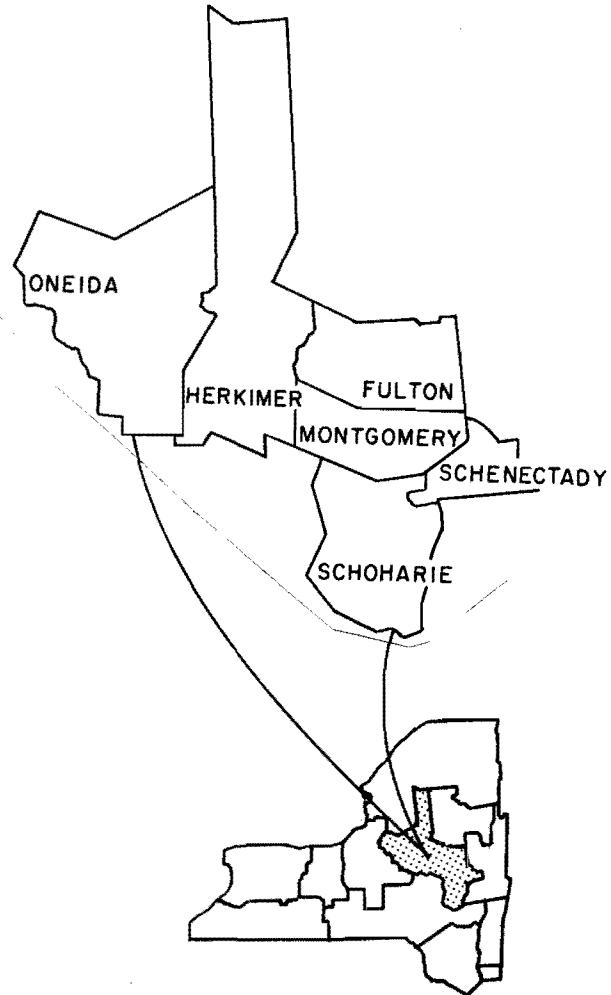


DAIRY FARM BUSINESS SUMMARY

ONEIDA-MOHAWK REGION 1984



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DAIRY FARM BUSINESS SUMMARY
Oneida-Mohawk Region

TABLE OF CONTENTS

	<u>Page</u>
Introduction	1
Program Objectives	1
New Developments	1
Summary of The Farm Business	2
Business Characteristics	2
Inventory Accounting	3
Receipts	4
Expenses	5
Farm Business Profitability	6
Farm Family Financial Situation	8
Analysis of the Farm Business	10
Size of Business	10
Rates of Production	11
Labor Efficiency	12
Capital Efficiency	13
Cost Control	14
Machinery, Labor and Miscellaneous Costs	15
Yearly Cash Flow Planning and Analysis	16
Progress of the Farm Business	17
Management Performance of Statewide Cooperators	18
Measure Your Management Performance	26

DAIRY FARM BUSINESS SUMMARY
Oneida-Mohawk Region

INTRODUCTION

combining and averaging data submitted by the participating farmers' from the region described at the bottom of this page.

Program Objectives

The primary objectives of the dairy farm business management program are to (1) assist farmers in developing and maintaining more complete farm business data for use in management decisions and (2) help farmers improve their management skills through appropriate use of farm record data and application of modern decision-making techniques. This report is prepared in workbook form for use in the systematic study of individual farm business performance.

The need for a thorough dairy farm business examination and follow-up plan is greater than ever. The years immediately ahead will bring continued economic pressures on dairy farmers. We must continue to place emphasis on cost control and improvements in operating efficiency to maintain adequate farm incomes. Projecting cash flows to determine future cash needs, and carefully planning how those needs can be met, will be required to survive the current dairy farm financial crisis.

New Developments

This year, several farm management agents and specialists are participating in a Dairy Farm Business Summary Pilot Program. Cooperative Extension Associations with appropriate microcomputers, have the capability to strengthen their dairy farm business analysis activities by calculating and printing the individual farm summary and analysis reports for immediate use by the agent and farmer, at any time. After the individual farm data is entered in the county office using the Micro DFBS computer program, it is sent to the Department of Agricultural Economics at Cornell University for additional review prior to transfer to a mainframe computer program for calculation of regional and state summaries.

Four dairy farmers participating in the milk diversion program are included in this report. Since this is a relatively small number, the data from these farms has not been summarized separately. A separate summary and analysis of milk diversion program farms will be included in the 1984 New York State Dairy Farm Business Summary.

This summary was prepared by Eddy L. LaDue, Department of Agricultural Economics, New York State College of Agriculture and Life Sciences, Cornell University, in cooperation with Cooperative Extension Agents David Thompson, Eric Kresse, and Teddy Aber. The Oneida-Mohawk Region is comprised of Oneida, Schoharie, Montgomery, Fulton, Herkimer, and Schenectady Counties.

SUMMARY OF THE FARM BUSINESS

Business Characteristics

Assembling the right combination of resources and management strategies is an important part of farming. The tables below show important farm business characteristics, the number of farms reporting these characteristics, and the average level of resources used in production.

MANAGEMENT SYSTEMS, PRODUCTION TECHNOLOGY AND FARM SIZE
40 Oneida-Mohawk Region Dairy Farms, 1984

Type of Business	Number	Business Records	Number	Dairy Records	Number
Proprietorship	31	CAMIS	3	D.H.I.C.	32
Partnership	8	Account Book	13	Owner Sampler	4
Corporation	1	Agrifax	12	None	4
		Agway	1		
Owner	36	On-Farm Computer	0		
Renter	4	Other	11		

Barn Type	Number	Milking System	Number	Number
Stanchion	29	Bucket & Carry	0	Herringbone
Freestall	7	Dumping Station	7	Other Parlor
Other	4	Pipeline	25	

Labor Force	My Farm	Average	Land Use	My Farm	Average
Operator 1.	_____ mo.	11	Total acres owned	_____	277
2.	_____ mo.	4	Total acres rented	_____	88
3.	_____ mo.	1	Tillable acres owned	_____	164
Family paid	_____ mo.	3	Tillable acres rented	_____	67
Family unpaid	_____ mo.	3			
Hired	_____ mo.	7	Number of Cows	_____	
Total	_____ mo.	29	Beginning of		
			year (owned)	_____	67
Age of operator(s) 1.	_____ yrs.	46	End of year (owned)	_____	68
2.	_____ yrs.	33	Avg. for year (all)	_____	68

Capital Investment-Farm Inventory represents the market value of resources committed to the farm business at the beginning and end of the year. Increases in inventory occur with herd expansion, new machinery, building additions and appreciation of assets.

CAPITAL INVESTMENT - FARM INVENTORY
40 Oneida-Mohawk Region Dairy Farms, 1984

Item	My Farm		Average	
	1/1/84	1/1/85	1/1/84	1/1/85
Livestock	\$ _____	\$ _____	\$ 90,970	\$ 90,736
Feed & supplies	_____	_____	29,558	31,698
Machinery & equipment	_____	_____	82,021	83,157
Land & buildings	_____	_____	180,212	187,349
TOTAL	\$ _____	\$ _____	\$382,761	\$392,940

Inventory Accounting

The value of the dairy herd is influenced by market prices, herd quality and quantity. Changes in market value caused by inflationary or deflationary price changes, are separated from changes in inventory caused by changes in herd quality and quantity.

CHANGE IN LIVESTOCK INVENTORY 40 Oneida-Mohawk Region Dairy Farms, 1984

Item	My Farm	Average
End of year market value	\$ _____	\$90,736
less end at beginning prices	- _____	<u>-93,631</u>
Change due to price	\$ _____	\$-2,895
End inventory at beginning prices	\$ _____	\$93,631
less beginning of year inventory	- _____	<u>-90,970</u>
Change due to quality & quantity	\$ _____	\$ 2,661

Changes in machinery and real estate inventories that are not accounted for by purchases, sales or depreciation reflect price changes and result in a change in the value of assets called appreciation.

MACHINERY AND EQUIPMENT INVENTORY 40 Oneida-Mohawk Region Dairy Farms, 1984

Item	My Farm	Average
End of year market value	(1)\$ _____	\$83,157
Beginning market value	\$ _____	\$82,021
Plus machinery purchased	+ _____	+11,268
Less machinery sold	- _____	- 700
Less depreciation	- _____	<u>-12,009</u>
Net end investment	(2)\$ _____	\$80,580
APPRECIATION (1 minus 2)	\$ _____	\$ 2,577

The change in real estate value is affected by market forces, building depreciation, and lost capital which is the portion of a new building investment that is not reflected in the value of the farm.

REAL ESTATE INVENTORY CALCULATIONS 40 Oneida-Mohawk Region Dairy Farms, 1984

Item	My Farm	Average
End of year market value	(1)\$ _____	\$187,349
Beginning market value	\$ _____	\$180,212
Cost of new real estate	\$ _____	\$12,181
Less lost capital	- _____	<u>- 1,398</u>
Value of new added	+ _____	+ 10,783
Less building depreciation	- _____	- 4,848
Less real estate sold	- _____	<u>- 2,300</u>
Net end investment	(2)\$ _____	\$183,847
APPRECIATION (1 minus 2)	\$ _____	\$ 3,502

Receipts

Receipts from the business should be large enough to cover all expenses and leave a reasonable return for the operator's labor and management. Cash receipts result when farm products and livestock are sold or services are performed and payment is received during the year. Noncash receipts do not result from sales, but are due to appreciation in value or increases in physical quantities of inventories that occurred during the year. Most of these items could be readily transformed into cash.

FARM RECEIPTS
40 Oneida-Mohawk Region Dairy Farms, 1984

Item	My Farm	Per Farm	Per Cow
CASH RECEIPTS			
Milk sales	\$ _____	\$136,937	\$2,014
Crop sales	_____	2,683	39
Dairy cattle sold	_____	8,207	121
Calves & other livestock sales	_____	2,022	30
Gas tax refunds	_____	55	1
Government payments	_____	2,451	36
Custom machine work	_____	53	1
Other	_____	1,422	21
Total Cash Receipts	\$ _____	\$153,830	\$2,263
NONCASH RECEIPTS			
Increase in livestock inventory ¹	_____	2,661	39
Increase in feed & supplies	_____	2,140	31
TOTAL FARM RECEIPTS EXCLUDING APPRECIATION			
	\$ _____	\$158,631	\$2,333
Livestock appreciation ²	_____	- 2,895	- 43
Machinery appreciation ³	_____	2,577	38
Real estate appreciation ³	_____	3,502	52
TOTAL FARM RECEIPTS	\$ _____	\$161,815	\$2,380

¹The increase in herd market value attributed to a change in numbers and/or a definite change in herd quality.

²The increase in herd market value, caused by inflationary price increase.

³Defined on page 3.

Income Analysis provides a means of examining the annual receipt producing capability of the farm business.

INCOME ANALYSIS
Oneida-Mohawk Region Dairy Farms, 1984 & 1983

Item	My Farm	40 Farms 1984	42 Farms 1983
Average price/cwt. milk sold	\$ _____	\$13.52	\$13.47
Milk and cattle sales per cow	_____	\$2,164	\$2,149
Total cash receipts/worker	_____	\$63,566	\$59,187

Expenses

All farm expenses, cash operating and overhead, are summarized below.

FARM EXPENSES
40 Oneida-Mohawk Region Dairy Farms, 1984

Item	My Farm	Per Farm	Per Cow
<u>Hired Labor</u>	\$ _____	\$ 10,103	\$ 149
<u>Feed</u>			
Dairy concentrate	_____	31,903	469
Hay and other	_____	1,366	20
<u>Machinery</u>			
Machine hire, rent and lease	_____	1,797	26
Machinery repairs	_____	6,431	95
Auto expense (farm share)	_____	447	7
Gas and oil	_____	4,686	69
<u>Livestock</u>			
Replacement livestock	_____	604	9
Breeding fees	_____	2,094	31
Veterinary and medicine	_____	2,779	41
Milk marketing	_____	10,938	161
Cattle lease	_____	30	0
Other livestock expense	_____	5,585	82
<u>Crops</u>			
Fertilizer & lime	_____	6,682	98
Seeds and plants	_____	2,255	33
Spray, other crop expense	_____	1,467	22
<u>Real Estate</u>			
Land, building, fence repair	_____	2,305	34
Taxes	_____	3,565	52
Insurance	_____	2,423	36
Rent and lease	_____	3,832	56
<u>Other</u>			
Telephone (farm share)	_____	581	9
Electricity (farm share)	_____	3,365	49
Interest paid	_____	16,571	246
Miscellaneous	_____	1,717	25
Total Cash Expenses	\$ _____	\$123,706	\$1,819
Expansion livestock	_____	411	6
Machinery depreciation	_____	12,009	177
Building depreciation	_____	4,848	71
Unpaid family labor @ \$500/month	_____	1,738	26
TOTAL FARM EXPENSES EXCLUDING INTEREST ON EQUITY CAPITAL	\$ _____	\$142,712	\$2,099
Interest on equity capital @ 5%	_____	12,453	183
TOTAL FARM EXPENSES	\$ _____	\$155,165	\$2,282

Farm Business Profitability

The results of management are reflected in the net return from the business. Four common ways to measure the returns from a farm business are calculated.

Net cash farm income reflects the cash available from the year's operation of the business. A family may have additional cash available if they have nonfarm income. Family living has first claim on cash income followed by fixed payments on debts. Cash flow is not a good measure of farm business profits, but it is useful when planning debt repayment programs. The level of cash generated by the business in one year may not be a good indicator of cash available for future years. This is particularly true when significant changes in accounts receivable and payable balances occur during the year. For example, a business can increase the net cash farm income for one year by allowing the outstanding feed bill to rise. Guidelines for annual cash flow planning are presented on page 9.

NET CASH FARM INCOME Oneida-Mohawk Region Dairy Farms, 1984 & 1983

Item	My Farm	40 Farms 1984	42 Farms 1983
Cash Farm Receipts	\$ _____	\$153,830	\$133,171
Cash Farm Expenses	_____	123,706	101,170
NET CASH FARM INCOME	\$ _____	\$ 30,124	\$ 32,001

Labor and management income is the return to the operator for his or her labor and management input into the business. A five percent charge for the use of the operator's equity capital in the business has been included as a farm expense. This interest charge reflects the long term average rate of return that a farmer might expect to earn in investments with comparable risk to farm businesses in an economy with little or no inflation. Labor and management income is the measure used most commonly when comparing farm businesses. Appreciation in livestock, machinery and real estate inventories is included as ownership income, not return to operator labor and management.

LABOR AND MANAGEMENT INCOME Oneida-Mohawk Region Dairy Farms, 1984 & 1983

Item	My Farm	40 Farms 1984	42 Farms 1983
Total farm receipts excluding appreciation	\$ _____	\$158,631	\$139,553
Total farm expenses	_____	155,165	127,321
LABOR & MANAGEMENT INCOME	\$ _____	\$ 3,466	\$ 12,232
Full-time operator-manager equivalents	_____	1.38	1.31
LABOR & MANAGEMENT INCOME PER OPERATOR-MANAGER	\$ _____	\$ 2,512	\$ 9,337

Labor, management and ownership income per operator reflects the combined return to the farmer for his or her triple role of worker-manager, financier and owner. Again, this is not a measure of the cash flow situation of the farm business. A satisfactory labor, management and ownership income does not eliminate cash flow problems if liabilities are large and repayment is rapid.

LABOR, MANAGEMENT AND OWNERSHIP INCOME
Oneida-Mohawk Region Dairy Farms, 1984 & 1983

Item	My Farm	40 Farms 1984	42 Farms 1983
Total farm receipts	\$ _____	\$161,815	\$139,407
Total farm expenses excluding interest on equity capital	_____	<u>142,712</u>	<u>115,470</u>
LABOR, MANAGEMENT AND OWNERSHIP INCOME PER FARM	\$ _____	\$ 19,103	\$ 23,937
Full-time operator-manager equivalents	_____	1.38	1.31
LABOR, MANAGEMENT AND OWNERSHIP INCOME PER OPERATOR-MANAGER	\$ _____	\$ 13,843	\$ 18,273

Return on equity capital measures the net profit remaining for the farmer's owned or equity capital after earnings have been allocated to the owner-operator's labor and management. The earnings or amount of gross profit allocated to labor and management is the opportunity cost or value of operator's labor and management estimated by the cooperators. Return on equity capital is computed including and excluding appreciation.

RETURN ON EQUITY CAPITAL
Oneida-Mohawk Region Dairy Farms, 1984 & 1983

Item	My Farm	40 Farms 1984	42 Farms 1983
Labor, management & ownership income per farm	\$ _____	\$19,103	\$23,937
Less value of operator's labor & management	_____	<u>18,588</u>	<u>17,602</u>
Return on equity capital	\$ _____	\$ 515	\$ 6,335
RATE OF RETURN INCLUDING APPRECIATION	_____ %	0.2%	2.7%
RATE OF RETURN EXCLUDING APPRECIATION	_____ %	-1.1%	2.7%

The rate of return on equity capital is computed as the amount returned divided by farm net worth or equity capital.

Farm Family Financial Situation

The financial situation is an important part of the farm business summary. It has a direct affect on current cash outflow and future capital investment decisions. Financial lease obligations are included in the balance sheet. The present value of all future payments is listed as a liability since the farmer is committed to make the payments. The present values are also listed as assets, representing the future value the item has to the business.

FARM FAMILY NET WORTH
40 Oneida-Mohawk Region Dairy Farms, January 1, 1985

Item	My Farm	Average
<u>Assets</u>		
Livestock	\$ _____	\$ 90,736
Feed and supplies	_____	31,698
Machinery and equipment	_____	85,072
(includes discounted lease payments)*	_____ (1,915)	
Land and buildings	_____	189,911
(includes discounted lease payments)*	_____ (2,562)	
Co-op investments	_____	5,703
Accounts receivable	_____	14,357
Cash and checking accounts	_____	2,448
Total Farm Assets	\$ _____	\$419,925
Savings accounts	\$ _____	\$ 4,600
Cash value life insurance	_____	1,113
Stocks and bonds	_____	281
Nonfarm real estate	_____	2,913
Auto (personal share)	_____	1,359
All Other	_____	7,464
TOTAL FARM & NONFARM ASSETS	\$ _____	\$437,655
<u>Liabilities</u>		
Long term	\$ _____	\$ 88,048
Intermediate	_____	71,732
Financial lease*	_____	4,477
Short term	_____	2,687
Other farm accounts	_____	3,918
Total Farm Liabilities	\$ _____	\$170,862
Nonfarm Liabilities	_____	300
TOTAL LIABILITIES	\$ _____	\$171,162
FARM NET WORTH (EQUITY CAPITAL)	\$ _____	\$249,063
FAMILY NET WORTH	\$ _____	\$266,493

*Future payments were discounted at an annual rate of 13 percent.

Payment ability is the most important consideration in determining if and how proposed investments should be financed. The farm business must produce sufficient cash income to meet operating expenses, to cover family living expenses and to make payments on debts. Interest paid and income from off-farm work are added to net cash farm income because planned debt payments will include interest as well as principal. Estimate your family living expenses to calculate cash available for debt payments and capital purchases made in cash.

A cash flow coverage ratio of less than one indicates that planned cash outflows for 1985 exceed cash availability determined from 1984 records.

FARM FAMILY DEBT REPAYMENT
40 Oneida-Mohawk Region Dairy Farms, January 1, 1985

Item	My Farm	Average
<u>Payment Ability</u>		
Net cash farm income	\$ _____	\$30,124
Plus interest paid	_____	16,751
Plus off-farm income	_____	1,335
CASH AVAILABLE FOR DEBT SERVICE AND LIVING	\$ _____	\$48,210
Less family living expenses ¹	_____	21,195
CASH AVAILABLE FOR DEBT PAYMENTS AND CAPITAL PURCHASES	\$ _____	\$27,015
<u>Scheduled Annual Debt Payments</u>		
Long term	\$ _____	\$11,190
Intermediate	_____	22,057
Short term	_____	1,839
Other farm accounts	_____	982
TOTAL FARM DEBT PAYMENTS	\$ _____	\$36,068
Nonfarm debt payments	_____	41
TOTAL PAYMENTS PLANNED 1985	\$ _____	\$36,109
<u>Commitment and Measures of Debt Equity Position</u>		
Cash flow coverage ratio ²	_____	0.75
Farm debt payments planned per cow	\$ _____	\$523
Farm debt payments as % milk sales	_____ %	26%
Farm debt/asset ratio-long term	_____	0.46
Farm debt/asset ratio-intermediate and short term	_____	0.34
Farm debt per cow	\$ _____	\$2,476
Percent equity (total)	_____ %	61%

¹Estimated as \$10,900 per family plus four percent of cash farm receipts.

²Cash available for debt payments and capital purchases divided by total payments planned.

ANALYSIS OF THE FARM BUSINESS

When analyzing a farm business, a manager must consider measures or factors that reflect the performance of specified parts of the farm business. To do this one must look at factors of size, rates of production, labor efficiency, capital efficiency and cost control. These measures and factors are detailed on the following pages.

Size of Business

Studies have shown that, in general, larger farms are more profitable than smaller farms. Larger businesses make possible more efficient use of overhead inputs such as labor and machinery and there are more units of production on which to earn a profit. Profitable farm businesses with good management have the ability and incentive to become larger. Large farms are not necessarily more profitable however, and size increases are only profitable with good management.

MEASURES OF SIZE OF BUSINESS
Oneida-Mohawk Region Dairy Farms, 1984 & 1983

Item	My Farm	40 Farms 1984	42 Farms 1983
Number of cows	_____	68	60
Number of heifers	_____	57	46
Pounds of milk sold	_____	1,013,200	902,600
Worker equivalent	_____	2.42	2.25
Total work units	_____	764	654
Total tillable acres	_____	231	195

In the table below, the 510 New York farms for 1983 are sorted by number of cows and the labor and management income is shown for each size group. In general, the large farms paid better, but, variability of income was significant.

FARM SIZE AND FARM INCOME MEASURES
510 New York Dairy Farms, 1983

Number of Cows	Number of Farms	Worker Equivalent	Net Cash Farm Income	Labor, Management & Owner- ship Income Per Operator
Under 40	51	1.67	\$12,955	\$ 2,541
40 to 54	103	2.08	19,443	6,279
55 to 69	95	2.42	32,659	14,886
70 to 84	79	2.83	33,688	11,517
85 to 99	54	3.08	43,739	19,509
100 to 149	64	3.75	50,521	21,210
150 to 199	38	4.58	62,048	7,458
200 to 249	13	6.00	100,374	43,033
250 & over	13	8.42	180,903	99,327

Rates of Production

Crop yields and rates of animal production are factors that have a significant impact on farm incomes. As shown in the table at the bottom of the page, production per cow is strongly related to net income. The yields and rates of production on a farm are a direct result of the quality of management.

CROP YIELDS & MILK SOLD PER COW 40 Oneida-Mohawk Region Dairy Farms, 1984

Crop	My Farm		Average of Farms Reporting		
	Acres	Yield	Farms	Acres	Yield/Acre
Dry hay	_____	_____	38	(combined below)	
Hay crop silage	_____	_____	30	(combined below)	
Total hay crops	_____	_____	39	141	2.5 tons D.M.
Corn silage	_____	_____	35	49	13.2 tons
Other forage	_____	_____	6	11	1.9 tons D.M.
Total forage crops	_____	_____	40	182	3.0 tons D.M.
Grain corn	_____	_____	20	57	88.0 bushels
Oats	_____	_____	8	27	58.0 bushels
Wheat	_____	_____	1	5	36.0 bushels
Other crops	_____	_____	3	26	
Tillable pasture	_____	_____	13	30	
Idle tillable land	_____	_____	11	14	

Milk sold per cow	_____	_____		14,900 pounds	

Tons of dry matter per acre from all hay and silage is a good measure of the overall rate of forage production.

MILK SOLD PER COW AND LABOR AND MANAGEMENT INCOME 510 New York Dairy Farms, 1983

Pounds of Milk Sold Per Cow	Number of Farms	Number of Cows	Labor & Mgmt. Income/Oper.	Labor, Mgmt., & Ownership Income/Operator
Under 11,000	26	58	\$-4,275	\$ -903
11,000 to 11,999	35	62	-1,323	370
12,000 to 12,999	44	71	-3,493	5,074
13,000 to 13,999	56	79	-1,391	5,411
14,000 to 14,999	85	87	4,607	13,504
15,000 to 15,999	95	101	2,804	11,607
16,000 to 16,999	80	101	13,797	28,297
17,000 to 17,999	49	96	12,335	31,231
18,000 & over	40	101	18,716	36,819

Labor Efficiency

Labor input is an important factor in farm production. Several measures of accomplishment per worker (labor efficiency) are shown below.

MEASURES OF LABOR EFFICIENCY
Oneida-Mohawk Region Dairy Farms, 1984 & 1983

Item	My Farm	40 Farms 1984	42 Farms 1983
Worker equivalent	_____	2.42	2.25
Cows per worker	_____	28	27
Lbs. milk sold per worker	_____	419,000	401,000
Work units per worker	_____	316	291

Number of cows per worker is calculated by dividing the average number of cows by the worker equivalent which represents the total farm labor force. Pounds of milk sold per worker is an important measure of labor efficiency on the dairy farm. It measures the ability of the labor force to handle a large number of cows without sacrificing milk output per cow.

It is important to look at other measures of labor efficiency, such as work units per worker because all dairy farms do not have the same relationship between cows, heifers, and crops grown.

Labor efficiency depends on a number of things. Among these are the amount of mechanization, the field and building layout, the work methods, and the abilities of the workers. All of these are management items under the control of the operator.

Another factor which may influence the productivity of labor is the wage paid to employees. A productive employee will require a reasonable and competitive wage.

MILK SOLD PER WORKER AND LABOR AND MANAGEMENT INCOME
510 New York Dairy Farms, 1983

Pounds of Milk Sold Per Worker	Number of Farms	Number of Cows	Pounds Milk Per Cow	Labor & Mgmt. Income Per Operator	Labor, Mgmt., & Ownership Income Per Operator
Under 250,000	46	44	11,386	\$-2,734	\$ 926
250,000 to 299,999	38	48	13,298	-1,281	4,804
300,000 to 349,999	56	64	14,128	860	5,896
350,000 to 399,999	70	75	14,793	993	9,853
400,000 to 449,000	95	77	15,319	6,463	17,787
450,000 to 499,999	68	89	15,293	3,590	13,037
500,000 to 599,999	81	104	15,710	5,968	19,317
600,000 & over	56	187	16,473	26,312	48,943

Capital Efficiency

Capital is a key resource in dairy farm businesses and a manager must continually analyze its use in the business. The measures of capital efficiency shown in the following table include owned as well as borrowed capital. It is possible for the business to be undercapitalized, but investing too much capital per productive unit is a more common problem.

MEASURES OF CAPITAL EFFICIENCY
Oneida-Mohawk Region Dairy Farms, 1984 & 1983

Item	My Farm	40 Farms 1984	42 Farms 1983
Farm capital per worker	\$ _____	\$162,000	\$158,000
Farm capital per cow	\$ _____	5,695	5,740
Machinery investment per cow	\$ _____	1,205	1,233
Machinery per tillable acre	\$ _____	360	392
Land & buildings per cow	\$ _____	2,715	2,879
Land & buildings/tillable acre owned	\$ _____	1,024	1,088
Capital turnover (years)	_____	2.4	2.6

Land and building investment per crop acre owned shows the relationship between investments in land and buildings. The farmer who owns little cropland but builds many farm buildings will have a relatively large land and building investment per crop acre owned. This could be an indication that capital use is out of balance.

Capital turnover is calculated by dividing the total farm capital (total year-end farm inventory) by the total farm receipts for the year. The factor is called capital turnover because it measures the number of years of receipts needed to equal or "turnover" farm capital. A fast rate of turnover is more desirable than a slow rate because it means capital purchases can be paid off at a faster rate. This figure also depends upon the enterprise selection of the business.

CAPITAL TURNOVER AND LABOR AND MANAGEMENT INCOME
510 New York Dairy Farms, 1983

Capital Turnover Rate - Years	Number of Farms	Number of Cows	Capital Investment		Labor & Mgmt. Income Per Operator
			Per Cow	Per Worker	
less than 1.5	14	126	\$3,178	\$105,385	\$ 34,525
1.5 to 1.99	92	121	4,493	153,029	15,742
2.0 to 2.49	168	97	5,246	163,826	5,682
2.5 to 2.99	113	74	6,239	170,148	3,794
3.0 to 3.49	66	63	6,364	168,003	-2,369
3.5 & over	57	60	7,601	206,061	-8,415

Cost Control

The control of costs is a big factor in the success of modern commercial dairy operations. Feed, machinery and labor costs are major items and should be examined in detail. It is important to check all cost items both large and small. Expenses should be incurred only when the returns from the expense are expected to be greater than the cost incurred.

Feed Costs

Purchased feed is the largest single expenditure on most dairy farms. Two considerations are important in keeping the feed bill down: (1) Be careful that only nutrients required by the cow are being fed. A dairy farmer cannot afford to buy a feed mix that overfeeds energy or protein. (2) Be certain that the required nutrients are being obtained from their least expensive source. For example, is the lowest cost source of protein, urea, soybean meal or a commercial protein? Help in answering these questions can come from budgeting, from agribusiness people selling feeds, and from dairy and management extension agents. Extension is supporting computerized decision aids to assist in answering these questions including the NEWPLAN program, Least-Cost Balanced Dairy Rations, and the dairy ration analyzers.

The size and productivity of the cropping program has an important influence on the amount of the purchased feed bill. Increased production of either roughages or grains should reduce the purchased feed expense unless cow numbers are increased. Also, heifer raising practices affect feed costs. The overall feed situation must be examined and evaluated as a "system".

FEED COSTS AND RELATED MEASURES
Oneida-Mohawk Region Dairy Farms, 1984 & 1983

Item	My Farm	40 Farms 1984	42 Farms 1983
Dairy concentrate purchased per cow	\$ _____	\$469	\$501
Dairy concentrate purchased per cwt. of milk sold	\$ _____	\$3.15	\$3.33
Percent dairy concentrate is of milk receipts	_____ %	23%	25%
Crop expense per cow	\$ _____	\$153	\$117
Feed & crop expense/cwt. milk	\$ _____	\$4.31	\$4.18
Forage dry matter harv./cow (tons)	_____	7.9	7.2
Acres of forage per cow	_____	2.7	2.5
Total tillable acres per cow	_____	3.4	3.3
Fertilizer and lime/tillable acre	\$ _____	\$29	\$22
Heifers as % of cow numbers	_____ %	84%	77%

Machinery, Labor and Miscellaneous Costs

Labor and machinery operate as a team on a dairy farm. The challenge is to obtain an efficient combination of these two inputs that will result in a low cost per unit of output.

MACHINERY AND LABOR COSTS
Oneida-Mohawk Region Dairy Farms, 1984 & 1983

Item	My Farm	40 Farms 1984	42 Farms 1983
<u>Machinery:</u> Depreciation ¹	\$ _____	\$12,009	\$ 8,567
Interest ²	_____	4,130	3,768
Operating expense ³	_____	13,361	11,550
Total machinery	\$ _____	\$29,500	\$23,975
Per cow	_____	\$434	\$400
<u>Labor:</u> Value of operators ⁴	\$ _____	\$11,963	\$11,607
Unpaid family ⁵	_____	1,738	1,488
Hired	_____	10,103	7,131
Total labor	\$ _____	\$23,804	\$20,226
Per cow	_____	\$350	\$337
Per cwt. milk	_____	\$2.35	\$2.24
Labor & machinery costs per cow	_____	\$784	\$737
Labor & machinery costs/cwt. milk	\$ _____	\$5.26	\$4.90

¹Regular depreciation from last year's tax plus 10 percent of new purchases.

²Five percent of average machinery investment.

³Machine hire, repairs, farm share auto expense, and gas and oil.

⁴\$750 per month.

⁵\$500 per month.

MISCELLANEOUS COST CONTROL MEASURES
Oneida-Mohawk Region Dairy Farms, 1984 & 1983

Item	My Farm	40 Farms 1984	42 Farms 1983
Livestock expense per cow	\$ _____	\$315	\$265
Real estate expense per cow	\$ _____	\$178	\$160
Total farm expense per cow	\$ _____	\$2,282	\$2,122

Livestock expense per cow includes breeding fees, veterinary and medicine, milk marketing, dairy supplies, bedding and DHIC fees. Real estate expenses include repairs, taxes, insurance and rent.

YEARLY CASH FLOW PLANNING & ANALYSIS

This worksheet is a valuable tool in financial planning, expansions and for setting goals for improving the farm business.

Item	40 Oneida-Mohawk			
	Region Farms Avg. Per Cow	My Farm,		Cows
		Per Cow	Total	Goal
CASH RECEIPTS				
Milk sales	\$2,014	\$ _____	\$ _____	\$ _____
Crop sales	39	_____	_____	_____
Dairy cattle	121	_____	_____	_____
Calves & other livestock	30	_____	_____	_____
Other	59	_____	_____	_____
Total Cash Receipts	\$2,263	\$ _____	\$ _____	\$ _____
CASH EXPENSES				
Hired labor	\$ 149	\$ _____	\$ _____	\$ _____
Dairy concentrate	469	_____	_____	_____
Hay and other	20	_____	_____	_____
Machine hire	26	_____	_____	_____
Machine repair & auto expense	102	_____	_____	_____
Gas & oil	69	_____	_____	_____
Replacement livestock	9	_____	_____	_____
Breeding fees	31	_____	_____	_____
Vet & medicine	41	_____	_____	_____
Milk marketing (ADA, Dues)	161	_____	_____	_____
Other livestock exp.	82	_____	_____	_____
Fertilizer & lime	98	_____	_____	_____
Seeds & plants	33	_____	_____	_____
Spray & other	22	_____	_____	_____
Land, bldg. fence repair	34	_____	_____	_____
Taxes	52	_____	_____	_____
Insurance	36	_____	_____	_____
Rent	56	_____	_____	_____
Telephone & elec. (farm share)	58	_____	_____	_____
Miscellaneous	25	_____	_____	_____
Total Cash Expenses ¹	\$1,573	\$ _____	\$ _____	\$ _____
Total Cash Receipts	\$2,263	_____	_____	_____
Total Cash Expenses ¹	-1,573	-	-	-
Net Cash Flow	\$ 690	\$ _____	\$ _____	\$ _____
Cash Family Living Expense ²	- 312	-	-	-
Amount Left for Debt Service, Capital Investment & Retained Earnings	\$ 378	\$ _____	\$ _____	\$ _____
Scheduled Farm Debt Service	- 523	-	-	-
Available for Capital Investment	\$ -145	\$ _____	\$ _____	\$ _____
Planned Expansion Livestock Purch.		_____	_____	_____
Planned Equipment Purchase		_____	_____	_____
Borrowed or Equity Funds Needed		\$ _____	\$ _____	\$ _____

¹ Interest paid excluded for it is contained in Scheduled Debt Service.

² Estimated: \$10,900 per family plus four percent of cash farm receipts.

PROGRESS OF THE FARM BUSINESS

Comparing your business with that of other farmers is one part of a business checkup. It is equally important to compare your current year's business with that of earlier years to show the progress you are making, and to plan ahead, by setting business targets or goals. Data from 25 identical Oneida-Mohawk dairy farms is included to provide a basis for comparison.

Item	Average of 25 Oneida-Mohawk Farms*		My Farm		
	1983	1984	1983	1984	Goal
<u>Size of Business</u>					
Number of cows	57	59	_____	_____	_____
Number of heifers	44	47	_____	_____	_____
Milk sold (cwt.)	8,751	9,002	_____	_____	_____
Worker equivalent	2.33	2.42	_____	_____	_____
Total tillable acres	187	189	_____	_____	_____
<u>Rates of Production</u>					
Pounds milk sold per cow	15,353	15,258	_____	_____	_____
Tons hay D.M. per acre	2.5	2.4	_____	_____	_____
Tons corn silage per acre	12.8	13.6	_____	_____	_____
<u>Labor Efficiency</u>					
Cows per worker	24	24	_____	_____	_____
Pounds milk sold/worker	376,000	372,000	_____	_____	_____
<u>Cost Control</u>					
Purch. feed as % milk sold	26%	25%	_____ %	_____ %	_____ %
Feed & crop exp./cwt. milk	\$4.26	\$4.29	\$ _____	\$ _____	\$ _____
Labor & mach. cost/cwt. milk	\$4.84	\$5.06	\$ _____	\$ _____	\$ _____
<u>Capital Efficiency</u>					
Farm capital per cow	\$5,685	\$5,765	\$ _____	\$ _____	\$ _____
Capital turnover (years)	2.5	2.5	_____	_____	_____
<u>Price</u>					
Price per cwt. milk	\$13.43	\$13.28	\$ _____	\$ _____	\$ _____
<u>Financial Summary</u>					
Net cash farm income	\$29,538	\$32,081	\$ _____	\$ _____	\$ _____
Labor & mgmt. income/oper.	\$8,514	\$3,891	\$ _____	\$ _____	\$ _____
Farm net worth	\$240,350	\$246,607	\$ _____	\$ _____	\$ _____
Rate of return on equity	1.0%	0.4%	_____ %	_____ %	_____ %
Percent equity	69%	69%	_____ %	_____ %	_____ %
Farm debt per cow	\$1,951	\$1,997	\$ _____	\$ _____	\$ _____

*Average of the same 25 farms for 1983 and 1984.