

# **DAIRY FARM BUSINESS SUMMARY**

March 1981

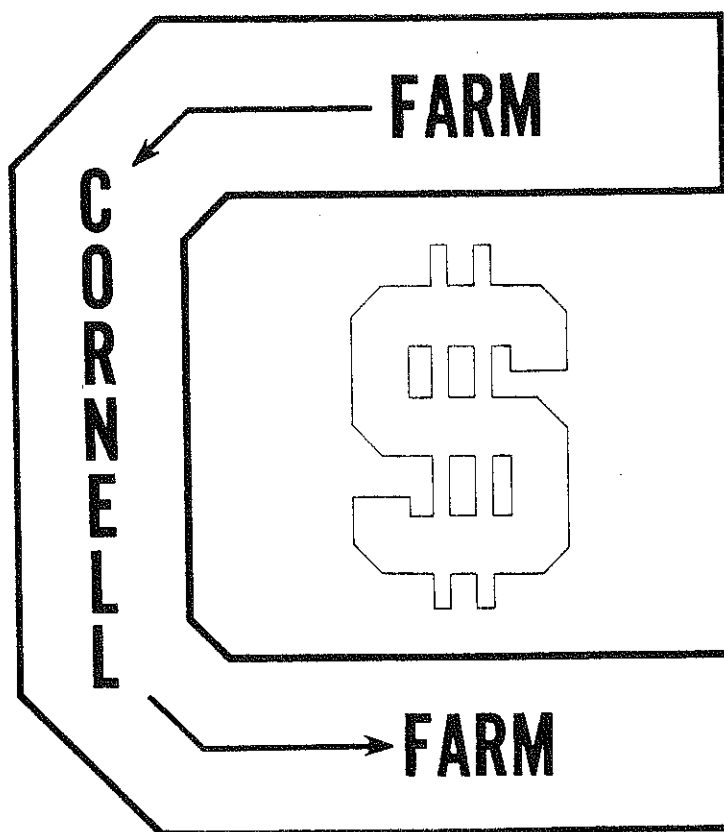
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## **ONEIDA MOHAWK REGION 1980**

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**Department of Agricultural Economics  
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- (1) Farm Business Summaries - Analysis of the business and financial activity of dairy, beef, fruit, poultry, and other farms.
- (2) CAMIS - Computerized programs to facilitate the recording, tabulation, and analysis of farm business accounts.
- (3) NEWPLAN Programs - Computerized Decision Aids which include such topics as: Least-Cost Balanced Dairy Rations, Profitable Organization of Dairy Farm Enterprises, Profitable Combinations of Field Crop Enterprises, and Analysis of Major Capital Investments.
- (4) Enterprise Budgets and Economic Data - Collection of data and analysis of enterprise costs and returns.

For further information on how you may take advantage of these programs, contact your local cooperative extension office.

## Improvements in 1980 Dairy Farm Business Summary

Although there are no major changes in the format of this year's Dairy Farm Business Summary publication, there are several changes in the accounting procedures. These changes affect comparisons of 1980 data with farm business summaries from prior years.

The following accounting methods were used for the first time this year to more accurately separate the effect of inflation on farm inventories, from increases caused by greater quantity and/or improved quality of inventory items.

1. Machinery and equipment depreciation is last year's regular income tax depreciation plus ten percent of machinery purchases in 1980. An increase in machinery market value above the level that would be expected based on the beginning inventory, purchases, depreciation and sales is machinery appreciation and is included in labor, management and ownership income of the farm business. Machinery appreciation is not included in the calculation of labor and management income but depreciation is included.
2. The change in livestock inventory is now divided into two parts. The change in herd market value attributed to a change in numbers and/or a definite change in herd quality, is the increase (or decrease) in livestock inventory that is included in labor and management income. The change in herd market value, caused by price increases or decreases, is excluded from labor and management income but is included in labor, management and ownership income.

Other new accounting procedures have been introduced to more accurately identify important farm resources and to obtain a better measure of forage production.

1. The number of operators now includes individuals who are integrally involved in the operation and management of the farm business in addition to the primary operator. Many farm spouses are included as part-time operators this year. The number of full-time operators per farm is total months of all operators' labor reported divided by 12.
2. The land available for crop production is called total tillable acres. Nontillable pasture, woodland and wasteland is included in the total land inventory. The reason for changing to tillable acres is to inventory the land resource available for production rather than only that currently in production.
3. Tons of dry matter has been adopted as an improved method of measuring forage harvested. It is more consistent and is more commonly used in dairy cattle nutrition than hay equivalent.

1980 ONEIDA-MOHAWK REGION  
DAIRY FARM BUSINESS SUMMARY

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1980 ONEIDA-MOHAWK REGION  
DAIRY FARM BUSINESS SUMMARY

INTRODUCTION

Dairy farmers in more than forty counties throughout the State submit records for summarization through Cooperative Extension's Farm Business Management Program. Each dairy farmer receives a report for the farm containing all the management information found in this publication. A compilation of the individual farm reports is published in ten regional summaries like this one and in one statewide summary. These publications are used not only by extension personnel and dairy farmers but also 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) 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 Oneida-Mohawk region who are not enrolled in the business management project and to agribusiness firms.

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.

With upward pressure on costs continuing into 1981, dairy farmers will need to place emphasis on operating 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 by carefully planning next year's business operations, a dairy farmer will be in a better position to manage the farm through the challenges of the 1980s.

Business records for 77 farms in the Oneida-Mohawk region are summarized in this publication. The region contains five counties: Oneida, Herkimer, Fulton, Montgomery and Schoharie.

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## SUMMARY OF THE FARM BUSINESS

Business Characteristics

Knowledge of farm business characteristics is fundamental to judging management performance. The combination of resources and management techniques used to put resources to work is an important part of planning a long-run farm organization strategy. The tables below show important farm business characteristics, the number of farms reporting these characteristics, and the average level of resources used in production.

MANAGEMENT SYSTEMS, PRODUCTION TECHNOLOGY AND FARM SIZE  
77 Oneida-Mohawk Region Dairy Farms, 1980

| Type of Business | Number | Business Records | Number | Dairy Records | Number |
|------------------|--------|------------------|--------|---------------|--------|
| Individual       | 64     | CAMIS            | 4      | D.H.I.C.      | 51     |
| Partnership      | 12     | Account Book     | 28     | Owner Sampler | 8      |
| Corporation      | 1      | Agrifax          | 30     | Other         | 2      |
|                  |        | Agway            | 8      | None          | 16     |
| Owner            | 71     | Other            | 7      |               |        |
| Renter           | 6      |                  |        |               |        |

| Barn Type | Number | Milking System  | Number |              | Number |
|-----------|--------|-----------------|--------|--------------|--------|
| Stanchion | 66     | Bucket & Carry  | 4      | Herringbone  | 11     |
| Freestall | 9      | Dumping Station | 19     | Other Parlor | 0      |
| Other     | 2      | Pipeline        | 43     |              |        |

| Labor Force           | My Farm | Average    | Land Use              | My Farm | Average |
|-----------------------|---------|------------|-----------------------|---------|---------|
| Operator 1.           | _____   | mo. 12     | Total acres owned     | _____   | 273     |
| 2.                    | _____   | mo. 2      | Total acres rented    | _____   | 79      |
| 3.                    | _____   | mo. 0      | Total tillable acres  | _____   | 181     |
| Family paid           | _____   | mo. 4      | Tillable acres rented | _____   | 64      |
| Family unpaid         | _____   | mo. 4      |                       |         |         |
| Hired                 | _____   | mo. 5      | Number of Cows        | My Farm | Average |
| Total                 | _____   | mo. 27     |                       |         |         |
| Age of operator(s) 1. | _____   | yrs. 41    | Beginning of year     | _____   | 60      |
| 2.                    | _____   | yrs. 37    | End of year           | _____   | 63      |
| 3.                    | _____   | yrs. _____ | Average for year      | _____   | 61      |

Capital Investment-Farm Inventory Value represents the market value of resources committed to the farming operation measured at the beginning and ending of the year. Increases in inventory values occur with expanding herd size, purchasing new machinery and equipment and appreciation of land, buildings and livestock.

CAPITAL INVESTMENT - FARM INVENTORY VALUE  
77 Oneida-Mohawk Region Dairy Farms, 1980

| Item                  | My Farm  |          | Average   |           |
|-----------------------|----------|----------|-----------|-----------|
|                       | 1/1/80   | 1/1/81   | 1/1/80    | 1/1/81    |
| Livestock             | \$ _____ | \$ _____ | \$ 84,770 | \$ 96,953 |
| Feed & supplies       | _____    | _____    | 17,972    | 21,505    |
| Machinery & equipment | _____    | _____    | 56,445    | 65,757    |
| Land & buildings      | _____    | _____    | 150,625   | 163,647   |
| TOTAL                 | \$ _____ | \$ _____ | \$309,812 | \$347,862 |

### Machinery and Real Estate Inventory Calculations

Capital outlays for machinery, buildings, land and land improvements usually occur in large uneven amounts, but depreciate gradually over a period of time. Machinery depreciation is a charge for use of the machinery complement in production. Appreciation in the value of the machinery complement results from inflation in the value of used machinery; it is calculated as a residual.

#### MACHINERY & EQUIPMENT INVENTORY 77 Oneida-Mohawk Region Dairy Farms, 1980

| Item                     | My Farm     | Average   |
|--------------------------|-------------|-----------|
| End of year market value | (1)\$ _____ | \$ 65,757 |
| Beginning market value   | \$ _____    | \$ 56,445 |
| Plus machinery purchased | + _____     | + 15,049  |
| Less machinery sold      | - _____     | - 480     |
| Less depreciation        | - _____     | - 9,217   |
| Net end investment       | (2)\$ _____ | \$ 61,797 |
| APPRECIATION (1 minus 2) | \$ _____    | \$ 3,960  |

The end of year market value of real estate can be verified by starting with the beginning of year value, making adjustments for purchases and sales, depreciation of buildings and any appreciation in land. Lost capital is the difference between the cost of new buildings or land improvements 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 investments. 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.

#### REAL ESTATE INVENTORY CALCULATIONS 77 Oneida-Mohawk Region Dairy Farms, 1980

| Item                                  | My Farm  | Average   |
|---------------------------------------|----------|-----------|
| Beginning market value                | \$ _____ | \$150,625 |
| Cost of new real estate               | \$ _____ | \$ 13,639 |
| Less lost capital                     | - _____  | - 4,119   |
| Value of new added                    | + _____  | + 9,520   |
| Less building depreciation            | - _____  | - 3,453   |
| Less real estate sold                 | - _____  | - 289     |
| Total without appreciation            | \$ _____ | \$156,403 |
| Appreciation of beginning real estate | + _____  | + 7,244   |
| End of year market value              | \$ _____ | \$163,647 |



## Receipts

Receipts from the business should be large enough to cover all expenses and leave a reasonable return for the operator's labor and management. Cash receipts items are those in which ownership is transferred or services are performed and payment is received during the year. Noncash receipts occur for items in which ownership is maintained and cash is not received, but due to appreciation in value or increases in physical quantities, could be readily transformed into a cash receipt.

### FARM RECEIPTS 77 Oneida-Mohawk Region Dairy Farms, 1980

| Item  | My Farm  | Ave: Amount | Percent |
|---|----------|-------------|---------|
| <b>CASH RECEIPTS</b>                          |          |             |         |
| Milk sales                                    | \$ _____ | \$110,652   | 89      |
| Crop sales                                    | _____    | 1,807       | 1       |
| Dairy cattle sold                             | _____    | 9,506       | 8       |
| Calves & other livestock sales                | _____    | 1,393       | 1       |
| Gas tax refunds                               | _____    | 154         |         |
| Government payments                           | _____    | 457         | 1       |
| Custom machine work                           | _____    | 27          |         |
| Other   | _____    | 762         |         |
| Total cash receipts                           | \$ _____ | \$124,758   | 100     |
| <b>NONCASH RECEIPTS</b>                       |          |             |         |
| Increase in livestock inventory               | _____    | \$ 4,767    |         |
| Increase in feed & supplies                   | _____    | 3,533       |         |
| Livestock appreciation                        | _____    | 7,416       |         |
| Machinery appreciation                        | _____    | 3,960       |         |
| Real estate appreciation                      | _____    | 7,244       |         |
| TOTAL FARM RECEIPTS                           | \$ _____ | \$151,678   |         |
| TOTAL FARM RECEIPTS<br>EXCLUDING APPRECIATION | \$ _____ | \$133,058   |         |

Income Analysis provides a means of examining the income producing capability of the farm business. Weak and strong points can be determined by comparing individual farm results with the averages. 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 dairy farmer. Milk and cattle sales per cow combines production and price components to measure income generation capability per cow. Cash receipts per worker combines two factors: income generated on the total farm and labor efficiency.

### INCOME ANALYSIS Oneida-Mohawk Region Dairy Farms

| Item                          | My Farm  | 1980     | 1979     |
|-------------------------------|----------|----------|----------|
| Average price/cwt. milk sold  | \$ _____ | \$ 12.70 | \$ 11.61 |
| Milk and cattle sales per cow | _____    | 1,993    | 1,681    |
| Total cash receipts/worker    | _____    | 55,448   | 52,460   |

Expenses

Expenses on many dairy farms approach and some exceed \$500 per day! Classifying expenses into categories will help identify those that may need tighter control.

FARM EXPENSES  
77 Oneida-Mohawk Region Dairy Farms, 1980

| Item  | My Farm  | Ave: Amount | Percent |
|---|----------|-------------|---------|
| <u>Hired Labor</u>                                      | \$ _____ | \$ 6,418    | 7       |
| <u>Feed</u>   |          |             |         |
| Dairy concentrate                                       | _____    | 30,222      | 32      |
| Hay and other   | _____    | 1,188       | 1       |
| <u>Machinery</u>  |          |             |         |
| Machine hire  | _____    | 467         | 1       |
| Machinery repairs                                       | _____    | 5,074       | 5       |
| Auto expense (farm share)                               | _____    | 466         | 1       |
| Gas & oil   | _____    | 4,394       | 5       |
| <u>Livestock</u>  |          |             |         |
| Replacement livestock                                   | _____    | 2,655       | 3       |
| Breeding fees   | _____    | 1,316       | 1       |
| Veterinary & medicine                                   | _____    | 2,060       | 2       |
| Milk marketing  | _____    | 2,323       | 3       |
| Other livestock expense                                 | _____    | 4,130       | 4       |
| <u>Crops</u>  |          |             |         |
| Fertilizer & lime                                       | _____    | 4,679       | 5       |
| Seeds & plants  | _____    | 1,741       | 2       |
| Spray, other crop expense                               | _____    | 1,227       | 1       |
| <u>Real Estate</u>                                      |          |             |         |
| Land, building, fence repair                            | _____    | 2,382       | 3       |
| Taxes   | _____    | 2,439       | 3       |
| Insurance   | _____    | 1,925       | 2       |
| Rent  | _____    | 2,039       | 2       |
| <u>Other</u>  |          |             |         |
| Telephone (farm share)                                  | _____    | 397         | <1      |
| Electricity (farm share)                                | _____    | 2,152       | 2       |
| Interest paid   | _____    | 12,132      | 13      |
| Miscellaneous   | _____    | 1,699       | 2       |
| Total cash expenses                                     | \$ _____ | \$ 93,525   | 100     |
| Decrease in livestock and/or feed                       | \$ _____ | \$          |         |
| Expansion livestock                                     | _____    | 1,098       |         |
| Machinery depreciation                                  | _____    | 9,217       |         |
| Building depreciation                                   | _____    | 3,453       |         |
| Unpaid family labor @ \$500/month                       | _____    | 2,000       |         |
| Interest on equity capital @ 9%                         | _____    | 20,131      |         |
| TOTAL FARM EXPENSES                                     | \$ _____ | \$129,424   |         |
| TOTAL FARM EXPENSES EXCLUDING<br>INT. ON EQUITY CAPITAL | \$ _____ | \$109,293   |         |

### Farm Business Profitability

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 this page and the next page.

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 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 9. 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.

#### NET CASH FARM INCOME Oneida-Mohawk Region Dairy Farms

| Item                 | My Farm  | Average       |               |
|----------------------|----------|---------------|---------------|
|                      |          | 1980          | 1979          |
| Cash Farm Receipts   | \$ _____ | \$124,758     | \$118,035     |
| Cash Farm Expenses   | _____    | <u>93,525</u> | <u>86,304</u> |
| NET CASH FARM INCOME | \$ _____ | \$ 31,233     | \$ 31,731     |

Labor and management income is the return to the operator for his or her labor and management input into 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. This interest charge reflects what the operator could have earned from this capital had it been invested elsewhere, such as in bank certificates of deposit. Labor and management income is the measure used most commonly when comparing farm businesses. Appreciation in livestock, machinery and real estate inventories is included as ownership income.

#### LABOR AND MANAGEMENT INCOME Oneida-Mohawk Region Dairy Farms

| Item                                       | My Farm  | Average        |                |
|--|----------|----------------|----------------|
|  |          | 1980           | 1979           |
| Total farm receipts excluding appreciation | \$ _____ | \$133,058      | \$124,948      |
| Total farm expenses                        | _____    | <u>129,424</u> | <u>116,466</u> |
| LABOR & MANAGEMENT INCOME                  | \$ _____ | \$ 3,634       | \$ 8,482       |
| Full-time operator-manager equivalents     | _____    | 1.2            | 1.2            |
| LABOR & MGT. INCOME/OPERATOR-MANAGER       | \$ _____ | \$ 3,106       | \$ 7,068       |

Labor, management and ownership income per operator reflects the combined return to the farmer for his/her triple role of worker-manager, financier and owner. Again, this is not a measure of the cash flow situation of the farm business. A satisfactory labor, management and ownership income does not eliminate cash flow problems if liabilities are large and repayment is rapid.

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

| Item   | My Farm  | Average   |           |
|--|----------|-----------|-----------|
|  |          | 1980      | 1979      |
| Total farm receipts                                      | \$ _____ | \$151,678 | \$156,913 |
| Total farm expenses excluding interest on equity capital | _____    | 109,293   | 100,297   |
| LABOR, MANAGEMENT AND OWNERSHIP INCOME PER FARM          | \$ _____ | \$ 42,385 | \$ 56,616 |
| Full-time operator-manager equivalents                   | _____    | 1.2       | 1.2       |
| LABOR, MANAGEMENT AND OWNERSHIP INCOME/OPERATOR-MANAGER  | \$ _____ | \$ 36,226 | \$ 47,298 |

Return on equity capital is a common measure for nonfarm businesses. It can be computed with or without appreciation. Both measures are shown below. To compute the rate of return, divide return on equity capital by farm net worth or equity capital.

RETURN ON EQUITY CAPITAL  
Oneida-Mohawk Region Dairy Farms

| Item                                   | My Farm  | Average   |           |
|--|----------|-----------|-----------|
|  |          | 1980      | 1979      |
| <u>Including Appreciation</u>          |          |           |           |
| Labor, mgt. & ownership income/farm    | \$ _____ | \$ 42,385 | \$ 56,616 |
| Less value of operator's labor & mgt.* | _____    | 16,162    | 15,436    |
| Return on equity capital               | \$ _____ | \$ 26,223 | \$ 41,180 |
| RATE OF RETURN ON \$ _____ equity      | _____ %  | 11.7%     | 19.1%     |
| <u>Excluding Appreciation</u>          |          |           |           |
| Return on equity capital (from above)  | \$ _____ | \$ 26,223 | \$ 41,180 |
| Less real estate appreciation          | _____    | 7,244     | 9,252     |
| Less machinery appreciation**          | _____    | 3,960     | 2,005     |
| Less livestock appreciation            | _____    | 7,416     | 20,708    |
| Return on equity capital               | \$ _____ | \$ 7,603  | \$ 9,215  |
| RATE OF RETURN EXCLUDING APPRECIATION  | _____ %  | 3.4%      | 4.3%      |

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

\*\*Estimated for 1979 using 1980 depreciation rate as a percent of average machinery inventory and 1979 purchases, sales and market values.

### 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 and management income, but a high debt payment schedule may seriously restrict management flexibility. Farm Net Worth is Total Farm Assets less Total Farm Liabilities. Family Net Worth is Total Assets less all Liabilities reported.

#### FARM FAMILY FINANCIAL SITUATION 77 Oneida-Mohawk Region Dairy Farms, 1980

| Item                            | My Farm  | Average Per Farm |
|---------------------------------|----------|------------------|
| <u>Assets</u>                   |          |                  |
| Livestock                       | \$ _____ | \$ 96,953        |
| Feed and supplies               | _____    | 21,505           |
| Machinery and equipment         | _____    | 65,757           |
| Land and buildings              | _____    | 163,647          |
| Co-op investments               | _____    | 3,819            |
| Accounts receivable             | _____    | 9,339            |
| Cash and checking accounts      | _____    | 3,151            |
| Total Farm Assets               | \$ _____ | \$364,171        |
| Savings Accounts                | \$ _____ | \$ 4,277         |
| Cash value life insurance       | _____    | 3,794            |
| Stocks and bonds                | _____    | 3,179            |
| Nonfarm real estate             | _____    | 5,422            |
| Auto (personal share)           | _____    | 1,620            |
| All other                       | _____    | 6,706            |
| Total Nonfarm Assets            | \$ _____ | \$ 24,998        |
| TOTAL ASSETS                    | \$ _____ | \$389,169        |
| <u>Liabilities</u>              |          |                  |
| Real estate                     | \$ _____ | \$ 78,722        |
| Cattle & equipment              | _____    | 49,650           |
| Installment contract            | _____    | 3,156            |
| Other loans over 10 years       | _____    | 390              |
| Other loans 1 to 10 years       | _____    | 4,178            |
| Other loans less than 1 year    | _____    | 1,612            |
| Feed store accounts             | _____    | 1,577            |
| Other accounts                  | _____    | 1,204            |
| Total Farm Liabilities          | \$ _____ | \$140,489        |
| Nonfarm Liabilities             | _____    | 1,994            |
| TOTAL LIABILITIES               | \$ _____ | \$142,483        |
| FARM NET WORTH (EQUITY CAPITAL) | \$ _____ | \$223,682        |
| FAMILY NET WORTH                | \$ _____ | \$246,686        |

Payment ability is the most important consideration in determining if and how proposed investments should be financed. In calculating payment ability, interest paid and income from off-farm work are 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 are the scheduled debt payments as of January. The cash flow coverage ratio is the cash available from farm sources for debt payment and capital purchases divided by the total payments planned for 1981. This ratio indicates the relationship between planned payments and the cash that is likely to be available to make payments. The intermediate debt/asset ratio is the relationship of all short and intermediate term debts to short and intermediate term assets.

FINANCIAL MEASURES & DEBT COMMITMENT  
77 Oneida-Mohawk Region Dairy Farms, 1980

| Item   | My Farm  | Average   |
|--|----------|-----------|
| <u>Payment Ability</u>                                   |          |           |
| Net cash farm income                                     | \$ _____ | \$ 31,233 |
| Plus interest paid                                       | _____    | 12,132    |
| Plus off-farm income                                     | _____    | 666       |
| CASH AVAILABLE FOR DEBT SERVICE AND LIVING               | \$ _____ | \$ 44,031 |
| Less family living expenses*                             | _____    | 15,169    |
| CASH AVAIL. FOR DEBT PAYMT. & CAP. PURCH.                | \$ _____ | \$ 28,862 |
| <u>Scheduled Annual Debt Payments</u>                    |          |           |
| Real estate mortgage                                     | \$ _____ | \$ 10,550 |
| Cattle and equipment liens                               | _____    | 12,850    |
| Installment contracts                                    | _____    | 1,640     |
| Other loans over 10 years                                | _____    | 101       |
| Other loans 1 to 10 years                                | _____    | 1,190     |
| Other loans and accounts less than 1 year                | _____    | 2,519     |
| TOTAL PAYMENTS PLANNED 1981                              | \$ _____ | \$ 28,850 |
| <u>Measures of Debt Commitment &amp; Equity Position</u> |          |           |
| Cash flow coverage ratio                                 | _____    | .98       |
| Debt payments planned per cow                            | \$ _____ | \$ 458    |
| Debt payments planned as % of milk sales                 | _____ %  | 26%       |
| Farm debt per cow  | \$ _____ | \$ 2,230  |
| Percent equity (total)                                   | _____ %  | 63%       |
| Debt/asset ratio - long term                             | _____    | .48       |
| Debt/asset ratio - intermediate                          | _____    | .30       |

\*Estimated at \$8,700 per family plus 4 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 method of doing this is to look at factors of size, production, labor efficiency, capital efficiency and cost control. 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 are more profitable than smaller farms. Two basic reasons 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. Another reason is that profitable farm businesses with good management have the ability and incentive to become larger. Large farms are not necessarily more profitable and size increases are only profitable with good management.

MEASURES OF SIZE OF BUSINESS  
Oneida-Mohawk Region Dairy Farms

| Item                                  | My Farm | Average |         |
|---------------------------------------|---------|---------|---------|
|                                       |         | 1980    | 1979    |
| Number of cows                        | _____   | 61      | 62      |
| Number of heifers                     | _____   | 44      | 43      |
| Pounds of milk sold                   | _____   | 871,500 | 897,500 |
| Worker equivalent                     | _____   | 2.3     | 2.3     |
| Total work units                      | _____   | 671     | 692     |
| Total tillable acres (1979 estimated) | _____   | 208     | 206     |

In the table below, the 610 New York farms for 1979 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  
610 New York Dairy Farms, 1979

| Number of Cows | Number of Farms | Percent of Farms | Labor & Management Income |         |
|----------------|-----------------|------------------|---------------------------|---------|
|                |                 |                  | Per Operator              | Per Cow |
| Under 40       | 89              | 15               | \$11,635                  | \$380   |
| 40 - 54        | 168             | 28               | 14,680                    | 344     |
| 55 - 69        | 123             | 20               | 19,435                    | 404     |
| 70 - 84        | 73              | 12               | 22,814                    | 387     |
| 85 - 99        | 30              | 5                | 18,876                    | 301     |
| 100 - 114      | 34              | 6                | 24,429                    | 308     |
| 115 - 129      | 24              | 4                | 35,147                    | 460     |
| 130 - 149      | 22              | 4                | 23,757                    | 268     |
| 150 and over   | 47              | 8                | 52,680                    | 385     |

### 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  
77 Oneida-Mohawk Region Dairy Farms, 1980

| Crop               | My Farm |       | Average of Farms Reporting |       |                  |
|--------------------|---------|-------|----------------------------|-------|------------------|
|                    | Acres   | Yield | Farms                      | Acres | Yield            |
| Baled hay          |         |       | 75                         | 92    | (combined below) |
| Hay crop silage    |         |       | 38                         | 71    |                  |
| Corn silage        |         |       | 67                         | 46    | 5.3 tons D.M.    |
| Other forage       |         |       | 15                         | 18    | 2.7 tons D.M.    |
| Grain corn         |         |       | 35                         | 44    | 88.0 bu.         |
| Oats               |         |       | 20                         | 15    | 62.0 bu.         |
| Wheat              |         |       | 1                          | 3     | 60.0 bu.         |
| Other crops        |         |       | 13                         | 23    |                  |
| Tillable pasture   |         |       | 15                         | 39    |                  |
| Idle tillable land |         |       | 11                         | 29    |                  |
| -----              |         |       |                            |       |                  |
| Dry matter:        |         |       |                            |       |                  |
| All hay crops      |         |       | 77                         | 125   | 2.4 tons         |
| All forage crops   |         |       | 77                         | 168   | 3.1 tons         |
| Milk sold per cow  |         |       |                            |       | 14,200           |

Tons of dry matter of all hay and silage is a good measure of the overall rate of forage production. For the Oneida-Mohawk region the average corn silage yield on an as fed basis was 14.4 tons. The importance of strong milk output per cow is shown in the table below.

MILK SOLD PER COW AND LABOR AND MANAGEMENT INCOME  
610 New York Dairy Farms, 1979

| 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                | 22              | 48             | \$286               | \$ 1,092                  | \$ 26   |
| 10,000 - 10,999             | 32              | 54             | 357                 | 9,137                     | 217     |
| 11,000 - 11,999             | 45              | 58             | 386                 | 12,273                    | 235     |
| 12,000 - 12,999             | 72              | 68             | 423                 | 13,673                    | 237     |
| 13,000 - 13,999             | 106             | 77             | 459                 | 18,496                    | 302     |
| 14,000 - 14,999             | 128             | 86             | 462                 | 27,895                    | 433     |
| 15,000 - 15,999             | 115             | 80             | 509                 | 26,527                    | 401     |
| 16,000 and over             | 90              | 77             | 548                 | 29,697                    | 488     |



### Labor Efficiency

Labor input is an important factor in farm production. Several measures of accomplishment per worker (labor efficiency) are shown below.

#### MEASURES OF LABOR EFFICIENCY Oneida-Mohawk Region Dairy Farms

| Item                      | My Farm | Average |         |
|---------------------------|---------|---------|---------|
|                           |         | 1980    | 1979    |
| Worker equivalent         |         | 2.3     | 2.3     |
| Cows per worker           |         | 27      | 28      |
| Lbs. milk sold per worker |         | 387,000 | 399,000 |
| Work units per worker     |         | 298     | 308     |

Number of cows per worker is calculated by dividing the average number of cows by the worker equivalent which represents the total farm labor force. Pounds of milk sold per worker is an important measure of labor efficiency on the dairy farm. It measures the ability of the labor force to handle a large number of cows without sacrificing milk output per cow.

It is important to look at other measures of labor efficiency, such as work units per worker 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.

Another factor which may influence the productivity of labor is the wage paid to employees. A productive employee will require a reasonable and competitive wage.

#### MILK SOLD PER WORKER AND LABOR AND MANAGEMENT INCOME 610 New York Dairy Farms, 1979

| Pounds of Milk<br>Sold Per Worker | Number<br>of Farms | Number<br>of Cows | Lbs. Milk<br>Per Cow | Labor &<br>Management Income |         |
|-----------------------------------|--------------------|-------------------|----------------------|------------------------------|---------|
|                                   |                    |                   |                      | Per Operator                 | Per Cow |
| Under 250,000                     | 68                 | 40                | 11,600               | \$ 4,778                     | \$137   |
| 250,000 - 299,999                 | 85                 | 54                | 13,200               | 12,141                       | 293     |
| 300,000 - 349,999                 | 94                 | 58                | 13,800               | 16,458                       | 335     |
| 350,000 - 399,999                 | 102                | 64                | 14,500               | 18,276                       | 361     |
| 400,000 - 449,999                 | 83                 | 75                | 14,600               | 20,204                       | 331     |
| 450,000 - 499,999                 | 54                 | 81                | 14,900               | 26,863                       | 481     |
| 500,000 - 599,999                 | 81                 | 113               | 14,800               | 39,637                       | 446     |
| 600,000 and over                  | 43                 | 151               | 15,300               | 49,358                       | 403     |

### 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. It is possible for the business to be undercapitalized, but investing too much capital per productive unit is a more common problem.

#### MEASURES OF CAPITAL EFFICIENCY Oneida-Mohawk Region Dairy Farms

| Item                                    | My Farm    | Average   |           |
|---|------------|-----------|-----------|
|   |            | 1980      | 1979      |
| Farm capital per worker                 | \$ _____   | \$154,600 | \$149,000 |
| Farm capital per cow                    | \$ _____   | \$ 5,522  | \$ 4,859  |
| Land & buildings per cow                | \$ _____   | \$ 2,598  | \$ 2,299  |
| Land & buildings/tillable<br>acre owned | \$ _____   | \$ 1,202  | \$ 1,072  |
| Machinery investment per cow            | \$ _____   | \$ 1,044  | \$ 919    |
| Machinery per tillable acre             | \$ _____   | \$ 316    | \$ 308    |
| Capital turnover                        | _____ yrs. | 2.3 yrs.  | 2.3 yrs.  |

Land and building investment per tillable acre owned shows the relationship between investments in land and buildings. The farmer who owns little cropland but builds many farm buildings will have a relatively large land and building investment per tillable acre owned. This could be an indication that capital use 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. This figure also depends upon the enterprise selection of the business.

#### CAPITAL TURNOVER AND LABOR AND MANAGEMENT INCOME 610 New York Dairy Farms, 1979

| Capital Turnover<br>Rate - Years | Number<br>of<br>Farms | Number<br>of<br>Cows | Capital Investment |            | Labor & Mgmt.<br>Income Per<br>Operator |
|----------------------------------|-----------------------|----------------------|--------------------|------------|---|
|                                  |                       |                      | Per Cow            | Per Worker |   |
| Less than 1.5                    | 13                    | 117                  | \$3,230            | \$102,900  | \$45,648                                |
| 1.5 to 1.99                      | 122                   | 101                  | 4,160              | 126,835    | 35,313                                  |
| 2.0 to 2.49                      | 247                   | 74                   | 4,984              | 149,255    | 24,415                                  |
| 2.5 to 2.99                      | 135                   | 60                   | 5,832              | 159,245    | 14,989                                  |
| 3.0 to 3.49                      | 49                    | 60                   | 6,560              | 180,556    | 7,764                                   |
| 3.5 and over                     | 44                    | 54                   | 7,645              | 179,670    | - 4,965                                 |

## 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. Some farms included in this summary used as much as 40 cents from each dollar's worth of milk sold to purchase dairy feed. Two considerations are important in keeping the feed bill down: (1) Be careful that only nutrients required by the cow are being fed. A dairy farmer 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 protein? 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 of Least-Cost Balanced 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, heifer raising practices affect feed costs. The overall feed situation must be examined and evaluated as a "system".

#### FEED COSTS AND RELATED MEASURES Oneida-Mohawk Region Dairy Farms

| Item   | My Farm  | Average |         |
|--|----------|---------|---------|
|  |          | 1980    | 1979    |
| Dairy concentrate purchased per cow                  | \$ _____ | \$ 495  | \$ 462  |
| Dairy concentrate purchased per cwt.<br>of milk sold | \$ _____ | \$ 3.47 | \$ 3.19 |
| Percent dairy concentrate is of<br>milk receipts     | _____ %  | 27%     | 27%     |
| Crop expense per cow                                 | \$ _____ | \$ 125  | \$ 109  |
| Feed & crop expense/cwt. milk                        | \$ _____ | \$ 4.35 | \$ 3.94 |
| Forage dry matter harvested/cow (tons)               | _____    | 8.5     | 7.5     |
| Acres of forage per cow                              | _____    | 2.8     | 2.8     |
| Total tillable acres per cow                         | _____    | 3.4     | 3.3     |
| Fertilizer and lime/tillable acre                    | \$ _____ | \$ 22   | \$ 21   |
| Heifers as % of cow numbers                          | _____ %  | 72%     | 69%     |

### Machinery, Labor and Miscellaneous Costs

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

#### MACHINERY & LABOR COSTS Oneida-Mohawk Region Dairy Farms

| Item   | My Farm  | Average   |           |
|--|----------|-----------|-----------|
|  |          | 1980      | 1979      |
| <u>Machinery:</u> Depreciation <sup>1/</sup>   | \$ _____ | \$ 9,217  | \$ 8,983  |
| Interest <sup>2/</sup>                         | _____    | 5,499     | 4,819     |
| Operating expense <sup>3/</sup>                | _____    | 10,401    | 9,725     |
| Total machinery costs                          | \$ _____ | \$ 25,117 | \$ 23,557 |
| Per cow  | _____    | 412       | 386       |
| Per cwt. milk                                  | _____    | 2.88      | 2.62      |
| <u>Labor:</u> Value of operators <sup>4/</sup> | \$ _____ | \$ 10,500 | \$ 9,360  |
| Unpaid family <sup>5/</sup>                    | _____    | 2,000     | 1,800     |
| Hired  | _____    | 6,418     | 5,790     |
| Total labor costs                              | \$ _____ | \$ 18,918 | \$ 16,950 |
| Per cow  | _____    | 310       | 273       |
| Per cwt. milk                                  | _____    | 2.17      | 1.89      |
| Labor & machinery costs/cwt. milk              | \$ _____ | \$ 5.05   | \$ 4.51   |

<sup>1/</sup> Regular depreciation from last years tax plus 10 percent of new purchases.

<sup>2/</sup> Nine percent of average machinery investment.

<sup>3/</sup> Machine hire, repairs, farm share auto expense, and gas and oil.

<sup>4/</sup> \$750 per month in 1980, \$650 in 1979.

<sup>5/</sup> \$500 per month in 1980, \$425 in 1979.

#### MISCELLANEOUS COST CONTROL MEASURES Oneida-Mohawk Region Dairy Farms

| Item                        | My Farm  | Average |         |
|-----------------------------|----------|---------|---------|
|                             |          | 1980    | 1979    |
| Livestock expense per cow   | \$ _____ | \$ 161  | \$ 142  |
| Real estate expense per cow | \$ _____ | \$ 144  | \$ 129  |
| Total farm expense per cow  | \$ _____ | \$2,122 | \$1,898 |

Livestock expense per cow includes breeding fees, veterinary and medicine, milk marketing, dairy supplies, bedding and DHIC fees. Real estate expenses include repairs, taxes, insurance and rent.

## YEARLY CASH FLOW PLANNING &amp; ANALYSIS

Completing the worksheet below can be a valuable tool in planning expansions and for setting goals for improving the farm business. The average is from 77 Oneida-Mohawk region dairy farms for 1980.

| Item   | Average<br>Per Cow | My Farm, |       | Cows |
|--|--------------------|----------|-------|------|
|  |                    | Per Cow  | Total | Goal |
| <b>CASH RECEIPTS</b>   |                    |          |       |      |
| Milk sales   | \$ 1,814           | \$       | \$    | \$   |
| Crop sales   | 29                 |          |       |      |
| Dairy cattle   | 156                |          |       |      |
| Calves & other livestock   | 23                 |          |       |      |
| Other  | 23                 |          |       |      |
| Total Cash Receipts  | \$ 2,045           | \$       | \$    | \$   |
| <b>CASH EXPENSES</b>   |                    |          |       |      |
| Hired labor  | 105                | \$       | \$    | \$   |
| Dairy concentrate  | 495                |          |       |      |
| Hay and other  | 19                 |          |       |      |
| Machine hire   | 8                  |          |       |      |
| Machine repair & auto expense  | 91                 |          |       |      |
| Gas & oil  | 72                 |          |       |      |
| Replacement livestock  | 43                 |          |       |      |
| Breeding fees  | 22                 |          |       |      |
| Vet & medicine   | 34                 |          |       |      |
| Milk marketing (ADA, Dues)   | 38                 |          |       |      |
| Other livestock expense  | 68                 |          |       |      |
| Fertilizer & lime  | 77                 |          |       |      |
| Seeds & plants   | 29                 |          |       |      |
| Spray & other  | 20                 |          |       |      |
| Land, bldg. fence repair (owner)   | 39                 |          |       |      |
| Taxes (owner)  | 40                 |          |       |      |
| Insurance (owner)  | 32                 |          |       |      |
| Rent (owner)   | 33                 |          |       |      |
| Telephone (farm share)   | 6                  |          |       |      |
| Electricity (farm share)   | 35                 |          |       |      |
| Miscellaneous  | 28                 |          |       |      |
| Total Cash Expenses <sup>1/</sup>  | \$ 1,334           | \$       | \$    | \$   |
| Total Cash Receipts <sup>1/</sup>  | \$ 2,045           |          |       |      |
| Total Cash Expenses <sup>1/</sup>  | - 1,334            | -        | -     | -    |
| Net Cash Flow  | \$ 711             | \$       | \$    | \$   |
| Cash Family Living Expense <sup>2/</sup>                                   | - 249              | -        | -     | -    |
| Amount Left for Debt Service,<br>Capital Investment &<br>Retained Earnings | \$ 462             | \$       | \$    | \$   |
| Scheduled Debt Service   | - 458              | -        | -     | -    |
| Available for Capital Investment   | \$ 4               | \$       | \$    | \$   |
| Planned Expansion Livestock Purch.   |                    |          |       |      |
| Planned Equipment Purchase   |                    |          |       |      |
| Borrowed or Equity Funds Needed  |                    | \$       | \$    | \$   |

<sup>1/</sup> Interest paid excluded from cash expenses as it is contained in Scheduled Debt Service.

<sup>2/</sup> Estimated: \$8,700 per family and four percent of cash receipts.

# 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                          | 1978     | 1979     | 1980     | 1981 Goal |
|-------------------------------|----------|----------|----------|-----------|
| <u>Size of Business</u>       |          |          |          |           |
| Number of cows                | _____    | _____    | _____    | _____     |
| Number of heifers             | _____    | _____    | _____    | _____     |
| Pounds of milk sold           | _____    | _____    | _____    | _____     |
| Worker equivalent             | _____    | _____    | _____    | _____     |
| Total tillable acres          | _____    | _____    | _____    | _____     |
| <u>Rates of Production</u>    |          |          |          |           |
| Lbs. milk sold per cow        | _____    | _____    | _____    | _____     |
| Tons hay D.M. per acre        | _____    | _____    | _____    | _____     |
| Tons corn silage/acre         | _____    | _____    | _____    | _____     |
| <u>Labor Efficiency</u>       |          |          |          |           |
| Cows per worker               | _____    | _____    | _____    | _____     |
| Lbs. milk sold per worker     | _____    | _____    | _____    | _____     |
| <u>Cost Control</u>           |          |          |          |           |
| Purch. feed as % of milk sold | \$ _____ | \$ _____ | \$ _____ | \$ _____  |
| Feed & crop exp./cwt. milk    | \$ _____ | \$ _____ | \$ _____ | \$ _____  |
| Labor & mach. cost/cow        | \$ _____ | \$ _____ | \$ _____ | \$ _____  |
| <u>Capital Efficiency</u>     |          |          |          |           |
| Farm capital per cow          | \$ _____ | \$ _____ | \$ _____ | \$ _____  |
| Capital turnover              | \$ _____ | \$ _____ | \$ _____ | \$ _____  |
| <u>Price</u>                  |          |          |          |           |
| Price per cwt. milk           | \$ _____ | \$ _____ | \$ _____ | \$ _____  |
| <u>Financial Summary</u>      |          |          |          |           |
| Net cash farm income          | \$ _____ | \$ _____ | \$ _____ | \$ _____  |
| Labor & mgt. inc./oper.       | \$ _____ | \$ _____ | \$ _____ | \$ _____  |
| Farm net worth                | \$ _____ | \$ _____ | \$ _____ | \$ _____  |
| Rate of return on equity      | _____ %  | _____ %  | _____ %  | _____ %   |
| Percent equity                | _____ %  | _____ %  | _____ %  | _____ %   |
| Farm debt per cow             | _____    | _____    | _____    | _____     |

## MEASURE YOUR PERFORMANCE

After you have entered your farm business data on the 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 next 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 opportunities for improvement, consider alternative ways of 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. 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 17 is provided for this purpose. Answering the following questions may also help evaluate your farm business progress.

- 1) Do 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 worker reach 600,000 pounds?
- 4) Have increases in costs 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 1980 and have you set new goals for 1981?

# MANAGEMENT PERFORMANCE OF STATEWIDE COOPERATORS

The Farm Business Chart is a tool which can be used in analyzing a business by drawing a line through the figure in each column which represents the current level of management performance. The figure at the top of each column is the average of the top 10 percent of the 610 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 610 New York Dairy Farms, 1979

| Size of Business       |                   |                        | Rates of Production            |                               |                                 | Labor Efficiency   |                                |
|------------------------|-------------------|------------------------|--------------------------------|-------------------------------|---------------------------------|--------------------|--------------------------------|
| Man<br>Equiv-<br>alent | No.<br>of<br>Cows | Pounds<br>Milk<br>Sold | Pounds<br>Milk Sold<br>Per Cow | Tons Hay<br>Crops<br>Per Acre | Tons Corn<br>Silage<br>Per Acre | Cows<br>Per<br>Man | Pounds<br>Milk Sold<br>Per Man |
| 5.5                    | 191               | 2,798,600              | 17,400                         | 4.6                           | 19                              | 44                 | 651,800                        |
| 3.6                    | 116               | 1,686,600              | 16,000                         | 3.8                           | 17                              | 37                 | 531,700                        |
| 3.1                    | 87                | 1,264,000              | 15,400                         | 3.3                           | 16                              | 33                 | 474,400                        |
| 2.8                    | 72                | 1,041,800              | 14,900                         | 3.0                           | 15                              | 30                 | 429,400                        |
| 2.4                    | 63                | 915,100                | 14,500                         | 2.8                           | 14                              | 28                 | 393,500                        |
| -----                  |                   |                        |                                |                               |                                 |                    |                                |
| 2.2                    | 56                | 799,700                | 14,000                         | 2.5                           | 13                              | 26                 | 363,400                        |
| 2.0                    | 50                | 704,100                | 13,400                         | 2.3                           | 12                              | 24                 | 331,400                        |
| 1.8                    | 45                | 604,700                | 12,800                         | 2.1                           | 10                              | 23                 | 301,100                        |
| 1.6                    | 40                | 513,300                | 11,800                         | 1.8                           | 8                               | 20                 | 266,200                        |
| 1.3                    | 32                | 370,500                | 9,900                          | 1.4                           | 5                               | 17                 | 202,900                        |

| Feed Bought |                       | Machinery       | Labor and                 | Feed and Crop            |
|-------------|-----------------------|-----------------|---------------------------|--------------------------|
| Per<br>Cow  | % of Milk<br>Receipts | Cost<br>Per Cow | Machinery Cost<br>Per Cow | Expense Per<br>Cwt. Milk |
| \$198       | 13%                   | \$182           | \$426                     | \$2.68                   |
| 309         | 19                    | 242             | 494                       | 3.31                     |
| 362         | 23                    | 270             | 537                       | 3.62                     |
| 410         | 26                    | 296             | 570                       | 3.85                     |
| 449         | 28                    | 320             | 605                       | 4.12                     |
| -----       |                       |                 |                           |                          |
| 490         | 29                    | 344             | 642                       | 4.37                     |
| 532         | 32                    | 369             | 683                       | 4.60                     |
| 566         | 34                    | 403             | 726                       | 4.85                     |
| 615         | 36                    | 454             | 785                       | 5.17                     |
| 709         | 41                    | 569             | 957                       | 5.78                     |

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.



FARM BUSINESS SUMMARY BY HERD SIZE  
610 New York Dairy Farms, 1979

| Item                                    | Farms with:          |                  |                  |                  |
|---|----------------------|------------------|------------------|------------------|
|   | Less than<br>40 Cows | 40 to<br>54 Cows | 55 to<br>69 Cows | 70 to<br>84 Cows |
| <u>Capital Investment</u> (end of year) |                      |                  |                  |                  |
| Livestock                               | \$ 50,187            | \$ 70,091        | \$ 88,963        | \$111,369        |
| Feed & supplies                         | 9,101                | 15,519           | 21,812           | 29,839           |
| Machinery & equipment                   | 35,935               | 49,977           | 62,625           | 78,440           |
| Land & buildings                        | 104,827              | 135,709          | 160,421          | 203,220          |
| TOTAL INVESTMENT                        | \$200,050            | \$271,296        | \$333,821        | \$422,868        |
| <u>Receipts</u>                         |                      |                  |                  |                  |
| Milk sales                              | \$ 52,145            | \$ 75,798        | \$104,128        | \$131,609        |
| Dairy cattle sold                       | 4,756                | 7,682            | 9,105            | 11,993           |
| Other livestock sales                   | 2,009                | 2,290            | 2,419            | 3,524            |
| Crop sales                              | 312                  | 684              | 1,038            | 1,261            |
| Miscellaneous receipts                  | 1,551                | 1,717            | 1,538            | 2,534            |
| Total Cash Receipts                     | \$ 60,773            | \$ 88,171        | \$118,228        | \$150,921        |
| Increase in livestock                   | 13,255               | 15,875           | 21,148           | 27,034           |
| Increase in feed & supplies             | 1,283                | 2,339            | 3,002            | 4,796            |
| TOTAL FARM RECEIPTS                     | \$ 75,311            | \$106,385        | \$142,378        | \$182,751        |
| <u>Expenses</u>                         |                      |                  |                  |                  |
| Hired labor                             | \$ 1,685             | \$ 4,066         | \$ 6,343         | \$ 10,558        |
| Dairy feed                              | 15,147               | 21,995           | 28,255           | 35,466           |
| Other feed                              | 752                  | 693              | 836              | 1,066            |
| Machine hire                            | 368                  | 578              | 698              | 752              |
| Machinery repair                        | 2,370                | 3,585            | 5,211            | 6,965            |
| Auto expense (farm share)               | 332                  | 336              | 384              | 365              |
| Gas & oil                               | 2,023                | 2,603            | 3,704            | 4,727            |
| Purchased animals                       | 2,562                | 3,364            | 4,332            | 4,580            |
| Breeding fees                           | 653                  | 1,023            | 1,290            | 1,712            |
| Veterinary & medicine                   | 1,011                | 1,499            | 1,845            | 2,144            |
| Milk marketing                          | 1,331                | 1,857            | 2,654            | 4,130            |
| Other livestock expense                 | 1,820                | 2,967            | 3,899            | 4,902            |
| Fertilizer & lime                       | 2,206                | 3,612            | 5,028            | 7,973            |
| Seeds & plants                          | 759                  | 1,160            | 1,698            | 2,000            |
| Spray & other crop expense              | 513                  | 803              | 1,290            | 1,772            |
| Land, bldg. fence repair                | 853                  | 1,604            | 2,046            | 2,202            |
| Taxes & insurance                       | 2,623                | 3,527            | 4,207            | 5,611            |
| Electric & phone (farm share)           | 1,331                | 1,953            | 2,293            | 3,211            |
| Interest paid                           | 4,034                | 6,447            | 9,016            | 11,734           |
| Miscellaneous expenses                  | 1,094                | 1,931            | 2,535            | 2,960            |
| Total Cash Expenses                     | \$ 43,467            | \$ 65,603        | \$ 87,564        | \$114,830        |
| Machinery depreciation                  | 3,536                | 4,605            | 5,431            | 7,940            |
| Building depreciation                   | 1,388                | 2,418            | 3,306            | 4,052            |
| Unpaid family labor                     | 1,800                | 1,800            | 1,800            | 1,350            |
| Interest on equity @ 9%                 | 12,578               | 16,149           | 19,634           | 25,537           |
| Decrease in feed & supplies             | 0                    | 0                | 0                | 0                |
| TOTAL FARM EXPENSES                     | \$ 62,769            | \$ 90,575        | \$117,735        | \$153,709        |
| <u>Financial Summary</u>                |                      |                  |                  |                  |
| Total Farm Receipts                     | \$ 75,311            | \$106,385        | \$142,378        | \$182,751        |
| Total Farm Expenses                     | 62,769               | 90,575           | 117,735          | 153,709          |
| Labor & Management Income               | \$ 12,542            | \$ 15,810        | \$ 24,643        | \$ 29,042        |
| Number of operators                     | (96) 1.08            | (181) 1.07       | (156) 1.27       | (93) 1.27        |
| LABOR & MGMT. INCOME/OPER.              | \$ 11,635            | \$ 14,680        | \$ 19,435        | \$ 22,814        |

FARM BUSINESS SUMMARY BY HERD SIZE  
610 New York Dairy Farms, 1979

| Item                                    | Farms with:      |                    |                    |                    |                     |
|---|------------------|--------------------|--------------------|--------------------|---------------------|
|   | 85 to<br>99 Cows | 100 to<br>114 Cows | 115 to<br>129 Cows | 130 to<br>149 Cows | 150 or<br>More Cows |
| <u>Capital Investment (end of year)</u> |                  |                    |                    |                    |                     |
| Livestock                               | \$136,167        | \$137,361          | \$175,692          | \$189,163          | \$263,356           |
| Feed & supplies                         | 34,434           | 40,338             | 46,263             | 56,794             | 79,357              |
| Machinery & equipment                   | 85,131           | 91,369             | 106,611            | 121,377            | 158,209             |
| Land & buildings                        | 238,672          | 234,728            | 274,673            | 342,599            | 425,345             |
| TOTAL INVESTMENT                        | \$494,404        | \$503,796          | \$603,239          | \$709,933          | \$926,267           |
| <u>Receipts</u>                         |                  |                    |                    |                    |                     |
| Milk sales                              | \$154,571        | \$180,777          | \$209,809          | \$234,613          | \$359,184           |
| Dairy cattle sold                       | 16,866           | 15,073             | 17,760             | 23,315             | 35,240              |
| Other livestock sales                   | 6,160            | 3,256              | 4,207              | 5,766              | 8,626               |
| Crop sales                              | 1,137            | 1,005              | 2,359              | 1,878              | 4,592               |
| Miscellaneous receipts                  | 2,476            | 4,106              | 2,805              | 6,401              | 5,912               |
| Total Cash Receipts                     | \$181,210        | \$204,217          | \$236,940          | \$271,973          | \$413,554           |
| Increase in livestock                   | 25,461           | 27,240             | 43,204             | 27,591             | 56,202              |
| Increase in feed & supplies             | 5,373            | 5,052              | 7,627              | 11,121             | 14,077              |
| TOTAL FARM RECEIPTS                     | \$212,044        | \$236,509          | \$287,771          | \$310,685          | \$483,833           |
| <u>Expenses</u>                         |                  |                    |                    |                    |                     |
| Hired labor                             | \$ 11,971        | \$ 17,474          | \$ 18,740          | \$ 27,423          | \$ 44,078           |
| Dairy feed                              | 42,224           | 50,188             | 55,670             | 58,640             | 98,093              |
| Other feed                              | 1,503            | 1,767              | 2,875              | 2,041              | 1,941               |
| Machine hire                            | 1,432            | 1,096              | 1,359              | 2,213              | 3,517               |
| Machinery repair                        | 9,058            | 9,239              | 10,912             | 12,484             | 17,939              |
| Auto expense (farm share)               | 706              | 829                | 574                | 473                | 660                 |
| Gas & oil                               | 6,263            | 6,884              | 7,418              | 8,388              | 12,702              |
| Purchased animals                       | 6,332            | 5,808              | 5,184              | 9,439              | 18,686              |
| Breeding fees                           | 2,301            | 1,977              | 2,383              | 2,827              | 4,391               |
| Veterinary & medicine                   | 2,914            | 2,919              | 4,033              | 4,648              | 7,070               |
| Milk marketing                          | 2,956            | 5,161              | 4,675              | 6,919              | 10,167              |
| Other livestock expense                 | 5,919            | 6,770              | 5,822              | 6,877              | 12,078              |
| Fertilizer & lime                       | 9,022            | 10,514             | 10,624             | 14,231             | 18,152              |
| Seeds & plants                          | 2,974            | 2,845              | 3,765              | 4,152              | 6,082               |
| Spray & other crop expense              | 2,179            | 2,588              | 2,273              | 3,420              | 5,585               |
| Land, bldg., fence repair               | 2,919            | 3,124              | 3,208              | 2,874              | 5,575               |
| Taxes & insurance                       | 6,163            | 6,689              | 7,772              | 9,503              | 13,436              |
| Electric & phone (farm share)           | 3,513            | 3,868              | 3,464              | 4,430              | 6,256               |
| Interest paid                           | 13,343           | 15,730             | 15,335             | 18,721             | 29,434              |
| Miscellaneous expenses                  | 4,512            | 4,853              | 5,830              | 7,582              | 9,802               |
| Total Cash Expenses                     | \$138,204        | \$160,323          | \$171,916          | \$207,285          | \$325,644           |
| Machinery depreciation                  | 12,034           | 9,451              | 15,076             | 13,519             | 17,676              |
| Building depreciation                   | 5,481            | 4,422              | 6,124              | 10,497             | 10,695              |
| Unpaid family labor                     | 1,350            | 1,800              | 900                | 450                | 900                 |
| Interest on equity @9%                  | 27,925           | 28,193             | 38,118             | 42,230             | 55,299              |
| Decrease in feed & supplies             | 0                | 0                  | 0                  | 0                  | 0                   |
| TOTAL FARM EXPENSES                     | \$184,994        | \$204,189          | \$232,134          | \$273,981          | \$410,214           |
| <u>Financial Summary</u>                |                  |                    |                    |                    |                     |
| Total Farm Receipts                     | \$212,044        | \$236,509          | \$287,771          | \$310,685          | \$483,833           |
| Total Farm Expenses                     | 184,994          | 204,189            | 232,134            | 273,981            | 410,214             |
| Labor & Mgmt. Income                    | \$ 27,050        | \$ 32,320          | \$ 55,637          | \$ 36,704          | \$ 73,619           |
| Number of operators                     | 1.4              | 1.3                | 1.6                | 1.5                | 1.5                 |
| LABOR & MGMT. INC./OPER.                | \$ 18,876        | \$ 24,420          | \$ 35,147          | \$ 23,757          | \$ 50,149           |

SELECTED BUSINESS FACTORS BY HERD SIZE  
610 New York Dairy Farms, 1979

| Item                             | Farms with:          |                  |                  |                  |
|----------------------------------|----------------------|------------------|------------------|------------------|
|                                  | Less than<br>40 Cows | 40 to<br>54 Cows | 55 to<br>69 Cows | 70 to<br>84 Cows |
| Number of farms                  | 89                   | 168              | 123              | 73               |
| <u>Size of Business</u>          |                      |                  |                  |                  |
| Number of cows                   | 33                   | 46               | 61               | 75               |
| Number of heifers                | 24                   | 32               | 43               | 58               |
| Pounds of milk sold              | 443,600              | 642,600          | 879,300          | 1,103,500        |
| Man equivalent                   | 1.8                  | 2.0              | 2.3              | 2.6              |
| Total work units                 | 392                  | 521              | 677              | 842              |
| Total crop acres                 | 114                  | 152              | 190              | 237              |
| (Crop acres rented)              | (27)                 | (42)             | (60)             | (77)             |
| <u>Rates of Production</u>       |                      |                  |                  |                  |
| Milk sold per cow                | 13,440               | 13,970           | 14,420           | 14,700           |
| Tons hay crops per acre          | 2.2                  | 2.4              | 2.6              | 2.8              |
| Tons corn silage per acre        | 11.7                 | 12.7             | 12.6             | 13.8             |
| Bushels of oats per acre         | 58                   | 60               | 62               | 56               |
| <u>Labor Efficiency</u>          |                      |                  |                  |                  |
| Cows per man                     | 19                   | 23               | 26               | 29               |
| Pounds milk sold per man         | 253,500              | 321,300          | 377,400          | 427,700          |
| Work units per man               | 224                  | 261              | 291              | 326              |
| <u>Feed Costs</u>                |                      |                  |                  |                  |
| Feed purchased per cow           | \$459                | \$478            | \$463            | \$473            |
| Crop expense per cow             | \$105                | \$121            | \$131            | \$157            |
| Feed cost per cwt. milk          | \$3.41               | \$3.42           | \$3.21           | \$3.21           |
| Feed & crop exp. per cwt milk    | \$4.20               | \$4.29           | \$4.12           | \$4.28           |
| % feed is of milk receipts       | 29%                  | 29%              | 27%              | 27%              |
| Hay equivalent per cow           | 7.9T                 | 8.4T             | 8.1T             | 8.9T             |
| Crop acres per cow               | 3.5                  | 3.3              | 3.1              | 3.2              |
| Fertilizer & lime/crop acre      | \$19                 | \$24             | \$26             | \$34             |
| <u>Machinery and Labor Costs</u> |                      |                  |                  |                  |
| Total machinery costs            | \$11,653             | \$15,927         | \$20,719         | \$27,362         |
| Machinery cost per cow           | \$353                | \$346            | \$340            | \$365            |
| Machinery cost/cwt. milk         | \$2.63               | \$2.48           | \$2.36           | \$2.48           |
| Labor cost per cow               | \$362                | \$311            | \$293            | \$289            |
| Labor cost per cwt. milk         | \$2.69               | \$2.23           | \$2.03           | \$1.96           |
| <u>Capital Efficiency</u>        |                      |                  |                  |                  |
| Investment per man               | \$114,300            | \$135,650        | \$143,300        | \$163,900        |
| Investment per cow               | \$5,700              | \$5,650          | \$5,220          | \$5,400          |
| Investment per cwt. milk         | \$45                 | \$42             | \$38             | \$38             |
| Land & buildings per cow         | \$3,000              | \$2,800          | \$2,500          | \$2,600          |
| Machinery investment/cow         | \$1,030              | \$1,040          | \$980            | \$1,000          |
| Capital turnover                 | 2.7                  | 2.6              | 2.3              | 2.3              |
| <u>Other</u>                     |                      |                  |                  |                  |
| Price per cwt. milk sold         | \$11.75              | \$11.80          | \$11.84          | \$11.93          |
| Acres hay crops                  | 83                   | 101              | 117              | 135              |
| Acres corn silage                | 23                   | 36               | 46               | 64               |
| Inventory changes 1979*:         |                      |                  |                  |                  |
| Number of cows                   | 0                    | 0                | 0                | 0                |
| Inv't. value per cow**           | + \$438              | + \$377          | + \$388          | + \$439          |

\* Change from 1/1/79 to 1/1/80.

\*\* Livestock inventory includes heifers.

SELECTED BUSINESS FACTORS BY HERD SIZE  
610 New York Dairy Farms, 1979

| Item                             | Farms with:      |                    |                    |                    |                     |
|----------------------------------|------------------|--------------------|--------------------|--------------------|---------------------|
|                                  | 85 to<br>99 Cows | 100 to<br>114 Cows | 115 to<br>129 Cows | 130 to<br>149 Cows | 150 or<br>More Cows |
| Number of farms                  | 30               | 34                 | 24                 | 22                 | 47                  |
| <u>Size of Business</u>          |                  |                    |                    |                    |                     |
| Number of cows                   | 90               | 105                | 121                | 137                | 205                 |
| Number of heifers                | 73               | 74                 | 95                 | 97                 | 136                 |
| Pounds of milk sold              | 1,311,500        | 1,486,700          | 1,766,500          | 1,969,200          | 2,996,700           |
| Man equivalent                   | 3.1              | 3.4                | 3.8                | 3.8                | 5.3                 |
| Total work units                 | 1,041            | 1,156              | 1,347              | 1,488              | 2,186               |
| Total crop acres                 | 298              | 316                | 357                | 387                | 545                 |
| (Crop acres rented)              | (111)            | (122)              | (104)              | (160)              | (186)               |
| <u>Rates of Production</u>       |                  |                    |                    |                    |                     |
| Milk sold per cow                | 14,572           | 14,159             | 14,599             | 14,374             | 14,618              |
| Tons hay crops per acre          | 3.1              | 2.8                | 3.1                | 3.0                | 3.3                 |
| Tons corn silage/acre            | 13.2             | 13.6               | 13.8               | 15.2               | 15.1                |
| Bushels oats/acre                | 70               | 64                 | 76                 | 47                 | 69                  |
| <u>Labor Efficiency</u>          |                  |                    |                    |                    |                     |
| Cows per man                     | 29               | 31                 | 32                 | 36                 | 38                  |
| Pounds milk sold/man             | 425,812          | 434,708            | 471,067            | 514,151            | 562,233             |
| Work units per man               | 338              | 338                | 359                | 389                | 410                 |
| <u>Feed Costs</u>                |                  |                    |                    |                    |                     |
| Feed purchased per cow           | \$469            | \$478              | \$460              | \$428              | \$479               |
| Crop expense per cow             | \$158            | \$152              | \$138              | \$159              | \$145               |
| Feed cost per cwt. milk          | \$3.22           | \$3.38             | \$3.15             | \$2.98             | \$3.27              |
| Feed & crop exp./cwt. milk       | \$4.30           | \$4.45             | \$4.09             | \$4.09             | \$4.27              |
| % feed is of milk receipts       | 27%              | 28%                | 27%                | 25%                | 27%                 |
| Hay equivalent per cow           | 9.0T             | 8.2T               | 8.7T               | 8.3T               | 8.0T                |
| Crop acres per cow               | 3.3              | 3.0                | 3.0                | 2.8                | 2.7                 |
| Fert. & lime/crop acre           | \$30             | \$33               | \$30               | \$37               | \$33                |
| <u>Machinery and Labor Costs</u> |                  |                    |                    |                    |                     |
| Total machinery costs            | \$36,827         | \$34,952           | \$44,095           | \$47,430           | \$65,823            |
| Machinery cost per cow           | \$409            | \$333              | \$364              | \$346              | \$321               |
| Machinery cost/cwt. milk         | \$2.81           | \$2.35             | \$2.50             | \$2.41             | \$2.20              |
| Labor cost per cow               | \$271            | \$276              | \$264              | \$289              | \$273               |
| Labor cost/cwt. milk             | \$1.86           | \$1.95             | \$1.81             | \$2.01             | \$1.87              |
| <u>Capital Efficiency</u>        |                  |                    |                    |                    |                     |
| Investment per man               | \$160,521        | \$147,309          | \$160,864          | \$185,361          | \$173,784           |
| Investment per cow               | \$5,260          | \$4,539            | \$4,536            | \$4,965            | \$4,432             |
| Investment/cwt. milk             | \$38             | \$34               | \$34               | \$36               | \$31                |
| Land & buildings/cow             | \$2,539          | \$2,115            | \$2,065            | \$2,396            | \$2,035             |
| Machinery investment/cow         | \$906            | \$823              | \$802              | \$849              | \$757               |
| Capital turnover                 | 2.3              | 2.1                | 2.1                | 2.3                | 1.9                 |
| <u>Other</u>                     |                  |                    |                    |                    |                     |
| Price per cwt. milk sold         | \$11.79          | \$12.16            | \$11.80            | \$11.91            | \$11.99             |
| Acres hay crops                  | 153              | 167                | 193                | 179                | 237                 |
| Acres corn silage                | 77               | 88                 | 101                | 119                | 170                 |
| Inventory changes 1979*:         |                  |                    |                    |                    |                     |
| Number of cows                   | + 4              | + 5                | + 7                | + 6                | + 6                 |
| Invt. value per cow**            | + \$219          | + \$198            | + \$219            | + \$144            | + \$240             |

\* Change from 1/1/79 to 1/1/80.

\*\* Livestock inventory includes heifers.

FARM FAMILY FINANCIAL SITUATION BY HERD SIZE  
610 New York Dairy Farms, January 1, 1980

| Item   | Farms with:          |                  |                  |                  |
|--|----------------------|------------------|------------------|------------------|
|  | Less than<br>40 Cows | 40 to<br>54 Cows | 55 to<br>69 Cows | 70 to<br>84 Cows |
| Number of farms                                    | 89                   | 168              | 123              | 73               |
| <u>Assets</u>                                      |                      |                  |                  |                  |
| Livestock  | \$ 50,187            | \$ 70,092        | \$ 88,964        | \$111,370        |
| Feed & supplies                                    | 9,102                | 15,519           | 21,812           | 29,839           |
| Machinery & equipment                              | 35,936               | 49,978           | 62,625           | 78,440           |
| Land & buildings                                   | 104,827              | 135,709          | 160,422          | 203,220          |
| Co-op investment                                   | 702                  | 2,080            | 3,223            | 5,540            |
| Accounts receivable                                | 3,511                | 5,323            | 7,806            | 10,878           |
| Cash & checking accounts                           | 1,652                | 1,804            | 1,975            | 2,573            |
| Total Farm Assets                                  | \$205,917            | \$280,505        | \$346,827        | \$441,860        |
| Savings accounts                                   | 3,420                | 1,872            | 4,069            | 3,690            |
| Cash value life insurance                          | 2,132                | 2,329            | 3,363            | 2,325            |
| Stocks & bonds                                     | 2,467                | 1,227            | 2,598            | 1,733            |
| Nonfarm real estate                                | 861                  | 2,639            | 8,283            | 4,678            |
| Auto (personal share)                              | 798                  | 1,204            | 1,454            | 1,312            |
| All other  | 4,605                | 5,213            | 5,143            | 3,430            |
| Total Nonfarm Assets                               | \$ 14,283            | \$ 14,484        | \$ 24,910        | \$ 17,168        |
| TOTAL ASSETS                                       | \$220,200            | \$294,989        | \$371,737        | \$459,028        |
| <u>Liabilities</u>                                 |                      |                  |                  |                  |
| Real estate mortgage                               | \$ 35,766            | \$ 56,931        | \$ 74,477        | \$ 92,788        |
| Liens on cattle & equipment                        | 22,083               | 32,439           | 40,873           | 52,896           |
| Installment contracts                              | 2,016                | 3,120            | 2,610            | 2,300            |
| Other loans over 10 years                          | 1,329                | 1,943            | 2,647            | 1,601            |
| Other loans 1 to 10 years                          | 3,057                | 3,253            | 4,206            | 4,138            |
| Other loans less than 1 year                       | 714                  | 1,167            | 1,604            | 1,713            |
| Feed store & other accounts                        | 1,202                | 2,223            | 2,260            | 2,675            |
| Total Farm Liabilities                             | \$ 66,167            | \$101,076        | \$128,677        | \$158,111        |
| Nonfarm Liabilities                                | 344                  | 980              | 1,954            | 1,005            |
| TOTAL LIABILITIES                                  | \$ 66,511            | \$102,056        | \$130,631        | \$159,116        |
| Farm Net Worth<br>(Equity Capital)                 | \$139,750            | \$179,429        | \$218,150        | \$283,749        |
| FAMILY NET WORTH                                   | \$153,689            | \$192,933        | \$241,106        | \$299,912        |
| <u>Financial Measures</u>                          |                      |                  |                  |                  |
| Percent equity                                     | 70%                  | 65%              | 65%              | 65%              |
| Farm debt per cow                                  | \$1,890              | \$2,060          | \$2,010          | \$2,000          |
| Available for debt service<br>& living             | \$21,334             | \$29,000         | \$39,700         | \$47,820         |
| Scheduled annual debt payment                      | \$11,210             | \$16,900         | \$22,900         | \$28,300         |
| Scheduled debt payment per cow                     | \$320                | \$345            | \$360            | \$360            |
| Scheduled debt payment as<br>percent of milk check | 21%                  | 22%              | 22%              | 22%              |

FARM FAMILY FINANCIAL SITUATION BY HERD SIZE  
610 New York Dairy Farms, January 1, 1980

| Item   | Farms with:      |                    |                    |                    |                     |
|--|------------------|--------------------|--------------------|--------------------|---------------------|
|  | 85 to<br>99 Cows | 100 to<br>114 Cows | 115 to<br>129 Cows | 130 to<br>149 Cows | 150 or<br>More Cows |
| Number of farms                                    | 30               | 34                 | 24                 | 22                 | 47                  |
| <u>Assets</u>                                      |                  |                    |                    |                    |                     |
| Livestock  | \$136,168        | \$137,361          | \$175,692          | 189,165            | \$263,357           |
| Feed & supplies                                    | 34,434           | 40,339             | 46,263             | 56,794             | 79,357              |
| Machinery & equipment                              | 85,132           | 91,369             | 106,612            | 121,377            | 158,210             |
| Land & buildings                                   | 238,672          | 234,728            | 274,673            | 342,600            | 425,346             |
| Co-op investment                                   | 5,347            | 6,353              | 7,832              | 10,821             | 17,202              |
| Accounts receivable                                | 11,581           | 14,193             | 15,230             | 21,918             | 30,163              |
| Cash & checking accounts                           | 2,153            | 2,578              | 5,428              | 4,540              | 5,686               |
| Total Farm Assets                                  | \$513,487        | \$526,921          | \$631,730          | \$747,215          | \$979,321           |
| Savings accounts                                   | 2,583            | 2,137              | 10,587             | 4,400              | 3,886               |
| Cash value life insurance                          | 4,050            | 6,302              | 4,506              | 4,021              | 2,654               |
| Stocks & bonds                                     | 3,134            | 5,560              | 1,203              | 3,371              | 4,974               |
| Nonfarm real estate                                | 1,266            | 1,088              | 3,125              | 14,921             | 10,557              |
| Auto (personal share)                              | 1,035            | 1,034              | 2,087              | 2,295              | 1,419               |
| All other  | 5,030            | 4,917              | 5,180              | 14,888             | 3,775               |
| Total Nonfarm Assets                               | \$ 17,098        | \$ 21,038          | \$ 26,688          | \$ 43,896          | \$ 27,265           |
| TOTAL ASSETS                                       | \$530,585        | \$547,959          | \$658,418          | \$791,111          | \$1,006,586         |
| <u>Liabilities</u>                                 |                  |                    |                    |                    |                     |
| Real estate mortgage                               | \$104,950        | \$115,743          | \$113,797          | \$157,919          | \$192,226           |
| Liens on cattle & equipment                        | 63,797           | 75,457             | 71,309             | 89,107             | 126,598             |
| Installment contracts                              | 19,913           | 4,445              | 3,677              | 7,523              | 8,377               |
| Other loans over 10 years                          | 2,498            | 3,872              | 3,166              | 8,424              | 12,868              |
| Other loans 1 to 10 years                          | 7,091            | 7,719              | 5,478              | 8,061              | 14,647              |
| Other loans less than 1 year                       | 2,541            | 3,613              | 8,185              | 1,970              | 6,953               |
| Feed store & other accounts                        | 2,421            | 2,816              | 2,584              | 4,991              | 3,218               |
| Total Farm Liabilities                             | \$203,211        | \$213,665          | \$208,196          | \$277,995          | \$364,887           |
| Nonfarm Liabilities                                | 326              | 672                | 635                | 2,687              | 3,662               |
| TOTAL LIABILITIES                                  | \$203,537        | \$214,337          | \$208,831          | \$280,682          | \$368,549           |
| Farm Net Worth<br>(Equity Capital)                 | \$310,276        | \$313,256          | \$423,534          | \$469,220          | \$614,434           |
| FAMILY NET WORTH                                   | \$327,048        | \$333,622          | \$449,587          | \$510,429          | \$638,037           |
| <u>Financial Measures</u>                          |                  |                    |                    |                    |                     |
| Percent equity                                     | 62%              | 61%                | 68%                | 65%                | 63%                 |
| Farm debt per cow                                  | \$ 2,162         | \$ 1,925           | \$ 1,554           | \$ 1,944           | \$ 1,738            |
| Available for debt service<br>& living             | \$ 56,341        | \$ 59,618          | \$ 80,352          | \$ 83,403          | \$117,338           |
| Scheduled annual debt payment                      | \$ 42,310        | \$ 40,026          | \$ 42,021          | \$ 44,834          | \$ 74,244           |
| Scheduled debt payment per cow                     | \$ 450           | \$ 361             | \$ 314             | \$ 314             | \$ 354              |
| Scheduled debt payment as<br>percent of milk check | 27%              | 22%                | 20%                | 19%                | 21%                 |

Financial Analysis Chart  
610 New York Dairy Farms, 1979

| Liquidity (Repayment)                 |   |  |  |                                  |   |  |
|---------------------------------------|---|--|--|----------------------------------|---|--|
| Scheduled<br>Debt Payments<br>Per Cow | Available<br>For Debt<br>Service<br>Per Cow | Cash Flow<br>Coverage<br>Ratio <sup>a/</sup> | Debt<br>Structure<br>Ratio <sup>b/</sup> | Debt Per<br>Dollar<br>Milk Sales | Debt Payments<br>Per Dollar<br>Milk Sales | Debt/<br>Income<br>Ratio <sup>c/</sup> |
| \$ 30                                 | \$-62                                       | -0.27  | 0.04                                     | \$0.07                           | \$0.02                                    | \$0.06                                 |
| 137                                   | 169   | 0.42   | 0.21                                     | 0.38                             | 0.08                                      | 0.33                                   |
| 209                                   | 259   | 0.65   | 0.29                                     | 0.63                             | 0.13                                      | 0.55                                   |
| 269                                   | 320   | 0.82   | 0.36                                     | 0.86                             | 0.17                                      | 0.75                                   |
| 326                                   | 370   | 1.02   | 0.41                                     | 1.10                             | 0.20                                      | 0.95                                   |
| 376                                   | 414   | 1.24   | 0.46                                     | 1.31                             | 0.24                                      | 1.14                                   |
| 425                                   | 468   | 1.47   | 0.52                                     | 1.57                             | 0.27                                      | 1.36                                   |
| 475                                   | 541   | 1.92   | 0.61                                     | 1.79                             | 0.30                                      | 1.54                                   |
| 551                                   | 628   | 3.35   | 0.82                                     | 2.10                             | 0.35                                      | 1.80                                   |
| 716                                   | 793   | 13.71  | 1.00                                     | 2.85                             | 0.47                                      | 2.45                                   |

| Solvency           |                                 |                   | Profitability             |              |                                  |            |                            |
|--------------------|---------------------------------|-------------------|---------------------------|--------------|----------------------------------|------------|----------------------------|
| Debt<br>Per<br>Cow | Leverage<br>Ratio <sup>d/</sup> | Percent<br>Equity | Debt/Asset Ratio          |              | Percentage<br>Rate of Return on: |            | Return<br>to<br>Management |
|                    |                                 |                   | Current &<br>Intermediate | Long<br>Term | Equity                           | Investment |                            |
| \$ 112             | 0.02                            | 0.29              | 0.00                      | 0.00         | -0.04                            | 0.02       | \$-20,282                  |
| 614                | 0.13                            | 0.41              | 0.06                      | 0.07         | 0.06                             | 0.07       | - 5,693                    |
| 1025               | 0.25                            | 0.48              | 0.12                      | 0.18         | 0.10                             | 0.09       | 151                        |
| 1382               | 0.37                            | 0.54              | 0.18                      | 0.30         | 0.13                             | 0.11       | 4,829                      |
| 1760               | 0.54                            | 0.59              | 0.24                      | 0.42         | 0.15                             | 0.13       | 8,676                      |
| 2119               | 0.71                            | 0.65              | 0.30                      | 0.51         | 0.17                             | 0.14       | 13,684                     |
| 2466               | 0.86                            | 0.73              | 0.35                      | 0.60         | 0.20                             | 0.16       | 19,165                     |
| 2808               | 1.08                            | 0.80              | 0.41                      | 0.69         | 0.23                             | 0.18       | 25,675                     |
| 3274               | 1.46                            | 0.88              | 0.51                      | 0.78         | 0.28                             | 0.21       | 35,322                     |
| 4248               | 2.80                            | 0.98              | 0.73                      | 1.05         | 0.45                             | 0.27       | 65,331                     |

| Efficiency (Capital)                         |  |                                 |                                   |                                |                                      |
|--|--|---------------------------------|-----------------------------------|--------------------------------|--------------------------------------|
| Capital<br>Turnover<br>(Years) <sup>e/</sup> | Cash<br>Expense<br>Structure <sup>f/</sup> | Income<br>Per Dollar<br>Expense | Mach. and<br>R. Estate<br>Per Cow | Total<br>Investment<br>Per Cow | Total<br>Investment<br>Per Man (000) |
| 1.3  | 0.07                                       | \$0.90                          | \$1.964                           | \$3,464                        | \$ 80                                |
| 1.5  | 0.11                                       | 1.07                            | 2.472                             | 4,165                          | 99                                   |
| 1.7  | 0.13                                       | 1.16                            | 2.754                             | 4,531                          | 112                                  |
| 1.8  | 0.15                                       | 1.23                            | 3,007                             | 4,835                          | 124                                  |
| 1.9  | 0.17                                       | 1.30                            | 3,247                             | 5,164                          | 135                                  |
| 2.0  | 0.18                                       | 1.37                            | 3,510                             | 5,493                          | 148                                  |
| 2.2  | 0.20                                       | 1.46                            | 3,808                             | 5,787                          | 159                                  |
| 2.4  | 0.22                                       | 1.54                            | 4,141                             | 6,238                          | 174                                  |
| 2.7  | 0.25                                       | 1.67                            | 4,590                             | 6,829                          | 193                                  |
| 3.7  | 0.30                                       | 1.91                            | 6,100                             | 8,414                          | 242                                  |

a/ Amount available for debt service per dollar of annual scheduled debt payment.

b/ Percent of debt with current and intermediate term (less than 10 years).

c/ Dollars income per dollar total income.

d/ Dollars of debt per dollar of equity.

e/ Capital investment per dollar of income.

f/ Percent of cash expenses that are fixed. Fixed expenses include taxes, insurance, interest and land, building and fence repair.