

Staff Paper

Business Analysis Summary
For Swine Farms

By

Sherrill B. Nott

Staff Paper 97-30

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BUSINESS ANALYSIS SUMMARY FOR SWINE FARMS

1996 Telfarm/MicroTel Data

by

Sherrill B. Nott¹

Introduction

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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. Swine farms have 50 percent or more of value

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

of combined sales from feeder pigs, fat hogs and cull breeding livestock.

This report is a summary of the financial and production records kept by swine farmers enrolled in the Telfarm/MicroTel record program through Michigan State University Extension. Farm records were included if a Finan² summary was completed on 1996 data including beginning and ending balance sheets, income and expenses plus crop acres and yields. The summary was included if cash discrepancy was less than 10 % of gross cash inflow, and if the debt discrepancy was less than \$1,000. A few farms were included which met this criteria but were not enrolled in Telfarm.

This report has three purposes: 1) to provide statistical information about the financial results on swine 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,³ a different software package for doing annual analysis. The new method was reported in Staff Paper No. 96-86, Michigan Farm Database, New Directions for 1995; it contains averages of 19 Hog 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. This percentage was increased if it meant getting a minimum of 6 farms. A farm was accepted in the average regardless of whether it was a proprietorship, partnership, limited liability company, or corporation. Finansum will produce a variety of report options; I included a subset in this publication.

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

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

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

Table 1. Livestock and Crops Production Summary, 1996
Michigan Hog Farms, All Sizes, 9 Counties
(Farms sorted by Net Farm Income)

	Average Of All Farms	Average Of Low 36%	Average Of High 36%
Hogs, Farrow To Finish			
Number of farms	15	-	6
Average number of sows	549.3	-	844.0
Litters farrowed	922	-	1383
Litters per sow	1.68	-	1.64
Litters per crate	14.15	-	12.88
Pigs born per litter	9.99	-	10.41
Pigs weaned per litter	8.67	-	8.84
Pigs weaned per sow	14.36	-	14.20
Number sold per litter	5.92	-	5.25
Avg wgt/Raised Hog sold	253	-	263
Avg price / cwt	60.53	-	63.05
	Average Of All Farms	Average Of Low 36%	Average Of High 36%
Number of Farms	17	6	6
ACREAGE SUMMARY			
Total Acres Owned	423	325	546
Total Crop Acres	406	264	619
Crop Acres Owned	211	241	318
Crop Acres Cash Rented	151	23	238
Crop Acres Share Rented	45	-	63
AVERAGE PRICE RECEIVED (Cash Sales Only)			
Soybeans per bu.	7.32	-	-
Wheat, Winter per bu.	4.01	-	-
AVERAGE YIELD PER ACRE			
Corn (bu.)	94.63	-	-
Soybeans (bu.)	33.64	-	-
Wheat, Winter (bu.)	43.69	-	-
Hay, Alfalfa (ton)	1.98	-	-
Straw (ton)	0.63	-	-
Hay, Grass (ton)	1.00	-	-
Sweet Corn (ton)	5.00	-	-

Table 2. FARM INCOME STATEMENT, 1996
Michigan Hog Farms, All Sizes, 9 Counties
(Farms sorted by Net Farm Income)

	Average Of All Farms	Average Of Low 36%	Average Of High 36%
Number of Farms	17	6	6
CASH FARM INCOME			
Cordwood	32	-	92
Corn	11065	5323	24018
Seed Corn	32	-	-
Alfalfa Hay	83	-	-
Mixed Hay	101	250	-
Oats	27	-	-
Soybeans	22931	4685	43866
Straw	15	-	-
Sweet Corn	168	-	-
Tomatoes	8	-	-
Winter Wheat	3153	698	5924
Beef Calves	1784	-	4427
Finish Beef Calves	59	-	-
Raised Hogs	740770	512502	1204238
Feeder Pigs	7883	21574	328
Finish Feeder Pigs	3302	8872	-
Wool	2	-	-
Cull breeding livestock	51666	35838	80752
Misc. livestock income	87	1	245
Deficiency payments	323	645	-
Other government payments	7894	5979	11015
Custom work income	2473	393	3017
Patronage dividends, cash	179	14	127
Cash from hedging accts	-3014	-	-6389
Other farm income	13948	9010	19001
Gross Cash Farm Income	864971	605785	1390660

Table 2. FARM INCOME STATEMENT, 1996 (Continued)
Michigan Hog Farms, All Sizes, 9 Counties
(Farms sorted by Net Farm Income)

	Average Of All Farms	Average Of Low 36%	Average Of High 36%
Number of Farms	17	6	6
CASH FARM EXPENSE			
Seed	8432	7343	11769
Fertilizer	12141	10232	14551
Crop chemicals	14461	9025	30143
Crop insurance	624	269	1499
Drying fuel	3662	3573	5033
Crop marketing	71	-	202
Crop miscellaneous	889	45	232
Feeder livestock purchase	14150	2955	36173
Purchased feed	404214	275836	691898
Breeding fees	5351	8500	5464
Veterinary	16670	12910	28918
Livestock supplies	5228	2360	9171
Livestock leases	446	1263	-
Livestock marketing	4426	7031	2640
Interest	52406	34557	82858
Fuel & oil	8413	6316	10930
Repairs	22100	17979	27571
Custom hire	41046	41795	70837
Hired labor	85210	33495	178998
Land rent	14754	1499	21674
Machinery & bldg leases	13723	7400	16803
Real estate taxes	7329	12569	5863
Personal property taxes	8	22	-
Farm insurance	6541	7417	8397
Utilities	20751	18362	29953
Dues & professional fees	3258	4173	3248
Hedging account deposits	1515	4294	-
Miscellaneous	28422	8989	17237
Total cash expense	796239	540208	1312064
Net cash farm income	68732	65577	78596
INVENTORY CHANGES			
Crops and feed	-15951	-9582	-29580
Market livestock	86252	27235	205691
Accounts receivable	-617	-410	-1508
Prepaid expenses and supplies	-314	-12006	18284
Accounts payable	-6860	-3652	-9013
Total inventory change	62510	1584	183874
Net operating profit	131242	67161	262470
DEPRECIATION AND OTHER CAPITAL ADJUSTMENTS			
Breeding livestock	19492	-1627	60322
Machinery and equipment	-27906	-19717	-49212
Buildings and improvements	-39921	-51968	-53443
Other farm capital	-2231	-7407	845
Total depr. and other capital adj	-50566	-80718	-41489
Net farm income	80676	-13557	220981

Table 3. INVENTORY CHANGES, 1996
Michigan Hog Farms, All Sizes, 9 Counties
(Farms sorted by Net Farm Income)

	Average Of All Farms	Average Of Low 36%	Average Of High 36%
Number of Farms	17	6	6
Net cash farm income	68732	65577	78596
CROPS AND FEED			
Ending inventory	61877	54545	76079
Beginning inventory	77827	64128	105660
Inventory change	-15951	-9582	-29580
MARKET LIVESTOCK			
Ending inventory	252326	135355	457436
Beginning inventory	166074	108120	251745
Inventory change	86252	27235	205691
ACCTS RECEIVABLE & OTHER CURRENT ASSETS			
Ending inventory	2318	1448	1929
Beginning inventory	2936	1858	3437
Inventory change	-617	-410	-1508
PREPAID EXPENSES AND SUPPLIES			
Ending inventory	27286	22090	51159
Beginning inventory	27599	34096	32875
Inventory change	-314	-12006	18284
ACCOUNTS PAYABLE			
Beginning inventory	35210	22882	54168
Ending inventory	42070	26535	63181
Inventory change	-6860	-3652	-9013
Total inventory change	62510	1584	183874
Net operating profit	131242	67161	262470

Table 4. DEPRECIATION AND OTHER CAPITAL ADJUSTMENTS, 1996
Michigan Hog Farms, All Sizes, 9 Counties
(Farms sorted by Net Farm Income)

	Average Of All Farms	Average Of Low 36%	Average Of High 36%
Number of Farms	17	6	6
Net operating profit	131242	67161	262470
BREEDING LIVESTOCK			
Ending inventory	115000	70133	196969
Capital sales	4750	449	7258
Beginning inventory	78881	64800	115671
Capital purchases	21377	7408	28234
Depreciation, capital adj.	19492	-1627	60322
MACHINERY AND EQUIPMENT			
Ending inventory	95250	68825	152486
Capital sales	1987	2352	217
Beginning inventory	95862	79738	150740
Capital purchases	29282	11156	51175
Depreciation, capital adj.	-27906	-19717	-49212
BUILDINGS AND IMPROVEMENTS			
Ending inventory	277729	164874	556138
Capital sales	-	-	-
Beginning inventory	141983	69142	263828
Capital purchases	175667	147701	345753
Depreciation, capital adj.	-39921	-51968	-53443
OTHER CAPITAL ASSETS			
Ending inventory	23400	31364	11703
Capital sales	46992	13787	118113
Beginning inventory	62103	48603	103601
Capital purchases	10520	3955	25370
Depreciation, capital adj.	-2231	-7407	845
Total depreciation, capital adj.	-50566	-80718	-41489
Net farm income	80676	-13557	220981

Table 5. PROFITABILITY AND LIQUIDITY ANALYSIS, 1996
Michigan Hog Farms, All Sizes, 9 Counties
(Farms sorted by Net Farm Income)

	Avg. Of All Farms	Avg. Of Low 36 %	Avg. Of High 36 %	Avg. Of All Farms	Avg. Of Low 36 %	Avg. Of High 36 %
Number of Farms	17	6	6	17	6	6
PROFITABILITY						
	----- Cost -----			----- Market -----		
Net farm income	80676	-13557	220981	118237	64005	241142
Labor and management earnings	61937	-28218	186771	76845	22820	177450
Rate of return on assets	9.0 %	-1.6 %	15.7 %	9.1 %	5.3 %	12.8 %
Rate of return on equity	13.5 %	-21.8 %	32.4 %	11.5 %	3.6 %	19.3 %
Operating profit margin	17.1 %	-3.7 %	28.3 %	24.1 %	18.9 %	30.5 %
Asset turnover rate	53.0 %	44.4 %	55.6 %	37.9 %	28.0 %	41.9 %
Interest on farm net worth	18739	14661	34210	41392	41185	63691
Farm interest expense	50537	40327	68967	50537	40327	68967
Value of operator lbr and mgmt.	39834	39442	35999	39834	39442	35999
Return on farm assets	91379	-12672	253949	128940	64890	274109
Average farm assets	1009979	772427	1613037	1413132	1223195	2139981
Return on farm equity	40842	-52999	184982	78403	24563	205142
Average farm equity	303197	243472	570171	684264	686415	1061520
Value of farm production	535783	342609	897514	535783	342609	897514
				Average Of All Farms	Average Of Low 36 %	Average Of High 36 %
Number of Farms				17	6	6
LIQUIDITY (Cash)						
Net cash farm income		68732	65577	78596		
Net nonfarm income		-576	-10780	1242		
Family living and taxes		36014	25180	39537		
Real estate principal payments		18931	17806	33609		
Cash available for interm. debt		13211	11812	6692		
Average intermediate debt		205269	180322	273384		
Years to turnover interm. debt		15.5	15.3	40.9		
Expense as a % of income		92 %	89 %	94 %		
Interest as a % of income		6 %	6 %	6 %		
LIQUIDITY (Accrual)						
Total accrual farm income		934655	623027	1565264		
Total accrual farm expense		803413	555866	1302794		
Net accrual operating income		131242	67161	262470		
Net nonfarm income		-576	-10780	1242		
Family living and taxes		36014	25180	39537		
Real estate principal payments		18931	17806	33609		
Available for intermediate debt		75721	13396	190565		
Average intermediate debt		205269	180322	273384		
Years to turnover interm. debt		2.7	13.5	1.4		
Expense as a % of income		86 %	89 %	83 %		
Interest as a % of income		5 %	6 %	4 %		

Table 6. BALANCE SHEET AT COST VALUES, 1996
Michigan Hog Farms, All Sizes, 9 Counties
(Farms sorted by Net Farm Income)

Number of Farms	Average Of All Farms		Average Of Low 36 %		Average Of High 36 %	
	17		6		6	
	Beginning	Ending	Beginning	Ending	Beginning	Ending
ASSETS						
Current Farm Assets						
Cash and checking balance	39859	19018	27179	15411	69025	21401
Prepaid expenses & supplies	27599	27286	34096	22090	32875	51159
Growing crops	1530	1149	1858	1448	1545	567
Accounts receivable	377	218	-	-	594	-
Hedging accounts	99	0	-	-	-	-
Crops held for sale or feed	77827	61877	64128	54545	105660	76079
Crops under government loan	-	-	-	-	-	-
Market livestock held for sale	166074	252326	108120	135355	251745	457436
Other current assets	929	951	-	-	1298	1362
Total current farm assets	314295	362824	235381	228849	462741	608004
Intermediate Farm Assets						
Breeding livestock	78881	115000	64800	70133	115671	196969
Machinery and equipment	95862	95250	79738	68825	150740	152486
Other intermediate assets	57183	21657	35095	26781	103169	11347
Total intermediate farm assets	231926	231907	179632	165739	369580	360801
Long-Term Farm Assets						
Farm land	225947	226682	241573	241573	299047	305144
Buildings and improvements	141983	277729	69142	164874	263828	556138
Other long-term assets	4920	1744	13508	4583	432	357
Total long-term farm assets	372851	506155	324223	411030	563308	861639
Total Farm Assets	919071	1100886	739236	805618	1395629	1830445
Total Nonfarm Assets	42490	47133	45745	53588	37211	40855
Total Assets	961561	1148019	784980	859206	1432840	1871300
LIABILITIES						
Current Farm Liabilities						
Accrued interest	10360	8491	2502	8272	24670	10778
Accounts payable	24850	33580	20380	18263	29499	52403
Current notes	158485	260034	64610	88320	277633	544000
Government crop loans	-	-	-	-	-	-
Principal due on term debt	54248	55052	41881	38015	93285	87059
Total current farm liabilities	248121	357333	129876	153373	425087	694241
Intermediate Farm Liabilities	180089	159291	170256	142299	224633	208937
Long-term Farm Liabilities	215418	253313	178060	284045	274571	258262
Total Farm Liabilities	643627	769937	478193	579717	924291	1161441
Total Nonfarm Liabilities	13181	17984	33767	45352	3021	5044
Total Liabilities	656808	787921	511960	625069	927312	1166485
Net Worth (farm and nonfarm)	304753	360098	273020	234137	505527	704815
Net Worth Change		55345		-38883		199288
RATIO ANALYSIS						
Current Farm Liabilities / Assets	79 %	98 %	55 %	67 %	92 %	114 %
Curr. & Interm Farm Liab / Assets	78 %	87 %	72 %	75 %	78 %	93 %
Long Term Farm Liab. / Assets	58 %	50 %	55 %	69 %	49 %	30 %
Total Liabilities / Assets	68 %	69 %	65 %	73 %	65 %	62 %

Table 7. BALANCE SHEET AT MARKET VALUES, 1996
Michigan Hog Farms, All Sizes, 9 Counties
(Farms sorted by Net Farm Income)

Number of Farms	Average Of All Farms		Average Of Low 36 %		Average Of High 36 %	
	17		6		6	
	Beginning	Ending	Beginning	Ending	Beginning	Ending
ASSETS						
Current Farm Assets						
Cash and checking balance	39859	19018	27179	15411	69025	21401
Prepaid expenses & supplies	27599	27286	34096	22090	32875	51159
Growing crops	1530	1149	1858	1448	1545	567
Accounts receivable	377	218	-	-	594	-
Hedging accounts	99	0	-	-	-	-
Crops held for sale or feed	77827	61877	64128	54545	105660	76079
Crops under government loan	-	-	-	-	-	-
Market livestock held for sale	166074	252326	108120	135355	251745	457436
Other current assets	929	951	-	-	1298	1362
Total current farm assets	314295	362824	235381	228849	462741	608004
Intermediate Farm Assets						
Breeding livestock	93644	132391	69450	75962	152848	240414
Machinery and equipment	204778	219158	171955	166707	286099	320482
Other intermediate assets	57183	21657	35095	26781	103169	11347
Total intermediate farm assets	355605	373206	276500	269450	542117	572243
Long-Term Farm Assets						
Farm land	436424	434277	532291	519076	551774	562658
Buildings and improvements	187062	352378	88212	268540	347960	631677
Other long-term assets	6685	3508	18508	9583	432	357
Total long-term farm assets	630171	790163	639012	797200	900167	1194691
Total Farm Assets	1300071	1526194	1150892	1295499	1905025	2374938
Total Nonfarm Assets	62284	67845	80587	85128	60452	69999
Total Assets	1362355	1594038	1231479	1380627	1965477	2444937
LIABILITIES						
Current Farm Liabilities						
Accrued interest	10360	8491	2502	8272	24670	10778
Accounts payable	24850	33580	20380	18263	29499	52403
Current notes	158485	260034	64610	88320	277633	544000
Government crop loans	-	-	-	-	-	-
Principal due on term debt	54248	55052	41881	38015	93285	87059
Total current farm liabilities	248121	357333	129876	153373	425087	694241
Intermediate Farm Liabilities	180089	159291	170256	142299	224633	208937
Long-term Farm Liabilities	215418	253313	178060	284045	274571	258262
Total Farm Liabilities	643627	769937	478193	579717	924291	1161441
Total Nonfarm Liabilities	13181	17984	33767	45352	3021	5044
Total Deferred Liabilities	20070	27136	8802	9451	30665	46520
Total Liabilities	676878	815057	520762	634520	957977	1213005
Net Worth (farm and nonfarm)	685477	778981	710717	746107	1007500	1231932
Net Worth Change		93504		35390		224433
RATIO ANALYSIS						
Current Farm Liabilities / Assets	79 %	98 %	55 %	67 %	92 %	114 %
Curr. & Inter Farm Liab. / Assets	64 %	70 %	59 %	59 %	65 %	77 %
Long Term Farm Liabilities / Assets	34 %	32 %	28 %	36 %	31 %	22 %
Total Liabilities / Assets	50 %	51 %	42 %	46 %	49 %	50 %

Table 8. STATEMENT OF CASH FLOWS, 1996
Michigan Hog Farms, All Sizes, 9 Counties
(Farms sorted by Net Farm Income)

	Average Of All Farms	Average Of Low 36%	Average Of High 36%
Number of Farms	17	6	6
(a) Beginning cash balance (farm & nonfarm)	41833	32179	69619
CASH FROM OPERATING ACTIVITIES			
Gross cash farm income	864971	605785	1390660
Net nonfarm income (+)	-576	-10780	1242
Total cash farm expense (-)	796239	540208	1312064
Apparent family living expense (-)	35601	24663	39537
Income and social security tax (-)	413	517	-
(b) Cash from operations (=)	32142	29617	40301
CASH FROM INVESTING ACTIVITIES			
Sale of breeding livestock	4750	449	7258
Sale of machinery & equipment (+)	1987	2352	217
Sale of farm land (+)	1941	-	-
Sale of farm buildings (+)	-	-	-
Sale of other farm assets (+)	46992	13787	118113
Sale of nonfarm assets (+)	-	-	-
Purchase of breeding livestock (-)	21377	7408	28234
Purchase of machinery & equip. (-)	29282	11156	51175
Purchase of farm land (-)	2596	231	6500
Purchase of farm buildings (-)	175667	147701	345753
Purchase of other farm assets (-)	10520	3955	25370
Purchase of nonfarm assets (-)	-	-	-
(c) Cash from investing activities (=)	-183772	-153864	-331444
CASH FROM FINANCING ACTIVITIES			
Money borrowed	423461	373162	711544
Cash gifts and inheritances (+)	1536	40	1
Principal payments (-)	294706	263706	468618
Dividends paid (-)	-	-	-
Gifts given (-)	770	18	-
(d) Cash from financing activities (=)	129521	109478	242926
(e) Net change in cash balance (b+c+d)	-22109	-14768	-48217
Ending cash balance (farm & nonfarm)	19724	17411	21401

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

	Average For All Farms		Average For Low 36 %		Average For High 36 %	
	17		6		6	
Number of Farms	17		6		6	
LIQUIDITY	Beginning	Ending	Beginning	Ending	Beginning	Ending
Current ratio	1.27	1.02	1.81	1.49	1.09	0.88
Working capital	66174	5491	105505	75476	37654	-86236
SOLVENCY (Market)	Beginning	Ending	Beginning	Ending	Beginning	Ending
Farm debt to asset ratio	51 %	52 %	42 %	45 %	50 %	50 %
Farm equity to asset ratio	49 %	48 %	58 %	55 %	50 %	50 %
Farm debt to equity ratio	104 %	107 %	73 %	83 %	100 %	100 %
PROFITABILITY	Cost	Market	Cost	Market	Cost	Market
Rate of return on farm assets	9.0 %	9.1 %	-1.6 %	5.3 %	15.7 %	12.8 %
Rate of return on farm equity	13.5 %	11.5 %	-21.8 %	3.6 %	32.4 %	19.3 %
Operating profit margin	17.1 %	24.1 %	-3.7 %	18.9 %	28.3 %	30.5 %
Net farm income	80676	118237	-13557	64005	220981	241142
REPAYMENT CAPACITY	Cash	Accrual	Cash	Accrual	Cash	Accrual
Term debt coverage ratio	69 %	155 %	76 %	79 %	54 %	214 %
Capital replacement margin	-22649	39861	-13802	-12218	-52984	130890
EFFICIENCY						
Asset turnover rate (market)	37.9 %		28.0 %		41.9 %	
Operating expense ratio	80.6 %		82.7 %		78.8 %	
Depreciation expense ratio	5.4 %		13.0 %		2.7 %	
Interest expense ratio	5.4 %		6.5 %		4.4 %	
Net farm income ratio	8.6 %		-2.2 %		14.1 %	

LABOR ANALYSIS

	Average For All Farms		Average For Low 36 %		Average For High 36 %	
	17		6		6	
Number of Farms	17		6		6	
Total unpaid labor hours	3173		3336		2322	
Total hired labor hours	6675		3500		12321	
Total labor hours per farm	9848		6836		14644	
Value of farm production / hour	54.40		50.12		61.29	
Net farm income / unpaid hour	25.43		-4.06		95.17	

Table A1. Livestock and Crops Production Summary, 1996
Michigan Hog Farms, 140 to 220 Sows
(Average of all farms reporting)

	Average Of All Farms
	<hr/>
Hogs, Farrow To Finish	
Number of farms	5
Average number of sows	180.0
Litters farrowed	363
Litters per sow	2.02
Litters per crate	16.21
Pigs born per litter	9.78
Pigs weaned per litter	8.14
Pigs weaned per sow	16.04
Number sold per litter	5.79
Avg wgt/Raised Hog sold	239
Avg price / cwt	68.00
	Average Of All Farms
	<hr/>
Number of Farms	6
 ACREAGE SUMMARY	
Total Acres Owned	202
Total Crop Acres	132
Crop Acres Owned	61
Crop Acres Cash Rented	7
Crop Acres Share Rented	63
 AVERAGE YIELD PER ACRE	
Corn (bu.)	106.10
Soybeans (bu.)	40.53
Wheat, Winter (bu.)	37.63
Straw (ton)	0.63
Hay, Alfalfa (ton)	1.15
Sweet Corn (ton)	5.00

Table A2. FARM INCOME STATEMENT, 1996
Michigan Hog Farms, 140 to 220 Sows
(Average of all farms reporting)

	Average Of All Farms
	<hr/>
Number of Farms	6
CASH FARM INCOME	
Corn	2009
Seed Corn	91
Alfalfa Hay	235
Mixed Hay	37
Oats	76
Soybeans	2858
Straw	41
Sweet Corn	477
Tomatoes	22
Winter Wheat	1124
Beef Calves	628
Finish Beef Calves	168
Raised Hogs	287858
Feeder Pigs	21958
Finish Feeder Pigs	483
Wool	4
Cull breeding livestock	18408
Deficiency payments	589
Other government payments	2462
Custom work income	3596
Patronage dividends, cash	356
Cash from hedging accts	841
Other farm income	11919
Gross Cash Farm Income	356240

Table A2. FARM INCOME STATEMENT, 1996 (Continued)
Michigan Hog Farms, 140 to 220 Sows
(Average of all farms reporting)

	Average Of All Farms
Number of Farms	6
CASH FARM EXPENSE	
Seed	2864
Fertilizer	6740
Crop chemicals	603
Drying fuel	292
Crop miscellaneous	2226
Feeder livestock purchase	963
Purchased feed	159280
Breeding fees	1338
Veterinary	5041
Livestock supplies	4135
Livestock leases	1263
Livestock marketing	2815
Interest	25567
Fuel & oil	4240
Repairs	11962
Custom hire	1913
Hired labor	20071
Land rent	1675
Machinery & bldg leases	5043
Real estate taxes	3600
Personal property taxes	22
Farm insurance	2579
Utilities	7935
Dues & professional fees	1157
Miscellaneous	53006
Total cash expense	326326
Net cash farm income	29914
INVENTORY CHANGES	
Crops and feed	2321
Market livestock	5731
Accounts receivable	169
Prepaid expenses and supplies	4139
Accounts payable	3186
Total inventory change	15547
Net operating profit	45460
DEPRECIATION AND OTHER CAPITAL ADJUSTMENTS	
Breeding livestock	702
Machinery and equipment	-6450
Buildings and improvements	-3703
Other farm capital	241
Total depr. and other capital adj	-9210
Net farm income	36250

Table A3. INVENTORY CHANGES, 1996
Michigan Hog Farms, 140 to 220 Sows
(Average of all farms reporting)

	Average Of All Farms
Number of Farms	6
Net cash farm income	29914
CROPS AND FEED	
Ending inventory	18405
Beginning inventory	16084
Inventory change	2321
MARKET LIVESTOCK	
Ending inventory	80364
Beginning inventory	74634
Inventory change	5731
ACCTS RECEIVABLE & OTHER CURRENT ASSETS	
Ending inventory	2259
Beginning inventory	2090
Inventory change	169
PREPAID EXPENSES AND SUPPLIES	
Ending inventory	10132
Beginning inventory	5992
Inventory change	4139
ACCOUNTS PAYABLE	
Beginning inventory	26974
Ending inventory	23787
Inventory change	3186
Total inventory change	15547
Net operating profit	45460

Table A4.

DEPRECIATION AND OTHER CAPITAL ADJUSTMENTS, 1996

Michigan Hog Farms, 140 to 220 Sows

(Average of all farms reporting)

	Average Of All Farms
	<hr/>
Number of Farms	6
Net operating profit	45460
BREEDING LIVESTOCK	
Ending inventory	42441
Capital sales	5014
Beginning inventory	26289
Capital purchases	20465
Depreciation, capital adj.	702
MACHINERY AND EQUIPMENT	
Ending inventory	37340
Capital sales	2952
Beginning inventory	38028
Capital purchases	8714
Depreciation, capital adj.	-6450
BUILDINGS AND IMPROVEMENTS	
Ending inventory	67432
Capital sales	-
Beginning inventory	68863
Capital purchases	2271
Depreciation, capital adj.	-3703
OTHER CAPITAL ASSETS	
Ending inventory	9707
Capital sales	6557
Beginning inventory	15542
Capital purchases	481
Depreciation, capital adj.	241
Total depreciation, capital adj.	-9210
Net farm income	36250

Table A5. PROFITABILITY AND LIQUIDITY ANALYSIS, 1996
Michigan Hog Farms, 140 to 220 Sows
(Average of all farms reporting)

	Average Of All Farms	Average Of All Farms
	6	6
Number of Farms	6	6
PROFITABILITY	--- Cost ---	-- Market --
Net farm income	36250	38605
Labor and management earnings	33907	27240
Rate of return on assets	5.3 %	4.0 %
Rate of return on equity	14.6 %	2.5 %
Operating profit margin	10.0 %	11.2 %
Asset turnover rate	52.6 %	36.1 %
Interest on farm net worth	2343	11365
Farm interest expense	18467	18467
Value of operator lbr and mgmt.	34194	34194
Return on farm assets	20523	22878
Average farm assets	389455	568036
Return on farm equity	2057	4411
Average farm equity	14106	173531
Value of farm production	204920	204920
	Average Of All Farms	
Number of Farms	6	
LIQUIDITY (Cash)		
Net cash farm income	29914	
Net nonfarm income	7921	
Family living and taxes	29566	
Real estate principal payments	2892	
Cash available for interm. debt	5376	
Average intermediate debt	115446	
Years to turnover interm. debt	21.5	
Expense as a % of income	92 %	
Interest as a % of income	7 %	
LIQUIDITY (Accrual)		
Total accrual farm income	364461	
Total accrual farm expense	319001	
Net accrual operating income	45460	
Net nonfarm income	7921	
Family living and taxes	29566	
Real estate principal payments	2892	
Available for intermediate debt	20923	
Average intermediate debt	115446	
Years to turnover interm. debt	5.5	
Expense as a % of income	88 %	
Interest as a % of income	5 %	

Table A6. BALANCE SHEET AT COST VALUES, 1996
Michigan Hog Farms, 140 to 220 Sows
(Average of all farms reporting)

Number of Farms	Average For All Farms	
	Beginning	Ending
	6	
ASSETS		
Current Farm Assets		
Cash and checking balance	12187	11564
Prepaid expenses & supplies	5992	10132
Growing crops	-	308
Accounts receivable	475	617
Hedging accounts	282	1
Crops held for sale or feed	16084	18405
Crops under government loan	-	-
Market livestock held for sale	74634	80364
Other current assets	1333	1333
Total current farm assets	110987	122724
Intermediate Farm Assets		
Breeding livestock	26289	42441
Machinery and equipment	38028	37340
Other intermediate assets	10959	5124
Total intermediate farm assets	75276	84905
Long-Term Farm Assets		
Farm land	121904	117651
Buildings and improvements	68863	67432
Other long-term assets	4583	4583
Total long-term farm assets	195351	189667
Total Farm Assets	381614	397296
Total Nonfarm Assets	37152	37692
Total Assets	418766	434988
LIABILITIES		
Current Farm Liabilities		
Accrued interest	9876	2776
Accounts payable	17098	21012
Current notes	29380	29775
Government crop loans	-	-
Principal due on term debt	16116	25836
Total current farm liabilities	72469	79399
Intermediate Farm Liabilities	118584	82077
Long-term Farm Liabilities	194333	203836
Total Farm Liabilities	385386	365312
Total Nonfarm Liabilities	1246	3877
Total Liabilities	386632	369190
Net Worth (farm and nonfarm)	32134	65798
Net Worth Change		33664
RATIO ANALYSIS		
Current Farm Liabilities / Assets	65 %	65 %
Curr. & Interm Farm Liab / Assets	103 %	78 %
Long Term Farm Liab. / Assets	99 %	107 %
Total Liabilities / Assets	92 %	85 %

Table A7. BALANCE SHEET AT MARKET VALUES, 1996
Michigan Hog Farms, 140 to 220 Sows
(Average of all farms reporting)

Number of Farms	Average For All Farms	
	Beginning	Ending
	6	
ASSETS		
Current Farm Assets		
Cash and checking balance	12187	11564
Prepaid expenses & supplies	5992	10132
Growing crops	-	308
Accounts receivable	475	617
Hedging accounts	282	1
Crops held for sale or feed	16084	18405
Crops under government loan	-	-
Market livestock held for sale	74634	80364
Other current assets	1333	1333
Total current farm assets	110987	122724
Intermediate Farm Assets		
Breeding livestock	30939	47122
Machinery and equipment	79188	81339
Other intermediate assets	10959	5124
Total intermediate farm assets	121086	133586
Long-Term Farm Assets		
Farm land	225741	221991
Buildings and improvements	89862	90929
Other long-term assets	9583	9583
Total long-term farm assets	325186	322503
Total Farm Assets	557259	578813
Total Nonfarm Assets	55560	56170
Total Assets	612819	634982
LIABILITIES		
Current Farm Liabilities		
Accrued interest	9876	2776
Accounts payable	17098	21012
Current notes	29380	29775
Government crop loans	-	-
Principal due on term debt	16116	25836
Total current farm liabilities	72469	79399
Intermediate Farm Liabilities	118584	82077
Long-term Farm Liabilities	194333	203836
Total Farm Liabilities	385386	365312
Total Nonfarm Liabilities	1246	3877
Total Deferred Liabilities	17397	20915
Total Liabilities	404030	390104
Net Worth (farm and nonfarm)	208789	244878
Net Worth Change		36088
RATIO ANALYSIS		
Current Farm Liabilities / Assets	65 %	65 %
Curr. & Interm Farm Liab. / Assets	82 %	63 %
Long Term Farm Liabilities / Assets	60 %	63 %
Total Liabilities / Assets	66 %	61 %

Table A8. STATEMENT OF CASH FLOWS, 1996
Michigan Hog Farms, 140 to 220 Sows
(Average of all farms reporting)

	Average Of All Farms
Number of Farms	6
(a) Beginning cash balance (farm & nonfarm)	17780
CASH FROM OPERATING ACTIVITIES	
Gross cash farm income	356240
Net nonfarm income	(+) 7921
Total cash farm expense	(-) 326326
Apparent family living expense	(-) 28914
Income and social security tax	(-) 652
(b) Cash from operations	(=) 8268
CASH FROM INVESTING ACTIVITIES	
Sale of breeding livestock	5014
Sale of machinery & equipment	(+) 2952
Sale of farm land	(+) 5500
Sale of farm buildings	(+) -
Sale of other farm assets	(+) 6557
Sale of nonfarm assets	(+) -
Purchase of breeding livestock	(-) 20465
Purchase of machinery & equip.	(-) 8714
Purchase of farm land	(-) 624
Purchase of farm buildings	(-) 2271
Purchase of other farm assets	(-) 481
Purchase of nonfarm assets	(-) -
(c) Cash from investing activities	(=) -12531
CASH FROM FINANCING ACTIVITIES	
Money borrowed	60705
Cash gifts and inheritances	(+) 4125
Principal payments	(-) 62814
Dividends paid	(-) -
Gifts given	(-) 1970
(d) Cash from financing activities	(=) 47
(e) Net change in cash balance	(b+c+d) -4217
Ending cash balance (farm & nonfarm)	13564

Table A9. FINANCIAL GUIDELINES MEASURES, 1996
Michigan Hog Farms, 140 to 220 Sows
(Average of all farms reporting)

	Average For All Farms	

Number of Farms	6	
LIQUIDITY	Beginning	Ending
Current ratio	1.53	1.55
Working capital	38517	43325
SOLVENCY (Market)	Beginning	Ending
Farm debt to asset ratio	72 %	66 %
Farm equity to asset ratio	28 %	34 %
Farm debt to equity ratio	261 %	195 %
PROFITABILITY	Cost	Market
Rate of return on farm assets	5.3 %	4.0 %
Rate of return on farm equity	14.6 %	2.5 %
Operating profit margin	10.0 %	11.2 %
Net farm income	36250	38605
REPAYMENT CAPACITY	Cash	Accrual
Term debt coverage ratio	78 %	122 %
Capital replacement margin	-7847	7699
EFFICIENCY		
Asset turnover rate (market)	36.1 %	
Operating expense ratio	82.5 %	
Depreciation expense ratio	2.5 %	
Interest expense ratio	5.1 %	
Net farm income ratio	9.9 %	

LABOR ANALYSIS

	Average For All Farms

Number of Farms	6
Total unpaid labor hours	3376
Total hired labor hours	1949
Total labor hours per farm	5325
Value of farm production / hour	38.48
Net farm income / unpaid hour	10.74

Table B1. Livestock and Crops Production Summary, 1996
Michigan Hog Farms, 400 to 2,200 Sows
(Average of all farms reporting)

	Average Of All Farms
	<hr/>
Hogs, Farrow To Finish	
Number of farms	6
Average number of sows	1037.8
Litters farrowed	1725
Litters per sow	1.66
Litters per crate	13.60
Pigs born per litter	10.05
Pigs weaned per litter	8.84
Pigs weaned per sow	14.48
Number sold per litter	5.69
Avg wgt/Raised Hog sold	256
Avg price / cwt	60.31
ACREAGE SUMMARY	
Total Acres Owned	764
Total Crop Acres	767
Crop Acres Owned	416
Crop Acres Cash Rented	352
Crop Acres Share Rented	-
AVERAGE YIELD PER ACRE	
Corn (bu.)	94.12
Soybeans (bu.)	34.05
Wheat, Winter (bu.)	47.18
Hay, Grass (ton)	1.00

Table B2. FARM INCOME STATEMENT, 1996
Michigan Hog Farms, 400 to 2,200 Sows
(Average of all farms reporting)

	Average Of All Farms
	<hr/>
Number of Farms	6
CASH FARM INCOME	
Cordwood	92
Mixed Hay	88
Soybeans	35858
Straw	0
Winter Wheat	4675
Raised Hogs	1517561
Feeder Pigs	97
Finish Feeder Pigs	68
Cull breeding livestock	105831
Misc. livestock income	245
Other government payments	14150
Custom work income	845
Patronage dividends, cash	74
Cash from hedging accts	-9081
Other farm income	21111
Gross Cash Farm Income	1691613

Table B2. FARM INCOME STATEMENT, 1996 (Continued)
Michigan Hog Farms, 400 to 2,200 Sows
(Average of all farms reporting)

	Average Of All Farms
	<hr/>
Number of Farms	6
CASH FARM EXPENSE	
Seed	13735
Fertilizer	18205
Crop chemicals	30776
Crop insurance	1707
Drying fuel	7657
Crop miscellaneous	251
Purchased feed	810088
Breeding fees	11230
Veterinary	37291
Livestock supplies	8162
Livestock marketing	6859
Interest	112008
Fuel & oil	14895
Repairs	40174
Custom hire	99552
Hired labor	202674
Land rent	23430
Machinery & bldg leases	19769
Real estate taxes	14784
Farm insurance	11959
Utilities	41480
Dues & professional fees	5409
Hedging account deposits	2791
Miscellaneous	20040
Total cash expense	1554927
Net cash farm income	136686
INVENTORY CHANGES	
Crops and feed	-40328
Market livestock	218239
Accounts receivable	-2125
Prepaid expenses and supplies	-6156
Accounts payable	-21585
Total inventory change	148044
Net operating profit	284730
DEPRECIATION AND OTHER CAPITAL ADJUSTMENTS	
Breeding livestock	28922
Machinery and equipment	-56587
Buildings and improvements	-100854
Other farm capital	-7407
Total depr. and other capital adj	-135926
Net farm income	148804

Table B3. INVENTORY CHANGES, 1996
Michigan Hog Farms, 400 to 2,200 Sows
(Average of all farms reporting)

	Average Of All Farms
Number of Farms	6
Net cash farm income	136686
CROPS AND FEED	
Ending inventory	127525
Beginning inventory	167853
Inventory change	-40328
MARKET LIVESTOCK	
Ending inventory	556561
Beginning inventory	338322
Inventory change	218239
ACCTS RECEIVABLE & OTHER CURRENT ASSETS	
Ending inventory	3255
Beginning inventory	5380
Inventory change	-2125
PREPAID EXPENSES AND SUPPLIES	
Ending inventory	58268
Beginning inventory	64424
Inventory change	-6156
ACCOUNTS PAYABLE	
Beginning inventory	69068
Ending inventory	90654
Inventory change	-21585
Total inventory change	148044
Net operating profit	284730

Table B4.

DEPRECIATION AND OTHER CAPITAL ADJUSTMENTS, 1996
Michigan Hog Farms, 400 to 2,200 Sows
(Average of all farms reporting)

	Average Of All Farms
	6
Number of Farms	6
Net operating profit	284730
BREEDING LIVESTOCK	
Ending inventory	226318
Capital sales	3532
Beginning inventory	169050
Capital purchases	31878
Depreciation, capital adj.	28922
MACHINERY AND EQUIPMENT	
Ending inventory	183723
Capital sales	2578
Beginning inventory	190506
Capital purchases	52382
Depreciation, capital adj.	-56587
BUILDINGS AND IMPROVEMENTS	
Ending inventory	633782
Capital sales	-
Beginning inventory	304195
Capital purchases	430441
Depreciation, capital adj.	-100854
OTHER CAPITAL ASSETS	
Ending inventory	32596
Capital sales	120740
Beginning inventory	133441
Capital purchases	27303
Depreciation, capital adj.	-7407
Total depreciation, capital adj.	-135926
Net farm income	148804

Table B5. PROFITABILITY AND LIQUIDITY ANALYSIS, 1996
Michigan Hog Farms, 400 to 2,200 Sows
(Average of all farms reporting)

	Average Of All Farms	Average Of All Farms
	-----	-----
Number of Farms	6	6
PROFITABILITY	--- Cost ---	-- Market --
Net farm income	148804	233817
Labor and management earnings	106903	146920
Rate of return on assets	9.9 %	10.1 %
Rate of return on equity	13.8 %	12.5 %
Operating profit margin	19.4 %	27.2 %
Asset turnover rate	51.0 %	37.3 %
Interest on farm net worth	41901	86896
Farm interest expense	113812	113812
Value of operator lbr and mgmt.	52120	52120
Return on farm assets	210496	295509
Average farm assets	2128305	2913828
Return on farm equity	96684	181697
Average farm equity	698345	1448273
Value of farm production	1086233	1086233
	Average Of All Farms	

Number of Farms	6	
LIQUIDITY (Cash)		
Net cash farm income	136686	
Net nonfarm income	2913	
Family living and taxes	49197	
Real estate principal payments	43059	
Cash available for interm. debt	47343	
Average intermediate debt	402538	
Years to turnover interm. debt	8.5	
Expense as a % of income	92 %	
Interest as a % of income	7 %	
LIQUIDITY (Accrual)		
Total accrual farm income	1867399	
Total accrual farm expense	1582669	
Net accrual operating income	284730	
Net nonfarm income	2913	
Family living and taxes	49197	
Real estate principal payments	43059	
Available for intermediate debt	195387	
Average intermediate debt	402538	
Years to turnover interm. debt	2.1	
Expense as a % of income	85 %	
Interest as a % of income	6 %	

Table B6. BALANCE SHEET AT COST VALUES, 1996
Michigan Hog Farms, 400 to 2,200 Sows
(Average of all farms reporting)

Number of Farms	Average For All Farms	
	Beginning	Ending
	6	
ASSETS		
Current Farm Assets		
Cash and checking balance	88738	35831
Prepaid expenses & supplies	64424	58268
Growing crops	3488	1893
Accounts receivable	594	-
Hedging accounts	-	-
Crops held for sale or feed	167853	127525
Crops under government loan	-	-
Market livestock held for sale	338322	556561
Other current assets	1298	1362
Total current farm assets	664717	781440
Intermediate Farm Assets		
Breeding livestock	169050	226318
Machinery and equipment	190506	183723
Other intermediate assets	124516	32596
Total intermediate farm assets	484072	442636
Long-Term Farm Assets		
Farm land	468421	468421
Buildings and improvements	304195	633782
Other long-term assets	8925	-
Total long-term farm assets	781541	1102203
Total Farm Assets	1930330	2326280
Total Nonfarm Assets	37491	42262
Total Assets	1967821	2368542
LIABILITIES		
Current Farm Liabilities		
Accrued interest	19477	21280
Accounts payable	49592	69373
Current notes	347386	638164
Government crop loans	-	-
Principal due on term debt	123723	123086
Total current farm liabilities	540681	852407
Intermediate Farm Liabilities	369898	274403
Long-term Farm Liabilities	372673	449857
Total Farm Liabilities	1283253	1576667
Total Nonfarm Liabilities	2333	1725
Total Liabilities	1285586	1578392
Net Worth (farm and nonfarm)	682235	790150
Net Worth Change		107916
RATIO ANALYSIS		
Current Farm Liabilities / Assets	81 %	109 %
Curr. & Interm Farm Liab / Assets	79 %	92 %
Long Term Farm Liab. / Assets	48 %	41 %
Total Liabilities / Assets	65 %	67 %

Table B7. BALANCE SHEET AT MARKET VALUES, 1996
Michigan Hog Farms, 400 to 2,200 Sows
(Average of all farms reporting)

Number of Farms	Average For All Farms	
	Beginning	Ending
	6	
ASSETS		
Current Farm Assets		
Cash and checking balance	88738	35831
Prepaid expenses & supplies	64424	58268
Growing crops	3488	1893
Accounts receivable	594	-
Hedging accounts	-	-
Crops held for sale or feed	167853	127525
Crops under government loan	-	-
Market livestock held for sale	338322	556561
Other current assets	1298	1362
Total current farm assets	664717	781440
Intermediate Farm Assets		
Breeding livestock	206228	264916
Machinery and equipment	394085	421761
Other intermediate assets	124516	32596
Total intermediate farm assets	724828	719273
Long-Term Farm Assets		
Farm land	893771	879821
Buildings and improvements	373637	781245
Other long-term assets	8925	-
Total long-term farm assets	1276332	1661066
Total Farm Assets	2665878	3161779
Total Nonfarm Assets	45324	52929
Total Assets	2711202	3214708
LIABILITIES		
Current Farm Liabilities		
Accrued interest	19477	21280
Accounts payable	49592	69373
Current notes	347386	638164
Government crop loans	-	-
Principal due on term debt	123723	123086
Total current farm liabilities	540681	852407
Intermediate Farm Liabilities	369898	274403
Long-term Farm Liabilities	372673	449857
Total Farm Liabilities	1283253	1576667
Total Nonfarm Liabilities	2333	1725
Total Deferred Liabilities	30665	46520
Total Liabilities	1316251	1624912
Net Worth (farm and nonfarm)	1394952	1589796
Net Worth Change		194844
RATIO ANALYSIS		
Current Farm Liabilities / Assets	81 %	109 %
Curr. & Interm Farm Liab. / Assets	66 %	75 %
Long Term Farm Liabilities / Assets	29 %	27 %
Total Liabilities / Assets	49 %	51 %

Table B8. STATEMENT OF CASH FLOWS, 1996
Michigan Hog Farms, 400 to 2,200 Sows
(Average of all farms reporting)

	Average Of All Farms
Number of Farms	6
(a) Beginning cash balance (farm & nonfarm)	88738
CASH FROM OPERATING ACTIVITIES	
Gross cash farm income	1691613
Net nonfarm income	2913
Total cash farm expense	1554927
Apparent family living expense	49197
Income and social security tax	-
(b) Cash from operations	90402
CASH FROM INVESTING ACTIVITIES	
Sale of breeding livestock	3532
Sale of machinery & equipment	2578
Sale of farm land	-
Sale of farm buildings	-
Sale of other farm assets	120740
Sale of nonfarm assets	-
Purchase of breeding livestock	31878
Purchase of machinery & equip.	52382
Purchase of farm land	-
Purchase of farm buildings	430441
Purchase of other farm assets	27303
Purchase of nonfarm assets	-
(c) Cash from investing activities	-415153
CASH FROM FINANCING ACTIVITIES	
Money borrowed	902106
Cash gifts and inheritances	228
Principal payments	630277
Dividends paid	-
Gifts given	212
(d) Cash from financing activities	271845
(e) Net change in cash balance (b+c+d)	-52907
Ending cash balance (farm & nonfarm)	35831

Table B9. FINANCIAL GUIDELINES MEASURES, 1996
Michigan Hog Farms, 400 to 2,200 Sows
(Average of all farms reporting)

	Average For All Farms	

Number of Farms	6	
LIQUIDITY	Beginning	Ending
Current ratio	1.23	0.92
Working capital	124037	-70967
SOLVENCY (Market)	Beginning	Ending
Farm debt to asset ratio	49 %	51 %
Farm equity to asset ratio	51 %	49 %
Farm debt to equity ratio	97 %	103 %
PROFITABILITY	Cost	Market
Rate of return on farm assets	9.9 %	10.1 %
Rate of return on farm equity	13.8 %	12.5 %
Operating profit margin	19.4 %	27.2 %
Net farm income	148804	233817
REPAYMENT CAPACITY	Cash	Accrual
Term debt coverage ratio	79 %	174 %
Capital replacement margin	-33321	114723
EFFICIENCY		
Asset turnover rate (market)	37.3 %	
Operating expense ratio	78.7 %	
Depreciation expense ratio	7.3 %	
Interest expense ratio	6.1 %	
Net farm income ratio	8.0 %	

LABOR ANALYSIS

	Average For All Farms

Number of Farms	6
Total unpaid labor hours	3442
Total hired labor hours	14800
Total labor hours per farm	18242
Value of farm production / hour	59.55
Net farm income / unpaid hour	43.23

EXPLANATORY NOTES FOR THE WHOLE-FARM REPORTS⁴

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.

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

Depreciation and Other Capital Adjustments

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

Profitability and Liquidity Analysis

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

Profitability

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

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

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

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

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

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

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

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

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

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

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

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

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

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

Liquidity: Cash Basis

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

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

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

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

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

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

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

Liquidity: Accrual Basis

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

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

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

Balance Sheets

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

Statement of Cash Flows

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

Financial Guidelines Measures and Labor Analysis

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

Liquidity

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

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

Solvency (Market)

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

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

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

Profitability

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

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: $\text{Rate of Return on Equity} = \text{Return on Farm Equity} \div \text{Average Farm Net Worth}$, where: $\text{Return on Farm Equity} = \text{Net Farm Income} - \text{Value of Operator's Labor \& Management}$, and $\text{Average Farm Net Worth} = (\text{Beginning Farm Net Worth} + \text{Ending Farm Net Worth}) \div 2$.

“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.