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# *Staff Paper*

BUSINESS ANALYSIS SUMMARY  
FOR CASH GRAIN FARMS

Ralph E. Hepp and Sherrill B. Nott

Staff Paper 97-27

Aug. 1997



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Business Analysis Summary for Cash Grain Farms  
1996 Telfarm/MircoTel Data

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

This report has three purposes: 1) to provide statistical information about the financial results on grain farms during 1996; 2) to provide production costs for comparative analysis and forward planning; and 3) to provide information on the trends in resource use, income and costs during the last few years.

48 pages

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<sup>1</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.

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# BUSINESS ANALYSIS SUMMARY FOR CASH GRAIN FARMS

## 1996 Telfarm/MicroTEI Data

by

Ralph E. Hepp and Sherrill B. Nott<sup>2</sup>  
Agricultural Economics Staff Paper Number 97-27

### Introduction

The body of this report is organized as follows:

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    5. Profitability and liquidity Analysis
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### Data Source

Farm types were assigned using the 1992 Census of Agriculture's Standard Industrial Classification (SIC) definitions. Basically, any farm with 50 percent or more of value of farm sales from one item becomes a farm of that type. Cash grain farms have 50 percent or more of value of combined sales from wheat, corn, soybeans, barley, dry beans, rye, sunflowers and other small grains.

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<sup>2</sup>Co-workers in the Telfarm/MicroTel project were: J. Jones, D. Stein, T. Purdy, S. Harsh, M. Kelsey, R. Betz, G. Schwab, A. Shapley, W. Schauer, L. Martin, and G. Kole with the assistance of MSU Extension Agents in Michigan.

This report is a summary of the financial and production records kept by crop farmers enrolled in the Telfarm/MicroTel record program through Michigan State University Extension. Farm records were included if a Finan<sup>3</sup> summary was completed on 1996 data including beginning and ending balance sheets, income and expenses plus crop acres and yields. The summary was included if cash discrepancy was less than 10 % of gross cash inflow, and if the debt discrepancy was less than \$1,000. A few farms were included which were not enrolled in Telfarm, but met the above criteria and completed a business analysis through Finan.

This report has three purposes: 1) to provide statistical information about the financial results on grain farms during 1996; 2) to provide production costs for comparative analysis and forward planning; and 3) to provide information on the trends in resource use, income and costs during the last few years. Following trends will be a problem this year, as Telfarm/MicroTel and the Department of Agricultural Economics adopted Finansum<sup>4</sup> a different software package for doing annual analysis. Some bridging inferences can be drawn from 1995 information. For 1995, the old method of analysis calculation was reported in Agricultural Economics Report Number 590, Business Analysis Summary for Cash Crop Farms, 1995 Telfarm Data. The new method was reported in Staff Paper No. 96-86, Michigan Farm Database, New Directions for 1995; it contains averages of 48 cash grain farms calculated with Finansum.

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

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<sup>3</sup>Finan = financial analysis, one of the parts of Finpack, a financial software package from the Center for Farm Financial Management at the University of Minnesota.

<sup>4</sup>Finansum provides summarization calculations for data files generated by Finan. It also comes from the Center for Farm Financial Management.

Table 1. **CROP PRODUCTION AND MARKETING SUMMARY, 1996**  
**Michigan Grain Farms, All Sizes, 19 Counties**  
(Farms sorted by Net Farm Income)

	Average Of All Farms	Average Of Low 25%	Average Of High 25%
	-----	-----	-----
Number of Farms	37	9	9
 ACREAGE SUMMARY			
Total Crop Acres	929	1371	1077
Crop Acres Owned	351	405	551
Crop Acres Cash Rented	572	966	512
Crop Acres Share Rented	5	-	14
Total Pasture Acres	0	1	-
 AVERAGE PRICE RECEIVED (Cash Sales Only)			
Corn per bu.	2.95	2.75	2.93
Soybeans per bu.	6.64	6.66	6.47
Wheat, Winter per bu.	4.36	-	-
Straw per ton	3.06	-	-
 AVERAGE YIELD PER ACRE			
Corn (bu.)	94.66	83.42	109.53
Soybeans (bu.)	32.27	27.03	35.20
Wheat, Winter (bu.)	42.69	40.11	-
Corn, Seed (bu.)	216.87	-	-
Hay, Alfalfa (ton)	3.07	-	-
Cucumbers (cwt.)	97.99	-	-
Beans, Navy (cwt.)	17.32	-	-
Corn Silage (ton)	11.76	-	-
Sugar Beets (ton)	9.87	-	-
Beans, Green (cwt.)	57.45	-	-

Table 2. FARM INCOME STATEMENT, 1996  
**Michigan Grain Farms, All Sizes, 19 Counties**  
(Farms sorted by Net Farm Income)

	Average Of All Farms	Average Of Low 25%	Average Of High 25%
Number of Farms	37	9	9
<b>CASH FARM INCOME</b>			
Asparagus	380	1562	-
Black Turtle Beans	611	-	2513
Green Beans	1401	2681	3077
Navy Beans	6596	16230	10885
Bedding Plants	947	-	-
Cordwood	50	-	-
Corn	115836	134576	145354
Corn Silage	124	-	-
Seed Corn	20353	-	83671
Cucumbers	8223	-	33805
Alfalfa Hay	427	303	205
Mixed Hay	902	2631	58
Mixed Alfalfa/Grass Hay	60	-	-
Alfalfa Haylage	89	-	-
Maple Syrup	16	-	-
Oats	124	1	-
Soybeans	83335	111749	85178
Speltz	287	1181	-
Straw	531	462	140
Sugar Beets	2818	-	11586
Winter Wheat	15415	27505	5181
Dry Beans	281	-	1156
Other crops	756	-	-
Beef Bulls	21	-	-
Beef Calves	473	708	-
Custom Fed Beef	2794	10432	-
Finish Beef Calves	982	621	-
Finish Yrlg Steers	2557	-	10514
Eggs	558	-	2296
Milk	7488	30782	-
Dairy Heifers (for sale)	291	1195	-
Dairy Steers	2136	4277	-
Raised Hogs	8288	-	10177
Cull breeding livestock	1121	2177	398
Misc. livestock income	26	-	80
Deficiency payments	2684	1814	5215
Other government payments	15508	22282	15110
Custom work income	17209	50932	9697
Patronage dividends, cash	250	39	570
Insurance income	1598	3855	1554
Cash from hedging accts	-1346	-	-3324
Other farm income	7936	7379	20199
<b>Gross Cash Farm Income</b>	<b>330138</b>	<b>435375</b>	<b>455293</b>

Table 2. **FARM INCOME STATEMENT, 1996 (Continued)**  
**Michigan Grain Farms, All Sizes, 19 Counties**  
(Farms sorted by Net Farm Income)

	Average Of All Farms	Average Of Low 25%	Average Of High 25%
Number of Farms	37	9	9
<b>CASH FARM EXPENSE</b>			
Seed	18003	24268	18503
Fertilizer	38192	49593	56327
Crop chemicals	31674	61871	25764
Crop insurance	1839	4239	2848
Drying fuel	1729	1498	2232
Irrigation energy	885	-	3638
Crop marketing	345	119	190
Crop miscellaneous	5016	1813	15619
Feeder livestock purchase	2460	8122	384
Purchased feed	4396	6081	3054
Breeding fees	22	83	5
Veterinary	604	1539	223
Livestock supplies	1068	2964	1293
Livestock leases	3	11	-
Livestock marketing	549	2060	63
Interest	17145	16917	29383
Fuel & oil	8407	8372	11848
Repairs	20487	24965	31280
Custom hire	10065	7128	22105
Hired labor	23275	56603	19222
Land rent	43561	58834	63788
Machinery & bldg leases	8233	11770	13013
Real estate taxes	5592	5270	9019
Personal property taxes	165	-	183
Farm insurance	6397	9625	6259
Utilities	5191	6375	7335
Dues & professional fees	1363	1008	1768
Hedging account deposits	110	450	-
Miscellaneous	10095	19490	9790
Total cash expense	266871	391068	355138
Net cash farm income	63267	44307	100155
<b>INVENTORY CHANGES</b>			
Crops and feed	-25027	-97885	47347
Market livestock	-1082	-1360	-1311
Accounts receivable	2495	4657	7549
Prepaid expenses and supplies	-823	-7435	-2573
Accounts payable	2842	2456	5539
Total inventory change	-21595	-99567	56550
Net operating profit	41672	-55261	156705
<b>DEPRECIATION AND OTHER CAPITAL ADJUSTMENTS</b>			
Breeding livestock	-2435	-6447	-846
Machinery and equipment	-25375	-33451	-32681
Buildings and improvements	-4493	-7282	-3933
Other farm capital	-2076	57	1200
Total depr. and other capital adj	-34380	-47123	-36261
Net farm income	7292	-102384	120444



Table 3. INVENTORY CHANGES, 1996  
**Michigan Grain Farms, All Sizes, 19 Counties**  
(Farms sorted by Net Farm Income)

	Average Of All Farms	Average Of Low 25%	Average Of High 25%
	37	9	9
Number of Farms	37	9	9
Net cash farm income	63267	44307	100155
CROPS AND FEED			
Ending inventory	136147	119864	219641
Beginning inventory	161174	217749	172294
Inventory change	-25027	-97885	47347
MARKET LIVESTOCK			
Ending inventory	10771	16480	14853
Beginning inventory	11852	17840	16165
Inventory change	-1082	-1360	-1311
ACCTS RECEIVABLE & OTHER CURRENT ASSETS			
Ending inventory	16875	38051	16266
Beginning inventory	14380	33395	8717
Inventory change	2495	4657	7549
PREPAID EXPENSES AND SUPPLIES			
Ending inventory	23347	32259	9555
Beginning inventory	24171	39694	12128
Inventory change	-823	-7435	-2573
ACCOUNTS PAYABLE			
Beginning inventory	21252	32871	18889
Ending inventory	18049	28930	13349
Inventory change	2842	2456	5539
Total inventory change	-21595	-99567	56550
Net operating profit	41672	-55261	156705

Table 4. DEPRECIATION AND OTHER CAPITAL ADJUSTMENTS, 1996  
**Michigan Grain Farms, All Sizes, 19 Counties**  
(Farms sorted by Net Farm Income)

	Average Of All Farms	Average Of Low 25%	Average Of High 25%
	37	9	9
Number of Farms	37	9	9
Net operating profit	41672	-55261	156705
<b>BREEDING LIVESTOCK</b>			
Ending inventory	6116	18592	167
Capital sales	290	1061	80
Beginning inventory	8124	24372	708
Capital purchases	717	1728	385
Depreciation, capital adj.	-2435	-6447	-846
<b>MACHINERY AND EQUIPMENT</b>			
Ending inventory	71021	109642	82195
Capital sales	1741	1713	3519
Beginning inventory	68669	107968	93857
Capital purchases	29469	36839	24539
Depreciation, capital adj.	-25375	-33451	-32681
<b>BUILDINGS AND IMPROVEMENTS</b>			
Ending inventory	24736	40172	29563
Capital sales	-	-	-
Beginning inventory	25704	42795	28611
Capital purchases	3525	4660	4885
Depreciation, capital adj.	-4493	-7282	-3933
<b>OTHER CAPITAL ASSETS</b>			
Ending inventory	36466	90823	16431
Capital sales	16094	50961	4946
Beginning inventory	32939	70177	18594
Capital purchases	21697	71550	1582
Depreciation, capital adj.	-2076	57	1200
Total depreciation, capital adj.	-34380	-47123	-36261
Net farm income	7292	-102384	120444

Table 5. **PROFITABILITY AND LIQUIDITY ANALYSIS, 1996**  
**Michigan Grain Farms, All Sizes, 19 Counties**  
 (Farms sorted by Net Farm Income)

	Avg. Of All Farms	Avg. Of Low 25 %	Avg. Of High 25 %	Avg. Of All Farms	Avg. Of Low 25 %	Avg. Of High 25 %
Number of Farms	37	9	9	37	9	9
<b>PROFITABILITY</b>						
	----- Cost -----			----- Market -----		
Net farm income	7292	-102384	120444	44659	-69119	180874
Labor and management earnings	-10422	-126118	100502	1976	-120445	132910
Rate of return on assets	-0.3 %	-15.8 %	17.2 %	3.6 %	-6.9 %	14.8 %
Rate of return on equity	-6.8 %	-34.5 %	29.8 %	2.5 %	-12.1 %	18.5 %
Operating profit margin	-0.5 %	-36.4 %	23.3 %	12.0 %	-26.0 %	35.3 %
Asset turnover rate	53.5 %	43.4 %	73.7 %	30.2 %	26.7 %	42.1 %
Interest on farm net worth	17713	23734	19942	42683	51326	47964
Farm interest expense	17881	20288	30153	17881	20288	30153
Value of operator lbr and mgmt.	26747	34282	32993	26747	34282	32993
Return on farm assets	-1574	-116378	117604	35793	-83114	178034
Average farm assets	555599	738230	684496	983347	1198093	1199181
Return on farm equity	-19455	-136666	87451	17912	-103402	147880
Average farm equity	285791	395562	293586	711381	855425	799399
Value of farm production	297233	320136	504593	297233	320136	504593
		Average Of All Farms	Average Of Low 25 %	Average Of High 25 %		
Number of Farms		37	9	9		
<b>LIQUIDITY (Cash)</b>						
Net cash farm income		63267	44307	100155		
Net nonfarm income		16751	31069	15733		
Family living and taxes		40576	35511	58853		
Real estate principal payments		5237	6031	7618		
Cash available for interm. debt		34205	33834	49417		
Average intermediate debt		88554	125123	119405		
Years to turnover interm. debt		2.6	3.7	2.4		
Expense as a % of income		81 %	90 %	78 %		
Interest as a % of income		5 %	4 %	6 %		
<b>LIQUIDITY (Accrual)</b>						
Total accrual farm income		306524	340786	508877		
Total accrual farm expense		264853	396047	352173		
Net accrual operating income		41672	-55261	156705		
Net nonfarm income		16751	31069	15733		
Family living and taxes		40576	35511	58853		
Real estate principal payments		5237	6031	7618		
Available for intermediate debt		12610	-65734	105967		
Average intermediate debt		88554	125123	119405		
Years to turnover interm. debt		7.0	**	1.1		
Expense as a % of income		86 %	116 %	69 %		
Interest as a % of income		6 %	6 %	6 %		

\*\* Income insufficient to meet debt servicing requirements

Table 6. **BALANCE SHEET AT COST VALUES, 1996**  
**Michigan Grain Farms, All Sizes, 19 Counties**  
**(Farms sorted by Net Farm Income)**

Number of Farms	Average Of All Farms		Average Of Low 25 %		Average Of High 25 %	
	Beginning	37 Ending	Beginning	9 Ending	Beginning	9 Ending
<b>ASSETS</b>						
<b>Current Farm Assets</b>						
Cash and checking balance	14344	25886	30499	40015	10728	16403
Prepaid expenses & supplies	24171	23347	39694	32259	12128	9555
Growing crops	10057	9651	25953	24606	2852	3086
Accounts receivable	3635	2838	6859	6778	5866	4147
Hedging accounts	-	-	-	-	-	-
Crops held for sale or feed	160219	135144	217749	119864	168371	215517
Crops under government loan	954	1003	-	-	3923	4123
Market livestock held for sale	11852	10771	17840	16480	16165	14853
Other current assets	688	4385	583	6667	-	9034
Total current farm assets	225921	213025	339177	246670	220032	276718
<b>Intermediate Farm Assets</b>						
Breeding livestock	8124	6116	24372	18592	708	167
Machinery and equipment	68669	71021	107968	109642	93857	82195
Other intermediate assets	25149	28745	50823	71590	13894	11892
Total intermediate farm assets	101941	105882	183163	199823	108460	94254
<b>Long-Term Farm Assets</b>						
Farm land	189479	208999	190287	195787	275435	326679
Buildings and improvements	25704	24736	42795	40172	28611	29563
Other long-term assets	7790	7721	19354	19233	4699	4538
Total long-term farm assets	222973	241455	252435	255192	308746	360781
Total Farm Assets	550835	560363	774776	701685	637238	731753
Total Nonfarm Assets	64300	83149	87976	121422	75980	99682
Total Assets	615135	643512	862752	823107	713218	831435
<b>LIABILITIES</b>						
<b>Current Farm Liabilities</b>						
Accrued interest	5761	6497	5578	8949	7944	8714
Accounts payable	15491	11552	27293	19981	10945	4635
Current notes	62827	61190	96161	102843	74324	53518
Government crop loans	-	-	-	-	-	-
Principal due on term debt	18945	26206	30296	50118	23075	30233
Total current farm liabilities	103399	105820	159328	181890	117831	98643
<b>Intermediate Farm Liabilities</b>						
Intermediate Farm Liabilities	64861	78298	88895	95933	94546	107900
<b>Long-term Farm Liabilities</b>						
Long-term Farm Liabilities	82521	104718	76421	82870	153955	208945
Total Farm Liabilities	250781	288835	324643	360693	366332	415489
Total Nonfarm Liabilities	10174	12187	18412	18627	1	1
Total Liabilities	260955	301022	343056	379320	366333	415489
Net Worth (farm and nonfarm)	354181	342489	519696	443787	346886	415946
Net Worth Change		-11692		-75908		69060
<b>RATIO ANALYSIS</b>						
Current Farm Liabilities / Assets	46 %	50 %	47 %	74 %	54 %	36 %
Curr. & Interm Farm Liab / Assets	51 %	58 %	48 %	62 %	65 %	56 %
Long Term Farm Liab. / Assets	37 %	43 %	30 %	32 %	50 %	58 %
Total Liabilities / Assets	42 %	47 %	40 %	46 %	51 %	50 %

Table 7. BALANCE SHEET AT MARKET VALUES, 1996  
**Michigan Grain Farms, All Sizes, 19 Counties**  
 (Farms sorted by Net Farm Income)

Number of Farms	Average Of All Farms		Average Of Low 25 %		Average Of High 25 %	
	Beginning	37 Ending	Beginning	9 Ending	Beginning	9 Ending
<b>ASSETS</b>						
<b>Current Farm Assets</b>						
Cash and checking balance	14344	25886	30499	40015	10728	16403
Prepaid expenses & supplies	24171	23347	39694	32259	12128	9555
Growing crops	10057	9651	25953	24606	2852	3086
Accounts receivable	3635	2838	6859	6778	5866	4147
Hedging accounts	-	-	-	-	-	-
Crops held for sale or feed	160219	135144	217749	119864	168371	215517
Crops under government loan	954	1003	-	-	3923	4123
Market livestock held for sale	11852	10771	17840	16480	16165	14853
Other current assets	688	4385	583	6667	-	9034
Total current farm assets	225921	213025	339177	246670	220032	276718
<b>Intermediate Farm Assets</b>						
Breeding livestock	8124	6116	24372	18592	708	167
Machinery and equipment	224872	236969	287509	304404	267665	263467
Other intermediate assets	27452	33576	60294	81561	13894	12226
Total intermediate farm assets	260449	276661	372175	404557	282268	275859
<b>Long-Term Farm Assets</b>						
Farm land	418863	461656	412508	428608	581949	690299
Buildings and improvements	43582	48752	74792	79113	23889	38111
Other long-term assets	8928	8859	19354	19233	4699	4538
Total long-term farm assets	471372	519266	506654	526954	610537	732948
Total Farm Assets	957742	1008952	1218006	1178180	1112837	1285525
Total Nonfarm Assets	92751	125582	81643	126814	164829	220810
Total Assets	1050493	1134534	1299649	1304994	1277666	1506336
<b>LIABILITIES</b>						
<b>Current Farm Liabilities</b>						
Accrued interest	5761	6497	5578	8949	7944	8714
Accounts payable	15491	11552	27293	19981	10945	4635
Current notes	62827	61190	96161	102843	74324	53518
Government crop loans	-	-	-	-	-	-
Principal due on term debt	18945	26206	30296	50118	23075	30233
Total current farm liabilities	103399	105820	159328	181890	117831	98643
<b>Intermediate Farm Liabilities</b>						
Intermediate Farm Liabilities	64861	78298	88895	95933	94546	107900
<b>Long-term Farm Liabilities</b>						
Long-term Farm Liabilities	82521	104718	76421	82870	153955	208945
Total Farm Liabilities	250781	288835	324643	360693	366332	415489
Total Nonfarm Liabilities	10174	12187	18412	18627	1	1
Total Deferred Liabilities	-	4316	-	-	-	17744
Total Liabilities	260955	305338	343056	379320	366333	433233
Net Worth (farm and nonfarm)	789538	829196	956593	925674	911333	1073103
Net Worth Change		39657		-30919		161769
<b>RATIO ANALYSIS</b>						
Current Farm Liabilities / Assets	46 %	50 %	47 %	74 %	54 %	36 %
Curr. & Interm Farm Liab. / Assets	35 %	38 %	35 %	43 %	42 %	37 %
Long Term Farm Liabilities / Assets	18 %	20 %	15 %	16 %	25 %	29 %
Total Liabilities / Assets	25 %	27 %	26 %	29 %	29 %	29 %

Table 10. **STATEMENT OF CASH FLOWS, 1996**  
**Michigan Grain Farms, All Sizes, 19 Counties**  
(Farms sorted by Net Farm Income)

		Average Of All Farms	Average Of Low 25%	Average Of High 25%
Number of Farms		37	9	9
(a) Beginning cash balance (farm & nonfarm)		16229	30555	18418
CASH FROM OPERATING ACTIVITIES				
		330138	435375	455293
	Gross cash farm income			
	Net nonfarm income (+)	16751	31069	15733
	Total cash farm expense (-)	266871	391068	355138
	Apparent family living expense (-)	38232	35343	56622
	Income and social security tax (-)	2344	168	2231
(b) Cash from operations (=)		39442	39865	57035
CASH FROM INVESTING ACTIVITIES				
		290	1061	80
	Sale of breeding livestock			
	Sale of machinery & equipment (+)	1741	1713	3519
	Sale of farm land (+)	-	-	-
	Sale of farm buildings (+)	-	-	-
	Sale of other farm assets (+)	16094	50961	4946
	Sale of nonfarm assets (+)	170	-	681
	Purchase of breeding livestock (-)	717	1728	385
	Purchase of machinery & equip. (-)	29469	36839	24539
	Purchase of farm land (-)	28448	4722	73728
	Purchase of farm buildings (-)	3525	4660	4885
	Purchase of other farm assets (-)	21697	71550	1582
	Purchase of nonfarm assets (-)	7381	778	1142
(c) Cash from investing activities (=)		-72942	-66540	-97035
CASH FROM FINANCING ACTIVITIES				
		171111	178299	272220
	Money borrowed			
	Cash gifts and inheritances (+)	25660	1673	57405
	Principal payments (-)	129520	138312	217523
	Dividends paid (-)	-	-	-
	Gifts given (-)	21418	5523	63119
(d) Cash from financing activities (=)		45833	36136	48984
(e) Net change in cash balance (b+c+d)		12332	9460	8983
Ending cash balance (farm & nonfarm)		28561	40015	27401

Table 9. **FINANCIAL GUIDELINES MEASURES, 1996**  
**Michigan Grain Farms, All Sizes, 19 Counties**  
 (Farms sorted by Net Farm Income)

	Average For All Farms		Average For Low 25 %		Average For High 25 %	
	37		9		9	
Number of Farms	37		9		9	
<b>LIQUIDITY</b>	Beginning	Ending	Beginning	Ending	Beginning	Ending
Current ratio	2.18	2.01	2.13	1.36	1.87	2.81
Working capital	122522	107205	179849	64779	102202	178075
<b>SOLVENCY (Market)</b>	Beginning	Ending	Beginning	Ending	Beginning	Ending
Farm debt to asset ratio	26 %	29 %	27 %	31 %	33 %	32 %
Farm equity to asset ratio	74 %	71 %	73 %	69 %	67 %	68 %
Farm debt to equity ratio	35 %	40 %	36 %	44 %	49 %	48 %
<b>PROFITABILITY</b>	Cost	Market	Cost	Market	Cost	Market
Rate of return on farm assets	-0.3 %	3.6 %	-15.8 %	-6.9 %	17.2 %	14.8 %
Rate of return on farm equity	-6.8 %	2.5 %	-34.5 %	-12.1 %	29.8 %	18.5 %
Operating profit margin	-0.5 %	12.0 %	-36.4 %	-26.0 %	23.3 %	35.3 %
Net farm income	7292	44659	-102384	-69119	120444	180874
<b>REPAYMENT CAPACITY</b>	Cash	Accrual	Cash	Accrual	Cash	Accrual
Term debt coverage ratio	190 %	94 %	132 %	-196 %	213 %	402 %
Capital replacement margin	20289	-1306	9568	-89999	33960	90510
<b>EFFICIENCY</b>						
Asset turnover rate (market)	30.2 %		26.7 %		42.1 %	
Operating expense ratio	80.6 %		110.3 %		63.3 %	
Depreciation expense ratio	11.2 %		13.8 %		7.1 %	
Interest expense ratio	5.8 %		6.0 %		5.9 %	
Net farm income ratio	2.4 %		-30.0 %		23.7 %	
<b>LABOR ANALYSIS</b>						
	Average For All Farms		Average For Low 25 %		Average For High 25 %	
	35		9		8	
Number of Farms	35		9		8	
Total unpaid labor hours	2904		4259		3913	
Total hired labor hours	2386		4624		2711	
Total labor hours per farm	5290		8883		6624	
Value of farm production / hour	58.36		36.04		82.66	
Net farm income / unpaid hour	1.89		-24.04		32.56	

Table A1. **CROP PRODUCTION AND MARKETING SUMMARY, 1996**  
**1 to 400 Acre Grain Farms, 10 Michigan Counties**  
(Average of all farms reporting)

	Average Of All Farms
	<hr/>
Number of Farms	10
ACREAGE SUMMARY	
Total Acres Owned	213
Total Crop Acres	213
Crop Acres Owned	172
Crop Acres Cash Rented	40
Crop Acres Share Rented	-
Total Pasture Acres	0
AVERAGE PRICE RECEIVED (Cash Sales Only)	
Corn per bu.	3.52
Soybeans per bu.	6.61
Wheat, Winter per bu.	4.42
AVERAGE YIELD PER ACRE	
Corn (bu.)	82.13
Soybeans (bu.)	27.92
Wheat, Winter (bu.)	45.17
Hay, Alfalfa (ton)	3.02
Oats (bu.)	49.38
CRP (\$)	57.33
Corn Silage (ton)	6.13



Table A2. FARM INCOME STATEMENT, 1996  
**1 to 400 Acre Grain Farms, 10 Michigan Counties**  
(Average of all farms reporting)

	Average Of All Farms
	<hr/>
Number of Farms	10
CASH FARM INCOME	
Bedding Plants	3505
Corn	28264
Corn Silage	459
Alfalfa Hay	1357
Mixed Alfalfa/Grass Hay	222
Alfalfa Haylage	328
Maple Syrup	59
Oats	460
Soybeans	27231
Straw	168
Winter Wheat	4869
Other crops	2799
Finish Beef Calves	215
Misc. livestock income	23
Deficiency payments	908
Other government payments	2374
Custom work income	4164
Patronage dividends, cash	121
Insurance income	625
Cash from hedging accts	-416
Other farm income	1718
Gross Cash Farm Income	79451

Table A2. FARM INCOME STATEMENT, 1996 (Continued)  
**1 to 400 Acre Grain Farms, 10 Michigan Counties**  
(Average of all farms reporting)

	Average Of All Farms
	<hr/>
Number of Farms	10
CASH FARM EXPENSE	
Seed	4507
Fertilizer	7156
Crop chemicals	4720
Crop insurance	60
Drying fuel	308
Crop marketing	80
Crop miscellaneous	1727
Feeder livestock purchase	352
Purchased feed	383
Veterinary	72
Interest	3633
Fuel & oil	2066
Repairs	5103
Custom hire	1893
Hired labor	491
Land rent	3814
Machinery & bldg leases	157
Real estate taxes	2573
Personal property taxes	109
Farm insurance	2829
Utilities	1849
Dues & professional fees	554
Hedging account deposits	405
Miscellaneous	3290
Total cash expense	48129
Net cash farm income	31321
INVENTORY CHANGES	
Crops and feed	-20050
Market livestock	-99
Accounts receivable	-1251
Prepaid expenses and supplies	1522
Accounts payable	41
Total inventory change	-19838
Net operating profit	11483
DEPRECIATION AND OTHER CAPITAL ADJUSTMENTS	
Breeding livestock	-500
Machinery and equipment	-5885
Buildings and improvements	-2627
Other farm capital	-138
Total depr. and other capital adj	-9150
Net farm income	2333

Table A3. INVENTORY CHANGES, 1996  
**1 to 400 Acre Grain Farms, 10 Michigan Counties**  
(Average of all farms reporting)

	Average Of All Farms
	<hr/>
Number of Farms	10
Net cash farm income	31321
CROPS AND FEED	
Ending inventory	29180
Beginning inventory	49230
Inventory change	-20050
MARKET LIVESTOCK	
Ending inventory	1561
Beginning inventory	1661
Inventory change	-99
ACCTS RECEIVABLE & OTHER CURRENT ASSETS	
Ending inventory	4912
Beginning inventory	6163
Inventory change	-1251
PREPAID EXPENSES AND SUPPLIES	
Ending inventory	6789
Beginning inventory	5267
Inventory change	1522
ACCOUNTS PAYABLE	
Beginning inventory	1005
Ending inventory	964
Inventory change	41
Total inventory change	-19838
Net operating profit	11483

Table A4. **DEPRECIATION AND OTHER CAPITAL ADJUSTMENTS, 1996**  
**1 to 400 Acre Grain Farms, 10 Michigan Counties**  
(Average of all farms reporting)

	Average Of All Farms
	<hr/>
Number of Farms	10
Net operating profit	11483
BREEDING LIVESTOCK	
Ending inventory	500
Capital sales	-
Beginning inventory	1000
Capital purchases	-
Depreciation, capital adj.	-500
MACHINERY AND EQUIPMENT	
Ending inventory	10944
Capital sales	152
Beginning inventory	9193
Capital purchases	7789
Depreciation, capital adj.	-5885
BUILDINGS AND IMPROVEMENTS	
Ending inventory	9698
Capital sales	-
Beginning inventory	11297
Capital purchases	1028
Depreciation, capital adj.	-2627
OTHER CAPITAL ASSETS	
Ending inventory	4755
Capital sales	3592
Beginning inventory	4764
Capital purchases	3720
Depreciation, capital adj.	-138
Total depreciation, capital adj.	-9150
Net farm income	2333

Table A5. **PROFITABILITY AND LIQUIDITY ANALYSIS, 1996**  
**1 to 400 Acre Grain Farms, 10 Michigan Counties**  
(Average of all farms reporting)

	Average Of All Farms	Average Of All Farms
	-----	-----
Number of Farms	10	10
PROFITABILITY	--- Cost ---	-- Market --
Net farm income	2333	8975
Labor and management earnings	-4997	-11188
Rate of return on assets	-2.0 %	0.9 %
Rate of return on equity	-5.3 %	0.1 %
Operating profit margin	-5.7 %	6.0 %
Asset turnover rate	34.5 %	15.0 %
Interest on farm net worth	7330	20163
Farm interest expense	3227	3227
Value of operator lbr and mgmt.	8779	8779
Return on farm assets	-3218	3423
Average farm assets	164560	378442
Return on farm equity	-6445	196
Average farm equity	122165	336047
Value of farm production	56815	56815
	Average Of All Farms	
	-----	
Number of Farms	10	
LIQUIDITY (Cash)		
Net cash farm income	31321	
Net nonfarm income	14313	
Family living and taxes	28946	
Real estate principal payments	1878	
Cash available for interm. debt	14810	
Average intermediate debt	2111	
Years to turnover interm. debt	0.1	
Expense as a % of income	61 %	
Interest as a % of income	5 %	
LIQUIDITY (Accrual)		
Total accrual farm income	58050	
Total accrual farm expense	46566	
Net accrual operating income	11483	
Net nonfarm income	14313	
Family living and taxes	28946	
Real estate principal payments	1878	
Available for intermediate debt	-5028	
Average intermediate debt	2111	
Years to turnover interm. debt	**	
Expense as a % of income	80 %	
Interest as a % of income	6 %	

\*\* Income insufficient to meet debt servicing requirements

Table A6. BALANCE SHEET AT COST VALUES, 1996  
**1 to 400 Acre Grain Farms, 10 Michigan Counties**  
(Average of all farms reporting)

Number of Farms	Average For All Farms	
	Beginning	Ending
<b>ASSETS</b>		
Current Farm Assets		
Cash and checking balance	23099	25054
Prepaid expenses & supplies	5267	6789
Growing crops	1727	1462
Accounts receivable	4436	3450
Hedging accounts	-	-
Crops held for sale or feed	49230	29180
Crops under government loan	-	-
Market livestock held for sale	1661	1561
Other current assets	-	-
Total current farm assets	85420	67496
Intermediate Farm Assets		
Breeding livestock	1000	500
Machinery and equipment	9193	10944
Other intermediate assets	474	464
Total intermediate farm assets	10667	11909
Long-Term Farm Assets		
Farm land	58804	65250
Buildings and improvements	11297	9698
Other long-term assets	4290	4290
Total long-term farm assets	74391	79238
Total Farm Assets	170478	158643
Total Nonfarm Assets	73934	77928
Total Assets	244412	236570
<b>LIABILITIES</b>		
Current Farm Liabilities		
Accrued interest	903	497
Accounts payable	102	467
Current notes	6368	6515
Government crop loans	-	-
Principal due on term debt	2379	1180
Total current farm liabilities	9752	8659
Intermediate Farm Liabilities	1311	1384
Long-term Farm Liabilities	27416	36268
Total Farm Liabilities	38479	46311
Total Nonfarm Liabilities	19072	18467
Total Liabilities	57550	64778
Net Worth (farm and nonfarm)	186862	171792
Net Worth Change		-15070
<b>RATIO ANALYSIS</b>		
Current Farm Liabilities / Assets	11 %	13 %
Curr. & Interm Farm Liab / Assets	12 %	13 %
Long Term Farm Liab. / Assets	37 %	46 %
Total Liabilities / Assets	24 %	27 %

Table A7. BALANCE SHEET AT MARKET VALUES, 1996  
**1 to 400 Acre Grain Farms, 10 Michigan Counties**  
(Average of all farms reporting)

Number of Farms	Average For All Farms	
	Beginning	Ending
<b>ASSETS</b>		
Current Farm Assets		
Cash and checking balance	23099	25054
Prepaid expenses & supplies	5267	6789
Growing crops	1727	1462
Accounts receivable	4436	3450
Hedging accounts	-	-
Crops held for sale or feed	49230	29180
Crops under government loan	-	-
Market livestock held for sale	1661	1561
Other current assets	-	-
Total current farm assets	85420	67496
Intermediate Farm Assets		
Breeding livestock	1000	500
Machinery and equipment	47827	52123
Other intermediate assets	1343	1334
Total intermediate farm assets	50170	53956
Long-Term Farm Assets		
Farm land	215730	225730
Buildings and improvements	21219	20163
Other long-term assets	8500	8500
Total long-term farm assets	245449	254393
Total Farm Assets	381039	375845
Total Nonfarm Assets	82026	85844
Total Assets	463065	461689
<b>LIABILITIES</b>		
Current Farm Liabilities		
Accrued interest	903	497
Accounts payable	102	467
Current notes	6368	6515
Government crop loans	-	-
Principal due on term debt	2379	1180
Total current farm liabilities	9752	8659
Intermediate Farm Liabilities	1311	1384
Long-term Farm Liabilities	27416	36268
Total Farm Liabilities	38479	46311
Total Nonfarm Liabilities	19072	18467
Total Deferred Liabilities	-	-
Total Liabilities	57550	64778
Net Worth (farm and nonfarm)	405514	396911
Net Worth Change		-8604
<b>RATIO ANALYSIS</b>		
Current Farm Liabilities / Assets	11 %	13 %
Curr. & Interm Farm Liab. / Assets	8 %	8 %
Long Term Farm Liabilities / Assets	11 %	14 %
Total Liabilities / Assets	12 %	14 %

Table A8. STATEMENT OF CASH FLOWS, 1996  
**1 to 400 Acre Grain Farms, 10 Michigan Counties**  
(Average of all farms reporting)

	Average Of All Farms
	<hr/>
Number of Farms	10
(a) Beginning cash balance (farm & nonfarm)	23101
CASH FROM OPERATING ACTIVITIES	
Gross cash farm income	79451
Net nonfarm income	(+) 14313
Total cash farm expense	(-) 48129
Apparent family living expense	(-) 27727
Income and social security tax	(-) 1220
(b) Cash from operations	(=) 16688
CASH FROM INVESTING ACTIVITIES	
Sale of breeding livestock	-
Sale of machinery & equipment	(+) 152
Sale of farm land	(+) -
Sale of farm buildings	(+) -
Sale of other farm assets	(+) 3592
Sale of nonfarm assets	(+) 17
Purchase of breeding livestock	(-) -
Purchase of machinery & equip.	(-) 7789
Purchase of farm land	(-) 9000
Purchase of farm buildings	(-) 1028
Purchase of other farm assets	(-) 3720
Purchase of nonfarm assets	(-) 4256
(c) Cash from investing activities	(=) -22032
CASH FROM FINANCING ACTIVITIES	
Money borrowed	40049
Cash gifts and inheritances	(+) 3152
Principal payments	(-) 32904
Dividends paid	(-) -
Gifts given	(-) 3000
(d) Cash from financing activities	(=) 7296
(e) Net change in cash balance	(b+c+d) 1952
Ending cash balance (farm & nonfarm)	25054



Table A9. FINANCIAL GUIDELINES MEASURES, 1996  
**1 to 400 Acre Grain Farms, 10 Michigan Counties**  
(Average of all farms reporting)

	Average For All Farms	
	-----	
Number of Farms	10	
<b>LIQUIDITY</b>	<b>Beginning</b>	<b>Ending</b>
Current ratio	8.76	7.79
Working capital	75668	58836
<b>SOLVENCY (Market)</b>	<b>Beginning</b>	<b>Ending</b>
Farm debt to asset ratio	10 %	12 %
Farm equity to asset ratio	90 %	88 %
Farm debt to equity ratio	11 %	14 %
<b>PROFITABILITY</b>	<b>Cost</b>	<b>Market</b>
Rate of return on farm assets	-2.0 %	0.9 %
Rate of return on farm equity	-5.3 %	0.1 %
Operating profit margin	-5.7 %	6.0 %
Net farm income	2333	8975
<b>REPAYMENT CAPACITY</b>	<b>Cash</b>	<b>Accrual</b>
Term debt coverage ratio	407 %	-43 %
Capital replacement margin	13539	-6299
<b>EFFICIENCY</b>		
Asset turnover rate (market)	15.0 %	
Operating expense ratio	74.7 %	
Depreciation expense ratio	15.8 %	
Interest expense ratio	5.6 %	
Net farm income ratio	4.0 %	

LABOR ANALYSIS

	Average For All Farms
	-----
Number of Farms	10
Total unpaid labor hours	1437
Total hired labor hours	119
Total labor hours per farm	1557
Value of farm production / hour	36.49
Net farm income / unpaid hour	1.62

Table B1. **CROP PRODUCTION AND MARKETING SUMMARY, 1996**  
**400 to 1,000 Acre Grain Farms, 10 Michigan Counties**  
(Farms sorted by Net Farm Income)

	Average Of All Farms	Average Of Low 43%	Average Of High 43%
Number of Farms	14	6	6
ACREAGE SUMMARY			
Total Acres Owned	440	457	504
Total Crop Acres	647	678	607
Crop Acres Owned	336	406	345
Crop Acres Cash Rented	311	272	262
Crop Acres Share Rented	-	-	-
Total Pasture Acres	0	1	-
AVERAGE PRICE RECEIVED (Cash Sales Only)			
Corn per bu.	3.04	-	-
Soybeans per bu.	6.94	-	-
Wheat, Winter per bu.	4.61	-	-
AVERAGE YIELD PER ACRE			
Corn (bu.)	97.41	-	-
Soybeans (bu.)	36.11	-	-
Wheat, Winter (bu.)	43.69	-	-
Hay, Alfalfa (ton)	3.21	-	-
Beans, Green (cwt.)	49.09	-	-
Sugar Beets (ton)	13.97	-	-
Hay, Grass (ton)	3.00	-	-
Asparagus (cwt.)	179.26	-	-
Corn Silage (ton)	5.77	-	-
Beans, Navy (cwt.)	7.94	-	-

Table B2. FARM INCOME STATEMENT, 1996  
**400 to 1,000 Acre Grain Farms, 10 Michigan Counties**  
 (Farms sorted by Net Farm Income)

	Average Of All Farms	Average Of Low 43%	Average Of High 43%
Number of Farms	14	6	6
CASH FARM INCOME			
Asparagus	1004	2343	-
Green Beans	1724	4022	-
Navy Beans	1448	-	3379
Cordwood	133	-	-
Corn	85627	91041	56621
Alfalfa Hay	28	-	-
Mixed Hay	2348	3947	1531
Soybeans	63845	56103	63756
Straw	642	669	804
Sugar Beets	6208	-	14485
Winter Wheat	12677	19573	9772
Beef Bulls	56	-	-
Beef Calves	1250	1062	1855
Custom Fed Beef	7385	15648	-
Finish Beef Calves	399	931	-
Dairy Heifers (for sale)	768	1792	-
Dairy Steers	1366	3187	-
Raised Hogs	6542	-	15265
Cull breeding livestock	1041	947	1482
Deficiency payments	2247	2495	2748
Other government payments	12139	9799	14898
Custom work income	3219	3701	374
Patronage dividends, cash	211	60	385
Insurance income	1440	1311	1604
Cash from hedging accts	-927	-2333	-
Other farm income	5074	8242	3331
Gross Cash Farm Income	217894	224540	192290

Table B2. **FARM INCOME STATEMENT, 1996 (Continued)**  
**400 to 1,000 Acre Grain Farms, 10 Michigan Counties**  
 (Farms sorted by Net Farm Income)

	Average Of All Farms	Average Of Low 43%	Average Of High 43%
Number of Farms	14	6	6
<b>CASH FARM EXPENSE</b>			
Seed	14435	15735	12358
Fertilizer	24916	29256	17603
Crop chemicals	22163	20904	18370
Crop insurance	374	458	125
Drying fuel	985	1009	457
Crop marketing	447	198	19
Crop miscellaneous	1624	815	2917
Feeder livestock purchase	5346	11596	-
Purchased feed	1615	1690	1875
Breeding fees	54	125	-
Veterinary	191	154	292
Livestock supplies	332	557	91
Livestock leases	7	17	-
Livestock marketing	372	585	143
Interest	11051	13507	3951
Fuel & oil	6192	5662	6378
Repairs	13436	12966	11702
Custom hire	7490	5993	8782
Hired labor	6376	3944	4917
Land rent	21109	22519	18697
Machinery & bldg leases	3684	2716	1777
Real estate taxes	5449	6054	6437
Personal property taxes	242	-	-
Farm insurance	4197	3333	3749
Utilities	3846	4592	2827
Dues & professional fees	1744	1243	1931
Miscellaneous	7921	15197	2802
Total cash expense	165598	180826	128198
Net cash farm income	52296	43714	64091
<b>INVENTORY CHANGES</b>			
Crops and feed	-31358	-58983	5477
Market livestock	-3286	-2460	-5316
Accounts receivable	721	578	1840
Prepaid expenses and supplies	2750	-2459	703
Accounts payable	181	-937	634
Total inventory change	-30992	-64261	3339
Net operating profit	21304	-20547	67430
<b>DEPRECIATION AND OTHER CAPITAL ADJUSTMENTS</b>			
Breeding livestock	-1611	-1633	-1325
Machinery and equipment	-20238	-26781	-13286
Buildings and improvements	-5230	-8524	-1921
Other farm capital	-107	-124	-0
Total depr. and other capital adj	-27186	-37063	-16532
Net farm income	-5882	-57610	50897

Table B3. INVENTORY CHANGES, 1996  
**400 to 1,000 Acre Grain Farms, 10 Michigan Counties**  
(Farms sorted by Net Farm Income)

	Average Of All Farms	Average Of Low 43%	Average Of High 43%
Number of Farms	14	6	6
Net cash farm income	52296	43714	64091
CROPS AND FEED			
Ending inventory	91688	63801	100694
Beginning inventory	123046	122785	95217
Inventory change	-31358	-58983	5477
MARKET LIVESTOCK			
Ending inventory	9595	18190	2621
Beginning inventory	12881	20650	7937
Inventory change	-3286	-2460	-5316
ACCTS RECEIVABLE & OTHER CURRENT ASSETS			
Ending inventory	12903	19042	6370
Beginning inventory	12182	18464	4530
Inventory change	721	578	1840
PREPAID EXPENSES AND SUPPLIES			
Ending inventory	13848	8928	6134
Beginning inventory	11097	11387	5431
Inventory change	2750	-2459	703
ACCOUNTS PAYABLE			
Beginning inventory	7491	11208	2030
Ending inventory	6355	9917	1395
Inventory change	181	-937	634
Total inventory change	-30992	-64261	3339
Net operating profit	21304	-20547	67430

Table B4. **DEPRECIATION AND OTHER CAPITAL ADJUSTMENTS, 1996**  
**400 to 1,000 Acre Grain Farms, 10 Michigan Counties**  
(Farms sorted by Net Farm Income)

	Average Of All Farms	Average Of Low 43%	Average Of High 43%
Number of Farms	14	6	6
Net operating profit	21304	-20547	67430
BREEDING LIVESTOCK			
Ending inventory	3039	3033	4058
Capital sales	677	1500	79
Beginning inventory	5327	6167	5463
Capital purchases	-	-	-
Depreciation, capital adj.	-1611	-1633	-1325
MACHINERY AND EQUIPMENT			
Ending inventory	53380	72421	35222
Capital sales	2166	1050	4004
Beginning inventory	55317	82429	30572
Capital purchases	20467	17824	21940
Depreciation, capital adj.	-20238	-26781	-13286
BUILDINGS AND IMPROVEMENTS			
Ending inventory	32719	61421	10671
Capital sales	-	-	-
Beginning inventory	33740	62956	10728
Capital purchases	4209	6989	1864
Depreciation, capital adj.	-5230	-8524	-1921
OTHER CAPITAL ASSETS			
Ending inventory	32671	22863	37871
Capital sales	2705	453	1908
Beginning inventory	34688	23315	38063
Capital purchases	796	124	1716
Depreciation, capital adj.	-107	-124	-0
Total depreciation, capital adj.	-27186	-37063	-16532
Net farm income	-5882	-57610	50897

Table B5. **PROFITABILITY AND LIQUIDITY ANALYSIS, 1996**  
**400 to 1,000 Acre Grain Farms, 10 Michigan Counties**  
 (Farms sorted by Net Farm Income)

	Avg. Of All Farms	Avg. Of Low 43 %	Avg. Of High 43 %	Avg. Of All Farms	Avg. Of Low 43 %	Avg. Of High 43 %
Number of Farms	14	6	6	14	6	6
<b>PROFITABILITY</b>						
	----- Cost -----			----- Market -----		
Net farm income	-5882	-57610	50897	24080	-11353	69991
Labor and management earnings	-26162	-81741	30722	-19627	-57710	24868
Rate of return on assets	-3.3 %	-12.5 %	9.7 %	1.4 %	-3.0 %	7.2 %
Rate of return on equity	-8.6 %	-22.4 %	10.9 %	0.1 %	-5.7 %	7.4 %
Operating profit margin	-9.7 %	-50.4 %	21.6 %	7.4 %	-19.3 %	31.6 %
Asset turnover rate	34.4 %	24.9 %	44.9 %	19.5 %	15.4 %	22.7 %
Interest on farm net worth	20279	24130	20175	43707	46358	45123
Farm interest expense	12120	15264	4688	12120	15264	4688
Value of operator lbr and mgmt.	23184	32637	14256	23184	32637	14256
Return on farm assets	-16946	-74984	41330	13016	-28726	60424
Average farm assets	509848	598184	425626	900304	968644	841425
Return on farm equity	-29066	-90248	36642	896	-43990	55736
Average farm equity	337991	402169	336251	728447	772630	752050
Value of farm production	175399	148754	191090	175399	148754	191090
			Average Of All Farms	Average Of Low 43 %	Average Of High 43 %	
Number of Farms			14	6	6	
<b>LIQUIDITY (Cash)</b>						
Net cash farm income		52296	43714	64091		
Net nonfarm income		18726	32641	10295		
Family living and taxes		31288	23642	43299		
Real estate principal payments		6671	8280	4823		
Cash available for interm. debt		33063	44432	26264		
Average intermediate debt		57788	69906	27326		
Years to turnover interm. debt		1.7	1.6	1.0		
Expense as a % of income		76 %	81 %	67 %		
Interest as a % of income		5 %	6 %	2 %		
<b>LIQUIDITY (Accrual)</b>						
Total accrual farm income		183971	163674	194291		
Total accrual farm expense		162667	184222	126861		
Net accrual operating income		21304	-20547	67430		
Net nonfarm income		18726	32641	10295		
Family living and taxes		31288	23642	43299		
Real estate principal payments		6671	8280	4823		
Available for intermediate debt		2071	-19829	29603		
Average intermediate debt		57788	69906	27326		
Years to turnover interm. debt		27.9	**	0.9		
Expense as a % of income		88 %	113 %	65 %		
Interest as a % of income		7 %	9 %	2 %		

\*\* Income insufficient to meet debt servicing requirements

Table B6. **BALANCE SHEET AT COST VALUES, 1996**  
**400 to 1,000 Acre Grain Farms, 10 Michigan Counties**  
**(Farms sorted by Net Farm Income)**

Number of Farms	Average Of All Farms		Average Of Low 43 %		Average Of High 43 %	
	14		6		6	
	Beginning	Ending	Beginning	Ending	Beginning	Ending
<b>ASSETS</b>						
<b>Current Farm Assets</b>						
Cash and checking balance	16098	39827	43438	58802	10317	31194
Prepaid expenses & supplies	11097	13848	11387	8928	5431	6134
Growing crops	8786	9511	14216	15354	3980	5637
Accounts receivable	2056	1895	4249	3688	550	733
Hedging accounts	-	-	-	-	-	-
Crops held for sale or feed	123046	91688	122785	63801	95217	100694
Crops under government loan	-	-	-	-	-	-
Market livestock held for sale	12881	9595	20650	18190	7937	2621
Other current assets	1340	1497	-	-	-	-
Total current farm assets	175305	167861	216724	168763	123432	147013
<b>Intermediate Farm Assets</b>						
Breeding livestock	5327	3039	6167	3033	5463	4058
Machinery and equipment	55317	53380	82429	72421	30572	35222
Other intermediate assets	23506	21585	968	733	34320	34133
Total intermediate farm assets	84149	78005	89564	76188	70354	73413
<b>Long-Term Farm Assets</b>						
Farm land	210503	215146	237555	238721	203954	204204
Buildings and improvements	33740	32719	62956	61421	10728	10671
Other long-term assets	11182	11086	22347	22129	3744	3738
Total long-term farm assets	255425	258951	322857	322271	218426	218614
Total Farm Assets	514879	504817	629145	567223	412212	439040
Total Nonfarm Assets	45561	68105	29133	47896	76988	110828
Total Assets	560440	572922	658279	615119	489200	549868
<b>LIABILITIES</b>						
<b>Current Farm Liabilities</b>						
Accrued interest	335	1404	781	2537	0	738
Accounts payable	7156	4952	10428	7380	2030	658
Current notes	28304	34855	21562	17717	14249	14667
Government crop loans	-	-	-	-	-	-
Principal due on term debt	12844	21138	20920	41001	5270	4804
Total current farm liabilities	48639	62349	53690	68635	21549	20867
Intermediate Farm Liabilities	50824	44364	63342	34409	19935	31855
Long-term Farm Liabilities	66943	70595	83473	88481	43281	41264
Total Farm Liabilities	166406	177308	200505	191525	84764	93986
Total Nonfarm Liabilities	-	-	-	-	-	-
Total Liabilities	166406	177308	200505	191525	84764	93986
Net Worth (farm and nonfarm)	394034	395615	457774	423594	404436	455883
Net Worth Change		1580		-34179		51447
<b>RATIO ANALYSIS</b>						
Current Farm Liabilities / Assets	28 %	37 %	25 %	41 %	17 %	14 %
Curr. & Interm Farm Liab / Assets	38 %	43 %	38 %	42 %	21 %	24 %
Long Term Farm Liab. / Assets	26 %	27 %	26 %	27 %	20 %	19 %
Total Liabilities / Assets	30 %	31 %	30 %	31 %	17 %	17 %



Table B7. **BALANCE SHEET AT MARKET VALUES, 1996**  
**400 to 1,000 Acre Grain Farms, 10 Michigan Counties**  
 (Farms sorted by Net Farm Income)

Number of Farms	Average Of All Farms		Average Of Low 43 %		Average Of High 43 %	
	14		6		6	
	Beginning	Ending	Beginning	Ending	Beginning	Ending
<b>ASSETS</b>						
<b>Current Farm Assets</b>						
Cash and checking balance	16098	39827	43438	58802	10317	31194
Prepaid expenses & supplies	11097	13848	11387	8928	5431	6134
Growing crops	8786	9511	14216	15354	3980	5637
Accounts receivable	2056	1895	4249	3688	550	733
Hedging accounts	-	-	-	-	-	-
Crops held for sale or feed	123046	91688	122785	63801	95217	100694
Crops under government loan	-	-	-	-	-	-
Market livestock held for sale	12881	9595	20650	18190	7937	2621
Other current assets	1340	1497	-	-	-	-
Total current farm assets	175305	167861	216724	168763	123432	147013
<b>Intermediate Farm Assets</b>						
Breeding livestock	5327	3039	6167	3033	5463	4058
Machinery and equipment	176290	184685	201383	206966	130423	139705
Other intermediate assets	28338	26732	12243	12741	34320	34133
Total intermediate farm assets	209955	214456	219793	222740	170205	177896
<b>Long-Term Farm Assets</b>						
Farm land	432298	453422	424012	447179	488583	503405
Buildings and improvements	61614	63429	93600	100000	32500	32333
Other long-term assets	11182	11086	22347	22129	3744	3738
Total long-term farm assets	505094	527936	539959	569308	524827	539477
Total Farm Assets	890354	910254	976477	960812	818464	864386
Total Nonfarm Assets	48345	79940	19633	45783	82020	126375
Total Assets	938699	990194	996110	1006595	900484	990761
<b>LIABILITIES</b>						
<b>Current Farm Liabilities</b>						
Accrued interest	335	1404	781	2537	0	738
Accounts payable	7156	4952	10428	7380	2030	658
Current notes	28304	34855	21562	17717	14249	14667
Government crop loans	-	-	-	-	-	-
Principal due on term debt	12844	21138	20920	41001	5270	4804
Total current farm liabilities	48639	62349	53690	68635	21549	20867
Intermediate Farm Liabilities	50824	44364	63342	34409	19935	31855
Long-term Farm Liabilities	66943	70595	83473	88481	43281	41264
Total Farm Liabilities	166406	177308	200505	191525	84764	93986
Total Nonfarm Liabilities	-	-	-	-	-	-
Total Deferred Liabilities	-	-	-	-	-	-
Total Liabilities	166406	177308	200505	191525	84764	93986
Net Worth (farm and nonfarm)	772293	812886	795605	815071	815719	896775
Net Worth Change		40593		19466		81056
<b>RATIO ANALYSIS</b>						
Current Farm Liabilities / Assets	28 %	37 %	25 %	41 %	17 %	14 %
Curr. & Interm Farm Liab. / Assets	26 %	28 %	27 %	26 %	14 %	16 %
Long Term Farm Liabilities / Assets	13 %	13 %	15 %	16 %	8 %	8 %
Total Liabilities / Assets	18 %	18 %	20 %	19 %	9 %	9 %

Table B8. **STATEMENT OF CASH FLOWS, 1996**  
**400 to 1,000 Acre Grain Farms, 10 Michigan Counties**  
(Farms sorted by Net Farm Income)

	Average Of All Farms	Average Of Low 43%	Average Of High 43%
Number of Farms	14	6	6
(a) Beginning cash balance (farm & nonfarm)	21041	43438	21851
CASH FROM OPERATING ACTIVITIES			
Gross cash farm income	217894	224540	192290
Net nonfarm income (+)	18726	32641	10295
Total cash farm expense (-)	165598	180826	128198
Apparent family living expense (-)	28945	21011	40882
Income and social security tax (-)	2342	2631	2417
(b) Cash from operations (=)	39734	52712	31087
CASH FROM INVESTING ACTIVITIES			
Sale of breeding livestock	677	1500	79
Sale of machinery & equipment (+)	2166	1050	4004
Sale of farm land (+)	-	-	-
Sale of farm buildings (+)	-	-	-
Sale of other farm assets (+)	2705	453	1908
Sale of nonfarm assets (+)	-	-	-
Purchase of breeding livestock (-)	-	-	-
Purchase of machinery & equip. (-)	20467	17824	21940
Purchase of farm land (-)	4573	-	1252
Purchase of farm buildings (-)	4209	6989	1864
Purchase of other farm assets (-)	796	124	1716
Purchase of nonfarm assets (-)	500	1167	-
(c) Cash from investing activities (=)	-24997	-23101	-20781
CASH FROM FINANCING ACTIVITIES			
Money borrowed	90087	72113	42571
Cash gifts and inheritances (+)	5647	2509	10667
Principal payments (-)	78044	79802	32703
Dividends paid (-)	-	-	-
Gifts given (-)	6569	9067	5000
(d) Cash from financing activities (=)	11120	-14247	15534
(e) Net change in cash balance (b+c+d)	25856	15364	25841
Ending cash balance (farm & nonfarm)	46898	58802	47692

Table B9. **FINANCIAL GUIDELINES MEASURES, 1996**  
**400 to 1,000 Acre Grain Farms, 10 Michigan Counties**  
 (Farms sorted by Net Farm Income)

	Average For All Farms		Average For Low 43 %		Average For High 43 %	
	14		6		6	
Number of Farms	14		6		6	
LIQUIDITY	Beginning	Ending	Beginning	Ending	Beginning	Ending
Current ratio	3.60	2.69	4.04	2.46	5.73	7.05
Working capital	126666	105513	163035	100128	101883	126147
SOLVENCY (Market)	Beginning	Ending	Beginning	Ending	Beginning	Ending
Farm debt to asset ratio	19 %	19 %	21 %	20 %	10 %	11 %
Farm equity to asset ratio	81 %	81 %	79 %	80 %	90 %	89 %
Farm debt to equity ratio	23 %	24 %	26 %	25 %	12 %	12 %
PROFITABILITY	Cost	Market	Cost	Market	Cost	Market
Rate of return on farm assets	-3.3 %	1.4 %	-12.5 %	-3.0 %	9.7 %	7.2 %
Rate of return on farm equity	-8.6 %	0.1 %	-22.4 %	-5.7 %	10.9 %	7.4 %
Operating profit margin	-9.7 %	7.4 %	-50.4 %	-19.3 %	21.6 %	31.6 %
Net farm income	-5882	24080	-57610	-11353	50897	69991
REPAYMENT CAPACITY	Cash	Accrual	Cash	Accrual	Cash	Accrual
Term debt coverage ratio	295 %	70 %	247 %	-51 %	546 %	604 %
Capital replacement margin	26890	-4102	31793	-32469	25817	29155
EFFICIENCY						
Asset turnover rate (market)	19.5 %		15.4 %		22.7 %	
Operating expense ratio	81.8 %		103.2 %		62.9 %	
Depreciation expense ratio	14.8 %		22.6 %		8.5 %	
Interest expense ratio	6.6 %		9.3 %		2.4 %	
Net farm income ratio	-3.2 %		-35.2 %		26.2 %	

## LABOR ANALYSIS

	Average For All Farms		Average For Low 43 %		Average For High 43 %	
	13		6		5	
Number of Farms	13		6		5	
Total unpaid labor hours	2299		3057		1754	
Total hired labor hours	753		221		920	
Total labor hours per farm	3052		3277		2674	
Value of farm production / hour	57.83		45.39		73.71	
Net farm income / unpaid hour	-4.91		-18.85		27.46	

Table C1. **CROP PRODUCTION AND MARKETING SUMMARY, 1996**  
**1,000 or more Acre Grain Farms, 10 MI Counties**  
(Average of all farms reporting)

	Average Of All Farms
	<hr/>
Number of Farms	13
ACREAGE SUMMARY	
Total Acres Owned	516
Total Crop Acres	1783
Crop Acres Owned	504
Crop Acres Cash Rented	1264
Crop Acres Share Rented	15
Total Pasture Acres	-
AVERAGE PRICE RECEIVED (Cash Sales Only)	
Corn per bu.	2.85
Soybeans per bu.	6.49
Wheat, Winter per bu.	4.14
AVERAGE YIELD PER ACRE	
Corn (bu.)	94.94
Soybeans (bu.)	31.07
Wheat, Winter (bu.)	41.92
Corn, Seed (bu.)	216.87
Cucumbers (cwt.)	97.99
Beans, Navy (cwt.)	18.00
Hay, Alfalfa (ton)	2.77
Corn Silage (ton)	13.48
Sugar Beets (ton)	4.75
Haylage, Alfalfa (ton)	12.00

Table C2. FARM INCOME STATEMENT, 1996  
**1,000 or more Acre Grain Farms, 10 MI Counties**  
(Average of all farms reporting)

	Average Of All Farms
	<hr/>
Number of Farms	13
CASH FARM INCOME	
Black Turtle Beans	1740
Green Beans	2130
Navy Beans	17212
Corn	215731
Seed Corn	57926
Cucumbers	23403
Alfalfa Hay	142
Mixed Hay	40
Soybeans	147481
Speltz	818
Straw	692
Sugar Beets	1336
Winter Wheat	26476
Dry Beans	800
Finish Beef Calves	2200
Finish Yrlg Steers	7279
Eggs	1589
Milk	21311
Dairy Steers	4609
Raised Hogs	16544
Cull breeding livestock	2071
Misc. livestock income	55
Deficiency payments	4521
Other government payments	29239
Custom work income	42311
Patronage dividends, cash	392
Insurance income	2515
Cash from hedging accts	-2512
Other farm income	15802
Gross Cash Farm Income	643853

Table C2. FARM INCOME STATEMENT, 1996 (Continued)  
**1,000 or more Acre Grain Farms, 10 MI Counties**  
 (Average of all farms reporting)

	Average Of All Farms
Number of Farms	13
<b>CASH FARM EXPENSE</b>	
Seed	32228
Fertilizer	76364
Crop chemicals	62652
Crop insurance	4786
Drying fuel	3622
Irrigation energy	2519
Crop marketing	439
Crop miscellaneous	11199
Feeder livestock purchase	974
Purchased feed	10479
Breeding fees	4
Veterinary	1458
Livestock supplies	2682
Livestock marketing	1161
Interest	34101
Fuel & oil	15670
Repairs	39916
Custom hire	19123
Hired labor	59001
Land rent	98314
Machinery & bldg leases	19346
Real estate taxes	8068
Personal property taxes	127
Farm insurance	11512
Utilities	9210
Dues & professional fees	1576
Miscellaneous	17670
Total cash expense	544198
Net cash farm income	99654
<b>INVENTORY CHANGES</b>	
Crops and feed	-22037
Market livestock	536
Accounts receivable	7288
Prepaid expenses and supplies	-6476
Accounts payable	7863
Total inventory change	-12827
Net operating profit	86828
<b>DEPRECIATION AND OTHER CAPITAL ADJUSTMENTS</b>	
Breeding livestock	-4811
Machinery and equipment	-45901
Buildings and improvements	-5135
Other farm capital	-5688
Total depr. and other capital adj	-61535
Net farm income	25293

Table C3. INVENTORY CHANGES, 1996  
**1,000 or more Acre Grain Farms, 10 MI Counties**  
 (Average of all farms reporting)

	Average Of All Farms
	<hr/>
Number of Farms	13
Net cash farm income	99654
CROPS AND FEED	
Ending inventory	266308
Beginning inventory	288345
Inventory change	-22037
MARKET LIVESTOCK	
Ending inventory	19121
Beginning inventory	18585
Inventory change	536
ACCTS RECEIVABLE & OTHER CURRENT ASSETS	
Ending inventory	30356
Beginning inventory	23068
Inventory change	7288
PREPAID EXPENSES AND SUPPLIES	
Ending inventory	46314
Beginning inventory	52790
Inventory change	-6476
ACCOUNTS PAYABLE	
Beginning inventory	51646
Ending inventory	43783
Inventory change	7863
Total inventory change	-12827
Net operating profit	86828

Table C4. **DEPRECIATION AND OTHER CAPITAL ADJUSTMENTS, 1996**  
**1,000 or more Acre Grain Farms, 10 MI Counties**  
(Average of all farms reporting)

	Average Of All Farms
	<hr/>
Number of Farms	13
Net operating profit	86828
BREEDING LIVESTOCK	
Ending inventory	13749
Capital sales	98
Beginning inventory	16616
Capital purchases	2042
Depreciation, capital adj.	-4811
MACHINERY AND EQUIPMENT	
Ending inventory	136232
Capital sales	2505
Beginning inventory	128799
Capital purchases	55840
Depreciation, capital adj.	-45901
BUILDINGS AND IMPROVEMENTS	
Ending inventory	27706
Capital sales	-
Beginning inventory	28131
Capital purchases	4710
Depreciation, capital adj.	-5135
OTHER CAPITAL ASSETS	
Ending inventory	64945
Capital sales	40130
Beginning inventory	52728
Capital purchases	58035
Depreciation, capital adj.	-5688
Total depreciation, capital adj.	-61535
Net farm income	25293



Table C5. **PROFITABILITY AND LIQUIDITY ANALYSIS, 1996**  
**1,000 or more Acre Grain Farms, 10 MI Counties**  
(Average of all farms reporting)

	Average Of All Farms	Average Of All Farms
Number of Farms	13	13
PROFITABILITY	--- Cost ---	-- Market --
Net farm income	25293	94270
Labor and management earnings	2356	35367
Rate of return on assets	1.8 %	5.5 %
Rate of return on equity	-5.4 %	5.1 %
Operating profit margin	2.6 %	13.9 %
Asset turnover rate	67.7 %	39.9 %
Interest on farm net worth	22937	58903
Farm interest expense	35356	35356
Value of operator lbr and mgmt.	44405	44405
Return on farm assets	16244	85221
Average farm assets	905668	1538090
Return on farm equity	-19112	49865
Average farm equity	355441	981720
Value of farm production	613375	613375
	Average Of All Farms	
Number of Farms	13	
LIQUIDITY (Cash)		
Net cash farm income	99654	
Net nonfarm income	16500	
Family living and taxes	59524	
Real estate principal payments	6276	
Cash available for interm. debt	50354	
Average intermediate debt	188181	
Years to turnover interm. debt	3.7	
Expense as a % of income	85 %	
Interest as a % of income	5 %	
LIQUIDITY (Accrual)		
Total accrual farm income	629639	
Total accrual farm expense	542811	
Net accrual operating income	86828	
Net nonfarm income	16500	
Family living and taxes	59524	
Real estate principal payments	6276	
Available for intermediate debt	37527	
Average intermediate debt	188181	
Years to turnover interm. debt	5.0	
Expense as a % of income	86 %	
Interest as a % of income	6 %	

Table C6. **BALANCE SHEET AT COST VALUES, 1996**  
**1,000 or more Acre Grain Farms, 10 MI Counties**  
(Average of all farms reporting)

Number of Farms	Average For All Farms	
	Beginning	Ending
	13	
<b>ASSETS</b>		
Current Farm Assets		
Cash and checking balance	5720	11511
Prepaid expenses & supplies	52790	46314
Growing crops	17832	16102
Accounts receivable	4720	3384
Hedging accounts	-	-
Crops held for sale or feed	285628	263453
Crops under government loan	2716	2855
Market livestock held for sale	18585	19121
Other current assets	516	10870
Total current farm assets	388507	373609
Intermediate Farm Assets		
Breeding livestock	16616	13749
Machinery and equipment	128799	136232
Other intermediate assets	45898	58210
Total intermediate farm assets	191313	208191
Long-Term Farm Assets		
Farm land	267358	312954
Buildings and improvements	28131	27706
Other long-term assets	6830	6736
Total long-term farm assets	302320	347396
Total Farm Assets	882140	929196
Total Nonfarm Assets	77070	103366
Total Assets	959210	1032563
<b>LIABILITIES</b>		
Current Farm Liabilities		
Accrued interest	15342	16597
Accounts payable	36304	27186
Current notes	143436	131610
Government crop loans	-	-
Principal due on term debt	38258	50913
Total current farm liabilities	234408	227374
Intermediate Farm Liabilities	128861	174005
Long-term Farm Liabilities	141686	194119
Total Farm Liabilities	504955	595499
Total Nonfarm Liabilities	14286	20480
Total Liabilities	519241	615979
Net Worth (farm and nonfarm)	439969	416583
Net Worth Change		-23385
<b>RATIO ANALYSIS</b>		
Current Farm Liabilities / Assets	60 %	61 %
Curr. & Interm Farm Liab / Assets	63 %	69 %
Long Term Farm Liab. / Assets	47 %	56 %
Total Liabilities / Assets	54 %	60 %

Table C7. **BALANCE SHEET AT MARKET VALUES, 1996**  
**1,000 or more Acre Grain Farms, 10 MI Counties**  
(Average of all farms reporting)

Number of Farms	Average For All Farms	
	Beginning	Ending
	13	
<b>ASSETS</b>		
Current Farm Assets		
Cash and checking balance	5720	11511
Prepaid expenses & supplies	52790	46314
Growing crops	17832	16102
Accounts receivable	4720	3384
Hedging accounts	-	-
Crops held for sale or feed	285628	263453
Crops under government loan	2716	2855
Market livestock held for sale	18585	19121
Other current assets	516	10870
Total current farm assets	388507	373609
Intermediate Farm Assets		
Breeding livestock	16616	13749
Machinery and equipment	413380	435464
Other intermediate assets	46583	65748
Total intermediate farm assets	476580	514961
Long-Term Farm Assets		
Farm land	560649	652005
Buildings and improvements	41365	54938
Other long-term assets	6830	6736
Total long-term farm assets	608844	713678
Total Farm Assets	1473931	1602248
Total Nonfarm Assets	148823	205301
Total Assets	1622754	1807550
<b>LIABILITIES</b>		
Current Farm Liabilities		
Accrued interest	15342	16597
Accounts payable	36304	27186
Current notes	143436	131610
Government crop loans	-	-
Principal due on term debt	38258	50913
Total current farm liabilities	234408	227374
Intermediate Farm Liabilities	128861	174005
Long-term Farm Liabilities	141686	194119
Total Farm Liabilities	504955	595499
Total Nonfarm Liabilities	14286	20480
Total Deferred Liabilities	-	12284
Total Liabilities	519241	628263
Net Worth (farm and nonfarm)	1103513	1179286
Net Worth Change		75773
<b>RATIO ANALYSIS</b>		
Current Farm Liabilities / Assets	60 %	61 %
Curr. & Interm Farm Liab. / Assets	42 %	45 %
Long Term Farm Liabilities / Assets	23 %	27 %
Total Liabilities / Assets	32 %	35 %

Table C8. STATEMENT OF CASH FLOWS, 1996  
**1,000 or more Acre Grain Farms, 10 MI Counties**  
(Average of all farms reporting)

	Average Of All Farms
	<hr/>
Number of Farms	13
(a) Beginning cash balance (farm & nonfarm)	5759
CASH FROM OPERATING ACTIVITIES	
Gross cash farm income	643853
Net nonfarm income	(+) 16500
Total cash farm expense	(-) 544198
Apparent family living expense	(-) 56313
Income and social security tax	(-) 3212
(b) Cash from operations	(= 56630
CASH FROM INVESTING ACTIVITIES	
Sale of breeding livestock	98
Sale of machinery & equipment	(+) 2505
Sale of farm land	(+) -
Sale of farm buildings	(+) -
Sale of other farm assets	(+) 40130
Sale of nonfarm assets	(+) 472
Purchase of breeding livestock	(-) 2042
Purchase of machinery & equip.	(-) 55840
Purchase of farm land	(-) 69119
Purchase of farm buildings	(-) 4710
Purchase of other farm assets	(-) 58035
Purchase of nonfarm assets	(-) 17196
(c) Cash from investing activities	(= -163736
CASH FROM FINANCING ACTIVITIES	
Money borrowed	359186
Cash gifts and inheritances	(+) 64526
Principal payments	(-) 259275
Dividends paid	(-) -
Gifts given	(-) 51577
(d) Cash from financing activities	(= 112859
(e) Net change in cash balance	(b+c+d) 5753
Ending cash balance (farm & nonfarm)	11511

Table C9. **FINANCIAL GUIDELINES MEASURES, 1996**  
**1,000 or more Acre Grain Farms, 10 MI Counties**  
(Average of all farms reporting)

	Average For All Farms	
	-----	
Number of Farms	13	
<b>LIQUIDITY</b>	<b>Beginning</b>	<b>Ending</b>
Current ratio	1.66	1.64
Working capital	154099	146235
<b>SOLVENCY (Market)</b>	<b>Beginning</b>	<b>Ending</b>
Farm debt to asset ratio	34 %	37 %
Farm equity to asset ratio	66 %	63 %
Farm debt to equity ratio	52 %	59 %
<b>PROFITABILITY</b>	<b>Cost</b>	<b>Market</b>
Rate of return on farm assets	1.8 %	5.5 %
Rate of return on farm equity	-5.4 %	5.1 %
Operating profit margin	2.6 %	13.9 %
Net farm income	25293	94270
<b>REPAYMENT CAPACITY</b>	<b>Cash</b>	<b>Accrual</b>
Term debt coverage ratio	140 %	112 %
Capital replacement margin	18371	5545
<b>EFFICIENCY</b>		
Asset turnover rate (market)	39.9 %	
Operating expense ratio	80.6 %	
Depreciation expense ratio	9.8 %	
Interest expense ratio	5.6 %	
Net farm income ratio	4.0 %	

LABOR ANALYSIS

	Average For All Farms
	-----
Number of Farms	13
Total unpaid labor hours	4507
Total hired labor hours	5579
Total labor hours per farm	10085
Value of farm production / hour	60.82
Net farm income / unpaid hour	5.61

## **EXPLANATORY NOTES FOR THE WHOLE-FARM REPORTS<sup>5</sup>**

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

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

### **Farm Income Statement**

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

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

### **Inventory Changes**

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

### **Depreciation and Other Capital Adjustments**

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

### **Profitability and Liquidity Analysis**

Various measures of performance are calculated for the farms in this report. These include measures of

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<sup>5</sup> This section is copied and adjusted from Staff Paper P96-4, Dept. Of Applied Economics, University of Minnesota, St. Paul, MN 55108, titled "1995 Annual Report, Southwestern Minnesota Farm Business Management Association."

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

### ***Profitability***

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

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

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

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

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

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

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

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

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

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

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

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

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

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

### ***Liquidity: Cash Basis***

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

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

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

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

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

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

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

### ***Liquidity: Accrual Basis***

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

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

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

### **Balance Sheets**

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

### **Statement of Cash Flows**

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



## Financial Guidelines Measures and Labor Analysis

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

### *Liquidity*

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

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

### *Solvency (Market)*

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

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

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

### *Profitability*

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

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

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

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

### ***Repayment Capacity***

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

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

### ***Efficiency***

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

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

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

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

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

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

### **Crop Production and Marketing Summary**

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