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Staff Paper

Dairy Grazing Finances in 4 Great Lakes States 2000

by

Sherrill B. Nott

Staff Paper 2002-04

January, 2002



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Abstract

The purpose of this paper is to demonstrate possible outcomes and problems of merging farm data sets from multiple states in order to build a statistically sound body of financial information that will help individual farmers analyze their own situations. This paper is in support of a grant titled "Regional/Multi-State Interpretation of Small Farm Financial Data" recently funded by USDA – IFAFS – Farm Efficiency and Profitability.

Financial data sets came from dairy farms using management intensive grazing (MIG) strategies during 2000. They included 1 farm from Indiana, 11 farms from Michigan, 8 farms from Ohio and 13 farms from Wisconsin. Finpack and RankEm 2 were used to process the data from all farms, because the Finpack software had been used to collect the farm level data. Definitions and formulas are not given in this paper as they can be found in Finpack users' guides and manuals. The averages for all 33 farms are given in Tables 1 through 10. Calculations were made using only current market values from the balance sheets because many farms did not supply cost basis information. The averages for farms with less than 80 milk cows are given in Tables 11 through 20. Averages for farms with over 80 cows are in Tables 21 through 30. The size ranges in the two groups were picked so about equal numbers of farms would be in each group. Cows per group, average milk production levels, and milk prices received are in Table 31 on the last page.

Similar financial data on dairy graziers in New York can be found in Intensive Grazing Farms, New York, 2000, a Dairy Farm Business Summary by George Conneman et al, E.B. 2001-13, Sept. 2001, 46 pp. It is available from Cornell's Department of Applied Economics and Management.

37 pages

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Dairy Grazing Finances in 4 Great Lakes States, 2000
Michigan State University Agricultural Economics Staff Paper No. 2002-04

by
Sherrill B. Nott¹

Introduction

The purpose of this paper is to demonstrate possible outcomes and problems of merging farm data sets from multiple states in order to build a statistically sound body of financial information that will help individual farmers analyze their own situations. This paper is in support of a grant titled “Regional/Multi-State Interpretation of Small Farm Financial Data” recently funded by USDA – IFAFS – Farm Efficiency and Profitability.

Financial data sets came from dairy farms using management intensive grazing (MIG) strategies during 2000. They included 1 farm from Indiana, 11 farms from Michigan, 8 farms from Ohio and 13 farms from Wisconsin. Finpack and RankEm² were used to process the data from all farms, because the Finpack software had been used to collect the farm level data. Definitions and formulas are not given in this paper as they can be found in Finpack users’ guides and manuals. The averages for all 33 farms are given in Tables 1 through 10. Calculations were made using only current market values from the balance sheets because many farms did not supply cost basis information. The averages for farms with less than 80 milk cows are given in Tables 11 through 20. Averages for farms with over 80 cows are in Tables 21 through 30. The size ranges in the two groups were picked so about equal numbers of farms would be in each group. Cows per group, average milk production levels, and milk prices received are in Table 31 on the last page.

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¹Extension specialist at Michigan State University. Data was also supplied by Ralph Booker, Indiana; Tom Noyes, Ohio; and Tom Kriegl, Wisconsin. We thank the farmers who anonymously provided their data for use in this study.

²Both are from the Center for Farm Financial Management at the University of Minnesota. Finpack provides, among other things, an accrualized financial summary of a farm business. RankEm allows averaging of results from several farms.

Table 1.

Farm Income Statement
Financial Averages from Great Lakes Dairy Graziers, 2000
Farm Records from 4 States on Finpack
(Farms Sorted By Net Farm Income)

	Avg. Of All Farms	Low 50%	High 50%
Number of farms	33	16	17
Cash Farm Income			
Cordwood	59	123	-
Hay, Mixed	105	-	203
Straw	85	134	38
Wheat, Winter	83	-	161
Miscellaneous crop income	121	151	94
Beef, Background Beef	930	-	1,806
Dairy, Milk	167,727	123,650	209,211
Dairy, Dairy Calves	2,117	2,970	1,314
Dairy Replacement Heifers	279	194	359
Dairy Steers	577	1,037	144
Cull breeding livestock	10,736	7,753	13,545
Misc. livestock income	1,224	90	2,291
Transition payments	3,647	3,555	3,734
Other government payments	12,233	8,906	15,364
Custom work income	389	251	518
Patronage dividends, cash	1,053	900	1,196
Other farm income	3,160	1,197	5,008
Gross Cash Farm Income	\$204,526	\$150,910	\$254,989

Table 1.

Farm Income Statement, continued
Financial Averages from Great Lakes Dairy Graziers, 2000
Farm Records from 4 States on Finpack
(Farms Sorted By Net Farm Income)

Cash Farm Expense			
Seed	2,764	2,390	3,116
Fertilizer	5,027	3,690	6,286
Crop chemicals	1,005	1,269	756
Crop miscellaneous	397	516	285
Purchased feed	41,056	28,752	52,637
Breeding fees	1,724	1,553	1,885
Veterinary	3,892	2,780	4,939
Livestock supplies	7,619	7,087	8,119
DHIA	340	259	417
Livestock leases	488	256	706
Livestock hauling and tru	2,824	2,715	2,927
Livestock marketing	5,253	4,366	6,088
Bedding	227	114	333
Interest	11,124	11,239	11,015
Fuel & oil	4,311	3,505	5,070
Repairs	14,353	9,364	19,049
Custom hire	3,327	2,631	3,982
Hired labor	17,123	12,197	21,760
Land rent	4,036	1,749	6,188
Machinery & bldg leases	2,799	1,959	3,588
Real estate taxes	3,379	4,020	2,776
Personal property taxes	347	-	673
Farm insurance	2,583	1,946	3,184
Utilities	4,669	4,159	5,148
Dues & professional fees	1,041	640	1,419
Car and truck	681	762	605
Supplies	1,026	635	1,394
Miscellaneous	3,218	2,733	3,674
Total cash expense	146,635	113,286	178,021
Net cash farm income	57,892	37,624	76,968
Inventory Changes			
Crops and feed	3,685	-1,040	8,133
Market livestock	-179	-512	133
Accounts receivable	851	-601	2,218
Prepaid expenses and supplies	11	-696	677
Accounts payable	-352	-71	-616
Total inventory change	4,017	-2,919	10,545
Net operating profit	61,908	34,704	87,512
Depreciation and Other Capital Adjustments			
Breeding livestock	8,137	7,175	9,043
Machinery and equipment	-12,429	-14,187	-10,775
Buildings and improvements	-2,181	-6,597	1,974
Other farm capital	-208	-426	-2
Total depr. and other capital adj	-6,681	-14,034	240
Net farm income	\$55,228	\$20,670	\$87,752

Table 2.

Inventory Changes
Financial Averages from Great Lakes Dairy Graziers, 2000
Farm Records from 4 States on Finpack
(Farms Sorted By Net Farm Income)

	Avg. Of All Farms	Low 50%	High 50%
Number of farms	33	16	17
Net cash farm income	57,892	37,624	76,968
Crops and Feed			
Ending inventory	30,723	23,206	37,798
Beginning inventory	27,038	24,246	29,665
Inventory change	3,685	-1,040	8,133
Market Livestock			
Ending inventory	1,906	282	3,436
Beginning inventory	2,086	793	3,302
Inventory change	-179	-512	133
Accts Receivable & Other Current Assets			
Ending inventory	8,180	3,874	12,232
Beginning inventory	7,328	4,475	10,014
Inventory change	851	-601	2,218
Prepaid Expenses and Supplies			
Ending inventory	5,319	1,362	9,042
Beginning inventory	5,307	2,058	8,365
Inventory change	11	-696	677
Accounts Payable & Accrued Expenses			
Beginning inventory	2,725	1,322	4,045
Ending inventory	3,077	1,393	4,662
Inventory change	-352	-71	-616
Total inventory change	4,017	-2,919	10,545
Net operating profit	61,908	34,704	87,512

Table 3.

Depreciation and Other Capital Adjustments
Financial Averages from Great Lakes Dairy Graziers, 2000
Farm Records from 4 States on Finpack
(Farms Sorted By Net Farm Income)

	Avg. Of All Farms	Low 50%	High 50%
Number of farms	33	16	17
Net operating profit	61,908	34,704	87,512
Breeding Livestock			
Ending inventory	144,557	111,882	175,310
Capital sales	690	487	881
Beginning inventory	135,377	102,459	166,359
Capital purchases	1,733	2,736	789
Depreciation, capital adjust.	8,137	7,175	9,043
Machinery and Equipment			
Ending inventory	38,332	22,916	52,842
Capital sales	705	492	907
Beginning inventory	40,036	27,237	52,083
Capital purchases	11,430	10,357	12,440
Depreciation, capital adjust.	-12,429	-14,187	-10,775
Buildings and Improvements			
Ending inventory	38,816	52,451	25,983
Capital sales	61	125	-
Beginning inventory	37,161	51,558	23,612
Capital purchases	3,896	7,615	396
Depreciation, capital adjust.	-2,181	-6,597	1,974
Other Capital Assets			
Ending inventory	10,434	12,978	8,041
Capital sales	598	495	696
Beginning inventory	10,838	13,255	8,563
Capital purchases	403	644	176
Depreciation, capital adjust.	-208	-426	-2
Total depreciation, capital adj.	-6,681	-14,034	240
Net farm income	55,228	20,670	87,752

Table 4.

Balance Sheet at Market Values
Financial Averages from Great Lakes Dairy Graziers, 2000
Farm Records from 4 States on Finpack
(Farms Sorted By Net Farm Income)

Number of farms	Avg. Of All Farms 33		Low 50% 16		High 50% 17	
	Beginning	Ending	Beginning	Ending	Beginning	Ending
Assets						
Current Farm Assets						
Cash and checking balance	7,295	9,792	6,617	7,590	7,934	11,864
Prepaid expenses & supplies	5,307	5,319	2,058	1,362	8,365	9,042
Growing crops	1,831	1,962	656	725	2,936	3,125
Accounts receivable	3,340	3,379	1,319	879	5,243	5,733
Hedging accounts	0	0	0	0	0	0
Crops held for sale or feed	27,038	30,723	24,246	23,206	29,665	37,798
Crops under government loan	0	0	0	0	0	0
Market livestock held for sale	2,086	1,906	793	282	3,302	3,436
Other current assets	2,158	2,839	2,500	2,270	1,835	3,374
Total current farm assets	49,054	55,920	38,189	36,314	59,280	74,372
Intermediate Farm Assets						
Breeding livestock	135,737	145,963	102,459	111,882	167,059	178,039
Machinery and equipment	80,013	82,457	63,664	64,099	95,401	99,735
Other intermediate assets	1,700	1,278	1,620	1,493	1,774	1,076
Total intermediate farm assets	217,450	229,699	167,743	177,475	264,233	278,851
Long Term Farm Assets						
Farm land	312,684	333,818	244,304	272,562	377,042	391,469
Buildings and improvements	54,832	59,035	61,407	65,397	48,643	53,047
Other long-term assets	15,123	15,214	23,979	23,979	6,788	6,964
Total long-term farm assets	382,639	408,066	329,689	361,938	432,474	451,481
Total Farm Assets	649,144	693,685	535,622	575,727	755,988	804,704
Total Nonfarm Assets	44,966	48,935	56,031	62,652	34,553	36,025
Total Assets	694,110	742,620	591,652	638,379	790,541	840,729
Liabilities						
Current Farm Liabilities						
Accrued interest	932	529	341	268	1,488	774
Accounts payable	1,793	2,548	981	1,124	2,557	3,888
Current notes	10,907	13,678	4,827	6,883	16,630	20,073
Government crop loans	0	0	0	0	0	0
Principal due on term debt	13,733	15,961	12,206	13,191	15,171	18,568
Total current farm liabilities	27,366	32,716	18,355	21,467	35,846	43,303
Total intermediate farm liabs	40,003	31,265	34,810	30,113	44,892	32,350
Total long term farm liabilities	90,213	88,515	104,834	105,184	76,453	72,828
Total farm liabilities	157,582	152,496	157,998	156,763	157,191	148,480
Total nonfarm liabilities	1,572	2,026	2,868	3,053	353	1,059
Total liabs excluding deferreds	159,154	154,522	160,866	159,816	157,544	149,539
Total deferred liabilities	0	0	0	0	0	0
Total liabilities	159,154	154,522	160,866	159,816	157,544	149,539
Net worth (farm and nonfarm)	534,956	588,098	430,787	478,563	632,997	691,190
Net worth excluding deferreds	534,956	588,098	430,787	478,563	632,997	691,190
Net worth change	53,142		47,776		58,193	
Ratio Analysis						
Current farm liabilities / assets	56 %	59 %	48 %	59 %	60 %	58 %
Curr. & interm farm liab. / assets	25 %	22 %	26 %	24 %	25 %	21 %
Long term farm liab. / assets	24 %	22 %	32 %	29 %	18 %	16 %
Total debt to asset ratio	23 %	21 %	27 %	25 %	20 %	18 %
Debt to assets excl deferreds	23 %	21 %	27 %	25 %	20 %	18 %

Table 5.

Statement Of Cash Flows
Financial Averages from Great Lakes Dairy Graziers, 2000
Farm Records from 4 States on Finpack
(Farms Sorted By Net Farm Income)

	Avg. Of All Farms	Low 50%	High 50%
Number of farms	33	16	17
Beginning cash (farm & nonfarm)	12,893	6,617	18,801
Cash From Operating Activities			
Gross cash farm income	204,526	150,910	254,989
Net nonfarm income	4,452	6,722	2,315
Total cash farm expense	-146,635	-113,286	-178,021
Apparent family living expense	-36,880	-21,310	-51,534
Income and social security tax	-699	-874	-534
Cash from operations	24,765	22,163	27,214
Cash From Investing Activities			
Sale of breeding livestock	690	487	881
Sale of machinery & equipment	705	492	907
Sale of farm land	747	-	1,450
Sale of farm buildings	61	125	-
Sale of other farm assets	598	495	696
Sale of nonfarm assets	870	-	1,688
Purchase of breeding livestock	-1,733	-2,736	-789
Purchase of machinery & equip.	-11,430	-10,357	-12,440
Purchase of farm land	-2,727	-	-5,294
Purchase of farm buildings	-3,896	-7,615	-396
Purchase of other farm assets	-403	-644	-176
Purchase of nonfarm assets	-394	-	-765
Cash from investing activities	-16,913	-19,753	-14,240
Cash From Financing Activities			
Money borrowed	34,245	27,546	40,549
Cash gifts and inheritances	1,525	-	2,960
Principal payments	-40,077	-28,724	-50,761
Dividends paid	-	-	-
Gifts given	-330	-259	-396
Cash from financing activities	-4,637	-1,436	-7,649
Net change in cash balance	3,215	973	5,326
Ending cash (farm & nonfarm)	16,109	7,590	24,126

Table 6.

Liquidity Measures
Financial Averages from Great Lakes Dairy Graziers, 2000
Farm Records from 4 States on Finpack
(Farms Sorted By Net Farm Income)

	Avg. Of All Farms	Low 50%	High 50%
Number of farms	33	16	17
Liquidity (cash)			
Net cash farm income	57,892	37,624	76,968
Net nonfarm income	4,452	6,722	2,315
Family living and taxes	37,579	22,184	52,068
Real estate principal payments	4,494	5,764	3,299
Cash available for interm. debt	20,271	16,398	23,916
Average intermediate debt	45,570	39,574	51,215
Years to turnover interm. debt	2.2	2.4	2.1
Expense as a % of income	72 %	75 %	70 %
Interest as a % of income	5 %	7 %	4 %
Liquidity (accrual)			
Total accrual farm income	208,883	148,758	265,473
Total accrual operating expense	146,975	114,053	177,960
Net accrual operating income	61,908	34,704	87,512
Net nonfarm income	4,452	6,722	2,315
Family living and taxes	37,579	22,184	52,068
Real estate principal payments	4,494	5,764	3,299
Available for intermediate debt	24,288	13,479	34,460
Average intermediate debt	45,570	39,574	51,215
Years to turnover interm. debt	1.9	2.9	1.5
Expense as a % of income	70 %	77 %	67 %
Interest as a % of income	5 %	8 %	4 %

Table 7.

Profitability Measures
 Financial Averages from Great Lakes Dairy Graziers, 2000
 Farm Records from 4 States on Finpack
 (Farms Sorted By Net Farm Income)

	Avg. Of All Farms	Low 50%	High 50%
Number of farms	33	16	17
Profitability (assets valued at market)			
Net farm income	81,768	56,680	105,381
Labor and management earnings	50,786	32,782	67,731
Rate of return on assets	7.8 %	6.6 %	8.6 %
Rate of return on equity	8.1 %	6.4 %	9.1 %
Operating profit margin	29.9 %	28.8 %	30.4 %
Asset turnover rate	26.2 %	22.9 %	28.4 %
Interest on farm net worth	30,983	23,898	37,651
Farm interest expense	10,721	11,167	10,301
Value of operator lbr and mgmt.	39,948	31,171	48,208
Return on farm assets	52,542	36,676	67,474
Average farm assets	671,414	555,674	780,346
Return on farm equity	41,821	25,509	57,173
Average farm equity	516,375	398,294	627,511
Value of farm production	175,957	127,166	221,878

Table 8.

Financial Standards Measures
Financial Averages from Great Lakes Dairy Graziers, 2000
Farm Records from 4 States on Finpack
(Farms Sorted By Net Farm Income)

	Avg. Of All Farms	Low 50%	High 50%
Number of farms	33	16	17
Liquidity			
Current ratio	1.71	1.69	1.72
Working capital	23,204	14,847	31,070
Solvency (market)			
Farm debt to asset ratio	22 %	27 %	18 %
Farm equity to asset ratio	78 %	73 %	82 %
Farm debt to equity ratio	28 %	37 %	23 %
Profitability (market)			
Rate of return on farm assets	7.8 %	6.6 %	8.6 %
Rate of return on farm equity	8.1 %	6.4 %	9.1 %
Operating profit margin	29.9 %	28.8 %	30.4 %
Net farm income	81,768	56,680	105,381
Repayment Capacity			
Term debt coverage ratio	177 %	140 %	203 %
Capital replacement margin	14,907	6,745	22,589
Efficiency			
Asset turnover rate (market)	26.2 %	22.9 %	28.4 %
Operating expense ratio	65.2 %	69.2 %	63.2 %
Depreciation expense ratio	3.2 %	9.4 %	-0.1 %
Interest expense ratio	5.1 %	7.5 %	3.9 %
Net farm income ratio	26.4 %	13.9 %	33.1 %

Table 9.

Operator and Labor Information
Financial Averages from Great Lakes Dairy Graziers, 2000
Farm Records from 4 States on Finpack
(Farms Sorted By Net Farm Income)

	Avg. Of All Farms	Low 50%	High 50%
Number of farms	33	16	17
Operator Information			
Average number of operators	1.2	1.1	1.3
Average age of operators	51.4	50.3	52.5
Average number of years farming	26.5	25.9	27.0
Results Per Operator			
Working capital	19,143	13,197	24,008
Total assets (market)	612,661	567,448	649,654
Total liabilities	127,480	142,059	115,552
Net worth (market)	485,181	425,389	534,102
Net worth excl deferred liabs	485,181	425,389	534,102
Gross farm income	172,329	132,229	205,138
Total farm expense	126,766	113,855	137,330
Net farm income	45,563	18,374	67,808
Net nonfarm income	3,673	5,975	1,789
Family living withdrawals	31,002	19,719	40,234
Total acres owned	187.0	198.6	177.5
Total crop acres	138.6	145.2	133.1
Crop acres owned	88.9	83.6	93.2
Crop acres cash rented	49.7	61.6	40.0
Labor Analysis			
Number of farms	21	11	10
Total unpaid labor hours	3,812	3,161	4,529
Total hired labor hours	1,880	1,120	2,715
Total labor hours per farm	5,692	4,281	7,244
Unpaid hours per operator	2,859	2,674	3,019
Value of farm production / hour	33.94	31.33	35.64
Net farm income / unpaid hour	14.22	6.52	20.13

Table 10.

Financial Summary
Financial Averages from Great Lakes Dairy Graziers, 2000
Farm Records from 4 States on Finpack
(Farms Sorted By Net Farm Income)

	Avg. Of All Farms	Low 50%	High 50%
Number of farms	33	16	17
Income Statement			
Gross cash farm income	204,526	150,910	254,989
Total cash farm expense	146,635	113,286	178,021
Net cash farm income	57,892	37,624	76,968
Inventory change	4,017	-2,919	10,545
Depreciation and capital adjust	-6,681	-14,034	240
Net farm income	55,228	20,670	87,752
Profitability (market)			
Labor and management earnings	50,786	32,782	67,731
Rate of return on assets	7.8 %	6.6 %	8.6 %
Rate of return on equity	8.1 %	6.4 %	9.1 %
Operating profit margin	29.9 %	28.8 %	30.4 %
Asset turnover rate	26.2 %	22.9 %	28.4 %
Liquidity			
Term debt coverage ratio	176.8 %	140.5 %	202.8 %
Expense as a percent of income	70.4 %	76.7 %	67.0 %
Interest as a percent of income	5.1 %	7.5 %	3.9 %
Solvency (market)			
Number of farms	33	16	17
Ending farm assets	693,685	575,727	804,704
Ending farm liabilities	152,496	156,763	148,480
Ending total assets	742,620	638,379	840,729
Ending total liabilities	154,522	159,816	149,539
Ending net worth	588,098	478,563	691,190
Net worth change	53,142	47,776	58,193
Ending farm debt to asset ratio	22 %	27 %	18 %
Beg total debt to asset ratio	23 %	27 %	20 %
End total debt to asset ratio	21 %	25 %	18 %
Nonfarm Information			
Net nonfarm income	4,452	6,722	2,315
Crop Acres			
Total acres owned	227	223	230
Total crop acres	168	163	172
Total crop acres owned	108	94	121
Total crop acres cash rented	60	69	52

Table 11.

Farm Income Statement
4 State Great Lakes Graziers, 30 to 80 cows, 2000
(Farms Sorted By Net Farm Income)

	Avg. Of All Farms	Low 50%	High 50%
Number of farms	17	8	9
Cash Farm Income			
Cordwood	115	245	-
Corn	164	148	178
Straw	114	243	-
Dairy, Milk	98,609	89,030	107,123
Dairy, Dairy Calves	2,265	3,136	1,491
Dairy Replacement Heifers	542	388	679
Dairy Steers	234	497	-
Other farm income	17,075	16,708	17,401
Gross Cash Farm Income	\$119,117	\$110,393	\$126,872

Table 11.

Farm Income Statement, continued
4 State Great Lakes Graziers, 30 to 80 cows, 2000
(Farms Sorted By Net Farm Income)

	Avg. Of All Farms	Low 50%	High 50%
Cash Farm Expense			
Seed	1,437	1,122	1,717
Fertilizer	4,152	3,686	4,566
Crop chemicals	431	560	316
Crop miscellaneous	710	725	697
Purchased feed	22,741	18,758	26,280
Breeding fees	1,305	1,281	1,326
Veterinary	2,152	2,013	2,275
Livestock supplies	5,178	6,027	4,424
DHIA	155	127	180
Livestock leases	240	466	40
Livestock hauling and tru	1,309	1,159	1,443
Livestock marketing	4,178	4,401	3,980
Interest	5,810	8,071	3,801
Fuel & oil	2,452	2,280	2,605
Repairs	7,710	7,312	8,064
Custom hire	1,571	2,174	1,036
Hired labor	4,276	4,277	4,275
Land rent	739	424	1,020
Machinery & bldg leases	86	180	3
Real estate taxes	2,636	2,525	2,734
Farm insurance	1,685	1,561	1,795
Utilities	3,032	3,234	2,853
Dues & professional fees	512	431	583
Other direct expense	86	-	163
Car and truck	576	1,102	108
Supplies	282	38	499
Miscellaneous	2,240	3,892	771
Total cash expense	77,683	77,826	77,556
Net cash farm income	41,435	32,567	49,317
Inventory Changes			
Crops and feed	446	-1,332	2,026
Market livestock	-141	-	-267
Accounts receivable	125	-492	673
Prepaid expenses and supplies	-705	-2,400	802
Accounts payable	245	-108	559
Total inventory change	-30	-4,332	3,794
Net operating profit	41,405	28,235	53,111
Depreciation and Other Capital Adjustments			
Breeding livestock	6,288	5,342	7,130
Machinery and equipment	-9,379	-8,728	-9,957
Buildings and improvements	-4	-4,567	4,052
Other farm capital	-377	-	-712
Total depr. and other capital adj	-3,472	-7,953	512
Net farm income	\$37,933	\$20,282	\$53,623

Table 12.

Inventory Changes
4 State Great Lakes Graziers, 30 to 80 cows, 2000
(Farms Sorted By Net Farm Income)

	Avg. Of All Farms	Low 50%	High 50%
Number of farms	17	8	9
Net cash farm income	41,435	32,567	49,317
Crops and Feed			
Ending inventory	19,508	19,682	19,354
Beginning inventory	19,063	21,014	17,328
Inventory change	446	-1,332	2,026
Market Livestock			
Ending inventory	0	0	0
Beginning inventory	141	0	267
Inventory change	-141	-	-267
Accts Receivable & Other Current Assets			
Ending inventory	3,331	5,132	1,729
Beginning inventory	3,206	5,624	1,056
Inventory change	125	-492	673
Prepaid Expenses and Supplies			
Ending inventory	1,378	329	2,310
Beginning inventory	2,082	2,729	1,508
Inventory change	-705	-2,400	802
Accounts Payable & Accrued Expenses			
Beginning inventory	1,005	1,138	887
Ending inventory	759	1,245	328
Inventory change	245	-108	559
Total inventory change	-30	-4,332	3,794
Net operating profit	41,405	28,235	53,111

Table 13.

Depreciation and Other Capital Adjustments
4 State Great Lakes Graziers, 30 to 80 cows, 2000
(Farms Sorted By Net Farm Income)

	Avg. Of All Farms	Low 50%	High 50%
Number of farms	17	8	9
Net operating profit	41,405	28,235	53,111
Breeding Livestock			
Ending inventory	89,501	86,403	92,256
Capital sales	881	-	1,663
Beginning inventory	83,640	80,717	86,239
Capital purchases	453	344	550
Depreciation, capital adjust.	6,288	5,342	7,130
Machinery and Equipment			
Ending inventory	27,329	20,243	33,628
Capital sales	145	-	274
Beginning inventory	28,825	21,668	35,188
Capital purchases	8,027	7,303	8,671
Depreciation, capital adjust.	-9,379	-8,728	-9,957
Buildings and Improvements			
Ending inventory	40,477	55,544	27,084
Capital sales	-	-	-
Beginning inventory	39,359	57,727	23,032
Capital purchases	1,122	2,384	-
Depreciation, capital adjust.	-4	-4,567	4,052
Other Capital Assets			
Ending inventory	12,209	21,972	3,531
Capital sales	355	615	124
Beginning inventory	12,470	22,586	3,478
Capital purchases	471	-	889
Depreciation, capital adjust.	-377	-	-712
Total depreciation, capital adj.	-3,472	-7,953	512
Net farm income	37,933	20,282	53,623

Table 14.

Balance Sheet at Market Values
4 State Great Lakes Graziers, 30 to 80 cows, 2000
(Farms Sorted By Net Farm Income)

	Avg. Of All Farms 17		Low 50% 8		High 50% 9	
Number of farms	Beginning	Ending	Beginning	Ending	Beginning	Ending
Assets						
Current Farm Assets						
Cash and checking balance	5,794	7,529	6,158	8,294	5,472	6,850
Prepaid expenses & supplies	2,082	1,378	2,729	329	1,508	2,310
Growing crops	0	0	0	0	0	0
Accounts receivable	794	1,135	624	592	944	1,618
Hedging accounts	0	0	0	0	0	0
Crops held for sale or feed	19,063	19,508	21,014	19,682	17,328	19,354
Crops under government loan	0	0	0	0	0	0
Market livestock held for sale	141	0	0	0	267	0
Other current assets	2,412	2,196	5,000	4,541	111	111
Total current farm assets	30,286	31,746	35,525	33,437	25,630	30,243
Intermediate Farm Assets						
Breeding livestock	84,329	91,648	80,717	86,403	87,539	96,311
Machinery and equipment	49,322	52,812	38,431	40,925	59,002	63,378
Other intermediate assets	1,525	1,405	2,067	1,452	1,044	1,364
Total intermediate farm assets	135,175	145,866	121,215	128,780	147,585	161,053
Long Term Farm Assets						
Farm land	219,173	233,728	207,133	214,937	229,876	250,431
Buildings and improvements	66,076	69,179	74,169	76,531	58,882	62,644
Other long-term assets	19,915	19,915	31,832	31,832	9,323	9,323
Total long-term farm assets	305,164	322,823	313,133	323,301	298,081	322,398
Total Farm Assets	470,626	500,435	469,873	485,518	471,295	513,694
Total Nonfarm Assets	52,477	59,936	59,669	72,880	46,085	48,431
Total Assets	523,103	560,371	529,542	558,397	517,380	562,126
Liabilities						
Current Farm Liabilities						
Accrued interest	144	139	138	113	150	161
Accounts payable	861	621	1,000	1,132	737	167
Current notes	2,658	3,099	2,512	2,075	2,787	4,010
Government crop loans	0	0	0	0	0	0
Principal due on term debt	5,489	5,373	6,861	6,712	4,269	4,183
Total current farm liabilities	9,151	9,232	10,511	10,032	7,943	8,521
Total intermediate farm liabs	19,245	16,444	29,088	25,062	10,496	8,783
Total long term farm liabilities	66,218	71,566	102,169	104,417	34,262	42,364
Total farm liabilities	94,615	97,242	141,768	139,511	52,701	59,669
Total nonfarm liabilities	99	441	0	0	186	833
Total liabs excluding deferreds	94,713	97,683	141,768	139,511	52,887	60,502
Total deferred liabilities	0	0	0	0	0	0
Total liabilities	94,713	97,683	141,768	139,511	52,887	60,502
Net worth (farm and nonfarm)	428,390	462,688	387,774	418,886	464,493	501,624
Net worth excluding deferreds	428,390	462,688	387,774	418,886	464,493	501,624
Net worth change	34,298		31,112		37,130	
Ratio Analysis						
Current farm liabilities / assets	30 %	29 %	30 %	30 %	31 %	28 %
Curr. & interm farm liab. / assets	17 %	14 %	25 %	22 %	11 %	9 %
Long term farm liab. / assets	22 %	22 %	33 %	32 %	11 %	13 %
Total debt to asset ratio	18 %	17 %	27 %	25 %	10 %	11 %
Debt to assets excl deferreds	18 %	17 %	27 %	25 %	10 %	11 %

Table 15.

Statement Of Cash Flows
4 State Great Lakes Graziers, 30 to 80 cows, 2000
(Farms Sorted By Net Farm Income)

	Avg. Of All Farms	Low 50%	High 50%
Number of farms	17	8	9
Beginning cash (farm & nonfarm)	13,722	6,158	20,446
Cash From Operating Activities			
Gross cash farm income	119,117	110,393	126,872
Net nonfarm income	2,828	5,370	569
Total cash farm expense	-77,683	-77,826	-77,556
Apparent family living expense	-31,231	-23,447	-38,150
Income and social security tax	-471	-56	-839
Cash from operations	12,561	14,434	10,897
Cash From Investing Activities			
Sale of breeding livestock	881	-	1,663
Sale of machinery & equipment	145	-	274
Sale of farm land	-	-	-
Sale of farm buildings	-	-	-
Sale of other farm assets	355	615	124
Sale of nonfarm assets	-	-	-
Purchase of breeding livestock	-453	-344	-550
Purchase of machinery & equip.	-8,027	-7,303	-8,671
Purchase of farm land	-5,294	-	-10,000
Purchase of farm buildings	-1,122	-2,384	-
Purchase of other farm assets	-471	-	-889
Purchase of nonfarm assets	-	-	-
Cash from investing activities	-13,987	-9,416	-18,050
Cash From Financing Activities			
Money borrowed	12,133	5,395	18,123
Cash gifts and inheritances	1,701	-	3,213
Principal payments	-8,963	-7,758	-10,035
Dividends paid	-	-	-
Gifts given	-243	-517	-
Cash from financing activities	4,627	-2,881	11,300
Net change in cash balance	3,201	2,137	4,148
Ending cash (farm & nonfarm)	16,923	8,294	24,593

Table 16.

Liquidity Measures
4 State Great Lakes Graziers, 30 to 80 cows, 2000
(Farms Sorted By Net Farm Income)

	Avg. Of All Farms	Low 50%	High 50%
Number of farms	17	8	9
Liquidity (cash)			
Net cash farm income	41,435	32,567	49,317
Net nonfarm income	2,828	5,370	569
Family living and taxes	31,702	23,504	38,989
Real estate principal payments	2,349	3,276	1,525
Cash available for interm. debt	10,212	11,158	9,372
Average intermediate debt	21,139	30,787	12,564
Years to turnover interm. debt	2.1	2.8	1.3
Expense as a % of income	65 %	70 %	61 %
Interest as a % of income	5 %	7 %	3 %
Liquidity (accrual)			
Total accrual farm income	119,547	108,569	129,305
Total accrual operating expense	78,142	80,334	76,194
Net accrual operating income	41,405	28,235	53,111
Net nonfarm income	2,828	5,370	569
Family living and taxes	31,702	23,504	38,989
Real estate principal payments	2,349	3,276	1,525
Available for intermediate debt	10,182	6,826	13,166
Average intermediate debt	21,139	30,787	12,564
Years to turnover interm. debt	2.1	4.5	1.0
Expense as a % of income	65 %	74 %	59 %
Interest as a % of income	5 %	7 %	3 %

Table 17.

Profitability Measures
4 State Great Lakes Graziers, 30 to 80 cows, 2000
(Farms Sorted By Net Farm Income)

	Avg. Of All Farms	Low 50%	High 50%
Number of farms	17	8	9
Profitability (assets valued at market)			
Net farm income	55,360	36,312	72,292
Labor and management earnings	31,984	16,089	46,114
Rate of return on assets	5.9 %	3.6 %	7.8 %
Rate of return on equity	5.8 %	2.7 %	8.0 %
Operating profit margin	27.6 %	18.0 %	35.0 %
Asset turnover rate	21.2 %	19.9 %	22.4 %
Interest on farm net worth	23,376	20,223	26,179
Farm interest expense	5,805	8,047	3,812
Value of operator lbr and mgmt.	32,692	27,250	37,530
Return on farm assets	28,473	17,109	38,574
Average farm assets	485,530	477,695	492,495
Return on farm equity	22,668	9,062	34,762
Average farm equity	389,602	337,056	436,310
Value of farm production	103,080	95,152	110,128

Table 18.

Financial Standards Measures
4 State Great Lakes Graziers, 30 to 80 cows, 2000
(Farms Sorted By Net Farm Income)

	Avg. Of All Farms	Low 50%	High 50%
Number of farms	17	8	9
Liquidity			
Current ratio	3.44	3.33	3.55
Working capital	22,514	23,406	21,721
Solvency (market)			
Farm debt to asset ratio	19 %	29 %	12 %
Farm equity to asset ratio	81 %	71 %	88 %
Farm debt to equity ratio	24 %	40 %	13 %
Profitability (market)			
Rate of return on farm assets	5.9 %	3.6 %	7.8 %
Rate of return on farm equity	5.8 %	2.7 %	8.0 %
Operating profit margin	27.6 %	18.0 %	35.0 %
Net farm income	55,360	36,312	72,292
Repayment Capacity			
Term debt coverage ratio	193 %	138 %	255 %
Capital replacement margin	6,944	3,241	10,236
Efficiency			
Asset turnover rate (market)	21.2 %	19.9 %	22.4 %
Operating expense ratio	60.5 %	66.6 %	56.0 %
Depreciation expense ratio	2.9 %	7.3 %	-0.4 %
Interest expense ratio	4.9 %	7.4 %	2.9 %
Net farm income ratio	31.7 %	18.7 %	41.5 %

Table 19.

Operator and Labor Information
4 State Great Lakes Graziers, 30 to 80 cows, 2000
(Farms Sorted By Net Farm Income)

	Avg. Of All Farms	Low 50%	High 50%
Number of farms	17	8	9
Operator Information			
Average number of operators	1.1	1.0	1.1
Average age of operators	49.3	49.3	49.3
Average number of years farming	25.1	25.0	25.2
Results Per Operator			
Working capital	21,263	23,406	19,549
Total assets (market)	529,239	558,397	505,913
Total liabilities	92,256	139,511	54,452
Net worth (market)	436,983	418,886	451,461
Net worth excl deferred liabs	436,983	418,886	451,461
Gross farm income	112,905	108,569	116,375
Total farm expense	77,079	88,287	68,114
Net farm income	35,826	20,282	48,261
Net nonfarm income	2,671	5,370	512
Family living withdrawals	29,941	23,504	35,090
Labor Analysis			
Number of farms	10	5	5
Total unpaid labor hours	3,176	-	-
Total hired labor hours	626	-	-
Total labor hours per farm	3,802	-	-
Unpaid hours per operator	2,887	-	-
Value of farm production / hour	27.90	-	-
Net farm income / unpaid hour	11.21	-	-

Table 20.

Financial Summary
4 State Great Lakes Graziers, 30 to 80 cows, 2000
(Farms Sorted By Net Farm Income)

	Avg. Of All Farms	Low 50%	High 50%
Number of farms	17	8	9
Income Statement			
Gross cash farm income	119,117	110,393	126,872
Total cash farm expense	77,683	77,826	77,556
Net cash farm income	41,435	32,567	49,317
Inventory change	-30	-4,332	3,794
Depreciation and capital adjust	-3,472	-7,953	512
Net farm income	37,933	20,282	53,623
Profitability (market)			
Labor and management earnings	31,984	16,089	46,114
Rate of return on assets	5.9 %	3.6 %	7.8 %
Rate of return on equity	5.8 %	2.7 %	8.0 %
Operating profit margin	27.6 %	18.0 %	35.0 %
Asset turnover rate	21.2 %	19.9 %	22.4 %
Liquidity			
Term debt coverage ratio	192.7 %	138.2 %	255.1 %
Expense as a percent of income	65.4 %	74.0 %	58.9 %
Interest as a percent of income	4.9 %	7.4 %	2.9 %
Solvency (market)			
Number of farms	17	8	9
Ending farm assets	500,435	485,518	513,694
Ending farm liabilities	97,242	139,511	59,669
Ending total assets	560,371	558,397	562,126
Ending total liabilities	97,683	139,511	60,502
Ending net worth	462,688	418,886	501,624
Net worth change	34,298	31,112	37,130
Ending farm debt to asset ratio	19 %	29 %	12 %
Beg total debt to asset ratio	18 %	27 %	10 %
End total debt to asset ratio	17 %	25 %	11 %
Nonfarm Information			
Net nonfarm income	2,828	5,370	569

Table 21.

Farm Income Statement
4 State Great Lakes Graziers, 80 to 250 cows, 2000
(Farms Sorted By Net Farm Income)

	Avg. Of All Farms	Low 50%	High 50%
Number of farms	16	8	8
Cash Farm Income			
Corn, Seed	54	109	-
Hay, Mixed	216	206	225
Straw	53	107	-
Wheat, Winter	171	-	343
Miscellaneous crop income	22	45	-
Beef, Background Beef	1,918	3,837	-
Broilers	53	107	-
Dairy, Milk	241,165	240,646	241,685
Dairy, Dairy Calves	1,960	1,812	2,108
Dairy Steers	942	1,578	307
Cull breeding livestock	16,626	16,544	16,709
Misc. livestock income	1,515	319	2,711
Transition payments	4,396	2,331	6,461
Other government payments	21,466	26,261	16,671
Custom work income	213	233	192
Patronage dividends, cash	954	1,207	702
Other farm income	3,548	3,875	3,220
Gross Cash Farm Income	295,273	299,215	291,332

Table 21.

Farm Income Statement, continued
 4 State Great Lakes Graziers, 80 to 250 cows, 2000
 (Farms Sorted By Net Farm Income)

	Avg. Of All Farms	Low 50%	High 50%
Cash Farm Expense			
Seed	4,174	4,174	4,174
Fertilizer	5,957	5,856	6,058
Crop chemicals	1,614	1,977	1,252
Irrigation energy	69	-	138
Purchased feed	60,517	74,770	46,264
Breeding fees	2,169	2,320	2,019
Veterinary	5,742	4,717	6,766
Livestock supplies	10,212	10,916	9,508
DHIA	537	775	299
Livestock leases	750	-	1,500
Livestock hauling and tru	4,434	5,971	2,896
Livestock marketing	6,395	6,966	5,824
Bedding	449	533	366
Interest	16,770	20,237	13,303
Fuel & oil	6,286	6,797	5,774
Repairs	21,412	25,631	17,193
Custom hire	5,193	7,575	2,810
Hired labor	30,774	35,784	25,764
Land rent	7,539	7,335	7,743
Machinery & bldg leases	5,680	7,126	4,234
Real estate taxes	4,168	4,475	3,862
Personal property taxes	715	-	1,430
Farm insurance	3,538	2,546	4,530
Utilities	6,408	6,277	6,539
Dues & professional fees	1,604	2,009	1,199
Car and truck	793	976	610
Supplies	1,817	3,113	521
Miscellaneous	4,180	3,553	4,808
Total cash expense	219,896	252,409	187,383
Net cash farm income	75,377	46,806	103,949
Inventory Changes			
Crops and feed	7,127	4,881	9,374
Market livestock	-220	-529	89
Accounts receivable	1,623	-1,266	4,512
Prepaid expenses and supplies	772	-676	2,221
Accounts payable	-986	-4,371	2,398
Total inventory change	8,316	-1,961	18,594
Net operating profit	83,694	44,844	122,543
Depreciation and Other Capital Adjustments			
Breeding livestock	10,101	11,428	8,775
Machinery and equipment	-15,670	-20,898	-10,442
Buildings and improvements	-4,495	-7,312	-1,677
Other farm capital	-28	-56	-
Total depr. and other capital adj	-10,091	-16,838	-3,344
Net farm income	\$73,603	\$28,006	\$119,199

Table 22.

Inventory Changes
4 State Great Lakes Graziers, 80 to 250 cows, 2000
(Farms Sorted By Net Farm Income)

	Avg. Of All Farms	Low 50%	High 50%
Number of farms	16	8	8
Net cash farm income	75,377	46,806	103,949
Crops and Feed			
Ending inventory	42,638	41,965	43,311
Beginning inventory	35,511	37,084	33,938
Inventory change	7,127	4,881	9,374
Market Livestock			
Ending inventory	3,932	7,413	450
Beginning inventory	4,152	7,943	361
Inventory change	-220	-529	89
Accts Receivable & Other Current Assets			
Ending inventory	13,332	10,038	16,626
Beginning inventory	11,709	11,304	12,114
Inventory change	1,623	-1,266	4,512
Prepaid Expenses and Supplies			
Ending inventory	9,506	5,862	13,150
Beginning inventory	8,734	6,538	10,929
Inventory change	772	-676	2,221
Accounts Payable & Accrued Expenses			
Beginning inventory	4,553	5,500	3,605
Ending inventory	5,539	9,871	1,207
Inventory change	-986	-4,371	2,398
Total inventory change	8,316	-1,961	18,594
Net operating profit	83,694	44,844	122,543

Table 23.

Depreciation and Other Capital Adjustments
4 State Great Lakes Graziers, 80 to 250 cows, 2000
(Farms Sorted By Net Farm Income)

	Avg. Of All Farms	Low 50%	High 50%
Number of farms	16	8	8
Net operating profit	83,694	44,844	122,543
Breeding Livestock			
Ending inventory	203,054	203,271	202,838
Capital sales	487	975	-
Beginning inventory	190,347	187,006	193,688
Capital purchases	3,094	5,812	375
Depreciation, capital adjust.	10,101	11,428	8,775
Machinery and Equipment			
Ending inventory	50,024	36,064	63,983
Capital sales	1,301	675	1,927
Beginning inventory	51,948	43,016	60,881
Capital purchases	15,046	14,621	15,472
Depreciation, capital adjust.	-15,670	-20,898	-10,442
Buildings and Improvements			
Ending inventory	37,051	50,125	23,977
Capital sales	125	250	-
Beginning inventory	34,826	44,068	25,584
Capital purchases	6,844	13,618	69
Depreciation, capital adjust.	-4,495	-7,312	-1,677
Other Capital Assets			
Ending inventory	8,549	11,078	6,020
Capital sales	857	1,714	-
Beginning inventory	9,104	12,187	6,020
Capital purchases	331	661	-
Depreciation, capital adjust.	-28	-56	-
Total depreciation, capital adj.	-10,091	-16,838	-3,344
Net farm income	73,603	28,006	119,199

Table 24.

Balance Sheet at Market Values
4 State Great Lakes Graziers, 80 to 250 cows, 2000
(Farms Sorted By Net Farm Income)

Number of farms	Avg. Of All Farms 16		Low 50% 8		High 50% 8	
	Beginning	Ending	Beginning	Ending	Beginning	Ending
Assets						
Current Farm Assets						
Cash and checking balance	8,890	12,196	12,115	15,566	5,665	8,826
Prepaid expenses & supplies	8,734	9,506	6,538	5,862	10,929	13,150
Growing crops	3,776	4,046	4,625	4,763	2,927	3,329
Accounts receivable	6,046	5,764	6,679	5,276	5,412	6,253
Hedging accounts	0	0	0	0	0	0
Crops held for sale or feed	35,511	42,638	37,084	41,965	33,938	43,311
Crops under government loan	0	0	0	0	0	0
Market livestock held for sale	4,152	3,932	7,943	7,413	361	450
Other current assets	1,888	3,522	0	0	3,775	7,044
Total current farm assets	68,996	81,604	74,984	80,845	63,007	82,364
Intermediate Farm Assets						
Breeding livestock	190,359	203,673	187,031	203,271	193,688	204,075
Machinery and equipment	112,623	113,955	105,883	104,078	119,364	123,833
Other intermediate assets	1,885	1,144	3,770	2,287	0	0
Total intermediate farm assets	304,867	318,772	296,684	309,635	313,051	327,908
Long Term Farm Assets						
Farm land	412,040	440,163	326,870	370,066	497,210	510,259
Buildings and improvements	42,885	48,257	57,020	67,763	28,750	28,750
Other long-term assets	10,031	10,218	14,042	14,416	6,020	6,020
Total long-term farm assets	464,956	498,637	397,932	452,245	531,980	545,029
Total Farm Assets	838,819	899,013	769,600	842,725	908,038	955,301
Total Nonfarm Assets	36,986	37,246	42,976	43,021	30,996	31,470
Total Assets	875,805	936,259	812,576	885,746	939,034	986,771
Liabilities						
Current Farm Liabilities						
Accrued interest	1,769	944	3,538	1,808	0	79
Accounts payable	2,784	4,595	1,963	8,063	3,605	1,128
Current notes	19,673	24,918	14,565	18,781	24,781	31,054
Government crop loans	0	0	0	0	0	0
Principal due on term debt	22,493	27,210	24,309	34,535	20,677	19,885
Total current farm liabilities	46,718	57,667	44,374	63,187	49,063	52,146
Total intermediate farm liabs	62,059	47,013	61,728	52,773	62,391	41,252
Total long term farm liabilities	115,707	106,524	163,461	154,779	67,954	58,270
Total farm liabilities	224,485	211,203	269,564	270,738	179,407	151,668
Total nonfarm liabilities	3,138	3,709	5,526	5,169	750	2,250
Total liabs excluding deferreds	227,623	214,913	275,089	275,907	180,157	153,918
Total deferred liabilities	0	0	0	0	0	0
Total liabilities	227,623	214,913	275,089	275,907	180,157	153,918
Net worth (farm and nonfarm)	648,182	721,346	537,487	609,839	758,877	832,853
Net worth excluding deferreds	648,182	721,346	537,487	609,839	758,877	832,853
Net worth change		73,164		72,352		73,976
Ratio Analysis						
Current farm liabilities / assets	68 %	71 %	59 %	78 %	78 %	63 %
Curr. & interm farm liab. / assets	29 %	26 %	29 %	30 %	30 %	23 %
Long term farm liab. / assets	25 %	21 %	41 %	34 %	13 %	11 %
Total debt to asset ratio	26 %	23 %	34 %	31 %	19 %	16 %
Debt to assets excl deferreds	26 %	23 %	34 %	31 %	19 %	16 %

Table 25.

Statement Of Cash Flows
4 State Great Lakes Graziers, 80 to 250 cows, 2000
(Farms Sorted By Net Farm Income)

	Avg. Of All Farms	Low 50%	High 50%
Number of farms	16	8	8
Beginning cash (farm & nonfarm)	12,013	12,115	11,911
Cash From Operating Activities			
Gross cash farm income	295,273	299,215	291,332
Net nonfarm income	6,177	10,243	2,111
Total cash farm expense	-219,896	-252,409	-187,383
Apparent family living expense	-42,882	-19,253	-66,511
Income and social security tax	-941	-890	-992
Cash from operations	37,731	36,906	38,557
Cash From Investing Activities			
Sale of breeding livestock	487	975	-
Sale of machinery & equipment	1,301	675	1,927
Sale of farm land	1,541	3,081	-
Sale of farm buildings	125	250	-
Sale of other farm assets	857	1,714	-
Sale of nonfarm assets	1,794	463	3,125
Purchase of breeding livestock	-3,094	-5,812	-375
Purchase of machinery & equip.	-15,046	-14,621	-15,472
Purchase of farm land	-	-	-
Purchase of farm buildings	-6,844	-13,618	-69
Purchase of other farm assets	-331	-661	-
Purchase of nonfarm assets	-813	-	-1,625
Cash from investing activities	-20,022	-27,555	-12,489
Cash From Financing Activities			
Money borrowed	57,739	87,282	28,195
Cash gifts and inheritances	1,338	1,050	1,625
Principal payments	-73,134	-94,232	-52,036
Dividends paid	-	-	-
Gifts given	-421	-	-843
Cash from financing activities	-14,479	-5,900	-23,058
Net change in cash balance	3,231	3,451	3,010
Ending cash (farm & nonfarm)	15,244	15,566	14,922

Table 26.

Liquidity Measures
4 State Great Lakes Graziers, 80 to 250 cows, 2000
(Farms Sorted By Net Farm Income)

	Avg. Of All Farms	Low 50%	High 50%
Number of farms	16	8	8
Liquidity (cash)			
Net cash farm income	75,377	46,806	103,949
Net nonfarm income	6,177	10,243	2,111
Family living and taxes	43,823	20,143	67,503
Real estate principal payments	6,773	8,914	4,632
Cash available for interm. debt	30,958	27,991	33,925
Average intermediate debt	71,528	75,609	67,448
Years to turnover interm. debt	2.3	2.7	2.0
Expense as a % of income	74 %	84 %	64 %
Interest as a % of income	6 %	7 %	5 %
Liquidity (accrual)			
Total accrual farm income	303,804	302,300	305,307
Total accrual operating expense	220,110	257,456	182,764
Net accrual operating income	83,694	44,844	122,543
Net nonfarm income	6,177	10,243	2,111
Family living and taxes	43,823	20,143	67,503
Real estate principal payments	6,773	8,914	4,632
Available for intermediate debt	39,275	26,030	52,519
Average intermediate debt	71,528	75,609	67,448
Years to turnover interm. debt	1.8	2.9	1.3
Expense as a % of income	72 %	85 %	60 %
Interest as a % of income	5 %	6 %	4 %

Table 27.

Profitability Measures
4 State Great Lakes Graziers, 80 to 250 cows, 2000
(Farms Sorted By Net Farm Income)

	Avg. Of All Farms	Low 50%	High 50%
Number of farms	16	8	8
Profitability (assets valued at market)			
Net farm income	109,827	83,193	136,461
Labor and management earnings	70,763	51,033	90,493
Rate of return on assets	9.0 %	8.0 %	9.8 %
Rate of return on equity	9.5 %	8.6 %	10.2 %
Operating profit margin	30.8 %	27.0 %	34.3 %
Asset turnover rate	29.2 %	29.6 %	28.7 %
Interest on farm net worth	39,064	32,161	45,968
Farm interest expense	15,944	18,507	13,382
Value of operator lbr and mgmt.	47,656	37,203	58,109
Return on farm assets	78,115	64,497	91,734
Average farm assets	868,916	806,162	931,669
Return on farm equity	62,171	45,990	78,352
Average farm equity	651,072	536,011	766,132
Value of farm production	253,388	238,958	267,818

Table 28.

Financial Standards Measures
4 State Great Lakes Graziers, 80 to 250 cows, 2000
(Farms Sorted By Net Farm Income)

	Avg. Of All Farms	Low 50%	High 50%
Number of farms	16	8	8
Liquidity			
Current ratio	1.42	1.28	1.58
Working capital	23,937	17,657	30,218
Solvency (market)			
Farm debt to asset ratio	23 %	32 %	16 %
Farm equity to asset ratio	77 %	68 %	84 %
Farm debt to equity ratio	31 %	47 %	19 %
Profitability (market)			
Rate of return on farm assets	9.0 %	8.0 %	9.8 %
Rate of return on farm equity	9.5 %	8.6 %	10.2 %
Operating profit margin	30.8 %	27.0 %	34.3 %
Net farm income	109,827	83,193	136,461
Repayment Capacity			
Term debt coverage ratio	173 %	127 %	238 %
Capital replacement margin	23,367	10,260	36,474
Efficiency			
Asset turnover rate (market)	29.2 %	29.6 %	28.7 %
Operating expense ratio	67.2 %	79.0 %	55.5 %
Depreciation expense ratio	3.3 %	5.6 %	1.1 %
Interest expense ratio	5.2 %	6.1 %	4.4 %
Net farm income ratio	24.2 %	9.3 %	39.0 %

Table 29.

Operator and Labor Information
4 State Great Lakes Graziers, 80 to 250 cows, 2000
(Farms Sorted By Net Farm Income)

	Avg. Of All Farms	Low 50%	High 50%
Number of farms	16	8	8
Operator Information			
Average number of operators	1.4	1.4	1.4
Average age of operators	53.7	52.3	55.1
Average number of years farming	27.9	26.4	29.4
Results Per Operator			
Working capital	17,409	12,842	21,976
Total assets (market)	680,916	644,179	717,652
Total liabilities	156,300	200,660	111,940
Net worth (market)	524,615	443,519	605,711
Net worth excl deferred liabs	524,615	443,519	605,711
Gross farm income	220,948	219,855	222,042
Total farm expense	167,419	199,487	135,351
Net farm income	53,529	20,368	86,690
Net nonfarm income	4,492	7,449	1,535
Family living withdrawals	31,871	14,649	49,093
Labor Analysis			
Number of farms	11	7	4
Total unpaid labor hours	4,390	3,436	-
Total hired labor hours	3,019	3,247	-
Total labor hours per farm	7,410	6,684	-
Unpaid hours per operator	2,841	2,406	-
Value of farm production / hour	36.76	37.12	-
Net farm income / unpaid hour	16.19	9.38	-

Table 30.

Financial Summary
4 State Great Lakes Graziers, 80 to 250 cows, 2000
(Farms Sorted By Net Farm Income)

	Avg. Of All Farms	Low 50%	High 50%
Number of farms	16	8	8
Income Statement			
Gross cash farm income	295,273	299,215	291,332
Total cash farm expense	219,896	252,409	187,383
Net cash farm income	75,377	46,806	103,949
Inventory change	8,316	-1,961	18,594
Depreciation and capital adjust	-10,091	-16,838	-3,344
Net farm income	73,603	28,006	119,199
Profitability (market)			
Labor and management earnings	70,763	51,033	90,493
Rate of return on assets	9.0 %	8.0 %	9.8 %
Rate of return on equity	9.5 %	8.6 %	10.2 %
Operating profit margin	30.8 %	27.0 %	34.3 %
Asset turnover rate	29.2 %	29.6 %	28.7 %
Liquidity			
Term debt coverage ratio	172.9 %	127.3 %	237.7 %
Expense as a percent of income	72.5 %	85.2 %	59.9 %
Interest as a percent of income	5.2 %	6.1 %	4.4 %
Solvency (market)			
Number of farms	16	8	8
Ending farm assets	899,013	842,725	955,301
Ending farm liabilities	211,203	270,738	151,668
Ending total assets	936,259	885,746	986,771
Ending total liabilities	214,913	275,907	153,918
Ending net worth	721,346	609,839	832,853
Net worth change	73,164	72,352	73,976
Ending farm debt to asset ratio	23 %	32 %	16 %
Beg total debt to asset ratio	26 %	34 %	19 %
End total debt to asset ratio	23 %	31 %	16 %
Nonfarm Information			
Net nonfarm income	6,177	10,243	2,111

Table 31 below summarizes herd information by size group. There is considerable variability in this panel of 33 farms. The average number of cows for all farms was 84; the standard deviation was 47.94. For all farms, the standard deviation of lbs. of milk sold was 3,097, and for the milk price it was 1.63.

Table 31.	Cows, Production Levels, and Prices		
	Averages of Graziers, 4 Great Lakes States, 2000		
Farm groups:	Number of cows per farm	Lbs. of milk sold per cow	Milk price per cwt.
All farms	84	15,309	\$12.98
30 - 80 cows	50	15,869	\$12.78
80 - 250 cows	120	14,713	\$13.19

This paper may be obtained on the internet at: <http://www.msu.edu/user/nott/>