estate principal payments	19452	29712	23736
Cash available for interm. debt	95803	72365	189518
Average intermediate debt	295342	513722	253293
Years to turnover interm. debt	3.1	7.1	1.3
Expense as a % of income	83 %	90 %	77 %
Interest as a % of income	4 %	7 %	3 %
<b>LIQUIDITY (Accrual)</b>			
Total accrual farm income	1175425	1318774	1780965
Total accrual farm expense	975765	1260922	1318961
Net accrual operating income	199660	57853	462004
Net nonfarm income	6747	6769	2798
Family living and taxes	90984	43963	200669
Real estate principal payments	19452	29712	23736
Available for intermediate debt	95972	-9053	240397
Average intermediate debt	295342	513722	253293
Years to turnover interm. debt	3.1	**	1.1
Expense as a % of income	83 %	96 %	74 %
Interest as a % of income	4 %	7 %	3 %

\*\* Income insufficient to meet debt servicing requirements

Table D6. BALANCE SHEET AT COST VALUES, 1996  
**Michigan Dairy Farms with 176 to 1,200 Cows**  
(Farms sorted by Net Farm Income)

Number of Farms	Average Of All Farms		Average Of Low 25 %		Average Of High 25 %	
	36		9		9	
	Beginning	Ending	Beginning	Ending	Beginning	Ending
<b>ASSETS</b>						
<b>Current Farm Assets</b>						
Cash and checking balance	24755	24620	11035	2177	54708	66410
Prepaid expenses & supplies	29780	42605	22527	23278	64763	101500
Growing crops	8252	8759	10330	11672	9033	8376
Accounts receivable	16180	25292	14686	48164	28995	27831
Hedging accounts	-	-	-	-	-	-
Crops held for sale or feed	194105	184413	251466	183315	274059	295037
Crops under government loan	2642	2117	0	0	10569	2290
Market livestock held for sale	11265	7553	17572	7387	1281	153
Other current assets	4720	6621	657	1736	12687	17089
Total current farm assets	291700	301979	328273	277730	456096	518687
<b>Intermediate Farm Assets</b>						
Breeding livestock	485241	531137	678408	761657	537904	602109
Machinery and equipment	259216	270705	325492	373779	363279	360569
Other intermediate assets	43925	48678	35966	33401	89281	111964
Total intermediate farm assets	788382	850520	1039867	1168837	990464	1074642
<b>Long-Term Farm Assets</b>						
Farm land	314712	323104	302534	298273	538349	550285
Buildings and improvements	264198	284650	350414	380990	463126	510096
Other long-term assets	6208	4109	10068	9525	1152	1114
Total long-term farm assets	585117	611863	663016	688788	1002627	1061495
Total Farm Assets	1665199	1764362	2031155	2135354	2449186	2654824
Total Nonfarm Assets	48097	49605	24589	17410	-	-
Total Assets	1713296	1813967	2055744	2152765	2449186	2654824
<b>LIABILITIES</b>						
<b>Current Farm Liabilities</b>						
Accrued interest	1024	1564	2617	3000	272	1842
Accounts payable	8367	18073	21403	60752	6248	4689
Current notes	48633	73671	95751	182968	20034	21090
Government crop loans	1687	1330	-0	-0	6748	1577
Principal due on term debt	63806	72347	119539	144695	51529	52516
Total current farm liabilities	123534	167003	239309	391416	84830	81713
Intermediate Farm Liabilities	236084	257401	413272	410890	214771	235181
Long-term Farm Liabilities	296124	304583	444700	541251	402138	394752
Total Farm Liabilities	655742	728987	1097281	1343558	701739	711646
Total Nonfarm Liabilities	42	-	-	-	-	-
Total Liabilities	655784	728987	1097281	1343558	701739	711646
Net Worth (farm and nonfarm)	1057512	1084980	958463	809207	1747447	1943178
Net Worth Change		27468		-149256		195731
<b>RATIO ANALYSIS</b>						
Current Farm Liabilities / Assets	42 %	55 %	73 %	141 %	19 %	16 %
Curr. & Interm Farm Liab / Assets	33 %	37 %	48 %	55 %	21 %	20 %
Long Term Farm Liab. / Assets	51 %	50 %	67 %	79 %	40 %	37 %
Total Liabilities / Assets	38 %	40 %	53 %	62 %	29 %	27 %

Table D7. **BALANCE SHEET AT MARKET VALUES, 1996**  
**Michigan Dairy Farms with 176 to 1,200 Cows**  
(Farms sorted by Net Farm Income)

Number of Farms	Average Of All Farms		Average Of Low 25 %		Average Of High 25 %	
	36		9		9	
	Beginning	Ending	Beginning	Ending	Beginning	Ending
<b>ASSETS</b>						
<b>Current Farm Assets</b>						
Cash and checking balance	24755	24620	11035	2177	54708	66410
Prepaid expenses & supplies	29780	42605	22527	23278	64763	101500
Growing crops	8252	8759	10330	11672	9033	8376
Accounts receivable	16180	25292	14686	48164	28995	27831
Hedging accounts	-	-	-	-	-	-
Crops held for sale or feed	194105	184413	251466	183315	274059	295037
Crops under government loan	2642	2117	0	0	10569	2290
Market livestock held for sale	11265	7553	17572	7387	1281	153
Other current assets	4720	6621	657	1736	12687	17089
Total current farm assets	291700	301979	328273	277730	456096	518687
<b>Intermediate Farm Assets</b>						
Breeding livestock	509057	570895	674505	761657	639022	761141
Machinery and equipment	350538	374699	465602	530285	415480	422883
Other intermediate assets	44015	48803	35966	33401	89281	111964
Total intermediate farm assets	903610	994396	1176073	1325343	1143783	1295988
<b>Long-Term Farm Assets</b>						
Farm land	661996	672546	675438	676959	902234	907653
Buildings and improvements	177289	198099	239286	274345	244054	287932
Other long-term assets	6235	4146	10124	9581	1204	1204
Total long-term farm assets	845521	874791	924847	960885	1147492	1196789
Total Farm Assets	2040831	2171167	2429193	2563957	2747371	3011464
Total Nonfarm Assets	51898	58405	4582	7111	18889	18889
Total Assets	2092729	2229572	2433775	2571068	2766260	3030352
<b>LIABILITIES</b>						
<b>Current Farm Liabilities</b>						
Accrued interest	1024	1564	2617	3000	272	1842
Accounts payable	8367	18073	21403	60752	6248	4689
Current notes	48633	73671	95751	182968	20034	21090
Government crop loans	1687	1330	-0	-0	6748	1577
Principal due on term debt	63806	72347	119539	144695	51529	52516
Total current farm liabilities	123534	167003	239309	391416	84830	81713
Intermediate Farm Liabilities	236084	257401	413272	410890	214771	235181
Long-term Farm Liabilities	296124	304583	444700	541251	402138	394752
Total Farm Liabilities	655742	728987	1097281	1343558	701739	711646
Total Nonfarm Liabilities	42	-	-	-	-	-
Total Deferred Liabilities	12032	13583	-	-	-	-
Total Liabilities	667816	742570	1097281	1343558	701739	711646
Net Worth (farm and nonfarm)	1424913	1487002	1336494	1227511	2064521	2318707
Net Worth Change		62089		-108983		254186
<b>RATIO ANALYSIS</b>						
Current Farm Liabilities / Assets	42 %	55 %	73 %	141 %	19 %	16 %
Curr. & Interm Farm Liab. / Assets	30 %	33 %	43 %	50 %	19 %	17 %
Long Term Farm Liabilities / Assets	35 %	35 %	48 %	56 %	35 %	33 %
Total Liabilities / Assets	32 %	33 %	45 %	52 %	25 %	23 %

Table D8.            STATEMENT OF CASH FLOWS, 1996  
**Michigan Dairy Farms with 176 to 1,200 Cows**  
(Farms sorted by Net Farm Income)

	Average Of All Farms	Average Of Low 25%	Average Of High 25%
Number of Farms	36	9	9
(a) Beginning cash balance (farm & nonfarm)	24755	11035	54708
CASH FROM OPERATING ACTIVITIES			
Gross cash farm income	1177836	1361211	1766813
Net nonfarm income           (+)	6747	6769	2798
Total cash farm expense       (-)	978344	1221940	1355688
Apparent family living expense (-)	86063	43105	190107
Income and social security tax (-)	4921	858	10562
(b) Cash from operations           (=)	115255	102077	213254
CASH FROM INVESTING ACTIVITIES			
Sale of breeding livestock	15137	40285	8423
Sale of machinery & equipment   (+)	2923	1872	1810
Sale of farm land           (+)	4719	8433	-
Sale of farm buildings       (+)	-	-	-
Sale of other farm assets   (+)	25044	55349	27582
Sale of nonfarm assets       (+)	829	3268	-
Purchase of breeding livestock (-)	64856	156395	70025
Purchase of machinery & equip. (-)	78762	124246	86784
Purchase of farm land       (-)	10080	-	12267
Purchase of farm buildings   (-)	51477	105892	55099
Purchase of other farm assets (-)	17386	35808	25056
Purchase of nonfarm assets   (-)	3192	3268	10
(c) Cash from investing activities   (=)	-177101	-316401	-211427
CASH FROM FINANCING ACTIVITIES			
Money borrowed	285760	741204	164268
Cash gifts and inheritances   (+)	2497	1437	3856
Principal payments           (-)	222800	534680	154370
Dividends paid               (-)	-	-	-
Gifts given                   (-)	3747	2495	3879
(d) Cash from financing activities   (=)	61711	205466	9874
(e) Net change in cash balance       (b+c+d)	-135	-8858	11702
Ending cash balance (farm & nonfarm)	24620	2177	66410

Table D9. **FINANCIAL GUIDELINES MEASURES, 1996**  
**Michigan Dairy Farms with 176 to 1,200 Cows**  
(Farms sorted by Net Farm Income)

	Average For All Farms		Average For Low 25 %		Average For High 25 %	
Number of Farms	36		9		9	
<b>LIQUIDITY</b>	Beginning	Ending	Beginning	Ending	Beginning	Ending
Current ratio	2.36	1.81	1.37	0.71	5.38	6.35
Working capital	168166	134976	88963	-113686	371266	436974
<b>SOLVENCY (Market)</b>	Beginning	Ending	Beginning	Ending	Beginning	Ending
Farm debt to asset ratio	33 %	34 %	45 %	52 %	26 %	24 %
Farm equity to asset ratio	67 %	66 %	55 %	48 %	74 %	76 %
Farm debt to equity ratio	49 %	52 %	82 %	110 %	34 %	31 %
<b>PROFITABILITY</b>	Cost	Market	Cost	Market	Cost	Market
Rate of return on farm assets	5.9 %	6.2 %	-4.5 %	-2.6 %	15.6 %	15.9 %
Rate of return on farm equity	4.9 %	5.7 %	-21.7 %	-12.3 %	18.7 %	18.6 %
Operating profit margin	12.2 %	15.7 %	-10.9 %	-7.4 %	30.6 %	35.1 %
Net farm income	110774	140396	-107978	-77413	393965	452420
<b>REPAYMENT CAPACITY</b>	Cash	Accrual	Cash	Accrual	Cash	Accrual
Term debt coverage ratio	164	164	88	33	329	402
Capital replacement margin	51449	51618	-17462	-98880	161726	212604
<b>EFFICIENCY</b>						
Asset turnover rate (market)	39.7 %		34.8 %		45.3 %	
Operating expense ratio	78.6 %		88.6 %		71.0 %	
Depreciation expense ratio	7.6 %		12.6 %		3.8 %	
Interest expense ratio	4.4 %		7.1 %		3.0 %	
Net farm income ratio	9.4 %		-8.2 %		22.1 %	

LABOR ANALYSIS

	Average For All Farms	Average For Low 25 %	Average For High 25 %
Number of Farms	34	8	8
Total unpaid labor hours	5397	5455	6119
Total hired labor hours	14006	16050	19851
Total labor hours per farm	19403	21505	25970
Value of farm production / hour	40.09	31.19	50.71
Net farm income / unpaid hour	21.13	-19.47	67.68

## **EXPLANATORY NOTES FOR THE WHOLE-FARM REPORTS<sup>4</sup>**

The number of farms included in each of the crop and livestock tables varies because all farms do not have the same enterprises. Some farmers' records were complete enough to be included in the whole-farm tables, but at times, these same farmers' crop or livestock records were not complete enough to include in the respective crop or livestock tables.

Rounding of individual items may have caused minor discrepancies between those items and the printed totals which are calculated before rounding.

### **Farm Income Statement**

This statement is a summary of income, expenses, and resultant profit or loss from farming operations during the calendar year. The first section lists cash farm income from all sources. The second section lists cash expenses. "Interest" includes only interest actually paid. No opportunity charges on farm equity capital or unpaid labor are included. The difference between "Gross Cash Farm Income" and "Total Cash Expense" is the "Net Cash Farm Income." This is net farm income on a cash basis.

The third and fourth sections deal with noncash changes in the farm business. The "Inventory Changes" and "Depreciation and Other Capital Adjustments" sections are used to convert the cash income Statement (Net Cash Farm Income) derived from the first two sections into an accrual income statement. The resulting "Net Farm Income" represents the return to the operator's and family's unpaid labor, management, and equity capital (net worth). In other words, it represents the return to all of the resources which are owned by the farm family and, hence, not purchased or paid a wage. However, it does not include any asset appreciation, debt forgiveness or asset repossessions.

### **Inventory Changes**

This is the detailed statement of inventory changes which is summarized. It includes beginning and ending inventories and the calculated changes.

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<sup>4</sup> This section is copied and adjusted from Staff Paper P96-4, Dept. Of Applied Economics, University of Minnesota, St. Paul, MN 55108, titled "1995 Annual Report, Southwestern Minnesota Farm Business Management Association."

## **Depreciation and Other Capital Adjustments**

This is the detailed statement of depreciation and other capital adjustments which is summarized. It includes beginning and ending inventories, sales, repossessions, and depreciation.

## **Profitability and Liquidity Analysis**

Various measures of performance are calculated for the farms in this report. These include measures of profitability and liquidity. No opportunity costs are used in the Net Income Statement, the Inventory changes, nor the depreciation and other Capital Adjustments. Opportunity costs are used in the Profitability and Liquidity Analysis. Changes in market value of assets are used in calculating the market values of these measures. The measures and their components are described below.

### ***Profitability***

Profitability is measured in both cost basis and market basis (if available).

“Labor and management earnings” equals “Net Farm Income” minus an opportunity interest cost of 6% on average farm net worth.

“Rate of return on assets” is the “Return to farm assets” divided by “Average farm assets.”

“Rate of return on equity” is the “Return to farm equity” divided by “Average farm equity.”

“Operating profit margin” is the “Return to farm assets” divided by “Value of farm production.”

“Asset turnover rate” is the “Value of farm production” divided by “Average farm assets.”

“Interest on farm net worth” is the “Average farm net worth” multiplied by a 6% opportunity interest cost charge.

“Farm interest expense” is the accrued interest cost so it will be different from the cash interest paid.

“Value of operator’s labor and management” is its opportunity cost.

“Return on farm assets” is calculated by adding “Farm interest expense” and “Net farm income” and then subtracting the “Value of operator’s labor and management.”

“Average farm assets” is the average of beginning and ending total farm assets.

“Return to farm equity” is calculated by subtracting the “Value of operator’s labor and management” from “Net farm income.”



“Average farm equity” is the average of beginning and ending farm net worth.

“Value of farm production” is gross farm income minus feeder livestock purchased and adjusted for inventory changes in crops, market livestock and breeding livestock.

***Liquidity: Cash Basis***

“Family Living and Taxes” is the apparent total family expenses and income and social security taxes paid.

“Real estate principal income is taken from the farmer’s data.

“Cash available for intermediate debt service” on the cash basis is “Total net income” minus “Family living and taxes” and “Real estate principal payments.”

“Average intermediate debt” is the average of beginning and ending intermediate farm liabilities.

“Years to turn over intermediate debt” is “Average intermediate debt” divided by “Cash available for intermediate debt service.” If either the cash-based or accrual-based “Cash available for intermediate debt” is a negative number, debt repayment is not possible because of negative cash flow and “Years to turn over intermediate debt” cannot be calculated.

“Expense as a percent of income” is “Total cash expense” divided by “Gross cash farm income.”

“Interest as a percent of income” is “Interest” divided by “Gross cash farm income.”

***Liquidity: Accrual Basis***

“Cash available for intermediate debt service” on the accrual basis is “Total net accrual income” minus “Family living and taxes” and “Real estate principal payments.”

“Accrual expense as a percent of income” is “Total accrual farm expense” divided by “Total accrual farm income.”

“Interest as a percent of income” is “Interest” minus beginning accrued interest plus ending accrued interest divided by “Total accrual farm income.”

## **Balance Sheets**

The beginning and ending balance sheets and solvency measures are presented. They include sole proprietors; partnerships and corporations.

## **Statement of Cash Flows**

This table reports the sources from which cash was available or obtained and where that cash was used or remains at the end of the year.

## **Financial Guidelines Measures and Labor Analysis**

This table contains two sections: first, the financial measures and, second, the labor summary. In the first section, the Farm Financial Standards Task Force's 16 financial measures for evaluating a farm's financial position and performance are reported. These 16 measures are explained below following the descriptions found in the FINPACK manual.

### ***Liquidity***

The "current ratio" is calculated by dividing the total current farm assets by the total current farm liabilities.

Working capital" is calculated by subtracting current farm liabilities from current farm assets.

### ***Solvency (Market)***

The "farm debt to asset ratio" is calculated by dividing the total farm liabilities by the total farm assets. It is similar to the total percent in debt ratio listed earlier. The difference is that nonfarm assets and liabilities are included in the total percent in debt but not in the farm debt to asset ratio.

The "farm equity to asset ratio" is calculated by dividing farm equity or net worth by the total farm assets. It measures the proportion of the farm assets financed by the owner's equity as opposed to debt. This is the opposite of the debt to asset ratio. These two measures always add up to 100% because they described how total farm assets are financed.

The "farm debt to equity ratio" measures farm debt relative to farm equity. It is calculated by dividing the total farm liabilities by the total farm net worth. The debt to equity ratio measures the amount of borrowed capital being employed for every dollar of equity capital.

## ***Profitability***

The “rate of return on farm assets” can be thought of as the average interest rate being earned on all investments in the farm or ranch business. If assets are valued at market value, the rate of return on assets can be looked at as the “opportunity cost” of farming versus alternate investments. If assets are valued at cost value, the rate of return on assets more closely represents the actual return on the average dollar invested in the farm. The rate of return on farm assets is calculated as follows:  $\text{Rate of Return on Assets} = \frac{\text{Return on Farm Assets}}{\text{Average Farm Investment}}$ , where:  $\text{Return on Farm Assets} = \text{Net Farm Income} + \text{Farm Interest} - \text{Value of Operator's Labor \& Management}$ , and  $\text{Average Farm Investment} = \frac{(\text{Beginning Total Farm Assets} + \text{Ending Total Farm Assets})}{2}$ .

The “rate of return on farm equity” represents the interest rate being earned on your farm net worth. If assets are valued at market value, this return can be compared to returns available if the assets were liquidated and invested in alternate investments. If assets are valued at cost value, this more closely represents the actual return on the funds that have been invested or retained in the business. The rate of return on farm equity is calculated as follows:  $\text{Rate of Return on Equity} = \frac{\text{Return on Farm Equity}}{\text{Average Farm Net Worth}}$ , where:  $\text{Return on Farm Equity} = \text{Net Farm Income} - \text{Value of Operator's Labor \& Management}$ , and  $\text{Average Farm Net Worth} = \frac{(\text{Beginning Farm Net Worth} + \text{Ending Farm Net Worth})}{2}$ .

“Operating profit margin” is a measure of the operating efficiency of the business. It is calculated as follows:  $\text{Operating Profit Margin} = \frac{\text{Return to Farm Assets}}{\text{Value of Farm Production}}$ . If expenses are held in line relative to the value of output produced, the farm will have a healthy net profit margin. A low net profit margin may be caused by low prices, high operating expenses, or inefficient production.

“Net farm income” represents the returns to unpaid labor, management, and equity capital invested in the business.

## ***Repayment Capacity***

The “term debt coverage ratio” measures whether the business generated enough cash to cover term debt payments. It is calculated by dividing the funds generated by the business for debt repayment (net cash farm income + nonfarm income + interest expense - family living expense - income taxes) by total term debt payments (annual scheduled principal and interest payments on intermediate and long term debt). A ratio less than 100 percent indicates that the business did not generate sufficient cash to meet scheduled payments in the past year. A ratio greater than 100 indicates the business generated enough cash to pay all term debt payments.

The “capital replacement margin” is the amount of money remaining after all operating expenses, taxes, family living costs, and scheduled debt payments have been made. It is the cash generated by the farm business that is available for financing capital replacement such as machinery and equipment. FINAN calculates the capital replacement margin by first adding interest due on intermediate and long term loans to the amount available for principal payments. It then subtracts scheduled principal and interest payments from this total.

## *Efficiency*

“Asset turnover rate” is a measure of efficiency in using capital. It is calculated as follows:  $\text{Asset Turnover Rate} = \text{Value of Farm Production} \div \text{Total Farm Assets}$ . This will be a market or cost rate depending on how the assets are valued.

The last four ratios reflect the distribution of gross income to cover operating expenses and generate farm income. The sum of the operating expense ratio, the depreciation expense ratio, and the interest expense ratio equals the percent of gross income used to pay business expenses. The amount remaining is net farm income. The gross farm income used to calculate these ratios is the accrual gross farm income.

The “operating expense ratio” is calculated as  $(\text{Total Farm Operating Expense} - \text{Farm Interest Expense}) \div \text{Gross Farm Income}$ . This indicates the percent of the gross farm income that was used to pay operating expenses. Total farm operating expense is the accrual total operating expense.

The “depreciation expense ratio” is calculated as  $\text{Depreciation} \div \text{Gross Farm Income}$ . This ratio indicates the percent of the gross farm income that was used to cover depreciation and other capital adjustments.

The “interest expense ratio” is calculated as  $\text{Farm Interest Expense} \div \text{Gross Farm Income}$ . This ratio indicates the percent of the gross farm income used for farm interest expenses. This is the same ratio as the accrual interest as a percent of income from the Liquidity section in Table 4.

The “net farm income ratio” is calculated as  $\text{Net Farm Income} \div \text{Gross Farm Income}$ . This ratio indicates the percent of the gross farm income that remained after all expenses.

## **Crop Production and Marketing Summary**

This table contains three sections. The first section reports average acreage by land use. The next two sections show average price received and average yields for major crops.