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# ***Staff Paper***

## **Dairy Grazing Farms in Michigan, 2001**

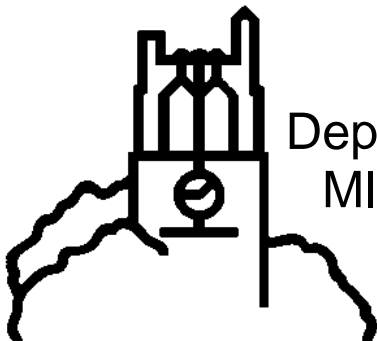
by

**Sherrill B. Nott**

**Staff Paper #2002-30**

**October, 2002**

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# DAIRY GRAZING FARMS IN MICHIGAN, 2001

Michigan Data from Telfarm/MicroTel, and the Farm Credit System  
Staff Paper No. 2002-30

by

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

The purposes of this report are: 1) to provide statistical information about the financial results of dairy farms that intensively grazed their milk cows during 2001 (the body of the paper); and 2) to provide production costs for comparative analysis and forward planning.

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## Data Source

The type of farm in this report is dairy. 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 animals. They are also classed as grazing farms because co-workers told me the farms used management intensive grazing with their milking herd during the summer of 2001.

This report is a summary of the financial and production records kept by Michigan dairy farmers who received outside help in keeping and reviewing those records. Farm records were included if a Finan<sup>2</sup> summary was completed on 2001 data including beginning and ending

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<sup>1</sup>Professor and Extension Specialist in the Department of Agricultural Economics. Co-workers in the Telfarm/MicroTel project were R. Betz, L. Borton, G. Kole, T. Purdy, W. Schauer, D. Stein, and V. Varner with the assistance of MSU Extension Agents in Michigan. Steve Zimmerman of Farm Credit Services also assisted..

<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.

balance sheets that had both cost basis and market valuations, plus income and expenses. 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. The 14 farms that met these criteria were spread across 12 counties throughout Michigan.

RankEm is software that averages and sorts data produced by Finan; it was used to generate the tables in this paper. It is available from the University of Minnesota. It allows rapid analysis of group averages with alternatives for how the results are presented. I chose to show the average of the high or low 50 percent by net farm income to insure 6 or more farms were in the group. A farm was accepted in the average regardless of whether it was a proprietorship, partnership, limited liability company, or corporation.

### **Data Variability**

The Finansum averages for 14 farms are reported in the following tables. Considerable variability exist in the data. The unweighted mean of the net farm income was \$44,871; the median was \$38,282 and the standard deviation was \$43029. The average number of cows was 99; the median was 90 and the standard deviation was 52. The unweighted mean of the milk sold per cow was 15,250 pounds; the median was 15,406 and the standard deviation was 3,266.

The 14 grazing dairy farms are not a random sample. Most of them kept their financial records with Michigan State University Extension's Telfarm/MicroTel accounting project, or with Farm Credit Services. The averages may be representative of bigger and better managed rotational grazing farms.

This document may be found and downloaded from the following:

<http://www.msu.edu/user/nott>

Table 2. **Crop and Livestock Production Summary**  
 Michigan Dairy Grazing Farms, 2001  
 (Farms Sorted By Net Farm Income)

	Avg. Of All Farms	Low 50%	High 50%
Number of farms	14	7	7
Acreage Summary			
Total acres owned	347	254	441
Total crop acres	440	364	516
Crop acres owned	252	197	307
Crop acres cash rented	188	167	210
Average number of cows	99	104	94
Average milk sold per cow, lbs.	15,250	15,117	15,382
Average milk price, per cwt.	\$ 15.38	\$ 15.05	\$ 15.71

Table 3. **Farm Income Statement**  
Michigan Dairy Grazing Farms, 2001  
(Farms Sorted By Net Farm Income)

	Avg. Of All Farms	Low 50%	High 50%
Number of farms	14	7	7
Cash Farm Income			
Corn	1,377	-	2,753
Corn, Seed	93	-	185
Hay, Alfalfa	823	-	1,645
Hay, Mixed	1,546	336	2,757
Wheat, Winter	61	-	121
Beef Cow-Calf, Beef Calves	116	-	232
Dairy, Milk	232,123	247,094	217,151
Dairy, Dairy Calves	2,361	2,019	2,702
Dairy Replacement Heifers	74	114	34
Dairy Steers	3,038	621	5,455
Other farm income	35,902	32,805	38,998
Gross Cash Farm Income	<b>277,512</b>	<b>282,989</b>	<b>272,035</b>

Table 3. **Farm Income Statement, continued**  
Michigan Dairy Grazing Farms, 2001  
(Farms Sorted By Net Farm Income)

	Avg. Of All Farms	Low 50%	High 50%
Number of farms	14	7	7
Cash Farm Expense			
Seed	2,077	2,495	1,659
Fertilizer	8,130	1,910	14,351
Crop chemicals	1,560	1,283	1,837
Purchased feed	58,949	72,867	45,032
Breeding fees	1,056	1,582	530
Veterinary	5,483	4,996	5,971
BST	503	-	1,005
Livestock supplies	11,928	13,081	10,774
DHIA	1,051	1,212	890
Livestock marketing	12,235	13,325	11,145
Interest	13,057	15,474	10,640
Fuel & oil	7,605	7,771	7,439
Repairs	21,688	26,400	16,976
Custom hire	7,257	11,008	3,506
Hired labor	31,768	39,044	24,491
Land rent	5,780	3,898	7,663
Machinery & bldg leases	2,686	3,752	1,620
Real estate taxes	4,279	4,524	4,034
Farm insurance	2,959	2,961	2,957
Utilities	5,946	5,648	6,244
Dues & professional fees	1,543	2,047	1,039
Hedging account deposits	319	-	638
Miscellaneous	1,159	1,533	786
Total cash expense	209,019	236,811	181,226
Net cash farm income	68,493	46,178	90,809
Inventory Changes			
Crops and feed	1,894	5,835	-2,047
Market livestock	-779	-335	-1,224
Accounts receivable	-3	-770	764
Prepaid expenses and supplies	-2,250	-3,193	-1,308
Accounts payable	-1,250	-1,804	-695
Total inventory change	-2,389	-267	-4,510
Net operating profit	66,104	45,910	86,298
Depreciation and Other Capital Adjustments			
Breeding livestock	1,667	-4,536	7,869
Machinery and equipment	-18,450	-23,518	-13,382
Buildings and improvements	-4,448	-1,810	-7,085
Other farm capital	-3	-109	103
Total depr. and other capital adj	-21,234	-29,973	-12,495
Net farm income	<b>\$ 44,871</b>	<b>\$ 15,938</b>	<b>\$ 73,804</b>

Table 4. **Inventory Changes**  
Michigan Dairy Grazing Farms, 2001  
(Farms Sorted By Net Farm Income)

	Avg. Of All Farms	Low 50%	High 50%
Number of farms	14	7	7
Net cash farm income	68,493	46,178	90,809
Crops and Feed			
Ending inventory	49,687	53,668	45,706
Beginning inventory	47,793	47,833	47,753
Inventory change	1,894	5,835	-2,047
Market Livestock			
Ending inventory	4,641	2,333	6,950
Beginning inventory	5,421	2,667	8,174
Inventory change	-779	-335	-1,224
Accts Receivable & Other Current Assets			
Ending inventory	14,292	15,466	13,118
Beginning inventory	14,295	16,236	12,354
Inventory change	-3	-770	764
Prepaid Expenses and Supplies			
Ending inventory	4,018	2,756	5,280
Beginning inventory	6,268	5,949	6,588
Inventory change	-2,250	-3,193	-1,308
Accounts Payable & Accrued Expenses			
Beginning inventory	5,763	8,803	2,722
Ending inventory	7,013	10,607	3,418
Inventory change	-1,250	-1,804	-695
Total inventory change	-2,389	-267	-4,510
Net operating profit	66,104	45,910	86,298



Table 5. **Depreciation and Other Capital Adjustments**  
Michigan Dairy Grazing Farms, 2001  
(Farms Sorted By Net Farm Income)

	Avg. Of All Farms	Low 50%	High 50%
Number of farms	14	7	7
Net operating profit	66,104	45,910	86,298
Breeding Livestock			
Ending inventory	177,702	183,360	172,045
Capital sales	2,662	1,955	3,369
Beginning inventory	177,749	188,233	167,265
Capital purchases	948	1,618	279
Depreciation, capital adjust.	1,667	-4,536	7,869
Machinery and Equipment			
Ending inventory	48,668	60,538	36,798
Capital sales	250	500	-
Beginning inventory	43,182	57,254	29,111
Capital purchases	24,186	27,302	21,069
Depreciation, capital adjust.	-18,450	-23,518	-13,382
Buildings and Improvements			
Ending inventory	23,783	20,298	27,267
Capital sales	-	-	-
Beginning inventory	19,462	16,751	22,173
Capital purchases	8,768	5,357	12,179
Depreciation, capital adjust.	-4,448	-1,810	-7,085
Other Capital Assets			
Ending inventory	7,244	12,649	1,839
Capital sales	789	1,487	92
Beginning inventory	4,452	7,486	1,418
Capital purchases	3,584	6,758	410
Depreciation, capital adjust.	-3	-109	103
Total depreciation, capital adj.	-21,234	-29,973	-12,495
Net farm income	44,871	15,938	73,804

Table 6. **Profitability Measures**  
Michigan Dairy Grazing Farms, 2001  
(Farms Sorted By Net Farm Income)

	Avg. Of All Farms	Low 50%	High 50%
Number of farms	14	7	7
Profitability (assets valued at cost)			
Net farm income	44,871	15,938	73,804
Labor and management earnings	28,475	-1,681	58,630
Rate of return on assets	2.4 %	-1.8 %	7.7 %
Rate of return on equity	-0.5 %	-8.4 %	8.6 %
Operating profit margin	5.1 %	-4.6 %	13.8 %
Asset turnover rate	47.1 %	40.1 %	55.9 %
Interest on farm net worth	16,396	17,618	15,173
Farm interest expense	12,707	15,069	10,345
Value of operator lbr and mgmt.	46,358	40,634	52,081
Return on farm assets	11,220	-9,627	32,067
Average farm assets	470,153	524,826	415,480
Return on farm equity	-1,487	-24,696	21,722
Average farm equity	273,265	293,638	252,892
Value of farm production	221,341	210,317	232,364
	Avg. Of All Farms	Low 50%	High 50%
Number of farms	14	7	7
Profitability (assets valued at market)			
Net farm income	105,444	69,166	141,722
Labor and management earnings	63,292	27,557	99,026
Rate of return on assets	8.0 %	4.7 %	11.4 %
Rate of return on equity	8.4 %	4.1 %	12.6 %
Operating profit margin	32.4 %	20.7 %	43.0 %
Asset turnover rate	24.6 %	22.7 %	26.6 %
Interest on farm net worth	42,153	41,609	42,696
Farm interest expense	12,707	15,069	10,345
Value of operator lbr and mgmt.	46,358	40,634	52,081
Return on farm assets	71,793	43,601	99,986
Average farm assets	899,434	924,671	874,196
Return on farm equity	59,087	28,532	89,641
Average farm equity	702,545	693,484	711,607
Value of farm production	221,341	210,317	232,364

Table 7. **Liquidity Measures**  
Michigan Dairy Grazing Farms, 2001  
(Farms Sorted By Net Farm Income)

	Avg. Of All Farms	Low 50%	High 50%
Number of farms	14	7	7
Liquidity (cash)			
Net cash farm income	68,493	46,178	90,809
Net nonfarm income	5,329	2,928	7,731
Family living and taxes	50,481	23,919	77,042
Real estate principal payments	7,526	6,995	8,058
Cash available for interm. debt	15,816	18,192	13,439
Average intermediate debt	55,509	75,585	35,432
Years to turnover interm. debt	3.5	4.2	2.6
Expense as a % of income	75 %	84 %	67 %
Interest as a % of income	5 %	5 %	4 %
Liquidity (accrual)			
Total accrual farm income	278,623	287,719	269,527
Total accrual operating expense	212,519	241,809	183,229
Net accrual operating income	66,104	45,910	86,298
Net nonfarm income	5,329	2,928	7,731
Family living and taxes	50,481	23,919	77,042
Real estate principal payments	7,526	6,995	8,058
Available for intermediate debt	13,427	17,925	8,929
Average intermediate debt	55,509	75,585	35,432
Years to turnover interm. debt	4.1	4.2	4.0
Expense as a % of income	76 %	84 %	68 %
Interest as a % of income	5 %	5 %	4 %

Table 8. **Balance Sheet at Cost Values**  
**Michigan Dairy Grazing Farms, 2001**  
**(Farms Sorted By Net Farm Income)**

Number of farms	Avg. Of All Farms 14		Low 50% 7		High 50% 7	
	Beginning	Ending	Beginning	Ending	Beginning	Ending
<b>Assets</b>						
<b>Current Farm Assets</b>						
Cash and checking balance	16,115	8,691	16,533	5,445	15,698	11,937
Prepaid expenses & supplies	6,268	4,018	5,949	2,756	6,588	5,280
Growing crops	8,310	8,129	8,516	8,533	8,104	7,724
Accounts receivable	5,985	6,163	7,720	6,933	4,250	5,393
Hedging accounts	0	0	0	0	0	0
Crops held for sale or feed	47,793	49,687	47,833	53,668	47,753	45,706
Crops under government loan	0	0	0	0	0	0
Market livestock held for sale	5,421	4,641	2,667	2,333	8,174	6,950
Other current assets	0	0	0	0	0	0
Total current farm assets	89,892	81,329	89,218	79,668	90,567	82,991
<b>Intermediate Farm Assets</b>						
Breeding livestock	177,749	177,702	188,233	183,360	167,265	172,045
Machinery and equipment	43,182	48,668	57,254	60,538	29,111	36,798
Other intermediate assets	1,472	3,312	2,403	5,784	540	839
Total intermediate farm assets	222,403	229,682	247,890	249,682	196,917	209,682
<b>Long Term Farm Assets</b>						
Farm land	133,155	133,687	166,987	167,210	99,324	100,163
Buildings and improvements	19,462	23,783	16,751	20,298	22,173	27,267
Other long-term assets	2,980	3,933	5,083	6,865	877	1,000
Total long-term farm assets	155,597	161,402	188,821	194,374	122,374	128,430
Total Farm Assets	467,893	472,413	525,929	523,723	409,858	421,103
Total Nonfarm Assets	28,390	27,616	45,921	44,373	10,859	10,859
Total Assets	496,283	500,029	571,850	568,096	420,717	431,962
<b>Liabilities</b>						
<b>Current Farm Liabilities</b>						
Accrued interest	1,460	1,109	2,365	1,960	555	259
Accounts payable	4,303	5,903	6,438	8,648	2,168	3,159
Current notes	29,736	13,529	43,508	13,477	15,965	13,580
Government crop loans	0	0	0	0	0	0
Principal due on term debt	18,555	18,435	23,257	24,531	13,852	12,339
Total current farm liabilities	54,053	38,976	75,568	48,616	32,539	29,336
Total intermediate farm liabs	32,143	53,541	39,434	73,339	24,851	33,744
Total long term farm liabilities	107,493	107,570	113,673	111,746	101,313	103,394
Total farm liabilities	193,689	200,087	228,676	233,700	158,703	166,475
Total nonfarm liabilities	3,975	3,153	6,878	5,592	1,071	714
Total liabilities	197,664	203,241	235,553	239,292	159,774	167,189
Net worth (farm and nonfarm)	298,619	296,789	336,297	328,804	260,942	264,773
Net worth change		-1,831		-7,492		3,831
<b>Ratio Analysis</b>						
Current farm liabilities / assets	60 %	48 %	85 %	61 %	36 %	35 %
Curr. & interm farm liab. / assets	28 %	30 %	34 %	37 %	20 %	22 %
Long term farm liab. / assets	69 %	67 %	60 %	57 %	83 %	81 %
Total debt to asset ratio	40 %	41 %	41 %	42 %	38 %	39 %

Table 9. **Balance Sheet at Market Values**  
**Michigan Dairy Grazing Farms, 2001**  
**(Farms Sorted By Net Farm Income)**

Number of farms	Avg. Of All Farms 14		Low 50% 7		High 50% 7	
	Beginning	Ending	Beginning	Ending	Beginning	Ending
<b>Assets</b>						
<b>Current Farm Assets</b>						
Cash and checking balance	16,115	8,691	16,533	5,445	15,698	11,937
Prepaid expenses & supplies	6,268	4,018	5,949	2,756	6,588	5,280
Growing crops	8,310	8,129	8,516	8,533	8,104	7,724
Accounts receivable	5,985	6,163	7,720	6,933	4,250	5,393
Hedging accounts	0	0	0	0	0	0
Crops held for sale or feed	47,793	49,687	47,833	53,668	47,753	45,706
Crops under government loan	0	0	0	0	0	0
Market livestock held for sale	5,421	4,641	2,667	2,333	8,174	6,950
Other current assets	0	0	0	0	0	0
<b>Total current farm assets</b>	<b>89,892</b>	<b>81,329</b>	<b>89,218</b>	<b>79,668</b>	<b>90,567</b>	<b>82,991</b>
<b>Intermediate Farm Assets</b>						
Breeding livestock	178,649	178,612	190,033	185,179	167,265	172,045
Machinery and equipment	132,275	146,847	145,758	164,360	118,791	129,335
Other intermediate assets	2,450	3,970	2,403	5,784	2,496	2,155
<b>Total intermediate farm assets</b>	<b>313,373</b>	<b>329,429</b>	<b>338,194</b>	<b>355,323</b>	<b>288,552</b>	<b>303,535</b>
<b>Long Term Farm Assets</b>						
Farm land	406,793	460,889	412,740	452,883	400,846	468,895
Buildings and improvements	53,848	56,401	53,925	55,444	53,771	57,357
Other long-term assets	2,980	3,933	5,083	6,865	877	1,000
<b>Total long-term farm assets</b>	<b>463,621</b>	<b>521,222</b>	<b>471,748</b>	<b>515,192</b>	<b>455,495</b>	<b>527,252</b>
<b>Total Farm Assets</b>	<b>866,887</b>	<b>931,980</b>	<b>899,160</b>	<b>950,183</b>	<b>834,614</b>	<b>913,778</b>
<b>Total Nonfarm Assets</b>	<b>65,965</b>	<b>70,190</b>	<b>83,221</b>	<b>87,329</b>	<b>48,709</b>	<b>53,050</b>
<b>Total Assets</b>	<b>932,852</b>	<b>1,002,170</b>	<b>982,381</b>	<b>1,037,512</b>	<b>883,323</b>	<b>966,828</b>
<b>Liabilities</b>						
<b>Current Farm Liabilities</b>						
Accrued interest	1,460	1,109	2,365	1,960	555	259
Accounts payable	4,303	5,903	6,438	8,648	2,168	3,159
Current notes	29,736	13,529	43,508	13,477	15,965	13,580
Government crop loans	0	0	0	0	0	0
Principal due on term debt	18,555	18,435	23,257	24,531	13,852	12,339
<b>Total current farm liabilities</b>	<b>54,053</b>	<b>38,976</b>	<b>75,568</b>	<b>48,616</b>	<b>32,539</b>	<b>29,336</b>
<b>Total intermediate farm liabs</b>	<b>32,143</b>	<b>53,541</b>	<b>39,434</b>	<b>73,339</b>	<b>24,851</b>	<b>33,744</b>
<b>Total long term farm liabilities</b>	<b>107,493</b>	<b>107,570</b>	<b>113,673</b>	<b>111,746</b>	<b>101,313</b>	<b>103,394</b>
<b>Total farm liabilities</b>	<b>193,689</b>	<b>200,087</b>	<b>228,676</b>	<b>233,700</b>	<b>158,703</b>	<b>166,475</b>
<b>Total nonfarm liabilities</b>	<b>3,975</b>	<b>3,153</b>	<b>6,878</b>	<b>5,592</b>	<b>1,071</b>	<b>714</b>
<b>Total liabs excluding deferreds</b>	<b>197,664</b>	<b>203,241</b>	<b>235,553</b>	<b>239,292</b>	<b>159,774</b>	<b>167,189</b>
<b>Total deferred liabilities</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
<b>Total liabilities</b>	<b>197,664</b>	<b>203,241</b>	<b>235,553</b>	<b>239,292</b>	<b>159,774</b>	<b>167,189</b>
<b>Retained earnings</b>	<b>298,619</b>	<b>296,789</b>	<b>336,297</b>	<b>328,804</b>	<b>260,942</b>	<b>264,773</b>
<b>Market valuation equity</b>	<b>436,569</b>	<b>502,141</b>	<b>410,531</b>	<b>469,416</b>	<b>462,606</b>	<b>534,866</b>
<b>Net worth (farm and nonfarm)</b>	<b>735,188</b>	<b>798,929</b>	<b>746,827</b>	<b>798,220</b>	<b>723,549</b>	<b>799,639</b>
<b>Net worth excluding deferreds</b>	<b>735,188</b>	<b>798,929</b>	<b>746,827</b>	<b>798,220</b>	<b>723,549</b>	<b>799,639</b>
<b>Net worth change</b>		<b>63,741</b>		<b>51,393</b>		<b>76,090</b>
<b>Ratio Analysis</b>						
Current farm liabilities / assets	60 %	48 %	85 %	61 %	36 %	35 %
Curr. & interm farm liab. / assets	21 %	23 %	27 %	28 %	15 %	16 %
Long term farm liab. / assets	23 %	21 %	24 %	22 %	22 %	20 %
Total debt to asset ratio	21 %	20 %	24 %	23 %	18 %	17 %
Debt to assets excl deferreds	21 %	20 %	24 %	23 %	18 %	17 %

Table 10. **Statement Of Cash Flows**  
Michigan Dairy Grazing Farms, 2001  
(Farms Sorted By Net Farm Income)

	Avg. Of All Farms	Low 50%	High 50%
Number of farms	14	7	7
Beginning cash (farm & nonfarm)	16,401	17,104	15,698
<b>Cash From Operating Activities</b>			
Gross cash farm income	277,512	282,989	272,035
Net nonfarm income	5,329	2,928	7,731
Total cash farm expense	-209,019	-236,811	-181,226
Apparent family living expense	-46,805	-19,587	-74,022
Income and social security tax	-3,676	-4,332	-3,020
Cash from operations	23,342	25,187	21,497
<b>Cash From Investing Activities</b>			
Sale of breeding livestock	2,662	1,955	3,369
Sale of machinery & equipment	250	500	-
Sale of farm land	-	-	-
Sale of farm buildings	-	-	-
Sale of other farm assets	789	1,487	92
Sale of nonfarm assets	260	519	-
Purchase of breeding livestock	-948	-1,618	-279
Purchase of machinery & equip.	-24,186	-27,302	-21,069
Purchase of farm land	-	-	-
Purchase of farm buildings	-8,768	-5,357	-12,179
Purchase of other farm assets	-3,584	-6,758	-410
Purchase of nonfarm assets	-1,148	-2,295	-
Cash from investing activities	-34,673	-38,869	-30,477
<b>Cash From Financing Activities</b>			
Money borrowed	95,088	124,412	65,763
Cash gifts and inheritances	1,510	-	3,020
Principal payments	-90,709	-122,374	-59,044
Dividends paid	-	-	-
Gifts given	-2,261	-	-4,521
Cash from financing activities	3,628	2,038	5,218
Net change in cash balance	-7,703	-11,645	-3,761
Ending cash (farm & nonfarm)	8,698	5,459	11,937

Table 11. **Financial Standards Measures**  
Michigan Dairy Grazing Farms, 2001  
(Farms Sorted By Net Farm Income)

	Avg. Of All Farms	Low 50%	High 50%
Number of farms	14	7	7
Liquidity			
Current ratio	2.09	1.64	2.83
Working capital	42,353	31,052	53,655
Solvency (market)			
Farm debt to asset ratio	21 %	25 %	18 %
Farm equity to asset ratio	79 %	75 %	82 %
Farm debt to equity ratio	27 %	33 %	22 %
Profitability (cost)			
Rate of return on farm assets	2.4 %	-1.8 %	7.7 %
Rate of return on farm equity	-0.5 %	-8.4 %	8.6 %
Operating profit margin	5.1 %	-4.6 %	13.8 %
Net farm income	44,871	15,938	73,804
Repayment Capacity			
Term debt coverage ratio	106 %	101 %	113 %
Capital replacement margin	1,753	577	2,929
Efficiency			
Asset turnover rate (cost)	47.1 %	40.1 %	55.9 %
Operating expense ratio	71.7 %	78.8 %	64.1 %
Depreciation expense ratio	7.6 %	10.4 %	4.6 %
Interest expense ratio	4.6 %	5.2 %	3.8 %
Net farm income ratio	16.1 %	5.5 %	27.4 %

Table 12. **Operator and Labor Information**  
Michigan Dairy Grazing Farms, 2001  
(Farms Sorted By Net Farm Income)

	Avg. Of All Farms	Low 50%	High 50%
Number of farms	14	7	7
Operator Information			
Average number of operators	1.5	1.1	1.9
Results Per Operator			
Working capital	28,236	27,170	28,891
Total assets (market)	668,113	907,823	520,599
Total liabilities	135,494	209,381	90,025
Net worth (market)	532,620	698,443	430,575
Net worth excl deferred liabs	532,620	698,443	430,575
Gross farm income	185,749	251,754	145,130
Total farm expense	155,835	237,809	105,390
Net farm income	29,914	13,946	39,740
Net nonfarm income	3,553	2,562	4,163
Family living withdrawals	33,654	20,929	41,484
Total acres owned	231.5	222.0	237.3
Total crop acres	293.4	318.4	278.1
Crop acres owned	168.1	172.7	165.2
Crop acres cash rented	125.4	145.7	112.8
Labor Analysis			
Number of farms	14	7	7
Total unpaid labor hours	4,679	3,996	5,361
Total hired labor hours	2,784	2,889	2,680
Total labor hours per farm	7,463	6,884	8,041
Unpaid hours per operator	3,119	3,496	2,887
Value of farm production / hour	29.66	30.55	28.90
Net farm income / unpaid hour	9.59	3.99	13.77



Table 13. **Financial Summary**  
**Michigan Dairy Grazing Farms, 2001**  
**(Farms Sorted By Net Farm Income)**

	Avg. Of All Farms	Low 50%	High 50%
Number of farms	14	7	7
<b>Income Statement</b>			
Gross cash farm income	277,512	282,989	272,035
Total cash farm expense	209,019	236,811	181,226
Net cash farm income	68,493	46,178	90,809
Inventory change	-2,389	-267	-4,510
Depreciation and capital adjust	-21,234	-29,973	-12,495
Net farm income	44,871	15,938	73,804
<b>Profitability (cost)</b>			
Labor and management earnings	28,475	-1,681	58,630
Rate of return on assets	2.4 %	-1.8 %	7.7 %
Rate of return on equity	-0.5 %	-8.4 %	8.6 %
Operating profit margin	5.1 %	-4.6 %	13.8 %
Asset turnover rate	47.1 %	40.1 %	55.9 %
<b>Profitability (market)</b>			
Labor and management earnings	63,292	27,557	99,026
Rate of return on assets	8.0 %	4.7 %	11.4 %
Rate of return on equity	8.4 %	4.1 %	12.6 %
Operating profit margin	32.4 %	20.7 %	43.0 %
Asset turnover rate	24.6 %	22.7 %	26.6 %
<b>Liquidity</b>			
Term debt coverage ratio	105.5 %	101.4 %	112.5 %
Expense as a percent of income	76.3 %	84.0 %	68.0 %
Interest as a percent of income	4.6 %	5.2 %	3.8 %
<b>Solvency (cost)</b>			
Number of farms	14	7	7
Ending farm assets	472,413	523,723	421,103
Ending farm liabilities	200,087	233,700	166,475
Ending total assets	500,029	568,096	431,962
Ending total liabilities	203,241	239,292	167,189
Ending net worth	296,789	328,804	264,773
Net worth change	-1,831	-7,492	3,831
Ending farm debt to asset ratio	42 %	45 %	40 %
Beg total debt to asset ratio	40 %	41 %	38 %
End total debt to asset ratio	41 %	42 %	39 %
<b>Solvency (market)</b>			
Number of farms	14	7	7
Ending farm assets	931,980	950,183	913,778
Ending farm liabilities	200,087	233,700	166,475
Ending total assets	1,002,170	1,037,512	966,828
Ending total liabilities	203,241	239,292	167,189
Ending net worth	798,929	798,220	799,639
Net worth change	63,741	51,393	76,090
Ending farm debt to asset ratio	21 %	25 %	18 %
Beg total debt to asset ratio	21 %	24 %	18 %
End total debt to asset ratio	20 %	23 %	17 %
<b>Nonfarm Information</b>			
Net nonfarm income	5,329	2,928	7,731