Staff Paper

1997 Business Analysis Summary for Fruit Farms

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1997 BUSINESS ANALYSIS SUMMARY FOR FRUIT FARMS

1997 Michigan Telfarm/MicroTel Data Staff Paper No. 98-14

by

Sherrill B. Nott and Jackie Smith 14 pages

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. Fruit farms have 50 percent or more of value of combined sales from cherries, apples, and other fruits.

This report is a summary of the financial and production records kept by fruit farmers enrolled in the Telfarm/MicroTel record program through Michigan State University Extension. Farm records were included if a Finan¹ summary was completed on 1997 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. The averages are reported in the tables below; it should be recognized that considerable variability exist in the data. In statistical terms, the expected standard deviations would be large.

This report has three purposes: 1)to provide statistical information about the financial results on fruit farms during 1997; 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 long term trends may be a problem, as Telfarm/MicroTel and the Department of Agricultural

¹ 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.

Economics in 1995 adopted Finansum,² a different software package than had been previously used for doing annual analysis. For fruit farm averages for 1995, see Staff Paper No. 96-86, <u>Michigan Farm</u> <u>Database</u>, <u>New Directions for 1995</u>; it contains averages of 23 fruit farms calculated with Finansum. Staff Paper No. 97-26, Business Analysis Summary for Fruit Farms, contains averages of 18 fruit farms for 1996. These staff papers are available from the lead author.

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 increased the percentage to 34 for the fruit farms. 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 include a subset in the publication.

The farms included in the averages below are not a random sample. Most of them kept their financial records with Michigan State University's Telfarm/MicroTel accounting project. The averages may be representative of bigger and better managed fruit farms.

This document may be found and downloaded from the following:

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

² 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, 1997

	Average Of All Farms	Average Of Low 34%	
Number of Farms	18	6	6
ACREAGE SUMMARY Total Acres Owned Total Crop Acres Crop Acres Owned Crop Acres Cash Rented Crop Acres Share Rented Total Pasture Acres	223 172 150 21 1 -	157 173 125 45 3 -	260 184 174 9 -
AVERAGE YIELD PER ACRE Apples (bu.) Cherries (lb.) Grapes (ton) Asparagus (cwt.) Peaches (bu.) Cherries, Tart (lb.) Corn (bu.) Soybeans (bu.) Cherries, Sweet (lb.) Plums (lb.)	$\begin{array}{r} 414.03\\2392.13\\5.53\\9.43\\225.57\\10660.63\\115.00\\37.00\\10903.06\\11286.73\end{array}$	- - - - - - - -	- - - - - - - -

Table 2.

FARM INCOME STATEMENT, 1997

	Average Of All Farms	Average Of Low 34%	Average Of High 34%
Number of Farms	18	6	6
CASH FARM INCOME			
Apples	131769	106497	219264
Asparagus	4499	2949	8553
Blackberries	7514	22540	-
Cherries	40499	26473	27361
Sweet Cherries	4533	-	13599
Tart Cherries	47	-	140
Corn	580	129	-
Grapes	7606	-	2561
Mustard Seed	8014	24041	-
Peaches	11726	5830	22014
Pears	30	67	5
Plums	3387	65	2839
Pumpkins	235	-	706
Rye	30	-	90
Soybeans	416	-	-
Squash	976	-	2927
Straw	17	-	50
Other crops	54377	29918	82133
Other government payments	288	181	634
Custom work income	3678	525	1245
Patronage dividends, cash	1590	458	1396
Insurance income	1685	-	-
Other farm income	9083	21300	3663
Gross Cash Farm Income	292579	240975	389179

Table 3.

FARM INCOME STATEMENT, 1997 (Continued)

	Average Of All Farms	Average Of Low 34%	Average Of High 34%
Number of Farms	18	б	б
CASH FARM EXPENSE			
Seed	2139	3335	1242
Fertilizer	4600	4409	3788
Crop chemicals	37987	38044	42054
Crop insurance	1119	497	1526
Crop marketing	2573	1156	2466
Crop miscellaneous	7225	2050	10239
Purchased feed	23	-	68
Veterinary	26	78	-
Interest	17646	16457	15712
Fuel & oil	5678	5796	4605
Repairs	21084	19864	22826
Custom hire	5468	3526	5928
Hired labor	78504	86135	92942
Land rent	3153	2013	2080
Machinery & bldg leases	8641	4524	9523
Real estate taxes	3647	3762	3983
Personal property taxes	102	60	54
Farm insurance	5547	10698	3216
Utilities	5208	5334	6436
Dues & professional fees	2475	2998	2203
Miscellaneous	23949	26083	39826
Total cash expense	236794	236818	270718
Net cash farm income	55784	4158	118462
INVENTORY CHANGES			
Crops and feed	-13701	-27115	-7160
Market livestock	-	-	-
Accounts receivable	2	-10382	13848
Prepaid expenses and supplies	-5159	-1300	-13325
Accounts payable	291	-360	701
Total inventory change	-18566	-39156	-5936
Net operating profit	37218	-34999	112526
DEPRECIATION AND OTHER CAPITAL ADJUSTMENTS			
Breeding livestock	-	-	-
Machinery and equipment	-13311	-9298	-17383
Buildings and improvements	-6025	-7324	-7623
Other farm capital	-1109	589	-2275
Total depr. and other capital adj	-20445	-16033	-27281
Net farm income	16773	-51032	85245

INVENTORY CHANGES, 1997

	Average Of All Farms	Average Of Low 34%	Average Of High 34%
Number of Farms	18	б	б
Net cash farm income	55784	4158	118462
CROPS AND FEED Ending inventory Beginning inventory Inventory change	84851 98552 -13701	59550 86665 -27115	106799 113959 -7160
MARKET LIVESTOCK Ending inventory Beginning inventory Inventory change	- -	- - -	- -
ACCTS RECEIVABLE & OTHER CURRENT ASSETS Ending inventory Beginning inventory Inventory change	48764 48762 2	3142 13523 -10382	124943 111095 13848
PREPAID EXPENSES AND SUPPLIES Ending inventory Beginning inventory Inventory change	6976 12136 -5159	4412 5712 -1300	9268 22594 -13325
ACCOUNTS PAYABLE Beginning inventory Ending inventory Inventory change	9085 8794 291	5286 5646 -360	3927 3226 701
Total inventory change	-18566	-39156	-5936
Net operating profit	37218	-34999	112526

Table 5.

DEPRECIATION AND OTHER CAPITAL ADJUSTMENTS, 1997

Michigan Fruit Farms, 6 Western Counties (Farms sorted by Net Farm Income)

	Average Of All Farms		Average Of High 34%
Number of Farms	18	6	6
Net operating profit	37218	-34999	112526
BREEDING LIVESTOCK Ending inventory Capital sales Beginning inventory Capital purchases Depreciation, capital adj.	- - - -	- - - -	- - - -
MACHINERY AND EQUIPMENT Ending inventory Capital sales Beginning inventory Capital purchases Depreciation, capital adj.	74441 5957 72581 21129 -13311	25085	
BUILDINGS AND IMPROVEMENTS Ending inventory Capital sales Beginning inventory Capital purchases Depreciation, capital adj.	99072 - 95149 9948 -6025	109461 113502 	118024 - 99137 26510 -7623
OTHER CAPITAL ASSETS Ending inventory Capital sales Beginning inventory Capital purchases Depreciation, capital adj.	38745 3614 39391 4076 -1109	6203	18190 2441 19487 3418 -2275
Total depreciation, capital adj.	-20445	-16033	-27281
Net farm income	16773	-51032	85245

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PROFITABILITY AND LIQUIDITY ANALYSIS, 1997

Michigan Fruit Farms, 6 Western Counties (Farms sorted by Net Farm Income)

	Avg. Of All Farms	Avg. Of Low 34 %	Avg. Of High 34 %	Avg. Of All Farms	Avg. Of Low 34 %	Avg. Of High 34 %
Number of Farms	18	6	6	18	6	6
PROFITABILITY		Cost			Market	
Net farm income		-51032	85245	43856	-37625	139835
Labor and management earnings	-492	-64847	56147	-830	-76992	85123
Rate of return on assets	0.0 %	-14.5 %	8.2 %	2.7 %	-5.9 %	9.8 %
Rate of return on equity	-6.4 %	-43.1 %	9.6 %	1.3 %	-10.9 %	11.0 %
Operating profit margin	0.1 %	-33.3 %	15.4 %	9.8 %	-26.7 %	29.2 %
Asset turnover rate	52.2 %	-14.5 % -43.1 % -33.3 % 43.5 %	53.4 %	27.7 %	-5.9 % -10.9 % -26.7 % 22.0 %	33.6 %
Interest on farm net worth Farm interest expense	17265	13815	29098	44686		54712
Farm interest expense	17549	16898	15597			
Value of operator lbr and mgmt.	34157	33575 -67709 467386	39921	34157	33575	
Return on farm assets	165	-67709	60921	27248		115511
Average farm assets	534309	467386	740837			
Return on farm equity	-17384	-84607	45323		-71201	
Average fails equity	270960	196502				
Value of farm production	-17384 270960 278858	203479	395800	278858	203479	395800
				e Of Averag 4 % High		
Number of Farms			18	6	6	
LIQUIDITY (Cash)						
Net cash farm income		557	784	4158 11	18462	
Net nonfarm income		173	346	9791	15498	
Family living and taxes		392	234 24	4882	50861	
Real estate principal payments		140	92 13	2610	17810	
Cash available for interm. debt		198	305 -23	3544 6	55289	
Average intermediate debt		600	042 78	8119 !	53831	
Years to turnover interm. debt		-			0.8	
Expense as a % of income					70 %	
Interest as a % of income		6	5 %	7 %	4 %	
LIQUIDITY (Accrual)						
Total accrual farm income		2788			95868	
Total accrual farm expense		2416			33342	
Net accrual operating income		372			12526	
Net nonfarm income		173			15498	
Family living and taxes					50861	
Real estate principal payments Available for intermediate debt					17810 59352	
Available for intermediate debt Average intermediate debt					59352 53831	
Years to turnover interm. debt		48	3.5	* *	0.9	
Expense as a % of income					72 %	
Interest as a % of income				8 %	4 %	

** Income insufficient to meet debt servicing requirements

BALANCE SHEET AT COST VALUES, 1997

	Average OfAverage OfAll FarmsLow 34 %			Average Of High 34 %		
Number of Farms		18		6		6
	Beginning	Ending	Beginning	Ending	Beginning	Ending
ASSETS						
Current Farm Assets						
Cash and checking balance	35436	29073	33063	35320	52589	43269
Prepaid expenses & supplies	12136	6976	5712	4412	22594	9268
Growing crops	-	-	-	-	-	-
Accounts receivable	45384	47831	6857	3142	107629	122143
Hedging accounts	- 98552	- 84851	- 86665	- 59550	- 113959	- 106799
Crops held for sale or feed Crops under government loan	98552	84851		59550	113959	106/99
Market livestock held for sale	-	-	-	-	_	-
Other current assets	3378	933	6667	_	3467	2800
Total current farm assets	194886	169665	138963	102423	300236	284280
Intermediate Farm Assets	191000	100000	100000	102125	500250	201200
Breeding livestock	-	-	_	-	_	-
Machinery and equipment	72581	74441	51750	57219	138984	130903
Other intermediate assets	27667	26509	37363	32647	16153	14856
Total intermediate farm assets	100248	100950	89112	89866	155137	145760
Long-Term Farm Assets						
Farm land	141261	143428	115258	111139	185425	187008
Buildings and improvements	95149	99072	113502	109461	99137	118024
Other long-term assets	11724	12236	31840	33207	3333	3333
Total long-term farm assets	248134	254736	260600	253807	287895	308365
Total Farm Assets	543268	525350	488675	446097	743268	738405
Total Nonfarm Assets	40905	46536	2500	2500	40618	52410
Total Assets	584173	571887	491175	448597	783886	790815
LIABILITIES						
Current Farm Liabilities						
Accrued interest	4141	4044	3300	3741	2549	2434
Accounts payable	4944	4750	1987	1905	1378	792
Current notes	21613	22882	36342	35774	3833	3333
Government crop loans	-	-	-	-	-	-
Principal due on term debt	24163	27514	21271	25157	31046	36779
Total current farm liabilities	54862	59218	62899	66577	38806	43338
Intermediate Farm Liabilities Long-term Farm Liabilities	51258 162368	47071 151922	63360 139084	73432 136414	50042 193351	34931 173868
Total Farm Liabilities	268487	258211	265343	276424	282199	252136
Iotal Falm Habilities	200407	230211	203343	270424	202199	252150
Total Nonfarm Liabilities	19639	18045	3900	815	-	-
Total Liabilities	288126	276256	269243	277239	282199	252136
Net Worth (farm and nonfarm)	296046	295630	221931	171358	501687	538679
Net Worth Change		-416		-50574		36992
RATIO ANALYSIS						
Current Farm Liabilities / Assets	28 %	35 %	45 %	65 %	13 %	15 %
Curr. & Interm Farm Liab / Assets	36 %	39 %	55 %	73 %	20 %	18 %
Long Term Farm Liab. / Assets	65 %	60 %	53 %	54 %	67 %	56 %
Total Liabilities / Assets	49 %	48 %	55 %	62 %	36 %	32 %

BALANCE SHEET AT MARKET VALUES, 1997

	Avera All	ge Of Farms	Averas Low 3		Avera High	ge Of 34 %
Number of Farms		18		6		6
	Beginning	Ending	Beginning	Ending	Beginning	Ending
ASSETS						
Current Farm Assets	25426	00070	22062	25200	50500	12000
Cash and checking balance	35436	29073	33063	35320	52589	43269
Prepaid expenses & supplies	12136	6976	5712	4412	22594	9268
Growing crops Accounts receivable	45384	47831	6857	3142	107629	122143
Hedging accounts	40004	47031		5142	107029	122145
Crops held for sale or feed	98552	84851	86665	59550	113959	106799
Crops under government loan	-	04051	-	-	-	100755
Market livestock held for sale	_	_	_	_	-	_
Other current assets	3378	933	6667	_	3467	2800
Total current farm assets	194886	169665	138963	102423	300236	284280
Intermediate Farm Assets	191000	200000	100000	102120	500250	201200
Breeding livestock	-	-	-	-	-	-
Machinery and equipment	176279	200228	167901	179728	203470	259005
Other intermediate assets	31029	29695	38179	33063	16153	14868
Total intermediate farm assets	207308	229923	206080	212791	219623	273873
Long-Term Farm Assets						
Farm land	472448	481475	428991	427914	562883	572983
Buildings and improvements	90510	90632	136577	137277	48927	48593
Other long-term assets	38381	41004	30976	32009	22500	24167
Total long-term farm assets	601339	613111	596544	597201	634310	645743
Total Farm Assets	1003533	1012698	941587	912415	1154170	1203896
Total Nonfarm Assets	130840	141905	2500	2500	162251	188069
Total Assets	1134373	1154603	944086	914915	1316421	1391965
LIABILITIES						
Current Farm Liabilities						
Accrued interest	4141	4044	3300	3741	2549	2434
Accounts payable	4944	4750	1987	1905	1378	792
Current notes	21613	22882	36342	35774	3833	3333
Government crop loans	-	-	-	-	-	-
Principal due on term debt	24163	27514	21271	25157	31046	36779
Total current farm liabilities	54862	59218	62899	66577	38806	43338
Intermediate Farm Liabilities	51258	47071	63360	73432	50042	34931
Long-term Farm Liabilities	162368	151922	139084	136414	193351	173868
Total Farm Liabilities	268487	258211	265343	276424	282199	252136
Total Nonfarm Liabilities	19639	18045	3900	815	-	-
Total Deferred Liabilities	-	-	-	-	-	-
Total Liabilities	288126	276256	269243	277239	282199	252136
Net Worth (farm and nonfarm)	846246	878347	674843	637676	1034222	1139829
Net Worth Change		32100		-37167		105607
RATIO ANALYSIS						
Current Farm Liabilities / Assets	28 %	35 %	45 %	65 %	13 %	15 %
Curr. & Interm Farm Liab. / Assets	26 %	27 %	37 %	44 %	17 %	14 %
Long Term Farm Liabilities / Assets	27 %	25 %	23 %	23 %	30 %	27 %
Total Liabilities / Assets	25 %	24 %	29 %	30 %	21 %	18 %

STATEMENT OF CASH FLOWS, 1997

	Average Of All Farms	Average Of Low 34%	Average Of High 34%
Number of Farms	18	6	6
(a) Beginning cash balance (farm & nonfarm)	37936	33063	59922
CASH FROM OPERATING ACTIVITIES Gross cash farm income (+) Total cash farm expense (-) Apparent family living expense (-) Income and social security tax (-) (b) Cash from operations (=)	292579 17346 236794 30009 9225 33897	240975 9791 236818 24799 83 -10934	389179 15498 270718 29410 21450 83099
CASH FROM INVESTING ACTIVITIES Sale of breeding livestock Sale of machinery & equipment (+) Sale of farm land (+) Sale of farm buildings (+) Sale of other farm assets (+) Sale of nonfarm assets (+) Purchase of breeding livestock (-) Purchase of machinery & equip. (-) Purchase of farm land (-) Purchase of farm buildings (-) Purchase of other farm assets (-) Purchase of nonfarm assets (-) Cash from investing activities (=)	- 5957 5556 - 3614 - 21129 - 9948 4076 5658 -25684	10317 16667 	- 6864 - 2441 - 16167 - 26510 3418 15372 -52163
CASH FROM FINANCING ACTIVITIES Money borrowed Cash gifts and inheritances (+) Principal payments (-) Dividends paid (-) Gifts given (-) (d) Cash from financing activities (=) (e) Net change in cash balance (b+c+d)	55166 894 64421 - 5929 -14290 -6077	41583 30863 - 10721 2257	35826
Ending cash balance (farm & nonfarm)	31859	35320	51461

FINANCIAL GUIDELINES MEASURES, 1997

Michigan Fruit Farms, 6 Western Counties (Farms sorted by Net Farm Income)

	Averas All H	,	Averas Low 3	·		ge For 34 %
Number of Farms		18		6		б
LIQUIDITY	Beginning	Ending	Beginning	Ending	Beginning	Ending
Current ratio	3.55	2.87	2.21	1.54	7.74	6.56
Working capital	140024	110447	76063	35846	261430	240942
SOLVENCY (Market)	Beginning	Ending	Beginning	Ending	Beginning	Ending
Farm debt to asset ratio	27 %	25 %	28 %	30 %	24 %	21 %
Farm equity to asset ratio	73 %	75 %	72 %	70 %	76 %	79 %
Farm debt to equity ratio	37 %	34 %	39 %	43 %	32 %	26 %
PROFITABILITY	Cost	Market	Cost	Market	Cost	Market
Rate of return on farm assets	0.0 %	2.7 %	-14.5 %	-5.9 %	8.2 %	9.8 %
Rate of return on farm equity	-6.4 %	1.3 %	-43.1 %	-10.9 %	9.6 %	11.0 %
Operating profit margin	0.1 %	9.8 %	-33.3 %	-26.7 %	15.4 %	29.2 %
Net farm income	16773	43856	-51032	-37625	85245	139835
REPAYMENT CAPACITY	Cash	Accrual	Cash	Accrual	Cash	Accrual
Term debt coverage ratio	124 %	76 %	-9 %	-141 %	220 %	207 %
Capital replacement margin	9138	-9428	-32205	-71361	52053	46117
EFFICIENCY Asset turnover rate (market) Operating expense ratio Depreciation expense ratio Interest expense ratio Net farm income ratio	80 7 6	.7 % .4 % .3 % .3 %	108 7	.9 % .3 %	67 6 3	.6 % .6 % .9 % .9 %

LABOR ANALYSIS

	Average For	Average For	Average For
	All Farms	Low 34 %	High 34 %
Number of Farms	18	6	6
Total unpaid labor hours	2500	2298	2568
Total hired labor hours	10911	11526	9037
Total labor hours per farm	13411	13823	11605
Value of farm production / hour	20.79	14.72	34.11
Net farm income / unpaid hour	6.71	-22.21	33.19

Table 11.

OPERATOR INFORMATION & NONFARM SUMMARY, 1997

	Average Of All Farms	Average Of Low 34%	Average Of High 34%
Number of Farms	18	6	6
OPERATOR INFORMATION			
Average number of operators	1.3	1.5	1.0
Average age of operators	51.9	51.8	45.7
Average number of years farming	27.6	27.0	22.0
NONFARM INCOME			
Nonfarm wages & salary	9027	833	1410
Nonfarm business income	-334	167	-
Nonfarm rental income	7032	6340	11943
Nonfarm interest income	1342	2276	1581
Nonfarm cash dividends	172	174	240
Tax refunds	108	-	324
Nontaxable nonfarm income	-	-	-
Gifts and inheritances	894	-	-
Other nonfarm income	-	_	-
Total nonfarm income	18240	9791	15498

	Average For Beginning	All Farms Ending
NONFARM ASSETS (Mkt)		
Checking & savings	2500	2786
Stocks & bonds	29364	32186
Other current assets	-	1556
Furniture & appliances	6294	6294
Nonfarm vehicles	3761	4428
Cash value of life ins.	4975	5358
Retirement accounts	25550	31273
Other intermediate assets	13313	12468
Nonfarm real estate	45083	45556
Other long term assets	-	-
Total nonfarm assets	130840	141905