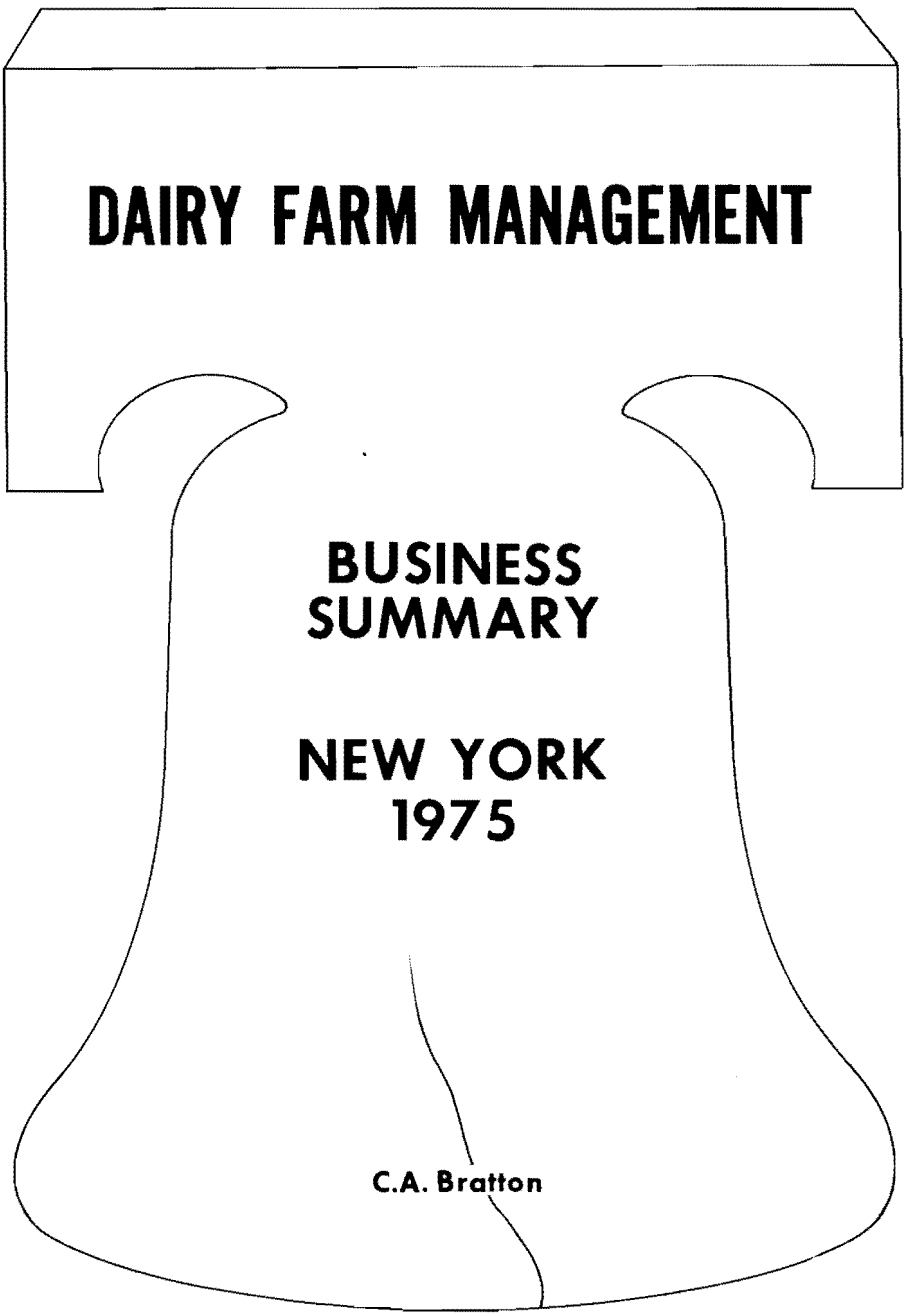
June 1976

A.E. Res. 76-7

DAIRY FARM MANAGEMENT



BUSINESS SUMMARY

NEW YORK 1975

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INTRODUCTION

Since 1955, farm business management projects have been a basic part of the management extension program in New York State. The College and the County Extension staffs cooperate in sponsoring these projects. In 1975, about 750 dairymen participated in these management projects. Each dairyman kept farm business records which were submitted to the College for summary and analysis. These projects provide the basis for extension educational programs and also data for applied research studies.

The Extension agents were responsible for organization of local groups and collection of the records. Regional summary reports were prepared for use by the agents in winter meetings with farmers. Each cooperator received a summary and analysis of his business and a regional report for use in studying his operation. The aim of these extension activities was to help the dairyman develop his managerial skills and solve his business management problems.

The records from all regions of the State have been combined for use in an applied research study of the factors affecting dairy farm incomes. This research provides current farm business data for use by dairymen, Extension agents, teachers, agribusinessmen, policy makers, and others concerned with the New York dairy industry.

A total of 605 farm business records have been included in the general dairy summary and analysis for 1975. These 605 farms do NOT represent the "average" for all dairy farms in the State. Participation was on a voluntary basis so not all areas were equally represented (see page 2). The 605 farms do represent a cross-section of better than average commercial operators in the State.

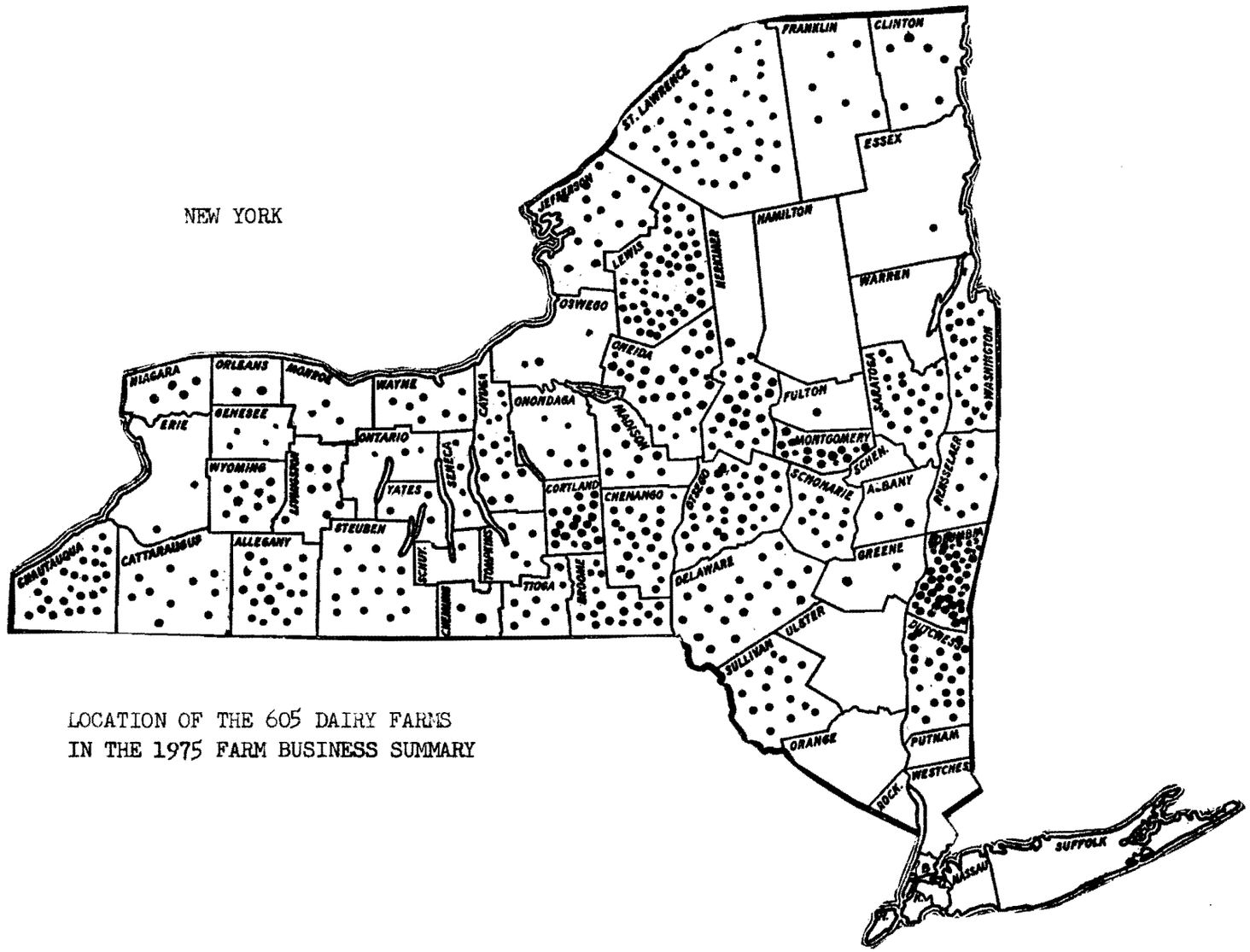
1975 Regional Summary Publications

Region	Publication	Author(s)
Cortland County	A.E. Ext. 76-3	R. S. Smith & S. F. Smith
Western Plateau	A.E. Ext. 76-10	G. L. Casler
Eastern Plateau	A.E. Ext. 76-8	G. J. Conneman & S. F. Smith
Western Plains	A.E. Ext. 76-17	E. L. LaDue
Central Plain	A.E. Ext. 76-13	R. A. Milligan
Central New York	A.E. Ext. 76-18	S. F. Smith
Oneida-Mohawk	A.E. Ext. 76-15	S. F. Smith
Lewis County	A.E. Ext. 76-7	C. A. Bratton
Northern New York	A.E. Ext. 76-9	C. A. Bratton
Northern Hudson	A.E. Ext. 76-11	S. F. Smith
Columbia & Dutchess Counties	A.E. Ext. 76-12	S. F. Smith

Acknowledgements

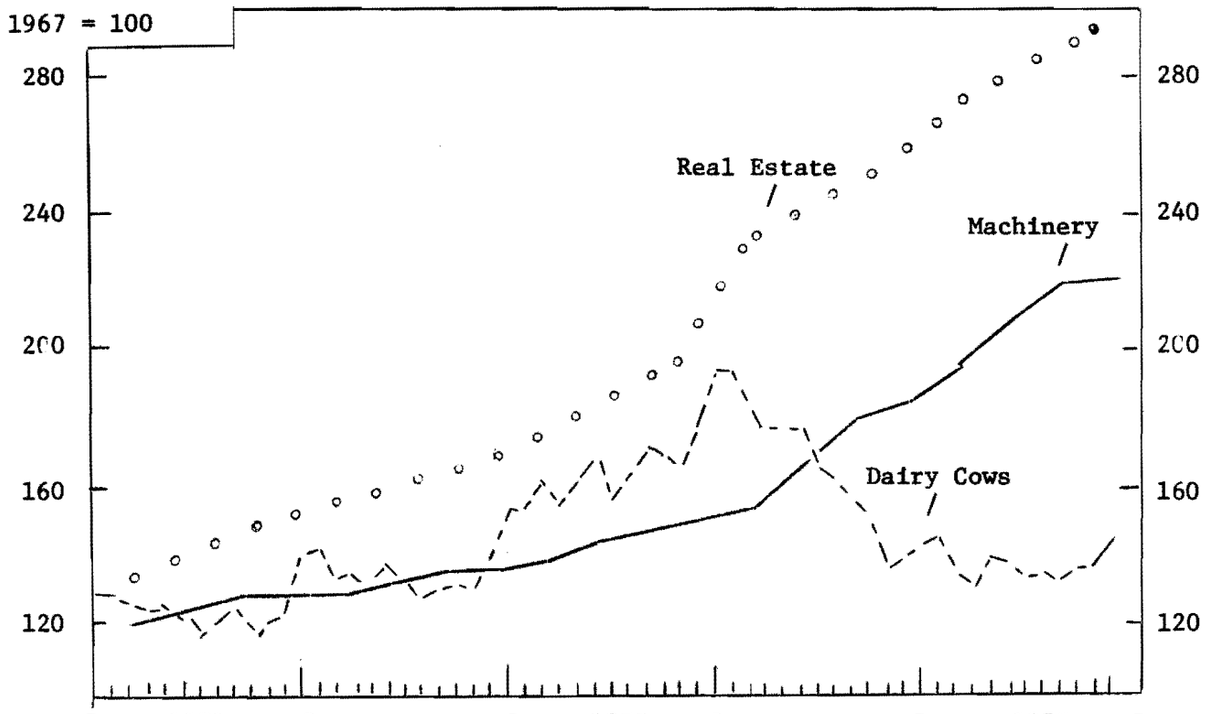
C. A. Bratton, G. L. Casler, G. J. Conneman, E. L. LaDue, A. C. Lowry, R. A. Milligan, R. S. Smith, and S. F. Smith with the assistance of the Cooperative Extension Agents supervised the farm business management projects and the records which made this summary possible. Summarization and tabulation of the records and all machine operations were completed under the supervision of Myrtle Voorheis and the typing was done by Angelina Torchia.

NEW YORK



LOCATION OF THE 605 DAIRY FARMS
IN THE 1975 FARM BUSINESS SUMMARY

VALUE OF N.Y. FARM REAL ESTATE, DAIRY COWS & MACHINERY, 1971-75



SOURCE: USDA - Agricultural Prices
Farm Real Estate Market Developments

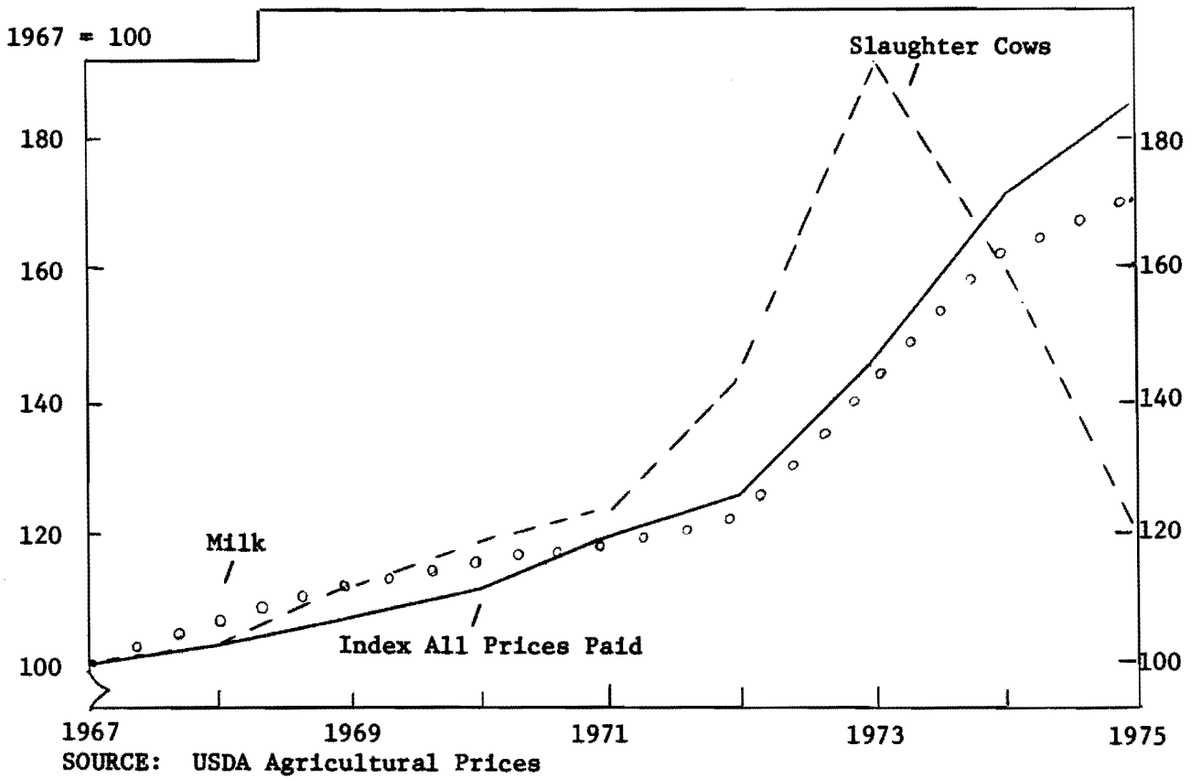
Price changes affect the inventory values on New York dairy farms. Real estate and machinery prices have risen steadily during the past five years, with the rate of rise in 1975 slightly less than in 1974. Dairy cow prices peaked in early 1974, dropped sharply during the year, then rose 3% in 1975. Real estate values tripled from 1967 to 1975, machinery prices more than doubled, while dairy cows were up 45%.

Table 1. REPORTED VALUES OF DAIRY FARM INVENTORY ITEMS, 1965-1975

Year	N.Y. Dairy Cows Value/Head	N.Y. Dairy Cows 1967=100	Machinery 1967=100	N.Y. Farm Real Estate Value/Acre	N.Y. Farm Real Estate 1967=100
1965	$238	79	92	$184	86
1970	353	116	117	273	125
1973* (Dec.)	550	177	(Dec.) 150	(Nov.) 442	199
1974* (Dec.)	435	140	(Dec.) 185	(Nov.) 564	254
1975* (Dec.)	450	145	(Dec.) 222	(Nov.) 654	294
Percent change:					
'65 to '75 (av./yr.)	+ 9%		+14%	+26%	
'73 to '74	-21%		+23%	+28%	
'74 to '75	+ 3%		+20%	+16%	

* Latest figure reported for year, i.e., November for real estate.

PRICES RECEIVED AND PAID BY N.Y. DAIRY FARMERS, 1967-1975



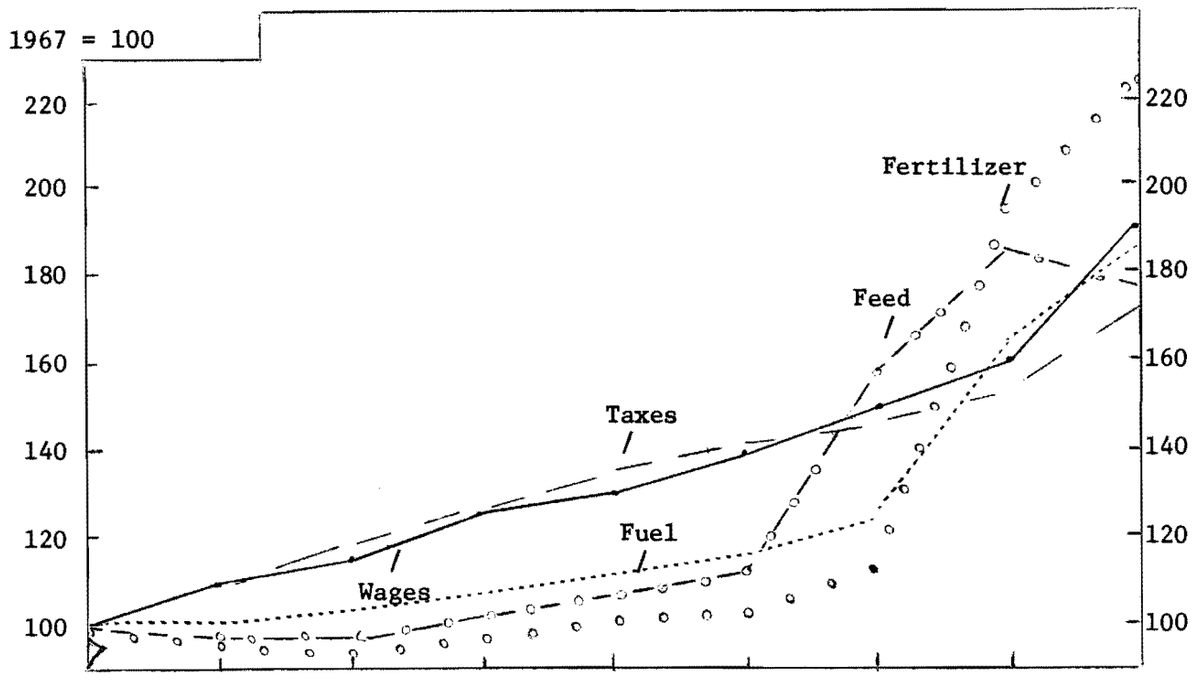
SOURCE: USDA Agricultural Prices

The relationship of prices received to prices paid determines the general level of incomes. The graph above shows the trend in prices since 1967 for milk, cull cows, and the index of all prices paid by New York dairy farmers. Since 1971, milk prices have lagged behind prices paid. Slaughter cow prices were unusually high in 1973 but dropped sharply in 1974 and 1975.

Table 2. PRICES RECEIVED AND PAID BY NEW YORK DAIRY FARMERS, 1965-1975

Year	Milk 3.5% B.F. (cwt.)	Slaughter Cows (cwt.)	Prices Paid By New York Dairy Farmers (1967=100)	Monthly Farm Price/100 Lbs. of Milk, 1975	
1965	$4.27	$13.91	93	January	$ 8.17
1966	4.79	17.35	96	February	8.17
1967	5.07	17.10	100	March	7.82
1968	5.43	17.60	103	April	7.71
1969	5.66	19.30	107	May	7.55
1970	5.89	20.70	112	June	7.61
1971	6.02	21.20	120	July	8.42
1972	6.25	24.48	126	August	9.10
1973	7.30	32.80	146	September	9.67
1974	8.24	27.40	172	October	10.17
1975	8.64	20.62	186	November	10.24
				December	10.22

PRICES PAID BY FARMERS FOR SELECTED ITEMS, 1967-1975



SOURCE: USDA Agricultural Prices

In recent years, all prices paid by New York dairy farmers have risen but some more than others. From 1967 to 1975, taxes rose 62%, feed 77%, fuel 80%, wages 86%, and fertilizer 124%. Feed, fertilizer, and motor fuel prices which had increased gradually over the years, have risen sharply since 1973. The average price of fertilizer in 1975 was 15% higher than for 1974 and fuel was 11%. In contrast, taxes for 1975 were up 5% and feed was down 4% from a year earlier.

Table 3. PRICES PAID BY FARMERS FOR SELECTED ITEMS, 1965-1975

Year	Index 1967=100				
	Feed	Fertilizer	Fuel	Wages	Taxes*
1965	96	100	96	85	87
1970	103	98	107	126	129
1971	108	101	112	130	136
1972	112	103	115	140	142
1973	157	114	124	150	146
1974	185	195	162	160	154
1975	177	224	180	186	162
% increase '74 to '75	-4%	15%	11%	16%	5%

* Revised

SUMMARY OF THE FARM BUSINESS

Resources

Information on the resources used is basic in the analysis of any business. The tables on this page report on the resources used and characteristics of the 605 farm businesses included in this study.

Table 4. BUSINESS CHARACTERISTICS AND RESOURCES USED
605 New York Dairy Farms, 1975

Type of Business	No.	%	Business Records	No.	%	Dairy Records	No.	%
Individual	488	81	CAMIS	123	20	D.H.I.C.	344	56
Partnership	104	17	Account Book	273	45	Owner Sampler	116	19
Corporation	13	2	Agrifax	106	18	Other	39	6
			Farm Bureau	13	2	None	116	19
			Agway	24	4			
			Other	16	11			

Barn Type	No.	%	Milking System	No.	%	Milking System	No.	%
Stanchion	389	64	Bucket & carry	27	5	Herringbone	164	27
Free stall	205	34	Dumping station	187	31	Other parlor	31	5
Other	11	2	Pipeline	196	32			

Labor Force	My Farm	Average
Operator	_____	14 mo.
Family paid	_____	3 mo.
Family unpaid	_____	3 mo.
Hired	_____	9 mo.
Total	_____	29 mo.
Age of operator(s)	_____	42
Estimated value operator's labor and management	$_____	$10,500

Land Used	My Farm	Farms	Acres
Total acres owned	_____	605	304
Total acres rented	_____	494	102
Total crop acres	_____	605	217
Crop acres rented	_____	484	76

Number of Cows	My Farm	Average
Beginning of year	_____	72
End of year	_____	74
Average for year	_____	72

Eighty-two percent of the 605 operators rented some land and 76 of the 217 crop acres or 35 percent were rented.

The average total farm inventory increased from $233,100 to $248,200 or 6 percent during 1975. The increase reflects both growth in the businesses and inflation. Changes in prices of major inventory items are shown on page 3.

Table 5. CAPITAL INVESTMENT - FARM INVENTORY VALUES
605 New York Dairy Farms, 1975

	My Farm		Average 605 Farms		Percent
	1/1/75	1/1/76	1/1/75	1/1/76	Increase
Livestock	$_____	$_____	$ 49,006	$ 51,826	+ 6%
Feed & supplies	_____	_____	18,220	20,435	+12
Machinery & equipt.	_____	_____	41,435	44,437	+ 7
Land & buildings	_____	_____	124,396	131,511	+ 6
Total	$_____	$_____	$233,057	$248,209	+ 6

Machinery and Real Estate Calculations

Capital outlay for machinery and buildings usually occur in large amounts which in turn are used over a number of years. Calculation of the depreciation to be charged to the 1975 business is shown below and is included as a farm expense on page 10.

Table 6. MACHINERY DEPRECIATION
605 New York Dairy Farms, 1975

Item	My Farm	Average 605 Farms
Beginning Inventory	$_____	$41,435
Purchases	_____	8,234
Total (1)	$_____	$49,669
End Inventory	$_____	$44,437
Sales	_____	166
Total (2)	_____	44,603
DEPRECIATION (1 minus 2)	$_____	$ 5,066
Percent Depreciation	_____%	10%

Lost capital represents the difference between the cost of real estate purchased during the year and the amount these improvements added to the sale value of the real estate. It is not included in farm expenses since building depreciation is based on the full cost of new buildings and will account for the lost capital over the life of the building.

Building depreciation was reported by the farmer and included the 1974 income tax depreciation plus the estimated depreciation on any new building in 1975.

Real estate appreciation was estimated by each farm operator. This appreciation includes the increase in market value and the building depreciation for the beginning package of real estate. It averaged about 4 percent of the beginning real estate inventory. This is probably underestimated since farmers find it difficult to realize how much values have risen.

Table 7. REAL ESTATE CALCULATIONS
605 New York Dairy Farms, 1975

Item	My Farm	Average 605 Farms
Beginning Inventory	$_____	$124,396
Plus Cost of Purchases	$_____	$ 5,448
Less Lost Capital	_____	-808
Value Added	_____	+4,640
Less Bldg. Depreciation	$_____	$-2,363
Less items sold	_____	-137
Value Deducted	_____	-2,500
Plus Appreciation	_____	+4,975
End of Year Inventory	$_____	$131,511

Receipts

Receipts from a 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.

Table 8. FARM RECEIPTS
605 New York Dairy Farms, 1975

Item	My Farm	Average 605 Farms Per Farm	Per Cow	Percent
Milk sales	$_____	$81,206	$1,128	91
Crop sales	_____	886	12	1
Dairy cattle sold	_____	4,725	66	6
Other livestock sales	_____	976	14	1
Gas tax refunds	_____	141	2	--
Government payments	_____	281	4	--
Work off farm	_____	76	1	--
Custom machine work	_____	138	2	--
Miscellaneous	_____	1,044	14	1
Total Cash Receipts	$_____	$89,473	$1,243	100
Increase in livestock inventories	_____	2,820	39	
Increase in feed and supplies	_____	2,215	31	
TOTAL FARM RECEIPTS	$_____	$94,508	$1,313	

A reasonably good 1975 crop season combined with high feed prices resulted in an average increase in feed and supply inventories of $2,215. Cow prices rose some during the year, and cattle numbers increased so the 605 farms had a net increase in livestock inventories of $2,820. The number of cows increased from 72 in the beginning to 74 at the end of year, and the average livestock inventory value per cow (including heifers) was $681 at the beginning of the year and $700 at the end, or an increase of $19 per cow.

The average price received for milk sold in 1975 by the 605 farms was $8.65. The state average was $8.64 shown on page 4. Milk sales per cow averaged $1,128 per cow for the 605 farms while the top 10 percent of the farms based on labor income averaged $1,230 per cow (table 9).

Table 9. INCOME ANALYSIS

Item	My Farm	Average 605 Farms	Top 10%
Average price per cwt. milk sold	$_____	$8.65	$8.66
Milk sales per cow	$_____	$1,128	$1,230
Total cash receipts per man	$_____	$37,280	$47,320

The average price per hundredweight of milk sold by the 605 farms in 1975 was $8.65. The average price is calculated by dividing the gross milk receipts for the year by the total pounds of milk sold. The variation in average price received is shown below.

Variation in Average Milk Price

Average Price Received for Milk	Farms	
	Number	Percent
Below $8.00	19	3
$8.00 - 8.24	54	9
8.25 - 8.49	190	31
8.50 - 8.74	189	31
8.75 - 8.99	57	9
9.00 - 9.24	42	7
9.25 - 9.49	33	6
9.50 or over	21	4
Total	605	100

Dairymen often say there is nothing they can do about the price received for milk. This may be true as it pertains to the price at a particular time, but the variation shown here does indicate that the average annual prices received for milk by farmers do vary. Management practices account for some of the differences. Seasonality of production and butterfat test are two management items that affect the average price for the year.

Total farm receipts are sometimes used as a measure of size of business. The Census of Agriculture uses this measure in classifying farms. The distribution of total farm receipts of the 605 farms in 1975 is shown below.

Distribution of Farms by Total Farm Receipts

Total Farm Receipts	Farms	
	Number	Percent
Under $ 40,000	56	9
$ 40,000 - 49,999	64	11
50,000 - 59,999	66	11
60,000 - 69,999	70	12
70,000 - 79,999	72	12
80,000 - 89,999	48	8
90,000 - 99,999	38	6
100,000 - 119,999	51	8
120,000 - 149,999	41	7
150,000 - 199,999	50	8
200,000 or over	49	8
Total	605	100

Only 9 percent of the 605 farms had receipts under $40,000 while 8 percent had receipts of $200,000 or more.

Expenses

The farm expenses for the 605 farms averaged nearly $250 per day. This provides many places for dollar leaks. The average expenses per farm and per cow are shown below.

FARM EXPENSES
605 New York Dairy Farms, 1975

Item	My Farm	Average 605 Farms Per Farm	Per Cow	Percent
Labor				
Hired labor	$_____	$ 6,923	$ 96	10
Feed				
Dairy concentrate	_____	22,460	312	32
Other feed	_____	1,081	15	1
Machinery				
Machine hire	_____	693	10	1
Machinery repairs	_____	4,079	57	6
Auto expense (farm share)	_____	315	4	--
Gas and oil	_____	2,735	38	4
Livestock				
Purchased animals	_____	2,146	30	3
Breeding fees	_____	988	14	1
Veterinary and medicine	_____	1,305	18	2
Milk marketing	_____	1,821	25	3
Other livestock expense	_____	2,716	38	4
Crops				
Lime and fertilizer	_____	4,607	64	7
Seeds and plants	_____	1,483	21	2
Spray & other crop expense	_____	1,263	18	2
Real Estate				
Land, building, fence repair	_____	1,430	20	2
Taxes	_____	2,050	28	3
Insurance	_____	1,379	19	2
Rent	_____	1,130	16	2
Other				
Telephone (farm share)	_____	323	4	--
Electricity (farm share)	_____	1,381	19	2
Interest paid	_____	6,196	86	9
Miscellaneous	_____	1,084	15	2
TOTAL CASH EXPENSES	$_____	$69,588	$ 967	100
Machinery depreciation	_____	5,066	70	
Building depreciation	_____	2,363	33	
Unpaid labor	_____	1,050	14	
Interest on equity capital @ 7%	_____	11,949	166	
Decrease in livestock inventory	_____	--	--	
Decrease in feed & supply inventory	_____	--	--	
TOTAL FARM EXPENSES	$_____	$90,016	$1,250	

The cash expense classifications used on page 10 are taken from the "Cornell Farm Account Book." Lists of the items included in each category are presented on the inside back cover of that account book.

Interest paid on farm indebtedness was included as a cash expense in these summaries for the first time in 1973. Although debt payments usually include both interest and principal only the interest portion is included here.

Machinery and real estate depreciation - expenditures for machinery and buildings are usually made in large amounts. To include all the expenses in the year of purchase would inflate the farm expenses. Machinery depreciation was calculated on page 7, and the farmers reported their building depreciation as that shown on their income tax returns.

Unpaid family labor refers to work done by members of the family who are not paid cash wages. The operator estimates the number of months of unpaid labor. This is charged to the business at $350 per month.

Interest on equity capital at 7 percent has been included as a noncash expense item. This represents what the operator might have earned on his equity capital had he not had it invested in the farm business. This is often called an "opportunity cost." The end-of-year farm net worth (see page 15) is used as the equity capital for computing this interest charge.

Decrease in livestock and feed inventories is the amount that the beginning inventory for each of these two items exceeds the end inventory. Since this indicates a "using up" of inventory items, it is considered as a farm expense for the year. For the 605 farms, the net inventory change was an increase for feed and supplies and livestock. Space is provided for individual farms that might have a decrease.

Farm expenses can be classified on the basis of fixed, variable, and capital items as shown below:

Overhead Expenses (Fixed)	
Land & building repairs	$ 1,430
Property taxes	$ 2,050
Insurance	1,379
Rent	1,130
Electricity	1,381
Telephone	323
Total Fixed Overhead	$ 7,693
Capital Expenses	
Interest on equity capital	$11,949
Interest paid	6,196
Machinery depreciation	5,066
Real estate depreciation	2,363
Total Capital Expenses	$25,574

Operating Expenses (Variable)	
Labor	$ 6,923
Feed	23,541
Machinery repairs	4,079
Gas and oil	2,735
Machine hire	693
Auto	315
Livestock purchased	2,146
Livestock expenses	6,830
Fertilizer and lime	4,607
Other crop expenses	2,746
Unpaid labor	1,050
Miscellaneous	1,084
Total Variable	$56,749

On these farms, the variable expenses accounted for 63 percent, the fixed 9 percent, and the capital expenses 28 percent of the total farm expenses.

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. Several common measures are reported here.

Table 11. NET CASH FARM INCOME
605 New York Dairy Farms, 1975

Item	My Farm	Average 605 Farms Per Farm	Average 605 Farms Per Cow
Cash Farm Receipts	$_____	$89,473	$1,243
Cash Farm Expenses	_____	69,588	967
NET CASH FARM INCOME	$_____	$19,885	$ 276

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 nonfarm income. Cash flow is not a good measure of the profitableness of the business but it is useful when planning debt repayment programs.

Table 12. LABOR AND MANAGEMENT INCOME
605 New York Dairy Farms, 1975

Item	My Farm	Average 605 Farms Per Farm	Average 605 Farms Per Cow
Total Farm Receipts	$_____	$94,508	$1,313
Total Farm Expenses	_____	90,016	1,250
LABOR & MANAGEMENT INCOME	$_____	$ 4,492	$ 63
Number of Operators	_____	(734) 1.21	
LABOR & MGT. INCOME/OPERATOR	$_____	$ 3,703	

Labor and management income is the return to the operator for his efforts in operating the business. A 7 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 with this capital had it been invested elsewhere, such as in bank certificates. Labor and management income is the measure used most often for comparing farm businesses.

The average labor and management income per operator for these 605 dairy farms was $3,703. In addition, the operators had the use of a house and perquisites, such as milk and meat which should be included when considering the operator's net earnings. There was a wide range in the labor and management incomes as shown below. Thirty-seven percent of the farms had minus labor incomes for 1975 while six percent had labor incomes of $20,000 or more.

Distribution of Labor and Management Incomes Per Operator

Labor and Management Income Per Operator	Farms	
	Number	Percent
$-10,000 & Below	57	9
-9,999 - -5,001	62	10
-5,000 - -1	109	18
0 - 4,999	136	23
5,000 - 9,999	104	17
10,000 - 14,999	65	11
15,000 - 19,999	37	6
20,000 - 24,999	16	3
25,000 or More	19	3

Labor, management, and ownership income per operator reflects the combined return to the farmer for his triple role of worker-manager, financier, and owner. This measure includes appreciation on real estate, and return on equity capital, and is the amount available for the operator's living and his gain in business net worth. The average labor, management, and ownership income per operator was $17,655 or nearly five times the labor and management income which explains in part how some farmers accumulate sizeable net worths with only modest labor incomes.

Table 13. LABOR, MANAGEMENT, AND OWNERSHIP INCOME
605 New York Dairy Farms, 1975

Item	My Farm	Average 605 Farms	Percent
Labor and management income/farm (p. 12)	$_____	$ 4,492	21
Real estate appreciation (p. 7)	_____	4,975	23
Interest on equity capital @ 7% (p. 10)	_____	11,949	56
Total Per Farm	$_____	$21,416	100
Number of operators	_____	(734) 1.21	
LABOR, MANAGEMENT, AND OWNERSHIP INCOME PER OPERATOR	$_____	$17,655	

Management income is another measure used in studying farm businesses. From labor and management income, the value of operator's labor is subtracted to get management income. In this study, operator's labor was valued at $6,000. This gives a management income per operator of minus $2,297 ($3,703 minus $6,000). If appreciation were included, the management income per operator would be $1,815.

Return on Equity Capital can be computed with or without real estate appreciation. To calculate return on equity capital (including real estate appreciation), the estimated value of operator's labor and management is deducted from labor, management, and ownership income. This return to equity capital is divided by the farm net worth to get the rate of return on equity capital. To compute return on equity capital, excluding real estate appreciation, real estate appreciation must be deducted from ownership income.

Table 14. RETURN ON EQUITY CAPITAL
605 New York Dairy Farms, 1975

Item	My Farm	Av. 605 Farms
	Including Real Estate Appreciation	
Labor, Management & Ownership Income (p. 13)	$_____	$21,416
Value of Operator's Labor & Management	_____	(1.21) 12,739
RETURN ON EQUITY CAPITAL	$_____	$ 8,677
Amount of Equity Capital	$_____	$170,700
RATE OF RETURN ON EQUITY CAPITAL	_____%	5.1%
	Excluding Real Estate Appreciation	
Return on Equity Capital (from above)	$_____	$8,677
Real Estate Appreciation	_____	4,975
RETURN ON EQUITY CAPITAL	$_____	$3,702
Amount of Equity Capital	$_____	$170,700
RATE OF RETURN ON EQUITY CAPITAL*	_____%	2.2%

* The rate of return on the average capital was 4.1%.

The operators were asked to estimate the value of their labor and management on the basis of what they might be able to earn if they were to hire out in a similar position. The average estimate for the 734 operators was $10,500. This is in line with the value if determined by the value of the labor plus a management charge based on 5 percent of the cash receipts.

Returns Per Unit of Input

Income from a business can also be calculated in relation to various input units. For example, since these are family-type farms, the labor and management return can be figured on a per man basis. Returns can also be figured on a per cow basis. These are shown below.

Returns to All Labor	
Labor & mgt. income per farm	$ 4,492
Value hired labor	6,923
Value unpaid labor	1,050
Total Returns to Labor	$12,465
Average man equivalent	2.4
Returns per man equivalent	$5,194
Returns per hour (3,000 hrs./yr.)	$1.73

Returns Per Cow	
Net cash farm income/cow	$276
Labor & mgt. income/cow	$63
Labor, management and ownership income/cow	$297

Farm Family Financial Situation

Table 15. FARM FAMILY FINANCIAL SITUATION
590 New York Dairy Farms, January 1, 1976

Item	My Farm	Average 590 Farms Amount	Percent
Assets			
Livestock	$_____	$ 51,734	19
Feed and supplies	_____	20,373	7
Machinery and equipment	_____	44,308	16
Land and buildings	_____	131,963	48
Co-op investment	_____	4,032	1
Accounts receivable	_____	7,291	3
Cash and checking accounts	_____	1,927	1
Total Farm Assets	$_____	$261,628	95
Savings accounts	$_____	$ 2,998	1
Cash value life insurance	_____	2,630	1
Stocks and bonds	_____	1,627	1
Nonfarm real estate	_____	2,726	1
Auto (personal share)	_____	706	--
All other	_____	1,873	1
Total Nonfarm Assets	_____	12,560	100
TOTAL ASSETS	$_____	$274,188	
Liabilities			
Real estate mortgage	$_____	$ 48,884	54
Liens on cattle & equipment	_____	30,402	33
Installment contracts	_____	2,149	2
Notes and other farm debt	_____	10,085	11
Total Farm Liabilities	$_____	$ 91,520	100
Nonfarm Liabilities	_____	502	
TOTAL LIABILITIES	$_____	$ 92,022	
Farm Net Worth (equity capital)	$_____	$170,108	
Family Net Worth	$_____	$182,166	

The financial situation is an important part of the farm business summary. It has a direct effect on current cash outflow and future capital investment decisions. A farmer may have a good labor income but a high debt payment schedule may seriously restrict his management flexibility. In the 605 records for 1975, a total of 590 submitted financial situation statements.

Total farm assets accounted for 95 percent of the total assets. Real estate mortgages were the largest liability and accounted for 54 percent of all debts. Equity capital for the 590 farms averaged $170,108, while the average equity capital for the 605 farms was $170,700 (see p. 14). The difference comes from the variation in the 15 farms that did not submit financial statements.

Table 16. FINANCIAL MEASURES AND DEBT COMMITMENTS
590 New York Dairy Farms, January 1, 1976

Measure	My Farm	Average 590 Farms	Average Top 10% Farms
Percent equity	_____%	66%	74%
Farm debt per cow	$_____	$1,250	$937
Available for debt service and living	$_____	$26,000	$53,245
Scheduled annual debt payments	$_____	$15,700	$18,835
Scheduled debt payment per cow	$_____	$214	$168
Scheduled debt payment as % milk check	_____%	19%	14%

Equity capital, or farm net worth, is the difference between the total farm inventory and the total farm liabilities. It represents the amount of farm capital provided by the operator.

Percent equity is the family net worth divided by the total assets. This indicates the general equity position of the family for credit purposes.

Farm debt per cow is total farm liabilities divided by number of cows. It indicates the relative debt load per production unit.

Available for debt service and living is the net cash farm income plus the interest paid. In planning debt repayments, subtract the expected family living expenses to determine the amount available for debts.

Scheduled annual debt payments represent the commitments outstanding as of January 1, 1976. When figured on a per cow or percent of milk check basis, the reasonableness of the debt commitment can be appraised.

As shown in table 17, there did not appear to be any definite relationship between herd size and percent equity or debt per cow.

Table 17. FINANCIAL SITUATION BY SIZE OF HERD
605 New York Dairy Farms, 1975

Herd Size (Cows)	Number of Farms	Number of Cows	Total Farm Assets	Farm* Liabilities	Farm Equity Capital	Percent Equity	Debt Per Cow
Under 40	88	31	$128,800	$ 36,900	$ 91,900	73%	$1,200
40 - 54	161	46	174,200	59,300	114,900	68	1,300
55 - 69	128	61	224,900	83,700	141,200	64	1,400
70 - 84	70	75	286,700	113,000	173,700	62	1,500
85 - 99	43	91	309,500	98,900	210,600	69	1,100
100 - 114	31	106	383,200	132,800	250,400	66	1,300
115 - 129	25	120	433,800	137,800	296,000	70	1,100
130 - 149	19	139	486,100	167,500	318,600	67	1,200
150 & Over	40	191	631,800	228,900	402,900	65	1,200

* For the 15 farms not submitting financial statements, liabilities were estimated by dividing the amount of interest paid by 7%.

ANALYSIS OF THE FARM BUSINESS

A systematic analysis of the operation helps to determine strengths and weaknesses in the business. In this part, five business factors are examined: size of business, rates of production, labor efficiency, capital efficiency, and cost control. The 1975 averages of selected measures for these factors for the 605 farms, and the average for the 10% with the highest labor and management incomes are reported along with general relationships of factors to labor income. Since the measures examined are interrelated, all factors should be studied before arriving at major conclusions.

Size of Business

Size has an effect on other factors such as labor efficiency, cost control, and capital efficiency. The prices received and paid are often affected by volume which is a function of size. Farm management studies show that in general larger farm businesses (when well managed) make larger labor incomes. 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 on which to make a profit.

Table 18. MEASURES OF SIZE OF BUSINESS
605 New York Dairy Farms, 1975

Measure	My Farm	Av. 605 Farms	Av. Top 10% Farms
Number of cows	_____	72	112
Number of heifers	_____	54	88
Man equivalent	_____	2.4	3.2
Total acres in crops	_____	217	331
Pounds of milk sold	_____	938,600	1,589,000
Total work units	_____	803	1,242
Total cash receipts	$_____	$89,473	$151,414
Total investment (end inventory)	$_____	$248,209	$362,517

Number of cows is the average number in the herd for the year. Where available, the D.H.I.C. annual average is used.

Total acres in crops includes all acres on which crops were harvested during the 1975 year. It does not include cropland pasture or uncropped land.

Man equivalent is the amount of labor available on the farm during the year in terms of full-time man years. Work of part-time employees and family members is converted to full-time man equivalent.

Total work units represents the number of productive man days that would be required under average conditions to care for the acreage of crops grown and the number of livestock handled. A man work unit is the average amount of productive work accomplished in ten hours.

Table 19. COWS PER FARM AND LABOR AND MANAGEMENT INCOME
605 New York Dairy Farms, 1975

Number of Cows	Number of Farms	Percent of Farms	Labor & Management Income Per Operator	Per Cow
Under 40	88	14%	$ 280	$ 9
40 - 54	161	27	2,290	55
55 - 69	128	21	3,190	60
70 - 84	70	12	560	10
85 - 99	43	7	4,000	60
100 - 114	31	5	5,780	69
115 - 129	25	4	9,130	110
130 - 149	19	3	11,970	131
150 - 179	22	4	14,170	111
180 - 199	8	1	2,540	24
200 & Over	10	2	11,850	68

The relation of size of business to labor and management income was observed for size as measured by number of cows and by man equivalent. In general, the larger the businesses the higher the labor incomes per operator. This relationship is consistent with that of earlier studies. A well-managed large farm will provide the operator a higher income than a well-managed small one, but a large farm poorly managed also can lose more.

The labor and management income for the 22 farms with 150 to 179 cows was much higher than for any other group. These farms averaged 162 cows, sold 522,700 pounds of milk per man, 28 percent of milk check went for feed, and they received an average of $8.68 per cwt. of milk sold, and twenty had free stall barns. This group ranked high in the major factors affecting incomes. The 22 farms were scattered over 18 counties in all regions of the state.

Man equivalent is often used as a measure of size. It is of interest that 75 percent of the farms had man equivalents of less than 3.0 (table 20). Thirty-four percent of the farms had less than 2.0 men and only 10 percent had 4.0 or more. The farms with a man equivalent of 4.0 or more did have higher labor and management incomes per operator.

Table 20. MAN EQUIVALENT PER FARM AND LABOR AND MANAGEMENT INCOME
605 New York Dairy Farms, 1975

Man Equivalent	Number of Farms	Percent of Farms	Number of Cows	Labor & Management Income Per Operator
1.0 - 1.4	89	15%	40	$2,790
1.5 - 1.9	114	19	46	2,130
2.0 - 2.4	162	27	60	2,930
2.5 - 2.9	82	14	75	3,630
3.0 - 3.4	66	11	92	4,470
3.5 - 3.9	30	5	112	2,750
4.0 - 4.4	26	4	130	5,530
4.5 & Over	36	6	180	6,720

Rates of Production

Production per animal and per acre are factors that affect farm incomes.

Table 21. MEASURES OF RATES OF PRODUCTION
605 New York Dairy Farms, 1975

Item	My Farm Acres	My Farm Yield	Av. 605 Farms Acres	Av. 605 Farms Yield	Average Yield Top 10% Farms
Milk sold per cow (lbs.)	_____	_____	---	13,000	14,200
All hay crops (tons H.E./A.)	_____	_____	120	2.6	3.1
Corn silage (tons/A.)	_____	_____	59	14.0	15.9
All forage crops (tons H.E./A.)	_____	_____	179	3.3	3.9
Grain corn (bu./A.)	_____	_____	24	94	102
Oats (bu./A.)	_____	_____	7	56	61

Pounds of milk sold per cow is calculated by dividing the total pounds of milk sold by the average number of cows.

Tons of hay crops per acre is calculated by adding the hay equivalent of hay crop silage and green chop to the dry hay and dividing by the total acres used for hay crops.

Tons of hay equivalent per acre of all forages is determined by adding tons of hay equivalent of corn silage to the tons of hay crops and dividing the total tons of hay equivalent from all roughage by the total acres used for roughages. This measure indicates how intensively the roughage land is used.

Studies have shown repeatedly that farms with higher rates of production tend to have higher labor incomes. In 1975, the farms with the higher rates of production tended to be larger, bought more feed per cow, and in general had higher incomes.

Table 22. MILK SOLD PER COW AND LABOR AND MANAGEMENT INCOME
605 New York Dairy Farms, 1975

Pounds of Milk Sold Per Cow	Number of Farms	Number of Cows	Feed Bought Per Cow	Labor & Management Income Per Operator	Labor & Management Income Per Cow
Under 10,000	72	55	$197	$-2,170	$-38
10,000 - 10,999	50	66	252	-2,420	-50
11,000 - 11,999	92	61	290	2,190	36
12,000 - 12,999	108	77	313	1,600	26
13,000 - 13,999	124	80	323	5,100	87
14,000 - 14,999	80	78	344	6,190	102
15,000 - 15,999	52	91	362	10,260	155
16,000 and Over	27	76	412	10,060	169

Labor Efficiency

Accomplishments per worker are used to measure labor efficiency. This is an important factor affecting labor and management incomes.

Table 23. MEASURES OF LABOR EFFICIENCY
605 New York Dairy Farms, 1975

Measure	My Farm	Av. 605 Farms	Av. Top 10% Farms
Number of cows per man	_____	30	35
Pounds of milk sold per man	_____	387,900	501,300
Work units per man	_____	332	392
Crop acres per man	_____	90	103

Pounds of milk sold per man is determined by dividing the total pounds of milk sold by the man equivalent. This is probably the best measure of labor efficiency for dairy farms.

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

The 10 percent of the farms with the highest labor and management incomes were considerably above the average of all 605 farms in the four measures of labor efficiency. The top 10 percent sold 30 percent more milk per man than the average of all farms.

The relationship of labor efficiency to labor income was positive on the 605 farms. The higher output per man was achieved by more and better cows.

Table 24. MILK SOLD PER MAN AND LABOR AND MANAGEMENT INCOME
605 New York Dairy Farms, 1975

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	94	43	10,500	$-2,210	$-56
250,000 - 299,999	77	52	11,800	-380	-5
300,000 - 349,999	106	65	12,200	1,440	24
350,000 - 399,999	96	69	13,100	3,700	70
400,000 - 449,999	89	78	13,400	4,240	70
450,000 - 499,999	51	90	13,500	5,540	79
500,000 - 599,999	64	113	14,300	10,210	123
600,000 and Over	28	131	14,400	15,770	168

Capital Efficiency

The average end-of-year inventory on the 605 farms was $248,209. This includes both owned and borrowed capital for all farms. About one-third was borrowed. The use of credit is part of capital management. Since capital is a key input item, it is important to analyze the use of capital in the business. The analysis in this section examines how efficiently the capital was used.

Table 25. MEASURES OF CAPITAL EFFICIENCY
605 New York Dairy Farms, 1975

Measure		Average 605 Farms	Average Top 10% Farms
Total capital per man	$_____	$102,570	$114,360
Total capital per cow	$_____	$3,450	$3,240
Machinery & equipment per cow	$_____	$620	$590
Land & building investment per cow	$_____	$1,830	$1,550
Land & building investment/crop acre owned	$_____	$930	$800
Total capital per cwt. milk sold	$_____	$26	$23
Capital turnover (capital ÷ receipts)	_____	2.6	2.2

Capital efficiency is often associated with size of herd. For this reason, the 605 farms were sorted on the basis of number of cows and the capital efficiency measures were calculated. There seemed to be a relationship between size and capital efficiency for the three items - machinery, real estate, and total capital. The farms with over 150 cows did have considerably lower investments per cow.

Table 26. SIZE OF HERD AND CAPITAL EFFICIENCY
605 New York Dairy Farms, 1975

Number of Cows	Number of Farms	Capital Investment Per Cow		
		Total	Real Estate	Machinery
Under 40	88	$3,980	$2,340	$730
40 - 54	161	3,640	1,970	700
55 - 69	128	3,520	1,860	670
70 - 84	70	3,600	1,990	610
85 - 99	43	3,230	1,690	580
100 - 114	31	3,400	1,740	590
115 - 129	25	3,430	1,720	640
130 - 149	19	3,300	1,630	600
150 & Over	40	3,030	1,550	470

Cost Control

Cost control is a big factor in the success of modern dairy operations. Feed, machinery, labor, and capital costs are major items and are examined in detail. In times of rising costs, it is especially important to check all items both large and small. Profitable businesses usually maintain a "tight" control on all costs.

Feed Costs

Feed is the largest single expense item on most New York dairy farms. For the 605 farms in 1975, dairy concentrate accounted for 32 percent of the cash operating expenses so feed is the first item examined.

Dairy feed costs are affected by many things. In 1975, feed prices were at near record highs. There is no satisfactory single measure of feed cost control so the feed situation is examined in the business analysis of feed costs. Below are some measures related to feed costs on a dairy farm.

Table 27. ITEMS RELATED TO FEED COSTS
605 New York Dairy Farms, 1975

Item	My Farm	Average 605 Farms	Average Top 10% Farms
Feed bought per cow	$_____	$312	$298
Crop expense per cow	$_____	$102	$120
Feed bought per cwt. milk	$_____	$2.39	$2.10
Feed & crop expense per cwt. milk	$_____	$3.18	$2.95
% Feed is of milk sales	_____%	28%	24%
Hay equivalent per cow	_____ T.	8.2 T.	9.1 T.
Crop acres per cow	_____	3.0	3.0
Fertilizer & lime per crop acre	$_____	$21	$26
Heifers as % of cow numbers	_____%	75%	79%

The average cost of feed bought per cow in 1975 was $312 while in 1974 it was $318. Likewise, the percent that feed bought is of milk sales was 28 percent in 1975 and 30 percent in 1974.

The crop situation in 1975 was good. Tons of hay equivalent produced per cow was 8.2 tons compared with 8.0 in 1974.

Feed costs include all feed for cows and heifers. Per cow costs are influenced markedly by the number of replacements on hand. Heifers as % of cow numbers must be considered when evaluating most of the per cow factors.

The 10 percent of farms with highest labor and management incomes spent more for crops, had more roughage per cow, and spent less for feed bought than the 605 farm average. The top income farms also had lower costs per cwt. milk sold.

Feed cost is influenced by a number of factors. On the production side, it is affected by the amount of homegrown grains, quality and quantity of the roughage, and the number of youngstock. On the purchasing side, it is influenced by the farmer's ability to purchase concentrates at reasonable prices.

Feed bought per cow is calculated by dividing the total expense for dairy concentrate by the average number of cows. Because this also includes the amount spent for calf and heifer feed, it actually represents the feed cost per cow and the replacements being raised.

Crop expense per cow is the total spent for fertilizer and lime, seeds and plants, spray, and other crop expense divided by the average number of cows. This represents the direct cash costs for growing feed.

Feed purchased as percent of milk receipts is calculated by dividing feed purchased by milk receipts. This measure can be used to determine whether the feed costs are in line. The amount of homegrown grain must be considered as you evaluate this measure. Milk prices also influence this factor.

Hay equivalent per cow is calculated by converting all hay crop silage, green chop, and corn silage to a dry hay equivalent and adding it to the tons of dry hay harvested. Total tons of hay equivalent is divided by the average number of cows.

Crop acres per cow is the total acres of cropland harvested divided by the average number of cows.

Heifers as percent of cow numbers is figured by dividing the number of heifers by the number of cows and multiplying by 100.

Table 28. PERCENT PURCHASED FEED IS OF MILK RECEIPTS AND LABOR AND MANAGEMENT INCOME
605 New York Dairy Farms, 1975

% Feed is of Milk	Number of Farms	Number of Cows	H.E. Per Cow	Lbs. Milk Per Cow	Labor and Management Income Per Operator
Over 40%	45	64	6.9	12,400	$-2,000
35 - 39	93	72	7.6	12,800	1,900
30 - 34	130	72	7.7	12,900	2,100
25 - 29	140	70	8.0	12,500	4,200
20 - 24	93	77	8.2	12,400	3,800
Under 20%	104	79	8.7	12,500	7,000

In general, the lower the percent of the milk check going for purchased feed the higher the income (table 28). Farms with a lower percent of the milk check going for purchased feed had more tons of hay equivalent per cow.

Machinery Costs

Machinery accounted for 18 percent of the farm inventory on these 605 farms, and the new purchases in 1975 averaged about $8,200 per farm. The cost of owning and operating this machinery accounted for one-sixth of the total farm expenses. An examination of the machinery costs is a key part of a systematic analysis of a dairy farm business.

Table 29. MACHINERY COST
605 New York Dairy Farms, 1975

Item	My Farm	Average 605 Farms Amount	Average 605 Farms Percent	Average Top 10% Farms
Depreciation (from p. 7)	$_____	$ 5,066	32	$ 6,104
Interest @ 7% on av. inventory	_____	3,005	19	4,347
Machine hire	_____	693	4	973
Machinery repairs	_____	4,079	26	6,634
Auto expense (farm share)	_____	315	2	343
Gas and oil	_____	2,735	17	3,966
Total Machinery Costs	$_____	$15,893	100	$22,367
Machinery cost:				
per cow	$_____	$221		$200
per cwt. milk sold	$_____	$1.69		$1.41

The machinery depreciation calculations were shown on page 7. Depreciation accounted for 32 percent of the total machinery costs and interest 19 percent. These two fixed cost items are often overlooked in a casual look at operating costs. Repairs were the second largest cost item and one which must be kept in line if costs are to be kept under control.

Machinery costs averaged $221 per cow but 5 farms had costs of under $100 while 67 had costs of $300 and over. In general, the lower the machinery costs per cow the higher the labor and management income per operator.

Table 30. MACHINERY COST PER COW AND LABOR AND MANAGEMENT INCOME
605 New York Dairy Farms, 1975

Machinery Cost Per Cow	Number of Farms	Percent of Farms	Labor and Management Income Per Operator
Under $100	5	1	$3,820
$100 - 149	58	10	6,070
150 - 199	192	32	4,910
200 - 249	177	29	3,490
250 - 299	106	17	2,350
300 & Over	67	11	-2,300

Labor Costs

Labor costs are sometimes overlooked in a farm business analysis. This is understandable since the farm family often provides a large part of the labor input. On these 605 farms, the family (including paid family labor) provided 69 percent of the months of labor inputs while hired nonfamily labor provided 31 percent (page 6). Family labor does have a value and in this section an analysis is made of the cost of all labor inputs.

Table 31. LABOR COSTS
605 New York Dairy Farms, 1975

Item	My Farm	Average 605 Farms Amount	Average 605 Farms Percent	Average Top 10% Farms
Value operator's labor @ $500/month	$_____	$ 7,000	47	$ 7,500
Hired labor expense (from p. 10) (includes paid family labor)	_____	6,923	46	13,903
Unpaid family labor @ $350/month	_____	1,050	7	700
Total Labor Costs	$_____	$14,973	100	$22,103
Labor cost per cow	$_____	$208		$197
Labor cost per cwt. milk	$_____	$1.60		$1.39
Cost per month hired labor	$_____	$577		$662
Cost per month all labor	$_____	$516		$582

The operator's labor was valued at $500 per month. Unpaid family labor was valued at $350 per month which is relatively low, but this is usually children or wives who would find it difficult to earn more than this amount off the farm with the hours they have available for work.

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

Table 32. LABOR AND MACHINERY COSTS
605 New York Dairy Farms, 1975

Item	My Farm	Av. 605 Farms	Av. Top 10% Farms
Total labor cost	$_____	$14,973	$22,103
Total machinery cost	_____	15,893	22,367
Total Labor and Machinery Costs	$_____	$30,866	$44,470
Labor and machinery cost per cow	$_____	$429	$397
Labor and machinery cost/cwt. milk	$_____	$3.29	$2.80

Combination of Factors

Individual factors have been examined in the analysis up to this point. It has been suggested that these factors are interrelated. In this section, the combination of four important factors is studied. The factors used here are size, rates of production, labor efficiency, and cost control as measured by number of cows, pounds of milk sold per cow, pounds of milk sold per man, and percent purchased feed was of milk receipts.

For each factor, the farms were divided on the basis of whether they were above or below the average for the 605 farms. They were then grouped on the basis of the number of factors better than average. The combination of factors above or below average within the three middle groups varied.

Table 33. COMBINATION OF FACTORS ABOVE AVERAGE* AND LABOR AND MANAGEMENT INCOME 605 New York Dairy Farms, 1975

Number of Factors Above Average	Number of Farms	Percent of Farms	Labor and Management Income Per Operator
4 Factors better than average	62	10%	$11,900
3 Factors better than average	124	21	7,200
2 Factors better than average	160	26	3,600
1 Factor better than average	164	27	-600
0 Factors better than average	95	16	-800

* Factors were:
Size - number of cows - average 72.
Rates of production - pounds of milk sold per cow - average 13,000.
Labor efficiency - pounds of milk sold per man - average 387,900.
Cost control - percent purchased feed was of milk receipts - average 28%.

The relationship between the number of factors better than average and labor income is shown in table 33. As the number of factors better than average decreased, labor incomes decreased at a rapid rate. It is important in managing a farm business to give attention to all major factors affecting the business. Concentrating on only one or two factors and neglecting the others will not give the kind of net return most farmers want.

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 605 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
605 New York Dairy Farms, 1975

Size of Business			Rates of Production			Labor Efficiency	
Man Equiv-alent	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
5.0	173	2,362,600	16,100	4.8	21	45	605,800
3.4	110	1,509,800	14,800	3.7	18	38	501,300
2.9	86	1,131,300	14,100	3.2	16	34	445,600
2.5	72	918,300	13,600	2.9	15	32	410,800
2.3	63	794,500	13,000	2.7	14	30	375,900
2.1	57	704,800	12,500	2.4	13	28	347,000
1.9	50	623,600	11,900	2.2	12	26	321,100
1.6	45	537,700	11,300	2.0	11	24	285,900
1.4	39	442,300	10,300	1.6	9	21	242,800
1.2	29	310,000	8,400	1.2	6	17	176,000

Feed Bought		Machinery Cost	Labor and Machinery	Feed and Crop Expense Per
Per Cow	% of Milk Receipts	Per Cow	Cost Per Cow	Cwt. Milk
$128	13%	$123	$297	$1.99
192	19	159	342	2.44
233	23	177	364	2.72
266	25	191	389	2.93
291	27	205	414	3.10
318	30	221	442	3.23
349	32	238	468	3.39
380	34	259	495	3.59
417	36	289	536	3.84
497	43	355	636	4.40

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.

SUPPLEMENTAL INFORMATION

Cost of Producing Milk

The cost of producing milk can be calculated from the farm business summary when the operations have dairy as the only principal enterprise. The average cost per hundredweight of producing milk in 1975 on the 605 farms and comparisons with earlier years is shown on page 29.

Comparison by Herd Size

In making an analysis of an individual farm business, it is helpful to compare it with businesses of similar size. On pages 30 to 35, the business summary, business factors, and financial situation for the 605 farms are shown for nine herd size groups. These data also can be used to study the effect of size on the many aspects of dairy farm businesses.

Farms With Free Stall Barns

There has been much interest in free stall barns in recent years. In the 1975 Summary, a total of 205 reported free stall facilities and were included in a special analysis which is reported on page 36.

Milking Systems

New types of milking systems have been introduced on many dairy farms in the past decade. The 1975 cooperators reported the kind of milking system in use on their farm. The 605 farms have been sorted by type of milking system and selected business factors for them are reported on page 37.

Type of Business Organization

Three types of business organization were included in the 605 farms. Summaries were prepared for: individual operators; partnerships; and corporations. The three summaries are compared on pages 38 and 39.

Same Farms for 1974 and 1975

There is some turnover each year in the cooperators in the business management projects. Of the 605 farms in 1975, 436 had been in the 1974 summary. A comparison of the 1974 and 1975 businesses of the same 436 farms is reported on pages 40 and 41.

Trends

A manager must keep abreast of current trends if he is to keep his business in tune with the times. Trends can be observed in different ways. One way is to compare similar business studies that have been made. On page 42, selected farm business summary factors are given for 1965, 1970, 1974 and 1975.

Operating Statements

In establishing goals, it is helpful to know what the "better" businesses do. For this purpose, an operating statement for the 10 percent of the farms with the highest labor incomes is on page 45.

Operating statements are included for two groups who participated in the farm business management projects but were not in the 605 farm analysis. These are the farms that had crop sales which were equal to 10 percent or more of the milk receipts and were classified as "dairy-cash crop" operations. The other group is the "renter" operators. See pages 43 and 44.

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.

Table 34. FARM COST OF PRODUCING MILK
605 New York Dairy Farms, 1975

Item	My Farm	Average 605 Farms
Total cash farm expenses (p. 10)	$_____	$69,588
Machinery depreciation	_____	5,066
Building depreciation	_____	2,363
Unpaid labor	_____	1,050
Interest on equity capital @ 7%	_____	11,949
TOTAL FARM EXPENSES	$_____	$90,016
Value Operator's Labor @ $500/mo.	_____	7,000
TOTAL COST OF PRODUCTION (1)	$_____	$97,016
Total cash farm receipts (p. 8)	$_____	$89,473
Less: Milk sales	_____	81,206
Non-milk cash receipts	_____	$ 8,267
Increase feed & supplies	_____	2,215
Increase of 2 cows @ $700	_____	1,400
TOTAL OTHER INCOME (2)	_____	11,882
COST OF PRODUCING MILK (minus 2)	$_____	$85,134
Hundredweights of milk sold (p. 17)	_____	9,386
COST OF PRODUCING CWT. MILK	$_____	$9.07
Management charge @ 5% cash receipts	$_____	$4,474
Management charge cwt. milk	_____	48¢
COST OF PRODUCING MILK WITH MGT. CHARGE	$_____	$9.55

Changes in cattle prices can cause a change in livestock inventories even though there are no changes in cattle numbers. To correct for this, the dollar change in livestock inventory is omitted and the change in cow numbers (increase of 2 cows) is valued at the average year-end livestock inventory value per cow (includes replacement heifers) and included as non-cash income. For 1975, the increase in value of the 2 additional cows was $1,400, while the increase in livestock inventories was $2,820.

Table 35. COST OF PRODUCING MILK AND PRICES RECEIVED, 1970-1975

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**
1970	$5,400	$2,853	$5.73	$6.08	$6.10	$5.89
1971	5,400	3,037	5.84	6.19	6.21	6.02
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

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

Table 36. FARM BUSINESS SUMMARY BY HERD SIZE
605 New York Dairy Farms, 1975

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	$ 21,274	$ 33,694	$ 43,746	$ 53,472
Feed and supplies	7,194	10,754	16,803	21,341
Machinery and equipment	22,571	32,409	40,750	45,745
Land and buildings	72,394	90,634	113,546	149,533
TOTAL INVESTMENT	$123,433	$167,491	$214,845	$270,091
Receipts				
Milk sales	$ 31,880	$ 50,068	$ 65,468	$ 82,597
Dairy cattle sold	2,102	3,022	3,901	4,858
Other livestock sales	510	621	1,025	854
Crop sales	291	527	720	719
Miscellaneous receipts	927	1,061	1,249	1,329
Total Cash Receipts	$ 35,710	$ 55,299	$ 72,363	$ 90,357
Increase in livestock	867	1,852	2,238	2,047
Increase in feed & supplies	594	1,217	2,127	2,200
TOTAL FARM RECEIPTS	$ 37,171	$ 58,368	$ 76,728	$ 94,604
Expenses				
Hired labor	$ 1,182	$ 2,240	$ 4,463	$ 6,563
Dairy feed	9,500	14,162	18,194	23,488
Other feed	462	745	599	973
Machine hire	235	318	612	778
Machinery repair	1,369	2,255	3,223	3,970
Auto expense (farm share)	223	297	284	396
Gas and oil	1,247	1,714	2,287	2,862
Purchased animals	861	1,478	1,508	2,654
Breeding fees	421	630	758	1,003
Veterinary and medicine	474	829	950	1,365
Milk marketing	700	1,198	1,373	1,814
Other livestock expense	1,203	1,902	2,433	2,927
Fertilizer and lime	1,286	2,485	3,696	4,814
Seeds and plants	476	992	1,192	1,352
Spray and other crop expense	454	692	934	1,311
Land, bldg., fence repair	721	1,067	1,304	1,088
Taxes and insurance	1,753	2,292	2,860	3,757
Electric & phone (farm share)	870	1,186	1,519	1,844
Interest paid	2,207	3,988	5,279	7,317
Miscellaneous expenses	700	1,169	1,541	1,319
Total Cash Expenses	$ 26,344	$ 41,639	$ 55,009	$ 72,625
Machinery depreciation	2,142	3,570	4,753	5,785
Building depreciation	908	1,494	1,967	2,105
Unpaid family labor	1,050	1,050	1,400	1,050
Interest on equity @ 7%	6,444	8,081	9,910	12,256
Decrease in livestock	--	--	--	--
TOTAL FARM EXPENSES	$ 36,888	$ 55,834	$ 73,039	$ 93,821
Financial Summary				
Total Farm Receipts	$ 37,171	$ 58,368	$ 76,728	$ 94,604
Total Farm Expenses	36,888	55,834	73,039	93,821
Labor & Mgt. Income	$ 283	$ 2,534	$ 3,689	$ 783
Number of operators	1.02	1.11	1.16	1.40
LABOR & MGT. INCOME/OPERATOR	$ 277	$ 2,293	$ 3,191	$ 559

Table 36. contd. FARM BUSINESS SUMMARY BY HERD SIZE
605 New York Dairy Farms, 1975

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	$ 62,813	$ 78,489	$ 89,955	$103,542	$134,131
Feed and supplies	24,860	35,246	37,769	46,139	59,292
Machinery and equipment	52,339	61,976	76,231	82,973	90,198
Land and buildings	153,759	184,241	207,014	225,989	295,192
TOTAL INVESTMENT	$293,771	$359,952	$410,969	$458,643	$578,813
Receipts					
Milk sales	$101,871	$126,780	$141,434	$169,514	$225,860
Dairy cattle sold	6,509	8,811	6,900	8,747	11,403
Other livestock sales	1,005	1,104	2,078	1,235	2,547
Crop sales	1,128	1,569	1,509	1,434	3,028
Miscellaneous receipts	1,717	2,971	3,422	2,842	5,131
Total Cash Receipts	$112,230	$141,235	$155,343	$183,772	$247,969
Increase in livestock	2,613	3,379	5,196	6,062	10,987
Increase in feed & supplies	3,523	2,680	6,054	7,557	3,407
TOTAL FARM RECEIPTS	$118,366	$147,294	$166,593	$197,391	$262,363
Expenses					
Hired labor	$ 8,856	$ 13,201	$ 14,833	$ 16,747	$ 30,347
Dairy feed	27,716	34,131	39,753	44,914	60,060
Other feed	1,939	1,365	1,059	1,397	4,248
Machine hire	898	658	1,387	1,093	2,500
Machinery repair	5,254	6,632	7,506	10,267	11,997
Auto expense (farm share)	463	305	413	478	254
Gas and oil	3,321	4,358	4,379	5,854	6,940
Purchased animals	3,570	2,401	2,939	2,862	6,256
Breeding fees	1,450	1,678	1,564	2,341	2,355
Veterinary and medicine	1,647	2,088	2,381	3,275	3,496
Milk marketing	1,677	2,185	2,811	4,133	6,396
Other livestock expense	2,986	4,582	4,178	4,630	6,289
Fertilizer and lime	6,060	7,683	7,730	10,887	14,133
Seeds and plants	2,079	2,461	2,238	3,459	4,035
Spray and other crop expense	1,835	2,120	1,769	2,602	4,084
Land, bldg., fence repair	1,298	2,318	2,132	3,128	3,661
Taxes and insurance	4,613	5,225	6,472	5,774	7,268
Electric & phone (farm share)	2,041	2,556	2,755	2,792	3,765
Interest paid	6,900	9,380	9,894	12,099	16,484
Miscellaneous expenses	2,781	4,907	3,530	5,545	6,565
Total Cash Expenses	$ 87,384	$110,234	$119,723	$144,277	$201,133
Machinery depreciation	6,970	7,740	7,826	7,636	10,203
Building depreciation	2,727	3,818	4,093	4,253	7,280
Unpaid family labor	1,050	700	1,050	700	700
Interest on equity @ 7%	14,743	17,530	20,753	22,263	27,876
Decrease in livestock	--	--	--	--	--
TOTAL FARM EXPENSES	$112,874	$140,022	$153,445	$179,129	$247,192
Financial Summary					
Total Farm Receipts	$118,366	$147,294	$166,593	$197,391	$262,363
Total Farm Expenses	112,874	140,022	153,445	179,129	247,192
Labor & Mgt. Income	$ 5,492	$ 7,272	$ 13,148	$ 18,262	$ 15,171
Number of operators	1.37	1.26	1.44	1.53	1.42
LABOR & MGT. INCOME/OPERATOR	$ 4,003	$ 5,781	$ 9,131	$ 11,967	$ 10,646

Table 37. SELECTED BUSINESS FACTORS BY HERD SIZE
605 New York Dairy Farms, 1975

Item	Farms with: Less Than 40 Cows	40 to 54 Cows	55 to 69 Cows	70 to 84 Cows
Number of farms	88	161	128	70
Size of Business				
Number of cows	31	46	61	75
Number of heifers	21	34	47	55
Pounds of milk sold	373,400	587,400	765,300	948,800
Man equivalent	1.5	1.8	2.3	2.7
Total work units	358	516	685	834
Crop acres	108	145	190	225
Rates of Production				
Milk sold per cow	12,000	12,800	12,600	12,600
Tons hay crops per acre	2.1	2.3	2.5	2.7
Tons corn silage per acre	12.9	13.2	14.0	14.3
Bushels of oats per acre	58	56	52	50
Labor Efficiency				
Cows per man	21	26	27	28
Pounds milk sold per man	248,900	335,700	340,100	355,400
Work units per man	239	295	304	312
Feed Costs				
Feed purchased per cow	$306	$308	$298	$313
Crop expense per cow	$71	$91	$95	$100
Feed cost per cwt. milk	$2.54	$2.41	$2.38	$2.48
Feed & crop exp./cwt. milk	$3.14	$3.12	$3.14	$3.26
% Feed is of milk receipts	30%	28%	28%	28%
Hay equivalent per cow	7.4	7.9	8.2	8.6
Crop acres per cow	3.5	3.2	3.1	3.0
Fertilizer & lime/crop acre	$12	$17	$19	$21
Machinery and Labor Costs				
Total machinery costs	$6,757	$10,377	$13,933	$16,919
Machinery cost per cow	$218	$226	$228	$226
Machinery cost/cwt. milk	$1.81	$1.77	$1.82	$1.78
Labor cost per cow	$266	$213	$211	$215
Labor cost per cwt. milk	$2.20	$1.67	$1.68	$1.70
Capital Efficiency				
Investment per man	$82,289	$95,709	$95,487	$101,158
Investment per cow	$3,982	$3,641	$3,522	$3,601
Investment per cwt. milk	$33	$29	$28	$28
Land & buildings per cow	$2,335	$1,970	$1,861	$1,994
Machinery investment/cow	$728	$705	$668	$610
Capital turnover	3.3	2.9	2.8	2.9
Other				
Price per cwt. milk sold	$8.54	$8.52	$8.55	$8.71
Acres hay crops	79	91	112	122
Acres corn silage	16	34	48	66
Inventory changes 1975*:				
Number of cows	0	+1	0	+1
Inv. value per cow**	+$27	+$25	+$37	+$18

* Change from 1/1/75 to 1/1/76.
** Livestock inventory includes heifers.

Table 37. contd.

SELECTED BUSINESS FACTORS BY HERD SIZE
605 New York Dairy Farms, 1975

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	43	31	25	19	40
Size of Business					
Number of cows	91	106	120	139	191
Number of heifers	69	85	88	102	138
Pounds of milk sold	1,190,100	1,445,700	1,627,100	1,922,100	2,572,300
Man equivalent	2.9	3.3	3.6	3.8	5.2
Total work units	1,003	1,186	1,323	1,529	2,070
Crop acres	260	334	339	412	511
Rates of Production					
Milk sold per cow	13,100	13,600	13,600	13,800	13,500
Tons hay crops per acre	2.8	3.1	2.9	2.9	3.2
Tons corn silage/acre	14.0	14.9	13.2	15.6	14.4
Bushels oats/acre	63	58	64	46	72
Labor Efficiency					
Cows per man	31	33	34	36	37
Pounds milk sold/man	407,600	444,800	454,500	501,800	497,500
Work units per man	343	365	370	399	400
Feed Costs					
Feed purchased per cow	$305	$322	$331	$323	$314
Crop expense per cow	$110	$116	$98	$122	$117
Feed cost per cwt. milk	$2.33	$2.36	$2.44	$2.34	$2.33
Feed & crop exp./cwt. milk	$3.17	$3.21	$3.16	$3.22	$3.20
% Feed is of milk receipts	27%	27%	28%	26%	27%
Hay equivalent per cow	7.5	8.8	8.3	8.7	8.3
Crop acres per cow	2.9	3.2	2.8	3.0	2.7
Fertilizer & lime/crop acre	$23	$23	$23	$26	$28
Machinery and Labor Costs					
Total machinery costs	$20,407	$23,943	$26,608	$30,670	$37,880
Machinery cost per cow	$224	$226	$222	$221	$198
Machinery cost/cwt. milk	$1.71	$1.66	$1.64	$1.60	$1.47
Labor cost per cow	$197	$202	$203	$190	$207
Labor cost/cwt. milk	$1.50	$1.48	$1.50	$1.38	$1.54
Capital Efficiency					
Investment per man	$100,607	$110,754	$114,796	$119,750	$111,956
Investment per cow	$3,228	$3,396	$3,425	$3,300	$3,030
Investment/cwt. milk	$25	$25	$25	$24	$22
Land & buildings/cow	$1,690	$1,738	$1,725	$1,626	$1,546
Machinery investment/cow	$575	$585	$635	$597	$472
Capital turnover	2.5	2.4	2.5	2.3	2.2
Other					
Price per cwt. milk sold	$8.56	$8.77	$8.69	$8.82	$8.78
Acres hay crops	128	164	174	217	225
Acres corn silage	71	84	111	111	181
Inventory changes 1975*:					
Number of cows	+2	0	+2	+3	+9
Inv. value per cow**	+$13	+$31	+$31	+$28	+$25

* Change from 1/1/75 to 1/1/76
** Livestock inventory includes heifers.

Table 38. FARM FAMILY FINANCIAL SITUATION BY HERD SIZE
590* New York Dairy Farms, January 1, 1976

Item	Farms With: Less than 40 Cows	40 to 54 Cows	55 to 69 Cows	70 to 84 Cows
Number of farms	87	157	123	69
Assets				
Livestock	$ 21,230	$ 33,766	$ 43,516	$ 53,592
Feed and supplies	7,168	10,786	16,800	21,305
Machinery & equipment	22,437	32,425	41,003	45,509
Land and buildings	72,818	91,034	113,919	149,719
Co-op investment	1,974	1,672	2,825	4,212
Accounts receivable	2,115	3,354	5,074	9,684
Cash & checking accounts	1,075	1,164	1,789	2,690
Total Farm Assets	$128,817	$174,201	$224,926	$286,711
Savings accounts	1,699	2,615	3,467	3,342
Cash value life insurance	2,439	2,504	2,996	2,818
Stocks and bonds	1,964	1,625	1,555	357
Nonfarm real estate	1,842	1,159	1,947	3,191
Auto (personal share)	678	616	761	866
All other	1,162	1,716	1,884	1,937
Total Nonfarm Assets	$ 9,784	$ 10,235	$ 12,610	$ 12,511
TOTAL ASSETS	$138,601	$184,436	$237,536	$299,222
Liabilities				
Real estate mortgage	$ 21,347	$ 35,037	$ 45,815	$ 63,667
Liens on cattle & equipt.	11,086	18,044	26,172	34,514
Installment contracts	948	1,800	2,191	2,836
Notes & other farm debts	3,527	4,378	9,557	11,945
Total Farm Liabilities	$ 36,908	$ 59,259	$ 83,735	$112,962
Nonfarm Liabilities	1,010	122	633	622
TOTAL LIABILITIES	$ 37,918	$ 59,381	$ 84,368	$113,584
Farm Net Worth (Equity Capital)	$ 91,909	$114,942	$141,191	$173,749
FAMILY NET WORTH	$100,683	$125,055	$153,168	$185,638
Financial Measures				
Percent equity	73%	68%	64%	62%
Farm debt per cow	$1,153	$1,261	$1,351	$1,486
Available for debt service and living	$11,469	$17,540	$22,701	$24,675
Scheduled annual debt payments	$6,598	$9,685	$14,949	$18,959
Scheduled debt payment/cow	$206	$206	$241	$249
Scheduled debt payment as % of milk check	21%	19%	23%	23%

* 15 of the 605 farms did not report.

Table 38. contd. FARM FAMILY FINANCIAL SITUATION BY HERD SIZE
590* New York Dairy Farms, January 1, 1976

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	43	31	24	18	38
Assets					
Livestock	$ 62,815	$ 78,490	$ 90,053	$104,263	$135,583
Feed and supplies	24,861	35,246	38,544	44,605	59,929
Machinery & equipment	52,339	61,977	77,313	80,416	90,548
Land and buildings	153,760	184,242	207,940	228,346	301,685
Co-op investment	4,533	9,127	6,475	10,624	12,683
Accounts receivable	8,294	11,295	11,670	15,438	27,214
Cash & checking accounts	2,876	2,836	1,777	2,376	4,157
Total Farm Assets	$309,478	$383,213	$433,772	$486,068	$631,799
Savings accounts	2,953	5,408	7,593	2,020	1,056
Cash value life insurance	2,136	2,244	2,600	3,314	2,633
Stocks and bonds	3,950	325	2,396	1,413	1,447
Nonfarm real estate	860	1,354	15,820	9,000	4,894
Auto (personal share)	607	577	858	643	829
All other	569	2,553	2,628	2,468	4,154
Total Nonfarm Assets	$ 11,075	$ 12,461	$ 31,895	$ 18,858	$ 15,013
TOTAL ASSETS	$320,553	$395,674	$465,667	$504,926	$646,812
Liabilities					
Real estate mortgage	$ 52,400	$ 68,203	$ 71,347	$ 79,725	$103,690
Liens on cattle & equipt.	33,890	51,319	44,123	70,482	83,250
Installment contracts	2,259	3,363	1,921	6,393	1,970
Notes and other farm debt	10,314	9,896	20,421	10,907	39,985
Total Farm Liabilities	$ 98,863	$132,781	$137,812	$167,507	$228,895
Nonfarm Liabilities	34	572	1,066	44	597
TOTAL LIABILITIES	$ 98,897	$133,353	$138,878	$167,551	$229,492
Farm Net Worth (Equity Capital)	$210,615	$250,432	$295,960	$318,561	$402,904
FAMILY NET WORTH	$221,656	$262,321	$326,789	$337,375	$417,320
Financial Measures					
Percent equity	69%	66%	70%	67%	65%
Farm debt per cow	$1,086	$1,253	$1,148	$1,205	$1,180
Available for debt service and living	$31,741	$40,375	$46,192	$53,782	$63,326
Scheduled annual debt payments	$17,992	$24,515	$20,815	$28,360	$38,194
Scheduled debt payment/cow	$198	$231	$173	$204	$197
Scheduled debt payment as % of milk check	18%	19%	15%	17%	17%

* 15 of the 605 farms did not report.

Table 39. COMPARISON OF FARMS BY TYPE OF BARN AND HERD SIZE
605 New York Dairy Farms, 1975

Item	Herd Size (Number Cows)				
	Under 55	55-69	70-99	100-149	150 & Over
Number of farms					
Free stall	17	42	56	55	35
Other	232	86	57	20	5
Number of men					
Free stall	1.8	2.2	2.4	3.4	5.0
Other	1.8	2.3	2.8	3.8	5.5
Land & bldgs./cow					
Free stall	$2,170	$1,810	$1,800	$1,680	$1,570
Other	$2,040	$1,890	$1,930	$1,770	$1,400
Tons hay crop/acre					
Free stall	2.8	2.6	2.9	3.0	3.3
Other	2.2	2.4	2.6	2.9	2.2
Lbs. milk sold/cow					
Free Stall	12,800	12,900	12,900	13,600	13,600
Other	12,400	12,400	12,800	13,900	12,500
Lbs. milk sold/man					
Free stall	293,500	373,700	437,800	481,900	519,100
Other	291,400	330,200	361,100	409,600	437,900
Labor cost/cow					
Free stall	$232	$201	$190	$194	$209
Other	$230	$205	$219	$215	$193
Machinery cost/cow					
Free stall	$233	$241	$226	$224	$197
Other	$221	$222	$224	$222	$204
Veterinary cost/cow					
Free stall	$15	$17	$19	$21	$18
Other	$17	$15	$17	$21	$23
Feed & crop expense/cow					
Free stall	$383	$410	$433	$427	$435
Other	$390	$385	$395	$468	$402
Debt/cow					
Free stall	$1,370	$1,260	$1,440	$1,220	$1,170
Other	$1,240	$1,410	$1,200	$1,170	$1,250
Labor & mgt. income/op.					
Free stall	$3,290	$4,760	$2,910	$9,720	$13,130
Other	$1,480	$2,520	$1,110	$6,260	-$7,050

A total of 205 of the 605 farms in this study reported having free stall barns. A comparison has been made by size of herd and type of barn for selected business factors.

Table 40. SELECTED BUSINESS FACTORS BY MILKING SYSTEMS
605 New York Dairy Farms, 1975

Item	Bucket and Carry	Dumping Station	Pipeline	Herringbone Parlor	Other Parlors
Number of farms	27	187	196	164	31
Percent of farms	4%	31%	33%	27%	5%
Capital Investment					
(end of year)					
Livestock	$ 20,922	$ 34,244	$ 48,684	$ 76,954	$ 71,735
Feed & supplies	7,215	11,286	18,095	34,711	26,408
Machinery & equipt.	20,486	30,621	43,423	63,364	54,916
Land & buildings	73,164	93,253	127,291	181,552	175,050
TOTAL INVESTMENT	$121,787	$169,404	$237,493	$356,581	$328,109
Financial Summary					
Total Farm Rcts.	$ 37,230	$ 57,890	$ 86,110	$148,843	$130,940
Total Farm Exp.	36,097	56,459	82,485	138,960	127,728
Labor & Mgt. Inc.	$ 1,133	$ 1,431	$ 3,625	$ 9,883	$ 3,212
No. of operators	(29) 1.1	(215) 1.1	(231) 1.2	(225) 1.4	(34) 1.1
LABOR & MGT. INC./OPR.	$ 1,055	$ 1,245	$ 3,077	$ 7,209	$ 2,931
Size of Business					
Number of cows	33	49	65	109	100
Number of heifers	21	35	48	84	67
Lbs. of milk sold	359,400	586,500	859,000	1,457,100	1,328,200
Man equivalent	1.8	2.0	2.3	3.2	3.0
Crop acres	111	158	190	323	268
Rates of Production					
Milk sold/cow (lbs.)	10,900	12,000	13,280	13,400	13,300
Tons hay crops/acre	1.8	2.1	2.7	3.0	2.7
Tons corn silage/acre	12.9	13.0	14.4	14.3	13.9
Labor Efficiency					
Cows per man	18	25	28	34	33
Lbs. milk sold/man	196,400	293,200	368,700	459,700	442,700
Costs					
Feed purchased/cow	$282	$296	$309	$315	$342
% Feed is of milk rcts.	30%	29%	27%	27%	29%
Machinery cost/cow	$195	$210	$229	$218	$227
Labor cost/cow	$290	$225	$209	$202	$192
Capital Efficiency					
Investment/man	$66,550	$84,700	$101,930	$112,490	$109,370
Investment/cow	$3,690	$3,460	$3,655	$3,270	$3,280
Land & bldgs./cow	$2,220	$1,900	$1,960	$1,700	$1,750
Machinery inv./cow	$620	$625	$670	$580	$550
Other					
Price/cwt. milk sold	$8.61	$8.53	$8.61	$8.71	$8.79

Table 41. FARM BUSINESS SUMMARIES FOR INDIVIDUALS, PARTNERSHIPS, AND CORPORATIONS
605 New York Dairy Farms, 1975

	Averages for:					
	488 Individuals		104 Partnerships		13 Corporations	
CAPITAL INVESTMENT						
	1/1/75	1/1/76	1/1/75	1/1/76	1/1/75	1/1/76
Livestock	$ 44,679	$ 47,229	$ 63,504	$ 67,021	$ 95,480	$102,847
Feed & supplies	15,912	17,819	25,288	28,059	48,303	57,647
Machinery & equipment	39,135	41,703	47,992	52,480	75,314	82,712
Land & buildings	116,629	123,143	142,960	152,230	267,443	279,854
TOTAL INVESTMENT	$216,355	$229,894	$279,744	$299,790	$486,540	$523,060
EXPENSES						
Labor						
Hired		$ 6,701		$ 6,486		$ 18,743
Feed						
Dairy concentrate		20,352		28,990		49,385
Hay and other		1,064		1,037		2,065
Machinery						
Machine hire		624		978		1,005
Machinery repair		3,555		5,636		11,321
Auto expense		312		309		468
Gas and oil		2,425		3,812		5,772
Livestock						
Purchased animals		2,012		2,539		4,051
Breeding fees		878		1,378		2,011
Veterinary, medicine		1,194		1,607		3,065
Milk marketing		1,643		2,299		4,684
Other livestock expense		2,447		3,610		5,651
Crops						
Fertilizer and lime		3,954		6,207		16,337
Seeds and plants		1,328		1,923		3,818
Spray and other		1,135		1,669		2,828
Real Estate						
Land, building, fence repair		1,325		1,794		2,446
Taxes		1,866		2,650		4,170
Insurance		1,240		1,815		3,114
Rent		932		1,711		3,925
Other						
Telephone (farm share)		300		381		719
Electricity (farm share)		1,254		1,777		2,952
Interest paid		5,978		5,991		15,993
Miscellaneous		965		1,435		2,748
TOTAL CASH EXPENSES		$63,484		$ 86,034		$167,271
Machinery depreciation		4,697		6,366		8,535
Building depreciation		2,150		2,705		7,609
Unpaid labor		1,050		700		350
Interest on farm equity @ 7%		10,816		15,760		23,984
TOTAL FARM EXPENSES		$82,197		$111,565		$207,749

Table 41. FARM BUSINESS SUMMARIES FOR INDIVIDUALS, PARTNERSHIPS, AND CORPORATIONS contd. 605 New York Dairy Farms, 1975

	Averages for:		
	488 Individuals	104 Partnerships	13 Corporations
RECEIPTS			
Milk sales	$73,479	$103,959	$189,253
Crop sales	709	1,400	3,441
Dairy cattle sold	4,208	6,350	11,122
Livestock sales	801	1,624	2,391
Gas tax refund	133	174	165
Government payments	279	291	269
Work off farm	81	61	0
Custom machine work	135	139	232
Miscellaneous	926	1,460	2,144
TOTAL CASH RECEIPTS	$80,751	$115,458	$209,017
Increase in livestock	2,550	3,517	7,367
Increase in feed & supplies	1,907	2,771	9,344
TOTAL FARM RECEIPTS	$85,208	$121,746	$225,728
FINANCIAL SUMMARY			
Total Cash Receipts	$80,751	$115,458	$209,017
Total Cash Expenses	63,484	86,034	167,271
NET FARM CASH FLOW	$17,267	$ 29,424	$ 41,746
Total Farm Receipts	$85,208	$121,746	$225,728
Total Farm Expenses	82,197	111,565	207,749
LABOR & MGT. INCOME/FARM	$ 3,011	$ 10,181	$ 17,979
Number of operators	(488) 1.00	(216) 2.08	(29) 2.23
LABOR & MGT. INCOME/OPERATOR	$ 3,011	$ 4,904	$ 8,062
BUSINESS FACTORS			
Man equivalent	2.3	3.1	4.3
Number of cows	66	92	151
Number of heifers	48	72	117
Acres of hay crops	113	146	174
Acres of corn silage	53	76	138
Total acres of crops	198	275	440
Lbs. of milk sold	849,800	1,201,800	2,167,500
Lbs. of milk sold/cow	12,900	13,100	14,400
Tons hay crops/acre	2.6	2.8	3.3
Tons corn silage/acre	13.9	15.1	13.1
Cows per man	29	30	35
Lbs. of milk sold/man	377,700	390,200	500,600
% Feed is of milk sales	28%	28%	26%
Feed & crop exp./cwt. milk	$3.15	$3.23	$3.34
Fertilizer & lime/crop acre	$20	$23	$37
Machinery cost/cow	$219	$224	$216
Av. price/cwt. milk	$8.65	$8.65	$8.73

Table 42. COMPARISON OF FARM BUSINESS SUMMARIES FOR 1974 AND 1975
Same 436 New York Dairy Farms

	Averages 1974		Averages 1975	
CAPITAL INVESTMENT				
	1/1/74	1/1/75	1/1/75	1/1/76
Livestock	$ 52,235	$ 51,009	$ 51,246	$ 53,781
Feed & supplies	14,137	19,587	19,488	21,761
Machinery & equipment	37,558	42,260	42,966	45,817
Land & buildings	115,306	125,716	127,958	134,694
TOTAL INVESTMENT	$219,236	$238,572*	$241,658*	$256,053
EXPENSES				
Labor				
Hired	$ 6,948		$ 7,660	
Feed				
Dairy concentrate	23,816		23,432	
Hay and other	1,227		1,249	
Machinery				
Machine hire	704		730	
Machinery repair	3,657		4,456	
Auto expense	286		324	
Gas and oil	2,501		2,873	
Livestock				
Purchased animals	2,884		2,013	
Breeding fees	905		1,026	
Veterinary, medicine	1,232		1,359	
Milk marketing	1,225		1,990	
Other livestock expense	2,548		2,855	
Crops				
Fertilizer and lime	4,426		4,993	
Seeds and plants	1,166		1,548	
Spray and other	1,207		1,356	
Real Estate				
Land, building, fence repair	1,548		1,517	
Taxes	1,882		2,154	
Insurance	1,321		1,426	
Rent	1,066		1,244	
Other				
Telephone (farm share)	304		332	
Electricity (farm share)	1,187		1,465	
Interest paid	5,386		6,283	
Miscellaneous	832		1,142	
TOTAL CASH EXPENSES	$68,258		$73,427	
Machinery depreciation	5,054		5,194	
Building depreciation	2,599		2,469	
Unpaid labor	1,050		1,050	
Interest on farm equity @ 7%	11,442		12,456	
Decrease in livestock	1,226		--	
TOTAL FARM EXPENSES	$89,629		$94,596	

* Operators often make adjustments in values "between" years.

Table 42. COMPARISON OF FARM BUSINESS SUMMARIES FOR 1974 AND 1975
contd. Same 436 New York Dairy Farms

	Averages 1974	Averages 1975
RECEIPTS		
Milk sales	$81,241	$85,943
Crop sales	767	920
Dairy cattle sold	5,683	4,969
Livestock sales	1,281	1,009
Gas tax refund	139	145
Government payments	209	303
Work off farm	61	71
Custom machine work	101	120
Miscellaneous	830	1,072
TOTAL CASH RECEIPTS	$90,312	$94,552
Increase in livestock	--	2,535
Increase in feed & supplies	5,450	2,273
TOTAL FARM RECEIPTS	$95,762	$99,360
FINANCIAL SUMMARY		
Total Cash Receipts	$90,312	$94,552
Total Cash Expenses	68,258	73,427
NET FARM CASH FLOW	$22,054	$21,125
Total Farm Receipts	$95,762	$99,360
Total Farm Expenses	89,629	94,596
LABOR & MGT. INCOME/FARM	$ 6,133	$ 4,764
Number of operators	(518) 1.19	(532) 1.22
LABOR & MGT. INCOME/OPERATOR	$ 5,162	$ 3,905
BUSINESS FACTORS		
Man equivalent	2.5	2.5
Number of cows	74	76
Number of heifers	53	56
Acres of hay crops	118	122
Acres of corn silage	60	61
Total acres of crops	215	225
Lbs. of milk sold	943,100	989,900
Lbs. of milk sold/cow	12,740	13,000
Tons hay crops/acre	2.7	2.7
Tons corn silage/acre	13.7	14.2
Cows per man	30	30
Lbs. of milk sold/man	377,200	396,000
% Feed is of milk sales	29%	27%
Feed & crop exp./cwt. milk	$3.25	$3.16
Fertilizer & lime/crop acre	$21	$22
Machinery cost/cow	$203	$220
Av. price/cwt. milk	$8.61	$8.68

Table 43. SELECTED FARM BUSINESS SUMMARY FACTORS
New York Dairy Farms, Selected Years 1965-1975

Item	Year			
	1965	1970	1974	1975
Number of farms	673	509	628	605
Financial Summary				
Average capital invested	$66,908	$132,545	$221,974	$240,633
Total farm receipts	$30,488	$66,467	$92,108	$94,508
Total farm expenses	$21,995	$47,795	$86,315*	$90,016*
Labor income per operator	$4,680	$7,983	$4,880	$3,703
Size of Business				
Number of cows	44	65	72	72
Pounds of milk sold	523,900	822,200	905,800	938,600
Crop acres	123	168	213	217
Man equivalent	1.8	2.2	2.4	2.4
Total work units	568	691	792	803
Rates of Production				
Milk sold per cow	11,900	12,600	12,580	13,000
Tons hay crops per acre	2.1	2.7	2.6	2.6
Tons corn silage per acre	13	15	14	14
Labor Efficiency				
Cows per man	24	30	30	30
Pounds milk sold per man	291,100	373,700	374,300	387,900
Work units per man	316	314	327	332
Cost Control Factors				
Machinery cost per cow	$116	$175	$201	$221
Machinery cost/cwt. milk	$.97	$1.38	$1.60	$1.69
Feed bought per cow	$154	$192	$318	$312
Feed bought/cwt. milk	$1.29	$1.52	$2.53	$2.39
Feed & crop expense/cwt. milk	$1.60	$1.91	$3.26	$3.18
% Feed is of milk receipts	29%	25%	30%	28%
Capital Efficiency				
Total investment per man	$38,250	$62,385	$95,683	$102,566
Total investment per cow	$1,560	$2,112	$3,216	$3,447
Machinery investment/cow	$335	$447	$572	$617
Total investment/cwt. milk	$13	$17	$26	$26
Other				
Price per cwt. milk sold	$4.41	$6.10	$8.57	$8.65
Acres hay crops	81	119	117	120
Acres corn silage	20	49	61	59
Total acres in crops/cow	2.8	2.6	3.0	3.0
Fertilizer & lime expense/crop acre	$9	$13	$20	$21
Farm income per cow	$193	$287	$291	$276
Labor income per cow	$106	$145	$80	$62

* Includes interest paid, interest on equity capital, and building depreciation which were not included in total farm expenses prior to 1973. In earlier years, interest was charged on all capital and depreciation was included with inventory changes.

FARM BUSINESS SUMMARY
47 New York Dairy-Cash Crop Farms,* 1975

CAPITAL INVESTMENT	1/1/75	1/1/76
Livestock	$ 51,580	$ 54,991
Feed & supplies	33,712	33,682
Machinery & equipment	54,379	59,204
Land & buildings	170,514	180,170
TOTAL INVESTMENT	$310,185	$328,047

EXPENSES	
Labor	
Hired	$ 11,117
Feed	
Dairy concentrate	15,105
Hay and other	838
Machinery	
Machine hire	1,870
Machinery repair	6,602
Auto expense	339
Gas and oil	4,683
Livestock	
Purchased animals	2,135
Breeding fees	949
Veterinary, medicine	1,580
Milk marketing	2,153
Other livestock expense	2,716
Crops	
Fertilizer and lime	9,531
Seeds and plants	2,839
Spray and other	3,026
Real Estate	
Land, building, fence repair	1,930
Taxes	3,004
Insurance	1,576
Rent	2,574
Other Cash Expense	
Telephone (farm share)	363
Electricity (farm share)	1,634
Interest paid	7,077
Miscellaneous	1,895
TOTAL CASH EXPENSES	$ 85,536
Machinery depreciation	6,434
Building depreciation	3,693
Unpaid labor	700
Interest on farm equity @ 7%	16,857
Decrease in feed & supplies	30
TOTAL FARM EXPENSES	$113,250

RECEIPTS	
Milk sales	$ 82,287
Crop sales	22,189
Dairy cattle sold	4,413
Other livestock sales	1,504
Gas tax refund	314
Government payments	185
Work off farm	82
Custom machine work	438
Miscellaneous	3,116
TOTAL CASH RECEIPTS	$114,528
Increase in livestock	3,411
TOTAL FARM RECEIPTS	$117,939

FINANCIAL SUMMARY	
Total Cash Receipts	$114,528
Total Cash Expenses	85,536
NET FARM CASH FLOW	$ 28,992
Total Farm Receipts	$117,939
Total Farm Expenses	113,250
LABOR & MGT. INCOME/FARM	$ 4,689
Number of operators (61)	1.3
LABOR & MGT. INCOME/OPERATOR	$ 3,615

BUSINESS FACTORS	
Man equivalent	2.9
Number of cows	73
Number of heifers	53
Acres of hay crops	119
Acres of corn silage	51
Total acres of crops	355
Lbs. of milk sold	953,700
Lbs. milk sold/cow	13,100
Tons hay crops/acre	3.1
Tons corn silage/acre	15.7
Cows per man	25
Lbs. of milk sold/man	326,600
% Feed is of milk receipts	18%
Feed & crop exp./cwt. milk	$320
Fertilizer & lime/crop acre	$27
Machinery cost/cow	$327
Av. price/cwt. milk	$8.63

* Farms where crop sales amounted to 10 percent or more of milk sales.

FARM BUSINESS SUMMARY
55 New York Dairy-Renter Farms,* 1975

CAPITAL INVESTMENT	1/1/75	1/1/76
Livestock	$39,872	$42,939
Feed & supplies	14,207	15,564
Machinery & equipment	30,057	35,192
Land & buildings	2,287	2,595
TOTAL INVESTMENT	$86,423	$96,290

EXPENSES	
Labor	
Hired	$ 4,668
Feed	
Dairy concentrate	19,166
Hay and other	1,920
Machinery	
Machine hire	580
Machinery repair	2,541
Auto expense	252
Gas and oil	1,918
Livestock	
Purchased animals	4,279
Breeding fees	864
Veterinary, medicine	1,033
Milk marketing	1,268
Other livestock expense	2,566
Crops	
Fertilizer and lime	2,918
Seeds and plants	976
Spray and other	832
Real Estate	
Land, building, fence repair	668
Taxes	276
Insurance	669
Rent	6,395
Other Cash Expense	
Telephone (farm share)	270
Electricity (farm share)	1,234
Interest paid	3,171
Miscellaneous	918
TOTAL CASH EXPENSES	$59,382
Machinery depreciation	3,570
Building depreciation	69
Unpaid labor	1,050
Interest on farm equity @ 7%	4,187
TOTAL FARM EXPENSES	$68,258

RECEIPTS	
Milk sales	$66,404
Crop sales	516
Dairy cattle sold	4,198
Other livestock sales	905
Gas tax refund	79
Government payments	135
Work off farm	31
Custom machine work	45
Miscellaneous	983
TOTAL CASH RECEIPTS	$73,296
Increase in livestock	3,067
Increase in feed & supplies	1,357
TOTAL FARM RECEIPTS	$77,720

FINANCIAL SUMMARY	
Total Cash Receipts	$73,296
Total Cash Expenses	59,382
NET FARM CASH FLOW	$13,914
Total Farm Receipts	$77,720
Total Farm Expenses	68,258
LABOR & MGT. INCOME/FARM	$ 9,462
Number of operators (65)	1.18
LABOR & MGT. INCOME/OPERATOR	$ 8,012

BUSINESS FACTORS	
Man equivalent	2.1
Number of cows	59
Number of heifers	43
Acres of hay crops	108
Acres of corn silage	51
Total acres of crops	185
Lbs. of milk sold	764,600
Lbs. milk sold/cow	13,000
Tons hay crops/acre	2.3
Tons corn silage/acre	12.4
Cows per man	28
Lbs. of milk sold/man	367,600
% Feed is of milk sales	29%
Feed & crop exp./cwt. milk	$3.12
Fertilizer & lime/crop acre	$16
Machinery cost/cow	$189
Av. price/cwt. milk	$8.68

* A farm was classified as renter if no real estate was owned or if all cropland was rented.

FARM BUSINESS SUMMARY
Top 10 Percent of the Farms by Labor & Management Income
61 New York Dairy Farms, 1975

CAPITAL INVESTMENT	1/1/75	1/1/76
Livestock	$ 73,640	$ 81,924
Feed & supplies	32,889	41,148
Machinery & equipment	57,982	66,218
Land & buildings	159,624	173,227
TOTAL INVESTMENT	$324,135	$362,517

EXPENSES	
Labor	
Hired	$ 13,903
Feed	
Dairy concentrate	33,342
Hay and other	922
Machinery	
Machine hire	973
Machinery repair	6,634
Auto expense	343
Gas and oil	3,966
Livestock	
Purchased animals	2,348
Breeding fees	1,534
Veterinary, medicine	2,217
Milk marketing	3,051
Other livestock expense	3,778
Crops	
Fertilizer and lime	8,755
Seeds and plants	2,522
Spray and other	2,214
Real Estate	
Land, building, fence repair	2,310
Taxes	2,744
Insurance	1,798
Rent	1,768
Other Cash Expense	
Telephone (farm share)	377
Electricity (farm share)	1,979
Interest paid	6,877
Miscellaneous	1,300
TOTAL CASH EXPENSES	$105,655
Machinery depreciation	6,104
Building depreciation	3,777
Unpaid labor	700
Interest on farm equity @ 7%	19,442
TOTAL FARM EXPENSES	$135,678

RECEIPTS	
Milk sales	$137,679
Crop sales	1,502
Dairy cattle sold	8,016
Other livestock sales	1,462
Gas tax refund	227
Government payments	365
Work off farm	66
Custom machine work	92
Miscellaneous	2,005
TOTAL CASH RECEIPTS	$151,414
Increase in livestock	8,284
Increase in feed & supplies	8,259
TOTAL FARM RECEIPTS	$167,957

FINANCIAL SUMMARY	
Total Cash Receipts	$151,414
Total Cash Expenses	105,655
NET FARM CASH FLOW	$ 45,759
Total Farm Receipts	$167,957
Total Farm Expenses	135,678
LABOR & MGT. INCOME/FARM	$ 32,279
Number of operators (78)	1.3
LABOR & MGT. INCOME/OPERATOR	$ 25,257

BUSINESS FACTORS	
Man equivalent	3.2
Number of cows	112
Number of heifers	88
Acres of hay crops	162
Acres of corn silage	97
Total acres of crops	331
Lbs. of milk sold	1,589,000
Lbs. of milk sold/cow	14,200
Tons hay crops/acre	3.1
Tons corn silage/acre	15.9
Cows per man	35
Lbs. of milk sold/man	501,300
% Feed is of milk receipts	24%
Feed & crop exp./cwt. milk	$2.95
Fertilizer & lime/crop acre	$26
Machinery cost/cow	$200
Av. price/cwt. milk	$8.66

FARM BUSINESS SUMMARY
Average of 605 New York Dairy Farms, 1975

CAPITAL INVESTMENT	1/1/75	1/1/76
Livestock	$ 49,006	$ 51,826
Feed & supplies	18,220	20,435
Machinery & equipment	41,435	44,437
Land & buildings	124,396	131,511
TOTAL INVESTMENT	$233,057	$248,209

EXPENSES	
Labor	
Hired	$ 6,923
Feed	
Dairy concentrate	22,460
Hay and other	1,081
Machinery	
Machine hire	693
Machinery repair	4,079
Auto expense	315
Gas and oil	2,735
Livestock	
Purchased animals	2,146
Breeding fees	988
Veterinary medicine	1,305
Milk marketing	1,821
Other livestock expense	2,716
Crops	
Lime and fertilizer	4,607
Seeds and plants	1,483
Spray and other	1,263
Real Estate	
Land, building, fence repair	1,430
Taxes	2,050
Insurance	1,379
Rent	1,130
Other	
Telephone (farm share)	323
Electricity (farm share)	1,381
Interest paid	6,196
Miscellaneous	1,084
TOTAL CASH EXPENSES	$69,588
Machinery depreciation	5,066
Building depreciation	2,363
Unpaid labor	1,050
Interest on farm equity @ 7%	11,949
TOTAL FARM EXPENSES	$90,016

RECEIPTS	
Milk sales	$81,206
Crop sales	886
Dairy cattle sold	4,725
Livestock sales	976
Gas tax refund	141
Government payments	281
Work off farm	76
Custom machine work	138
Miscellaneous	1,044
TOTAL CASH RECEIPTS	$89,473
Increase in livestock	2,820
Increase in feed & supplies	2,215
TOTAL FARM RECEIPTS	$94,508

FINANCIAL SUMMARY	
Total Cash Receipts	$89,473
Total Cash Expenses	69,588
NET FARM CASH FLOW	$19,885
Total Farm Receipts	$94,508
Total Farm Expenses	90,016
LABOR & MGT. INCOME/FARM	$ 4,492
Number of operators (734)	1.2
LABOR & MGT. INCOME/OPERATOR	$ 3,703

BUSINESS FACTORS	
Man equivalent	2.4
Number of cows	72
Number of heifers	54
Acres of hay crops	120
Acres of corn silage	63
Total acres of crops	217
Lbs. of milk sold	938,600
Lbs. of milk sold/cow	13,036
Tons hay crops/acre	2.6
Tons corn silage/acre	14.0
Lbs. of milk sold/man	387,850
Cows per man	30
% Feed is of milk sales	28%
Feed & crop exp./cwt. milk	$3.18
Lime & fertilizer/crop acre	$21
Machinery cost/cow	$221
Av. price/cwt. milk	$8.65