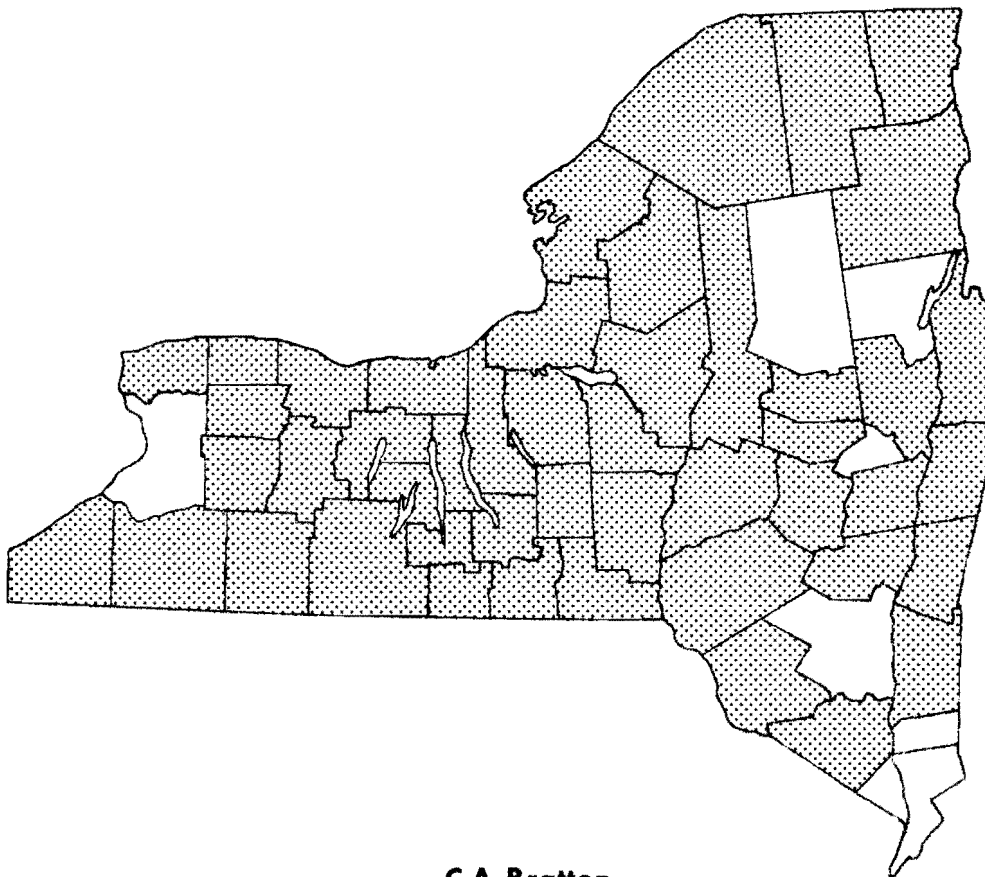


DAIRY FARM MANAGEMENT

BUSINESS SUMMARY NEW YORK 1976



C.A. Bratton

Department of Agricultural Economics
Cornell University Agricultural Experiment Station
New York State College of Agriculture and Life Sciences
A Statutory College of the State University
Cornell University, Ithaca, New York 14853

TABLE OF CONTENTS

	<u>Page</u>
INTRODUCTION	1
Distribution of Dairy Farms	2
Prices	3
 SUMMARY OF THE FARM BUSINESS	 6
Resources	6
Machinery and Real Estate Calculations	7
Receipts	8
Expenses	10
Financial Summary of Year's Business	12
 ANALYSIS OF THE FARM BUSINESS	 17
Size of Business	17
Rates of Production	19
Labor Efficiency	20
Capital Efficiency	21
Cost Control	22
Feed Costs	22
Machinery Costs	24
Labor Costs	25
Combination of Factors	26
Farm Business Chart	27
 SUPPLEMENTAL INFORMATION	 28
Cost of Producing Milk	29
Farm Business Summary by Herd Size	30
Selected Business Factors by Herd Size	32
Farm Family Financial Situation by Herd Size	34
Comparison of Farms by Type of Barn and Herd Size	36
Selected Business Factors by Milking Systems	37
Farm Business Summaries for Individuals, Partnerships, and Corporations	38
Comparison of Same Farms for 1975 and 1976	40
Selected Farm Business Summary Factors, 1956-1976	42
Operating Statements:	
32 Dairy-Cash Crop Farms	43
62 Dairy-Renter Farms	44
Top 10 Percent of 615 Dairy Farms (62 Farms)	45
Average of 615 Dairy Farms	46
Average Per Cow of 615 Dairy Farms	47

INTRODUCTION

Farm business management projects are 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 1976, about 765 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 by the college staff 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 effects of price and technological changes on 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 615 farm business records have been included in the general dairy summary for 1976. These 615 farms do NOT represent the "average" for all dairy farms in the State. Participation was on a voluntary basis so not all areas or types of operations were equally represented (see page 2). The 615 farms do represent a good cross-section of better than average commercial operators in the State.

1976 Regional Summary Publications

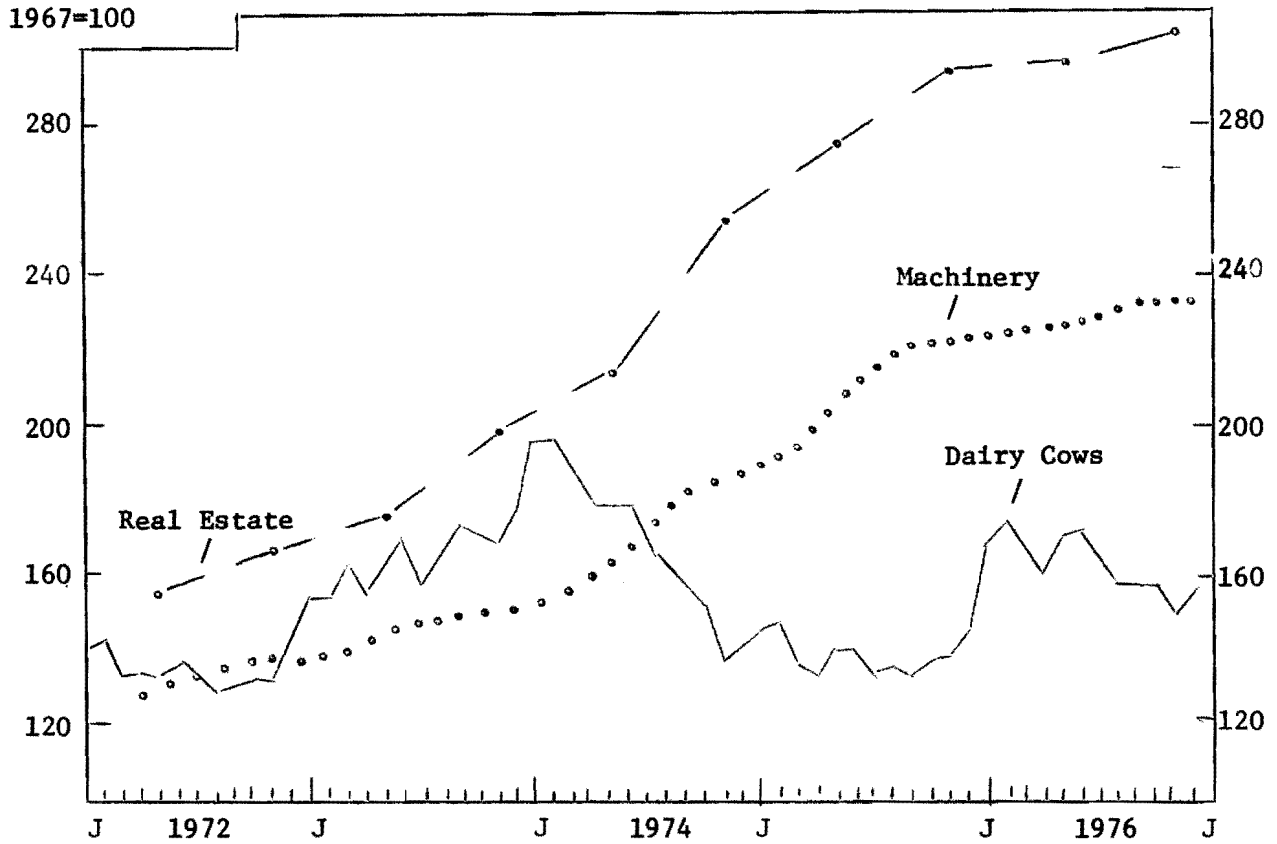
<u>Region</u>	<u>Publication</u>	<u>Author(s)</u>
Cortland County	A.E. Ext. 77-4	W. A. Knoblauch
Columbia & Dutchess Counties	A.E. Ext. 77-11	S. F. Smith
Central New York	A.E. Ext. 77-15	W. A. Knoblauch
Northern New York	A.E. Ext. 77-8	C. A. Bratton
Southeastern New York	A.E. Ext. 77-7	S. F. Smith
Central Plain	A.E. Ext. 77-16	R. A. Milligan
Western Plains	A.E. Ext. 77-13	E. L. LaDue
Eastern Plateau	A.E. Ext. 77-6	S. F. Smith & W. A. Knoblauch
Western Plateau	A.E. Ext. 77-14	G. L. Casler
Northern Hudson	A.E. Ext. 77-12	S. F. Smith
Oneida-Mohawk	A.E. Ext. 77-9	S. F. Smith

Acknowledgements

C. A. Bratton, G. L. Casler, E. L. LaDue, W. A. Knoblauch, A. C. Lowry, R. A. Milligan, 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.

Prices

VALUE OF N.Y. FARM REAL ESTATE, DAIRY COWS & MACHINERY, 1972-76



SOURCE: USDA - Agricultural Prices

Farm Real Estate Market Developments

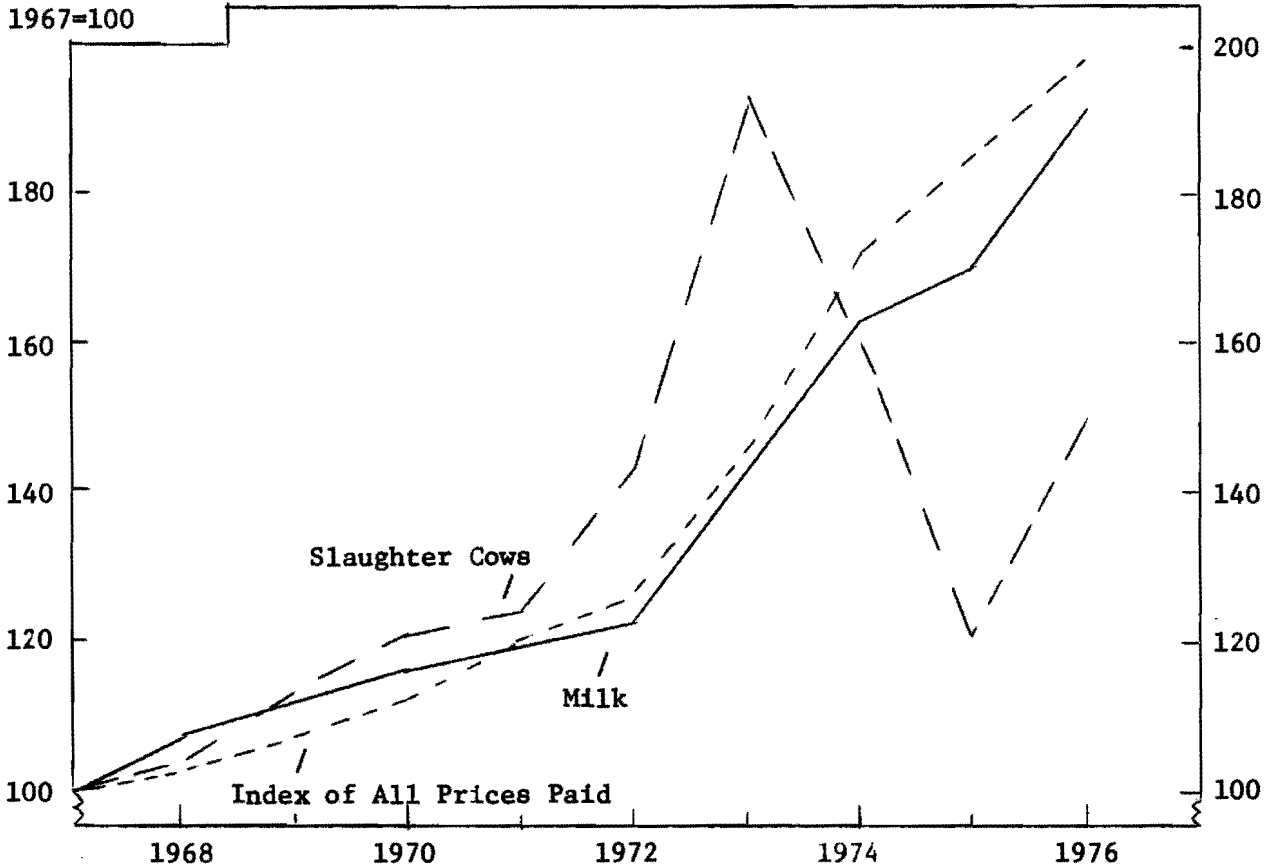
Price changes affect the inventory values on New York dairy farms. Real estate and machinery prices have risen steadily during the past five years, but the rate of rise was slower in 1976. Dairy cow prices peaked in early 1974, dropped sharply during the year, then rose 4% in 1975 and 8% in 1976. Real estate values tripled from 1967 to 1976, machinery prices more than doubled, while dairy cows were up 56%.

Table 1. REPORTED VALUES OF DAIRY FARM INVENTORY ITEMS, 1972-1976

Year*	N.Y. Dairy Cows		Machinery		N.Y. Farm Real Estate	
	Value/Head	1967=100	Value/Head	1967=100	Value/Acre	1967=100
1972	(Dec.) \$435	140	(Dec.) 137	137	(Nov.) \$372	167
1973	(Dec.) 550	177	(Dec.) 150	150	(Nov.) 442	199
1974	(Dec.) 435	140	(Dec.) 185	185	(Nov.) 564	254
1975	(Dec.) 450	145	(Dec.) 222	222	(Nov.) 653	294
1976	(Dec.) 485	156	(Dec.) 233	233	(Nov.) 677	304
Percent change:						
'72 to '73		+26%		+ 9%		+19%
'73 to '74		-21%		+23%		+28%
'74 to '75		+ 4%		+20%		+16%
'75 to '76		+ 8%		+ 5%		+ 3%

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

PRICES RECEIVED AND PAID BY N.Y. DAIRY FARMERS, 1967-1976



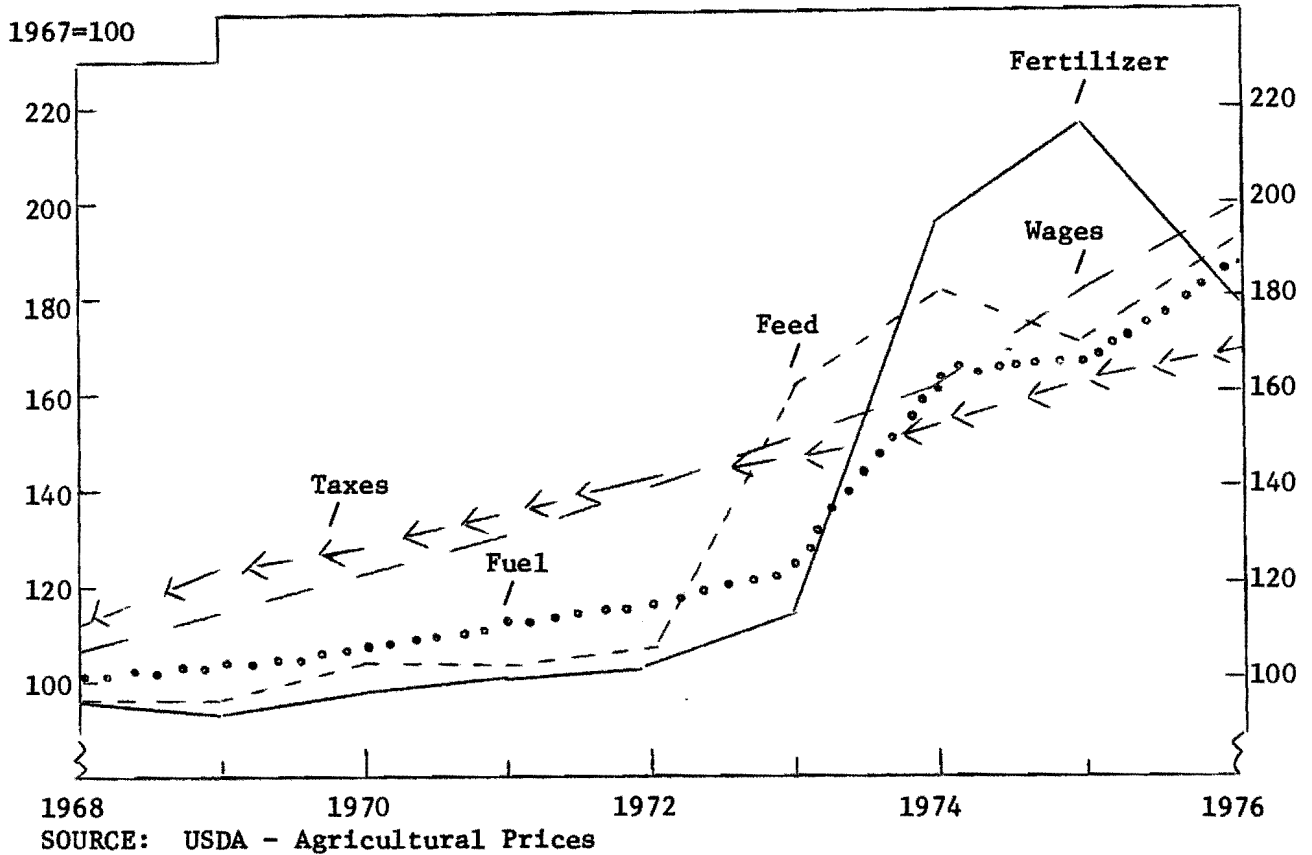
SOURCE: USDA - Agricultural Prices

The relationship of prices received to prices paid determines the general level of farm 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 all prices paid. Slaughter cow prices were unusually high in 1973, dropped in 1974 and 1975, but rose again in 1976. The prices of both milk and cull cows rose more in 1976 than all costs making the price situation in 1976 better than 1975.

Table 2. PRICES RECEIVED AND PAID BY NEW YORK DAIRY FARMERS, 1967-1976

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, 1976
1967	\$5.07	\$17.10	100	January \$10.30
1968	5.43	17.60	103	February 10.00
1969	5.66	19.30	107	March 9.80
1970	5.89	20.70	112	April 9.20
1971	6.02	21.20	120	May 9.05
1972	6.25	24.48	126	June 8.95
1973	7.30	32.80	146	July 9.70
1974	8.24	27.40	172	August 10.30
1975	8.64	20.60	186	September 10.40
1976	9.86	25.57	199	October 10.60
				November 10.30
				December 9.75

PRICES PAID BY FARMERS FOR SELECTED ITEMS, 1968-1976



In recent years, all prices paid by New York dairy farmers have risen but some more than others. From 1967 to 1976, wages rose 99%, feed 92%, fuel 87%, fertilizer 80%, and taxes 69%. Feed, fertilizer, and motor fuel prices which had increased gradually over the years, have risen sharply since 1973. The average price of fertilizer in 1976 was 17% lower than for 1975.

Table 3. PRICES PAID BY FARMERS FOR SELECTED ITEMS, 1971-1976

Year	Index 1967=100				
	Feed	Fertilizer	Fuel	Wages	Taxes*
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	217*	177	180	162
1976	192	180	187	199	169
% increase:					
'71 to '76 (av.)	16%	16%	13%	11%	5%
'74 to '75	-4%	11%	9%	12%	5%
'75 to '76	8%	-17%	6%	11%	4%

* Revised

SUMMARY OF THE FARM BUSINESS

Resources

The resources used is an important element in the analysis of any business. The tables on this page report on the resources used and characteristics of the 615 farm businesses included in this study.

Table 4. BUSINESS CHARACTERISTICS AND RESOURCES USED
615 New York Dairy Farms, 1976

<u>Type of Business</u>	<u>No.</u>	<u>%</u>	<u>Business Records</u>	<u>No.</u>	<u>%</u>	<u>Dairy Records</u>	<u>No.</u>	<u>%</u>
Individual	487	79	Account Book	271	44	D.H.I.C.	361	59
Partnership	116	19	CAMIS	134	22	Owner Sampler	107	17
Corporation	12	2	Agrifax	122	20	Other	34	6
			Farm Bureau	10	2	None	113	18
			Agway	24	4			
			Other	54	8			
<u>Barn Type</u>	<u>No.</u>	<u>%</u>	<u>Milking System</u>	<u>No.</u>	<u>%</u>	<u>Milking System</u>	<u>No.</u>	<u>%</u>
Stanchion	407	66	Bucket & carry	28	5	Herringbone	160	26
Free stall	195	32	Dumping station	190	31	Other parlor	27	4
Other	13	2	Pipeline	210	34			
<u>Labor Force</u>	<u>My Farm</u>	<u>Average</u>	<u>Land Used</u>	<u>My Farm</u>	<u>Farms</u>	<u>Acres</u>		
Operator	_____	15 mo.	Total acres owned	_____	615	304		
Family paid	_____	3 mo.	Total acres rented	_____	485	99		
Family unpaid	_____	3 mo.	Total crop acres	_____	615	209		
Hired	_____	9 mo.	Crop acres rented	_____	473	73		
Total	_____	30 mo.						
Age of operator(s)	_____	42	<u>Number of Cows</u>	<u>My Farm</u>	<u>Average</u>			
Estimated value			Beginning of year	_____	71			
operator's labor			End of year	_____	73			
and management	\$ _____	\$10,800	Average for year	_____	71			

473 or 69% of the 615 operators rented some cropland. The average acres rented by the 473 farmers was 73 or an average of 56 for the 615 farms. Thus of the 209 total crop acres, 27% were rented.

The average total farm inventory increased from \$240,500 to \$263,100 or 9% during 1976. 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
615 New York Dairy Farms, 1976

	<u>My Farm</u>		<u>Average 615 Farms</u>		<u>Percent Increase</u>
	<u>1/1/76</u>	<u>1/1/77</u>	<u>1/1/76</u>	<u>1/1/77</u>	
Livestock	\$ _____	\$ _____	\$ 50,034	\$ 53,749	7%
Feed & supplies	_____	_____	18,775	20,695	10
Machinery & equipt.	_____	_____	42,771	49,277	15
Land & buildings	_____	_____	128,937	139,423	8
Total	\$ _____	\$ _____	\$240,517	\$263,144	9%

Machinery and Real Estate Calculations

Capital expenditures for machinery and buildings usually occur in large amounts but then are used over a number of years. Calculation of the machinery depreciation to be charged to the 1976 business is shown below. Building depreciation is the amount used for tax purposes. Both are included as farm expenses on page 10.

Table 6. MACHINERY DEPRECIATION
615 New York Dairy Farms, 1976

Item	My Farm	Average 615 Farms
Beginning Inventory	\$ _____	\$42,771
Purchases	_____	11,976
Total (1)	\$ _____	\$54,747
End Inventory	\$ _____	\$49,277
Sales	_____	225
Total (2)	_____	49,502
DEPRECIATION (1 minus 2)	\$ _____	\$ 5,245
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.

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.

Table 7. REAL ESTATE CALCULATIONS
615 New York Dairy Farms, 1976

Item	My Farm	Average 615 Farms
Beginning Inventory	\$ _____	\$128,937
Plus Cost of Purchases	\$ _____	\$ 9,325
Less Lost Capital	_____	-1,054
Value Added	_____	+8,271
Less Bldg. Depreciation	\$ _____	\$-2,612
Less items sold	_____	-293
Value Deducted	_____	-2,905
Plus Appreciation	_____	+5,120
End of Year Inventory	\$ _____	\$139,423

Receipts

Total farm receipts indicate the value of the farm's production for the year. This includes the cash received for products sold plus the increase in value of livestock and feed and supplies inventories. The receipts on these 615 farms averaged \$300 per day or \$4.20 per cow per day.

Table 8. FARM RECEIPTS
615 New York Dairy Farms, 1976

Item	My Farm	Average 615 Farms		Percent
		Per Farm	Per Cow	
Milk sales	\$ _____	\$ 94,063	\$1,325	91
Crop sales	_____	813	11	1
Dairy cattle sold	_____	5,642	79	6
Other livestock sales	_____	1,190	17	1
Gas tax refunds	_____	133	2	--
Government payments	_____	290	4	--
Work off farm	_____	70	1	--
Custom machine work	_____	112	2	--
Miscellaneous	_____	928	13	1
Total Cash Receipts	\$ _____	\$103,241	\$1,454	100
Increase in livestock inventories	_____	3,715	52	
Increase in feed and supplies	_____	1,920	27	
TOTAL FARM RECEIPTS	\$ _____	\$108,876	\$1,533	

A reasonably good 1976 crop season resulted in an average increase in feed and supply inventories of \$1,920. Cow prices rose during the year, and cattle numbers increased so the 615 farms had a net increase in livestock inventories of \$3,715. The number of cows increased from 71 in the beginning to 73 at the end of year, and the average livestock inventory value per cow (including heifers) was \$705 at the beginning of the year and \$736 at the end, or an increase of \$31 per cow.

The average price received for milk sold in 1976 by the 615 farms was \$9.90. The state average was \$9.86 shown on page 4. Milk sales per cow averaged \$1,325 per cow for the 615 farms while the top 10 percent of the farms based on labor income averaged \$1,407 per cow (table 9).

Table 9. INCOME ANALYSIS

Item	My Farm	Average 615 Farms	Top 10%
Average price per cwt. milk sold	\$ _____	\$9.90	\$9.89
Milk sales per cow	\$ _____	\$1,325	\$1,407
Total cash receipts per man	\$ _____	\$41,300	\$55,110

The average price per hundredweight of milk sold by the 615 farms in 1976 was \$9.90. 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.

Average Price/Cwt. Received for Milk	Farms	
	Number	Percent
Below \$ 9.00	7	1
\$ 9.00- 9.24	4	1
9.25- 9.49	31	5
9.50- 9.74	178	29
9.75- 9.99	246	40
10.00- 10.24	84	14
10.25- 10.49	31	5
10.50 & over	34	5
Total	615	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 615 farms in 1976 is shown below.

Distribution of Farms by Total Farm Receipts

Total Farm Receipts	Farms	
	Number	Percent
Under \$ 40,000	36	6
\$ 40,000- 49,999	39	7
50,000- 59,999	49	8
60,000- 69,999	65	11
70,000- 79,999	63	10
80,000- 89,999	56	9
90,000- 99,999	47	8
100,000- 119,999	76	12
120,000- 149,999	64	10
150,000- 199,999	56	9
200,000 or over	64	10
Total	615	100

Only 6 percent of the 615 farms had total farm receipts under \$40,000, while 10 percent had receipts of \$200,000 or more.

Expenses

The total farm expenses for the 615 farms averaged nearly \$275 per day or \$3.85 per cow per day. This provides many places for dollar leaks. The average expenses per farm and per cow for each item are shown below.

FARM EXPENSES
615 New York Dairy Farms, 1976

Item	My Farm	Average 615 Farms		Percent
		Per Farm	Per Cow	
<u>Labor</u>				
Hired labor	\$ _____	\$ 7,682	\$ 108	10
<u>Feed</u>				
Dairy concentrate	_____	25,756	363	33
Other feed	_____	1,313	18	2
<u>Machinery</u>				
Machine hire	_____	822	12	1
Machinery repairs	_____	4,677	66	6
Auto expense (farm share)	_____	343	5	--
Gas and oil	_____	2,954	42	4
<u>Livestock</u>				
Purchased animals	_____	2,808	40	4
Breeding fees	_____	1,124	16	1
Veterinary and medicine	_____	1,446	20	2
Milk marketing	_____	1,810	25	2
Other livestock expense	_____	3,214	45	4
<u>Crops</u>				
Lime and fertilizer	_____	4,530	64	6
Seeds and plants	_____	1,455	20	2
Spray & other crop expense	_____	1,283	18	2
<u>Real Estate</u>				
Land, building, fence repair	_____	1,779	25	2
Taxes	_____	2,244	32	3
Insurance	_____	1,537	22	2
Rent	_____	1,308	18	2
<u>Other</u>				
Telephone (farm share)	_____	357	5	--
Electricity (farm share)	_____	1,548	21	2
Interest paid	_____	6,574	93	9
Miscellaneous	_____	1,063	15	1
TOTAL CASH EXPENSES	\$ _____	\$77,627	\$1,093	100
Machinery depreciation	_____	5,245	74	
Building depreciation	_____	2,612	37	
Unpaid labor	_____	1,050	15	
Interest on equity capital @ 7%	_____	12,519	176	
Decrease in livestock inventory	_____	--	--	
Decrease in feed & supply inventory	_____	--	--	
TOTAL FARM EXPENSES	\$ _____	\$99,053	\$1,395	

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 \$400 per month.

Interest on equity capital at 7% 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 615 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:

<u>Overhead Expenses (Fixed)</u>		<u>Operating Expenses (Variable)</u>	
Land & building repairs	\$ 1,779	Labor	\$ 7,682
Property taxes	2,244	Feed	27,069
Insurance	1,537	Machinery repairs	4,677
Rent	1,308	Gas and oil	2,954
Electricity	1,548	Machine hire	822
Telephone	357	Auto	343
Total Fixed Overhead	\$ 8,773	Livestock purchased	2,808
		Livestock expenses	7,594
<u>Capital Expenses</u>		Fertilizer and lime	4,530
Interest on equity capital	\$12,519	Other crop expenses	2,738
Interest paid	6,574	Unpaid labor	1,050
Machinery depreciation	5,245	Miscellaneous	1,063
Real estate depreciation	2,612	Total Variable	\$63,330
Total Capital Expenses	\$26,950		

On these farms, the variable expenses accounted for 64%, the fixed 9%, and the capital expenses 27% 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
615 New York Dairy Farms, 1976

Item	My Farm	Average 615 Farms	
		Per Farm	Per Cow
Cash Farm Receipts	\$ _____	\$103,241	\$1,454
Cash Farm Expenses	_____	<u>77,627</u>	<u>1,093</u>
NET CASH FARM INCOME	\$ _____	\$ 25,614	\$ 361

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 profitability of the business but it is useful when planning debt repayment programs.

Table 12. LABOR AND MANAGEMENT INCOME
New York Dairy Farms, 1976

Item	My Farm	Average 615 Farms	
		Per Farm	Per Cow
Total Farm Receipts	\$ _____	\$108,876	\$1,533
Total Farm Expenses	_____	<u>99,053</u>	<u>1,395</u>
LABOR & MANAGEMENT INCOME	\$ _____	\$ 9,823	\$ 138
Number of Operators	_____	(759) 1.23	
LABOR & MGT. INCOME/OPERATOR	\$ _____	\$ 7,960	

Labor and management income is the return to the operator for his efforts in operating the business. A 7% 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 615 dairy farms was \$7,960. 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. Twenty-three percent or nearly one-fourth of the farms had minus labor incomes for 1976, while eight percent had labor incomes of \$25,000 or more.

Distribution of Labor and Management Incomes Per Operator

<u>Labor and Management Income Per Operator</u>	<u>Farms</u>	
	<u>Number</u>	<u>Percent</u>
\$-10,000 and below	33	5
-9,999 - \$-5,001	38	6
-5,000 - -1	75	12
0 - 4,999	126	21
5,000 - 9,999	112	18
10,000 - 14,999	92	15
15,000 - 19,999	59	10
20,000 - 24,999	33	5
25,000 or more	47	8

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 \$22,254 or nearly three 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
615 New York Dairy Farms, 1976

<u>Item</u>	<u>My Farm</u>	<u>Average 615 Farms</u>	<u>Percent</u>
Labor and management income/farm (p. 12)	\$ _____	\$ 9,823	36
Real estate appreciation (p. 7)	_____	5,120	19
Interest on equity capital @ 7% (p. 10)	_____	12,519	45
Total Per Farm	\$ _____	\$27,462	100
Number of operators	_____	(759) 1.23	
LABOR, MANAGEMENT, AND OWNERSHIP INCOME PER OPERATOR	\$ _____	\$22,254	

Management income is another measure used in studying farm businesses. To get management income, the value of operator's labor is subtracted from labor and management income. In this study, operator's labor was valued at \$6,000. This gives a management income per operator of \$1,960 (\$7,960 minus \$6,000). If appreciation were included, the management income per operator would be \$6,123.

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
615 New York Dairy Farms, 1976

Item	My Farm	Av. 615 Farms
	<u>Including Real Estate Appreciation</u>	
Labor, Management & Ownership Income (p. 13)	\$ _____	\$27,462
Value of Operator's Labor & Management	_____	(1.23) 13,370
RETURN ON EQUITY CAPITAL	\$ _____	\$14,092
Amount of Equity Capital	\$ _____	\$178,840
RATE OF RETURN ON EQUITY CAPITAL	_____%	7.9%
	<u>Excluding Real Estate Appreciation</u>	
Return on Equity Capital (from above)	\$ _____	\$14,092
Real Estate Appreciation	_____	5,120
RETURN ON EQUITY CAPITAL	\$ _____	\$ 8,972
Amount of Equity Capital	\$ _____	\$178,840
RATE OF RETURN ON EQUITY CAPITAL*	_____%	5.0%

* The rate of return on the average capital was 5.9%.

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 759 operators was \$10,870. This is in line with the value if determined by the value of the labor plus a management charge based on 5% 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	\$ 9,839
Value hired labor	7,682
Value unpaid labor	<u>1,050</u>
Total Returns to Labor	\$18,571
Average man equivalent	2.5
Returns per man equivalent	\$7,428
Returns per hour (3,000 hrs./yr.)	\$2.48

Returns Per Cow

Net cash farm income/cow	\$361
Labor & mgt. income/cow	\$138
Labor, management and ownership income/cow	\$387

Farm Family Financial Situation

Table 15. FARM FAMILY FINANCIAL SITUATION
608 New York Dairy Farms, January 1, 1977

Item	My Farm	Average 608 Farms	
		Amount	Percent
<u>Assets</u>			
Livestock	\$ _____	\$ 53,647	19
Feed and supplies	_____	20,633	7
Machinery and equipment	_____	49,068	17
Land and buildings	_____	139,097	48
Co-op investment	_____	4,024	1
Accounts receivable	_____	7,018	2
Cash and checking accounts	_____	1,810	1
Total Farm Assets	\$ _____	\$275,297	95
Savings accounts	\$ _____	\$ 2,861	1
Cash value life insurance	_____	2,425	1
Stocks and bonds	_____	1,944	1
Nonfarm real estate	_____	3,417	1
Auto (personal share)	_____	871	--
All other	_____	1,979	1
Total Nonfarm Assets	_____	13,497	100
TOTAL ASSETS	\$ _____	\$288,794	
<u>Liabilities</u>			
Real estate mortgage	\$ _____	\$ 53,613	55
Liens on cattle & equipment	_____	31,997	33
Installment contracts	_____	2,967	3
Notes and other farm debt	_____	8,420	9
Total Farm Liabilities	\$ _____	\$ 96,997	100
Nonfarm Liabilities	_____	877	
TOTAL LIABILITIES	\$ _____	\$ 97,874	
Farm Net Worth (equity capital)	\$ _____	\$178,300	
Family Net Worth	\$ _____	\$190,920	

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 615 records for 1976, a total of 608 submitted financial situation statements.

Total farm assets accounted for 95% of the total assets. Real estate mortgages were the largest liability and accounted for 55% of all debts. Equity capital for the 608 farms averaged \$178,300, while the average equity capital for the 615 farms was \$178,840 (see p. 14). The difference comes from the variation in the 7 farms that did not submit financial statements.

Table 16. FINANCIAL MEASURES AND DEBT COMMITMENTS
608 New York Dairy Farms, January 1, 1977

Measure	My Farm	Average 608 Farms	Average Top 10% Farms
Percent equity	_____ %	66%	72%
Farm debt per cow	\$ _____	\$1,366	\$1,036
Available for debt service & living	\$ _____	\$32,000	\$66,090
Scheduled annual debt payments	\$ _____	\$16,520	\$23,430
Scheduled debt payment per cow	\$ _____	\$233	\$200
Scheduled debt payment as % milk check	_____ %	18%	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, 1977. 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
615 New York Dairy Farms, 1976

Herd Size (Cows)	Number of		Total Farm Assets	Farm* Liabilities	Farm Equity Capital	Percent Equity	Debt Per Cow
	Farms	Cows					
Under 40	91	32	\$130,000	\$ 37,800	\$ 92,200	71%	\$1,180
40 - 54	164	47	181,500	65,300	116,200	64	1,390
55 - 69	133	61	231,900	90,500	141,400	61	1,480
70 - 84	81	76	301,400	109,200	192,200	64	1,440
85 - 99	48	92	319,400	127,400	192,000	60	1,390
100 - 114	24	106	389,600	133,700	255,900	66	1,260
115 - 129	15	120	439,200	144,800	294,400	67	1,210
130 - 149	24	139	478,500	211,700	266,800	56	1,520
150 & over	35	200	635,300	230,300	405,000	64	1,150

* For the 7 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 1976 averages of selected measures for these factors for the 615 farms, and the average for the 10% with the highest labor and management incomes per operator 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
615 New York Dairy Farms, 1976

Measure	My Farm	Av. 615 Farms	Av. Top 10% Farms
Number of cows	_____	71	118
Number of heifers	_____	52	86
Man equivalent	_____	2.5	3.4
Total acres in crops	_____	209	316
Pounds of milk sold	_____	950,600	1,736,400
Total work units	_____	784	1,281
Total cash receipts	\$ _____	\$103,241	\$188,480
Total investment (end inventory)	\$ _____	\$263,140	\$407,100

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 1976 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
615 New York Dairy Farms, 1976

Number of Cows	Number of Farms	Percent of Farms	Labor & Management Income	
			Per Operator	Per Cow
Under 40	91	15%	\$ 2,340	\$ 79
40 - 54	164	27	5,854	140
55 - 69	133	21	6,238	125
70 - 84	81	13	8,523	154
85 - 99	48	8	9,312	134
100 - 114	24	4	11,387	181
115 - 129	15	2	11,408	134
130 - 149	24	4	11,600	118
150 - 179	18	3	15,278	130
180 - 199	7	1	20,553	200
200 & over	10	2	30,334	167

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.

Man equivalent is often used as a measure of size. It is of interest that 73% of the farms had man equivalents of less than 3.0 (table 20). Thirty-one percent of the farms had less than 2.0 men and only 10% 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
615 New York Dairy Farms, 1976

Man Equivalent	Number of Farms	Percent of Farms	Number of Cows	Labor & Management Income Per Operator
1.0 - 1.4	72	12%	36	\$4,420
1.5 - 1.9	118	19	47	7,370
2.0 - 2.4	180	29	59	7,160
2.5 - 2.9	83	13	73	6,290
3.0 - 3.4	70	11	86	7,830
3.5 - 3.9	28	5	101	8,200
4.0 - 4.4	25	4	128	14,330
4.5 & over	39	6	181	14,690

Rates of Production

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

Table 21. MEASURES OF RATES OF PRODUCTION
615 New York Dairy Farms, 1976

Item	My Farm		Av. 615 Farms		Average Yield Top 10% Farms
	Acres	Yield	Acres*	Yield	
Milk sold per cow (lbs.)	_____	_____	--	13,400	14,700
All hay crops (tons H.E./A.)	_____	_____	117	2.8	3.2
Corn silage (tons/A.)	_____	_____	63	13.1	14.8
All forage crops (tons H.E./A.)	_____	_____	176	3.3	3.9
Grain corn (bu./A.)	_____	_____	53	83	87
Oats (bu./A.)	_____	_____	21	52	53

* Average for farms reporting the crop.

Pounds of milk sold per cow is calculated by dividing the total pounds of milk sold for the year 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 1976, 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
615 New York Dairy Farms, 1976

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	50	54	\$252	\$ -927	\$-13
10,000 - 10,999	51	55	301	155	3
11,000 - 11,999	70	64	311	3,455	63
12,000 - 12,999	121	68	347	5,799	105
13,000 - 13,999	112	80	382	10,405	172
14,000 - 14,999	101	83	382	11,628	177
15,000 - 15,999	71	75	422	13,277	225
16,000 and over	39	79	458	13,915	240

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
615 New York Dairy Farms, 1976

Measure	My Farm	Av. 615 Farms	Av. Top 10% Farms
Number of cows per man	_____	28	35
Pounds of milk sold per man	_____	380,200	507,700
Work units per man	_____	314	375
Crop acres per man	_____	84	93

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 per operator were considerably above the average of all 615 farms in the four measures of labor efficiency. The top 10 percent sold 34% more milk per man than the average of all farms.

The relationship of labor efficiency to labor income was positive on the 615 farms. The higher output per man was achieved by more and better cows.

Table 24. MILK SOLD PER MAN AND LABOR AND MANAGEMENT INCOME
615 New York Dairy Farms, 1976

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	91	42	10,800	\$-1,200	\$-30
250,000 - 299,999	96	51	12,200	2,000	48
300,000 - 349,999	106	65	12,800	5,460	110
350,000 - 399,999	97	73	13,400	9,350	160
400,000 - 449,999	76	83	14,000	8,900	133
450,000 - 499,999	57	79	14,300	11,250	188
500,000 - 599,999	66	114	14,500	19,460	226
600,000 and over	26	112	14,800	20,680	234

Capital Efficiency

The average end-of-year inventory on the 615 farms was \$263,144. 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
615 New York Dairy Farms, 1976

Measure	My Farm	Average	Average
		615 Farms	Top 10% Farms
Total capital per man	\$ _____	\$105,260	\$119,020
Total capital per cow	\$ _____	\$3,710	\$3,450
Machinery & equipment per cow	\$ _____	\$694	\$655
Land & building investment per cow	\$ _____	\$1,964	\$1,660
Land & building investment/crop acre owned	\$ _____	\$1,025	\$1,000
Total capital per cwt. milk sold	\$ _____	\$28	\$23
Capital turnover (capital ÷ receipts)	_____	2.4	2.0

Capital efficiency is often associated with size of herd. For this reason, the 615 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 somewhat lower investments per cow.

Table 26. SIZE OF HERD AND CAPITAL EFFICIENCY
615 New York Dairy Farms, 1976

Number of Cows	Number of Farms	Capital Investment Per Cow		
		Total	Real Estate	Machinery
Under 40	91	\$4,134	\$2,344	\$808
40 - 54	164	3,871	2,108	765
55 - 69	133	3,799	2,032	729
70 - 84	81	3,962	2,201	695
85 - 99	48	3,477	1,824	657
100 - 114	24	3,689	1,821	691
115 - 129	15	3,653	1,987	622
130 - 149	24	3,436	1,685	670
150 & over	35	3,198	1,571	580

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 615 farms in 1976, dairy concentrate accounted for 33% of the cash operating expenses so feed is the first item examined.

Dairy feed costs are affected by many things. 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
615 New York Dairy Farms, 1976

Item	My Farm	Average 615 Farms	Average Top 10% Farms
Feed bought per cow	\$ _____	\$363	\$355
Crop expense per cow	\$ _____	\$102	\$112
Feed bought per cwt. milk	\$ _____	\$2.71	\$2.41
Feed & crop expense per cwt. milk	\$ _____	\$3.47	\$3.17
% Feed is of milk sales	_____ %	27%	24%
Hay equivalent per cow	_____ T.	8.2 T.	8.2 T.
Crop acres per cow	_____	2.9	2.7
Fertilizer & lime per crop acre	\$ _____	\$22	\$26
Heifers as % of cow numbers	_____ %	73%	73%

The average cost of feed bought per cow in 1976 was \$363 while in 1975 it was \$312. The percent that feed bought is of milk sales was 27% in 1976 and 28% in 1975.

The crop situation in 1976 was good. Tons of hay equivalent produced per cow was 8.2 tons which was the same as in 1975.

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 ten percent of farms with highest labor and management incomes spent more for crops but less for feed bought than the 615 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
615 New York Dairy Farms, 1976

% 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%	48	60	7.6	12,400	\$-2,000
35 - 39	102	70	7.6	13,100	4,500
30 - 34	118	69	7.8	13,400	7,900
25 - 29	131	73	8.1	13,200	9,300
20 - 24	115	76	8.1	12,900	9,700
Under 20%	101	75	8.8	13,100	10,700

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 19% of the farm inventory on these 615 farms, and the new purchases in 1976 averaged about \$12,000 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
615 New York Dairy Farms, 1976

Item	My Farm	Average 615 Farms		Average Top 10% Farms
		Amount	Percent	
Depreciation (from p. 7)	\$ _____	\$ 5,245	30	\$ 6,714
Interest @ 7% on av. inventory	_____	3,222	19	4,937
Machine hire	_____	822	5	1,114
Machinery repairs	_____	4,677	27	7,512
Auto expense (farm share)	_____	343	2	401
Gas and oil	_____	2,954	17	4,344
Total Machinery Costs	\$ _____	\$17,263	100	\$25,022

Machinery cost:				
per cow	\$ _____	\$243		\$212
per cwt. milk sold	\$ _____	\$1.82		\$1.44

The machinery depreciation calculations were shown on page 7. Depreciation accounted for 30% of the total machinery costs and interest 19%. 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 \$243 per cow, but 5 farms had costs of under \$100, while 126 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
615 New York Dairy Farms, 1976

Machinery Cost Per Cow	Number of Farms	Percent of Farms	Labor and Management Income Per Operator
Under \$100	5	1	\$ 8,110
\$100 - 149	47	8	12,410
150 - 199	122	20	9,910
200 - 249	177	29	8,710
250 - 299	138	22	6,600
300 & over	126	20	3,350

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 615 farms, the family (including paid family labor) provided 70% of the months of labor inputs, while hired nonfamily labor provided 30% (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
615 New York Dairy Farms, 1976

Item	My Farm	Average 615 Farms		Average Top 10% Farms
		Amount	Percent	
Value operator's labor @ \$500/month	\$ _____	\$ 7,500	46	\$ 7,500
Hired labor expense (from p. 10) (includes paid family labor)	_____	7,682	48	18,633
Unpaid family labor @ \$400/month	_____	1,050	6	700
Total Labor Costs	\$ _____	\$16,232	100	\$26,833

Labor cost per cow	\$ _____	\$229		\$227
Labor cost per cwt. milk	\$ _____	\$1.71		\$1.55
Cost per month hired labor	\$ _____	\$640		\$776
Cost per month all labor	\$ _____	\$541		\$654

The operator's labor was valued at \$500 per month, and unpaid family labor was valued at \$400 per month. These are relatively low, but the unpaid labor 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
615 New York Dairy Farms, 1976

Item	My Farm	Av. 615 Farms	Av. Top 10% Farms
Total labor cost	\$ _____	\$16,232	\$26,833
Total machinery cost	_____	17,263	25,022
Total Labor and Machinery Costs	\$ _____	\$33,495	\$51,855

Labor and machinery cost per cow	\$ _____	\$472	\$439
Labor and machinery cost/cwt. milk	\$ _____	\$3.52	\$2.99

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 615 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
615 New York Dairy Farms, 1976

Number of Factors Above Average	Number of Farms	Percent of Farms	Labor and Management Income Per Operator
4 Factors better than average	57	9%	\$20,400
3 Factors better than average	135	22	12,800
2 Factors better than average	142	23	8,400
1 Factor better than average	177	29	3,800
0 Factors better than average	104	17	-500

* Factors were:

- Size - number of cows - average 71.
- Rates of production - pounds of milk sold per cow - average 13,400
- Labor efficiency - pounds of milk sold per man - average 380,200
- Cost control - percent purchased feed was of milk receipts - average 27%

The relationship between the number of factors better than average and labor and management 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 615 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
615 New York Dairy Farms, 1976

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
5.2	173	2,398,800	16,500	5.0	20	43	607,100
3.5	104	1,455,400	15,200	3.9	17	36	498,700
2.9	83	1,128,400	14,500	3.4	15	33	444,900
2.6	71	953,000	14,000	3.1	14	30	405,500
2.3	62	830,200	13,500	2.8	13	28	373,500

2.1	56	726,600	12,900	2.6	12	27	340,800
2.0	50	642,300	12,400	2.3	10	25	313,200
1.7	45	556,400	11,800	2.1	10	23	279,000
1.5	38	450,600	10,800	1.8	7	21	247,100
1.2	29	313,300	8,900	1.4	4	17	187,300

Feed Bought		Machinery	Labor and	Feed and Crop
Per Cow	% of Milk Receipts	Cost Per Cow	Machinery Cost Per Cow	Expense Per Cwt. Milk
\$156	13%	\$131	\$321	\$2.07
228	19	169	375	2.63
272	22	193	404	2.92
309	25	212	428	3.14
344	27	227	452	3.35

375	29	245	476	3.57
407	31	267	507	3.83
442	34	290	541	4.03
491	37	325	590	4.29
584	43	415	716	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.

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 1976 on the 615 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 615 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 1976 Summary, a total of 195 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 1976 cooperators reported the kind of milking system in use on their farm. The 615 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 615 farms. Summaries were prepared for: individual operators; partnerships; and corporations. The three summaries are compared on pages 38 and 39.

Same Farms for 1975 and 1976

There is some turnover each year in the cooperators in the business management projects. Of the 615 farms in 1976, 441 had been in the 1975 summary. A comparison of the 1975 and 1976 businesses of the same 441 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 1956, 1966, 1971, and 1976.

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 615 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. A statement for the 615 farms is on page 46, and the average per cow figures are on page 47.

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
615 New York Dairy Farms, 1976

Item	Av. 615 Farms	My Farm
Total cash farm expenses (p. 10)	\$ 77,627	\$ _____
Machinery depreciation	5,245	_____
Building depreciation	2,612	_____
Unpaid labor	1,050	_____
Interest on equity capital @ 7%	12,519	_____
TOTAL FARM EXPENSES	\$ 99,053	\$ _____
Value Operator's Labor @ \$500/mo.	7,380	_____
TOTAL COST OF PRODUCTION (1)	\$106,433	\$ _____
Total cash farm receipts (p. 8)	\$103,241	\$ _____
Less: Milk sales	94,063	_____
Non-milk cash receipts	9,178	_____
Increase feed & supplies	1,920	_____
Increase of 2 cows @ \$730	1,460	_____
TOTAL OTHER INCOME (2)	12,558	_____
COST OF PRODUCING MILK (1 minus 2)	\$ 93,875	\$ _____
Hundredweights of milk sold (p. 17)	9,506	_____
COST OF PRODUCING CWT. MILK	\$ 9.88	\$ _____
Management charge @ 5% cash receipts	\$ 5,162	\$ _____
Management charge cwt. milk	54¢	_____¢
COST OF PRODUCING MILK WITH MGT. CHARGE	\$ 10.42	\$ _____

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 1976, the increase in value of the 2 additional cows was \$1,460, while the increase in livestock inventories was \$3,715.

Table 35. COST OF PRODUCING MILK AND PRICES RECEIVED, 1971-1976

Year	Value Operator's		Cost/Cwt. With Management		Average Price	
	Labor	Management*	Excluded	Included	Received	Reported**
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
1976	6,000	5,162	9.87	10.42	9.90	9.86

* Estimated @ 5% of cash receipts.

** New York-New Jersey Milk Marketing Area.

Table 36.

FARM BUSINESS SUMMARY BY HERD SIZE
615 New York Dairy Farms, 1976

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	\$ 23,761	\$ 35,184	\$ 46,189	\$ 57,238
Feed and supplies	7,482	11,462	17,191	23,829
Machinery and equipment	25,152	35,852	44,431	52,864
Land and buildings	73,570	98,991	124,089	167,473
TOTAL INVESTMENT	\$129,965	\$181,489	\$231,900	\$301,404
Receipts				
Milk sales	\$ 37,599	\$ 58,845	\$ 79,765	\$ 99,861
Dairy cattle sold	2,240	3,547	4,460	6,373
Other livestock sales	674	768	955	1,060
Crop sales	276	584	764	847
Miscellaneous receipts	642	917	1,391	1,443
Total Cash Receipts	\$ 41,431	\$ 64,661	\$ 87,335	\$109,584
Increase in livestock	2,111	2,091	3,440	4,727
Increase in feed & supplies	873	1,582	1,607	2,570
TOTAL FARM RECEIPTS	\$ 44,415	\$ 68,334	\$ 92,382	\$116,881
Expenses				
Hired labor	\$ 1,254	\$ 2,622	\$ 5,113	\$ 7,723
Dairy feed	11,305	16,436	22,205	26,150
Other feed	499	796	680	1,163
Machine hire	228	443	772	860
Machinery repair	1,775	2,830	4,103	4,542
Auto expense (farm share)	275	295	353	435
Gas and oil	1,260	1,852	2,593	3,175
Purchased animals	1,776	1,906	2,743	2,753
Breeding fees	470	748	999	1,311
Veterinary and medicine	565	877	1,212	1,399
Milk marketing	661	1,098	1,537	1,707
Other livestock expense	1,413	2,170	2,627	3,834
Fertilizer and lime	1,291	2,453	3,830	5,181
Seeds and plants	484	850	1,240	1,664
Spray and other crop expense	401	722	1,072	1,211
Land, bldg., fence repair	780	1,102	1,786	1,800
Taxes and insurance	2,025	2,455	3,310	4,202
Electric & phone (farm share)	987	1,322	1,756	2,088
Interest paid	2,478	4,132	6,090	7,533
Miscellaneous expenses	669	1,318	1,917	2,372
Total Cash Expenses	\$ 30,596	\$ 46,427	\$ 65,938	\$ 81,103
Machinery depreciation	2,538	3,810	4,923	5,885
Building depreciation	1,017	1,724	2,283	2,956
Unpaid family labor	1,050	1,400	1,050	700
Interest on equity @ 7%	6,773	8,551	10,546	14,663
Decrease in livestock	--	--	--	--
TOTAL FARM EXPENSES	\$ 41,974	\$ 61,912	\$ 84,740	\$105,307
Financial Summary				
Total Farm Receipts	\$ 44,415	\$ 68,334	\$ 92,382	\$116,881
Total Farm Expenses	41,974	61,912	84,740	105,307
Labor & Mgt. Income	\$ 2,441	\$ 6,422	\$ 7,642	\$ 11,574
Number of operators	1.04	1.10	1.23	1.36
LABOR & MGT. INCOME/OPERATOR	\$ 2,340	\$ 5,854	\$ 6,238	\$ 8,523

Table 36.
contd.

FARM BUSINESS SUMMARY BY HERD SIZE
615 New York Dairy Farms, 1976

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	\$ 65,102	\$ 92,446	\$ 86,454	\$105,994	\$147,415
Feed and supplies	26,361	32,183	38,610	44,786	64,521
Machinery and equipment	60,389	73,005	74,514	93,448	112,405
Land and buildings	167,501	191,947	239,650	234,280	310,932
TOTAL INVESTMENT	\$319,353	\$389,581	\$439,228	\$478,508	\$635,273
Receipts					
Milk sales	\$122,200	\$150,106	\$162,262	\$187,802	\$276,290
Dairy cattle sold	7,274	9,392	9,667	14,621	14,411
Other livestock sales	1,602	2,083	2,165	3,083	2,819
Crop sales	481	1,046	1,542	1,751	2,740
Miscellaneous receipts	1,869	1,595	2,071	3,081	5,671
Total Cash Receipts	\$133,426	\$164,222	\$177,707	\$210,338	\$301,931
Increase in livestock	4,079	6,979	3,883	5,739	9,995
Increase in feed & supplies	2,121	1,077	2,541	1,323	6,359
TOTAL FARM RECEIPTS	\$139,626	\$172,278	\$184,131	\$217,400	\$318,285
Expenses					
Hired labor	\$ 10,948	\$ 12,842	\$ 17,909	\$ 20,830	\$ 36,358
Dairy feed	34,476	42,116	44,993	47,708	73,110
Other feed	1,724	2,491	1,081	2,354	6,609
Machine hire	1,191	1,086	1,040	1,066	3,298
Machinery repair	6,113	7,122	9,077	10,518	13,842
Auto expense (farm share)	363	336	553	486	285
Gas and oil	3,844	4,959	4,604	5,998	7,999
Purchased animals	4,387	3,330	1,527	7,089	5,178
Breeding fees	1,178	1,858	1,973	2,178	2,971
Veterinary and medicine	1,709	2,646	2,328	2,939	4,819
Milk marketing	2,197	3,006	2,271	3,626	6,616
Other livestock expense	3,645	5,708	5,819	6,282	8,066
Fertilizer and lime	6,079	6,404	7,488	12,005	14,039
Seeds and plants	2,090	2,485	2,603	3,293	3,820
Spray and other crop expense	1,575	1,948	2,166	3,127	4,678
Land, bldg., fence repair	2,234	1,921	3,309	3,518	4,910
Taxes and insurance	4,645	5,979	6,721	6,862	9,308
Electric & phone (farm share)	2,386	3,078	3,233	2,903	4,456
Interest paid	8,388	8,868	11,017	15,197	16,410
Miscellaneous expenses	3,116	3,424	3,665	5,811	8,801
Total Cash Expenses	\$102,288	\$121,607	\$133,377	\$163,790	\$235,573
Machinery depreciation	6,449	7,013	7,226	10,547	11,403
Building depreciation	3,046	4,073	4,922	4,598	7,430
Unpaid family labor	1,050	1,050	700	1,400	1,050
Interest on equity @ 7%	14,576	19,565	21,935	20,640	31,333
Decrease in livestock	--	--	--	--	--
TOTAL FARM EXPENSES	\$127,409	\$153,308	\$168,160	\$200,975	\$286,789
Financial Summary					
Total Farm Receipts	\$139,626	\$172,278	\$184,131	\$217,400	\$318,285
Total Farm Expenses	127,409	153,308	168,160	200,975	286,789
Labor & Mgt. Income	\$ 12,217	\$ 18,970	\$ 15,971	\$ 16,425	\$ 31,496
Number of operators	1.31	1.67	1.40	1.42	1.51
LABOR & MGT. INCOME/OPERATOR	\$ 9,312	\$ 11,387	\$ 11,408	\$ 11,600	\$ 20,803

Table 37.

SELECTED BUSINESS FACTORS BY HERD SIZE
615 New York Dairy Farms, 1976

Item	Farms with:			
	Less Than 40 Cows	40 to 54 Cows	55 to 69 Cows	70 to 84 Cows
Number of farms	91	164	133	81
<u>Size of Business</u>				
Number of cows	31	46	61	75
Number of heifers	22	34	46	54
Pounds of milk sold	383,300	599,600	806,300	1,008,900
Man equivalent	1.6	1.8	2.3	2.6
Total work units	347	517	679	829
Total crop acres	98	145	190	222
Crop acres rented	(15)	(26)	(58)	(54)
<u>Rates of Production</u>				
Milk sold per cow	12,400	13,000	13,200	13,500
Tons hay crops per acre	2.3	2.4	2.7	3.0
Tons corn silage per acre	12.5	12.1	12.3	12.8
Bushels of oats per acre	48	44	52	45
<u>Labor Efficiency</u>				
Cows per man	20	25	26	29
Pounds milk sold per man	242,600	327,600	346,100	391,000
Work units per man	220	283	291	321
<u>Feed Costs</u>				
Feed purchased per cow	\$365	\$357	\$364	\$349
Crop expense per cow	\$70	\$88	\$101	\$107
Feed cost per cwt. milk	\$2.95	\$2.74	\$2.75	\$2.59
Feed & crop exp./cwt. milk	\$3.52	\$3.41	\$3.52	\$3.39
% Feed is of milk receipts	30%	28%	28%	26%
Hay equivalent per cow	7.6	7.9	8.3	8.4
Crop acres per cow	3.2	3.2	3.1	3.0
Fertilizer & lime/crop acre	\$13	\$17	\$20	\$23
<u>Machinery and Labor Costs</u>				
Total machinery costs	\$7,740	\$11,590	\$15,670	\$18,350
Machinery cost per cow	\$250	\$252	\$257	\$245
Machinery cost/cwt. milk	\$2.02	\$1.93	\$1.94	\$1.82
Labor cost per cow	\$284	\$229	\$224	\$219
Labor cost per cwt. milk	\$2.30	\$1.75	\$1.69	\$1.63
<u>Capital Efficiency</u>				
Investment per man	\$82,260	\$99,170	\$99,530	\$116,820
Investment per cow	\$4,190	\$3,950	\$3,800	\$4,020
Investment per cwt. milk	\$34	\$30	\$29	\$30
Land & buildings per cow	\$2,370	\$2,150	\$2,030	\$2,230
Machinery investment/cow	\$811	\$779	\$728	\$705
Capital turnover	2.9	2.7	2.5	2.6
<u>Other</u>				
Price per cwt. milk sold	\$9.81	\$9.81	\$9.89	\$9.90
Acres hay crops	73	93	113	122
Acres corn silage	16	34	50	63
Inventory changes 1976*:				
Number of cows	+2	+1	+2	+5
Invt. value per cow**	+\$22	+\$29	+\$33	+\$15

* Change from 1/1/76 to 1/1/77.

** Livestock inventory includes heifers.

Table 37.
contd.

SELECTED BUSINESS FACTORS BY HERD SIZE
615 New York Dairy Farms, 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	48	24	15	24	35
Size of Business					
Number of cows	91	105	119	139	200
Number of heifers	63	83	92	100	158
Pounds of milk sold	1,244,900	1,529,300	1,621,900	1,889,300	2,752,800
Man equivalent	2.9	3.4	3.8	4.0	5.7
Total work units	1,000	1,177	1,305	1,508	2,181
Total crop acres	270	297	325	385	528
Crop acres rented	(94)	(115)	(96)	(142)	(221)
Rates of Production					
Milk sold per cow	13,700	14,600	13,600	13,600	13,800
Tons hay crops per acre	2.8	2.8	3.4	3.3	3.2
Tons corn silage/acre	12.4	14.0	15.1	15.0	14.3
Bushels oats/acre	52	46	41	69	64
Labor Efficiency					
Cows per man	31	31	32	35	35
Pounds milk sold/man	426,300	447,200	432,500	472,300	485,500
Work units per man	342	344	348	377	385
Feed Costs					
Feed purchased per cow	\$379	\$401	\$378	\$343	\$366
Crop expense per cow	\$107	\$103	\$103	\$133	\$113
Feed cost per cwt. milk	\$2.77	\$2.75	\$2.77	\$2.53	\$2.66
Feed & crop exp./cwt. milk	\$3.55	\$3.46	\$3.53	\$3.50	\$3.47
% Feed is of milk receipts	28%	28%	28%	25%	26%
Hay equivalent per cow	8.4	7.8	8.8	9.0	8.1
Crop acres per cow	3.0	2.8	2.7	2.8	2.6
Fertilizer & lime/crop acre	\$23	\$22	\$23	\$31	\$27
Machinery and Labor Costs					
Total machinery costs	\$21,870	\$25,355	\$27,260	\$34,695	\$44,056
Machinery cost per cow	\$240	\$241	\$229	\$250	\$220
Machinery cost/cwt. milk	\$1.76	\$1.66	\$1.68	\$1.84	\$1.60
Labor cost per cow	\$214	\$223	\$228	\$221	\$232
Labor cost/cwt. milk	\$1.57	\$1.53	\$1.67	\$1.63	\$1.69
Capital Efficiency					
Investment per man	\$109,370	\$113,910	\$117,130	\$119,630	\$112,040
Investment per cow	\$3,510	\$3,710	\$3,690	\$3,440	\$3,180
Investment/cwt. milk	\$26	\$25	\$27	\$25	\$23
Land & buildings/cow	\$1,840	\$1,830	\$2,010	\$1,680	\$1,560
Machinery investment/cow	\$660	\$695	\$625	\$670	\$560
Capital turnover	2.3	2.3	2.4	2.2	2.0
Other					
Price per cwt. milk sold	\$9.82	\$9.82	\$10.00	\$9.94	\$10.04
Acres hay crops	139	153	156	181	230
Acres corn silage	89	82	103	128	182
Inventory changes 1976*:					
Number of cows	+3	+1	+3	+4	+6
Invt. value per cow**	+\$23	+\$57	+\$15	+\$20	+\$28

* Change from 1/1/76 to 1/1/77.

** Livestock inventory includes heifers.

Table 38. FARM FAMILY FINANCIAL SITUATION BY HERD SIZE
608* New York Dairy Farms, January 1, 1977

Item	Farms with:			
	Less than 40 Cows	40 to 54 Cows	55 to 69 Cows	70 to 84 Cows
Number of farms	91	162	130	81
Assets				
Livestock	\$ 23,762	\$ 35,180	\$ 46,037	\$ 57,238
Feed and supplies	7,483	11,477	17,157	23,830
Machinery & equipment	25,152	35,809	44,072	52,864
Land and buildings	73,571	99,356	124,060	167,473
Co-op investment	1,618	1,704	2,811	4,815
Accounts receivable	1,986	3,331	5,235	9,545
Cash & checking accounts	981	964	1,409	2,934
Total Farm Assets	<u>\$134,553</u>	<u>\$187,821</u>	<u>\$240,781</u>	<u>\$318,699</u>
Savings accounts	2,008	2,007	4,075	3,767
Cash value life insurance	2,457	2,085	2,630	2,158
Stocks and bonds	1,606	1,228	1,690	2,861
Nonfarm real estate	1,448	2,282	3,635	1,622
Auto (personal share)	782	772	972	956
All other	1,928	1,053	2,817	2,008
Total Nonfarm Assets	<u>\$ 10,229</u>	<u>\$ 9,427</u>	<u>\$ 15,819</u>	<u>\$ 13,372</u>
TOTAL ASSETS	\$144,782	\$197,248	\$256,600	\$332,071
Liabilities				
Real estate mortgage	\$ 21,688	\$ 37,545	\$ 50,575	\$ 65,646
Liens on cattle & equipt.	11,069	20,925	26,314	35,512
Installment contracts	1,843	2,591	3,086	2,186
Notes & other farm debts	3,194	5,005	9,468	5,885
Total Farm Liabilities	<u>\$ 37,794</u>	<u>\$ 66,066</u>	<u>\$ 89,443</u>	<u>\$109,229</u>
Nonfarm Liabilities	360	349	1,981	271
TOTAL LIABILITIES	\$ 38,154	\$ 66,415	\$ 91,424	\$109,500
Farm Net Worth (Equity Capital)	\$ 96,759	\$121,755	\$151,338	\$209,470
FAMILY NET WORTH	\$106,628	\$130,833	\$165,176	\$222,571
Financial Measures				
Percent equity	74%	66%	64%	67%
Farm debt per cow	\$1,181	\$1,406	\$1,466	\$1,437
Available for debt service and living	\$13,308	\$22,270	\$27,430	\$36,006
Scheduled annual debt payments	\$6,532	\$10,822	\$15,507	\$19,291
Scheduled debt payment/cow	\$204	\$230	\$254	\$254
Scheduled debt payment as % of milk check	17%	18%	19%	19%

* 7 of the 615 farms did not report.

Table 38. FARM FAMILY FINANCIAL SITUATION BY HERD SIZE
 contd. 608* New York Dairy Farms, January 1, 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	48	24	15	24	33
<u>Assets</u>					
Livestock	\$ 65,103	\$ 92,447	\$ 86,454	\$105,995	\$150,015
Feed and supplies	26,361	32,184	38,610	44,786	65,221
Machinery & equipment	60,389	73,005	74,514	93,449	112,748
Land and buildings	167,502	191,948	239,650	234,281	309,786
Co-op investment	5,856	7,396	5,001	11,228	14,079
Accounts receivable	8,039	13,049	12,378	14,707	25,921
Cash & checking accounts	2,366	3,130	1,569	2,081	5,211
Total Farm Assets	<u>\$335,616</u>	<u>\$413,159</u>	<u>\$458,176</u>	<u>\$506,527</u>	<u>\$682,981</u>
Savings accounts	1,846	5,590	2,377	3,057	1,963
Cash value life insurance	2,069	3,453	3,053	3,060	2,874
Stocks and bonds	2,937	2,316	2,297	1,643	3,474
Nonfarm real estate	6,208	375	22,606	7,854	4,166
Auto (personal share)	587	661	1,760	1,204	918
All other	1,793	750	3,656	1,785	3,844
Total Nonfarm Assets	<u>\$ 15,440</u>	<u>\$ 13,145</u>	<u>\$ 35,749</u>	<u>\$ 18,603</u>	<u>\$ 17,239</u>
TOTAL ASSETS	\$351,056	\$426,304	\$493,925	\$525,130	\$700,220
<u>Liabilities</u>					
Real estate mortgage	\$ 69,526	\$ 65,476	\$ 88,367	\$116,267	\$109,814
Liens on cattle & equipt.	43,695	46,416	42,299	77,768	92,344
Installment contracts	3,603	5,430	3,142	5,446	4,751
Notes and other farm debt	10,570	16,335	11,013	12,182	28,888
Total Farm Liabilities	<u>\$127,394</u>	<u>\$133,657</u>	<u>\$144,821</u>	<u>\$211,663</u>	<u>\$235,797</u>
Nonfarm Liabilities	<u>1,152</u>	<u>312</u>	<u>1,400</u>	<u>900</u>	<u>1,790</u>
TOTAL LIABILITIES	\$128,546	\$133,969	\$146,221	\$212,563	\$237,587
Farm Net Worth (Equity Capital)	\$208,222	\$279,502	\$313,355	\$294,864	\$447,184
FAMILY NET WORTH	\$222,510	\$292,335	\$347,704	\$312,567	\$462,633
<u>Financial Measures</u>					
Percent equity	63%	69%	70%	60%	66%
Farm debt per cow	\$1,385	\$1,261	\$1,207	\$1,523	\$1,173
Available for debt					
service and living	\$39,518	\$51,476	\$55,341	\$61,739	\$81,890
Scheduled annual debt payments	\$22,958	\$19,908	\$26,007	\$30,674	\$42,819
Scheduled debt payment/cow	\$250	\$188	\$217	\$221	\$213
Scheduled debt payment as % of milk check	19%	13%	16%	16%	16%

* 7 of the 615 farms did not report.

Table 39. COMPARISON OF FARMS BY TYPE OF BARN AND HERD SIZE
615 New York Dairy Farms, 1976

Item	Herd Size (Number Cows)				
	Under 55	55-69	70-99	100-149	150 & Over
Number of farms					
Free stall	16	33	65	48	33
Other	239	100	64	15	2
Number of men					
Free stall	2.0	2.3	2.6	3.7	5.5
Other	1.8	2.3	2.9	4.0	7.2
Land & bldgs./cow					
Free stall	\$2,360	\$2,140	\$1,860	\$1,790	\$1,560
Other	\$2,170	\$2,010	\$2,260	\$1,800	\$1,600
Tons hay crops/acre					
Free stall	3.0	2.9	3.0	3.3	3.3
Other	2.3	2.6	2.9	2.7	2.6
Lbs. milk sold/cow					
Free stall	12,700	13,500	13,500	13,700	13,800
Other	12,700	13,200	13,400	14,500	13,500
Lbs. milk sold/man					
Free stall	285,600	364,900	440,900	458,200	502,000
Other	296,600	351,900	361,400	427,600	364,900
Labor cost/cow					
Free stall	\$240	\$228	\$200	\$215	\$230
Other	\$236	\$221	\$238	\$249	\$245
Machinery cost/cow					
Free stall	\$295	\$291	\$243	\$239	\$217
Other	\$244	\$247	\$239	\$249	\$282
Veterinary cost/cow					
Free stall	\$17	\$18	\$20	\$21	\$24
Other	\$19	\$21	\$17	\$26	\$19
Feed & crop expense/cow					
Free stall	\$437	\$472	\$490	\$470	\$482
Other	\$436	\$465	\$439	\$534	\$442
Debt/cow					
Free stall	\$1,700	\$1,220	\$1,420	\$1,410	\$1,180
Other	\$1,300	\$1,600	\$1,420	\$1,180	\$1,170
Labor & mgt. income/op.					
Free stall	\$3,290	\$6,055	\$9,880	\$12,870	\$21,860
Other	\$4,935	\$6,300	\$7,638	\$8,420	\$5,765

A total of 195 of the 615 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
615 New York Dairy Farms, 1976

Item	Bucket and Carry	Dumping Station	Pipeline	Herringbone Parlor	Other Parlors
Number of farms	28	190	210	160	27
Percent of farms	5%	31%	34%	26%	4%
<u>Capital Investment (end of year)</u>					
Livestock	\$ 22,282	\$ 36,160	\$ 52,313	\$ 81,181	\$ 58,753
Feed & supplies	7,142	11,957	19,715	34,542	21,801
Machinery & equipt.	21,454	32,989	49,981	72,109	51,965
Land & buildings	73,632	101,139	135,909	198,191	156,142
TOTAL INVESTMENT	\$124,510	\$182,245	\$257,918	\$386,023	\$288,661
<u>Financial Summary</u>					
Total Farm Receipts	\$ 40,521	\$ 68,698	\$105,047	\$172,238	\$116,813
Total Farm Expenses	37,832	63,388	95,076	155,960	110,123
Labor & Mgt. Income	\$ 2,689	\$ 5,310	\$ 9,971	\$ 16,278	\$ 6,690
Number of operators	(32) 1.1	(218) 1.1	(251) 1.2	(228) 1.4	(30) 1.1
LABOR & MGT. INC./OPR.	\$ 2,355	\$ 4,629	\$ 8,344	\$ 11,423	\$ 6,022
<u>Size of Business</u>					
Number of cows	32	48	65	111	78
Number of heifers	22	34	48	83	61
Lbs. of milk sold	355,300	604,800	904,200	1,509,900	1,048,500
Man equivalent	1.8	2.1	2.3	3.4	2.7
Crop acres	100	154	193	313	224
<u>Rates of Production</u>					
Milk sold/cow (lbs.)	11,100	12,600	13,900	13,600	13,440
Tons hay crops/acre	2.0	2.3	2.8	3.1	2.9
Tons corn silage/acre	10.7	11.8	13.5	13.6	12.2
<u>Labor Efficiency</u>					
Cows per man	18	23	28	32	29
Lbs. milk sold/man	203,000	290,800	388,100	441,500	392,800
<u>Costs</u>					
Feed purchased/cow	\$288	\$363	\$364	\$368	\$362
% Feed is of milk rcts.	26%	29%	26%	27%	27%
Machinery cost/cow	\$229	\$232	\$262	\$234	\$267
Labor cost/cow	\$308	\$238	\$231	\$221	\$217
<u>Capital Efficiency</u>					
Investment/man	\$71,149	\$87,618	\$110,690	\$112,870	\$108,110
Investment/cow	\$3,891	\$3,797	\$3,970	\$3,480	\$3,700
Land & bldgs./cow	\$2,301	\$2,107	\$2,090	\$1,800	\$2,000
Machinery inv./cow	\$670	\$687	\$770	\$650	\$670
<u>Other</u>					
Price/cwt. milk sold	\$9.85	\$9.80	\$9.91	\$9.94	\$9.81

Table 41. FARM BUSINESS SUMMARIES FOR INDIVIDUALS, PARTNERSHIPS, AND CORPORATIONS
615 New York Dairy Farms, 1976

	Averages for:					
	487 Individuals		116 Partnerships		12 Corporations	
	1/1/76	1/1/77	1/1/76	1/1/77	1/1/76	1/1/77
CAPITAL INVESTMENT						
Livestock	\$ 45,159	\$ 48,473	\$ 65,754	\$ 71,283	\$ 95,920	\$ 98,356
Feed & supplies	16,437	18,346	26,045	27,840	43,351	46,921
Machinery & equipment	39,619	45,435	51,914	60,753	82,320	94,257
Land & buildings	119,775	129,484	152,022	163,887	277,618	306,302
TOTAL INVESTMENT	\$220,990	\$241,738	\$295,735	\$323,763	\$499,209	\$545,836
EXPENSES						
Labor						
Hired		\$ 7,374		\$ 7,344		\$ 23,452
Feed						
Dairy concentrate		23,211		34,116		48,239
Hay and other		1,232		1,671		1,138
Machinery						
Machine hire		761		1,086		752
Machinery repair		4,192		6,200		9,669
Auto expense		349		285		678
Gas and oil		2,622		4,010		6,259
Livestock						
Purchased animals		2,880		2,534		2,529
Breeding fees		974		1,628		2,364
Veterinary, medicine		1,284		1,982		2,861
Milk marketing		1,603		2,389		4,609
Other livestock expense		2,882		4,216		6,992
Crops						
Fertilizer and lime		3,956		6,304		10,714
Seeds and plants		1,322		1,812		3,387
Spray and other		1,113		1,825		2,944
Real Estate						
Land, building, fence repair		1,548		2,544		3,773
Taxes		2,038		2,772		5,495
Insurance		1,352		1,967		4,889
Rent		992		2,132		6,178
Other						
Telephone (farm share)		338		411		631
Electricity (farm share)		1,399		2,017		3,040
Interest paid		6,217		7,122		15,788
Miscellaneous		919		1,430		3,364
TOTAL CASH EXPENSES		\$70,558		\$ 97,797		\$169,745
Machinery depreciation		4,900		6,276		9,299
Building depreciation		2,402		3,109		6,335
Unpaid labor		1,050		700		700
Interest on farm equity @ 7%		11,152		16,979		24,851
TOTAL FARM EXPENSES		\$90,062		\$124,861		\$210,930

Table 41. FARM BUSINESS SUMMARIES FOR INDIVIDUALS, PARTNERSHIPS, AND CORPORATIONS
contd. 615 New York Dairy Farms, 1976

	Averages for:		
	487 Individuals	116 Partnerships	12 Corporations
RECEIPTS			
Milk sales	\$84,067	\$124,856	\$202,094
Crop sales	722	1,076	1,989
Dairy cattle sold	5,136	6,926	13,771
Livestock sales	1,052	1,716	1,738
Gas tax refund	130	143	151
Government payments	286	245	855
Work off farm	69	71	83
Custom machine work	99	178	0
Miscellaneous	787	1,363	2,434
TOTAL CASH RECEIPTS	\$92,348	\$136,574	\$223,115
Increase in livestock	3,314	5,529	2,436
Increase in feed & supplies	1,909	1,795	3,570
TOTAL FARM RECEIPTS	\$97,571	\$143,898	\$229,121
FINANCIAL SUMMARY			
Total Cash Receipts	\$92,348	\$136,574	\$223,115
Total Cash Expenses	70,558	97,797	169,745
NET FARM CASH FLOW	\$21,790	\$ 38,777	\$ 53,370
Total Farm Receipts	\$97,571	\$143,898	\$229,121
Total Farm Expenses	90,062	124,861	210,930
LABOR & MGT. INCOME/FARM	\$ 7,509	\$ 19,037	\$ 18,191
Number of operators	(487) 1.0	(247) 2.1	(25) 2.1
LABOR & MGT. INCOME/OPERATOR	\$ 7,509	\$ 8,942	\$ 8,733
BUSINESS FACTORS			
Man equivalent	2.3	3.1	4.6
Number of cows	64	93	135
Number of heifers	47	71	94
Acres of hay crops	109	141	188
Acres of corn silage	53	77	122
Total acres of crops	191	268	396
Lbs. of milk sold	850,400	1,261,000	2,016,800
Lbs. of milk sold/cow	13,300	13,600	14,900
Tons hay crops/acre	2.7	2.9	3.2
Tons corn silage/acre	12.8	14.3	12.2
Cows per man	27	30	29
Lbs. of milk sold/man	365,000	409,400	440,300
% Feed is of milk sales	28%	27%	24%
Feed & crop exp./cwt. milk	\$3.48	\$3.49	\$3.24
Fertilizer & lime/crop acre	\$21	\$24	\$27
Machinery cost/cow	\$247	\$234	\$243
Av. price/cwt. milk	\$9.89	\$9.90	\$10.02

Table 42. COMPARISON OF FARM BUSINESS SUMMARIES FOR 1975 AND 1976
Same 441 New York Dairy Farms

	Averages 1975		Averages 1976	
<u>CAPITAL INVESTMENT</u>				
	<u>1/1/75</u>	<u>1/1/76</u>	<u>1/1/76</u>	<u>1/1/77</u>
Livestock	\$ 49,192	\$ 52,467	\$ 52,662	\$ 56,068
Feed & supplies	18,629	20,707	20,697	22,417
Machinery & equipment	41,392	44,551	45,053	51,697
Land & buildings	123,748	131,368	135,249	144,256
TOTAL INVESTMENT	\$232,961	\$249,093*	\$253,661*	\$274,438
<u>EXPENSES</u>				
<u>Labor</u>				
Hired	\$ 7,149		\$ 8,465	
<u>Feed</u>				
Dairy concentrate	23,143		27,063	
Hay and other	1,090		1,301	
<u>Machinery</u>				
Machine hire	705		884	
Machinery repair	4,089		5,058	
Auto expense	314		366	
Gas and oil	2,727		3,099	
<u>Livestock</u>				
Purchased animals	2,149		2,416	
Breeding fees	1,004		1,192	
Veterinary, medicine	1,336		1,555	
Milk marketing	1,825		1,962	
Other livestock expense	2,858		3,356	
<u>Crops</u>				
Fertilizer and lime	4,570		4,848	
Seeds and plants	1,505		1,558	
Spray and other	1,317		1,418	
<u>Real Estate</u>				
Land, building, fence repair	1,534		1,893	
Taxes	2,036		2,342	
Insurance	1,371		1,591	
Rent	1,317		1,392	
<u>Other</u>				
Telephone (farm share)	322		351	
Electricity (farm share)	1,424		1,607	
Interest paid	5,998		6,502	
Miscellaneous	1,086		1,042	
TOTAL CASH EXPENSES	\$70,689		\$ 81,261	
Machinery depreciation	5,110		5,524	
Building depreciation	2,381		2,793	
Unpaid labor	1,050		1,050	
Interest on farm equity @ 7%	12,209		13,564	
Decrease in livestock	--		--	
TOTAL FARM EXPENSES	\$91,439		\$104,192	

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

Table 42. COMPARISON OF FARM BUSINESS SUMMARIES FOR 1975 AND 1976
contd. Same 441 New York Dairy Farms

	Averages 1975	Averages 1976
<u>RECEIPTS</u>		
Milk sales	\$82,952	\$ 99,843
Crop sales	858	806
Dairy cattle sold	4,769	5,964
Livestock sales	1,005	1,270
Gas tax refund	141	148
Government payments	277	304
Work off farm	68	76
Custom machine work	97	129
Miscellaneous	<u>1,097</u>	<u>998</u>
TOTAL CASH RECEIPTS	\$91,264	\$109,538
Increase in livestock	3,275	3,406
Increase in feed & supplies	<u>2,078</u>	<u>1,720</u>
TOTAL FARM RECEIPTS	\$96,617	\$114,664
<u>FINANCIAL SUMMARY</u>		
Total Cash Receipts	\$91,264	\$109,538
Total Cash Expenses	<u>70,689</u>	<u>81,261</u>
NET FARM CASH FLOW	\$20,575	\$ 28,277
Total Farm Receipts	\$96,617	\$114,664
Total Farm Expenses	<u>91,439</u>	<u>104,192</u>
LABOR & MGT. INCOME/FARM	\$ 5,178	\$ 10,472
Number of operators	(540) 1.22	(549) 1.24
LABOR & MGT. INCOME/OPERATOR	\$ 4,230	\$ 8,418
<u>BUSINESS FACTORS</u>		
Man equivalent	2.5	2.6
Number of cows	73	75
Number of heifers	55	57
Acres of hay crops	120	121
Acres of corn silage	60	62
Total acres of crops	216	219
Lbs. of milk sold	957,800	1,007,000
Lbs. of milk sold/cow	13,100	13,400
Tons hay crops/acre	2.6	2.8
Tons corn silage/acre	14.0	13.3
Cows per man	29	29
Lbs. of milk sold/man	383,120	390,310
% Feed is of milk sales	28%	27%
Feed & crop exp./cwt. milk	\$3.19	\$3.46
Fertilizer & lime/crop acre	\$21	\$22
Machinery cost/cow	\$219	\$244
Av. price/cwt. milk	\$8.66	\$9.91

Table 43. SELECTED FARM BUSINESS SUMMARY FACTORS
New York Dairy Farms, Selected Years 1956-1976

Item	Year			
	1956	1966	1971	1976
Number of farms	342	731	569	615
<u>Financial Summary</u>				
Average capital invested	\$39,708	\$76,996	\$147,378	\$251,830
Total farm receipts	\$17,654	\$39,180	\$64,682	\$108,876
Total farm expenses	\$12,397	\$27,109	\$44,857	\$99,037*
Labor income per operator	\$2,870	\$7,522	\$8,127	\$7,973
<u>Size of Business</u>				
Number of cows	34	47	67	71
Pounds of milk sold	302,500	561,000	861,700	950,600
Crop acres	98	138	185	209
Man equivalent	1.8	1.8	2.2	2.5
Total work units	575	569	729	784
<u>Rates of Production</u>				
Milk sold per cow	8,900	11,900	12,900	13,400
Tons hay crops per acre	2.1	2.5	2.7	2.8
Tons corn silage per acre	10	14	16	13
<u>Labor Efficiency</u>				
Cows per man	19	26	30	28
Pounds milk sold per man	168,100	311,700	391,700	380,240
Work units per man	319	316	331	314
<u>Cost Control Factors</u>				
Machinery cost per cow	\$95	\$132	\$173	\$243
Machinery cost/cwt. milk	\$1.07	\$1.11	\$1.34	\$1.82
Feed bought per cow	\$96	\$156	\$194	\$363
Feed bought/cwt. milk	\$1.07	\$1.30	\$1.51	\$2.71
Feed & crop expense/cwt. milk	\$1.38	\$1.68	\$1.95	\$3.47
% Feed is of milk receipts	26%	27%	24%	27%
<u>Capital Efficiency</u>				
Total investment per man	\$22,554	\$44,760	\$69,680	\$105,258
Total investment per cow	\$1,194	\$1,710	\$2,290	\$3,706
Machinery investment/cow	\$248	\$375	\$478	\$694
Total investment/cwt. milk	\$13	\$14	\$18	\$28
<u>Other</u>				
Price per cwt. milk sold	\$4.18	\$4.91	\$6.21	\$9.90
Acres hay crops	60	88	155	117
Acres corn silage	13	24	51	59
Total acres in crops/cow	2.9	2.9	2.8	2.9
Fertilizer & lime expense/crop acre	\$6	\$10	\$13	\$22
Farm income per cow	\$155	\$257	\$296	\$361
Labor income per cow	\$96	\$160	\$142	\$138

* 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 deducted from the net farm income and depreciation was included with inventory changes.

FARM BUSINESS SUMMARY
32 New York Dairy-Cash Crop Farms,* 1976

<u>CAPITAL INVESTMENT</u>			<u>RECEIPTS</u>	
	<u>1/1/76</u>	<u>1/1/77</u>		
Livestock	\$ 61,498	\$ 67,421	Milk sales	\$109,549
Feed & supplies	43,984	43,459	Crop sales	23,951
Machinery & equipment	72,672	84,586	Dairy cattle sold	7,033
Land & buildings	<u>216,626</u>	<u>232,363</u>	Other livestock sales	1,668
TOTAL INVESTMENT	\$394,780	\$427,829	Gas tax refund	307
			Government payments	489
			Work off farm	51
			Custom machine work	1,275
			Miscellaneous	<u>3,898</u>
			TOTAL CASH RECEIPTS	\$148,221
			Increase in livestock	<u>5,928</u>
			TOTAL FARM RECEIPTS	\$154,144
<u>EXPENSES</u>			<u>FINANCIAL SUMMARY</u>	
<u>Labor</u>			Total Cash Receipts	\$148,221
Hired		\$ 15,235	Total Cash Expenses	<u>112,619</u>
<u>Feed</u>			NET FARM CASH FLOW	\$ 35,602
Dairy concentrate		20,924	Total Farm Receipts	\$154,114
Hay and other		638	Total Farm Expenses	<u>147,765</u>
<u>Machinery</u>			LABOR & MGT. INCOME/FARM	\$ 6,379
Machine hire		1,949	Number of operators (41)	1.3
Machinery repair		8,689	LABOR & MGT. INCOME/OPERATOR	\$ 4,980
Auto expense		441		
Gas and oil		5,654	<u>BUSINESS FACTORS</u>	
<u>Livestock</u>			Man equivalent	3.2
Purchased animals		5,512	Number of cows	81
Breeding fees		1,209	Number of heifers	65
Veterinary, medicine		1,967	Acres of hay crops	122
Milk marketing		2,460	Acres of corn silage	70
Other livestock expense		4,583	Total acres of crops	382
<u>Crops</u>			Acres cropland rented	(158)
Fertilizer and lime		10,281	Lbs. of milk sold	1,097,900
Seeds and plants		3,457	Lbs. milk sold/cow	13,600
Spray and other		3,632	Tons hay crops/acre	3.5
<u>Real Estate</u>			Tons corn silage/acre	12.6
Land, building, fence repair		2,218	Cows per man	26
Taxes		3,276	Lbs. of milk sold/man	346,300
Insurance		1,927	% Feed is of milk receipts	19%
Rent		3,710	Feed & crop exp./cwt. milk	\$3.49
<u>Other Cash Expense</u>			Fertilizer & lime/crop acre	\$27
Telephone (farm share)		445	Machinery cost/cow	\$377
Electricity (farm share)		1,775	Av. price/cwt. milk	\$9.98
Interest paid		10,017		
Miscellaneous		<u>2,610</u>		
TOTAL CASH EXPENSES		\$112,619		
Machinery depreciation		8,312		
Building depreciation		4,104		
Unpaid labor		700		
Interest on farm equity @ 7%		21,505		
Decrease in feed & supplies		<u>525</u>		
TOTAL FARM EXPENSES		\$147,765		

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

FARM BUSINESS SUMMARY
62 New York Dairy-Renter Farms,* 1976

CAPITAL INVESTMENT

	<u>1/1/76</u>	<u>1/1/77</u>
Livestock	\$ 41,665	\$ 44,269
Feed & supplies	15,177	17,476
Machinery & equipment	32,388	38,425
Land & buildings	7,284	9,275
TOTAL INVESTMENT	\$ 96,514	\$109,445

EXPENSES

Labor

Hired \$ 6,521

Feed

Dairy concentrate 21,206
Hay and other 1,125

Machinery

Machine hire 797
Machinery repair 3,891
Auto expense 228
Gas and oil 2,489

Livestock

Purchased animals 2,978
Breeding fees 1,102
Veterinary, medicine 1,466
Milk marketing 1,200
Other livestock expense 3,284

Crops

Fertilizer and lime 3,611
Seeds and plants 1,297
Spray and other 911

Real Estate

Land, building, fence repair 1,161
Taxes 620
Insurance 1,020
Rent 7,346

Other Cash Expense

Telephone (farm share) 271
Electricity (farm share) 1,317
Interest paid 3,457
Miscellaneous 1,005

TOTAL CASH EXPENSES \$68,303

Machinery depreciation 3,903

Building depreciation 324

Unpaid labor 700

Interest on farm equity @ 7% 4,789

TOTAL FARM EXPENSES \$78,019

RECEIPTS

Milk sales	\$82,375
Crop sales	572
Dairy cattle sold	4,846
Other livestock sales	975
Gas tax refund	176
Government payments	95
Work off farm	60
Custom machine work	125
Miscellaneous	613

TOTAL CASH RECEIPTS \$89,837

Increase in livestock 2,604

Increase in feed & supplies 2,299

TOTAL FARM RECEIPTS \$94,740

FINANCIAL SUMMARY

Total Cash Receipts \$89,837

Total Cash Expenses 68,303

NET FARM CASH FLOW \$21,534

Total Farm Receipts 94,740

Total Farm Expenses 78,019

LABOR & MGT. INCOME/FARM \$16,721

Number of operators (74) 1.2

LABOR & MGT. INCOME/OPERATOR \$14,016

BUSINESS FACTORS

Man equivalent 2.2

Number of cows 62

Number of heifers 43

Acres of hay crops 112

Acres of corn silage 49

Total acres of crops 190

Lbs. of milk sold 827,500

Lbs. milk sold/cow 13,300

Tons hay crops/acre 2.6

Tons corn silage/acre 12.7

Cows per man 29

Lbs. of milk sold/man 381,300

% Feed is of milk sales 26%

Feed & crop exp./cwt. milk \$3.27

Fertilizer & lime/crop acre \$19

Machinery cost/cow \$222

Av. price/cwt. milk \$9.95

* 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
 62 New York Dairy Farms, 1976

<u>CAPITAL INVESTMENT</u>			<u>RECEIPTS</u>	
	<u>1/1/76</u>	<u>1/1/77</u>		
Livestock	\$ 81,042	\$ 90,110	Milk sales	\$171,702
Feed & supplies	36,195	43,490	Crop sales	2,032
Machinery & equipment	63,753	77,302	Dairy cattle sold	9,726
Land & buildings	180,306	196,165	Other livestock sales	1,531
TOTAL INVESTMENT	\$361,296	\$407,067	Gas tax refund	167
			Government payments	451
			Work off farm	96
			Custom machine work	226
			Miscellaneous	2,549
			TOTAL CASH RECEIPTS	\$188,480
<u>EXPENSES</u>			Increase in livestock	\$ 9,068
<u>Labor</u>			Increase in feed & supplies	7,295
Hired		\$ 18,633	TOTAL FARM RECEIPTS	\$204,843
<u>Feed</u>				
Dairy concentrate		41,891	<u>FINANCIAL SUMMARY</u>	
Hay and other		2,359	Total Cash Receipts	\$188,480
<u>Machinery</u>			Total Cash Expenses	130,942
Machine hire		1,114	NET FARM CASH FLOW	\$ 57,538
Machinery repair		7,512	Total Farm Receipts	\$204,843
Auto expense		401	Total Farm Expenses	164,891
Gas and oil		4,344	LABOR & MGT. INCOME/FARM	\$ 39,952
<u>Livestock</u>			Number of operators (75)	1.2
Purchased animals		3,445	LABOR & MGT. INCOME/OPERATOR	\$ 33,045
Breeding fees		1,898		
Veterinary, medicine		2,766	<u>BUSINESS FACTORS</u>	
Milk marketing		3,754	Man equivalent	3.4
Other livestock expense		4,661	Number of cows	118
<u>Crops</u>			Number of heifers	86
Fertilizer and lime		8,183	Acres of hay crops	147
Seeds and plants		2,432	Acres of corn silage	99
Spray and other		2,617	Total acres of crops	316
<u>Real Estate</u>			Acres cropland rented	(108)
Land, building, fence repair		2,995	Lbs. of milk sold	1,736,400
Taxes		3,444	Lbs. of milk sold/cow	14,700
Insurance		2,239	Tons hay crops/acre	3.2
Rent		3,231	Tons corn silage/acre	14.8
<u>Other Cash Expense</u>			Cows per man	35
Telephone (farm share)		426	Lbs. of milk sold/man	507,700
Electricity (farm share)		2,275	% Feed is of milk receipts	24%
Interest paid		8,558	Feed & crop exp./cwt. milk	\$3.17
Miscellaneous		1,764	Fertilizer & lime/crop acre	\$26
TOTAL CASH EXPENSES		\$130,942	Machinery cost/cow	\$212
Machinery depreciation		6,714	Av. price/cwt. milk	\$9.89
Building depreciation		5,009		
Unpaid labor		700		
Interest on farm equity @ 7%		21,526		
TOTAL FARM EXPENSES		\$164,891		

FARM BUSINESS SUMMARY
Average of 615 New York Dairy Farms, 1976

CAPITAL INVESTMENT

	<u>1/1/76</u>	<u>1/1/77</u>
Livestock	\$ 50,034	\$ 53,749
Feed & supplies	18,775	20,695
Machinery & equipment	42,771	49,277
Land & buildings	<u>128,937</u>	<u>139,423</u>
TOTAL INVESTMENT	\$240,517	\$263,144

EXPENSES

Labor

Hired \$ 7,682

Feed

Dairy concentrate 25,756
Hay and other 1,313

Machinery

Machine hire 822
Machinery repair 4,677
Auto expense 343
Gas and oil 2,954

Livestock

Purchased animals 2,808
Breeding fees 1,124
Veterinary, medicine 1,446
Milk marketing 1,810
Other livestock expense 3,214

Crops

Lime and fertilizer 4,530
Seeds and plants 1,455
Spray and other 1,283

Real Estate

Land, building, fence repair 1,779
Taxes 2,244
Insurance 1,537
Rent 1,308

Other

Telephone (farm share) 357
Electricity (farm share) 1,548
Interest paid 6,574
Miscellaneous 1,063

TOTAL CASH EXPENSES \$77,627

Machinery depreciation	5,245
Building depreciation	2,612
Unpaid labor	1,050
Interest on farm equity @ 7%	12,519
Decrease in livestock	--
TOTAL FARM EXPENSES	\$99,053

RECEIPTS

Milk sales	\$ 94,063
Crop sales	813
Dairy cattle sold	5,642
Livestock sales	1,190
Gas tax refund	133
Government payments	290
Work off farm	70
Custom machine work	112
Miscellaneous	<u>928</u>

TOTAL CASH RECEIPTS \$103,241

Increase in livestock 3,715

Increase in feed & supplies 1,920

TOTAL FARM RECEIPTS \$108,876

FINANCIAL SUMMARY

Total Cash Receipts \$103,241
Total Cash Expenses 77,627

NET FARM CASH FLOW \$ 25,614

Total Farm Receipts \$108,876

Total Farm Expenses 99,053

LABOR & MGT. INCOME/FARM \$ 9,823

Number of operators (759) 1.23

LABOR & MGT. INCOME/OPERATOR \$ 7,960

BUSINESS FACTORS

Man equivalent	2.5
Number of cows	71
Number of heifers	52
Acres of hay crops	117
Acres of corn silage	59
Total acres of crops	209
Acres cropland rented	(56)
Lbs. of milk sold	950,600
Lbs. of milk sold/cow	13,400
Tons hay crops/acre	2.8
Tons corn silage/acre	13.1
Lbs. of milk sold/man	380,200
Cows per man	28
% Feed is of milk sales	27%
Feed & crop exp./cwt. milk	\$3.47
Lime & fertilizer/crop acre	\$22
Machinery cost/cow	\$243
Av. price/cwt. milk	\$9.90

