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Staff Paper

1998 Business Analysis Summary For General Livestock Farms

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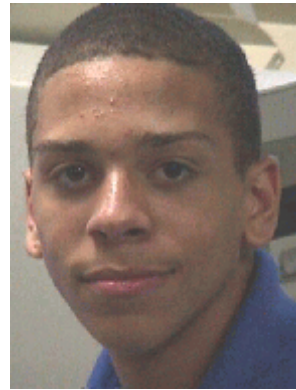
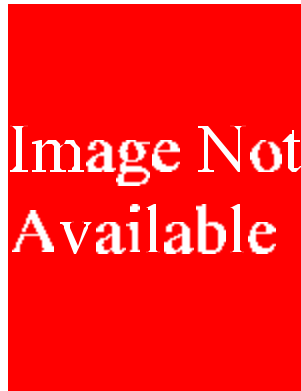
1998 BUSINESS ANALYSIS SUMMARY FOR GENERAL LIVESTOCK FARMS

1998 Michigan Telfarm/MicroTel Data

Staff Paper No. 99-33, 15 pages

by

Sherrill B. Nott¹ and Jonathon C. Hampton²



Introduction

The body of this report is organized as follows:

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- A. List of Tables
- B. Data Source
- C. Per Acre Expense Worksheet

II. List & Sequence of Tables

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B. 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. General livestock farms have 50 percent or more of value of combined sales from livestock and livestock products, such as milk and beef animals, and wool.

This report is a summary of the financial and production records kept by dairy farmers enrolled in the Telfarm/MicroTel record program through Michigan State University Extension. Farm records were included if a Finan³ summary was completed on 1998 data including beginning and ending balance sheets, plus income and expenses. The summary was included if cash discrepancy was less than 10% of gross cash inflow, and if the debt discrepancy was less than \$1,000. The averages are reported in the tables that follow; it should be recognized that considerable variability exists in the data. The unweighted mean of the net farm income for the 13 farms was \$9,081, the standard deviation of the mean was \$51,470 and the median was (\$8,694). The unweighted mean of the acres cropped was 580; the standard deviation of the mean was 382, and the median was 522.

This report has three purposes: 1)to provide statistical information about the financial results on dairy farms during 1998; 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 Economics in 1995 adopted Finansum⁴ and a different software package for doing annual analysis. For general livestock farm averages of 1995, see Staff Paper No. 96-86, Michigan Farm Database, New Directions for 1995; it contains averages of 12 general livestock farms calculated with Finansum.. During 1996 and 1997, there were not enough general livestock records in the system to publish averages.

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 this publication.

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

This document may be found and downloaded from the following:

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

³ **Finan:** financial analysis, one of the parts of Finpack, a financial software package from the Center of Farm Financial Management at the University of Minnesota.

⁴ **Finansum:** provides summarized calculations for data files generated by Finan. It also comes from the Center for Farm Financial Management.

TABLE 1 CROP PRODUCTION AND MARKETING SUMMARY, 1998

General Livestock Farms in Michigan
(Farms sorted by Net Farm Income)

	Average of All Farms)))))))))	Average of Low 48%)))))))))	Average of High 48%)))))))))
Number of Farms	13	6	6

ACREAGE SUMMARY

Total Crop Acres	537	555	585
Crop Acres Owned	367	411	362
Crop Acres Cash Rented	144	144	168
Crop Acres Share Rented	25	-	55
Total Pasture Acres	8	-	-

AVERAGE YIELD PER ACRE

Corn (bu.)	101.21	-	-
Soybeans (bu.)	49.34	-	-
Hay, Alfalfa (ton)	3.14	-	-
Wheat, Winter (bu.)	48.70	-	-
Corn Silage (ton)	14.48	-	-
Corn, Seed (bu.)	188.82	-	-
Hay, Mixed Alfalfa/Grass (ton)	6.70	-	-
Straw (ton)	0.91	-	-
Sugar Beets (ton)	3.60	-	-

TABLE 2

FARM INCOME STATEMENT, 1998

General Livestock Farms in Michigan
(Farms sorted by Net Farm Income)

	Average of <u>All Farms</u>	Average of <u>Low 48%</u>	Average of <u>High 48%</u>
Number of Farms	13	6	6
CASH FARM INCOME			
Alfalfa Seed	457	-	991
Sweet Cherries	3853	8347	-
Tart Cherries	3623	7850	-
Corn	21810	17330	29925
Corn Silage	159	19	326
Alfalfa Hay	207	-	450
Mixed Hay	1114	2083	332
Mixed Alfalfa/Grass Hay	506	-	-
Mixed Haylage	100	217	-
Oats	484	-	1048
Soybeans	36895	27423	52516
Straw	14	30	-
Winter Wheat	4163	5972	3048
Other crops	1634	-	3540
Beef Bulls	4896	10608	-
Beef Calves	3204	6942	-
Background Beef	731	-	1584
Finish Beef Calves	5273	8847	2131
Finish Yrlg Steers	9051	17478	1492
Milk	51534	19971	91686
Dairy Replacement Heifers	1637	3548	-
Dairy Steers	2234	823	4017
Raised Hogs	5757	-	12473
Feeder Pigs	197	408	20
Finish Feeder Pigs	11316	24519	-
Fdr Lambs	14	-	-
Lamb Finishing	6855	14853	-
Mkt Lambs	2218	4362	443
Wool	412	862	30
Cull breeding livestock	8146	5759	11890
Misc. livestock income	218	472	-
Transition payments	3215	3784	2739
Other government payments	16396	21202	14322
Custom work income	7664	7700	8880
Patronage dividends, cash	291	424	208
Insurance income	292	83	550
Cash from hedging accounts	152	329	-
Other farm income	7683	8024	8452
Gross Cash Farm Income	224405	230267	253092

TABLE 3

FARM INCOME STATEMENT, 1998 (Continued)

General Livestock Farms in Michigan
(Farms sorted by Net Farm Income)

	Average of <u>All Farms</u>	Average of <u>Low 48%</u>	Average of <u>High 48%</u>
Number of Farms	13	6	6
CASH FARM EXPENSE			
Seed	14934	13159	19176
Fertilizer	25585	22719	32714
Crop chemicals	8921	14926	4359
Crop insurance	513	1065	47
Drying fuel	658	581	844
Irrigation energy	308	-	667
Crop marketing	87	190	-
Crop miscellaneous	196	192	202
Feeder livestock purchase	12768	26242	1423
Purchased feed	23814	26501	25010
Breeding fees	420	98	794
Veterinary	2855	2391	3743
Livestock supplies	2084	935	3555
Livestock leases	159	344	-
Livestock marketing	1697	2531	1073
Interest	21724	25926	20420
Fuel & oil	7397	8314	7532
Repairs	13645	12708	16595
Custom hire	6088	10302	2889
Hired labor	8253	6248	11633
Land rent	11030	12928	10663
Machinery & bldg leases	1326	2696	177
Real estate taxes	6741	8353	6252
Personal property taxes	3	-	-
Farm insurance	5677	6005	5869
Utilities	4553	4154	5451
Dues & professional fees	2535	2397	3014
Miscellaneous	11752	9967	15463
Total cash expense	195723	221872	199564
Net cash farm income	28682	8395	53528
INVENTORY CHANGES			
Crops and feed	9986	6921	14715
Market livestock	-7543	-10198	-6145
Accounts receivable	3044	-1197	7791
Prepaid expenses and supplies	1632	-808	4345
Accounts payable	-3596	-5086	-2706
Total inventory change	3523	-10368	18000
Net operating profit	32205	-1973	71528
DEPRECIATION AND OTHER CAPITAL ADJUSTMENTS			
Breeding livestock	-372	-1250	1493
Machinery and equipment	-18163	-17027	-21861
Buildings and improvements	-3888	-3598	-4827
Other farm capital	-699	-	-1515
Total depreciation & other capital adjustments	-23123	-21874	-26710
Net farm income	9082	-23847	44818

TABLE 4

INVENTORY CHANGES, 1998

General Livestock Farms in Michigan
(Farms sorted by Net Farm Income)

	Average Of All Farms)))))))))	Average Of Low 48%)))))))))	Average Of High 48%)))))))))
Number of Farms	13	6	6
Net cash farm income	28682	8395	53528
CROPS AND FEED			
Ending inventory	108656	110914	122798
Beginning inventory	98670	103992	108084
Inventory change	9986	6921	14715
MARKET LIVESTOCK			
Ending inventory	27856	39768	20586
Beginning inventory	35399	49966	26731
Inventory change	-7543	-10198	-6145
ACCTS RECEIVABLE & OTHER CURRENT ASSETS			
Ending inventory	15520	8733	24893
Beginning inventory	12476	9930	17102
Inventory change	3044	-1197	7791
PREPAID EXPENSES AND SUPPLIES			
Ending inventory	5582	1411	10683
Beginning inventory	3949	2219	6338
Inventory change	1632	-808	4345
ACCOUNTS PAYABLE			
Beginning inventory	13565	20682	7864
Ending inventory	17161	25768	10569
Inventory change	-3596	-5086	-2706
Total inventory change	3523	-10368	18000
Net operating profit	32205	-1973	71528

TABLE 5

DEPRECIATION AND OTHER CAPITAL ADJUSTMENTS, 1998

General Livestock Farms in Michigan
(Farms sorted by Net Farm Income)

	Average of All Farms)))))))))	Average of Low 48%)))))))))	Average of High 48%)))))))))
Number of Farms	13	6	6
Net operating profit	32205	-1973	71528
BREEDING LIVESTOCK			
Ending inventory	83915	87694	91336
Capital sales	8509	6975	11461
Beginning inventory	87232	91146	94022
Capital purchases	5564	4773	7283
Depreciation, capital adj.	-372	-1250	1493
MACHINERY AND EQUIPMENT			
Ending inventory	86530	81367	102711
Capital sales	3836	3000	5311
Beginning inventory	79466	68332	99975
Capital purchases	29063	33062	29908
Depreciation, capital adj.	-18163	-17027	-21861
BUILDINGS AND IMPROVEMENTS			
Ending inventory	26782	24811	32813
Capital sales	-	-	-
Beginning inventory	28642	28336	33319
Capital purchases	2027	73	4320
Depreciation, capital adj.	-3888	-3598	-4827
OTHER CAPITAL ASSETS			
Ending inventory	17302	29052	8186
Capital sales	631	747	619
Beginning inventory	11041	13353	10320
Capital purchases	7590	16446	-
Depreciation, capital adj.	-699	-	-1515
Total depreciation, capital adj.	-23123	-21874	-26710
Net farm income	9082	-23847	44818

TABLE 6

PROFITABILITY AND LIQUIDITY ANALYSIS, 1998General Livestock Farms in Michigan
(Farms sorted by Net Farm Income)

	Avg. of All Farms)))))))))	Avg. of Low 48%)))))))))	Avg. of High 48%)))))))))	Avg. Of All Farms)))))))))	Avg. Of Low 48%)))))))))	Avg. Of High 48%)))))))))
Number of Farms	13	6	6	13	6	6
PROFITABILITY						
	-----	Cost	-----	-----	Market	-----
Net farm income	9082	-23847	44818	38725	-3167	86473
Labor and management earnings	-8677	-37202	19915	-8611	-53637	36740
Rate of return on assets	-1.8 %	-7.7 %	3.7 %	1.8 %	-1.9 %	6.0 %
Rate of return on equity	-12.0 %	-36.1 %	1.0 %	-0.4 %	-5.9 %	5.6 %
Operating profit margin	-5.4 %	-25.6 %	10.1 %	10.0 %	-13.5 %	27.2 %
Asset turnover rate	33.0 %	30.2 %	36.3 %	17.6 %	14.1 %	22.2 %
Interest on farm net worth	17759	13355	24903	47335	50470	49733
Farm interest expense	22101	26368	20795	22101	26368	20795
Value of operator lbr and mgmt.	41506	46434	40830	41506	46434	40830
Return on farm assets	-10323	-43913	24783	19319	-23233	66439
Average farm assets	584353	568805	672948	1097552	1215055	1103023
Return on farm equity	-32425	-70281	3988	-2782	-49601	45644
Average farm equity	270324	194914	387124	783522	841163	817199
Value of farm production	192936	171800	244513	192936	171800	244513
		Average Of	Average Of	Average Of		
		All Farms	Low 48%	High 48%		
)))))))))))))))))))))))))))		
Number of Farms		13	6	6		
LIQUIDITY (Cash)						
Net cash farm income		28682	8395	53528		
Net nonfarm income		24092	29775	18258		
Family living and taxes		25973	32742	19828		
Real estate principal payments		30185	9359	54837		
Cash available for interm. debt		-3384	-3931	-2879		
Average intermediate debt		76406	133667	30280		
Years to turnover interm. debt		**	**	**		
Expense as a % of income		87 %	96 %	79 %		
Interest as a % of income		10 %	11 %	8 %		
LIQUIDITY (Accrual)						
Total accrual farm income		229891	225793	269453		
Total accrual farm expense		197686	227766	197925		
Net accrual operating income		32205	-1973	71528		
Net nonfarm income		24092	29775	18258		
Family living and taxes		25973	32742	19828		
Real estate principal payments		30185	9359	54837		
Available for intermediate debt		139	-14299	15121		
Average intermediate debt		76406	133667	30280		
Years to turnover interm. debt		550.1	**	2.0		
Expense as a % of income		86 %	101 %	73 %		
Interest as a % of income		10 %	12 %	8 %		

** Income insufficient to meet debt servicing requirements

TABLE 7

BALANCE SHEET AT COST VALUES, 1998
 General Livestock Farms in Michigan
 (Farms sorted by Net Farm Income)

Number of Farms	Average Of All Farms)))))))))		Average Of Low 48 %)))))))))		Average Of High 48 %)))))))))	
	13		6		6	
	Beginning)))))))))	Ending)))))))))	Beginning)))))))))	Ending)))))))))	Beginning)))))))))	Ending)))))))))
ASSETS						
Current Farm Assets						
Cash and checking balance	14533	25871	10854	10202	19726	45020
Prepaid expenses & supplies	3949	5582	2219	1411	6338	10683
Growing crops	5551	8546	7530	8408	4497	10109
Accounts receivable	5470	4355	2350	325	9501	9111
Hedging accounts	-	500	-	-	-	1083
Crops held for sale or feed	97713	108194	101920	110914	108084	121798
Crops under government loan	957	462	2073	-	-	1001
Market livestock held for sale	35399	27856	49966	39768	26731	20586
Other current assets	1456	2118	50	-	3104	4590
Total current farm assets	165027	183484	176961	171027	177980	223979
Intermediate Farm Assets						
Breeding livestock	87232	83915	91146	87694	94022	91336
Machinery and equipment	79466	86530	68332	81367	99975	102711
Other intermediate assets	2652	2498	2792	2827	2702	2334
Total intermediate farm assets	169350	172943	162270	171888	196699	196382
Long-Term Farm Assets						
Farm land	200676	198610	185004	180528	235627	235627
Buildings and improvements	28642	26782	28336	24811	33319	32813
Other long-term assets	8390	14804	10560	26224	7618	5851
Total long-term farm assets	237708	240196	223901	231563	276564	274291
Total Farm Assets	572085	596622	563132	574478	651243	694652
Total Nonfarm Assets	52407	55881	61004	64491	45817	49856
Total Assets	624492	652503	624136	638969	697061	744509
LIABILITIES						
Current Farm Liabilities						
Accrued interest	1717	2095	1136	1579	1740	2115
Accounts payable	11848	15066	19546	24190	6124	8454
Current notes	73273	88311	60866	88799	97893	102543
Government crop loans	681	455	1475	-	-	985
Principal due on term debt	46921	24677	39885	42052	60571	10178
Total current farm liabilities	134439	130650	122908	156619	166327	124374
Intermediate Farm Liabilities	63778	53852	108280	94612	28305	20468
Long-term Farm Liabilities	115419	129921	131347	134018	101317	130857
Total Farm Liabilities	313637	314423	362535	385248	295950	275698
Total Nonfarm Liabilities	2557	1972	5540	2067	-	2205
Total Liabilities	316194	316395	368075	387316	295950	277903
Net Worth (farm and nonfarm)	308298	336108	256061	251653	401111	466605
Net Worth Change		27810		-4408		65494
RATIO ANALYSIS						
Current Farm Liabilities / Assets	81 %	71 %	69 %	92 %	93 %	56 %
Curr. & Interm Farm Liab / Assets	59 %	52 %	68 %	73 %	52 %	34 %
Long Term Farm Liab. / Assets	49 %	54 %	59 %	58 %	37 %	48 %
Total Liabilities / Assets	51 %	48 %	59 %	61 %	42 %	37 %

TABLE 9

STATEMENT OF CASH FLOWS, 1998

General Livestock Farms in Michigan
(Farms sorted by Net Farm Income)

	Average of All Farms)))))))))	Average of Low 48%)))))))))	Average of High 48%)))))))))
Number of Farms	13	6	6
(a) Beginning cash balance (farm & nonfarm)	14805	11442	19726
CASH FROM OPERATING ACTIVITIES			
Gross cash farm income	224405	230267	253092
Net nonfarm income (+)	24092	29775	18258
Total cash farm expense (-)	195723	221872	199564
Apparent family living expense (-)	20325	25079	15253
Income and social security tax (-)	5648	7663	4575
(b) Cash from operations (=)	26801	5428	51958
CASH FROM INVESTING ACTIVITIES			
Sale of breeding livestock	8509	6975	11461
Sale of machinery & equipment (+)	3836	3000	5311
Sale of farm land (+)	24753	21964	31667
Sale of farm buildings (+)	-	-	-
Sale of other farm assets (+)	631	747	619
Sale of nonfarm assets (+)	-	-	-
Purchase of breeding livestock (-)	5564	4773	7283
Purchase of machinery & equip. (-)	29063	33062	29908
Purchase of farm land (-)	15385	-	33333
Purchase of farm buildings (-)	2027	73	4320
Purchase of other farm assets (-)	7590	16446	-
Purchase of nonfarm assets (-)	6940	1380	13657
(c) Cash from investing activities (=)	-28841	-23047	-39443
CASH FROM FINANCING ACTIVITIES			
Money borrowed	174242	175407	202117
Cash gifts and inheritances (+)	2635	5397	313
Principal payments (-)	161330	159254	189536
Dividends paid (-)	-	-	-
Gifts given (-)	2168	4697	-
(d) Cash from financing activities (=)	13379	16853	12894
(e) Net change in cash balance (b+c+d)	11339	-766	25409
Ending cash balance (farm & nonfarm)	26144	10676	45135

TABLE 10

FINANCIAL GUIDELINES MEASURES, 1998

General Livestock Farms in Michigan
(Farms sorted by Net Farm Income)

	Average Of All Farms)))))))))		Average Of Low 48 %)))))))))		Average of High 48 %)))))))))	
Number of Farms	13		6		6	
LIQUIDITY						
	Beginning	Ending	Beginning	Ending	Beginning	Ending
Current ratio	1.23	1.40	1.44	1.09	1.07	1.80
Working capital	30587	52834	54053	14408	11653	99606
SOLVENCY (Market)						
	Beginning	Ending	Beginning	Ending	Beginning	Ending
Farm debt to asset ratio	29 %	28 %	30 %	31 %	28 %	24 %
Farm equity to asset ratio	71 %	72 %	70 %	69 %	72 %	76 %
Farm debt to equity ratio	41 %	39 %	43 %	46 %	39 %	32 %
PROFITABILITY						
	Cost	Market	Cost	Market	Cost	Market
Rate of return on farm assets	-1.8 %	1.8 %	-7.7 %	-1.9 %	3.7 %	6.0 %
Rate of return on farm equity	-12.0 %	-0.4 %	-36.1 %	-5.9 %	1.0 %	5.6 %
Operating profit margin	-5.4 %	10.0 %	-25.6 %	-13.5 %	10.1 %	27.2 %
Net farm income	9082	38725	-23847	-3167	44818	86473
REPAYMENT CAPACITY						
	Cash	Accrual	Cash	Accrual	Cash	Accrual
Term debt coverage ratio	37 %	48 %	35 %	16 %	33 %	173 %
Capital replacement margin	-20488	-16965	-35255	-45623	-8613	9387
EFFICIENCY						
Asset turnover rate (market)	17.6 %		14.1 %		22.2 %	
Operating expense ratio	76.4 %		89.2 %		65.7 %	
Depreciation expense ratio	10.1 %		9.7 %		9.9 %	
Interest expense ratio	9.6 %		11.7 %		7.7 %	
Net farm income ratio	4.0 %		-10.6 %		16.6 %	

LABOR ANALYSIS

	Average Of All Farms)))))))))		Average Of Low 48 %)))))))))		Average Of High 48 %)))))))))	
Number of Farms	13		6		6	
Total unpaid labor hours	4291		5066		4147	
Total hired labor hours	1248		1267		1436	
Total labor hours per farm	5538		6334		5583	
Value of farm production / hour	34.84		27.12		43.80	
Net farm income / unpaid hour	2.12		-4.71		10.81	

TABLE 11

OPERATOR INFORMATION & NONFARM SUMMARY, 1998

General Livestock Farms in Michigan
(Farms sorted by Net Farm Income)

	Average Of All Farms)))))))))	Average Of Low 48%)))))))))	Average Of High 48%)))))))))
Number of Farms	13	6	6
OPERATOR INFORMATION			
Average number of operators	1.4	1.8	1.0
Average age of operators	54.2		
Average number of years farming	26.8		
NONFARM INCOME			
Nonfarm wages & salary	10637	14497	4383
Nonfarm business income	677	394	1072
Nonfarm rental income	182	-	394
Nonfarm interest income	471	606	415
Nonfarm cash dividends	5	-	10
Tax refunds	890	1928	-
Nontaxable nonfarm income	-	-	-
Gifts and inheritances	2635	5397	313
Other nonfarm income	11231	12350	11984
Total nonfarm income	26728	35172	18571
NONFARM ASSETS (Mkt)			
	Average of All Farms		
	Beginning)))))))))	Ending)))))))))	
Checking & savings	272	272	
Stocks & bonds	210	234	
Other current assets	873	783	
Furniture & appliances	7946	7946	
Nonfarm vehicles	2154	4308	
Cash value of life ins.	5214	9344	
Retirement accounts	9963	12394	
Other intermediate assets	215	231	
Nonfarm real estate	35813	36275	
Other long term assets	-	862	
Total nonfarm assets	62660	72650	

