

The World's Largest Open Access Agricultural & Applied Economics Digital Library

This document is discoverable and free to researchers across the globe due to the work of AgEcon Search.

Help ensure our sustainability.

Give to AgEcon Search

AgEcon Search
http://ageconsearch.umn.edu
aesearch@umn.edu

Papers downloaded from **AgEcon Search** may be used for non-commercial purposes and personal study only. No other use, including posting to another Internet site, is permitted without permission from the copyright owner (not AgEcon Search), or as allowed under the provisions of Fair Use, U.S. Copyright Act, Title 17 U.S.C.

No endorsement of AgEcon Search or its fundraising activities by the author(s) of the following work or their employer(s) is intended or implied.

Staff Paper

Dairy Grazing Farms in Michigan, 2001

by

Sherrill B. Nott

Staff Paper #2002-30

October, 2002

Copyright: 2002 by Sherrill B. Nott. All rights reserved. Readers may make verbatim copies of this document for non-commercial purposes by any means, provided that this copyright notice appears on all such copies.



DAIRY GRAZING FARMS IN MICHIGAN, 2001

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

by

Sherrill B. Nott¹

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.

Contents

Averages of 14 Dairy Farms using Rotational Grazing, 2001

1.	Crop and Livestock Production Summary	Page 3
2.	Farm Income Statement	Page 4
3.	Farm Income Statement, continued	Page 5
4.	Inventory Changes	Page 6
5.	Depreciation and Other Capital Adjustments	Page 7
6.	Profitability Measures	Page 8
7.	Liquidity Measures	Page 9
8.	Balance Sheet at Cost Values	Page 10
9.	Balance Sheet at Market Values	Page 11
10.	Statement of Cash Flows	Page 12
11.	Financial Standards Measures	Page 13
12.	Operator Information and Nonfarm Summary	Page 14
13	Financial Summary	Page 15

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 Finan² summary was completed on 2001 data including beginning and ending

¹Professor 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...

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

	Avg. Of All Farms	Low 50%	High 50%
Number of farms	14	7	7
Acreage Summary Total acres owned Total crop acres Crop acres owned Crop acres cash rented	347	254	441
	440	364	516
	252	197	307
	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	277,512	282,989	272,035

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	1 522	638
Miscellaneous	1,159	1,533	786
Total cash expense	209,019	236,811	
Net cash farm income	68,493	46,178	90,809
Inventory Changes			
Crops and feed	1,894	5,835	-2,047
Market livestock	-779		
Accounts receivable	-3		
Prepaid expenses and supplies	-2,250		
Accounts payable	-1,250		-695
Total inventory change	-2,389	-267	-4,510
Net operating profit	66,104	45,910	86,298
Depreciation and Other Capital Adjust	ments		
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		103
Total depr. and other capital adj	-21,234	-29,973	-12,495
Net farm income	\$ 44,871	\$ 15,938	\$ 73,804

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 Beginning inventory Inventory change	49,687 47,793 1,894	· ·	47,753
Market Livestock Ending inventory Beginning inventory Inventory change	5,421	2,333 2,667 -335	8,174
Accts Receivable & Other Current As Ending inventory Beginning inventory Inventory change	sets 14,292 14,295 -3	· ·	
Prepaid Expenses and Supplies Ending inventory Beginning inventory Inventory change	4,018 6,268 -2,250	5,949	6,588
Accounts Payable & Accrued Expenses Beginning inventory Ending inventory Inventory change	5,763 7,013 -1,250	10,607	·
Total inventory change	-2,389	-267	-4,510
Net operating profit	66,104	45,910	86,298

Table 5. Depreciation and Other Capital Adjustments

	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 Capital sales Beginning inventory Capital purchases Depreciation, capital adjust.	177,702 2,662 177,749 948 1,667	188,233 1,618	167,265 279
Machinery and Equipment Ending inventory Capital sales Beginning inventory Capital purchases Depreciation, capital adjust.		57,254 27,302	29,111 21,069
Buildings and Improvements Ending inventory Capital sales Beginning inventory Capital purchases Depreciation, capital adjust.	23,783 - 19,462 8,768 -4,448	· ·	
Other Capital Assets Ending inventory Capital sales Beginning inventory Capital purchases Depreciation, capital adjust.	7,244 789 4,452 3,584 -3	6,758	
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)

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

Table 7. **Liquidity Measures**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
Liquidity (cash) Net cash farm income Net nonfarm income Family living and taxes Real estate principal payments Cash available for interm. debt Average intermediate debt	68,493	46,178	90,809
	5,329	2,928	7,731
	50,481	23,919	77,042
	7,526	6,995	8,058
	15,816	18,192	13,439
	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 Total accrual operating expense Net accrual operating income Net nonfarm income Family living and taxes Real estate principal payments Available for intermediate debt Average intermediate debt	278,623	287,719	269,527
	212,519	241,809	183,229
	66,104	45,910	86,298
	5,329	2,928	7,731
	50,481	23,919	77,042
	7,526	6,995	8,058
	13,427	17,925	8,929
	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

Reginning	Number of farms	Avg. (All Fa		Low	50% 7	Hig	h 50% 7
Assets Current Farm Assets 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 6,613 7,702 6,933 4,250 5,393 Redging accounts 70		Reginning	Endina	Reginning	Endina	Beginning	Endina
Cash and checking balance 16,115 8,691 16,533 5,445 15,698 11,937	Assets	20911111119	Bilding	Degimini	Buding	Degiiiiii	Highing
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 5,955 6,163 7,720 6,933 8,104 7,724 Accounts receivable 47,793 49,687 47,833 53,668 47,753 45,706 Grops held for sale or feed 47,793 49,687 47,833 53,668 47,753 45,706 Grops held for sale or feed 47,793 49,687 47,833 53,668 47,753 45,706 Grops under government loan 0	Current Farm Assets						
Crowing crops Ray		·					
Accounts receivable 5,885 6,163 7,720 6,933 4,250 5,393 1,8250 6,705 1,000							
Hedging accounts							•
Crops held for sale or feed Crops under government loan		•	-				•
Crops under government loan							
Market livestock held for sale other current assets	_	·	-				•
Other current assets							
Total current farm assets		•	-				
Intermediate Farm Assets							
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 36	Total Cuffent Tarm assets	09,092	01,323	09,210	19,000	90,507	02,991
Machinery and equipment Other intermediate assets 43,182 (1,472) (1,312) (1,47							
Other intermediate assets						·	
Total intermediate farm assets	1 1 1	•		•			
Long Term Farm Assets Farm land 133,155 133,687 166,987 167,210 99,324 100,163							
Farm Land 133,155 133,687 166,987 167,210 99,324 100,163 19,462 23,783 16,751 20,298 22,173 27,267 20,100 20	Total intermediate farm assets	222,403	229,682	247,890	249,682	196,917	209,682
Buildings and improvements	Long Term Farm Assets						
Other long-term assets	Farm land	133,155	133,687	166,987	167,210	99,324	100,163
Total long-term 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 5496,283 500,029 571,850 568,096 420,717 431,962 Liabilities Current Farm Liabilities 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 Government crop loans 0 0 0 0 0 0 0 Principal due on term debt 18,555 18,435 23,257 24,531 13,852 12,339 Total intermediate farm liabilities 107,493 107,576 113,673 111,746 101,313 103,394 Total long term farm liabilities 107,493 107,576 113,673 111,746 101,313 103,394 Total nonfarm liabilities 3,975 3,153 6,878 5,592 1,071 714 Total nonfarm 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 Ratio Analysis Current farm liabilities / assets 60 % 48 % 85 % 61 % 36 % 35 % Curr. & interm farm liabilities / assets 60 % 48 % 85 % 61 % 36 % 35 % Curr. & interm farm liabilities / assets 69 % 67 % 60 % 57 % 83 % 81 %	Buildings and improvements				20,298	22,173	27,267
Total Farm Assets		•					
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 Liabilities Current Farm Liabilities 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 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 Ratio Analysis Current farm liabilities 60 % 48 % 85 % 61 % 36 % 35 % Curr. & interm farm liab. / assets 60 % 48 % 30 % 34 % 37 % 20 % 22 % Long term farm liab. / assets 69 % 67 % 60 % 57 % 83 % 81 %						•	•
Total Assets 496,283 500,029 571,850 568,096 420,717 431,962 Liabilities Current Farm Liabilities 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 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 13,673 111,746 101,313 103,394 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 Ratio Analysis Current farm liabilities / assets 60 % 48 % 85 % 61 % 36 % 35 % Curr. & interm farm liab. / assets 69 % 67 % 60 % 57 % 83 % 81 %	Total Farm Assets	467,893	472,413	525,929	523,723	409,858	421,103
Liabilities Current Farm Liabilities Accrued interest	Total Nonfarm Assets	28,390	27,616	45,921	44,373	10,859	10,859
Current Farm Liabilities Accrued interest	Total Assets	496,283	500,029	571,850	568,096	420,717	431,962
Accounts payable	Current Farm Liabilities	1 460	1 100	2 265	1 060	555	250
Current notes Government crop loans Government crop loans Principal due on term debt Total current farm liabilities Total long term farm liabilities Total farm liabilities Total nonfarm liabilities Total liabilities Total liabilities Total nonfarm liabilities Total liabilities Total nonfarm liabilitie			•				
Government crop loans Principal due on term debt Principal due on term debt Total current farm liabilities Principal due on term debt Total current farm liabilities Principal due on term debt Total current farm liabilities Principal due on term debt Principal due of term 13,852 Princi							
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 Ratio Analysis Current farm liabilities / assets 60 % 48 % 85 % 61 % 36 % 35 % Curr. & interm farm liab. / assets 60 % 67 % 60 % 57 %		•					
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 Ratio Analysis 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 long term farm liabilities 107,493 107,570 113,673 111,746 101,313 103,394 193,689 200,087 228,676 233,700 158,703 166,475 Total nonfarm liabilities 3,975 3,153 6,878 5,592 1,071 714 197,664 203,241 235,553 239,292 159,774 167,189 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 Ratio Analysis 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 long term farm liabilities 107,493 107,570 113,673 111,746 101,313 103,394 193,689 200,087 228,676 233,700 158,703 166,475 Total nonfarm liabilities 3,975 3,153 6,878 5,592 1,071 714 197,664 203,241 235,553 239,292 159,774 167,189 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 Ratio Analysis 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 intermediate form links	22 1/12	E2 E/1	20 121	72 220	24 051	22 711
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 Ratio Analysis 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 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 Ratio Analysis 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 %	3	·		•			•
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 Ratio Analysis 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 %	iotai iaim iiabiiities	100,000	200,007	220,070	233,700	130,703	100,475
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 Ratio Analysis 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 nonfarm liabilities		3,153	6,878	5,592	1,071	714
Net worth change -1,831 -7,492 3,831 Ratio Analysis 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 liabilities	197,664	203,241	235,553	239,292	159,774	167,189
Net worth change -1,831 -7,492 3,831 Ratio Analysis 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 %	Net worth (farm and nonfarm)	298.619	296.789	336.297	328.804	260.942	264.773
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 %							
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 %	Patio Analygia						
Curr. & interm farm liab. / assets 28 % 30 % 34 % 37 % 20 % 22 % Long term farm liab. / assets 69 % 67 % 60 % 57 % 83 % 81 %		60 s	/1 Q %	Q	61 º	26 %	3 E &
Long term farm liab. / assets 69 % 67 % 60 % 57 % 83 % 81 %							

Table 9. Balance Sheet at Market Values

	`	J		,		
	Avg.	Of				
	All E		Lot	v 50%	Hig	h 50%
Number of farms		L4		7	3	7
	Beginning	Ending	Beginning	Ending	Beginning	Ending
Assets						
Current Farm Assets						
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
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
Tubaninadiaka Banin Banaka						
Intermediate Farm Assets	170 (10	170 610	100 022	105 170	167 065	170 045
Breeding livestock	178,649	178,612	190,033	185,179		172,045
Machinery and equipment	132,275	146,847		164,360		129,335
Other intermediate assets	2,450	3,970	2,403	5,784		2,155
Total intermediate farm assets	313,373	329,429	338,194	355,323	288,552	303,535
Long Term Farm Assets						
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		57,357
Other long-term assets	2,980	3,933		6,865		1,000
Total long-term farm assets	463,621	521,222		515,192		527,252
Total Farm Assets	866,887			950,183		913,778
TOTAL PAIM ADDCED	000,007	JJ1,J00	000,100	230,103	031,011	213,770
Total Nonfarm Assets	65,965	70,190	83,221	87,329	48,709	53,050
Total Assets	932,852	1,002,170	982,381	1,037,512	883,323	966,828
Liabilities						
Current Farm Liabilities						
Accrued interest	1,460	1,109	2,365	1,960		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
makal dakannallaka Sana libba	20 142	E2 E41	20 424	72 220	04 051	22 544
Total intermediate farm liabs	32,143	53,541	39,434	73,339		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 liabs excluding deferreds	197,664	203,241	•	239,292		167,189
Total deferred liabilities	0	0		0		0
Total liabilities	197,664	203,241		239,292	159,774	167,189
TOTAL TRADITION	13,,001	203,211	233,333	200,202	233,777	10,,100
Retained earnings	298,619	296,789	336,297	328,804	260,942	264,773
Market valuation equity	436,569	502,141	410,531	469,416	462,606	534,866
Net worth (farm and nonfarm)	735,188	798,929	746,827	798,220	723,549	799,639
Net worth excluding deferreds	735,188	798,929	746,827	798,220	723,549	799,639
Net worth change		3,741		1,393		,090
Ratio Analysis						,
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

	Avg. Of All Farms	Low 50%	High 50%
Number of farms	14	7	7
Beginning cash (farm & nonfarm)	16,401	17,104	15,698
Cash From Operating Activities Gross cash farm income Net nonfarm income Total cash farm expense Apparent family living expense Income and social security tax Cash from operations	-3,676	282,989 2,928 -236,811 -19,587 -4,332 25,187	-74,022 -3,020
Cash From Investing Activities Sale of breeding livestock Sale of machinery & equipment Sale of farm land Sale of farm buildings Sale of other farm assets Sale of nonfarm assets Purchase of breeding livestock Purchase of machinery & equip. Purchase of farm land Purchase of farm buildings Purchase of other farm assets Purchase of nonfarm assets Cash from investing activities	2,662 250 - 789 260 -948 -24,186 - - -8,768 -3,584 -1,148 -34,673	500 - 1,487 519 -1,618 -27,302 - -5,357 -6,758 -2,295	-21,069 - -12,179 -410 -
Cash From Financing Activities Money borrowed Cash gifts and inheritances Principal payments Dividends paid Gifts given Cash from financing activities	95,088 1,510 -90,709 - -2,261 3,628	_	65,763 3,020 -59,044 - -4,521 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

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

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 Total assets (market) Total liabilities Net worth (market) Net worth excl deferred liabs	28,236	27,170	28,891
	668,113	907,823	520,599
	135,494	209,381	90,025
	532,620	698,443	430,575
	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 Total crop acres Crop acres owned Crop acres cash rented	231.5	222.0	237.3
	293.4	318.4	278.1
	168.1	172.7	165.2
	125.4	145.7	112.8
Labor Analysis Number of farms Total unpaid labor hours Total hired labor hours Total labor hours per farm Unpaid hours per operator Value of farm production / hour Net farm income / unpaid hour	14 4,679 2,784 7,463 3,119 29.66 9.59	7 3,996 2,889 6,884 3,496 30.55 3.99	7 5,361 2,680 8,041 2,887 28.90 13.77

Table 13. **Financial Summary**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
Income Statement Gross cash farm income Total cash farm expense Net cash farm income Inventory change Depreciation and capital adjust Net farm income	277,512 209,019 68,493 -2,389 -21,234 44,871	282,989 236,811 46,178 -267 -29,973 15,938	272,035 181,226 90,809 -4,510 -12,495 73,804
Profitability (cost) Labor and management earnings Rate of return on assets Rate of return on equity Operating profit margin Asset turnover rate	28,475 2.4 % -0.5 % 5.1 % 47.1 %	-1,681 -1.8 % -8.4 % -4.6 % 40.1 %	58,630 7.7 % 8.6 % 13.8 % 55.9 %
Profitability (market) Labor and management earnings Rate of return on assets Rate of return on equity Operating profit margin Asset turnover rate	63,292 8.0 % 8.4 % 32.4 % 24.6 %	27,557 4.7 % 4.1 % 20.7 % 22.7 %	99,026 11.4 % 12.6 % 43.0 % 26.6 %
Liquidity Term debt coverage ratio Expense as a percent of income Interest as a percent of income	105.5 % 76.3 % 4.6 %	84.0 %	112.5 % 68.0 % 3.8 %
Solvency (cost) Number of farms Ending farm assets Ending farm liabilities Ending total assets Ending total liabilities Ending net worth Net worth change Ending farm debt to asset ratio Beg total debt to asset ratio End total debt to asset ratio	14 472,413 200,087 500,029 203,241 296,789 -1,831 42 % 40 % 41 %	41 %	7 421,103 166,475 431,962 167,189 264,773 3,831 40 % 38 % 39 %
Solvency (market) Number of farms Ending farm assets Ending farm liabilities Ending total assets Ending total liabilities Ending net worth Net worth change Ending farm debt to asset ratio Beg total debt to asset ratio End total debt to asset ratio	14 931,980 200,087 1,002,170 203,241 798,929 63,741 21 % 21 % 20 %	7 950,183 233,700 1,037,512 239,292 798,220 51,393 25 % 24 % 23 %	7 913,778 166,475 966,828 167,189 799,639 76,090 18 % 18 %
Nonfarm Information Net nonfarm income	5,329	2,928	7,731