

# **DAIRY FARM BUSINESS SUMMARY**

May 1980

A.E.Ext. 80-15

## **CENTRAL NEW YORK 1979**

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CENTRAL NEW YORK  
DAIRY FARM BUSINESS SUMMARY

Business records for 65 farms in the Central New York region are summarized in this publication. The Central New York region contains five counties: Cayuga, Cortland, Madison, Onondaga and Oswego. Dairy men in more than 40 counties throughout the State submit records through Cooperative Extension's Farm Business Management Program for summarization. Each dairyman receives a report for his farm containing all the management information found in this publication. A compilation of the individual farm reports are published in eight regional summaries like this one and one Statewide summary. These publications are used by many segments of the dairy industry to monitor the health of the milk production sector.

Primary objectives of the dairy farm business management program are to (1) assist farmers in developing and maintaining more complete farm business data for use in management decisions and (2) to help farmers improve their management skills through appropriate use of farm record data and application of modern decision-making techniques. This report is prepared in workbook form for use in the systematic study of individual farm business operations. This booklet should also be useful to farmers in the Central New York region who are not enrolled in the business management project and to agribusinessmen.

Highlights of the financial picture for Central New York region dairy farms in 1979 include (1) a large increase in the value of dairy livestock inventories for the second consecutive year and (2) a record high net cash farm income. These items are discussed in more detail on the following pages.

The increasing size of the New York dairy farms and the dynamic nature of the economic environment within which they operate make farm incomes increasingly dependent upon the accuracy of management decisions.

An assessment of past business performance combined with careful analysis of future economic conditions and goals of the farm business will greatly enhance the operator's profit potential. Cash expenses per farm in the Central New York region averaged over \$135,000 or \$1,468 per cow in 1979. One year earlier the cash expenses per cow were \$1,325. Those expense categories showing the largest increases were: gas and oil, interest paid, fertilizer and lime, and dairy concentrate. Some of these expenses were up almost 30 percent from year earlier levels.

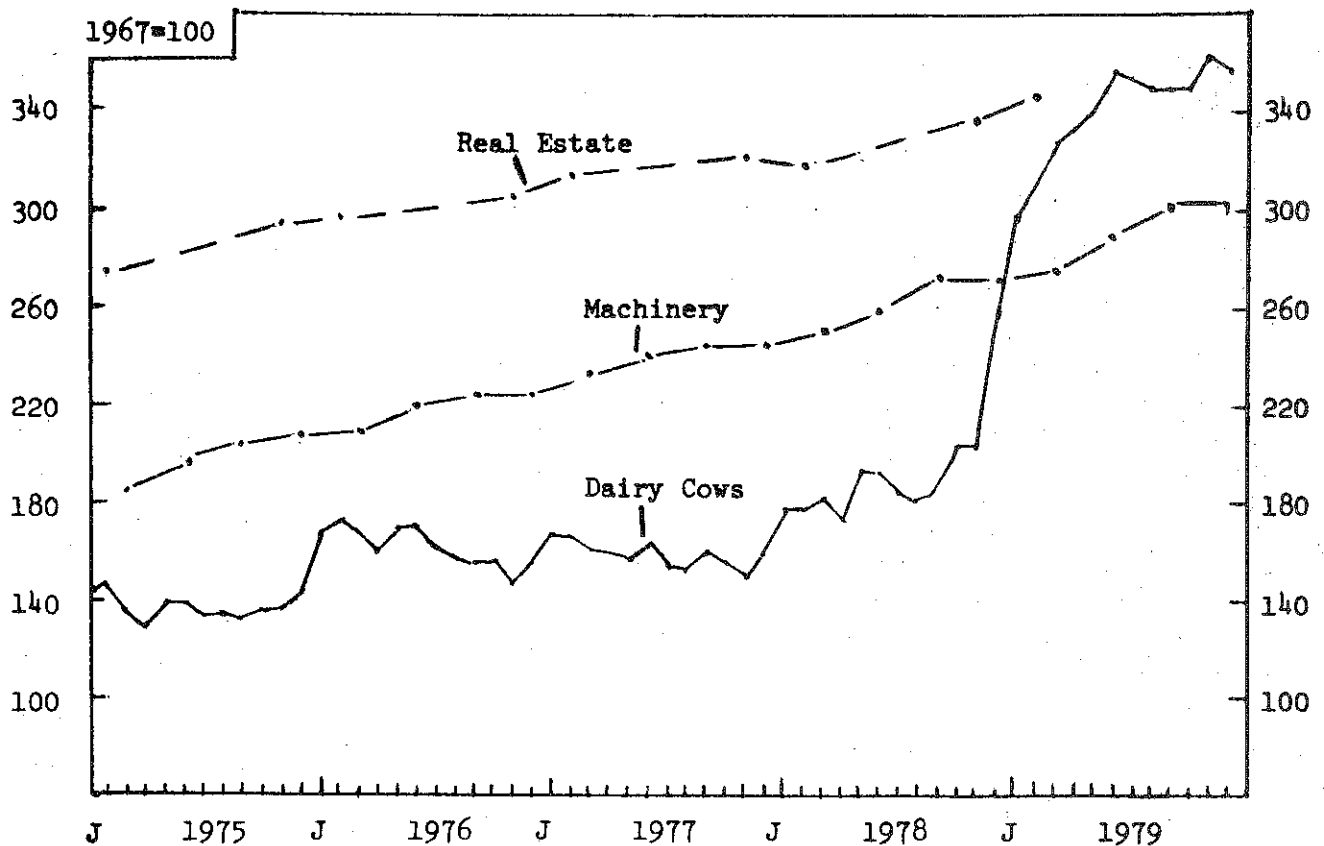
With prices received not expected to increase as rapidly as prices paid in 1980, increased pressure will be on the dairyman to operate the most efficient business possible. Two areas for continued emphasis are (1) dairy concentrate purchases and the total livestock feeding program, and (2) the crop production program. Dairy concentrate purchases are the largest single cash expense and with large increases in fuel and fertilizer costs the cropping program warrants careful examination as well. By carefully proceeding through this workbook to determine business strengths and weaknesses and carefully planning next year's business operations, a dairy farmer will be in a better position to manage his farm through the challenge of the 1980s.

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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/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 FARM BUSINESS

## Business Characteristics and Resources Used

Knowledge of farm resource availability and business characteristics is fundamental to judging management performance. The combination of resources and the management techniques used to put the resources to work is an important part of farm organization. The tables below show important farm business characteristics, the number of farms reporting these characteristics, and the average use of farm resources.

### BUSINESS CHARACTERISTICS AND RESOURCES USED 65 Central New York Dairy Farms, 1979

Type of Business	Number	Business Records	Number	Dairy Records	Number
Individual	43	CAMIS	19	D.H.I.C.	48
Partnership	21	Account Book	25	Owner Sampler	4
Corporation	1	Agrifax	5	Other	5
		Farm Bureau	3	None	8
		Agway	11		
		Other	2		

Barn Type	Number	Milking System	Number	Number	
Stanchion	37	Bucket & carry	1	Herringbone	25
Freestall	27	Dumping station	8	Other parlor	1
Other	1	Pipeline	30		

Labor Force	My Farm	Average	Land Used	My Farm	Average
Operator	_____	16 mo.	Total acres owned	_____	378
Family paid	_____	3 mo.	Total acres rented	_____	97
Family unpaid	_____	3 mo.	Total crop acres	_____	285
Hired	_____	13 mo.	Crop acres rented	_____	77
Total	_____	35 mo.			
Age of operator(s)	_____	41 yrs.	Number of Cows	My Farm	Average
			Beginning of year	_____	90
			End of year	_____	94
Estimated value			Average for year	_____	92
oper. labor & mgt.	_____	\$13,644			

The 65 Central New York farms were run by 92 operators with 22 farms having two operators and 4 farms having three operators. Two of the farms rented all their cropland while 49 of the 65 farms rented some additional cropland.

### CAPITAL INVESTMENT - FARM INVENTORY VALUES 65 Central New York Dairy Farms, 1979

Item	My Farm		Average 65 Farms	
	1/1/79	1/1/80	1/1/79	1/1/80
Livestock	\$	\$	\$ 99,373	\$128,582
Feed & supplies			33,746	38,782
Machinery & equipment			75,725	87,666
Land & buildings			237,181	266,886
TOTAL	\$	\$	\$446,025	\$521,916

### Machinery and Real Estate Inventory Calculations

Capital outlays for machinery, buildings, land and land improvements usually occur in large uneven amounts, but assets depreciate gradually over a period of time. Machinery depreciation is calculated from changes in machinery values rather than using the accounting value required for tax purposes.

#### MACHINERY & EQUIPMENT DEPRECIATION 65 Central New York Dairy Farms, 1979

Item	My Farm	Average 65 Farms
Beginning Inventory	\$ _____	\$75,725
Machinery Purchases	_____	21,589
Total (1)	\$ _____	\$97,314
End of Year Inventory	\$ _____	\$87,666
Machinery Sold	_____	186
Total (2)	\$ _____	\$87,852
DEPRECIATION (1 minus 2)	\$ _____	\$ 9,462
Percent Depreciation	_____ %	10%

#### REAL ESTATE INVENTORY CALCULATIONS 65 Central New York Dairy Farms, 1979

Item	My Farm	Average 65 Farms
Beginning Market Value	\$ _____	\$237,181
Cost of New Real Estate	\$ _____	\$21,169
Less Lost Capital	- _____	-1,982
Value of New Added	+ _____	+ 19,187
Less Building Depreciation	- _____	- 5,353
Less Real Estate Sold	- _____	- 76
Total Without Appreciation	\$ _____	\$250,939
Appreciation of Beginning Real Estate	+ _____	+ 15,947
End of Year Market Value	\$ _____	\$266,886

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 6.4 percent on these farms in 1979.

## Receipts

Receipts (cash and non-cash) from the business should be large enough to cover all expenses (cash and non-cash) and leave a reasonable return for the operator's labor and management. Here we look at sources and amounts of receipts for this group of farms.

### FARM RECEIPTS 65 Central New York Dairy Farms, 1979

Item	My Farm	Average 65 Farms	
		Amount	Percent
Milk sales	\$ _____	\$152,064	71
Crop sales	_____	6,842	3
Dairy cattle sold	_____	13,332	6
Calves & other livestock sales	_____	4,320	3
Gas tax refunds	_____	212	
Government payments	_____	358	
Work off farm	_____	230	
Custom machine work	_____	38	
Other	_____	1,357	_____
Total cash receipts	\$ _____	\$178,753	83
Increase in livestock	_____	29,209	14
Increase in feed & supplies	_____	5,036	3
TOTAL FARM RECEIPTS	\$ _____	\$212,998	100

Milk sales increased \$25,755 per farm or 20 percent when one compares the 1979 average shown above with the average of similar Central New York farms summarized last year. Crop sales, dairy cattle and livestock sales were slightly above year earlier levels.

Cow numbers increased by only four but dairymen's estimates of market prices dramatically increased to result in a \$29,209 increase in livestock inventory.

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

Item	My Farm	Central New York Average	
		65 Farms 1979	65 Farms 1978
Average price/cwt. milk sold	\$ _____	\$ 11.61	\$ 10.18
Milk sales per cow	_____	1,653	1,435
Total cash receipts/man	_____	\$61,217	\$52,290

The average price per hundredweight of milk sold is calculated by dividing total milk receipts by total hundredweight sold. It will be different from an average of monthly prices received by the dairyman. The average milk price received in 1979 increased by \$1.43 cents per hundredweight compared to 1978.

## Expenses

There are many opportunities for dollar leaks when cash farm expenses average \$370 per day. Classifying expenses into the categories on this page will help you identify those that need tighter control.

### FARM EXPENSES 65 Central New York Dairy Farms, 1979

Item	My Farm	Average 65 Farms	
		Amount	Percent
<u>Hired Labor</u>	\$ _____	\$ 13,400	7
<u>Feed</u>			
Dairy concentrate	_____	36,990	20
Other feed	_____	1,285	-
<u>Machinery</u>			
Machine hire	_____	2,414	1
Machinery repairs	_____	8,062	5
Auto expense (farm share)	_____	471	
Gas & oil	_____	5,734	3
<u>Livestock</u>			
Purchased livestock	_____	8,409	5
Breeding fees	_____	1,855	1
Veterinary & medicine	_____	2,773	2
Milk marketing	_____	2,899	2
Other livestock expense	_____	5,128	3
<u>Crops</u>			
Fertilizer & lime	_____	9,200	5
Seeds & plants	_____	3,467	2
Spray, other crop expense	_____	3,002	2
<u>Real Estate</u>			
Land, building, fence repair	_____	2,446	1
Taxes	_____	3,797	2
Insurance	_____	2,753	2
Rent	_____	2,375	1
<u>Other</u>			
Telephone (farm share)	_____	528	-
Electricity (farm share)	_____	2,842	2
Interest paid	_____	13,567	7
Miscellaneous	_____	1,639	1
Total cash expenses	\$ _____	\$135,036	74
<u>Noncash Items</u>			
Machinery depreciation	\$ _____	\$ 9,462	5
Building depreciation	_____	5,353	3
Unpaid family labor	_____	1,350	1
Interest on equity capital @ 9%	_____	31,052	17
<b>TOTAL FARM EXPENSES</b>	\$ _____	\$182,253	100



## Financial Summary of Year's Business

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

### NET CASH FARM INCOME Central New York Dairy Farms, 1979 & 1978

Item	My Farm	Average 65 Farms 1979	Average 65 Farms 1978
Cash farm receipts	\$ _____	\$178,753	\$147,982
Cash farm expenses	_____	<u>135,036</u>	<u>116,608</u>
NET CASH FARM INCOME	\$ _____	\$ 43,717	\$ 31,374

Net Cash Farm Income reflects the cash available from the year's operation of the business. Family living has first claim on cash income followed by fixed payments on debts. A family may have additional cash available if they have a non-farm income. Cash flow is not a good measure of farm business profits, but it is useful when planning debt repayment programs. 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 the price of important factors such as milk or purchased concentrate are expected to change significantly.

### LABOR AND MANAGEMENT INCOME Central New York Dairy Farms, 1979 & 1978

Item	My Farm	Average 65 Farms 1979	Average 65 Farms 1978
Total farm receipts	\$ _____	\$212,998	\$183,769
Total farm expenses	_____	<u>182,253</u>	<u>151,484</u>
LABOR & MANAGEMENT INCOME	\$ _____	\$ 30,745	\$ 32,285
Number of operators	_____	1.4	1.3
LABOR & MGT. INCOME/OPERATOR	\$ _____	\$ 21,728	\$ 25,603

Labor and management income is the return to the operator for his effort in operating the business. A nine percent charge for the use of the operator's equity capital in the business has been included as a farm expense. Last year the charge was seven percent. This interest charge reflects what the operator could have earned from this capital had it been invested elsewhere, such as bank certificates. Labor and management income is the measure used most commonly when comparing profitability of farm businesses.

If the increase in livestock values is removed from the calculation of labor and management income, the resulting value would be \$8,183 in 1979 and \$6,908 in 1978. This is an important factor to keep in mind when interpreting a farm's progress over time and also the absolute level of income.

Labor, management and ownership income per operator reflects 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  
Central New York Dairy Farms, 1979 & 1978

Item	My Farm	Average 65 Farms 1979	Average 65 Farms 1978
Labor & management income	\$ _____	\$30,745	\$32,285
Real estate appreciation	_____	15,947	15,452
Interest on equity capital	_____	31,052	20,754
Total per farm	\$ _____	\$77,744	\$68,491
Number of operators	_____	1.4	1.3
LABOR, MANAGEMENT AND OWNERSHIP INCOME/OPERATOR	\$ _____	\$54,943	\$51,012

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.

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

Item	My Farm	Average 65 Farms 1979	Average 65 Farms 1978
<u>Including Real Estate Appreciation</u>			
Labor, mgt. & ownership inc./farm	\$ _____	\$77,744	\$68,491
Less: Value of Oper. labor & mgt.*	_____	-19,102	-17,479
Return on equity capital	\$ _____	\$58,642	\$51,012
Rate of return on equity capital	_____ %	17.0%	17.2%
<u>Excluding Real Estate Appreciation</u>			
Return on equity cap. (from above)	\$ _____	\$58,642	\$51,012
Less: Real estate appreciation	_____	-15,947	-15,452
Return on equity capital	\$ _____	\$42,695	\$35,560
Rate of return on equity capital	_____ %	12.3%	11.9%

\* Value of operator's labor and management estimated by operators, page 3.

# 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. Complete financial data was submitted on all 65 Central New York dairy farms.

## FARM FAMILY FINANCIAL SITUATION 65 Central New York Dairy Farms, January 1, 1980

Item	My Farm	Average 65 Farms
<u>Assets</u>		\$128,584
Livestock	\$ _____	38,782
Feed and supplies	_____	87,667
Machinery and equipment	_____	266,886
Land and buildings	_____	4,272
Co-op investment	_____	12,696
Accounts receivable	_____	3,132
Cash and checking accounts	_____	
Total Farm Assets	\$ _____	\$542,019
Savings accounts	_____	5,476
Cash value life insurance	_____	4,696
Stocks and bonds	_____	3,437
Nonfarm real estate	_____	1,576
Auto (personal share)	_____	876
All other	_____	6,407
Total Nonfarm Assets	\$ _____	\$ 22,468
TOTAL ASSETS	\$ _____	\$564,487
<u>Liabilities</u>		\$115,416
Real estate mortgage	\$ _____	63,741
Liens on cattle & equipment	_____	2,696
Installment contracts	_____	4,230
Other loans over 10 years	_____	5,508
Other loans 1 to 10 years	_____	2,664
Other loans less than 1 year	_____	2,746
Feed store & other accounts	_____	
Total Farm Liabilities	\$ _____	\$197,001
Nonfarm Liabilities	_____	635
TOTAL LIABILITIES	\$ _____	\$197,636
Farm Net Worth (equity capital)	\$ _____	\$345,018
Family Net Worth	\$ _____	\$366,851

Farm Net Worth (equity capital) is total Farm Assets less total Farm Liabilities, Family Net Worth is total Assets less all liabilities reported. With 1.4 operators per farm, the average family has a net worth of over \$262,036. This illustrates the importance of farm estate planning.

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. Some farms in the group had scheduled debt payments exceeding 30 percent of the milk receipts. Committing this much cash inflow to debt payments put a "big squeeze" on cash available for operating the business and family living.

FINANCIAL MEASURES & DEBT COMMITMENT  
65 Central New York Dairy Farms, January 1, 1980

Item	My Farm	Average of 65 Farms
<u>Payment Ability</u>		
Net cash farm income	\$ _____	\$43,717
Add: Interest paid	_____	13,567
CASH AVAILABLE FOR DEBT SERVICE & LIVING	\$ _____	\$57,284
Less: Family living expenses*	_____	15,550
CASH AVAIL. FOR DEBT PAYMENT & CAP. PURCH.	\$ _____	\$41,734
<u>Scheduled Annual Debt Payments</u>		
Real estate mortgage	\$ _____	\$11,464
Cattle and equipment liens	_____	17,256
Installment contracts	_____	1,219
Other loans over 10 years	_____	498
Other loans 1 to 10 years	_____	1,907
Other loans less than 1 year	_____	2,711
TOTAL PAYMENTS PLANNED 1980	\$ _____	\$35,055
<u>Measure of Debt Commitment &amp; Equity Position</u>		
Scheduled debt payments per cow	\$ _____	\$ 369
Scheduled debt payments as % of milk sales	_____ %	23%
Farm debt per cow	\$ _____	\$ 2,074
Percent equity (total)	_____ %	65%

\* Estimated at \$6,000 per family plus four percent of cash receipts.

# ANALYSIS OF THE FARM BUSINESS

In analyzing a farm business, a manager must consider measures or factors that reflect the performance of specified parts of the farm business. One means of doing this is to look at factors of size, production, labor efficiency, capital efficiency, and cost. These factors are considered on the following pages. Another method, which is not considered in this workbook, is to analyze the farm business by analyzing the individual crop and livestock enterprises and the relationships between these enterprises.

## Size of Business

Studies have shown that, in general, larger farms pay better. Two basic reasons for this are that larger businesses make possible more efficient use of overhead inputs such as labor and machinery and there are more units of production (milk) on which to make a profit. Another reason is that profitable farm businesses with good management have the ability and incentive to become larger. It is imperative to remember that large farms are not necessarily profitable and that size increases are only profitable with good management.

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

Measure	My Farm	Average 65 Farms 1979	Average 65 Farms 1978
Number of cows	_____	92	88
Number of heifers	_____	64	63
Pounds of milk sold	_____	1,310,100	1,240,500
Man equivalent	_____	2.9	2.8
Total work units	_____	1,021	980
Total acres of crops	_____	285	282

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

## CROP YIELDS & MILK SOLD PER COW 65 Central New York Dairy Farms, 1979

Crop	My Farm		Average of Farms Reporting		
	Acres	Yield	Farms Reporting	Acres	Yield
Dry hay	_____	_____	55	70	(combined below)
Hay crop silage	_____	_____	47	86	
Corn silage	_____	_____	64	66	15.1 tons
Grain corn	_____	_____	52	93	94.7 bu.
Oats	_____	_____	27	36	67.0 bu.
Wheat	_____	_____	12	23	58.6 bu.
Hay equivalent:					
All hay crops	_____	_____	64	123	3.2 ton
All hay & silage	_____	_____	65	189	3.8 ton
Milk sold per cow	_____	_____			14,240 lbs.

Tons of hay equivalent of all hay and silage is a measure of the overall rate of roughage production for all the acres used for roughage crops. One ton of hay equivalent is equal to one ton of dry hay containing 90 percent dry matter.

The corn yields reported for 1979 were lower for corn grain and corn silage but higher than those reported for 1978 for hay and wheat. Milk sold increased 143 pounds per cow in 1979.

## 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

The labor input is an important factor in farm production. Several measures of accomplishment per man or labor efficiency are shown below.

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

Item	My Farm	Average 65 Farms 1979	Average 65 Farms 1978
Man equivalent	_____	2.9	2.8
Cows per man	_____	32	31
Lbs. milk sold per man	_____	448,664	438,339
Work units per man	_____	350	343

Number of cows per man is calculated by dividing the average number of cows by the man equivalent which includes the total farm labor force. The 65 farms summarized for 1979 averaged one more cow per man when compared to those summarized for 1978.

Pounds of milk sold per man is the 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 reported milk output per man of 10,325 pounds more than the average of the farms in the 1978 summary.

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

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

### MILK SOLD PER MAN AND LABOR AND MANAGEMENT INCOME 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	Income 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 it is important to 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 only way a farmer can get a good return on capital invested in his business is to "put it to work".

#### MEASURES OF CAPITAL EFFICIENCY Central New York Dairy Farms, 1979 & 1978

Item	My Farm	Average 65 Farms 1979	Average 65 Farms 1978
Farm capital per man	\$ _____	\$178,738	\$160,705
Farm capital per cow	\$ _____	\$ 5,552	\$ 4,998
Land & buildings per cow	\$ _____	\$ 2,839	\$ 2,612
Land & buildings/crop acre owned	\$ _____	\$ 1,283	\$ 1,278
Machinery investment per cow	\$ _____	\$ 933	\$ 861
Capital turnover	_____ yrs.	2.5 yrs.	2.5 yrs.

Land and building investment per crop acre owned shows the relationship between investments in land and in buildings. The farmer who owns little crop-land but builds 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 big factor in the success of modern commercial dairy operations. Feed, machinery, and labor costs are major items and are examined in detail. However, it is important to check all cost items both large and small. Expenses should be incurred only when the returns from the expense are expected to be greater than the cost incurred.

### Feed Costs

Purchased feed is the largest single expenditure on most dairy farms. The average Central New York farm included in this summary used 25 cents from every dollar's worth of milk sold to purchase dairy feed in 1979. It is very important to reduce purchased feed costs while maintaining production levels in the herd.

Two considerations are important in keeping the feed bill down: (1) Be certain that only nutrients required by the cow are being fed. A dairyman cannot afford to buy a feed mix that overfeeds energy or protein. (2) Be certain that the required nutrients are being obtained from their cheapest source. For example, what is the cheapest source of proteins? urea? soybean oil meal? a commercial protein? Help in answering these questions can come from budgeting, from agribusinessmen selling feeds, and from dairy and management extension agents. Extension is supporting two computerized decision aids to assist in answering these questions: a NEWPLAN program, Least Cost Dairy Rations, and the NYDHIC forage balancing program.

The size and productivity of the crop program has an important influence on the size of the purchased feed bill. Increased production of either roughages or grains should reduce the purchased feed expense unless cow numbers are increased. 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 Central New York Dairy Farms, 1979 & 1978

Item	My Farm	Average 65 Farms 1979	Average 65 Farms 1978
Feed bought per cow	\$ _____	\$ 402	\$ 337
Crop expense per cow	\$ _____	\$ 170	\$ 157
Feed bought per cwt. milk	\$ _____	\$ 2.82	\$ 2.39
Feed & crop exp. per cwt. milk	\$ _____	\$ 4.02	\$ 3.50
Percent feed is of milk receipts	_____ %	24%	23%
Hay equivalent per cow (tons)	_____	7.8	8.4
Crop acres per cow	_____	3.1	3.2
Lime & fertilizer per crop acre	\$ _____	\$ 32	\$ 30
Heifers as % of cow numbers	_____ %	70%	72%

Machinery, Labor and Miscellaneous Costs

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

LABOR & MACHINERY COSTS  
Central New York Dairy Farms, 1979 & 1978

Item	My Farm	Average 65 Farms 1979	Average 65 Farms 1978
Total machinery <sup>1/</sup>	\$ _____	\$33,496	\$27,754
Machinery cost per cow	_____	364	315
Machinery costs/cwt. milk	_____	2.56	2.24
Total labor costs <sup>2/</sup>	_____	24,750	24,756
Labor costs per cow	_____	269	281
Labor costs/cwt. milk	_____	1.89	2.00
Labor & machinery costs/cwt. milk	_____	4.45	4.24

<sup>1/</sup> Machinery depreciation, nine percent 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 and paid family labor, plus unpaid family labor valued at \$425 per month and operator's labor valued at \$650 per month.

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

Item	My Farm	Average 65 Farms 1979	Average 65 Farms 1978
Veterinary & medicine per cow	\$ _____	\$ 30.14	\$ 27.69
Other livestock expense per cow	_____	55.74	53.16
Real estate expense per cow	_____	123.60	117.82
Total farm expenses per cow	_____	1,981	1,721

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.

YEARLY FINANCIAL PLANNING & ANALYSIS  
65 Central New York Farms, 1979  
Ave.: 92 Cows, 14,240 Lbs. Milk/Cow, \$11.61 cwt.

Item	Average	My Farm, _____ Cows		
	Per Cow	Per Cow	Total	Goal
<u>CASH RECEIPTS</u>				
Milk sales	\$1,653	\$ _____	\$ _____	\$ _____
Crop sales	74	_____	_____	_____
Dairy cattle	145	_____	_____	_____
Calves & other livestock	47	_____	_____	_____
Other	24	_____	_____	_____
Total Cash Receipts	\$1,943	\$ _____	\$ _____	\$ _____
<u>CASH EXPENSES</u>				
Hired labor	\$ 146	\$ _____	\$ _____	\$ _____
Dairy concentrate	402	_____	_____	_____
Hay and other	14	_____	_____	_____
Machine hire	26	_____	_____	_____
Gas & oil	62	_____	_____	_____
Machinery repair & auto expense	93	_____	_____	_____
Breeding fees	20	_____	_____	_____
Vet & medicine	30	_____	_____	_____
Milk marketing	32	_____	_____	_____
Other livestock expense	56	_____	_____	_____
Fertilizer & lime	100	_____	_____	_____
Seeds & plants	38	_____	_____	_____
Spray & other	33	_____	_____	_____
Land, bldg., fence repair	27	_____	_____	_____
Taxes	41	_____	_____	_____
Insurance	30	_____	_____	_____
Rent	26	_____	_____	_____
Telephone (farm share)	6	_____	_____	_____
Electricity (farm share)	31	_____	_____	_____
Miscellaneous	18	_____	_____	_____
Total Cash Expenses <sup>1/</sup>	\$1,261	\$ _____	\$ _____	\$ _____
Total Cash Receipts	\$1,943	\$ _____	\$ _____	\$ _____
Total Cash Expenses <sup>1/</sup>	-1,261	- _____	- _____	- _____
Net Cash Flow	\$ 682	\$ _____	\$ _____	\$ _____
Cash Family Living Expense <sup>2/</sup>	- 169	- _____	- _____	- _____
Amount Left for Debt Service, Capital Investment & Retained Earnings	\$ 513	\$ _____	\$ _____	\$ _____
Scheduled Debt Service	- 381	- _____	- _____	- _____
Available for Capital Invest. <sup>3/</sup>	\$ 132	\$ _____	\$ _____	\$ _____
Planned Cattle Purchase		_____	_____	_____
Planned Equipment Purchase		_____	_____	_____
Borrowed Funds Needed		\$ _____	\$ _____	\$ _____

- <sup>1/</sup> Interest paid excluded from cash expenses as it is contained in Scheduled Debt Service. Purchased livestock are also excluded.
- <sup>2/</sup> Estimated; \$6,000 per family and four percent of cash receipts.
- <sup>3/</sup> Retained earnings are \$0.

### How Does Your Management Measure Up?

After you have entered your farm business data on the previous pages of this workbook, categorize your farm business performance into three groups. List the strong points, those which indicate average performance and those areas which need improvement. Your business factors that exceed the regional average should be listed as strong points, factors that are close to the regional average should be identified as average, and factors that are below average should be listed under need improvement.

The Farm Business Chart on the opposite page can also be used to identify strengths and weaknesses by comparing your business with a large number of New York dairy farms summarized for the previous year. It is recommended that you use more than one standard for comparison when analyzing the farm business.

STRONG POINTS:

AVERAGE:

_____	_____
_____	_____
_____	_____
_____	_____

NEED IMPROVEMENT:

_____
_____
_____

After identifying problems, consider alternative ways to solving each problem. List each alternative and analyze the consequences in detail. Extension conducts many schools, meetings, and provides many printed materials that should be of assistance. Local agribusinesses often provide helpful information and assistance. Fully seek out information related to the problem under consideration.

Another way to measure your management performance is to compare your current business factors with those from previous years. Page 26 is provided for this purpose. Answering the following questions will help evaluate your farm business progress.

- 1) Does the livestock numbers, labor force and crop acres make up a well balanced unit of resources?
- 2) Have rates of production shown a steady increase?
- 3) When will milk output per man reach 600,000 pounds?
- 4) Have increases in costs per cow been limited to the effects of inflation?
- 5) Is growth in Net Worth keeping up with increased capital investment?
- 6) Is net cash farm income increasing fast enough to meet your needs?
- 7) Have you reached the business goals set for 1979 and set new goals for 1980?

### 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
<hr/>							
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
<hr/>							
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	
<hr/>							
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
<b>TOTAL INVESTMENT</b>	<b>\$163,572</b>	<b>\$227,824</b>	<b>\$285,762</b>	<b>\$364,154</b>
<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
<b>Total Cash Receipts</b>	<b>\$ 51,252</b>	<b>\$ 73,533</b>	<b>\$101,384</b>	<b>\$128,397</b>
Increase in livestock	9,421	13,303	15,071	17,986
Increase in feed & supplies	1,470	2,855	4,074	4,797
<b>TOTAL FARM RECEIPTS</b>	<b>\$ 62,143</b>	<b>\$ 89,691</b>	<b>\$120,529</b>	<b>\$151,180</b>
<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
<b>Total Cash Expenses</b>	<b>\$ 37,882</b>	<b>\$ 55,835</b>	<b>\$ 75,307</b>	<b>\$ 97,671</b>
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	--	--	--	--
<b>TOTAL FARM EXPENSES</b>	<b>\$ 52,012</b>	<b>\$ 73,821</b>	<b>\$ 97,583</b>	<b>\$125,285</b>
<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
<b>LABOR &amp; MGT. INCOME/OPERATOR</b>	<b>\$ 9,865</b>	<b>\$ 14,480</b>	<b>\$ 18,505</b>	<b>\$ 20,246</b>

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
<b>TOTAL INVESTMENT</b>	<b>\$410,097</b>	<b>\$478,734</b>	<b>\$507,577</b>	<b>\$566,295</b>	<b>\$754,126</b>
<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
<b>Total Cash Receipts</b>	<b>\$151,798</b>	<b>\$178,871</b>	<b>\$198,032</b>	<b>\$236,219</b>	<b>\$330,656</b>
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
<b>TOTAL FARM RECEIPTS</b>	<b>\$176,484</b>	<b>\$222,421</b>	<b>\$233,378</b>	<b>\$274,834</b>	<b>\$386,872</b>
<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
<b>Total Cash Expenses</b>	<b>\$117,547</b>	<b>\$143,112</b>	<b>\$151,174</b>	<b>\$181,748</b>	<b>\$266,072</b>
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	--	--	--	--	--
<b>TOTAL FARM EXPENSES</b>	<b>\$150,477</b>	<b>\$181,900</b>	<b>\$190,078</b>	<b>\$227,774</b>	<b>\$322,740</b>
<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
<b>LABOR &amp; MGT. INCOME/OPR</b>	<b>\$ 18,818</b>	<b>\$ 32,417</b>	<b>\$ 27,440</b>	<b>\$ 32,752</b>	<b>\$ 45,387</b>

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
Invt. 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?