

# **DAIRY FARM BUSINESS SUMMARY**

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## **SOUTHEASTERN NEW YORK 1979**

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1979 SOUTHEASTERN NEW YORK  
DAIRY FARM BUSINESS SUMMARY

The 1979 Southeastern New York dairy farm business summary includes 20 farms from Sullivan County, 14 from Orange County and 4 Ulster County dairy farms for a total of 38 farms. The Cooperative Extension Associations of the Southeastern New York counties and The Farm Credit Association of Middletown, sponsor this farm business management project and cooperate with The College of Agriculture and Life Sciences at Cornell, where the records are summarized.

The primary purpose of this project is to assist cooperators in farm record keeping and business analysis and thereby improve their skills as managers. This report is prepared in workbook form for use in the systematic study of individual farm business operations.

The data in the following table gives a view of the characteristics of farms participating in the Southeastern New York farm management program.

FARM MANAGEMENT CHARACTERISTICS OF  
SOUTHEASTERN NEW YORK DAIRY FARMS, 1976 THROUGH 1979

Item	Year			
	1976	1977	1978	1979
Number of farms	30	30	30	38
Cows per farm	56	58	55	63
Man equivalents	2.2	2.1	1.9	2.3
Investment per farm	\$241,393	\$246,900	\$255,284	\$335,359
Capital per cow	\$4,311	\$4,257	\$4,559	\$5,005
Milk sold per cow, lbs.	13,586	13,812	13,873	14,632
Milk sold per man, lbs.	350,599	385,144	397,396	395,622
Labor & management income per operator	\$3,739	-\$315	\$18,891	\$23,712

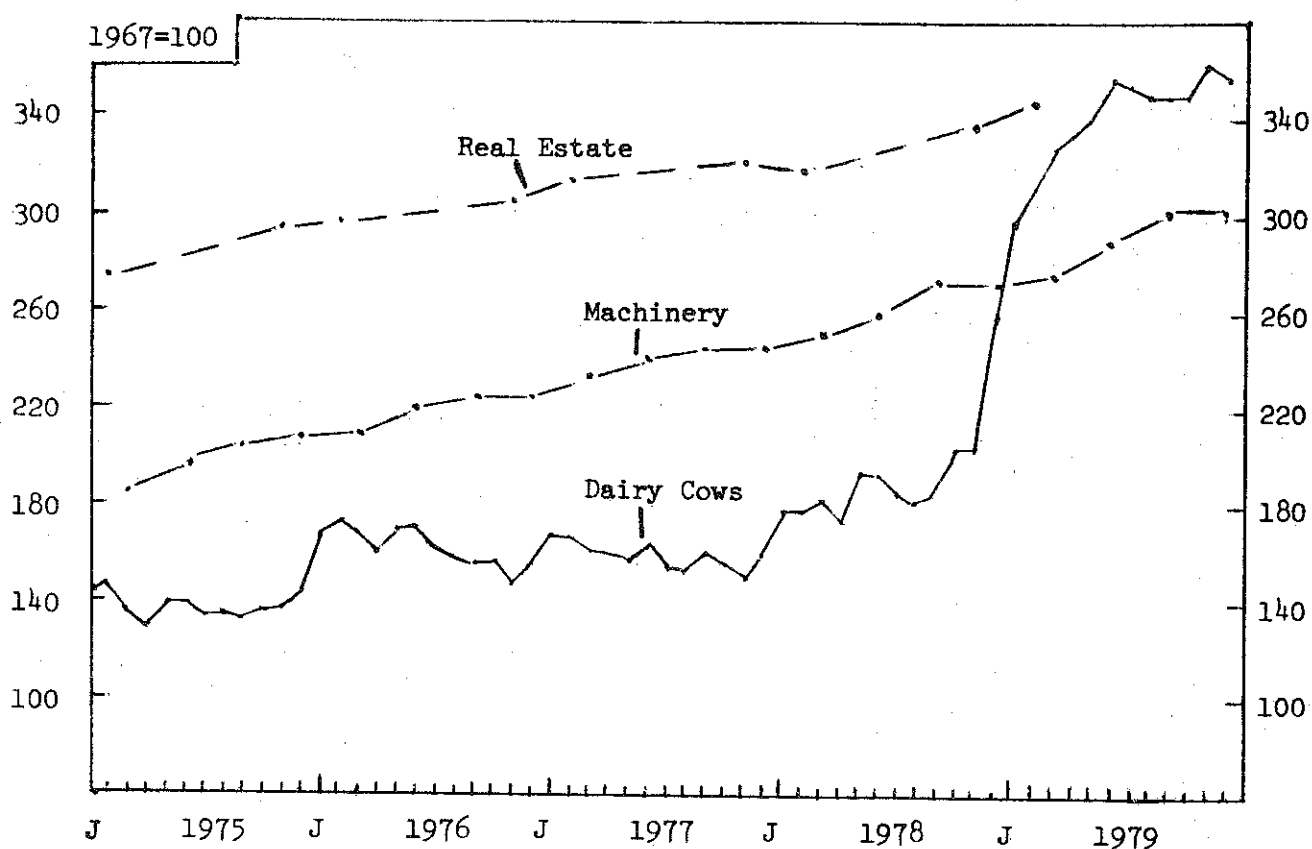
Economic conditions for dairymen have changed and the mix of farms included in the Southeastern regional summary has also changed since 1976. The average 1979 farm data shows more cows, a larger labor force, a substantial increase in capital invested and the highest return to labor and management since 1976.

The record high 1979 labor and management income was boosted by rising cow values and reduced by higher costs of capital. Cow values jumped nearly \$300 per head during the year and increased the cattle inventory more than \$22,000 per farm. The charge for using equity capital was increased from seven to nine percent in 1979, resulting in an increased cost of \$5,400 per farm.

This summary was prepared by Stuart F. Smith, Department of Agricultural Economics, New York State College of Agriculture and Life Sciences, Cornell University, in cooperation with Gerald Skoda, Sullivan County Cooperative Extension and the Middletown Farm Credit Association.

Prices

VALUE OF NEW YORK FARM REAL ESTATE, DAIRY COWS & MACHINERY  
1975-1979



Price changes affect the inventory values on New York dairy farms. Real estate and machinery prices have risen steadily during the past five years. Dairy cow prices dropped during 1974, rose sharply in late 1975, fluctuated throughout 1976 and 1977, and then jumped 62 percent in 1978. Dairy cow prices continued upward in 1979 and were reported at \$1,105 for December, or 38 percent above the December 1978 price. From 1967 to 1979, machinery prices increased 202 percent, dairy cows 256 percent and real estate increased an estimated 255 percent.

Table 1. REPORTED VALUES OF DAIRY FARM INVENTORY ITEMS, 1975-1979

Year	N.Y. Dairy Cows		Machinery	N.Y. Farm Real Estate	
	Value/Head	1967=100		Value/Acre	1967=100
1975	(Dec.) \$450	145	(Dec.) 222	(Nov.) \$543	294
1976	(Dec.) 485	156	(Dec.) 233	(Nov.) 562	304
1977	(Dec.) 495	160	(Dec.) 253	(Nov.) 593	320
1978	(Dec.) 800	258	(Dec.) 276	(Nov.) 629	339
1979	(Dec.) 1105	356	(Dec.) 302	(est.) 355	
Percent change:					
1975 to 1976	+ 8%		+ 5%	+ 3%	
1976 to 1977	+ 3%		+ 9%	+ 5%	
1977 to 1978	+62%		+ 9%	+ 6%	
1978 to 1979	+38%		+ 9%	+ 5% (est.)	

# SUMMARY OF THE FARM BUSINESS

## Business Characteristics and Resources Used

Knowledge about the availability of farm resources and their characteristics is fundamental to judging management performance. The tables on this page identify some important farm business characteristics and show the use of farm resources on this group of farms.

### BUSINESS CHARACTERISTICS AND RESOURCES USED 38 Southeastern New York Dairy Farms, 1979

Type of Business	Number	Business Records	Number	Dairy Records	Number
Individual	34	CAMIS	4	D.H.I.C.	19
Partnership	3	Account Book	20	Owner Sampler	4
Corporation	1	Agrifax	14	None	15

Barn Type	Number	Milking System	Number	Number	
Stanchion	32	Bucket & Carry	1	Herringbone	6
Freestall	5	Dumping Station	17	Other Barlor	1
Other	1	Pipeline	13		

Labor Force	My Farm	Average	Land Used	My Farm	Average
Operator	_____	13 mo.	Total acres owned	_____	148
Family paid	_____	5 mo.	Total acres rented	_____	154
Family unpaid	_____	3 mo.	Total crop acres	_____	174
Hired	_____	7 mo.	Crop acres rented	_____	94
Total	_____	28 mo.			
Age of operator(s)	_____	42 yrs.			

	Number of Cows	My Farm	Average
Beginning of year		_____	67
End of year		_____	67
Average for year		_____	63

Estimated value op's labor & management	_____	\$15,061
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There were 41 operators on the 28 farms for an average of 1.08 operators per farm. Ten of the 38 farms rented all their cropland. Only four farms rented no cropland. Fifty-four percent of the land cropped by these farmers was rented.

Total farm inventory increased \$51,714 or 15 percent during 1979. The end of year farm inventory values are used in determining farm assets in this report.

### CAPITAL INVESTMENT - FARM INVENTORY VALUES 38 Southeastern New York Dairy Farms

Item	My Farm		Average 38 Farms	
	1/1/79	1/1/80	1/1/79	1/1/80
Livestock	\$	\$	\$ 70,114	\$ 92,556
Feed & supplies			19,439	24,965
Machinery & equipment			52,171	60,925
Land & buildings*			192,140	207,132
TOTAL	\$	\$	\$333,864	\$385,578

\* Average of 28 farmers owning real estate.

# Machinery and Real Estate Inventory Calculations

The costs of owning machinery and real estate are charged out as depreciation, interest, insurance, taxes and maintenance. In recent years depreciation has been kept low by appreciation.

## MACHINERY AND EQUIPMENT DEPRECIATION 38 Southeastern New York Dairy Farms, 1979

Item	My Farm	Average 38 Farms
Beginning Inventory	\$ _____	\$52,171
Machinery Purchases	_____	<u>14,940</u>
Total (1)	\$ _____	\$67,111
End of Year Inventory	\$ _____	\$60,925
Machinery sold	_____	<u>857</u>
Total (2)	\$ _____	<u>\$61,782</u>
DEPRECIATION (1 minus 2)	\$ _____	\$ 5,329
Percent Depreciation	_____ %	8%

## REAL ESTATE INVENTORY CALCULATIONS ON OWNED FARMS 28 Southeastern New York Dairy Farms, 1979

Item	My Farm	Average 28 Farms
Beginning Market Value	\$ _____	\$192,140
Cost of New Real Estate	\$ _____	\$23,963
Less Lost Capital	- _____	<u>- 6,839</u>
Value of New Added	+\$ _____	+ 17,124
Less Building Depreciation	- _____	- 3,555
Less Real Estate Sold	- _____	<u>- 6,285</u>
Total Without Appreciation	\$ _____	\$199,424
Appreciation of Beginning Real Estate	+ _____	<u>+ 7,708</u>
End of Year Market Value	\$ _____	<u>\$207,132</u>

Lost Capital is the difference between the cost of new buildings and the amount these improvements added to the value of the farm. It is not included in farm expenses, since building depreciation is based on the full cost of new buildings and will account for lost capital over the life of the building. Building depreciation was taken from the farm depreciation schedule and is included as a farm expense. Real Estate Appreciation was estimated by each farm operator. It is the increase in value of real estate caused by demand and inflation. Appreciation averaged four percent on these farms in 1979.

## Receipts

Receipts from the farm business should be great enough to cover operating and overhead costs and provide a return to the operator's labor and management. The size and sources of receipts on this group of farms are examined below.

### FARM RECEIPTS 38 Southeastern New York Dairy Farms, 1979

Item	My Farm	Average 38 Farms	
		Amount	Percent
Milk sales	\$ _____	\$111,169	88
Crop sales	_____	344	--
Dairy cattle sold	_____	9,476	8
Calves & other livestock sales	_____	2,503	2
Gas tax refunds	_____	159	--
Government payments	_____	411	--
Work off farm	_____	1,079	1
Custom machine work	_____	112	--
Other	_____	733	1
Total Cash Receipts	\$ _____	\$125,986	100
Increase in livestock	_____	22,442*	
Increase in feed & supplies	_____	5,526	
TOTAL FARM RECEIPTS	\$ _____	\$153,954	

\* Due to higher dairy cattle prices at end of year. Average cow values increased from approximately \$850 to \$1,130 per head during 1979.

Total cash receipts increased nearly \$35,000 per farm in 1979 compared to the 1978 regional average. About \$30,000 resulted from higher prices and increased farm production in 1979.

### INCOME ANALYSIS Southeastern New York Dairy Farms, 1978 & 1979

Item	Average 30 Farms 1978	Average 38 Farms 1979	My Farm
Average price per cwt. milk sold	\$ 10.51	\$ 12.06	\$ _____
Milk sales per cow	\$ 1,458	\$ 1,765	\$ _____
Total cash receipts per man	\$47,452	\$54,071	\$ _____

The price of milk sold increased 15 percent and milk sales per cow increased 21 percent when average data from the 1979 summary is compared with 1978.

# Expenses

There are many cost control opportunities when cash farm expenses average \$259 per day. Compare your farm expenses with the averages listed below.

## FARM EXPENSES 38 Southeastern New York Dairy Farms, 1979

Item	My Farm	Average 38 Farms	
		Amount	Percent
<u>Hired Labor</u>	\$ _____	\$ 8,342	9
<u>Feed</u>			
Dairy concentrate	_____	33,244	35
Other feed	_____	1,321	1
<u>Machinery</u>			
Machine hire	_____	676	1
Machinery repairs	_____	4,713	5
Auto expense (farm share)	_____	387	—
Gas & oil	_____	4,020	4
<u>Livestock</u>			
Purchased livestock	_____	5,912	6
Breeding fees	_____	1,304	1
Veterinary & medicine	_____	1,770	2
Milk marketing	_____	3,230	3
Other livestock expense	_____	3,524	4
<u>Crops</u>			
Fertilizer & lime	_____	4,390	5
Seeds & plants	_____	932	1
Spray, other crop expense	_____	1,254	1
<u>Real Estate</u>			
		(Owners)	
Land, building, fence repair	_____	2,129 ( 2,465)	2
Taxes	_____	2,497 ( 3,154)	3
Insurance	_____	2,494 ( 2,690)	3
Rent	_____	2,278 ( 1,269)	2
<u>Other</u>			
Telephone (farm share)	_____	433	1
Electricity (farm share)	_____	2,653	3
Interest paid	_____	5,681 ( 6,264)	6
Miscellaneous	_____	1,480	2
Total Cash Expenses	\$ _____	\$ 94,664 ( 99,923)	100
<u>Noncash Items</u>			
Machinery depreciation	\$ _____	\$ 5,329	
Building depreciation	_____	2,698 ( 3,555)	
Unpaid family labor @ \$425/month	_____	1,350	
Interest on equity capital @ 9%	_____	24,351 ( 29,524)	
Decrease in livestock & feed	_____	0	
TOTAL FARM EXPENSES	\$ _____	\$128,392 (139,816)	



# Financial Summary of Year's Business

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

## NET CASH FARM INCOME Southeastern New York Dairy Farms, 1979

Item	Average 38 Farms 1979	Average 28 Owners 1979	My Farm
Cash Farm Receipts	\$125,986	\$133,580	\$ _____
Cash Farm Expenses	<u>94,664</u>	<u>99,923</u>	_____
NET CASH FARM INCOME	\$ 31,322	\$ 33,657	\$ _____

Net Cash Farm Income shows 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 farm business profits, but, it is useful when planning debt repayment programs. Guidelines for annual cash flow planning are presented on page 10. Monthly cash flow planning is also recommended and may be required in order to identify cash flow problems in the year ahead. This is particularly true when major changes in the business are planned or when prices of important factors are expected to change significantly.

## LABOR AND MANAGEMENT INCOME Southeastern New York Dairy Farms, 1979

Item	Average 38 Farms		My Farm
	Including Cattle Price Increase	Excluding Cattle Price Increase	
Total Farm Receipts	\$153,954	\$131,512	\$ _____
Total Farm Expenses	<u>128,392</u>	<u>126,372</u>	_____
LABOR & MANAGEMENT INCOME PER FARM	\$ 25,562	\$ 5,140	\$ _____
Number of Operators	1.08	1.08	_____
LABOR & MANAGEMENT INCOME PER OPERATOR	\$ 23,712	\$ 4,759	\$ _____

Labor and Management Income is the return to the operator for his efforts in operating the business. It is computed with and without the effect of the large increase in livestock inventory caused by higher cattle prices. Dairymen who used realistic cow values in their beginning and end inventories should recognize this increase as part of the return for operating the farm. A nine percent charge for the use of the operator's equity capital has been included as a farm expense. This interest charge reflects what the operator could have earned from this capital had it been invested elsewhere.

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

LABOR, MANAGEMENT AND OWNERSHIP INCOME  
Southeastern New York Dairy Farms, 1978 & 1979

Item	Average 30 Farms 1978	Average 38 Farms 1979	My Farm
Labor & management income	\$19,514	\$25,562	\$ _____
Real estate appreciation	1,835	6,022	_____
Interest on equity capital	<u>14,684</u>	<u>24,351</u>	_____
Total Per Farm	\$36,033	\$55,935	\$ _____
Number of operators	1.03	1.08	_____
LABOR, MANAGEMENT AND OWNERSHIP INCOME PER OPERATOR	\$34,882	\$51,888	\$ _____

Return on equity capital is a common measure for nonfarm businesses. It can be computed with or without real estate appreciation. Both measures are shown below. Equity capital or farm net worth averaged \$270,572 per farm, (see page 9).

RETURN ON EQUITY CAPITAL  
Southeastern New York Dairy Farms, 1978 & 1979

Item	Average 30 Farms 1978	Average 38 Farms 1979	My Farm
<u>Including Real Estate Appreciation</u>			
Labor, Mgmt. & Ownership Income/Farm	\$36,033	\$55,935	\$ _____
Less: Value of Operator's Labor & Mgmt.*	<u>14,258</u>	<u>16,251</u>	_____
Return on Equity Capital	\$21,775	\$39,684	\$ _____
Rate of Return on Equity Capital	10.4%	14.4%	_____ %
<u>Excluding Real Estate Appreciation</u>			
Return on Equity Capital (from above)	\$21,775	\$39,684	\$ _____
Less: Real Estate Appreciation	<u>1,835</u>	<u>6,022</u>	_____
Return on Equity Capital	\$19,940	\$33,662	\$ _____
Rate of Return on Equity Capital	9.5%	12.2%	_____ %

\* Value of operators' labor and management estimated by operators, (\$15,061 times 1.08 operators per farm in 1979).

# Farm Family Financial Situation

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

## FARM FAMILY FINANCIAL SITUATION 38 Southeastern New York Dairy Farms, January 1, 1980

Item	My Farm	Average 38 Farms
<u>Assets</u>		
Livestock	\$ _____	\$ 92,556
Feed & supplies	_____	24,966
Machinery & equipment	_____	60,925
Land & buildings	_____	156,914
Co-op investment	_____	3,810
Accounts receivable	_____	9,018
Cash & checking accounts	_____	3,193
Total Farm Assets	\$ _____	\$351,382
Savings accounts	\$ _____	\$ 5,125
Cash value life insurance	_____	2,682
Stocks & bonds	_____	5,650
Nonfarm real estate	_____	12,765
Auto (personal share)	_____	1,376
All other	_____	2,826
Total Nonfarm Assets	\$ _____	\$ 30,424
TOTAL ASSETS	\$ _____	\$381,806
<u>Liabilities</u>		
Real estate mortgage	\$ _____	\$ 45,296
Liens on cattle & equipment	_____	27,024
Installment contracts	_____	2,337
Notes & other farm debt	_____	6,153
Total Farm Liabilities	\$ _____	\$ 80,810
Nonfarm Liabilities	_____	3,165
TOTAL LIABILITIES	\$ _____	\$ 83,975
Farm Net Worth (equity capital)	\$ _____	\$270,572
Family Net Worth	\$ _____	\$297,831

Farm Net Worth (equity capital) averaged \$270,572 on the 38 Southeastern New York farms, \$60,000 more than the farm net worth reported on January 1, 1979 by the 30 farms summarized for 1978. The 28 farm owners farm net worth averaged \$328,045 on January 1, 1980.

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

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

Debt payments planned for 1980 are the scheduled debt payments as of January 1980. Few farms in the group had scheduled debt payments exceeding 25 percent of the milk receipts. Committing 30 percent or more of the milk income to debt payments can put a "big squeeze" on cash available for operating the business and family living.

FINANCIAL MEASURES AND DEBT COMMITMENT  
Southeastern New York Dairy Farms, January 1, 1980

Item	My Farm	Average 38 Farms
<u>Payment Ability</u>		
Net cash farm income	\$ _____	\$31,322
Add: Interest paid	_____	<u>5,676</u>
CASH AVAILABLE FOR DEBT SERVICE & LIVING	\$ _____	\$36,998
Less: Family living expenses	_____	<u>14,039*</u>
CASH AVAILABLE FOR DEBT PAYMENT & CAPITAL PURCHASES	\$ _____	\$22,959
<u>Scheduled Annual Debt Payments</u>		
Real estate mortgage	\$ _____	\$ 5,000
Cattle and equipment liens	_____	8,130
Installment contracts	_____	1,187
Notes and other	_____	<u>1,905</u>
TOTAL PAYMENTS PLANNED 1980	\$ _____	\$16,222
<u>Measure of Debt Commitment &amp; Equity Position</u>		
Scheduled debt payments per cow	\$ _____	\$ 239
Scheduled debt payments as % of milk sales	_____ %	15%
Farm debt per cow	\$ _____	\$ 1,188
Percent equity (total)	_____ %	78%

\* Estimated at \$6,000 per family, (assuming 1.08 families per farm and one family per operator), plus four percent of cash farm receipts.

## ANALYSIS OF THE FARM BUSINESS

Research has shown that certain factors controlled by management affect farm incomes. In analyzing a farm business, we examine the factors of size, rates of production, labor efficiency, capital efficiency and cost control.

### Size of Business

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

### MEASURES OF SIZE OF BUSINESS Southeastern New York Dairy Farms, 1978 & 1979

Measure	Average 30 Farms 1978	Average 38 Farms 1979	My Farm
Number of cows	55	63	_____
Number of heifers	27	33	_____
Pounds of milk sold	763,000	921,800	_____
Man equivalent	1.9	2.3	_____
Total work units	585	683	_____
Total acres of crops	151	174	_____

The average Southeastern New York farm summarized for 1979 was considerably larger than the average farm in the 1978 summary.

In the table below, the 527 New York farms for 1978 are sorted by number of cows and the labor income is shown for each size group. In general, the large farms paid better, but, variability of income was significant.

### COWS PER FARM AND LABOR AND MANAGEMENT INCOME 527 New York Dairy Farms, 1978

Number of Cows	Number of Farms	Percent of Farms	Labor & Management Income	
			Per Operator	Per Cow
Under 40	73	13%	\$ 9,865	\$307
40 - 54	156	30	14,480	345
55 - 69	104	20	18,505	376
70 - 84	68	13	20,246	345
85 - 99	34	6	18,818	286
100 - 114	28	5	32,417	382
115 - 129	19	4	27,440	358
130 - 149	16	3	32,752	341
150 and over	29	6	45,387	329

# Rates of Production

Crop yields and animal production rates are factors that affect farm incomes. Crop acres, yields and pounds of milk sold per cow are compared in the following table.

## CROP YIELDS AND MILK SOLD PER COW 38 Southeastern New York Dairy Farms, 1979

Crop	Average of Farms Reporting			My Farm	
	Farms Reporting	Acres	Yield	Acres	Yield
Dry hay	37	93	(combined	_____	_____
Hay crop silage	15	41	below)	_____	_____
Corn silage	35	54	13.7 ton	_____	_____
Grain corn	8	75	73.9 bu.	_____	_____
-----					
Hay equivalent:					
All hay crops	38	107	2.7 ton	_____	_____
All hay & silage	38	157	3.3 ton	_____	_____
Milk sold per cow			14,632 lbs.	_____	

Tons of hay equivalent of all hay and silage is a good measure of the overall rate of forage production. One ton of hay equivalent is equal to one ton of dry hay containing 90 percent dry matter. All 38 farms produced one or a combination of forage crops in 1979. Grain was produced on 23 percent of the farms but on less than ten percent of the cropland.

The hay crop yields reported in 1979 were 13 percent higher than in 1978 and corn silage yields were 10 percent higher than reported last year. Milk sold per cow increased 759 pounds or five percent over the 1978 average.

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

## MILK SOLD PER COW AND LABOR AND MANAGEMENT INCOME 527 New York Dairy Farms, 1978

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	28	60	\$294	\$ 3,400	\$ 64
10,000 - 10,999	37	52	339	10,170	227
11,000 - 11,999	37	67	334	19,230	349
12,000 - 12,999	76	69	370	18,680	296
13,000 - 13,999	99	75	378	18,680	294
14,000 - 14,999	99	79	442	23,650	369
15,000 - 15,999	85	75	465	26,690	456
16,000 and over	66	65	499	21,590	438

## Labor Efficiency

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

### MEASURES OF LABOR EFFICIENCY Southeastern New York Dairy Farms, 1978 & 1979

Item	Average 30 Farms 1978	Average 38 Farms 1979	My Farm
Man equivalent	1.9	2.3	_____
Cows per man	29	27	_____
Pounds of milk sold per man	397,396	395,622	_____
Work units per man	305	293	_____

Number of cows per man is calculated by dividing the average number of cows by the man equivalent which represents the total farm labor force. There was a decrease of two cows per man when the average for 1979 is compared with the average of the 30 farms summarized for 1978.

Pounds of milk sold per man is the single best measure of labor efficiency on the dairy farm. It measures the ability of the labor force to handle a large number of cows without sacrificing milk output per cow. The farms included in the 1979 summary were less efficient than those in the 1978 study as milk output per man decreased by 1,774 pounds.

It is important to look at other measures of labor efficiency, such as work units per man because all dairy farms do not have the same relationship between cows, heifers and crops grown. One work unit is the equivalent of one ten hour work day.

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

### MILK SOLD PER MAN AND LABOR AND MANAGEMENT INCOME 527 New York Dairy Farms, 1978

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	62	41	11,200	\$ 6,760	\$191
250,000 - 299,999	60	49	12,900	12,830	309
300,000 - 349,999	71	68	13,100	14,170	279
350,000 - 399,999	91	66	13,800	21,000	376
400,000 - 449,999	82	73	14,400	23,090	392
450,000 - 499,999	64	79	14,500	23,500	337
500,000 - 599,999	67	97	15,200	25,570	366
600,000 and over	30	120	14,500	34,840	413

## Capital Efficiency

Capital is a key resource and a manager must continually analyze its use in the business. The measures of capital efficiency shown in the following table include owned as well as borrowed capital. The management of borrowed capital has been analyzed on page 10. It's possible for the business to be under capitalized, but, investing too much capital per productive unit is a more common problem. The best way a farmer can get a good return on capital invested in his business is to "put it to work".

### MEASURES OF CAPITAL EFFICIENCY Southeastern New York Dairy Farms

Item	Average 38 Farms 1979	Ave. 28 Owned Farms 1979	My Farm
Farm capital per man	\$143,931	\$165,819	\$ _____
Farm capital per cow	5,005	5,652	_____
Land & buildings per cow	2,342	2,917	_____
Land & buildings per crop acre owned	1,961	1,918	_____
Machinery investment per cow	909	956	_____
Capital turnover	2.2 years	2.4 years	_____

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

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

### SIZE OF HERD AND CAPITAL EFFICIENCY 527 New York Dairy Farms, 1978

Number of Cows	Number of Farms	Capital Investment Per Cow			Total Capital Per Cwt. Milk
		Total	Real Estate	Machinery	
Under 40	73	\$4,860	\$2,660	\$900	\$38
40 - 54	156	4,780	2,500	890	36
55 - 69	104	4,570	2,300	890	33
70 - 84	68	4,880	2,500	940	34
85 - 99	34	4,390	2,200	800	33
100 - 114	28	4,480	2,200	800	32
115 - 129	19	4,100	2,000	750	30
130 - 149	16	4,000	2,000	700	28
150 and over	29	3,800	1,800	680	28



## Cost Control

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

### Feed Costs

Feed purchased is the largest single expenditure category on the dairy farm. These Southeastern New York dairy farms put 35 cents of each dollar spent during 1979 into purchased dairy feed. Feed costs can be controlled by making sure that only required nutrients are fed and that required nutrients are purchased from their most economical source.

The crop program has an important influence on purchased feed costs. Both roughages and grains grown have a bearing on purchased feed expenses. Also, the heifer raising practices affect feed costs. The overall feed situation must be examined and evaluated as a "system".

FEED COSTS AND RELATED MEASURES  
Southeastern New York Dairy Farms, 1978 & 1979

Item	Average 30 Farms 1978	Average 38 Farms 1979	My Farm
Feed bought per cow	\$ 459	\$ 528	\$ _____
Crop expense per cow	78	104	_____
Feed bought per cwt. milk	3.31	3.61	_____
Feed & crop expense per cwt. milk	3.87	4.32	_____
Percent feed is of milk receipts	31%	30%	_____ %
Hay equivalent per cow (tons)	7.7	8.2	_____
Crop acres per cow	2.7	2.8	_____
Lime & fertilizer per crop acre	\$ 19	\$ 25	\$ _____
Heifers as percent of cow numbers	49%	52%	_____ %

Feed bought per cow increased 15 percent in 1979 compared to the amount spent in 1978. Feed bought increased 30 cents per hundredweight of milk sold although the farms summarized for 1979 spent one percent less of their milk check to buy dairy feed compared to the 1978 average.

Crop expenses per cow jumped 33 percent in 1979 although forage production increased only six percent per cow. Fertilizer costs increased 32 percent per crop acre.

There were .52 heifers for every cow in 1979, an increase of .03 heifers per cow over 1978.

Machinery, Labor and Miscellaneous Costs

Labor and machinery operate as a "team" on a modern farm. The management challenge is to find the combination of labor and mechanization that will give a reasonable cost per unit of output.

LABOR AND MACHINERY COSTS  
Southeastern New York Dairy Farms, 1978 & 1979

Item	Average 30 Farms 1978	Average 38 Farms 1979	My Farm
Total machinery <sup>1/</sup>	\$12,677	\$20,214	\$ _____
Machinery cost per cow	230	321	_____
Machinery costs per cwt. of milk	1.66	2.19	_____
Total labor costs <sup>2/</sup>	14,263	17,817	_____
Labor costs per cow	2.59	2.83	_____
Labor costs per cwt. of milk	1.87	1.93	_____
Labor & machinery costs per cwt. of milk	3.53	4.12	_____

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

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

Machinery costs increased more than labor costs in 1979. Machinery costs increased 30 percent per cow excluding the effects of the higher nine percent interest rate charged in 1979. Labor costs per cow increased nine percent compared with the 1978 average.

MISCELLANEOUS COSTS CONTROL MEASURES  
Southeastern New York Dairy Farms, 1978 & 1979

Item	Average 30 Farms 1978	Average 38 Farms 1979	My Farm
Veterinary & medicine per cow	\$ 22.07	\$ 28.10	\$ _____
Other livestock expense per cow	45.11	55.94	_____
Real estate expense per cow	126.05	149.17	_____
Total farm expense per cow	1,574	2,038	_____

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

Total farm expenses were up 29 percent per cow in 1979.

YEARLY FINANCIAL PLANNING AND ANALYSIS  
38 Southeastern New York Dairy Farms, 1979  
Average: 63 Cows, 14,632 Lbs. Milk Per Cow, \$12.06 Per Cwt.

Item	Average Per Cow	My Farm, _____ Cows		
		Per Cow	Total	Goal
<u>CASH RECEIPTS</u>				
Milk sales	\$1,764	\$ _____	\$ _____	\$ _____
Crop sales	5	_____	_____	_____
Dairy cattle	150	_____	_____	_____
Calves & other livestock	40	_____	_____	_____
Other	41	_____	_____	_____
Total Cash Receipts	\$2,000	\$ _____	\$ _____	\$ _____
<u>CASH EXPENSES</u>				
Hired labor	\$ 132	\$ _____	\$ _____	\$ _____
Dairy concentrate	528	_____	_____	_____
Hay & other	21	_____	_____	_____
Machine hire	11	_____	_____	_____
Machine repair & auto expense	81	_____	_____	_____
Gas & oil	64	_____	_____	_____
Breeding fees	21	_____	_____	_____
Vet & medicine	28	_____	_____	_____
Milk marketing (ADA, dues, hauling)	51	_____	_____	_____
Other livestock expense	56	_____	_____	_____
Fertilizer & lime	70	_____	_____	_____
Seeds & plants	15	_____	_____	_____
Spray & other	20	_____	_____	_____
Land, bldg., fence repair (owner)	37	_____	_____	_____
Taxes (owner)	47	_____	_____	_____
Insurance (owner)	40	_____	_____	_____
Rent (owner)	19	_____	_____	_____
Telephone (farm share)	7	_____	_____	_____
Electricity (farm share)	42	_____	_____	_____
Misc.	23	_____	_____	_____
Total Cash Expenses <sup>1/</sup>	\$1,314	\$ _____	\$ _____	\$ _____
Total Cash Receipts	\$2,000	\$ _____	\$ _____	\$ _____
Total Cash Expenses <sup>1/</sup>	- 1,314	- _____	- _____	- _____
Net Cash Flow	\$ 686	\$ _____	\$ _____	\$ _____
Cash Family Living Expense <sup>2/</sup>	- 223	- _____	- _____	- _____
Amount Left for Debt Service, Capital				
Investment & Retained Earnings	\$ 463	\$ _____	\$ _____	\$ _____
Scheduled Debt Service	- 239	- _____	- _____	- _____
Available for Capital Investment <sup>3/</sup>	\$ 224	\$ _____	\$ _____	\$ _____
Planned Cattle Purchase		_____	_____	_____
Planned Equipment Purchase		_____	_____	_____
Borrowed Funds Needed <sup>4/</sup>		\$ _____	\$ _____	\$ _____

- 1/ Interest paid excluded from cash expenses as it is contained in Scheduled Debt Service. Purchased livestock are also excluded.
- 2/ Estimated: \$6,000 per family and four percent of cash receipts.
- 3/ Retained earnings are \$0.
- 4/ May be replaced by equity capital.

1979 DAIRY FARM RENTER BUSINESS SUMMARY  
Average of 10 Southeastern New York Farm Renters

<u>CAPITAL INVESTMENT</u>		<u>1/1/80</u>	<u>RECEIPTS</u>	
Livestock		\$ 77,745	Milk sales	\$ 92,718
Feed & supplies		15,281	Crop sales	86
Machinery & equipment		41,450	Dairy cattle sold	6,701
Land & buildings		16,300	Calves & other livestock sales	2,051
Total Investment		\$150,776	Refunds & payments	347
<u>EXPENSES</u>			Machine work & work off farm	2,345
Hired Labor		\$ 6,373	Miscellaneous	480
Feed			Total Cash Receipts	\$104,728
Dairy concentrate		29,067	Increase in livestock	15,256
Hay & other		2,983	Increase in feed & supplies	3,371
Machinery			TOTAL FARM RECEIPTS	\$123,355
Machine hire		348	<u>FINANCIAL SUMMARY</u>	
Machinery repair & auto (f.s.)		4,511	Cash farm receipts	\$104,728
Gas & oil		3,156	Cash farm expenses	79,944
Livestock			Net Cash Farm Income	\$ 24,784
Purchased livestock		4,001	Total farm receipts	\$123,355
Breeding fees		1,002	Total farm expenses	96,413
Veterinary & medicine		1,479	Labor & Management Income	\$ 26,942
Milk mktg. (promo. & dues)		3,588	Number of operators	1.1
Other livestock expense		3,747	Labor & Mgmt. Inc./Operator	\$ 24,493
Crops			Labor & management income	\$ 26,942
Fertilizer & lime		2,286	Real estate appreciation	1,300
Seeds & plants		678	Interest on equity capital	9,868
Spray & other		357	Labor, Mgmt. & Ownership Inc.	\$ 38,110
Real Estate			Labor, Mgmt. & Ownshp. Inc./Op.	\$ 34,645
Repairs		1,189	Return on eq. cap. with apprec.	19.7%
Taxes		657	<u>BUSINESS FACTORS</u>	
Insurance		1,945	Number of cows	53
Rent		5,101	Number of heifers	30
Other Cash Expense			Total acres of crops	157
Telephone (farm share)		330	Man equivalent	2.3
Electricity (farm share)		2,042	Pounds of milk sold per cow	14,543
Interest paid		4,048	Tons hay crop per acre	2.5
Miscellaneous		1,056	Tons corn silage per acre	12.3
Total Cash Expenses		\$ 79,944	Cows per man	24
Noncash Items			Milk sold per man - pounds	342,578
Depreciation of machinery		4,951	Feed purchased per cow	\$548
Depreciation of buildings		300	% purchased feed is of milk rec.	31%
Unpaid labor @ \$450/month		1,350	Hay equivalent per cow - tons	9.0
Interest on equity cap. @ 9%		9,868	Average price per cwt. of milk	\$12.03
TOTAL FARM EXPENSES		\$ 96,413	Machinery cost per cow	\$311
			Labor costs per cow	\$299
			Farm capital per cow	\$2,645

# 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 527 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 527 New York Dairy Farms, 1978

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	168	2,333,700	17,100	4.4	20	44	631,900
3.4	106	1,499,800	15,800	3.4	17	37	518,900
2.9	83	1,188,200	15,200	3.0	16	33	473,100
2.5	70	1,004,200	14,700	2.7	15	31	434,000
2.3	62	875,000	14,100	2.5	14	29	403,100
-----							
2.0	55	769,700	13,600	2.3	13	27	373,500
2.0	50	671,400	13,000	2.1	12	25	340,700
1.7	44	578,000	12,400	1.9	11	23	306,000
1.5	39	487,500	11,300	1.7	9	21	264,200
1.2	31	352,100	9,400	1.2	6	17	192,400

Feed Bought		Machinery	Labor and	Feed and Crop
Per Cow	% of Milk Receipts	Cost Per Cow	Machinery Cost Per Cow	Expense Per Cwt. Milk
\$178	13%	\$151	\$382	\$2.36
263	20	197	443	2.98
322	24	226	482	3.24
371	26	250	517	3.48
398	28	271	541	3.67
-----				
424	30	288	565	3.85
455	32	311	598	4.04
489	34	338	636	4.29
539	37	376	695	4.62
644	43	476	826	5.27

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

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

FARM BUSINESS SUMMARY BY HERD SIZE  
527 New York Dairy Farms, 1978

Item	Farms with:			
	Less than 40 Cows	40 to 54 Cows	55 to 69 Cows	70 to 84 Cows
<b>Capital Investment (end of year)</b>				
Livestock	\$ 35,739	\$ 52,755	\$ 65,255	\$ 78,468
Feed and supplies	8,173	13,258	19,892	28,543
Machinery and equipment	30,530	42,334	56,067	70,121
Land and buildings	89,130	119,477	144,548	187,022
TOTAL INVESTMENT	\$163,572	\$227,824	\$285,762	\$364,154
<b>Receipts</b>				
Milk sales	\$ 44,369	\$ 64,277	\$ 88,791	\$113,625
Dairy cattle sold	3,822	5,553	8,146	9,008
Other livestock sales	1,260	1,481	1,623	2,366
Crop sales	327	610	855	659
Miscellaneous receipts	1,474	1,612	1,969	2,739
Total Cash Receipts	\$ 51,252	\$ 73,533	\$101,384	\$128,397
Increase in livestock	9,421	13,303	15,071	17,986
Increase in feed & supplies	1,470	2,855	4,074	4,797
TOTAL FARM RECEIPTS	\$ 62,143	\$ 89,691	\$120,529	\$151,180
<b>Expenses</b>				
Hired labor	\$ 1,371	\$ 2,682	\$ 5,625	\$ 9,875
Dairy feed	12,936	18,960	24,903	31,012
Other feed	830	1,067	1,242	1,048
Machine hire	299	476	637	1,081
Machinery repair	2,287	3,202	4,783	6,270
Auto expense (farm share)	281	308	283	374
Gas and oil	1,534	1,996	2,823	3,497
Purchased animals	2,402	3,242	2,776	1,885
Breeding fees	606	912	1,085	1,338
Veterinary and medicine	841	1,236	1,559	1,953
Milk marketing	1,218	1,581	2,516	3,161
Other livestock expense	1,734	2,543	3,185	4,233
Fertilizer and lime	1,922	2,788	4,508	6,902
Seeds and plants	612	1,044	1,525	2,101
Spray and other crop expense	327	744	877	1,455
Land, bldg, fence repair	1,085	1,091	1,708	2,158
Taxes and insurance	2,304	3,068	3,752	4,805
Electric & phone (farm share)	1,218	1,622	2,098	2,548
Interest paid	3,190	5,806	7,232	8,654
Miscellaneous expenses	885	1,467	2,190	3,321
Total Cash Expenses	\$ 37,882	\$ 55,835	\$ 75,307	\$ 97,671
Machinery depreciation	3,077	4,280	5,626	6,504
Building depreciation	1,283	1,835	2,574	2,957
Unpaid family labor	1,700	1,700	1,275	850
Interest on equity @ 7%	8,070	10,171	12,801	17,303
Decrease in feed & supplies	--	--	--	--
TOTAL FARM EXPENSES	\$ 52,012	\$ 73,821	\$ 97,583	\$125,285
<b>Financial Summary</b>				
Total Farm Receipts	\$ 62,143	\$ 89,691	\$120,529	\$151,180
Total Farm Expenses	52,012	73,821	97,583	125,285
Labor & Mgt. Income	\$ 10,131	\$ 15,870	\$ 22,946	\$ 25,895
Number of operators	1.03	1.10	1.24	1.28
LABOR & MGT. INCOME/OPERATOR	\$ 9,865	\$ 14,480	\$ 18,505	\$ 20,246

FARM BUSINESS SUMMARY BY HERD SIZE  
527 New York Dairy Farms, 1978

Item	Farms with:				
	85 to 99 Cows	100 to 114 Cows	115 to 129 Cows	130 to 149 Cows	150 or More Cows
<b>Capital Investment (end of year)</b>					
Livestock	\$ 97,347	\$121,909	\$119,719	\$141,329	\$190,365
Feed and supplies	30,205	35,548	41,538	45,886	64,626
Machinery and equipment	74,732	87,843	93,068	99,001	132,126
Land and buildings	207,813	233,434	253,252	280,079	367,009
TOTAL INVESTMENT	\$410,097	\$478,734	\$507,577	\$566,295	\$754,126
<b>Receipts</b>					
Milk sales	\$131,892	\$154,734	\$178,211	\$209,111	\$292,088
Dairy cattle sold	12,876	14,438	12,279	17,746	23,754
Other livestock sales	2,776	4,671	2,549	3,182	5,066
Crop sales	1,537	1,051	1,479	944	2,102
Miscellaneous receipts	2,717	3,977	3,514	5,236	7,646
Total Cash Receipts	\$151,798	\$178,871	\$198,032	\$236,219	\$330,656
Increase in livestock	22,212	35,079	29,387	34,682	46,650
Increase in feed & supplies	2,474	8,471	5,959	3,937	9,566
TOTAL FARM RECEIPTS	\$176,484	\$222,421	\$233,378	\$274,834	\$386,872
<b>Expenses</b>					
Hired labor	\$ 12,139	\$ 14,607	\$ 18,495	\$ 24,385	\$ 41,507
Dairy feed	36,223	48,215	46,532	58,126	78,730
Other feed	2,093	3,096	3,003	2,422	3,797
Machine hire	1,325	1,025	950	972	3,918
Machinery repair	8,028	8,105	9,079	12,487	15,440
Auto expense (farm share)	584	523	448	379	572
Gas and oil	4,808	4,963	5,854	6,361	9,147
Purchased animals	2,219	8,158	4,912	4,120	9,642
Breeding fees	1,764	1,938	2,186	2,640	3,151
Veterinary and medicine	2,419	2,870	3,102	4,394	4,704
Milk marketing	4,026	3,733	5,333	5,473	9,729
Other livestock expense	4,170	5,089	5,572	6,937	9,295
Fertilizer and lime	7,551	7,293	7,886	9,950	16,339
Seeds and plants	2,415	2,844	2,785	3,767	5,176
Spray and other crop expense	1,583	2,026	2,815	3,429	4,364
Land, bldg., fence repair	2,524	1,957	2,740	4,565	4,788
Taxes and insurance	5,970	5,919	7,178	8,028	11,419
Electric & phone (farm share)	3,176	3,258	3,914	3,406	5,161
Interest paid	10,676	13,477	12,395	14,610	20,567
Miscellaneous expenses	3,854	4,016	5,995	5,297	8,626
Total Cash Expenses	\$117,547	\$143,112	\$151,174	\$181,748	\$266,072
Machinery depreciation	9,155	9,979	9,912	10,443	15,674
Building depreciation	3,284	5,885	4,293	7,095	7,289
Unpaid family labor	850	1,700	425	425	850
Interest on equity @ 7%	19,641	21,224	24,274	28,063	32,855
Decrease in feed & supplies	--	--	--	--	--
TOTAL FARM EXPENSES	\$150,477	\$181,900	\$190,078	\$227,774	\$322,740
<b>Financial Summary</b>					
Total Farm Receipts	\$176,484	\$222,421	\$233,378	\$274,838	\$386,872
Total Farm Expenses	150,477	181,900	190,078	227,774	322,740
Labor & Mgt. Income	\$ 26,007	\$ 40,521	\$ 43,300	\$ 47,064	\$ 64,132
Number of operators	1.38	1.25	1.58	1.44	1.41
LABOR & MGT. INCOME/OPR	\$ 18,818	\$ 32,417	\$ 27,440	\$ 32,752	\$ 45,387

SELECTED BUSINESS FACTORS BY HERD SIZE  
527 New York Dairy Farms, 1978

Item	Farms with:			
	Less than 40 Cows	40 to 54 Cows	55 to 69 Cows	70 to 84 Cows
Number of farms	73	156	104	68
<u>Size of Business</u>				
Number of cows	33	46	61	75
Number of heifers	22	31	41	54
Pounds of milk sold	426,800	624,700	855,100	1,085,500
Man equivalent	1.6	1.8	2.3	2.6
Total work units	370	512	677	839
Total crop acres	111	147	199	244
(Crop acres rented)	(17)	(29)	(50)	(70)
<u>Rates of Production</u>				
Milk sold per cow	12,930	13,600	14,000	14,500
Tons hay crops per acre	2.1	2.3	2.4	2.6
Tons corn silage per acre	13.0	13.2	13.3	14.2
Bushels of oats per acre	55	72	58	61
<u>Labor Efficiency</u>				
Cows per man	21	25	27	29
Pounds milk sold per man	270,100	341,400	380,000	420,700
Work units per man	234	280	301	325
<u>Feed Costs</u>				
Feed purchased per cow	\$392	\$412	\$408	\$413
Crop expense per cow	\$87	\$99	\$113	\$139
Feed cost per cwt. milk	\$3.03	\$3.04	\$2.91	\$2.86
Feed & crop exp./cwt. milk	\$3.70	\$3.77	\$3.72	\$3.82
% feed is of milk receipts	29%	29%	28%	27%
Hay equivalent per cow	7.8	8.3	8.5	8.8
Crop acres per cow	3.4	3.2	3.3	3.3
Fertilizer & lime/crop acre	\$17	\$19	\$23	\$28
<u>Machinery and Labor Costs</u>				
Total machinery costs	\$9,501	\$13,110	\$17,825	\$22,372
Machinery cost per cow	\$288	\$285	\$292	\$298
Machinery cost/cwt. milk	\$2.23	\$2.10	\$2.08	\$2.06
Labor cost per cow	\$329	\$279	\$273	\$273
Labor cost per cwt. milk	\$2.55	\$2.05	\$1.95	\$1.89
<u>Capital Efficiency</u>				
Investment per man	\$103,500	\$124,500	\$127,000	\$141,100
Investment per cow	\$4,800	\$4,850	\$4,600	\$4,860
Investment per cwt. milk	\$38	\$36	\$33	\$34
Land & buildings per cow	\$2,620	\$2,540	\$2,330	\$2,490
Machinery investment/cow	\$900	\$900	\$900	\$935
Capital turnover	2.6	2.5	2.4	2.4
<u>Other</u>				
Price per cwt. milk sold	\$10.40	\$10.29	\$10.38	\$10.47
Acres hay crops	85	99	123	140
Acres corn silage	22	37	52	66
Inventory changes 1978*:				
Number of cows	0	0	0	+1
Invt. value per cow**	+\$277	+\$348	+\$243	+\$229

\* Change from 1/1/78 to 1/1/79.

\*\* Livestock inventory includes heifers.



SELECTED BUSINESS FACTORS BY HERD SIZE  
527 New York Dairy Farms, 1978

Item	Farms with:				
	85 to 99 Cows	100 to 114 Cows	115 to 129 Cows	130 to 149 Cows	150 or More Cows
Number of farms	34	28	19	16	29
<u>Size of Business</u>					
Number of cows	91	106	121	138	195
Number of heifers	72	77	90	90	124
Pounds of milk sold	1,240,100	1,482,800	1,699,200	1,999,300	2,651,400
Man equivalent	2.8	3.4	3.5	3.8	5.4
Total work units	1,014	1,183	1,333	1,487	2,064
Total crop acres	271	331	361	382	506
(Crop acres rented)	(83)	(115)	(159)	(111)	(212)
<u>Rates of Production</u>					
Milk sold per cow	13,600	14,000	14,000	14,500	13,600
Tons hay crops per acre	3.0	2.5	2.6	2.5	2.6
Tons corn silage/acre	14.1	13.6	14.4	14.6	14.4
Bushels oats/acre	52	52	64	66	73
<u>Labor Efficiency</u>					
Cows per man	32	31	35	36	36
Pounds milk sold/man	438,200	433,600	485,500	522,000	489,200
Work units per man	358	346	381	388	381
<u>Feed Costs</u>					
Feed purchased per cow	\$398	\$455	\$385	\$421	\$404
Crop expense per cow	\$127	\$115	\$111	\$124	\$133
Feed cost per cwt. milk	\$2.92	\$3.25	\$2.74	\$2.91	\$2.97
Feed & crop exp./cwt. milk	\$3.85	\$4.07	\$3.53	\$3.76	\$3.95
% feed is of milk receipts	27%	31%	26%	28%	27%
Hay equivalent per cow	8.7	8.9	8.8	8.2	7.7
Crop acres per cow	3.0	3.1	3.0	2.8	2.6
Fertilizer & lime/crop acre	\$28	\$22	\$22	\$26	\$32
<u>Machinery and Labor Costs</u>					
Total machinery costs	\$28,917	\$30,361	\$32,366	\$37,230	\$53,376
Machinery cost per cow	\$318	\$286	\$267	\$270	\$274
Machinery cost/cwt. milk	\$2.33	\$2.05	\$1.90	\$1.86	\$2.01
Labor cost per cow	\$257	\$246	\$258	\$260	\$274
Labor cost/cwt. milk	\$1.89	\$1.76	\$1.84	\$1.79	\$2.01
<u>Capital Efficiency</u>					
Investment per man	\$144,900	\$140,000	\$145,000	\$147,900	\$139,100
Investment per cow	\$4,410	\$4,470	\$4,100	\$4,000	\$3,800
Investment/cwt. milk	\$33	\$32	\$30	\$28	\$28
Land & buildings/cow	\$2,235	\$2,180	\$2,000	\$2,000	\$1,840
Machinery investment/cow	\$800	\$820	\$750	\$700	\$660
Capital turnover	2.3	2.2	2.2	2.1	1.9
<u>Other</u>					
Price per cwt. milk sold	\$10.64	\$10.44	\$10.49	\$10.46	\$11.02
Acres hay crops	141	180	194	198	234
Acres corn silage	80	110	115	130	185
Inventory changes 1978*:					
Number of cows	+3	+1	+4	+1	+3
Inv't. value per cow**	+\$212	+\$320	+\$212	+\$239	+\$222

\* Change from 1/1/78 to 1/1/79.

\*\* Livestock inventory includes heifers.

FARM FAMILY FINANCIAL SITUATION BY HERD SIZE  
527 New York Dairy Farms, January 1, 1979

Item	Farms with:			
	Less than 40 Cows	40 to 54 Cows	55 to 69 Cows	70 to 84 Cows
Number of farms	73	156	104	68
<b>Assets</b>				
Livestock	\$ 35,740	\$ 52,755	\$ 65,255	\$ 78,470
Feed and supplies	8,174	13,258	19,892	28,543
Machinery & equipment	30,530	42,335	56,068	70,121
Land and buildings	89,130	119,478	144,549	187,022
Co-op investment	838	2,393	2,585	3,794
Accounts receivable	3,226	4,828	6,532	8,284
Cash & checking accounts	1,275	1,374	1,971	2,617
Total Farm Assets	\$168,913	\$236,421	\$296,852	\$378,851
Savings accounts	2,336	3,254	4,117	3,505
Cash value life insurance	2,376	1,886	2,570	3,131
Stocks and bonds	982	520	1,808	3,695
Nonfarm real estate	2,201	2,698	3,157	4,945
Auto (personal share)	969	1,032	962	1,042
All other	3,816	3,620	4,336	4,843
Total Nonfarm Assets	\$ 12,680	\$ 13,010	\$ 16,950	\$ 21,161
TOTAL ASSETS	\$181,593	\$249,431	\$313,802	\$400,012
<b>Liabilities</b>				
Real estate mortgage	\$ 27,851	\$ 53,975	\$ 63,209	\$ 77,966
Liens on cattle & equipt.	18,893	29,321	38,989	40,351
Installment contracts	1,567	1,913	2,363	2,447
Other loans over 7 years	720	1,317	2,591	2,185
Other loans 1 to 7 years	2,696	2,481	3,040	5,201
Other loans less than 1 year	201	517	1,372	1,787
Feed store & other accounts	1,693	1,592	2,414	1,725
Total Farm Liabilities	\$ 53,621	\$ 91,116	\$113,978	\$131,662
Nonfarm Liabilities	412	587	711	729
TOTAL LIABILITIES	\$ 54,033	\$ 91,703	\$114,689	\$132,391
Farm Net Worth (Equity Capital)	\$115,292	\$145,305	\$182,874	\$247,189
FAMILY NET WORTH	\$127,560	\$157,728	\$199,113	\$267,621
<b>Financial Measures</b>				
Percent equity	70%	63%	63%	67%
Farm debt per cow	\$1,577	\$1,898	\$1,809	\$1,755
Available for debt service and living	\$16,555	\$23,498	\$33,303	\$39,376
Scheduled annual debt payment	\$9,140	\$14,216	\$19,411	\$23,752
Scheduled debt payment/cow	\$269	\$296	\$308	\$317
Scheduled debt payment as percent of milk check	21%	22%	22%	21%

FARM FAMILY FINANCIAL SITUATION BY HERD SIZE  
527 New York Dairy Farms, January 1, 1979

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	34	28	19	16	29
<b>Assets</b>					
Livestock	\$ 97,349	\$121,910	\$119,720	\$141,329	\$190,366
Feed and supplies	30,206	35,549	41,539	45,886	64,626
Machinery & equipment	74,733	87,844	93,069	99,001	132,127
Land and buildings	207,814	233,435	253,252	280,080	367,010
Co-op investment	5,970	5,439	8,301	8,186	12,723
Accounts receivable	10,338	10,866	20,992	18,651	24,789
Cash & checking accounts	1,929	2,476	4,846	5,012	3,992
Total Farm Assets	\$428,339	\$497,519	\$541,719	\$598,145	\$795,633
Savings accounts	4,607	4,087	3,571	3,327	2,497
Cash value life insurance	3,013	7,869	2,509	4,274	3,698
Stocks and bonds	3,118	4,885	1,465	5,580	4,771
Nonfarm real estate	2,058	250	7,236	15,656	15,442
Auto (personal share)	561	1,206	816	1,134	2,131
All other	3,191	3,780	2,942	4,281	9,901
Total Nonfarm Assets	\$ 16,548	\$ 22,077	\$ 18,539	\$ 34,252	\$ 38,440
TOTAL ASSETS	\$444,887	\$519,596	\$560,258	\$632,397	\$834,073
<b>Liabilities</b>					
Real estate mortgage	\$ 80,379	\$109,060	\$105,786	\$119,664	\$172,762
Liens on cattle & equipt.	52,117	62,451	74,989	70,337	129,739
Installment contracts	2,163	3,762	2,755	2,366	3,763
Other loans over 7 years	3,663	719	2,184	687	10,191
Other loans 1 to 7 years	6,754	10,783	3,793	1,666	5,731
Other loans less than 1 year	828	2,184	1,895	625	1,995
Feed store & other accounts	1,846	5,361	3,540	1,902	2,088
Total Farm Liabilities	\$147,750	\$194,320	\$194,942	\$197,247	\$326,269
Nonfarm Liabilities	276	324	3,476	687	1,724
TOTAL LIABILITIES	\$148,026	\$194,644	\$198,418	\$197,934	\$327,993
Farm Net Worth (Equity Capital)	\$280,589	\$303,199	\$346,777	\$400,898	\$469,364
FAMILY NET WORTH	\$296,861	\$324,952	\$361,840	\$434,463	\$506,080
<b>Financial Measures</b>					
Percent equity	67%	63%	65%	69%	61%
Farm debt per cow	\$1,572	\$1,799	\$1,572	\$1,379	\$1,623
Available for debt service and living	\$44,922	\$49,231	\$59,244	\$69,078	\$85,141
Scheduled annual debt payment	\$27,466	\$33,068	\$36,631	\$31,485	\$56,418
Scheduled debt payment/cow	\$292	\$306	\$295	\$220	\$281
Scheduled debt payment as percent of milk check	21%	21%	21%	15%	19%

# PROGRESS OF THE FARM BUSINESS

Comparing your business with that of other farmers is one part of a business checkup. It is equally important to compare your current year's business with that of earlier years to show the progress you are making, and to plan ahead, by setting business targets or goals.

Item	1977	1978	1979	1980 Goal
<u>Size of Business</u>				
Number of cows	_____	_____	_____	_____
Number of heifers	_____	_____	_____	_____
Pounds of milk sold	_____	_____	_____	_____
Man equivalent	_____	_____	_____	_____
Acres of crops	_____	_____	_____	_____
<u>Rates of Production</u>				
Lbs. milk sold per cow	_____	_____	_____	_____
Tons hay crops per acre	_____	_____	_____	_____
Tons corn silage/acre	_____	_____	_____	_____
<u>Labor Efficiency</u>				
Cows per man	_____	_____	_____	_____
Lbs. milk sold per man	_____	_____	_____	_____
<u>Cost Control</u>				
Feed bought per cow	\$ _____	\$ _____	\$ _____	\$ _____
Machinery cost per cow	\$ _____	\$ _____	\$ _____	\$ _____
Labor cost per cow	\$ _____	\$ _____	\$ _____	\$ _____
<u>Capital Efficiency</u>				
Farm capital per cow	\$ _____	\$ _____	\$ _____	\$ _____
Land & bldgs. per cow	\$ _____	\$ _____	\$ _____	\$ _____
Machinery investment per cow	\$ _____	\$ _____	\$ _____	\$ _____
<u>Price</u>				
Price per cwt. milk	\$ _____	\$ _____	\$ _____	\$ _____
<u>Financial Summary</u>				
Net cash farm income	\$ _____	\$ _____	\$ _____	\$ _____
Total farm receipts	\$ _____	\$ _____	\$ _____	\$ _____
Total farm expenses	\$ _____	\$ _____	\$ _____	\$ _____
Labor & mgmt. inc./oper.	\$ _____	\$ _____	\$ _____	\$ _____
Farm Net Worth	\$ _____	\$ _____	\$ _____	\$ _____

Are you satisfied with your progress? Have you set a realistic goal for 1980?