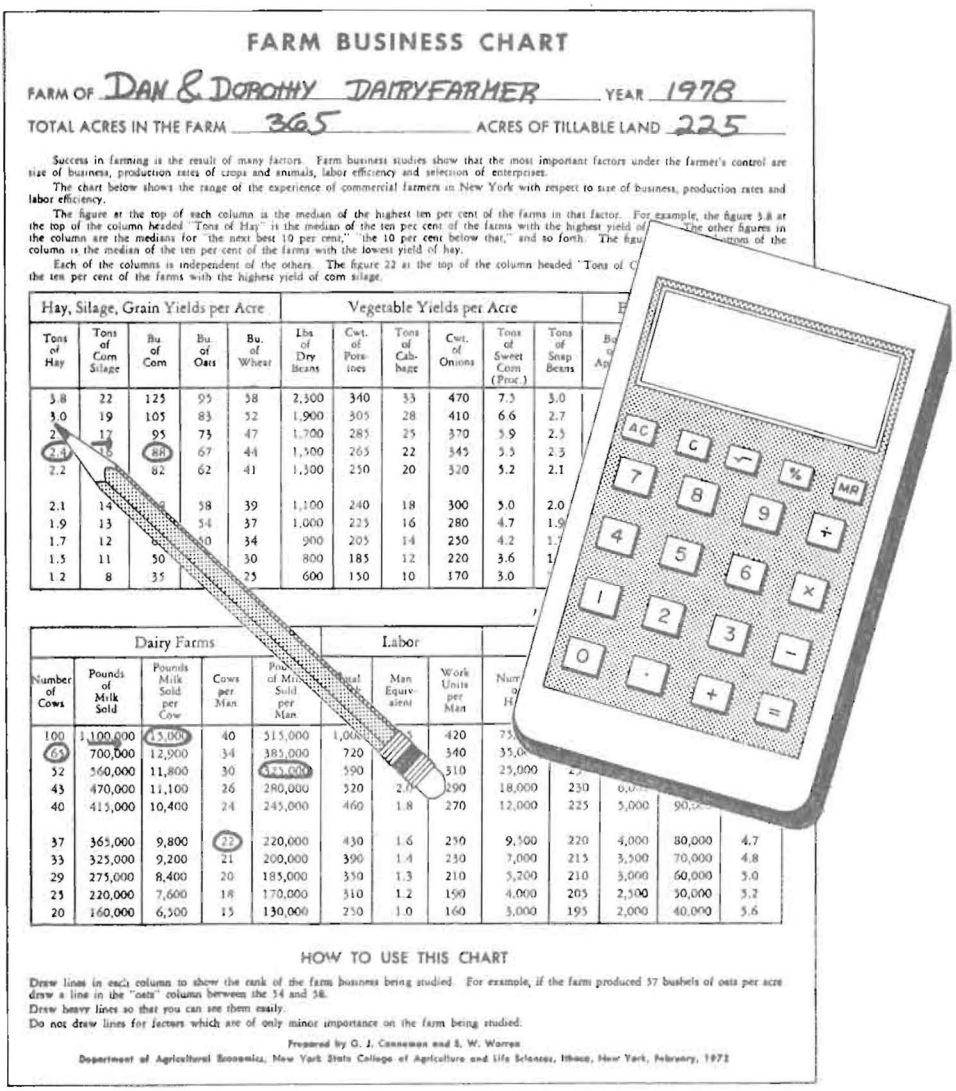
April 1979 A.E. Ext. 79-17

1978 ONEIDA MOHAWK REGION
Farm Business Summary



FARM BUSINESS CHART

FARM OF DAN & DOROTHY DAIRYFARMER YEAR 1978

TOTAL ACRES IN THE FARM 365 ACRES OF TILLABLE LAND 225

Success in farming is the result of many factors. Farm business studies show that the most important factors under the farmer's control are size of business, production rates of crops and animals, labor efficiency and selection of enterprises.

The chart below shows the range of the experience of commercial farmers in New York with respect to size of business, production rates and labor efficiency.

The figure at the top of each column is the median of the highest ten per cent of the farms in that factor. For example, the figure 3.8 at the top of the column headed "Tons of Hay" is the median of the ten per cent of the farms with the highest yield of ... The other figures in the column are the medians for "the next best 10 per cent," "the 10 per cent below that," and so forth. The figure at the bottom of the column is the median of the ten per cent of the farms with the lowest yield of hay.

Each of the columns is independent of the others. The figure 22 at the top of the column headed "Tons of C... the ten per cent of the farms with the highest yield of corn silage.

Hay, Silage, Grain Yields per Acre					Vegetable Yields per Acre						
Tons of Hay	Tons of Corn Silage	Bu. of Corn	Bu. of Oats	Bu. of Wheat	Lbs. of Dry Beans	Cwt. of Potatoes	Tons of Cabbage	Cwt. of Onions	Tons of Sweet Corn (Proc.)	Tons of Snap Beans	B... of Ap...
3.8	22	125	95	58	2,300	340	33	470	7.3	3.0	
3.0	19	105	83	52	1,900	305	28	410	6.6	2.7	
2.7	17	95	73	47	1,700	285	25	370	5.9	2.5	
2.4	15	88	67	44	1,500	265	22	345	5.3	2.3	
2.2	13	82	62	41	1,300	250	20	320	5.2	2.1	
2.1	14	78	58	39	1,100	240	18	300	5.0	2.0	
1.9	13	74	54	37	1,000	225	16	280	4.7	1.9	
1.7	12	68	50	34	900	205	14	250	4.2	1.7	
1.5	11	50	46	30	800	185	12	220	3.6	1.4	
1.2	8	35	40	25	600	150	10	170	3.0	1.1	

Dairy Farms					Labor						
Number of Cows	Pounds of Milk Sold	Pounds Milk Sold per Cow	Cows per Man	Pounds of Milk Sold per Man	Total ...	Man Equivalent	Work Units per Man	Num... of H...			
100	1,100,000	15,000	40	515,000	1,000	2.5	420	75			
65	700,000	12,900	34	385,000	720		340	35,0...			
52	560,000	11,800	30	323,000	590		310	25,000			
43	470,000	11,100	26	280,000	520	2.0	290	18,000	230	6,0...	
40	415,000	10,400	24	245,000	460	1.8	270	12,000	225	5,000	90,...
37	365,000	9,800	22	220,000	430	1.6	250	9,500	220	4,000	80,000	4.7
33	325,000	9,200	21	200,000	390	1.4	230	7,000	215	3,500	70,000	4.8
29	275,000	8,400	20	185,000	350	1.3	210	5,700	210	3,000	60,000	5.0
25	220,000	7,600	18	170,000	310	1.2	190	4,000	205	2,500	50,000	5.2
20	160,000	6,500	15	130,000	250	1.0	160	3,000	195	2,000	40,000	5.6

HOW TO USE THIS CHART

Draw lines in each column to show the rank of the farm business being studied. For example, if the farm produced 57 bushels of oats per acre draw a line in the "oats" column between the 54 and 58.

Draw heavy lines so that you can see them easily.

Do not draw lines for factors which are of only minor importance on the farm being studied.

Prepared by O. J. Conneman and S. W. Warren

Department of Agricultural Economics, New York State College of Agriculture and Life Sciences, Ithaca, New York, February, 1972

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1978 FARM BUSINESS SUMMARY

ONEIDA - MOHAWK REGION

The Oneida - Mohawk Region of New York State includes Oneida, Herkimer, Fulton, Montgomery and Schoharie counties. This report is a summary of the 1978 business records from 69 of the dairy farms in this region.

The primary purpose of the Cornell business management project is to assist cooperators in farm record keeping and analysis and thereby improve their skills as farm business managers. This report is prepared in workbook form for use in the systematic study of individual farm business operations. This booklet should also be useful to farmers in the Oneida - Mohawk region who are not enrolled in the business management project and to agribusinessmen.

Presented below is a historical view of the characteristics of the farms included in the Oneida - Mohawk farm management summary.

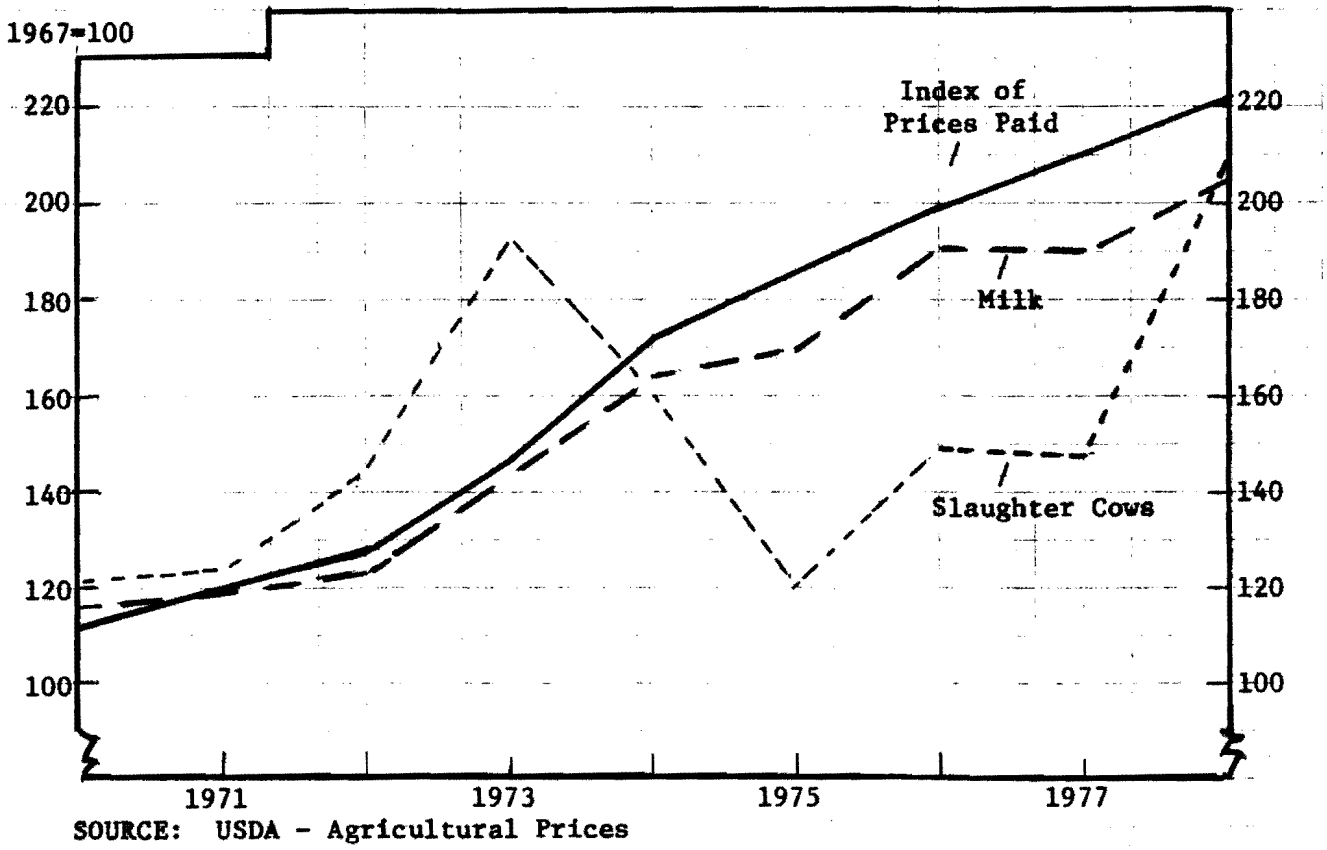
Oneida - Mohawk Dairy Farm Management Summary

Item	Year			
	1975	1976	1977	1978
Number of farms	93	94	63	69
Cows per farm	62	59	58	56
Labor force	2.3	2.3	2.1	2.1
Investment per farm	$195,000	$211,000	$223,400	$252,895
Investment per cow	$3,200	$3,600	$3,850	$4,437
Milk sold per cow (lbs)	12,900	13,300	13,300	13,400
Milk sold per man (lbs)	345,000	336,000	371,000	361,731
Average price per cwt. milk sold	$8.56	$9.83	$9.59	$10.31
Feed cost per cwt. milk	$2.53	$2.81	$2.82	$3.11
Average cash operating expenses per cwt. milk sold	$7.22	$8.02	$8.05	$8.86
Labor & mgmt. income/oper.	$3,657	$5,639	$13,032	$13,542

The record high 1978 average return to labor and management is partly due to skyrocketing cow values that pushed the cattle inventory up about $10,000 per farm. Therefore, more than 75 percent of the 1978 labor and management income can be directly attributed to owning and maintaining the dairy herd in a period of rapidly rising prices. This is very important to keep in mind when charting yearly farm financial progress and making projections for the future.

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 John S. Adams, Cooperative Extension Specialist; David L. Roy, Cooperative Extension Agent, Teddy J. Auber, Cooperative Extension Agent and Ed Luczynski, Farm Credit Service.

PRICES RECEIVED AND PAID BY N.Y. DAIRY FARMERS, 1970-1977



SOURCE: USDA - Agricultural Prices

The general level of farm incomes is determined by the relationship of prices paid to prices received by farmers. The graph above shows the relationship improved in 1978 but it is still not as favorable as in 1970 through 1973. The table below contains some of the important prices for the last ten years. Prices paid by New York dairy farmers are up 106 percent in the last ten years while the milk prices have increased only 83 percent.

PRICES RECEIVED AND PAID BY NEW YORK DAIRY FARMERS, 1969-1978

Year	Milk 3.5% B.F. (cwt.)	Slaughter Cows (cwt.)	Dairy Feed 16% Prot. (ton)	Gasoline Bulk Delv. Reg. (gal.)	Ferti-lizer 10-20-20 (ton)	Index Prices Paid NY D. Farmers (1967=100)
1969	$5.66	$19.30	$ 72	$.33	$ 87	107
1970	5.89	20.70	77	.33	89	112
1971	6.02	21.20	81	.34	93	120
1972	6.25	24.48	83	.34	94	126
1973	7.30	32.80	115	.37	103	146
1974	8.24	27.40	138	.51	160	172
1975	8.64	20.60	132	.54	175	186
1976	9.71	25.57	139	.57	158	200
1977	9.61	25.09	139	.61	155	210
1978	10.38	35.58	137	.64 est.	157 est.	221

SUMMARY OF THE FARM BUSINESS

Business Characteristics and Resources Used

Information on the availability of farm resources and their characteristics is fundamental to judging management performance. The combination of resources and the management techniques used to put the resources to work is an important function called farm organization. The tables on this page show some important farm business characteristics, the number of farms reporting these characteristics, and the average use of farm resources.

BUSINESS CHARACTERISTICS AND RESOURCES USED
69 Oneida - Mohawk Region Dairy Farms, 1978

Type of Business	Number	Business Records	Number	Dairy Records	Number
Individual	59	CAMIS	3	D.H.I.C.	36
Partnership	10	Account Book	33	Owner Sampler	11
Corporation	0	Agrifax	29	Other	4
		Other	4	None	18

Barn Type	Number	Milking System	Number		Number
Stanchion	57	Bucket & carry	5	Herringbone	7
Freestall	9	Dumping station	20		
Other	3	Pipeline	37		

Labor Force	My Farm	Average
Operator	_____	14 mo.
Family paid	_____	3 mo.
Family unpaid	_____	4 mo.
Hired	_____	4 mo.
Total	_____	25 mo.
Age of operator(s)	_____	39 yrs.
Estimated value oper's labor & management		$9,293

Land Used	My Farm	Average
Total acres owned	_____	258
Total acres rented	_____	97
Total crop acres	_____	189
Crop acres rented	_____	70

Number of Cows	My Farm	Average
Beginning of year	_____	57
End of year	_____	57
Average for year	_____	56

There were 82 operators on the 69 farms for an average of 1.19 per farm. Forty-five of the 69 farms rented an average of 70 crop acres per farm. Only three farms rented all the land cropped.

Total farm inventory increased $28,046 or 12 percent during 1978. The end of year farm inventory values are used in determining farm assets in this report.

CAPITAL INVESTMENT - FARM INVENTORY VALUE
69 Oneida - Mohawk Region Dairy Farms, 1978

Item	My Farm 1/1/78	My Farm 1/1/79	Average 87 Farms 1/1/78	Average 87 Farms 1/1/79
Livestock	$_____	$_____	$ 46,269	$ 56,587
Feed & supplies	_____	_____	12,245	16,174
Machinery & equipment	_____	_____	45,000	50,262
Land and buildings	_____	_____	121,335	129,872
TOTAL	$_____	$_____	$224,849	$252,895

Machinery and Real Estate Inventory Calculations

Capital outlays for machinery and buildings usually occur in large, uneven amounts, but, assets depreciate gradually over a period of time. Machinery depreciation has been calculated below and is included as a farm expense.

MACHINERY & EQUIPMENT DEPRECIATION
69 Oneida - Mohawk Region Dairy Farms, 1978

Item	My Farm		Average 69 Farms
Beginning inventory	$_____		$45,000
Machinery purchases	_____		11,503
Total (1)		$_____	$56,503
End of year inventory	$_____		$50,262
Machinery sold	_____		318
Total (2)		$_____	$50,580
DEPRECIATION (1 minus 2)		$_____	$ 5,923
Percent depreciation		_____%	10%

REAL ESTATE INVENTORY CALCULATIONS
69 Oneida - Mohawk Region Dairy Farms, 1978

Item	My Farm		Average 69 Farms
Beginning market value		$_____	$121,335
Cost of new real estate	$_____		$ 6,967
Less lost capital	-_____		-693
Value of new added		+$_____	+ 6,274
Less building depreciation		- _____	- 2,574
Less real estate sold		- _____	- 172
Total Without Appreciation		$_____	$124,863
Appreciation of beginning real estate		+ _____	+ 5,009
End of Year Market Value		$_____	$129,872

Lost Capital is the difference between the cost of new buildings and the amount these improvements added to the value of the farm. It is not included in farm expenses, since building depreciation is based on the full cost of new buildings and will account for lost capital over the life of the building. Building depreciation was taken from the farm depreciation schedule and is included as a farm expense. Real Estate Appreciation was estimated by each farm operator. It is the increase in value of real estate caused by demand and inflation. Appreciation averaged 4.1 percent of beginning market value in 1978.

Receipts

Receipts from the business should be large enough to cover the operating and overhead costs and leave a return for the operator's labor and management. Here we look at sources and amounts of receipts for this group of farms.

FARM RECEIPTS
69 Oneida - Mohawk Region Dairy Farms, 1978

Item	My Farm	Average 69 Farms Amount	Average 69 Farms Percent
Milk sales	$_____	$ 77,597	75
Crop sales	_____	1,060	1
Dairy cattle sold	_____	6,800	7
Calves & other livestock sales	_____	1,322	1
Gas tax refunds	_____	80	2
Government payments	_____	997	
Work off farm	_____	342	
Custom machine work	_____	61	
Other	_____	857	
Total Cash Receipts	$_____	$ 89,116	86
Increase in livestock	_____	10,318	10
Increase in feed & supplies	_____	3,929	4
TOTAL FARM RECEIPTS	$_____	$103,363	100

The large increase in livestock inventory is due entirely to higher dairy cattle prices at the end of the year. The average number of cows per farm was 57 at both the beginning and end of the year and youngstock numbers appeared to be at or below beginning of year levels.

Fourteen percent of total farm receipts were made up of noncash items: livestock, feed and supplies inventory increases. This is much higher than the four to six percent normally experienced by New York dairy farmers and implies that a much lower proportion of net farm income will be spendable without sale of assets.

INCOME ANALYSIS

Item	Average 63 Farms 1977	Average 69 Farms 1978	My Farm
Average price/cwt. milk sold	$ 9.59	$ 10.31	$_____
Milk sales per cow	$ 1,277	$ 1,386	$_____
Total cash receipts per man	$39,289	$42,884	$_____

Expenses

There are many opportunities for dollar leaks when cash farm expenses average $183 per day. Classifying expenses into the categories on this page will help you identify those that may need tighter control.

FARM EXPENSES
69 Oneida - Mohawk Region Dairy Farms, 1978

Item	My Farm	Average 69 Farms Amount	Percent
Hired Labor	$_____	$ 3,230	4
Feed			
Dairy concentrate	_____	23,413	27
Other feed	_____	418	
Machinery			
Machine hire	_____	523	8
Machinery repairs	_____	4,254	
Auto expense (farm share)	_____	367	
Gas & oil	_____	2,359	
Livestock			
Purchased livestock	_____	3,264	12
Breeding fees	_____	1,023	
Veterinary & medicine	_____	1,284	
Milk marketing	_____	1,743	
Other livestock expense	_____	2,869	
Crops			
Fertilizer & lime	_____	3,664	7
Seeds & plants	_____	1,368	
Spray, other crop expense	_____	754	
Real Estate			
Land, building, fence repair	_____	1,438	7
Taxes	_____	1,812	
Insurance	_____	1,519	
Rent	_____	1,210	
Other			
Telephone (farm share)	_____	365	11
Electricity (farm share)	_____	1,539	
Interest paid	_____	7,387	
Miscellaneous	_____	845	
Total Cash Expenses	$_____	$66,648	76
Non-Cash Items			
Machinery Depreciation	$_____	$ 5,923	24
Building Depreciation	_____	2,574	
Unpaid Family Labor @ $425/month	_____	1,700	
Interest on Equity Capital @ 7%	_____	10,430	
Decrease in Livestock & Feed	_____	0	
TOTAL FARM EXPENSES	$_____	$87,275	100

Financial Summary of Year's Business

The results of management are reflected in the net return from the business. Researchers have developed a number of ways to measure the returns from a farm business. Four common measures are reported on the next two pages.

NET CASH FARM INCOME
Oneida - Mohawk Region Dairy Farms, 1977 & 1978

Item	Average 63 Farms 1977	Average 69 Farms 1978	My Farm
Cash Farm Receipts	$81,721	$89,116	$_____
Cash Farm Expenses	62,107	66,648	_____
NET CASH FARM INCOME	$19,614	$22,468	$_____

Net Cash Farm Income reflects the cash available from the year's operation of the business. Family living has first claim on cash income followed by fixed payments on debts. A family may have additional cash available if they have a non-farm income. Cash flow is not a good measure of farm business profits, but it is useful when planning debt repayment programs.

LABOR AND MANAGEMENT INCOME
Oneida - Mohawk Region Dairy Farms, 1977 & 1978

Item	Average 63 Farms 1977	Average 69 Farms, 1978		My Farm
		With Increase In Cattle Prices	Without Increase In Cattle Prices*	
Total Farm Receipts	$83,990	$103,363	$93,045	$_____
Total Farm Expenses	79,607	87,275	86,553	_____
LABOR & MANAGEMENT INCOME	$ 4,383	$ 16,088	$ 6,492	$_____
Number of Operators	1.21	1.19	1.19	_____
LABOR & MANAGEMENT INCOME PER OPERATOR	$ 3,634	$ 13,542	$ 5,455	$_____

* Calculated by subtracting from receipts the increase in livestock inventory due to price increases and subtracting from expenses the increased interest on equity capital due to the higher livestock investment.

Labor and management income is the return to the operator for his efforts in operating the business. It is computed with and without the affect of the large increase in livestock inventory caused by higher cattle prices. Dairymen who used realistic cow values in their beginning and end inventories should recognize this increase as part of the return for operating the farm. A seven 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 what the operator could have earned from this capital had it been invested elsewhere.

Labor, management and ownership income per operator measures the combined return to the farmer for his triple role of worker-manager, financier and owner. The return here provides for the operator's living and his gain in business net worth.

LABOR, MANAGEMENT AND OWNERSHIP INCOME
Oneida - Mohawk Region Dairy Farms, 1977 & 1978

Item	Average 63 Farms 1977	Average 69 Farms 1978	My Farm
Labor & management income	$ 4,383	$16,088	$_____
Real estate appreciation	2,685	5,009	_____
Interest on equity capital	8,648	10,430	_____
Total Per Farm	$15,716	$31,527	$_____
Number of operators	1.21	1.19	_____
LABOR, MANAGEMENT AND OWNERSHIP INCOME PER OPERATOR	$13,032	$26,538	$_____

Return on equity capital is a common measure for non-farm businesses. When appreciation in assets is included the rate of return for these businesses in 1978 was 13.7%. Where real estate appreciation was excluded the rate dropped to 10.3%. Also excluding livestock appreciation would have reduced the rate to 7.1%.

RETURN ON EQUITY CAPITAL
Oneida - Mohawk Region Dairy Farms, 1977 & 1978

Item	Average 63 Farms 1977	Average 69 Farms 1978	My Farm
	Including Real Estate Appreciation		
Labor, Mgt. & Ownership Income/Farm	$15,716	$31,527	$_____
Less: Value of Operator's Labor & Mgt.	11,043	11,044*	_____
Return on Equity Capital	$ 4,673	$20,483	$_____
Rate of Return on Equity Capital	3.7%	13.7%	_____%
	Excluding Real Estate Appreciation		
Return on Equity Capital (from above)	$ 4,673	$24,213	$_____
Less: Real Estate Appreciation	2,685	4,801	_____
Return on Equity Capital	$ 1,988	$19,412	$_____
Rate of Return on Equity Capital	1.5%	10.3%	_____%

* Value of operator's labor and management estimated by operators, $9,293 from page 3, times 1.19 operators per farm.

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. A farmer with a high debt repayment schedule may find his management flexibility seriously restricted even though he has a good labor and management income.

FARM FAMILY FINANCIAL SITUATION
69 Oneida - Mohawk Region Dairy Farms, January 1, 1979

Item	My Farm	Average 69 Farms
Assets		
Livestock	$_____	$ 56,587
Feed and supplies	_____	16,175
Machinery and Equipment	_____	50,263
Land and buildings	_____	129,872
Co-op investment	_____	2,933
Accounts receivable	_____	6,597
Cash and checking accounts	_____	1,397
Total Farm Assets	$_____	$263,824
Savings accounts	$_____	$ 2,238
Cash value life insurance	_____	1,774
Stocks and bonds	_____	928
Non-farm real estate	_____	1,763
Auto (personal share)	_____	708
All other	_____	2,259
Total Non-Farm Assets	$_____	$ 9,670
TOTAL ASSETS	$_____	$273,494
Liabilities		
Real estate mortgage	$_____	$ 64,140
Liens on cattle and equipment	_____	41,022
Installment contracts	_____	2,385
Other loans	_____	4,786
Accounts payable	_____	2,489
Total Farm Liabilities	$_____	$114,822
Non-Farm Liabilities	_____	1,217
TOTAL LIABILITIES	$_____	$116,039
Farm Net Worth (equity capital)	$_____	$149,002
Family Net Worth	$_____	$157,455

Payment Ability is the most important consideration in determining if and how proposed investments should be financed. The farm business must produce enough cash income to meet operating expenses, to cover family or personal living expenses and to make debt payments. Cash purchases of capital items that normally take place during the year must also be included.

Payment ability is calculated in the following table. All 69 of the farms provided repayment information. Interest paid is added to net cash farm income because planned or budgeted debt payments will include interest as well as principal. Estimate family living expenses for your farm to calculate cash available for debt payment and capital purchases made in cash.

Debt payments planned for 1979 are the scheduled debt payments as of January 1979. Some farms in the group had scheduled debt payments exceeding 40 percent of the milk receipts. Committing this much cash inflow to debt payments can put a "big squeeze" on cash available for operating the business and family living.

FINANCIAL MEASURES & DEBT COMMITMENT
69 Oneida - Mohawk Region Dairy Farms, January 1, 1979

Item	My Farm	Average 69 Farms
Payment Ability		
Net cash farm income	$_____	$22,468
Add: Interest paid	_____	7,387
CASH AVAILABLE FOR DEBT SERVICE & LIVING	$_____	$29,855
Less: Family living expenses	_____	10,705*
CASH AVAILABLE FOR DEBT PAYMENT & CAPITAL PURCHASES	$_____	$19,150
Scheduled Annual Debt Payments		
Real estate mortgage	$_____	$ 6,148
Cattle and equipment liens	_____	10,030
Installment contracts	_____	1,176
Notes and other	_____	812
TOTAL PAYMENTS PLANNED 1979	$_____	$18,166
Measure of Debt Commitment & Equity Position		
Scheduled debt payments per cow	$_____	$ 313
Scheduled debt payments as % of milk sales	_____	23%
Farm debt per cow	$_____	$ 1,980
Percent equity (total)	_____%	58%

* Estimated at $6,000 per family and four percent of cash receipts, assuming one family per operator.

ANNALYSIS OF THE FARM BUSINESS

Research and experience has shown that certain factors controlled by management affect farm incomes. In analyzing a farm business, we examine it in terms of these basic factors. This will be done on the pages that follow.

Size of Business

Studies have shown that, in general, larger farms pay better. Two basic reasons for this are that larger businesses make possible more efficient use of overhead inputs such as labor and machinery and there are more units of production (milk) on which to make a profit. It is imperative to remember, however, all large farms are not profitable and big size without "big" management can lead to big trouble!

MEASURES OF SIZE OF BUSINESS
Oneida - Mohawk Region Dairy Farms, 1977 & 1978

Measure	Average 63 Farms 1977	Average 69 Farms 1978	My Farm
Number of cows	58	56	_____
Number of heifers	40	36	_____
Pounds of milk sold	771,900	752,400	_____
Man equivalent	2.1	2.1	_____
Total work units	648	631	_____
Total acres of crops	197	189	_____

In the table below, the 570 New York farms for 1977 are sorted by number of cows and the labor income is shown for each size group. In general, the large farms paid better, but, variability of income was significant.

COWS PER FARM AND LABOR AND MANAGEMENT INCOME
570 New York Dairy Farms, 1977

Number of Cows	Number of Farms	Percent of Farms	Labor & Management Income Per Operator	Per Cow
Under 40	86	15%	-$ 1,022	-$ 33
40 - 54	157	27	2,338	56
55 - 69	120	21	2,933	59
70 - 84	73	13	5,467	97
85 - 99	40	7	3,454	53
100 - 114	21	4	321	4
115 - 129	19	3	11,764	155
130 - 149	17	3	5,186	48
150 - 179	22	4	6,196	48
180 - 199	5	1	- 681	- 8
200 & over	10	2	4,959	32

Rates of Production

Crop yields and rates of animal production are factors that affect farm incomes. In the table below, we examine the crops grown and yields along with the pounds of milk sold per cow.

CROP YIELDS & MILK SOLD PER COW
69 Oneida - Mohawk Region Dairy Farms, 1978

Crop	My Farm		Average of Farms Reporting		
	Acres	Yield	Farms Reporting	Acres	Yield
Dry hay	_____	_____	67	98	(combined
Hay crop silage	_____	_____	36	54	below)
Corn silage	_____	_____	66	51	13.7 ton
Grain corn	_____	_____	20	26	115.8 bu.
Oats	_____	_____	15	18	67.0 bu.
Hay equivalent:					
All hay crops	_____	_____	69	125	2.3 ton
All hay & silage	_____	_____	69	174	2.9 ton
Milk sold per cow	_____				13,436 lbs.

Tons of hay equivalent of all hay and silage is a good measure of the overall rate of forage production. One ton of hay equivalent is equal to one ton of dry hay containing 90 percent dry matter.

The importance of strong milk output per cow is shown in the table below.

MILK SOLD PER COW AND LABOR AND MANAGEMENT INCOME
570 New York Dairy Farms, 1977

Pounds of Milk Sold Per Cow	Number of Farms	Number of Cows	Feed Bought Per Cow	Labor & Management Income Per Operator	Per Cow
Under 10,000	52	45	$267	-$4,500	-$111
10,000 - 10,999	34	52	316	- 350	- 7
11,000 - 11,999	61	61	312	1,940	36
12,000 - 12,999	86	63	357	1,400	26
13,000 - 13,999	125	80	370	4,300	64
14,000 - 14,999	82	84	386	4,200	71
15,000 - 15,999	82	82	445	7,000	110
16,000 - over	48	72	474	4,900	87

Labor Efficiency

Labor utilization is an important factor in milk production. Several measures of accomplishment per man or labor efficiency are shown below.

MEASURES OF LABOR EFFICIENCY
Oneida - Mohawk Region Dairy Farms, 1977 & 1978

Item	Average 63 Farms 1977	Average 69 Farms 1978	My Farm
Man equivalent	2.1	2.1	_____
Cows per man	28	27	_____
Pounds of milk sold per man	371,106	361,731	_____
Work units per man	312	303	_____

Number of cows per man is calculated by dividing the average number of cows by the man equivalent which includes the total farm labor force.

Pounds of milk sold per man is the single best 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 man 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.

MILK SOLD PER MAN AND LABOR AND MANAGEMENT INCOME
570 New York Dairy Farms, 1977

Pounds of Milk Sold Per Man	Number of Farms	Number of Cows	Lbs. Milk Per Cow	Labor & Management Income Per Operator	Per Cow
Under 250,000	76	41	11,000	-$2,648	-$ 77
250,000 - 299,999	72	48	12,600	- 390	- 10
300,000 - 349,999	103	60	12,800	2,700	55
350,000 - 399,999	90	70	13,500	2,030	35
400,000 - 449,999	72	75	14,000	5,300	91
450,000 - 499,999	51	88	14,700	3,700	56
500,000 - 599,999	83	105	14,400	8,700	100
600,000 & over	23	124	15,200	8,100	93

Capital Efficiency

Capital is a key resource 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. The management of borrowed capital has been analyzed on page 10. It's possible for the business to be under capitalized, but, investing too much capital per productive unit is a more common problem. The best way a farmer can get a good return on capital invested in his business is to "put it to work".

MEASURES OF CAPITAL EFFICIENCY
Oneida - Mohawk Region Dairy Farms, 1977 & 1978

Item	Average 63 Farms 1977	Average 69 Farms 1978	My Farm
Farm capital per man	$107,405	$121,584	$_____
Farm capital per cow	3,852	4,437	_____
Land & buildings per cow	1,982	2,278	_____
Land & buildings/crop acre owned	891	1,091	_____
Machinery investment per cow	807	882	_____
Capital turnover	2.7 years	2.4 years	_____

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

SIZE OF HERD AND CAPITAL EFFICIENCY
570 New York Dairy Farms, 1977

Number of Cows	Number of Farms	Capital Investment Per Cow			Total Capital Per Cwt. Milk
		Total	Real Estate	Machinery	
Under 40	86	$4,200	$2,400	$840	$34
40 - 54	157	4,100	2,200	835	32
55 - 69	120	4,100	2,200	828	31
70 - 84	73	4,400	2,400	807	31
85 - 99	40	3,800	2,000	736	28
100 - 114	21	3,700	1,800	816	26
115 - 129	19	3,700	1,800	737	26
130 - 149	17	3,800	2,000	679	27
150 & over	37	3,800	2,000	688	27

Cost Control

The control of costs could be a dominant factor in the success of modern commercial dairy operations. Feed, machinery and labor costs are major items examined in detail. However, it is important to check all cost items both large and small.

Feed Costs

Feed purchased is the largest single expenditure category on the dairy farm. These Eastern Plateau dairy farms used 30 cents from each dollar's worth of milk sold to purchase dairy feed in 1978.

The crop program has an important influence on purchased feed costs. Increasing the amount of roughage and/or grain grown on the farm will reduce the quantity of feed to be purchased. However, this will reduce the total cost of feeding the animals only if the cost of growing feed on the farm is less than the cost of purchased feed. Also, the number of heifers being raised on the farm will affect the total feed cost per cow or hundredweight of milk sold. The overall feed situation must be examined and evaluated as a "system".

FEED COSTS AND RELATED MEASURES
Oneida - Mohawk Region Dairy Farms, 1977 & 1978

Item	Average 63 Farms 1977	Average 69 Farms 1978	My Farm
Feed bought per cow	$ 376	$ 418	$_____
Crop expense per cow	$ 92	$ 103	$_____
Feed bought per cwt. milk	$2.82	$3.11	$_____
Feed & crop expense per cwt. milk	$3.52	$3.88	$_____
Percent feed is of milk receipts	29%	30%	_____%
Hay equivalent per cow (tons)	7.9	9.2	_____
Crop acres per cow	3.4	3.4	_____
Lime & fertilizer per crop acre	$ 17	$ 19	$_____
Heifers as % of cow numbers	69%	64%	_____%

Several factors are known to have an important influence on feed and crop expense per hundredweight of milk. Early cutting of hay and hay crop silage increases the amount of protein and energy that can be supplied by forage. Feeding according to production so that cows in early lactation are not underfed and cows in late lactation are not overfed increases the efficiency of concentrate use. Feeding a balanced, least-cost ration reduces the cost of the concentrate required to meet the cow's needs.

Machinery, Labor and Miscellaneous Costs

Labor and machinery operate as a "team" on a modern farm. The challenge is to get an efficient combination that will give a reasonable cost per unit of output.

LABOR & MACHINERY COSTS
Oneida - Mohawk Region Dairy Farms, 1977 & 1978

Item	Average 63 Farms 1977	Average 69 Farms 1978	My Farm
Total Machinery[1/]	$15,531	$16,760	$_____
Machinery cost per cow	$ 268	$ 299	$_____
Machinery costs per cwt. of milk	$ 2.01	$ 2.23	$_____
Total labor costs[2/]	$13,578	$14,030	$_____
Labor costs per cow	$ 234	$ 251	$_____
Labor costs per cwt. of milk	$ 1.76	$ 1.86	$_____
Labor & machinery costs/cwt. of milk	$ 3.77	$ 4.09	$_____

1/ Machinery depreciation, seven percent interest on the average machinery inventory, machine hire, machinery repairs, farm share of auto expense and gas and oil are all included.

2/ Includes hired labor and paid family labor, plus unpaid family labor valued at $425 per month and operator's labor valued at $650 per month.

MISCELLANEOUS COSTS CONTROL MEASURES
Oneida - Mohawk Region Dairy Farms, 1977 & 1978

Item	Average 63 Farms 1977	Average 69 Farms 1978	My Farm
Veterinary & medicine per cow	$ 21.93	$ 22.93	$_____
Other livestock expense per cow	$ 45.45	$ 51.23	$_____
Real estate expense per cow	$ 98.52	$106.77	$_____
Total farm expense per cow	$ 1,373	$ 1,558	$_____

Other livestock expenses per cow include dairy supplies, bedding and DHIC fees, but, exclude breeding fees and milk marketing. Real estate expenses include repairs, taxes, insurance and rent.

Real Estate Taxes on Dairy Farms

Information from New York State farm business management dairy summaries indicates the following trends in real estate taxes paid by New York farmers.

1. Between the periods 1958-62 and 1973-77 real estate taxes per farm quadrupled.

2. Real estate taxes per cow have doubled in the last 20 years.

3. Real estate taxes as a percent of cash receipts have actually decreased (2.6 percent in 1958-62 versus 2.3 percent in 1973-77).

4. Taxes as a percent of cash farm expenses have also decreased over the last 20 years (3.8 percent in 1958-62 versus 3.0 percent in 1973-77).

REAL ESTATE TAXES ON DAIRY FARM MANAGEMENT COOPERATOR FARMS
New York State, 1958 to 1977

Period	Number of Farms	Number of Cows	Real Estate Taxes Per Farm	Real Estate Taxes Per Cow	Real Estate Taxes Per Cwt. Milk Sold	Real Estate Taxes % of Cash Receipts	Real Estate Taxes % of Cash Expenses
1958-1962	512	36	$ 506	$14	$.14	2.6	3.8
1963-1967	571	44	688	16	.13	2.5	3.6
1968-1972	546	64	1,397	22	.17	2.5	3.6
1973-1977	605	71	2,078	29	.23	2.3	3.0

Source: Dairy Farm Management Business Summaries, 1958 to 1977, Department of Agricultural Economics (A.E. Res. 78-8 and previous publications).

REAL ESTATE TAXES ON ONEIDA - MOHAWK REGION DAIRY FARMS
1968 to 1978

Year	Number of Farms	Number of Cows	Real Estate Taxes Per Farm	Real Estate Taxes Per Cow	Real Estate Taxes Per Cwt. Milk Sold	Real Estate Taxes % of Cash Receipts	Real Estate Taxes % of Cash Expenses
1968	65	50	$1,012	$20	$.17	2.7	5.0
1973	66	60	1,521	25	.21	2.5	3.3
1976	94	59	1,701	29	.22	2.0	2.7
1977	63	58	1,834	32	.24	2.2	3.0
1978	69	56	1,812	32	.24	2.1	2.7

Source: Oneida - Mohawk Region Farm Business Summaries, 1968-1978, Department of Agricultural Economics.

Cost of Producing Milk

The "farm unit" method is used here to compute cost of producing milk. Farm expenses include all costs except the operator's labor and management. Non-milk receipts are deducted on the assumption they were produced at cost.

FARM COST OF PRODUCING MILK
69 Oneida - Mohawk Region Dairy Farms, 1978

Item	My Farm	Average 69 Farms
Total cash farm expenses	$____	$66,648
Machinery depreciation	____	5,923
Building depreciation	____	2,574
Unpaid labor	____	1,700
Interest on equity capital @ 7%	____	10,430
Decrease in feed or livestock inv.	____	0
TOTAL FARM EXPENSES	$____	$87,275
Value Operator's Labor @ $650/mo.	____	9,282
TOTAL COST OF PRODUCTION (A)	$____	$96,557
Total cash farm receipts	$____	$89,116
Less: Milk sales	____	- 77,597
Non-milk cash receipts	____	$11,519
Increase in feed & supplies	____	3,929
Increase in cattle inventory[a/]	____	0
TOTAL NON-MILK INCOME (B)	____	15,448
COST OF PRODUCING MILK (A minus B)	$____	81,109
Hundredweights of milk sold	____	7,524
COST OF PRODUCING CWT. MILK	$____	$ 10.78
Management charge @ 5% cash receipts	$____	$ 4,456
Management charge per cwt. milk	____	.59
COST OF PRODUCING MILK WITH MGT. CHARGE	$____	$ 11.37

a/ Due to change in livestock numbers. Excludes inventory change due to price variation.

COST OF PRODUCING MILK, NEW YORK DAIRY FARMS, 1972-1977

Year	Value Operator's Labor	Value Operator's Management*	Cost/Cwt. With Management Excluded	Cost/Cwt. With Management Included	Average Price Received	Average Price Reported**
1972	$6,000	$3,275	$ 6.43	$ 6.80	$ 6.41	$ 6.25
1973	6,000	3,689	7.26	7.69	7.30	7.30
1974	6,000	4,330	8.34	8.82	8.57	8.24
1975	6,000	4,474	9.07	9.55	8.65	8.66
1976	6,000	5,162	9.87	10.42	9.90	9.86
1977	7,200	5,212	10.55	11.09	9.76	9.61

*Estimated @ 5% of cash receipts.
**New York - New Jersey Milk Marketing Area.

Farm Business Chart

The Farm Business Chart is a tool which can be used in analyzing a business to determine the strong and weak points. The figure at the top of each column is the average of the top 10 percent of the 570 farms for that factor. The other figures in each column are the average for the second 10 percent, third 10 percent, etc. Each column of the chart is independent of the others. The farms which are in the top 10 percent for one factor would not necessarily be the same farms which make up the top 10 percent for any other factor.

FARM BUSINESS CHART FOR FARM MANAGEMENT COOPERATORS
570 New York Dairy Farms, 1977

Size of Business			Rates of Production			Labor Efficiency	
Man Equivalent	No. of Cows	Pounds Milk Sold	Pounds Milk Sold Per Cow	Tons Hay Crops Per Acre	Tons Corn Silage Per Acre	Cows Per Man	Pounds Milk Sold Per Man
5.1	174	2,465,400	16,800	4.6	22	43	602,900
3.4	105	1,501,900	15,500	3.4	17	37	518,700
2.9	82	1,162,700	14,800	2.9	16	33	467,600
2.6	70	968,800	14,100	2.6	15	31	420,000
2.3	62	842,600	13,600	2.3	14	29	386,800
2.1	55	733,400	13,200	2.1	13	27	353,200
2.0	49	638,900	12,700	1.9	12	26	325,500
1.7	45	556,000	11,900	1.7	10	23	296,200
1.5	39	457,300	10,900	1.4	9	21	257,900
1.2	30	321,100	8,900	1.0	6	17	186,900

Feed Bought		Machinery Cost	Labor and Machinery Cost	Feed and Crop Expense Per
Per Cow	% of Milk Receipts	Per Cow	Per Cow	Cwt. Milk
$153	13%	$129	$341	$2.14
236	20	171	400	2.77
289	23	196	432	3.06
325	26	218	465	3.27
354	28	236	492	3.45
389	30	256	517	3.64
422	33	278	547	3.87
464	36	299	582	4.10
512	38	343	638	4.40
614	44	440	758	5.03

The cost control factors are ranked from low to high, but the lowest cost is not necessarily the most profitable. Many things affect the level of costs, and these items must be taken into account when analyzing the factors.

This chart can be used to analyze a dairy business by drawing a line through the figure in each column which represents the level of management for this farm.

FARM BUSINESS SUMMARY BY HERD SIZE
570 New York Dairy Farms, 1977

Item	Farms with: Less Than 40 Cows	40 to 54 Cows	55 to 69 Cows	70 to 84 Cows
Capital Investment (end of year)				
Livestock	$ 24,283	$ 37,180	$ 47,535	$ 60,072
Feed and supplies	6,495	11,339	16,250	25,690
Machinery and equipment	26,915	38,431	50,484	60,537
Land and buildings	76,576	103,258	134,514	182,777
TOTAL INVESTMENT	$134,269	$190,208	$248,783	$329,076
Receipts				
Milk sales	$ 38,308	$ 57,368	$ 79,144	$104,568
Dairy cattle sold	2,639	3,463	5,200	6,814
Other livestock sales	890	984	1,143	1,360
Crop sales	199	447	662	674
Miscellaneous receipts	818	1,056	1,386	2,076
Total Cash Receipts	$ 42,854	$ 63,318	$ 87,535	$115,492
Increase in livestock	1,149	2,260	2,712	3,172
Increase in feed & supplies	---	428	---	813
TOTAL FARM RECEIPTS	$ 44,003	$ 66,006	$ 90,247	$119,477
Expenses				
Hired labor	$ 1,024	$ 2,533	$ 4,993	$ 9,192
Dairy feed	12,417	17,288	22,833	27,759
Other feed	515	896	743	1,223
Machine hire	266	438	576	704
Machinery repair	1,776	2,702	3,807	5,222
Auto expense (farm share)	241	310	315	286
Gas and oil	1,367	1,821	2,584	3,194
Purchased animals	1,707	1,996	2,305	1,977
Breeding fees	540	756	1,011	1,440
Veterinary and medicine	643	948	1,259	1,734
Milk marketing	854	1,252	1,763	2,784
Other livestock expense	1,281	1,995	2,685	3,801
Fertilizer and lime	1,430	2,583	3,829	5,506
Seeds and plants	534	872	1,259	1,716
Spray and other crop expense	343	696	1,056	1,177
Land, bldg., fence repair	641	908	1,335	1,768
Taxes and insurance	2,090	2,716	3,666	4,883
Electric & phone (farm share)	1,042	1,459	1,827	2,429
Interest paid	2,821	4,852	6,219	7,722
Miscellaneous expenses	945	1,236	2,014	2,656
Total Cash Expenses	$ 32,477	$ 48,257	$ 66,079	$ 87,173
Machinery depreciation	2,751	3,755	5,175	5,970
Building depreciation	1,052	1,584	2,324	2,689
Unpaid family labor	1,400	1,400	1,050	700
Interest on equity @ 7%	6,565	8,420	11,486	15,685
Decrease in feed & supplies	804	---	517	---
TOTAL FARM EXPENSES	$ 45,049	$ 63,416	$ 86,631	$112,217
Financial Summary				
Total Farm Receipts	$ 44,003	$ 66,006	$ 90,247	$119,477
Total Farm Expenses	45,049	63,416	86,631	112,217
Labor & Mgt. Income	$ -1,046	$ 2,590	$ 3,616	$ 7,260
Number of operators	1.02	1.11	1.23	1.33
LABOR & MGT. INCOME/OPERATOR	$ -1,022	$ 2,338	$ 2,933	$ 5,467

FARM BUSINESS SUMMARY BY HERD SIZE
570 New York Dairy Farms, 1977

Item	Farms with: 85 to 99 Cows	100 to 114 Cows	115 to 129 Cows	130 to 149 Cows	150 or More Cows
Capital Investment (end of year)					
Livestock	$ 74,862	$ 82,885	$ 96,375	$103,330	$155,071
Feed and supplies	25,502	33,463	40,358	46,371	67,679
Machinery and equipment	67,001	84,841	88,398	94,406	132,690
Land and buildings	181,783	183,803	220,344	283,255	380,603
TOTAL INVESTMENT	$349,148	$384,992	$445,475	$527,362	$736,043
Receipts					
Milk sales	$119,537	$145,139	$167,767	$190,840	$269,747
Dairy cattle sold	7,714	8,087	11,313	11,559	17,249
Other livestock sales	1,379	3,151	1,967	3,322	3,002
Crop sales	953	1,076	1,827	1,624	3,177
Miscellaneous receipts	2,525	2,717	2,927	3,398	6,719
Total Cash Receipts	$132,108	$106,170	$185,801	$210,743	$299,894
Increase in livestock	3,921	5,237	6,197	2,378	9,082
Increase in feed & supplies	---	---	3,894	1,414	---
TOTAL FARM RECEIPTS	$136,029	$165,407	$195,892	$214,535	$308,976
Expenses					
Hired labor	$ 9,551	$ 13,979	$ 17,849	$ 24,419	$ 38,160
Dairy feed	35,763	40,345	48,350	54,614	69,436
Other feed	2,906	1,993	723	1,107	3,217
Machine hire	999	1,512	923	1,716	2,621
Machinery repair	6,177	8,621	8,439	10,363	14,117
Auto expense (farm share)	515	562	305	358	381
Gas and oil	3,700	5,433	4,988	5,473	8,270
Purchased animals	3,207	6,027	3,750	3,800	5,604
Breeding fees	1,360	1,692	2,198	2,924	2,892
Veterinary and medicine	2,082	2,666	3,209	3,743	5,785
Milk marketing	2,561	3,566	4,953	4,441	8,046
Other livestock expense	3,856	5,532	4,870	6,248	10,487
Fertilizer and lime	6,175	9,117	8,759	8,577	15,573
Seeds and plants	2,207	2,783	2,533	2,872	4,476
Spray and other crop expense	1,447	2,448	2,349	2,927	4,748
Land, bldg., fence repair	1,896	1,965	2,543	3,873	4,111
Taxes and insurance	5,155	5,276	8,094	7,670	11,773
Electric & phone (farm share)	2,664	3,051	3,303	3,328	4,563
Interest paid	8,262	11,913	10,824	11,854	17,780
Miscellaneous expenses	3,624	4,003	4,010	4,285	7,023
Total Cash Expenses	$104,107	$132,484	$142,972	$164,592	$239,063
Machinery depreciation	6,699	10,122	7,756	10,714	16,319
Building depreciation	3,196	4,599	4,892	6,213	9,548
Unpaid family labor	700	1,050	700	350	700
Interest on equity @ 7%	16,175	15,440	21,008	25,955	35,776
Decrease in feed & supplies	316	1,284	---	---	787
TOTAL FARM EXPENSES	$131,193	$164,979	$177,328	$207,824	$302,193
Financial Summary					
Total Farm Receipts	$136,029	$165,407	$195,892	$214,535	$308,976
Total Farm Expenses	131,193	164,979	177,328	207,824	302,193
Labor & Mgt. Income	$ 4,836	$ 428	$ 18,564	$ 6,711	$ 6,783
Number of operators	1.40	1.33	1.58	1.29	1.51
LABOR & MGT. INCOME/OPERATOR	$ 3,454	$ 321	$ 11,764	$ 5,186	$ 4,483

SELECTED BUSINESS FACTORS BY HERD SIZE
570 New York Dairy Farms, 1977

Item	Farms with: Less Than 40 Cows	40 to 54 Cows	55 to 69 Cows	70 to 84 Cows
Number of farms	86	157	120	73
Size of Business				
Number of cows	32	46	61	75
Number of heifers	22	32	44	55
Pounds of milk sold	395,600	595,100	813,200	1,065,400
Man equivalent	1.5	1.8	2.2	2.7
Total work units	360	512	680	839
Total crop acres	105	149	199	239
Crop acres rented	(17)	(30)	(57)	(55)
Rates of Production				
Milk sold per cow	12,360	12,900	13,300	14,200
Tons hay crops per acre	1.7	2.0	2.2	2.3
Tons corn silage per acre	11.4	13.3	13.5	14.6
Bushels of oats per acre	50	45	48	58
Labor Efficiency				
Cows per man	21	25	28	28
Pounds milk sold per man	263,700	325,200	374,700	399,000
Work units per man	240	280	313	314
Feed Costs				
Feed purchased per cow	$388	$376	$374	$370
Crop expense per cow	$72	$90	$101	$112
Feed cost per cwt. milk	$3.14	$2.91	$2.81	$2.61
Feed & crop exp./cwt. milk	$3.72	$3.60	$3.56	$3.39
% feed is of milk receipts	32%	30%	29%	27%
Hay equivalent per cow	6.2	7.2	7.6	7.8
Crop acres per cow	3.3	3.2	3.3	3.2
Fertilizer & lime/crop acre	$14	$17	$19	$23
Machinery and Labor Costs				
Total machinery costs	$8,229	$11,599	$15,844	$19,383
Machinery cost per cow	$257	$252	$260	$258
Machinery cost/cwt. milk	$2.08	$1.95	$1.95	$1.82
Labor cost per cow	$263	$227	$222	$239
Labor cost per cwt. milk	$2.13	$1.75	$1.67	$1.68
Capital Efficiency				
Investment per man	$89,500	$103,900	$114,650	$123,250
Investment per cow	$4,200	$4,100	$4,100	$4,400
Investment per cwt. milk	$34	$32	$31	$31
Land & buildings per cow	$2,390	$2,245	$2,200	$2,400
Machinery investment/cow	$840	$835	$828	$807
Capital turnover	3.1	2.9	2.8	2.8
Other				
Price per cwt. milk sold	$9.68	$9.64	$9.73	$9.81
Acres hay crops	78	92	115	132
Acres corn silage	20	35	50	60
Inventory changes 1977*:				
Number of cows	+1	+1	+2	0
Invt. value per cow**	+$13	+$32	+$20	+$11

* Change from 1/1/77 to 1/1/78.

** Livestock inventory includes heifers.

SELECTED BUSINESS FACTORS BY HERD SIZE
570 New York Dairy Farms, 1977

Item	Farms with: 85 to 99 Cows	100 to 114 Cows	115 to 129 Cows	130 to 149 Cows	150 or More Cows
Number of farms	40	27	19	17	37
Size of Business					
Number of cows	91	104	120	139	193
Number of heifers	67	76	85	95	148
Pounds of milk sold	1,231,700	1,495,000	1,696,900	1,955,900	2,729,000
Man equivalent	2.8	3.2	3.6	3.9	5.6
Total work units	1,010	1,172	1,318	1,490	2,108
Total crop acres	273	337	366	371	532
Crop acres rented	(68)	(150)	(127)	(116)	(161)
Rates of Production					
Milk sold per cow	13,540	14,400	14,140	14,100	14,140
Tons hay crops per acre	2.4	2.7	2.3	2.4	3.3
Tons corn silage/acre	13.8	14.3	15.6	14.7	14.9
Bushels oats/acre	52	31	42	31	59
Labor Efficiency					
Cows per man	32	33	34	35	35
Pounds milk sold/man	435,230	471,610	474,000	499,000	489,100
Work units per man	357	370	368	380	378
Feed Costs					
Feed purchased per cow	$393	$388	$403	$393	$360
Crop expense per cow	$108	$138	$114	$103	$128
Feed cost per cwt. milk	$2.90	$2.70	$2.85	$2.79	$2.54
Feed & crop exp./cwt. milk	$3.70	$3.66	$3.65	$3.53	$3.45
% feed is of milk receipts	30%	28%	29%	29%	26%
Hay equivalent per cow	7.4	8.3	7.8	7.5	8.1
Crop acres per cow	3.0	3.2	3.1	2.7	2.8
Fertilizer & lime/crop acre	$23	$27	$24	$23	$29
Machinery and Labor Costs					
Total machinery costs	$22,639	$31,820	$28,298	$34,836	$50,387
Machinery cost per cow	$249	$306	$236	$251	$260
Machinery cost/cwt. milk	$1.84	$2.13	$1.67	$1.78	$1.85
Labor cost per cow	$206	$217	$234	$236	$248
Labor cost/cwt. milk	$1.52	$1.51	$1.65	$1.68	$1.75
Capital Efficiency					
Investment per man	$123,370	$121,400	$124,430	$134,530	$131,910
Investment per cow	$3,840	$3,700	$3,700	$3,800	$3,800
Investment/cwt. milk	$28	$26	$26	$27	$27
Land & buildings/cow	$2,000	$1,770	$1,840	$2,040	$1,970
Machinery investment/cow	$740	$820	$740	$680	$690
Capital turnover	2.6	2.3	2.3	2.5	2.4
Other					
Price per cwt. milk sold	$9.71	$9.71	$9.89	$9.76	$9.88
Acres hay crops	139	171	176	182	213
Acres corn silage	73	82	103	124	173
Inventory changes 1977*:					
Number of cows	+2	+5	+2	+4	+4
Invt. value per cow**	+$26	+$16	+$39	-$4	+$31

* Change from 1/1/77 to 1/1/78.
** Livestock inventory includes heifers.

FARM FAMILY FINANCIAL SITUATION BY HERD SIZE
570 New York Dairy Farms, January 1, 1978

Item	Farms with: Less than 40 Cows	40 to 54 Cows	55 to 69 Cows	70 to 84 Cows
Number of farms	86	157	120	73
Assets				
Livestock	$ 24,284	$ 37,181	$ 47,536	$ 60,073
Feed and supplies	6,496	11,339	16,250	25,690
Machinery & equipment	26,915	38,432	50,484	60,538
Land and buildings	76,576	103,259	134,515	182,777
Co-op investment	1,304	1,554	2,234	4,758
Accounts receivable	2,117	3,853	5,153	7,789
Cash & checking accounts	1,348	1,140	1,553	2,453
Total Farm Assets	$139,040	$196,758	$257,725	$344,078
Savings accounts	3,636	1,772	4,291	5,748
Cash value life insurance	3,243	2,960	2,533	3,929
Stocks and bonds	3,221	678	2,131	2,851
Nonfarm real estate	1,979	1,519	4,153	4,378
Auto (personal share)	809	899	901	790
All other	1,531	1,468	1,648	1,023
Total Nonfarm Assets	$ 14,419	$ 9,296	$ 15,657	$ 18,719
TOTAL ASSETS	$154,459	$206,054	$273,382	$362,797
Liabilities				
Real estate mortgage	$ 25,568	$ 46,521	$ 50,804	$ 68,107
Liens on cattle & equipt.	14,818	22,538	31,848	40,606
Installment contracts	1,821	2,029	2,325	3,370
Notes & other farm debts	3,043	5,381	8,667	7,919
Total Farm Liabilities	$ 45,250	$ 76,469	$ 93,644	$120,002
Nonfarm Liabilities	519	675	1,973	662
TOTAL LIABILITIES	$ 45,769	$ 77,144	$ 95,617	$120,664
Farm Net Worth (Equity Capital)	$ 93,790	$120,289	$164,081	$224,076
FAMILY NET WORTH	$107,690	$128,910	$177,765	$242,133
Financial Measures				
Percent equity	70%	63%	65%	67%
Farm debt per cow	$1,414	$1,660	$1,535	$1,600
Available for debt service and living	$13,192	$19,910	$27,670	$36,034
Scheduled annual debt payment	$7,567	$11,965	$15,729	$21,015
Scheduled debt payment/cow	$236	$260	$258	$280
Scheduled debt payment as % of milk check	20%	21%	20%	20%

FARM FAMILY FINANCIAL SITUATION BY HERD SIZE
570 New York Dairy Farms, January 1, 1978

Item	Farms with: 85 to 99 Cows	100 to 114 Cows	115 to 129 Cows	130 to 149 Cows	150 or More Cows
Number of farms	40	21	19	17	37
Assets					
Livestock	$ 74,862	$ 82,886	$ 96,376	$103,331	$115,072
Feed and supplies	25,503	33,463	40,359	46,371	67,679
Machinery & equipment	67,001	84,842	88,398	94,407	132,691
Land and buildings	181,784	183,803	220,345	283,255	380,604
Co-op investment	5,120	5,904	7,637	8,731	12,752
Accounts receivable	7,334	10,002	13,150	11,305	22,994
Cash & checking accounts	2,201	1,522	2,711	3,100	3,772
Total Farm Assets	$363,805	$402,422	$468,976	$550,500	$775,564
Savings accounts	2,209	1,123	6,633	5,220	2,635
Cash value life insurance	2,432	5,195	1,965	7,144	2,023
Stocks and bonds	5,253	1,716	627	5,704	2,379
Nonfarm real estate	2,787	4,761	3,657	10,421	5,364
Auto (personal share)	890	857	489	1,718	1,295
All other	1,087	1,680	8,066	2,516	4,669
Total Nonfarm Assets	$ 14,658	$ 15,332	$ 21,437	$ 32,723	$ 18,365
TOTAL ASSETS	$378,463	$417,754	$490,413	$583,223	$793,929
Liabilities					
Real estate mortgage	$ 67,395	$ 82,041	$101,663	$ 99,432	$140,950
Liens on cattle & equipt.	50,120	66,069	49,499	71,825	100,064
Installment contracts	6,406	5,595	2,906	1,899	3,405
Notes and other farm debt	8,816	28,146	14,793	6,562	20,054
Total Farm Liabilities	$132,737	$181,851	$168,861	$179,718	$264,473
Nonfarm Liabilities	974	3,872	789	1,421	4,500
TOTAL LIABILITIES	$133,711	$185,723	$169,650	$181,139	$268,973
Farm Net Worth (Equity Capital)	$231,068	$220,571	$300,115	$370,782	$511,091
FAMILY NET WORTH	$244,752	$232,031	$320,763	$402,084	$524,956
Financial Measures					
Percent equity	65%	56%	65%	69%	66%
Farm debt per cow	$1,440	$1,730	$1,410	$1,290	$1,370
Available for debt service and living	$36,260	$39,590	$53,640	$58,000	$78,600
Scheduled annual debt paymts	$22,550	$32,980	$26,390	$29,330	$46,850
Scheduled debt payment/cow	$245	$314	$220	$210	$240
Scheduled debt payment as % of milk check	19%	23%	16%	15%	17%

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.

Item	1976	1977	1978	1979 Goal
Size of Business				
Number of cows	_____	_____	_____	_____
Number of heifers	_____	_____	_____	_____
Pounds of milk sold	_____	_____	_____	_____
Man equivalent	_____	_____	_____	_____
Acres of crops	_____	_____	_____	_____
Rates of Production				
Lbs. milk sold per cow	_____	_____	_____	_____
Tons hay crops/acre	_____	_____	_____	_____
Tons corn silage/acre	_____	_____	_____	_____
Labor Efficiency				
Cows per man	_____	_____	_____	_____
Lbs. milk sold/man	_____	_____	_____	_____
Cost Control				
Feed bought per cow	$_____	$_____	$_____	$_____
Machinery cost/cow	$_____	$_____	$_____	$_____
Labor cost per cow	$_____	$_____	$_____	$_____
Capital Efficiency				
Farm capital per cow	$_____	$_____	$_____	$_____
Land & bldgs./cow	$_____	$_____	$_____	$_____
Machinery investment per cow	$_____	$_____	$_____	$_____
Price				
Price per cwt. milk	$_____	$_____	$_____	$_____
Financial Summary				
Net cash farm income	$_____	$_____	$_____	$_____
Total farm income	$_____	$_____	$_____	$_____
Total farm receipts	$_____	$_____	$_____	$_____
Labor & mgt. inc./oper.	$_____	$_____	$_____	$_____
Net Worth	$_____	$_____	$_____	$_____

Are you satisfied with your progress? Have you set a realistic goal for 1979?