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DAIRY FARM MANAGEMENT

BUSINESS SUMMARY NEW YORK 1986

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INTRODUCTION

Dairy farm business summary (DFBS) projects are an integral part of Cornell Cooperative Extension's agriculture program in New York State. The Department of Agricultural Economics of the New York State College of Agriculture and Life Sciences, and County Extension staff, cooperate in sponsoring DFBS projects. In 1986, more than 500 dairy farmers participated. Business records submitted by dairy farmers from 45 counties in the State provide the basis for continued Extension educational programs, data for applied research studies, and for use in the classroom. Regardless of the use of the data, confidentiality of individual farm data is maintained.

Cooperative Extension agents and specialists enroll the cooperators and collect the records. Each cooperator receives a detailed summary and analysis of his or her business. More than 70 percent of the agents and specialists are using a micro computer in their offices and/or on the farm to process and return the individual farm business reports for immediate use. Regional reports are prepared by Cornell faculty and used by DFBS cooperators and other farmers to compare their farm with regional averages. The DFBS program helps farmers develop managerial skills and solve business management problems.

Records from the nine regions of the State have been combined and the total data set analyzed as an applied research study of the effects of changes in price, technology, and management on dairy farm incomes (Figure 1, page 2). This research provides current farm business information for use by dairy farmers, Cooperative Extension staff, teachers, and others concerned with the New York dairy industry.

A total of 414 farm business records are included in the main body of this report. These farms do NOT represent the "average" for all dairy farms in the State. Participation was on a voluntary basis, therefore, not all areas or types of operations were equally represented (Figure 1, page 2). The 414 farms represent a cross section of better than average commercial dairy farm owner-operators in the State. Dairy farm renters, dairy-cash crop farmers, and part-time dairy operators have been excluded from the main body of this report and summarized separately in the supplemental information section of the publication.

Features

Accrual procedures have been used to provide the most accurate accounting of farm receipts and farm expenses for measuring farm profits. An explanation of these procedures is found on page 8. Four measures of farm profits are calculated on pages 11 through 13. The balance sheet and cash flow statement are featured on pages 14 through 18.

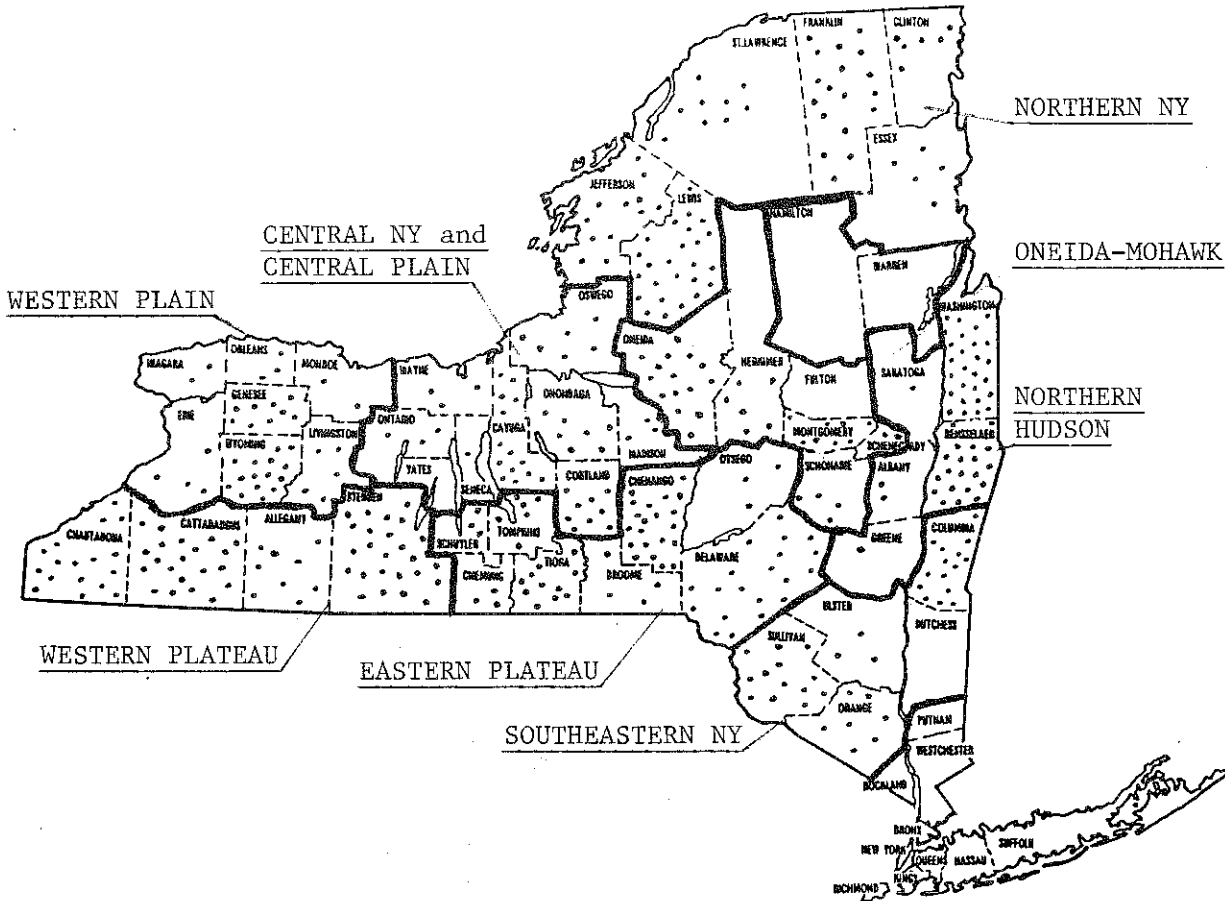
The dairy program analysis includes data on the costs of producing milk (pages 22-26) and separate farm business charts using data from freestall farms versus conventional stall dairy farms (pages 47-51).

Acknowledgements

The authors appreciate the outstanding assistance provided by the following staff members: Gregory Bogardo - programming, Joe Baldwin - artwork, Cindy Farrell - wordprocessing, and Beverly Carcelli - proofreading and distribution.

Figure 1.

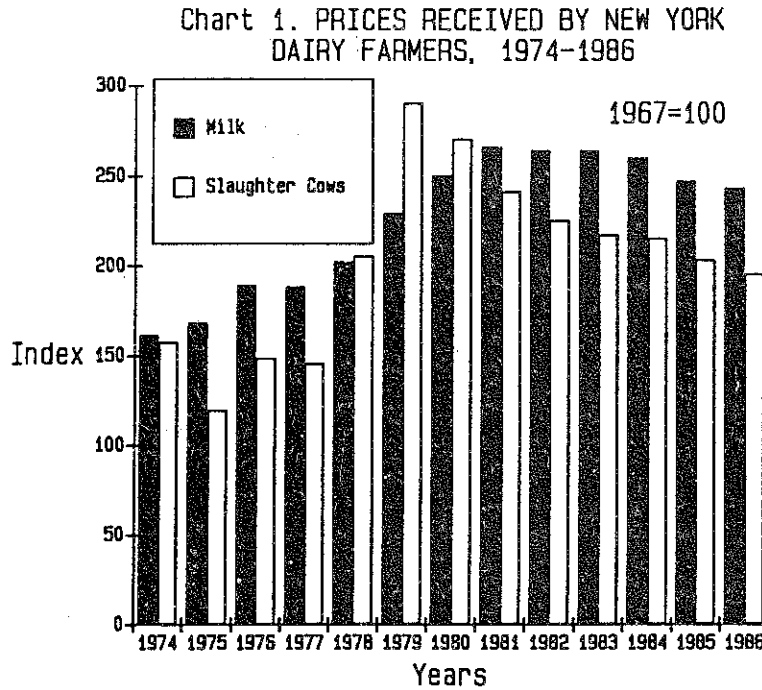
LOCATION OF THE 414 NEW YORK DAIRY FARMS
IN THE 1986 DAIRY FARM BUSINESS SUMMARY



1986 Regional Summary Publications

| <u>Region</u> | <u>Publications</u> | <u>Author(s)</u> |
|-------------------------------------|---------------------|---|
| Northern New York | A.E. Ext. 87-8 | William F. Lazarus |
| Western Plain Region | A.E. Ext. 87-9 | Stuart F. Smith |
| Eastern Plateau Region | A.E. Ext. 87-10 | Robert A. Milligan & Linda D. Putnam |
| Western Plateau Region | A.E. Ext. 87-11 | George L. Casler |
| Northern Hudson Region | A.E. Ext. 87-13 | Stuart F. Smith |
| Oneida-Mohawk Region | A.E. Ext. 87-14 | Eddy L. LaDue |
| Central New York & Central Plain | A.E. Ext. 87-15 | Wayne A. Knoblauch, Robert A. Milligan & Linda D. Putnam |
| Southeastern New York | A.E. Ext. 87-16 | Stuart F. Smith |

THE ECONOMIC ENVIRONMENT FACING NEW YORK DAIRY FARMERS



SOURCE: NYCERS, New York Crop and Livestock Report.

The prices dairy farmers receive for milk and slaughter cows have a major impact on dairy farm profits. Milk prices generally increased from 1974 to 1981. Since 1981, annual milk prices have been declining, although the average monthly farm price exceeded 1985 levels during the last five months of 1986. Slaughter cow prices hit a six-year low in 1975, peaked in 1979, and have declined throughout the 1980's.

Table 1. PRICES RECEIVED BY NEW YORK DAIRY FARMERS, 1974-1986

| Year | All Milk (\$/cwt) | Slaughter Cows (\$/cwt) | Monthly Farm Price of Milk (\$/cwt) | |
|------|----------------------|----------------------------|---|-------------|
| | | | 1985 | 1986 |
| 1974 | 8.39 | 27.10 | January | 14.00 12.50 |
| 1975 | 8.75 | 20.60 | February | 13.80 12.40 |
| 1976 | 9.83 | 25.40 | March | 13.30 12.00 |
| 1977 | 9.75 | 25.00 | April | 12.80 11.80 |
| 1978 | 10.50 | 35.30 | May | 12.30 11.60 |
| | | | June | 11.80 11.50 |
| 1979 | 11.90 | 49.80 | July | 12.30 12.10 |
| 1980 | 13.00 | 46.30 | August | 12.60 12.70 |
| 1981 | 13.80 | 41.30 | September | 12.80 13.20 |
| 1982 | 13.70 | 38.60 | October | 13.00 13.60 |
| 1983 | 13.70 | 37.20 | November | 12.90 13.70 |
| | | | December | 12.70 13.40 |
| 1984 | 13.50 | 36.90 | | |
| 1985 | 12.80 | 34.90 | | |
| 1986 | 12.60 | 33.60 | | |

SOURCE: NYCERS, New York Crop and Livestock Report.

Table 2. PRICES PAID BY NEW YORK FARMERS FOR SELECTED ITEMS, 1976-1986

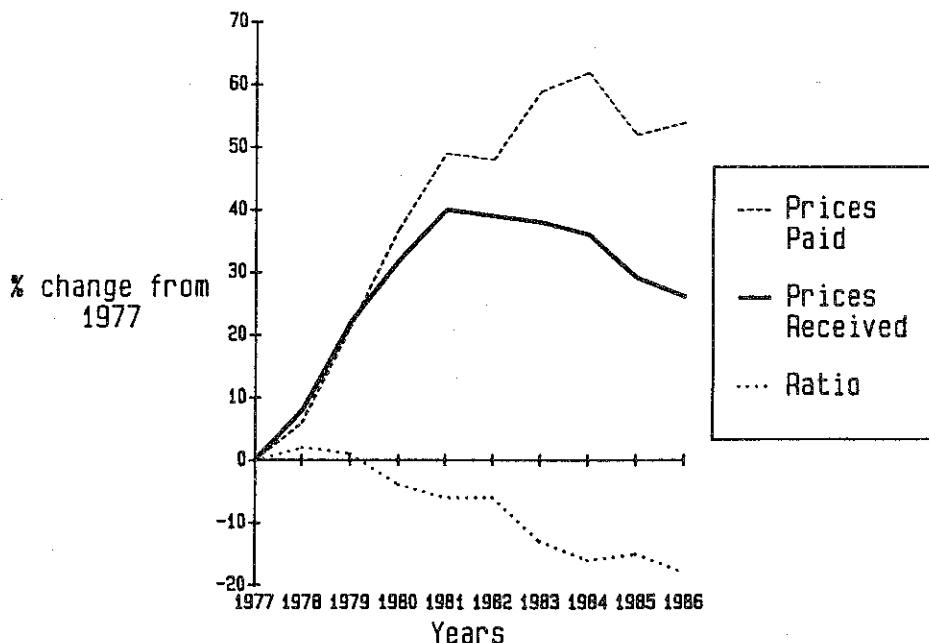
| Year | Mixed Dairy Feed 16% Protein (\$/ton) | Fertilizer, Urea, 45-46%N (\$/ton) | Seed Corn, Hybrid* (\$/bu) | Diesel Fuel (\$/gal) | Tractor 50-59 PTO* (\$) | Wage Rate All Hired Farm Workers (\$/hr) |
|------|---|---|-------------------------------------|----------------------------|-------------------------------|---|
| 1976 | 139.00 | 180 | 36.50 | 0.420 | 9,300 | 2.48 |
| 1977 | 139.40 | 180 | 40.00 | 0.481 | 10,000 | 2.53 |
| 1978 | 136.50 | 189 | 43.00 | 0.509 | 10,900 | 2.78 |
| 1979 | 156.80 | 213 | 45.50 | 0.723 | 12,000 | 2.88 |
| 1980 | 179.60 | 259 | 52.50 | 1.030 | 13,400 | 3.12 |
| 1981 | 193.70 | 275 | 60.00 | 1.310 | 14,900 | 3.26 |
| 1982 | 176.60 | 278 | 63.70 | 1.240 | 16,000 | 3.26 |
| 1983 | 192.60 | 249 | 64.60 | 1.140 | 17,200 | 3.52 |
| 1984 | 194.30 | 250 | 70.20 | 1.140 | 17,400 | 3.60 |
| 1985 | 164.20 | 238 | 67.30 | 1.080 | 16,800 | 4.00*** |
| 1986 | 162.90 | 200** | 65.60 | 0.840** | 16,600 | 4.41*** |

SOURCE: NYCERS, New York Agricultural Statistics. USDA, ASB, Agricultural Prices. *United States average. **Northeast region average. ***New York and New England combined.

The prices dairy farmers pay for a given quantity of goods and services has a major influence on farm production costs. The astute manager will keep close watch on unit costs and utilize the most economical goods and services.

The table above shows average prices of selected goods and services used on New York dairy farms. Chart 2 shows the ratio of prices received for milk and prices paid by New York dairy farmers as a percent change from 1977. The ratio has been on a downward trend since 1978 except for a slight increase in 1985.

Chart 2. RATIO OF PRICES RECEIVED FOR MILK AND PRICES PAID BY NEW YORK DAIRY FARMERS, 1977-1986



SOURCE: NYCERS, New York Agricultural Statistics.

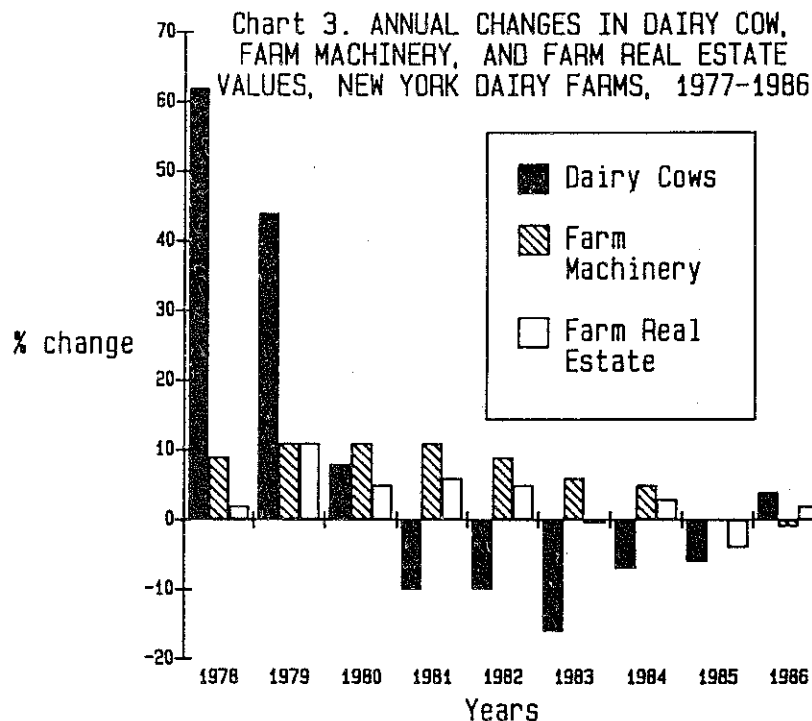
Inflation, farm profitability, supply and demand all have a direct impact on the inventory values on New York dairy farms. The table below shows year-end (December) prices paid for dairy cows (replacements), an index of these cow prices, an index of new machinery prices (U.S. average), the average per acre value of farmland and buildings reported in April (February for 1986), and an index of the real estate prices.

Table 3. VALUES OF NEW YORK DAIRY FARM INVENTORY ITEMS, 1977-1986

| Year | Dairy Cows | | Machinery* | Farm Real Estate | |
|------|------------|----------|------------|------------------|----------|
| | Value/Head | 1977=100 | 1977=100 | Value/Acre | 1977=100 |
| 1977 | \$ 495 | 100 | 100 | \$587 | 100 |
| 1978 | 800 | 162 | 109 | 600 | 102 |
| 1979 | 1,150 | 232 | 121 | 670 | 113 |
| 1980 | 1,240 | 251 | 134 | 720 | 119 |
| 1981 | 1,120 | 226 | 149 | 773 | 126 |
| 1982 | 1,010 | 204 | 163 | 821 | 132 |
| 1983 | 850 | 172 | 173 | 817 | 129 |
| 1984 | 790 | 160 | 181 | 842 | 133 |
| 1985 | 740 | 149 | 181 | 808 | 128 |
| 1986 | 770 | 156 | 179 | 824 | 131 |

SOURCE: USDA, ERS, Farm Real Estate Market Developments Outlook and Situation. NYCRC, New York Agricultural Statistics. USDA, ASB, Agricultural Prices. *United States average.

Several price trends were reversed in 1986. Dairy cow prices turned up after declining for five consecutive years, new machinery prices declined for the first time in eight years, and farm real estate values strengthened. All of these changes are associated with the gradual improvement in economic conditions on dairy farms.



SOURCE: USDA, ERS, Farm Real Estate Market Developments Outlook and Situation. NYCRC, New York Agricultural Statistics.

Table 4. COST AND RETURN ESTIMATES PER HUNDREDWEIGHT OF MILK
Specialized Dairy Farms by Region, United States, 1986 (Preliminary)

| Region | Returns/Cwt. | | Costs/Cwt. | | Return to Oper- ator's Mgmt. | Return to Labor, Mgmt. & Ownersh.** |
|---|--------------|---------|------------|---------|---------------------------------------|--|
| | Milk | Total | Variable | Total* | | |
| 1. Southern Plains (TEXAS) | \$13.65 | \$14.46 | \$8.32 | \$11.25 | \$3.21 | \$4.42 |
| 2. Upper Midwest (MN,WI,MI,SD) | 12.15 | 13.28 | 6.32 | 11.74 | 1.54 | 4.23 |
| 3. Northeast (NY,PA,OH,NEW ENGLAND) | 12.72 | 13.61 | 7.38 | 12.14 | 1.47 | 3.85 |
| 4. Pacific (CA,WA) | 11.83 | 12.53 | 7.61 | 9.43 | 3.10 | 3.81 |
| 5. Appalachia (KY,TN,VA,NC,GA) | 13.21 | 14.01 | 8.57 | 12.74 | 1.27 | 3.51 |
| 6. Corn Belt (IN,IL,IA,MO) | 12.27 | 13.18 | 7.21 | 12.69 | 0.49 | 3.39 |
| National Average | 12.42 | 13.36 | 7.14 | 11.70 | 1.66 | 3.96 |

SOURCE: USDA, ERS, Economic Indicators of the Farm Sector, Costs of Production, 1986 (preliminary).

*Total costs include allocated charges for unpaid labor and equity capital.

**Return to labor, management, and ownership excludes charges for unpaid labor and equity capital from total costs.

The Agriculture and Consumer Protection Act of 1973 directed the Secretary of Agriculture to make annual estimates of the costs of producing a number of major agricultural commodities. One of these is milk. The most recent set of estimates is for 1986 and was issued in 1987 as part of the Economic Indicators of the Farm Sector series by the ERS. Cost estimates were developed by the USDA for six major producing regions in the United States.

Over the past 10 years the differences in prices received for milk at the farm between regions have narrowed substantially. In 1986, the highest prices received nationally were in the South and the lowest in the Pacific region. The spread is now about \$1.82 per hundredweight. There are important differences in average production costs between regions. The USDA estimates are based on a consistent methodology and appear reasonable in relation to other data and information from the six designated regions. In 1986, the Southern Plains region showed the highest return to labor, management, and ownership. The Northeast is in third place and ahead of the Pacific region on this measure.

At Cornell University, the "whole farm data" method is used to compute the cost of producing milk. This method is based on the actual costs and returns reported by 414 dairy farmers which is quite different from the USDA's use of budget estimates. One could compare cost of production data from these two sources keeping in mind the different methodologies.

SUMMARY AND ANALYSIS OF THE FARM BUSINESS

Business Characteristics and Resources Used

Recognition of important business characteristics and identification of the farm resources used is necessary for evaluating management performance. The combination of resources and management practices is known as farm organization. Important farm business characteristics, the number of farms reporting these characteristics, and a listing of the average labor, land, and dairy cattle resources used are presented in the following table.

Table 5. BUSINESS CHARACTERISTICS AND RESOURCES USED
414 New York Dairy Farms, 1986

| <u>Type of Business</u> | <u>Number</u> | <u>Percent</u> | <u>Labor Force</u> | <u>Average</u> | <u>Percent</u> |
|-------------------------|---------------|----------------|--------------------------------|------------------------|----------------|
| Sole Proprietorship | 295 | 72 | Operators | 15.6 mo. | 42 |
| Partnership | 100 | 24 | Family | 4.7 mo. | 13 |
| Corporation | 18 | 4 | Family unpaid | 3.2 mo. | 8 |
| Other | 1 | <1 | Hired | <u>13.6 mo.</u> | <u>37</u> |
| | | | Total Months | 37.1 | 100 |
| <u>Barn Type</u> | | | | <u>Average</u> | |
| Stanchion | 259 | 62 | | | |
| Freestall | 144 | 35 | <u>Operators</u> (total = 539) | 1.30 | |
| Other | 11 | 3 | Age | 44 | |
| | | | Education | 13 yrs. | |
| <u>Milking System</u> | | | Estimated Value of | | |
| Bucket & Carry | 3 | 1 | Labor & Management | \$24,116 | |
| Dumping Station | 35 | 8 | | | |
| Pipeline | 228 | 55 | | | |
| Herringbone | 135 | 33 | | | |
| Other Parlor | 13 | 3 | | | |
| | | | <u>Land Used</u> | <u>Farms Reporting</u> | |
| <u>Business Records</u> | <u>Number</u> | <u>Percent</u> | Total acres: | <u>Number</u> | <u>Average</u> |
| Account Book | 191 | 46 | Owned | 414 | 347 |
| Agrifax (mail in) | 67 | 16 | Rented | 349 | 269 |
| ELFAC | 36 | 9 | Tillable acres: | | |
| On-Farm Computer | 36 | 9 | Owned | 414 | 188 |
| Other | 84 | 20 | Rented | 344 | 121 |
| | | | Total | 414 | 288 |
| <u>Dairy Records</u> | <u>Number</u> | <u>Percent</u> | Number of | | |
| D.H.I.C. | 299 | 72 | <u>Dairy Livestock</u> | <u>Cows</u> | <u>Heifers</u> |
| Owner Sampler | 54 | 13 | Beginning of Year | 94 | 77 |
| Other | 18 | 4 | End of Year | 97 | 78 |
| None | 43 | 11 | Average for Year | 95 | 77 |

The sole proprietorship, conventional stall barn, pipeline milking system, farm business account book, and DHIC record system continue to prevail on these dairy farms.

There were 539 full-time operator equivalents on the 414 dairy farms for an average of 1.30 operators per farm. The operators averaged 44 years of age and 13 years of formal education. Additional data on the labor force is in Table 38. All 414 farm businesses included in the regular dairy summary own farm real estate. Dairy farm renters are summarized separately later in this publication. However, 344 of the dairy farm owners rented an average of 121 acres of tillable land in 1986. The 414 farms averaged 288 total tillable acres per farm of which 100 acres were rented. Tables 20 and 26 contain additional information on land use and the dairy herd.

Accounting Procedures

Accrual accounting is used for measuring farm profitability. It is a more accurate method than cash accounting when examining the profitability of a business in a particular year. Cash expenses and receipts are used when evaluating the cash flow position of the business.

The accrual accounting system considers changes in accounts payable and receivable and changes in inventory of not only such items as crop and livestock inventory but also the inventory of production items such as fertilizer, seed, and fuel. In this manner, the total costs of production and the total value of production are obtained to provide an accurate representation of profitability in that year.

Accrual accounting is complimented by accounting procedures used to separate changes in inventory into changes caused by price and those caused by quality or quantity changes. Separating price changes (appreciation) from physical changes in the farm inventory are important in determining farm profitability. Appreciation of farm assets are included in the return to farm capital but excluded from the return to labor and management

Income Statement

The accrual income statement on the following page begins with an accounting of all farm business expenses. Farm business expenditures are grouped into seven major categories.

Hired labor includes gross wages plus the farm share of social security, workmen's compensation insurance, health insurance, and other employee benefits paid by the farm employer.

Feed expenses are divided into purchased dairy grain and concentrate, purchased dairy roughage, and all feed purchased for other livestock to allow more thorough analysis of dairy herd feeding costs. The costs of growing grain and roughage are not included in cash and accrual feed expenses.

Machinery costs represent all the operating costs of using power machinery on the farm. Ownership costs are excluded here but are included in the analysis of machinery costs.

Livestock expenses include the cost of supplies and services directly associated with the care and maintenance of the dairy herd, plus milk marketing costs. The purchase of replacement cattle is considered a herd maintenance expense while expansion livestock is not.

Crop expenses include the costs of fertilizer, lime, seeds, pesticides, and other crop supplies.

Real estate expenses are the direct costs associated with owning and maintaining farmland and buildings.

Other includes the farm share of utilities, interest paid on all farm indebtedness, and miscellaneous costs. Total operating expenses exclude expansion livestock and machinery and building depreciation. These nonoperating costs are included in total expenses. Depreciation charges are based on income tax figures.

Cash and accrual farm expenses are summarized below. Total operating accrual expenses for the 414 farms averaged \$472 per day or \$4.97 per cow per day. Total accrual expenses averaged more than \$540 per day. The average expenses per farm and percent of total for each item are shown below.

Table 6.

CASH AND ACCRUAL FARM EXPENSES
414 New York Dairy Farms, 1986

| Expense Item | Cash Paid + | Change in Inventory + | Change in Accounts Payable = | Accrual Expenses | Percent |
|---------------------------|----------------|--------------------------|------------------------------------|---------------------|----------|
| <u>Hired Labor</u> | \$ 21,239 | | \$ 42 | \$ 21,281 | 12 |
| <u>Feed</u> | | | | | |
| Dairy grain & conc. | 46,540 | \$-918 | 167 | 45,789 | 27 |
| Dairy roughage | 1,705 | -91 | 205 | 1,819 | 1 |
| Other livestock | 729 | 29 | 2 | 760 | <1 |
| <u>Machinery</u> | | | | | |
| Mach. hire, rent/lease | 1,801 | | 37 | 1,838 | 1 |
| Machinery repairs/parts | 9,689 | -40 | 11 | 9,660 | 6 |
| Auto expense (farm share) | 565 | | 0 | 565 | <1 |
| Fuel, oil & grease | 5,380 | -11 | -87 | 5,282 | 3 |
| <u>Livestock</u> | | | | | |
| Replacement livestock | 1,962 | | 2 | 1,964 | 1 |
| Breeding | 2,892 | -11 | -33 | 2,848 | 2 |
| Vet & medicine | 4,285 | | 15 | 4,300 | 3 |
| Milk marketing | 12,942 | | 24 | 12,966 | 8 |
| Cattle lease/rent | 81 | | -1 | 80 | <1 |
| Other livestock expense | 7,905 | 37 | 46 | 7,988 | 5 |
| <u>Crops</u> | | | | | |
| Fertilizer & lime | 7,407 | 96 | 33 | 7,536 | 4 |
| Seeds & plants | 3,338 | -51 | -15 | 3,272 | 2 |
| Spray, other crop exp. | 2,954 | 71 | 15 | 3,040 | 2 |
| <u>Real Estate</u> | | | | | |
| Land/bldg./fence repair | 2,449 | -41 | 30 | 2,438 | 1 |
| Taxes | 4,956 | | 120 | 5,076 | 3 |
| Insurance | 3,415 | | 6 | 3,421 | 2 |
| Rent & lease | 3,855 | | 39 | 3,894 | 2 |
| <u>Other</u> | | | | | |
| Telephone (farm share) | 770 | | 0 | 770 | <1 |
| Electricity (farm share) | 5,158 | | 29 | 5,187 | 3 |
| Interest paid | 18,026 | | 88 | 18,114 | 11 |
| Miscellaneous | <u>2,467</u> | <u>90</u> | <u>-5</u> | <u>2,552</u> | <u>1</u> |
| Total Operating | \$172,510 | \$-840 | \$770 | \$172,440 | 100 |
| Expansion livestock | \$ 1,218 | | \$ 9 | \$ 1,228 | |
| Machinery depreciation | | | | 15,545 | |
| Building depreciation | | | | <u>8,135</u> | |
| TOTAL ACCRUAL EXPENSES | | | | \$197,348 | |

Cash paid is the actual amount of money paid out during the year and does not necessarily represent the cost of goods and services actually used.

Accrual expenses are the costs of inputs actually used in this year's production. The value of feed and supplies used out of inventory are included as are the costs of inputs purchased but not paid for (net increases in accounts payable). Items paid for and not used (net additions to inventory) are excluded from accrual expenses as are payments made on inputs used in a prior year (net decreases in accounts payable).

Cash and accrual farm receipts are presented in the following table. Total cash receipts averaged \$216,313 per farm. Total accrual receipts averaged \$221,201 per farm and \$2,328 per cow. Accrual receipts were greater than cash receipts primarily due to dairy herd growth. Cow numbers increased an average of three head per farm and heifer numbers increased from 77 to 78. The increase in homegrown feed (change in crop inventory) was very small in 1986 and averaged only \$71 per additional cow.

Table 7. CASH AND ACCRUAL FARM RECEIPTS
414 New York Dairy Farms, 1986

| Receipt Item | Cash Receipts | + Change in Inventory | + Change in Accounts Receivable | = Accrual Receipts | Percent |
|---------------------------|---------------|-----------------------|---------------------------------|--------------------|---------|
| Milk sales | \$193,611 | | \$ 911 | \$194,522 | 88 |
| Dairy cattle | 11,919 | \$3,336 | 175 | 15,431 | 7 |
| Dairy calves | 2,378 | | 0 | 2,378 | 1 |
| Other livestock | 582 | -14 | 5 | 573 | <1 |
| Crops | 1,857 | 214 | 232 | 2,303 | 1 |
| Government receipts | 3,220 | | 109 | 3,329 | 2 |
| Custom machine work | 251 | | -19 | 232 | <1 |
| Gas tax refund | 147 | | 5 | 152 | <1 |
| Other | 2,348 | | 123 | 2,471 | 1 |
| - Nonfarm noncash capital | | 190 | | 190 | |
| Total | \$216,313 | \$3,346 | \$1,541 | \$221,201 | 100 |

Cash receipts includes the gross value of milk checks received during the year plus all other payments received for the sale of farm products, services, and government programs.

Accrual receipts represent the value of all farm commodities produced and services actually provided by the farmer during the year. Increases in livestock inventory caused by herd growth and/or quality, are included as accrual receipts. Decreases in inventory caused by herd reduction are deducted. Changes in inventories of crops grown are accounted for in accrual receipts. Changes in accounts receivable include the difference between the January milk check for this December's marketings and the previous January's check, and other delayed payments.

Nonfarm noncash capital are gifts and inheritances of cattle and crops received by the farm owner/operator, and included in inventory or used in the business during the year. They are deducted from growth in inventory and reduce accrual receipts because they came from outside the farm business. Gift and inheritances of machinery and real estate are accounted for in Table 15.

Profitability Analysis

Farm owners/operators contribute labor, management, and capital to their businesses. The best combination of these resources produces optimum profits. Farm profits can be measured as the return to all family resources or as the return to one or more individual resources such as labor and management.

Net farm income is the total combined return to the farm operator(s) and other unpaid family members for their labor, management, and equity capital. It is the farm family's net annual return from working, managing, financing, and owning the farm business. This is not a measure of cash available from the year's business operation. Cash flow is evaluated later in this report.

Net farm income is computed with and without appreciation. Appreciation represents the change in farm inventory values caused by changes in prices during the year. Appreciation is a major factor contributing to changes in farm net worth and must be included in the profitability analysis.

Table 8. NET FARM INCOME
414 New York Dairy Farms, 1986

| Item | Average 414 Farms | Average Top 10% Farms* |
|--|----------------------|---------------------------|
| Total accrual receipts | \$221,201 | \$626,782 |
| + Appreciation: Livestock | 1,689 | -2,127 |
| Machinery | 4,165 | 6,579 |
| Real Estate | 10,979 | 15,388 |
| Other Stock/Cert. | <u>70</u> | <u>-1,301</u> |
| = Total including appreciation | \$238,104 | \$645,321 |
| - Total accrual expenses | <u>197,348</u> | <u>514,297</u> |
| = Net Farm Income (with appreciation) | \$ 40,756 | \$131,024 |
| Net Farm Income (without appreciation) | \$ 23,853 | \$112,485 |

*Average of 41 farms with highest net farm incomes (without appreciation).

Return to operator(s') labor, management, and equity capital measures the total business profits for the farm operators. It is calculated by deducting a charge for unpaid family labor from net farm income. Operator(s') labor is not included in unpaid family labor. Return to operator(s') labor, management, and equity capital has been compiled with and without appreciation. Appreciation is considered an important part of the return to ownership of farm assets.

Table 9. RETURN TO OPERATOR(S') LABOR, MANAGEMENT, AND EQUITY
414 New York Dairy Farms, 1986

| Item | Average 414 Farms | | Average Top 10% Farms | |
|---|-------------------|--------------------|-----------------------|--------------------|
| | With Apprec. | Without Apprec. | With Apprec. | Without Apprec. |
| Net farm income | \$40,756 | \$23,853 | \$131,024 | \$112,485 |
| - Family labor unpaid @ \$600 per month | <u>1,926</u> | <u>1,926</u> | <u>702</u> | <u>702</u> |
| = Return to Operator(s') Labor, Management, & Equity | \$38,830 | \$21,927 | \$130,322 | \$111,783 |

Labor and management income is the share of net farm income without appreciation returned to the operator(s') labor and management. Appreciation is not included as part of the return to labor and management. Labor and management income is determined by deducting the cost of using equity capital at a real interest rate of five percent, from the return to operator(s') labor, management, and equity capital excluding appreciation. The interest charge reflects the long-term average rate of return that a farmer might expect to earn in comparable risk investments in a low inflation economy.

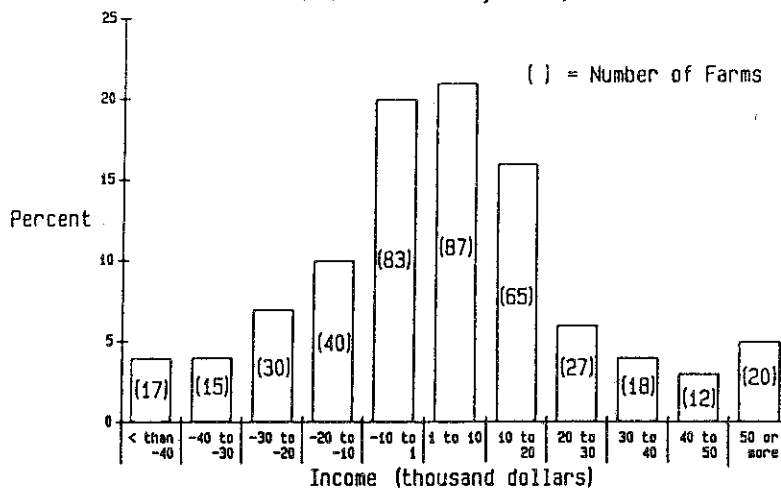
Labor and management income per operator measures the return to one full-time operator's labor and management. A full-time operator provides 12 months of labor and management.

Table 10. LABOR AND MANAGEMENT INCOME
414 New York Dairy Farms, 1986

| Item | Average 414 Farms | Average Top 10% Farms |
|--|----------------------|--------------------------|
| Return to operator(s') labor, management, & equity without appreciation | \$21,927 | \$111,783 |
| - Real interest @ 5% on \$338,772 equity capital for average & \$810,644 for the top 10% | <u>16,939</u> | <u>40,532</u> |
| = Labor & Management Income (1.30 operators) | \$ 4,988 | (1.79) \$ 71,251 |
| Labor & Management Income per Operator | \$ 3,837 | \$ 39,805 |

Labor and management income per operator averaged \$3,837 on these 414 dairy farms in 1986. The range in labor and management income per operator was from less than -\$50,000 to more than \$60,000. Returns to labor and management were negative on 45 percent of the farms. Labor and management income per operator ranged from \$0 to \$19,999 on 37 percent of the farms while only 18 percent showed labor and management incomes of \$20,000 or more per operator.

Chart 4. DISTRIBUTION OF LABOR AND MANAGEMENT
INCOMES PER OPERATOR
414 New York Dairy Farms, 1986



Return on equity capital measures the net return remaining for the farmer's equity or owned capital after a charge has been made for the owner-operator's labor and management. The earnings or amount of net farm income allocated to labor and management is the opportunity cost or value of operator(s') labor and management estimated by the cooperators. Return on equity capital is calculated with and without appreciation. The rate of return on equity capital is determined by dividing the amount returned by the end of year farm net worth or equity capital.

Table 11. RETURN ON EQUITY CAPITAL
414 New York Dairy Farms, 1986

| Item | Average 414 Farms | Average Top 10% Farms |
|---|----------------------|--------------------------|
| Return to operator(s') labor, management, & equity capital with appreciation | \$38,830 | \$130,322 |
| - Value of operator(s') labor & management | <u>24,116</u> | <u>40,680</u> |
| = Return on Equity Capital With Appreciation | \$14,714 | \$ 89,642 |
| Rate of Return on Equity Capital With Appreciation | 4.3% | 11.1% |
| Return on Equity Capital Without Appreciation | \$-2,189 | \$71,103 |
| Rate of Return Without Appreciation | -0.6% | 8.8% |

The rate of return on all capital can be computed by adding interest paid to the return on equity capital and dividing by total farm assets. It averaged 6.0 percent including appreciation and 2.9 percent not including appreciation on these farms in 1986.

Returns Per Unit of Input

Income from a business can also be calculated in relation to various input units. For example, the labor and management return can be allocated to the entire labor force and figured on a per worker basis.

Table 12. RETURNS TO ALL LABOR AND MANAGEMENT
414 New York Dairy Farms, 1986

| Item | Average |
|--|--------------|
| Labor & management income per farm | \$ 4,988 |
| + Cost of hired labor | 21,281 |
| + Value of unpaid family labor | <u>1,926</u> |
| = Total Returns to All Labor & Management | \$28,195 |
| Average worker equivalent | 3.09 |
| Returns per worker equivalent | \$9,125 |
| Returns per hour (3,000 hours/worker/year) | \$3.04 |

Farm and Family Financial Status

Evaluating the financial status of the farm business and the farm family is an important part of business analysis. The first step is to inventory all the assets, determine all the liabilities, and fill out the balance sheet. The second step is to analyze the completed balance sheet by evaluating the relationships between assets and liabilities and changes made during the year.

Table 13. 1986 FARM BUSINESS AND NONFARM BALANCE SHEET
414 New York Dairy Farms, 1986

| Farm Assets | | | Farm Liabilities & Net Worth | | |
|--------------------------------|-----------|-----------|------------------------------|-----------|-----------|
| | Jan. 1 | Dec. 31 | | Jan. 1 | Dec. 31 |
| <u>Current</u> | | | <u>Current</u> | | |
| Farm cash, checking & savings | \$ 3,283 | \$ 4,120 | Accounts payable | \$ 5,563 | \$ 6,346 |
| Accounts rec. | 16,556 | 18,136 | Operating debt | 3,783 | 4,598 |
| Feed & supplies | 42,670 | 43,722 | Short-term | 2,391 | 3,028 |
| Total | \$62,509 | \$65,978 | Total | \$11,737 | \$13,972 |
| <u>Intermediate</u> | | | <u>Intermediate</u> | | |
| Dairy cows: | | | Structured debt | | |
| owned | \$ 76,901 | \$ 80,350 | 1-10 years | \$77,488 | \$76,988 |
| leased | 8 | 20 | Financial lease | | |
| Heifers | 31,276 | 32,817 | (cattle/mach.) | 714 | 744 |
| Bulls/other lvstk. | 1,028 | 1,050 | FLB & PCA stock | 4,071 | 4,107 |
| Mach./eq. owned | 99,365 | 100,393 | Total | \$82,273 | \$81,839 |
| Mach./eq. leased | 705 | 725 | | | |
| FLB & PCA stock | 4,071 | 4,107 | <u>Long-Term</u> | | |
| Coop stock & cert. | 5,871 | 7,449 | Structured debt | | |
| Total | \$219,226 | \$226,910 | ≥10 years | \$112,666 | \$112,559 |
| | | | Financial lease | | |
| <u>Long-Term</u> | | | (structures) | 2,163 | 2,199 |
| Land/buildings: | | | Total | \$114,830 | \$114,758 |
| owned | \$253,576 | \$264,392 | | | |
| leased | 2,163 | 2,199 | Total Farm Liab. | \$208,840 | \$210,570 |
| Total | \$255,739 | \$266,591 | | | |
| | | | FARM NET WORTH | \$328,634 | \$348,909 |
| Total Farm Assets | \$537,474 | \$559,479 | | | |
| | | | <u>Nonfarm Liabilities*</u> | | |
| <u>Nonfarm Assets*</u> | | | <u>& Net Worth</u> | | |
| | Jan. 1 | Dec. 31 | | Jan. 1 | Dec. 31 |
| Personal cash, chkg. & savings | \$ 6,229 | \$ 6,614 | Nonfarm Liab. | \$1,595 | \$1,694 |
| Cash value life ins. | 4,006 | 3,867 | NONFARM NET WORTH | \$40,248 | \$43,120 |
| Nonfarm real estate | 10,076 | 10,640 | | | |
| Auto (personal sh.) | 2,699 | 3,198 | <u>FARM & NONFARM*</u> | | |
| Stocks & bonds | 6,973 | 7,823 | Total Assets | \$579,317 | \$604,293 |
| Household furn. | 8,236 | 8,590 | Total Liabilities | 210,435 | 212,264 |
| All other | 3,625 | 4,081 | | | |
| Total Nonfarm | \$41,843 | \$44,814 | TOTAL FARM & NON- | | |
| | | | FARM NET WORTH | \$368,882 | \$392,029 |

*Average of 268 farms completing the nonfarm balance sheet.

Financial lease obligations are included in the balance sheet. The present values of all future payments are listed as liabilities since the farmer (lessee) is committed to make the payments. The present values are also listed as assets, representing the future value the item has to the business.

The balance sheet analysis continues by examining financial and debt ratios and factors measuring levels of debt. Percent equity is calculated by dividing net worth by assets. Equity increases as the value of assets increase more than liabilities. The debt to asset ratio is compiled by dividing liabilities by assets. Low debt to asset ratios reflect strength in solvency and the potential capacity to borrow. The debt analysis ratios show how well the debt is structured and managed. Debt levels per unit of production include some old standards that are still useful if used with measures of cash flow and repayment ability. Thirteen farms reported no farm liabilities.

Table 14. BALANCE SHEET ANALYSIS
414 New York Dairy Farms, 1986

| Item | Average 414 Farms | Average Top 10% Farms | | |
|---|----------------------|----------------------------|---------|----------------------------|
| <u>Financial Ratios - Farm:</u> | | | | |
| Percent equity | 62% | 65% | | |
| Debt/asset ratio: total | 0.38 | 0.35 | | |
| long-term | 0.43 | 0.40 | | |
| inter. & current | 0.33 | 0.31 | | |
| <u>Financial Ratios - Farm & Nonfarm:</u> | | | | |
| Percent equity | 64% | 65% | | |
| Total debt/asset ratio | 0.36 | 0.35 | | |
| <u>Farm Debt Analysis:</u> | | | | |
| Accts. payable as % of total debt | 3% | 2% | | |
| Long-term liab. as % of total debt | 54% | 50% | | |
| Current & int. liab. as % of tot. debt | 46% | 50% | | |
| | | | | |
| | Per Cow | Per Tillable Acre Owned | Per Cow | Per Tillable Acre Owned |
| <u>Farm Debt Levels:</u> | | | | |
| Total farm debt | \$2,171 | \$1,120 | \$1,880 | \$1,114 |
| Long-term debt | 1,183 | 610 | 939 | 556 |
| Intermediate & current debt | 988 | 510 | 941 | 558 |

The Farm Inventory Balance accounts for the changes in the values of major farm assets from the beginning to the end of the year.

Table 15. FARM INVENTORY BALANCE
414 New York Dairy Farms, 1986

| Item | Real Estate | Machinery/Equip. | Livestock |
|---------------------------------|-------------|------------------|-----------|
| Value beg. of year | \$253,576 | \$99,365 | \$109,206 |
| Purchases | \$10,915* | \$12,891 | |
| + Nonfarm noncash transfer** | 1,114 | 55 | |
| - Lost capital | 2,468 | | |
| - Sales | 1,179 | 539 | |
| - Depreciation | 8,135 | 15,545 | |
| = Net investment | 247 | -3,138 | 3,322 |
| + Appreciation | 10,569*** | 4,165 | 1,689 |
| Value end of year | \$264,392 | \$100,393 | \$114,217 |

*\$3,578 land and \$7,337 buildings and/or depreciable improvements.

**Gifts and inheritances of property transferred into the farm business from outside.

***Excludes \$410 of appreciation on assets sold during the year.

Cash Flow Summary and Analysis

Completing an annual cash flow summary and analysis is important to determine how well the cash generated by the business, plus that brought in from outside, met the annual cash needs of the business and the farm family. Understanding last year's cash flow is the first step toward planning and managing cash flow for the current and future years.

The Annual Cash Flow Statement is structured to compare all the cash inflows with all the cash outflows for the year. Cash inflows include all the cash farm receipts, receipts from the sale of farm assets, additional funds borrowed, cash used in the business from the sale of nonfarm capital, as well as the amount of cash available at the beginning of the year. Cash outflows include all the cash farm expenses, capital purchases, principal payments, money taken out of the business, and the cash balance left at year's end. When all the cash inflows and outflows are correct, the statement will balance. The positive imbalance of \$5,739 indicates that on average, farms had more inflows than were accounted for by outflows.

Table 16.

ANNUAL CASH FLOW STATEMENT
414 New York Dairy Farms, 1986

| <u>Item</u> | Average 414 Farms | Average Top 10% Farms |
|---|----------------------|--------------------------|
| <u>Cash Inflows</u> | | |
| Beginning farm cash, checking & savings | \$ 3,283 | \$ 5,031 |
| Cash farm receipts | 216,312 | 594,614 |
| Sale of assets: Machinery | 539 | 2,344 |
| Real estate | 1,208 | 252 |
| Other stock & certificates | 621 | 2,218 |
| Money borrowed (intermediate & long-term) | 33,294 | 129,437 |
| Money borrowed (short-term) | 2,397 | 7,249 |
| Increase in operating debt | 816 | 9,034 |
| Nonfarm income | 4,859 | 2,243 |
| Cash from nonfarm capital | 1,688 | 504 |
| Money borrowed - nonfarm | <u>375</u> | <u>536</u> |
| Total | \$265,392 | \$753,462 |
| <u>Cash Outflows</u> | | |
| Cash farm expenses | \$172,511 | \$460,037 |
| Capital purchases: Expansion livestock | 1,218 | 5,955 |
| Machinery | 12,891 | 37,034 |
| Real estate | 10,915 | 45,250 |
| Other stock & certificates | 2,129 | 13,719 |
| Principal payments (intermediate & long-term) | 33,902 | 115,225 |
| Principal payments (short-term) | 1,759 | 5,199 |
| Decrease in operating debt | 0 | 0 |
| Nonfarm debt payments | 574 | 1,891 |
| Personal withdrawals & family expenditures | 19,634 | 47,905 |
| Ending farm cash, checking & savings | <u>4,120</u> | <u>9,030</u> |
| Total | \$259,653 | \$741,245 |
| Imbalance (error) | \$ 5,739 | \$ 12,217 |

Table 17.

ANNUAL CASH FLOW BUDGETING DATA
414 New York Dairy Farms, 1986

| Item | Average 414 Farms | | Average Top 10% Farms | |
|--|-------------------|------------|-----------------------|------------|
| | Total | Per Cow | Total | Per Cow |
| Average number of cows | 94.7 | | 232.3 | |
| <u>Accrual Operating Receipts</u> | | | | |
| Milk | \$194,522 | \$2,055 | \$539,217 | \$2,321 |
| Dairy cattle | 15,431 | 163 | 48,326 | 208 |
| Dairy calves | 2,378 | 25 | 5,703 | 25 |
| Other livestock | 573 | 6 | 788 | 3 |
| Crops | 2,303 | 24 | 16,421 | 71 |
| Miscellaneous receipts | <u>6,184</u> | <u>65</u> | <u>16,327</u> | <u>70</u> |
| Total | \$221,391 | \$2,338 | \$626,782 | \$2,698 |
| <u>Accrual Operating Expenses</u> | | | | |
| Hired labor | \$ 21,281 | \$ 225 | \$ 74,532 | \$ 321 |
| Dairy grain & concentrate | 45,789 | 484 | 125,159 | 539 |
| Dairy roughage | 1,819 | 19 | 5,983 | 26 |
| Other livestock feed | 760 | 8 | 444 | 2 |
| Machinery hire/rent/lease | 1,838 | 19 | 3,524 | 15 |
| Machinery repairs/parts & auto | 10,225 | 108 | 25,216 | 108 |
| Fuel, oil & grease | 5,282 | 56 | 11,788 | 51 |
| Replacement livestock | 1,964 | 21 | 2,496 | 11 |
| Breeding | 2,848 | 30 | 7,852 | 34 |
| Vet & medicine | 4,300 | 45 | 12,797 | 55 |
| Milk marketing | 12,966 | 137 | 33,781 | 145 |
| Cattle lease | 80 | 1 | 276 | 1 |
| Other livestock expense | 7,988 | 84 | 21,235 | 91 |
| Fertilizer & lime | 7,536 | 80 | 19,899 | 86 |
| Seeds & plants | 3,272 | 34 | 8,854 | 38 |
| Spray/other crop expense | 3,040 | 32 | 9,137 | 39 |
| Land, building, fence repair | 2,438 | 26 | 6,429 | 28 |
| Taxes | 5,076 | 54 | 9,481 | 41 |
| Insurance | 3,421 | 36 | 6,598 | 28 |
| Real estate rent/lease | 3,894 | 41 | 8,598 | 37 |
| Utilities | 5,957 | 63 | 12,819 | 55 |
| Miscellaneous | <u>2,552</u> | <u>27</u> | <u>7,142</u> | <u>31</u> |
| Total Less Interest Paid | \$154,326 | \$1,630 | \$414,038 | \$1,782 |
| <u>Net Accrual Operating Income</u> | | | | |
| (without interest paid) | \$67,065 | \$708 | \$212,744 | \$916 |
| - Change in livestock/crop inv. | 3,346 | 37 | 24,873 | 107 |
| - Change in accounts rec. | 1,541 | 16 | 7,294 | 31 |
| + Change in feed/supply inv. | -840 | -9 | -5,867 | -25 |
| + Change in accounts payable* | <u>682</u> | <u>8</u> | <u>1,070</u> | <u>5</u> |
| NET CASH FLOW | \$62,020 | \$654 | \$175,780 | \$758 |
| - Net personal withdrawals & family expenditures | <u>14,400</u> | <u>152</u> | <u>45,126</u> | <u>194</u> |
| Available for Farm Debt | | | | |
| Payments & Investments | \$47,620 | \$502 | \$130,654 | \$564 |
| - Farm Debt Payments | <u>54,275</u> | <u>573</u> | <u>162,269</u> | <u>698</u> |
| Avail. for Farm Investments | \$-6,655 | \$-71 | \$-31,615 | \$-134 |
| - Capital Purchases: cattle, machinery & improvements | <u>27,163</u> | <u>287</u> | <u>101,958</u> | <u>439</u> |
| Capital Deficit | \$-33,818 | \$-358 | \$-133,573 | \$-573 |

*Excludes change in interest account payable.

Repayment Analysis

The second step in cash flow planning is to compare and evaluate debt payments planned and made last year, and estimate the payments required in the current year. It is helpful to compare and evaluate a farm's repayment position by using debt payments per unit of production and receipt/debt payment ratios. The data presented below are for the 293 farms that completed Dairy Farm Business Summaries for both 1985 and 1986.

Table 18. FARM DEBT PAYMENTS PLANNED
New York Dairy Farms, 1986

| Debt Payments | Same 293 Dairy Farms | | | Same 30 Top 10% Farms | | |
|-------------------------------------|----------------------|--------------|-----------------|-----------------------|--------------|-----------------|
| | 1986 Payments | | Planned 1987 | 1986 Payments | | Planned 1987 |
| | Planned | Made | | Planned | Made | |
| Long-term | \$16,111 | \$22,813 | \$15,564 | \$30,045 | \$ 59,928 | \$28,759 |
| Intermediate-term | 22,963 | 31,640 | 22,868 | 51,519 | 88,279 | 41,276 |
| Short-term | 2,516 | 2,175 | 2,379 | 8,458 | 7,432 | 8,051 |
| Operating (net reduction) | 755 | 0 | 889 | 167 | 0 | 260 |
| Accounts payable (net reduction) | <u>1,138</u> | <u>1,362</u> | <u>1,167</u> | <u>707</u> | <u>3,746</u> | <u>4,175</u> |
| Total | \$43,484 | \$57,990 | \$42,868 | \$90,895 | \$159,385 | \$82,521 |
| Per cow | \$429 | \$572 | | \$391 | \$686 | |
| Per cwt. 1986 milk | \$2.62 | \$3.49 | | \$2.16 | \$3.80 | |
| Percent of total 1986 receipts | 18% | 24% | | 15% | 26% | |
| Percent of 1986 milk receipts | 21% | 28% | | 17% | 30% | |

The Cash Flow Coverage Ratio measures the ability of the farm business to meet its planned debt payment schedule. The ratio shows the percentage of last year's planned payments that could have been made with last year's available cash flow.

Table 19. CASH FLOW COVERAGE RATIO
New York Dairy Farms, 1986

| Item | Same 293 Dairy Farms | Same 30 Top 10% Farms |
|---|-------------------------|--------------------------|
| Cash farm receipts | \$234,850 | \$587,426 |
| - Cash farm expenses | 187,145 | 458,187 |
| + Interest paid | 19,054 | 38,779 |
| - Net personal withdrawals from farm* | <u>15,973</u> | <u>44,202</u> |
| (A) = Amount Available for Debt Service | \$ 50,786 | \$123,816 |
| (B) = Debt Payments Planned for 1986 | \$ 43,484 | \$ 90,895 |
| (A ÷ B) = Cash Flow Coverage Ratio for 1986 | 1.17 | 1.36 |

*Personal withdrawals and family expenditures less nonfarm income and nonfarm money borrowed. If family withdrawals are excluded the cash flow coverage ratio will be incorrect.

Cropping Program Analysis

The cropping program is an important part of the dairy farm business that sometimes is overlooked and neglected. A complete evaluation of available land resources, how they are being used, how well crops are producing and what it costs to produce them, is required to evaluate alternative cropping and feed purchase choices.

Table 20. LAND RESOURCES AND CROP PRODUCTION
414 New York Dairy Farms, 1986

| Item | Average 414 Farms | | | Average Top 10% Farms | | |
|----------------------|----------------------|--------------|----------------------|-----------------------|--------------|----------------------|
| | Owned | Rented | Total | Owned | Rented | Total |
| <u>Land</u> | | | | | | |
| Tillable | 188 | 100 | 288 | 405 | 205 | 609 |
| Nontillable | 49 | 12 | 61 | 48 | 10 | 59 |
| Other nontillable | <u>110</u> | <u>10</u> | <u>120</u> | <u>155</u> | <u>12</u> | <u>167</u> |
| Total | 347 | 122 | 469 | 608 | 227 | 835 |
| <u>Crop Yields</u> | <u>Farms</u> | <u>Acres</u> | <u>Prod/Acre</u> | <u>Farms</u> | <u>Acres</u> | <u>Prod/Acre</u> |
| Hay crop | 411 | 148 | 2.8 tn DM | 41 | 243 | 3.1 tn DM |
| Corn silage | 384 | 72 | 14.3 tn 4.9 tn DM | 41 | 200 | 16.1 tn 5.4 tn DM |
| Other forage | 49 | 20 | 1.7 tn DM | 6 | 29 | 3.3 tn DM |
| Total forage | 413 | 216 | 3.4 tn DM | 41 | 447 | 4.1 tn DM |
| Corn grain | 223 | 72 | 99.8 bu | 34 | 119 | 104.6 bu |
| Oats | 104 | 28 | 64.0 bu | 11 | 36 | 65.9 bu |
| Wheat | 32 | 42 | 49.2 bu | 9 | 51 | 56.4 bu |
| Other crops | 52 | 30 | | 9 | 54 | |
| Tillable pasture | 113 | 30 | | 14 | 41 | |
| Idle | 130 | 34 | | 14 | 49 | |
| Total Tillable Acres | 414 | 288 | | 41 | 609 | |

Crop acres and yields compiled for the state average represent only the number of farms reporting each crop. Yields of forage crops have been converted to tons of dry matter using dry matter coefficients reported by the farmers. Grain production has been converted to bushels of dry grain equivalent.

The following measures of crop management indicate how efficiently the land resource is being used and how well total forage requirements are being met.

Table 21. CROP MANAGEMENT FACTORS
414 New York Dairy Farms, 1986

| Item | Average 414 Farms | Average Top 10% Farms |
|---|----------------------|--------------------------|
| Total tillable acres per cow | 3.04 | 2.62 |
| Total forage acres per cow | 2.28 | 1.92 |
| Harvested forage dry matter, tons per cow | 7.73 | 7.96 |

In the second year of collecting information on individual crop production costs, over 240 cooperators allocated expenses to hay crop, corn, and other crop production. This additional data has been compiled to show the crop production expenses per acre and per unit for these crops. Corn grain production has been converted to corn silage equivalent using 5.88 bushels of dry shell corn to equal one ton of corn silage as fed. In Table 22, the total per tillable acre represents all 414 farms and the expenses for individual crops are for the 249 farms which submitted data.

Table 22. CROP RELATED ACCRUAL EXPENSES
New York Dairy Farms, 1986

| Expense | Average 414 Farms | Average 249 Farms Reporting Individual Crop Costs | | | | |
|-------------------------------|----------------------------------|---|---------------|-------------|-------------------------------------|----------------------------|
| | Total Per Tillable Acre | Hay Crop | | Corn | Per Ton Corn Silage Equiv. | Other Crops Per Acre |
| | | Per Acre | Per Ton DM | Per Acre | | |
| Fertilizer & lime | \$26.18 | \$16.81 | \$6.12 | \$43.47 | \$2.85 | \$29.11 |
| Seeds & plants | 11.37 | 6.48 | 2.36 | 19.52 | 1.28 | 15.48 |
| Spray & other crop expense | 10.56 | 3.93 | 1.43 | 23.14 | 1.52 | 9.97 |
| Total | \$48.11 | \$27.22 | \$9.92 | \$86.13 | \$5.64 | \$54.57 |
| Average Top 10% Farms: | | Average Top 17 Farms Reporting Individual Crop Costs | | | | |
| Fertilizer & lime | \$32.67 | \$20.09 | \$ 7.10 | \$43.76 | \$2.76 | \$28.27 |
| Seeds & plants | 14.54 | 8.52 | 3.01 | 18.20 | 1.15 | 13.57 |
| Spray & other crop expense | 15.00 | 5.42 | 1.92 | 24.06 | 1.52 | 10.93 |
| Total | \$62.21 | \$34.03 | \$12.03 | \$86.02 | \$5.43 | \$52.77 |

Most machinery costs are associated with crop production and should be analyzed with the crop enterprise. Total machinery expenses include the major fixed costs (interest and depreciation), as well as the accrual operating costs. Machinery costs have not been allocated to individual crops, but they are calculated per total tillable acre.

Table 23. ACCRUAL MACHINERY EXPENSES
414 New York Dairy Farms, 1986

| Machinery Expense Item | Average 414 Farms | | Average Top 10% Farms | |
|----------------------------|-------------------|------------------|-----------------------|------------------|
| | Total Expenses | Per Til. Acre | Total Expenses | Per Til. Acre |
| Fuel, oil & grease | \$ 5,282 | \$ 18.35 | \$11,787 | \$ 19.35 |
| Machinery repairs & parts | 9,660 | 33.56 | 24,467 | 40.17 |
| Machine hire, rent & lease | 1,838 | 6.39 | 3,524 | 5.79 |
| Auto expense (farm share) | 565 | 1.96 | 749 | 1.23 |
| Interest (5%) | 4,994 | 17.35 | 10,087 | 16.56 |
| Depreciation | 15,545 | 54.00 | 33,577 | 55.12 |
| Total | \$37,884 | \$131.61 | \$84,191 | \$138.21 |

Table 24. CROP RELATED ACCRUAL EXPENSES BY HAY CROP PRODUCTION PER ACRE
249 New York Dairy Farms, 1986

| Item | Tons of Hay Crop Dry Matter Per Acre | | | | |
|--|--------------------------------------|-------------|-------------|-------------|-------------|
| | <2.0 | 2.0-2.4 | 2.5-2.9 | 3.0-3.4 | ≥3.5 |
| Hay crop, tons DM/acre | 1.6 | 2.3 | 2.7 | 3.2 | 4.1 |
| Farms reporting crop expense breakdowns | 47 | 64 | 46 | 46 | 46 |
| Average number hay crop acres for farms reporting | 141 | 139 | 148 | 152 | 144 |
| <u>Accrual Crop Expense</u> | | | | | |
| <u>Per Acre of Hay Crop:</u> | | | | | |
| Fertilizer & lime | \$ 9.81 | \$14.29 | \$18.00 | \$21.61 | \$20.92 |
| Seeds & plants | 4.00 | 5.60 | 6.31 | 8.43 | 8.28 |
| Spray & other crop expense | <u>1.88</u> | <u>3.12</u> | <u>2.74</u> | <u>5.68</u> | <u>6.43</u> |
| Total | \$15.69 | \$23.01 | \$27.05 | \$35.72 | \$35.63 |
| <u>Accrual Crop Expense</u> | | | | | |
| <u>Per Ton DM of Hay Crop:</u> | | | | | |
| Fertilizer & lime | \$6.14 | \$ 6.26 | \$ 6.66 | \$ 6.78 | \$5.12 |
| Seeds & plants | 2.50 | 2.45 | 2.33 | 2.64 | 2.03 |
| Spray & other crop expense | <u>1.18</u> | <u>1.37</u> | <u>1.01</u> | <u>1.78</u> | <u>1.57</u> |
| Total | \$9.82 | \$10.08 | \$10.00 | \$11.20 | \$8.72 |

Table 25. CROP RELATED ACCRUAL EXPENSES BY CORN SILAGE PRODUCTION PER ACRE
247 New York Dairy Farms, 1986

| Item | Tons of Corn Silage Per Acre | | | | |
|--|------------------------------|--------------|--------------|--------------|--------------|
| | 0-9 | 10-12 | 13-15 | 16-18 | ≥19 |
| Corn silage, tons/acre | 6.9 | 11.2 | 14.2 | 16.7 | 19.9 |
| Farms reporting crop expense breakdowns | 41 | 41 | 82 | 52 | 31 |
| Average number corn acres for farms reporting | 66 | 92 | 106 | 140 | 93 |
| <u>Accrual Crop Exp./Acre of Corn:</u> | | | | | |
| Fertilizer & lime | \$41.83 | \$41.00 | \$43.01 | \$44.27 | \$47.58 |
| Seeds & plants | 17.06 | 20.30 | 19.46 | 19.63 | 20.71 |
| Spray & other crop expense | <u>19.03</u> | <u>21.06</u> | <u>22.53</u> | <u>25.18</u> | <u>26.35</u> |
| Total | \$77.93 | \$82.36 | \$85.00 | \$89.09 | \$94.64 |
| <u>Accrual Crop Expense Per</u> | | | | | |
| <u>Ton Corn Silage Equiv.*:</u> | | | | | |
| Fertilizer & lime | \$4.04 | \$3.38 | \$2.91 | \$2.57 | \$2.32 |
| Seeds & plants | 1.65 | 1.67 | 1.32 | 1.14 | 1.01 |
| Spray & other crop expense | <u>1.84</u> | <u>1.73</u> | <u>1.52</u> | <u>1.46</u> | <u>1.29</u> |
| Total | \$7.53 | \$6.78 | \$5.75 | \$5.18 | \$4.62 |

*Corn grain converted to silage equivalent using 5.88 bushels = 1 ton corn silage, as fed.

From the above two tables, it is important to observe that as forage yields per acre increase, crop related expenses per acre also increase. For corn silage, crop expense per ton decreases significantly as yield per acre increases. However, for hay crop silage, crop expense per ton increases slightly as yield per acre increases except for the very high yields. This is likely attributable to not only increases in yield but also increases in quality of the hay crop. The change in cost per ton as yield increases is likely more than offset by the increase in value of the crop.

Dairy Program Analysis

An analysis of the dairy enterprise can identify and explain the strengths and weaknesses of the dairy farm business. Changes in dairy herd size and market values that occurred during the year are identified in the table below. The change in inventory value without appreciation is attributed to physical changes in herd size and quality. This "real" increase in inventory has been included as an accrual farm receipt for the profitability calculations shown on page 11.

Table 26.

DAIRY HERD INVENTORY
414 New York Dairy Farms, 1986

| Item | Dairy Cows | | Heifers | |
|-------------------------------|------------|------------|---------|------------|
| | Number | Value | Number | Value |
| Beginning of year (owned) | 94 | \$76,901 | 77 | \$31,276 |
| + Change without appreciation | | 2,528 | | 809 |
| + Appreciation | | <u>921</u> | | <u>732</u> |
| End of year (owned) | 97 | \$80,350 | 78 | \$32,817 |
| End including leased | 97 | | | |
| Average number | 95 | | 77 | |

Average Top 10% Farms:

| | | | | |
|-------------------------------|-----|---------------|-----|-------------|
| Beginning of year (owned) | 226 | \$191,386 | 188 | \$79,848 |
| + Change without appreciation | | 11,657 | | 5,488 |
| + Appreciation | | <u>-1,235</u> | | <u>-872</u> |
| End of year (owned) | 240 | \$201,808 | 196 | \$84,464 |
| End including leased | 240 | | | |
| Average number | 232 | | 194 | |

There is a strong relationship between farm size and farm income. When net farm income and labor and management income are compared with cows per farm, net farm income increased 1,701 percent while labor and management income per operator jumped \$44,852 as herd size increased from less than 40 to over 250 cows per farm.

Table 27.

COWS PER FARM AND FARM INCOME MEASURES
414 New York Dairy Farms, 1986

| Number of Cows | Average Number of Cows | Number of Farms | Worker Equivalent | Net Farm Income (w/o apprec.) | Labor & Management Income Per Operator |
|----------------|------------------------|-----------------|-------------------|-------------------------------|--|
| Under 40 | 32 | 32 | 1.69 | \$ 6,845 | \$-2,533 |
| 40 to 54 | 47 | 87 | 2.01 | 7,644 | -2,168 |
| 55 to 69 | 61 | 76 | 2.43 | 16,164 | 1,361 |
| 70 to 84 | 76 | 60 | 2.87 | 15,600 | -1,372 |
| 85 to 99 | 90 | 46 | 2.95 | 19,361 | 378 |
| 100 to 149 | 119 | 62 | 3.57 | 39,080 | 8,981 |
| 150 to 199 | 172 | 22 | 4.66 | 33,630 | 3,696 |
| 200 to 249 | 226 | 10 | 5.85 | 42,881 | 4,803 |
| 250 & over | 382 | 19 | 9.36 | 123,246 | 42,319 |

Total milk sold and milk sold per cow are extremely valuable measures of productivity on the dairy farm. These measures of milk output are based on pounds of milk marketed during the year.

Table 28. MILK PRODUCTION
414 New York Dairy Farms, 1986

| Item | Average 414 Farms | Average Top 10% Farms |
|--|----------------------|--------------------------|
| Total milk sold, lbs. | 1,537,444 | 4,230,167 |
| Milk sold per cow, lbs. | 16,237 | 18,209 |
| Average milk plant test, percent butterfat | 3.61 | 3.57 |

Farms with higher rates of production tend to have higher profits. In 1986, the farms that sold more than 16,000 pounds of milk per cow had substantially higher profit margins and higher than average herd sizes.

Table 29. MILK SOLD PER COW AND LABOR AND MANAGEMENT INCOME
414 New York Dairy Farms, 1986

| Pounds of Milk Sold Per Cow | Number of Farms | Average Number of Cows | Net Farm Income w/o Apprec. | Labor & Management Income/Operator |
|--------------------------------|--------------------|------------------------------|-----------------------------------|--|
| Under 11,000 | 12 | 67 | \$-3,316 | \$-17,416 |
| 11,000 to 11,999 | 16 | 76 | 11,874 | -1,314 |
| 12,000 to 12,999 | 22 | 68 | 7,781 | -4,457 |
| 13,000 to 13,999 | 35 | 75 | 8,521 | -5,837 |
| 14,000 to 14,999 | 60 | 74 | 15,162 | 2,564 |
| 15,000 to 15,999 | 87 | 87 | 18,929 | 700 |
| 16,000 to 16,999 | 72 | 99 | 23,916 | 3,211 |
| 17,000 to 17,999 | 50 | 103 | 29,939 | 5,931 |
| 18,000 & over | 60 | 146 | 57,951 | 18,643 |

The cost of producing milk has been compiled using the whole farm method, and is featured in the following table.

Table 30. ACCRUAL RECEIPTS FROM DAIRY AND COST OF PRODUCING MILK
414 New York Dairy Farms, 1986

| Item | Average 414 Farms | | | Average Top 10% Farms | | |
|---|-------------------|---------|----------|-----------------------|---------|----------|
| | Total | Per Cow | Per Cwt. | Total | Per Cow | Per Cwt. |
| <u>Accrual Costs of Producing Milk</u> | | | | | | |
| Operating costs | \$145,761 | \$1,539 | \$9.48 | \$367,676 | \$1,583 | \$8.69 |
| Total costs with- out op(s') labor, mgmt. & capital | \$172,595 | \$1,823 | \$11.23 | \$427,434 | \$1,840 | \$10.10 |
| Total Costs | \$213,650 | \$2,256 | \$13.90 | \$508,647 | \$2,189 | \$12.02 |
| <u>Accrual Receipts from Milk</u> | | | | | | |
| | \$194,522 | \$2,054 | \$12.65 | \$539,217 | \$2,321 | \$12.75 |

Accrual receipts from milk sales are compared with the accrual costs of producing milk per cow and per hundredweight of milk in the preceding table. Using the whole farm method, operating costs of producing milk are estimated by deducting non-milk accrual receipts from total accrual operating expenses. Total costs of producing milk include the operating costs plus expansion livestock purchased, depreciation on machinery and buildings, the value of operator(s') labor and management, and an interest charge for using equity capital. Note that the cost of operator's labor, management, and equity capital has been excluded in the intermediate compilation.

The total cost of producing milk on all 414 dairy farms averaged \$13.90 per hundredweight, \$1.25 more than the average price received for milk sold from these farms during 1986. In 1985 the total cost of producing milk averaged \$14.23 on 404 New York dairy farms, \$1.33 per hundredweight more than the average price received. This implies dairy farmers are willing to receive less than the stated returns on their labor and equity capital to remain in farming.

Size of herd and level of milk production are important factors related to the cost of producing milk. The cost of production for nine herd size categories and nine production levels is shown in the following table. The average total cost of production was \$15.07 for herds with less than 100 cows, and \$13.25 for those with 100 cows or more, for a difference of \$1.82 per hundredweight. Farms selling less than 16,000 pounds of milk per cow had an average total cost of production of \$15.83 while those selling 16,000 pounds and over averaged approximately \$13.42 for a difference of \$2.41 per hundredweight.

Table 31. FARM COST OF PRODUCING MILK BY HERD SIZE AND MILK SOLD PER COW
414 New York Dairy Farms, 1986

| Number of Cows | By Herd Size | | | Pounds Milk Sold Per Cow | By Milk Sold Per Cow | | |
|-------------------|----------------|---|---------|--------------------------------|----------------------|---|---------|
| | Oper- ating | Excluding Op.s Labor, Mgt. & Cap. | Total | | Oper- ating | Excluding Op.s Labor, Mgt. & Cap. | Total |
| Under 40 | \$ 9.27 | \$11.42 | \$16.34 | Under 11,000 | \$11.83 | \$14.85 | \$19.49 |
| 40 to 54 | 9.77 | 11.71 | 15.40 | 11,000 to 11,999 | 10.00 | 12.16 | 15.71 |
| 55 to 69 | 9.14 | 11.04 | 14.75 | 12,000 to 12,999 | 10.03 | 12.32 | 15.86 |
| 70 to 84 | 9.56 | 11.43 | 14.57 | 13,000 to 13,999 | 10.01 | 12.07 | 15.46 |
| 85 to 99 | 9.45 | 11.36 | 14.29 | 14,000 to 14,999 | 9.70 | 11.40 | 14.26 |
| 100 to 149 | 9.17 | 10.86 | 13.65 | 15,000 to 15,999 | 9.61 | 11.35 | 14.21 |
| 150 to 199 | 9.82 | 11.56 | 13.71 | 16,000 to 16,999 | 9.56 | 11.26 | 13.89 |
| 200 to 249 | 9.93 | 11.54 | 13.26 | 17,000 to 17,999 | 9.08 | 11.03 | 13.60 |
| 250 & over | 9.54 | 10.98 | 12.37 | 18,000 & over | 9.15 | 10.61 | 12.76 |

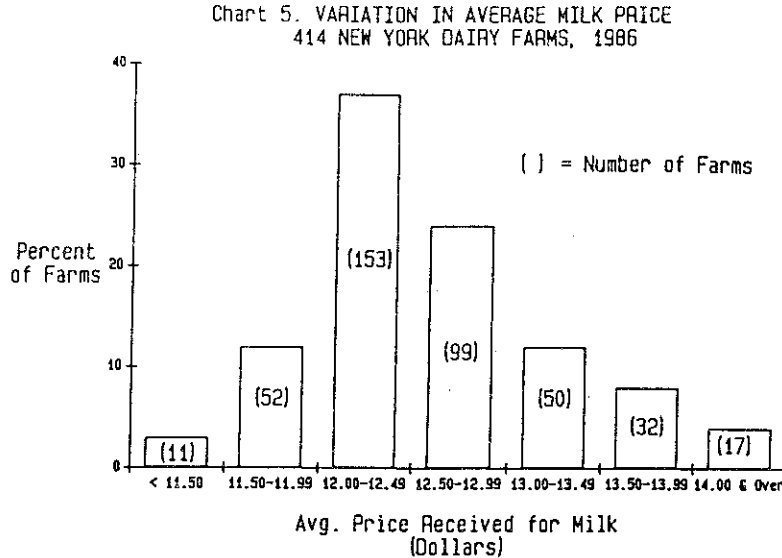
Costs of production are divided into 10 categories and presented for the 414 New York dairy farms and the top 10 percent farms (by net farm income, without appreciation) in the table on page 25. Non-milk receipts are deducted on the assumption they were produced at cost. Government receipts are included as a credit or negative cost of production under feed and crop expenses. For 1986, government receipts are primarily crop related.

Table 32. TOTAL COST OF PRODUCING MILK BASED ON WHOLE FARM DATA
414 New York Dairy Farms and Top 10 Percent of Farms, 1986

| Cost Item | Average of 414 New York Dairy Farms | | Average of Top 10% Farms | |
|--|--|-------------|-----------------------------|-------------|
| | Total | Cost/Cwt. | Total | Cost/Cwt. |
| <u>Feed & Crop Expense</u> | | | | |
| Dairy grain & concentrate | \$ 45,789 | | \$125,159 | |
| Dairy roughage | 1,819 | | 5,983 | |
| Other livestock feed | 760 | | 444 | |
| Fertilizer & lime | 7,536 | | 19,899 | |
| All other crop expenses | 6,312 | | 17,991 | |
| - Crop sales & gov't receipts | <u>5,632</u> | | <u>25,208</u> | |
| TOTAL | \$ 56,584 | \$ 3.68 | \$144,268 | \$ 3.41 |
| <u>Labor Costs</u> | | | | |
| Value of operator's labor & management & family labor | \$ 26,042 | | \$ 41,382 | |
| Hired labor | <u>21,281</u> | | <u>74,532</u> | |
| TOTAL | \$ 47,323 | \$ 3.08 | \$115,914 | \$2.74 |
| <u>Machinery Costs</u> | | | | |
| Depreciation | \$ 15,545 | | \$ 33,577 | |
| Machine repairs, hire & auto | 12,063 | | 28,739 | |
| Fuel, oil & grease | 5,282 | | 11,788 | |
| - Gas tax ref & custom work | <u>384</u> | | <u>694</u> | |
| TOTAL | \$ 32,506 | \$ 2.11 | \$ 73,410 | \$ 1.73 |
| <u>Livestock Expenses</u> | | | | |
| Breeding fees, vet & medicine | \$ 7,148 | | \$ 20,649 | |
| Other livestock expense | <u>7,988</u> | | <u>21,235</u> | |
| TOTAL | \$ 15,136 | \$ 0.99 | \$ 41,884 | \$ 0.99 |
| <u>Milk Marketing</u> | | | | |
| | \$ 12,966 | \$ 0.84 | \$ 33,781 | \$ 0.80 |
| <u>Livestock Ownership</u> | | | | |
| Purchased livestock | \$ 3,192 | | \$ 8,451 | |
| Cattle lease | 80 | | 276 | |
| - Dairy cattle & lvstk. sales* | <u>18,192</u> | | <u>54,817</u> | |
| TOTAL | \$-14,920 | \$-0.97 | \$-46,090 | \$-1.09 |
| <u>Real Estate Costs</u> | | | | |
| Land, building & fence repair | \$ 2,438 | | \$ 6,429 | |
| Taxes & insurance | 8,497 | | 16,079 | |
| Rent/lease | 3,894 | | 8,598 | |
| Building depreciation | <u>8,135</u> | | <u>19,524</u> | |
| TOTAL | \$ 22,964 | \$ 1.50 | \$ 50,630 | \$ 1.20 |
| <u>Interest Expense</u> | | | | |
| Interest paid | \$ 18,114 | | \$ 41,203 | |
| Interest on equity @ 5% | <u>16,939</u> | | <u>40,532</u> | |
| TOTAL | \$ 35,053 | \$ 2.28 | \$ 81,735 | \$ 1.93 |
| <u>Miscellaneous</u> | | | | |
| Telephone & electricity | \$ 5,957 | | \$ 12,818 | |
| Miscellaneous | 2,552 | | 7,142 | |
| - Miscellaneous income | <u>2,471</u> | | <u>6,846</u> | |
| TOTAL | \$ 6,038 | \$ 0.39 | \$ 13,114 | \$ 0.31 |
| TOTAL COST OF PRODUCING MILK | \$213,650 | \$13.90 | \$508,647 | \$12.02 |
| - Operator's labor, manage- ment & capital | <u>41,055</u> | <u>2.67</u> | <u>81,212</u> | <u>1.92</u> |
| TOTAL COST EXCLUDING OPERATOR'S LABOR, MANAGEMENT & CAPITAL | \$172,595 | \$11.23 | \$427,435 | \$10.10 |

*Includes \$190 of nonfarm noncash capital for cattle and crops.

The average or mean price per hundredweight of milk sold is calculated by dividing the gross milk receipts for the year by the total pounds of milk sold. The average price for the 414 farms was \$12.65 but there was considerable variation among the individual farms. The variation in average price received and the distribution of farms around the mean is shown below.



Sixty-one percent of the farms received from \$12.00 to \$12.99 per hundredweight of milk sold. Twenty-four percent of the farms received \$13.00 or more per hundredweight while 15 percent received less than \$12.00 per hundredweight. Location and organization of markets are factors contributing to the variability of milk prices on these dairy farms. Management practices on farms as well as in milk companies also affect farm milk prices. Seasonality of production and butterfat test are two variables under the direct control of the farm manager.

The accrual operating expenses most commonly associated with the dairy enterprise are listed in the table below. Evaluating these costs per unit of production enables the comparison of different size dairy farms for strengths and areas for improvement.

Table 33. DAIRY RELATED ACCRUAL EXPENSES
414 New York Dairy Farms, 1986

| Item | Average 414 Farms | | Average Top 10% Farms | |
|---|-------------------|----------|-----------------------|----------|
| | Per Cow | Per Cwt. | Per Cow | Per Cwt. |
| Purc. dairy grain & conc. | \$484 | \$2.98 | \$539 | \$2.96 |
| Purchased dairy roughage | 19 | 0.12 | 26 | 0.14 |
| Total Purchased Dairy Feed | \$503 | \$3.10 | \$565 | \$3.10 |
| Purchased grain & conc. as % of milk receipts | | 24% | | 23% |
| Purchased feed & crop exp. | \$649 | \$4.00 | \$728 | \$4.00 |
| Purchased feed & crop exp. as % of milk receipts | | 32% | | 31% |
| Breeding | \$30 | \$0.19 | \$34 | \$0.19 |
| Veterinary & medicine | 45 | 0.28 | 55 | 0.30 |
| Milk marketing | 137 | 0.84 | 145 | 0.80 |
| Cattle lease | 1 | 0.01 | 1 | 0.01 |
| Other livestock expense | 84 | 0.52 | 91 | 0.50 |

Feed costs are influenced by a number of factors. Feed production costs are affected by the amount of homegrown grains fed, quality and quantity of the roughage, and the number of youngstock. Purchasing costs are influenced by the farmer's ability to purchase grains and concentrates at reasonable prices and to balance nutrients fed with energy and protein requirements.

Dairy grain and concentrates bought per cow is calculated by dividing the total expenses for dairy grains and concentrates purchased by the average number of cows. Because this also includes the amount spent for calf and heifer feed, it actually represents the feed cost per cow and the replacements being raised.

Feed and crop expense per hundredweight of milk is one of the most useful feed cost measures because it accounts for variations in milk production between herds, it includes all feeds purchased on the farm, and it includes crop expenses that are associated with feed production.

Grain and concentrates purchased as percent of milk sales is calculated by dividing feed purchased by milk receipts. This is another useful measure of feed efficiency although variations in homegrown grains fed and milk prices can have an adverse effect.

Forage dry matter harvested per cow is calculated by converting all hay crops and corn silage harvested to tons of dry matter, and dividing by the average number of cows. It is a measure of the forage supply available for a 12-month feeding season.

Table 34. PERCENT PURCHASED DAIRY GRAIN AND CONCENTRATES
ARE OF MILK RECEIPTS AND LABOR AND MANAGEMENT INCOME
414 New York Dairy Farms, 1986

| Percent Grain & Conc. are of Milk | Number of Farms | Number of Cows | Forage Dry Matter Harvested Per Cow | Pounds Milk Per Cow | Labor & Management Income Per Operator |
|--|--------------------|-------------------|--|---------------------------|---|
| Over 40% | 6 | 80 | 5.7 | 15,483 | \$-8,713 |
| 35 to 39 | 24 | 62 | 7.6 | 15,545 | -7,618 |
| 30 to 34 | 61 | 114 | 7.2 | 16,756 | 3,778 |
| 25 to 29 | 112 | 95 | 8.1 | 16,338 | 8,934 |
| 20 to 24 | 93 | 87 | 7.7 | 15,804 | 976 |
| 15 to 19 | 60 | 102 | 8.0 | 16,321 | 2,899 |
| Under 15% | 58 | 94 | 7.7 | 16,175 | 5,528 |

Generally, the lower the percent of the milk check going for purchased dairy grain and concentrates, the higher the income. If purchased feed is restricted enough to cause substantial declines in production, profits will fall. Farmers spending less than 30 percent but more than 24 percent of their milk receipts for purchased feed in 1986 appear to be practicing the most effective feed cost control.

Capital and Labor Efficiency Analysis

Capital efficiency factors measure how intensively the capital is being used in the farm business. Measures of labor efficiency are key indicators of the amount of work each worker has accomplished.

Table 35. CAPITAL EFFICIENCY
414 New York Dairy Farms, 1986

| Item (Average for Year) | Per Worker | Per Cow | Per Tillable Acre | Per Tillable Acre Owned |
|-------------------------------|------------|---------|-------------------|-------------------------|
| Farm capital | \$177,500 | \$5,792 | \$1,905 | \$2,917 |
| Real estate | | \$2,758 | | \$1,389 |
| Machinery & equipment | \$32,555 | \$1,062 | \$349 | |
| Capital turnover, years | | 2.30 | | |
| <u>Average Top 10% Farms:</u> | | | | |
| Farm capital | \$208,108 | \$5,375 | \$2,050 | \$3,083 |
| Real estate | | \$2,371 | | \$1,360 |
| Machinery & equipment | \$33,663 | \$869 | \$332 | |
| Capital turnover, years | | 1.93 | | |

Capital turnover is a measure of capital efficiency as it shows the number of years of farm receipts required to equal or "turnover" capital investment. It is computed by dividing the average farm assets by the year's total farm accrual receipts. The relationship capital turnover has to labor and management income and other factors is shown in the following table. As a general rule, dairy farmers should aim for a capital turnover rate of 2.5 years or less.

Table 36. CAPITAL TURNOVER AND LABOR AND MANAGEMENT INCOME
414 New York Dairy Farms, 1986

| Capital Turnover Rate - Years | No. of Farms | No. of Cows | Farm Capital (average for year) | | Labor & Mgt. Inc. Per Operator | Net Farm Income (w/o apprec.) |
|-------------------------------|--------------|-------------|---------------------------------|------------|--------------------------------|-------------------------------|
| | | | Per Cow | Per Worker | | |
| Less than 1.5 | 17 | 142 | \$3,902 | \$131,481 | \$17,757 | \$49,523 |
| 1.5 to 1.99 | 68 | 144 | 4,714 | 165,669 | 20,972 | 47,379 |
| 2.0 to 2.49 | 141 | 94 | 5,662 | 174,567 | 5,960 | 25,721 |
| 2.5 to 2.99 | 106 | 79 | 6,594 | 186,509 | -3,203 | 14,398 |
| 3.0 to 3.49 | 42 | 67 | 7,217 | 185,764 | -4,486 | 13,244 |
| 3.5 & over | 40 | 65 | 8,165 | 218,648 | -15,490 | 2,493 |

The decile of farms with the highest net farm incomes (without appreciation) were considerably above the average of all 414 farms in the four measures of labor efficiency. The top 10 percent sold 42 percent more milk per worker than the average of all farms.

Table 37. LABOR EFFICIENCY
414 New York Dairy Farms, 1986

| Labor Efficiency | Average 414 Farms | | Average Top 10% Farms | |
|----------------------|-------------------|------------|-----------------------|------------|
| | Total | Per Worker | Total | Per Worker |
| Cows, average number | 95 | 31 | 232 | 39 |
| Milk sold, pounds | 1,537,444 | 497,555 | 4,230,167 | 705,028 |
| Tillable acres | 288 | 93 | 609 | 102 |

The labor force averaged 3.09 full-time worker equivalents per farm. Forty-two percent of the labor was supplied by the farm operator/managers, 21 percent came from the operator's family, and 37 percent was regular hired labor.

Labor costs, labor efficiency, and farm profitability are closely related. Farms with high net farm incomes can attribute some of their success to the control of labor and machinery costs. Labor and machinery costs averaged \$20 per cow less on the 41 farms in the top decile.

Table 38. LABOR FORCE INVENTORY AND COST ANALYSIS
414 New York Dairy Farms, 1986

| Labor Force | Months | Age | Years of Educ. | Value of Labor & Mgmt. |
|-------------------------------|--------|---|-------------------|---------------------------|
| Operator number 1 | 11.75 | 44 | 13 | \$18,411 |
| Operator number 2 | 3.31 | 39 | 14 | 4,907 |
| Operator number 3 | 0.49 | 43 | 12 | 676 |
| Operator number 4 | 0.08 | 49 | 14 | 122 |
| Family paid | 4.74 | | | Total \$24,116 |
| Family unpaid | 3.21 | | | |
| Hired | 13.55 | | | |
| Total | 37.13 | ÷ 12 = 3.09 Worker Equivalent 1.30 Operator/Manager Equiv. | | |
| <u>Average Top 10% Farms:</u> | | | | |
| Total | 72.01 | ÷ 12 = 6.00 Worker Equivalent | | |
| Operators' | 21.52 | ÷ 12 = 1.79 Operator/Manager Equiv. | | |

| Labor Costs | Average 414 Farms | | | Average Top 10% Farms | | |
|-----------------------------|-------------------|------------|------------------|-----------------------|------------|------------------|
| | Total | Per Cow | Per Til. Acre | Total | Per Cow | Per Til. Acre |
| Value op.s' lab. (\$850/mo) | \$13,286 | \$140 | \$ 46.16 | \$18,292 | \$ 79 | \$ 30.03 |
| Family unpd. (\$600/mo.) | 1,926 | 20 | 6.69 | 702 | 3 | 1.15 |
| Hired | <u>21,281</u> | <u>225</u> | <u>73.93</u> | <u>74,531</u> | <u>321</u> | <u>122.35</u> |
| Total Labor | \$36,493 | \$385 | \$126.78 | \$93,525 | \$403 | \$153.53 |
| Machinery Cost | <u>37,884</u> | <u>400</u> | <u>131.61</u> | <u>84,191</u> | <u>362</u> | <u>138.21</u> |
| Total Labor & Mach. | \$74,377 | \$785 | \$258.39 | \$177,716 | \$765 | \$291.74 |

The relationship of labor efficiency to net farm income is very positive on the 414 farms. The higher output per worker achieved is partially attributable to more and higher producing cows.

Table 39. MILK SOLD PER WORKER AND NET FARM INCOME
414 New York Dairy Farms, 1986

| Pounds of Milk Sold Per Worker | No. of Farms | No. of Cows | Pounds Milk Per Cow | Net Farm Income (w/o apprec.) | Labor & Mgmt. Income Per Operator |
|-----------------------------------|--------------------|-------------------|---------------------------|-------------------------------------|---|
| Under 250,000 | 24 | 45 | 12,460 | \$ -151 | \$-14,266 |
| 250,000 to 299,999 | 34 | 49 | 13,829 | 5,366 | -4,941 |
| 300,000 to 349,999 | 38 | 56 | 15,232 | 8,888 | -4,067 |
| 350,000 to 399,999 | 48 | 65 | 15,462 | 15,975 | 1,547 |
| 400,000 to 449,999 | 70 | 74 | 15,616 | 15,424 | 479 |
| 450,000 to 499,999 | 58 | 84 | 15,764 | 16,686 | -433 |
| 500,000 to 599,999 | 74 | 104 | 16,401 | 30,049 | 5,813 |
| 600,000 & over | 68 | 197 | 17,498 | 63,506 | 21,709 |

Miscellaneous Costs

Costs in addition to feed, machinery, and labor make up a sizable amount on a dairy farm. The "cost conscious" manager checks on all cost items both large and small. Good cost management requires careful planning and priority spending on farm inputs that will pay dividends when the checkbook is balanced at the end of the month. A number of miscellaneous cost items are reported in the following table to help in a detailed checkup on all farm costs.

Table 40. MISCELLANEOUS COST CONTROL MEASURES
414 New York Dairy Farms, 1986

| Item | Average 414 Farms | Average Top 10% Farms |
|--|----------------------|--------------------------|
| <u>Livestock</u> | | |
| Breeding fees per cow | \$30 | \$34 |
| Veterinary & medicine per cow | \$45 | \$55 |
| Other livestock expense per cow | \$84 | \$91 |
| Milk marketing per cow | \$137 | \$145 |
| Milk marketing per hundredweight milk | \$0.84 | \$0.80 |
| <u>Real Estate</u> | | |
| Taxes per cow | \$54 | \$41 |
| Taxes per \$1,000 year-end real estate value | \$19 | \$17 |
| Insurance paid per cow | \$36 | \$28 |
| Cash rent paid per cow | \$41 | \$37 |
| Cash rent paid per acre rented | \$32 | \$38 |
| Real estate expense per cow | \$157 | \$134 |
| <u>Capital Cost</u> | | |
| Interest paid per cow | \$191 | \$177 |
| Interest on equity per cow | \$179 | \$174 |
| Interest paid as percent of year-end debt | 8.6% | 9.1% |
| Depreciation per cow | \$250 | \$229 |
| <u>Fixed & Variable Costs*</u> | | |
| Total fixed costs per cow | \$796 | \$717 |
| Total variable costs per cow | \$1,486 | \$1,674 |
| Variable costs per hundredweight milk sold | \$9.15 | \$9.19 |

*Fixed costs include real estate repairs, taxes, insurance, rent, interest paid, depreciation, unpaid family labor, and interest on equity capital. All other costs were classified as variable.

Fixed costs per cow on the top decile farms were 10 percent below the 414 farm average. This is related to more intensive use of cows and cropland through better management. Variable costs were four cents higher per hundredweight of milk sold on the top farms.

Combination of Factors

Individual factors representing the cropping program, dairy program, and capital and labor efficiency have been examined in the analysis up to this point. It has been suggested that these factors are interrelated. On this page, the combination of four important factors is studied. The factors combined are the number of cows per farm, pounds of milk sold per cow, pounds of milk sold per worker, and purchased feed and crop expense per hundredweight of milk.

For each factor, the farms were divided on the basis of whether or not they were better than the average for the 414 farms. They were then grouped on the basis of the number of factors better than average. The combination of factors above or below average within the three middle groups varied.

The relationship between the number of factors better than average and net farm income is shown in the table below. As the number of factors better than average decreased, net farm income decreased at a rapid rate.

Table 41. COMBINATION OF FACTORS ABOVE AVERAGE*
AND NET FARM INCOME
414 New York Dairy Farms, 1986

| Number of Factors Above Average | Number of Farms | Percent of Farms | Net Farm Income without Appreciation |
|------------------------------------|--------------------|---------------------|---|
| 4 factors better than average | 29 | 7 | \$70,378 |
| 3 factors better than average | 54 | 13 | 57,250 |
| 2 factors better than average | 114 | 28 | 24,634 |
| 1 factor better than average | 145 | 35 | 10,642 |
| 0 factors better than average | 72 | 17 | 5,401 |

*Factors were:

Size - number of cows - average 95.

Rate of production - pounds of milk sold per cow - average 16,237

Labor efficiency - pounds of milk sold per worker - average 497,555

Cost control - purchased feed and crop expense per hundredweight milk - average \$4.00

The 29 farms with four factors better than average had 183 cows, 18,319 pounds of milk sold per cow, 672,421 pounds of milk sold per worker, and \$3.30 per hundredweight purchased feed and crop expense. Net farm income averaged \$70,378 on these farms. Obviously, other business factors excluded from the combination in the above table have a strong affect on business profits. These include labor, machinery and crop expenses, capital efficiency, financial management, crop yields, and the receipts from milk and cattle sales.

It is important in managing a farm business to give attention to all major factors affecting the business. Concentrating on only one or two factors and neglecting the others will not give the kind of net return most farmers want.

Farm Business Chart

The Farm Business Chart is a tool which can be used in analyzing a business 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 414 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.

The cost control factors are ranked from low to high, but the lowest cost is not necessarily the most profitable. In some cases, the "best" management position is somewhere near the middle or average. Many things affect the level of costs, and must be taken into account when analyzing the factors.

Table 42. FARM BUSINESS CHART FOR FARM MANAGEMENT COOPERATORS
414 New York Dairy Farms, 1986

| Size of Business | | | Rates of Production | | | Labor Efficiency | |
|---------------------------|-------------------|------------------------------|--------------------------------|-----------------------------|---------------------------------|-----------------------|-----------------------------------|
| Worker Equiv- alent | No. of Cows | Pounds of Milk Sold | Pounds Milk Sold Per Cow | Tons Hay Crop DM/Acre | Tons Corn Silage Per Acre | Cows Per Worker | Pounds Milk Sold Per Worker |
| 7.4 | 286 | 5,067,341 | 19,686 | 4.6 | 21 | 48 | 767,478 |
| 4.2 | 137 | 2,199,034 | 18,065 | 3.7 | 18 | 38 | 614,002 |
| 3.5 | 106 | 1,711,440 | 17,165 | 3.3 | 17 | 34 | 545,894 |
| 3.1 | 88 | 1,394,330 | 16,585 | 3.0 | 15 | 32 | 499,543 |
| 2.8 | 77 | 1,214,123 | 15,981 | 2.7 | 15 | 29 | 462,369 |
| ----- | | | | | | | |
| 2.5 | 68 | 1,053,490 | 15,498 | 2.5 | 14 | 27 | 432,308 |
| 2.3 | 59 | 896,427 | 15,025 | 2.3 | 13 | 26 | 402,824 |
| 2.0 | 52 | 779,541 | 14,393 | 2.1 | 12 | 24 | 358,752 |
| 1.9 | 45 | 671,587 | 13,423 | 1.8 | 10 | 21 | 304,576 |
| 1.4 | 34 | 468,617 | 11,150 | 1.4 | 6 | 16 | 230,949 |

| Cost Control | | | | | |
|----------------------------|----------------------------------|-------------------------------|---------------------------------------|------------------------------------|--|
| Grain Bought Per Cow | % Feed is of Milk Receipts | Machinery Costs Per Cow | Labor & Machinery Costs Per Cow | Feed & Crop Expenses Per Cow | Feed & Crop Expenses Per Cwt. Milk |
| \$188 | 10% | \$197 | \$ 496 | \$352 | \$2.44 |
| 290 | 15 | 262 | 599 | 449 | 3.00 |
| 354 | 18 | 310 | 663 | 502 | 3.36 |
| 402 | 21 | 351 | 712 | 550 | 3.59 |
| 445 | 23 | 384 | 757 | 590 | 3.83 |
| ----- | | | | | |
| 483 | 25 | 411 | 805 | 632 | 4.04 |
| 528 | 27 | 441 | 868 | 682 | 4.28 |
| 573 | 29 | 481 | 916 | 728 | 4.50 |
| 629 | 31 | 542 | 1,007 | 794 | 4.85 |
| 765 | 37 | 712 | 1,201 | 936 | 5.86 |

The next section of the Farm Business Chart provides for comparative analysis of the value of production as measured by milk receipts per cow and dairy receipts per hundredweight of milk sold and the costs of production. The final or profitability section shows the variation in farm income by decile and enables a dairy farmer to determine where he or she ranks by using several measures of farm profitability. Remember that each column is independently established and the farms making up the top decile in the first column will not necessarily be on the top of any other column. The dairy farmer who ranks at or near the top of most of these columns is in a very enviable position.

Table 42 (continued) FARM BUSINESS CHART FOR FARM
MANAGEMENT COOPERATORS
414 New York Dairy Farms, 1986

| Milk Receipts Per Cow | Dairy Receipts Per Cwt. | Oper. Cost Milk Per Cow | Oper. Cost Milk Per Cwt. | Total Cost Production Per Cow | Total Cost Production Per Cwt. |
|-----------------------|-------------------------|-------------------------|--------------------------|-------------------------------|--------------------------------|
| \$2,747 | \$15.65 | \$ 922 | \$ 6.41 | \$1,678 | \$11.39 |
| 2,518 | 14.69 | 1,149 | 7.69 | 1,920 | 12.48 |
| 2,401 | 14.30 | 1,274 | 8.29 | 2,026 | 13.19 |
| 2,293 | 14.01 | 1,368 | 8.80 | 2,124 | 13.69 |
| 2,189 | 13.82 | 1,445 | 9.26 | 2,218 | 14.04 |
| ----- | | | | | |
| 2,115 | 13.57 | 1,533 | 9.59 | 2,308 | 14.54 |
| 2,026 | 13.36 | 1,599 | 10.12 | 2,415 | 15.23 |
| 1,932 | 13.11 | 1,693 | 10.64 | 2,522 | 15.97 |
| 1,812 | 12.80 | 1,798 | 11.20 | 2,671 | 16.98 |
| 1,517 | 12.10 | 2,039 | 13.18 | 3,026 | 20.35 |

Profitability

| Net Farm Income | | Return to Operator's Labor, Management, & Equity Capital | | Labor & Management Income | |
|-------------------|----------------------|--|----------------------|---------------------------|--------------|
| With Appreciation | Without Appreciation | With Appreciation | Without Appreciation | Per Farm | Per Operator |
| \$157,944 | \$112,483 | \$157,154 | \$111,814 | \$72,075 | \$50,073 |
| 72,699 | 46,862 | 70,487 | 44,957 | 25,129 | 18,115 |
| 51,682 | 33,290 | 49,335 | 31,000 | 15,514 | 12,290 |
| 40,559 | 25,457 | 39,083 | 23,381 | 9,128 | 7,659 |
| 33,904 | 19,749 | 32,076 | 17,627 | 4,136 | 3,599 |
| ----- | | | | | |
| 26,429 | 15,395 | 23,588 | 13,469 | 21 | -24 |
| 19,844 | 10,520 | 18,127 | 8,427 | -4,171 | -3,475 |
| 14,690 | 4,432 | 12,898 | 2,090 | -9,752 | -8,829 |
| 6,680 | -3,173 | 4,611 | -5,189 | -20,244 | -16,770 |
| -13,617 | -23,915 | -15,804 | -25,722 | -44,712 | -39,924 |

Farm Business Charts for farms with freestall barns and 120 cows or less and more than 120 cows, and farms with conventional barns with 60 cows or less and more than 60 cows are discussed in the supplemental section on pages 47-51.

Financial Analysis and Management

Analysis and astute management of farm financial affairs must receive high priority if the farm business is to be successful and if the farm family is to achieve a reasonable living standard.

The Farm Finance Checklist and the Financial Analysis Chart are provided to serve as guidelines. Dairy farmers can determine how their financial management measures up by comparing with average data from other farms.

Table 43.

A FARM FINANCE CHECKLIST 414 New York Dairy Farms, 1986

| | Average 414 New York Farms | Average Top 10% Farms* | | |
|--|-------------------------------|---------------------------|---------------|----------------|
| <u>How farm assets are being used</u> (average for the year): | | | | |
| Total assets (capital) per cow | \$5,792 | \$5,375 | | |
| Farm assets in livestock | 20% | 22% | | |
| Farm assets in farm real estate | 48% | 44% | | |
| Farm assets in machinery | 18% | 16% | | |
| <u>Measures of debt capacity & debt structure:</u> | | | | |
| Equity in the business | 62% | 65% | | |
| Farm debt per cow | \$2,171 | \$1,880 | | |
| Long term debt/asset ratio** | 0.43 | 0.40 | | |
| Intermediate & current term debt/asset ratio** | 0.33 | 0.31 | | |
| Intermediate & current term debt as % of total | 46% | 50% | | |
| <u>Debt repayment ability:</u> | | | | |
| Cash flow coverage ratio | 1.17 | 1.36 | | |
| Debt payments made per cow | \$572 | \$686 | | |
| Debt payments made as % of milk check | 28% | 30% | | |
| <u>Indicators of annual financial progress:</u> | | | | |
| | <u>Amount</u> | <u>Percent</u> | <u>Amount</u> | <u>Percent</u> |
| Annual change in farm assets | +\$22,005 | +4.1% | +\$85,581 | +7.1% |
| Annual change in farm debts | +\$1,730 | +0.8% | +\$26,429 | +6.2% |
| Annual change in farm net worth | +\$20,275 | +6.2% | +\$59,152 | +7.6% |

*Forty-one farms with highest net farm incomes (without appreciation).

**Long or intermediate and current term debt divided by long or intermediate and current term assets.

The most profitable farms carried \$291 less debt per cow, had a greater ability to make 1986 debt payments, and equity in their business was three percent more than that of the average.

Farm assets grew faster than farm debts during 1986 and net worth increased more than six percent.

Financial Analysis Chart

The farm financial analysis chart is designed just like the Farm Business Chart on pages 32-33 and may be used to measure the financial health of the farm business. Most of the financial measures used are defined on pages 13, 15, 18, and 28 in this publication.

Table 44. FINANCIAL ANALYSIS CHART
414 New York Dairy Farms, 1986

| Liquidity (repayment) | | | | | |
|-----------------------|------------------------------------|--------------------------|--|--------------|-------|
| Debt Payments Per Cow | Available for Debt Service Per Cow | Cash Flow Coverage Ratio | Debt Payments as Percent of Milk Sales | Debt Per Cow | |
| \$ 48 | \$984 | 4.68 | 2% | \$ | 136 |
| 204 | 726 | 1.99 | 10 | | 705 |
| 291 | 635 | 1.56 | 15 | | 1,249 |
| 367 | 571 | 1.31 | 19 | | 1,670 |
| 426 | 522 | 1.16 | 22 | | 2,036 |
| 488 | 461 | 1.02 | 25 | | 2,402 |
| 578 | 400 | 0.89 | 29 | | 2,751 |
| 670 | 336 | 0.76 | 35 | | 3,053 |
| 804 | 244 | 0.53 | 42 | | 3,567 |
| 1,525 | 76 | 0.02 | 78 | | 4,842 |

| Solvency | | | | Efficiency & Profitability | | |
|-----------------|----------------|------------------------|-----------|----------------------------|--------------------|--------------|
| Leverage Ratio* | Percent Equity | Debt/Asset Ratio | | Capital Turnover (years) | Rate of Return on: | |
| | | Current & Intermediate | Long Term | | Equity | Investment** |
| 0.02 | 98% | 0.01 | 0.00 | 1.52 | 38 | 18 |
| 0.14 | 88 | 0.07 | 0.02 | 1.88 | 12 | 11 |
| 0.28 | 79 | 0.14 | 0.15 | 2.06 | 8 | 9 |
| 0.40 | 73 | 0.20 | 0.30 | 2.20 | 5 | 7 |
| 0.54 | 65 | 0.26 | 0.38 | 2.34 | 3 | 5 |
| 0.74 | 58 | 0.32 | 0.48 | 2.50 | 1 | 4 |
| 0.95 | 52 | 0.39 | 0.60 | 2.68 | -1 | 2 |
| 1.23 | 46 | 0.47 | 0.71 | 2.90 | -4 | 1 |
| 1.76 | 37 | 0.56 | 0.86 | 3.19 | -9 | -1 |
| 9.80 | 15 | 0.88 | 1.33 | 4.39 | -45 | -7 |

| Efficiency (Capital) | | |
|--------------------------------|------------------------------|---------------------------|
| Real Estate Investment Per Cow | Machinery Investment Per Cow | Total Farm Assets Per Cow |
| \$1,272 | \$ 468 | \$3,753 |
| 1,940 | 665 | 4,529 |
| 2,231 | 797 | 4,963 |
| 2,430 | 900 | 5,276 |
| 2,644 | 1,011 | 5,620 |
| 2,870 | 1,122 | 5,901 |
| 3,151 | 1,250 | 6,322 |
| 3,517 | 1,425 | 6,945 |
| 4,118 | 1,665 | 7,751 |
| 5,629 | 2,338 | 9,489 |

*Dollars of debt per dollar of equity, computed by dividing total liabilities by total equity.

**Return on all farm capital (no deduction for interest paid) divided by total farm assets.

SUPPLEMENTAL INFORMATION

Introduction

Comparisons of business performance for the same farms over time, by herd size and housing, business organization and milking technology, and numerous other factors are contained in this section. Summary data is also presented for dairy-cash crop and dairy-renters in this section. The tables on the following pages are provided for use as a reference, thus, the discussion of each table is at a minimum.

Herd Size Comparisons: A detailed comparison of profitability, financial situation, and business analysis factors across herd sizes is contained in Tables 45 through 47. As herd size increases, the average profitability also increases (Table 45). Net farm income without appreciation was \$123,246 per farm for the 250 or more herd size group and \$6,845 per farm for those with less than 40 cows. This relationship holds for all measures of profitability including rate of return on equity capital.

As herd sizes increase above 55 cows, percent equity decreases (Table 46). However, farm net worth increases substantially as herd size increases. The average net worth for all size farms increased during 1986.

Crop yields increased as herd size increased, but fertilizer and lime expenses and machinery cost per tillable acre also increased (Table 47). Milk sold per cow also increased as herd size increased, ranging from 14,525 pounds on the farms with less than 40 cows to 18,593 pounds on farms with 250 or more cows. Farm capital per worker increased as herd size increased, while farm capital per cow decreased as herd size increased. Cows per worker increased dramatically as herd size increased, ranging from 20 at the lowest herd size category up to 41 at the largest size category.

Same 229 New York Dairy Farms, 1984, 1985, and 1986: Two hundred and twenty-nine farms participated in the Dairy Farm Business Summary Project in all three years 1984, 1985, and 1986 (Table 48). Total operating expenses and total accrual expenses, and receipts have been slowly increasing over these years. During this time, average cow numbers increased from 96 in 1984 to 106 in 1986. Profitability, however, has not increased in the same fashion. Net farm income without appreciation and labor and management income were greatest in 1985. Net farm income including appreciation rebounded in 1986 to its highest level in the last three years.

Pounds of milk sold per cow has increased by 532 pounds or 3.4 percent over the last two years. When combined with the increase in cow numbers, the increase in milk sold per cow results in total milk sold from the farms increasing by 213,848 pounds. This increase has been achieved by only a small addition to the work force and, thus, pounds of milk sold per worker has increased dramatically.

Comparisons by Type of Barn and Herd Size: When analyzing a dairy farm business by comparing it to a group of farms, it is important that the group of farms used have as many of the same physical characteristics as possible as the farm being analyzed. To assist in this endeavor, dairy farms in the summary have been divided into those with freestall and those with conventional housing. Within each group is a further classification by size of the dairy herd.

Table 49 on page 47 shows the average values for the resulting four groups of dairy farms. Within each housing type, the larger herd size has the highest

crop yields and pounds of milk sold per cow. The cost of producing milk was lower on the larger farms and labor efficiency greater. Profitability was also greater on the larger farms within each housing type.

Farm business charts have been computed for each of the four housing and herd size categories. From these charts on pages 48-51 (Tables 50-53) the range in size of business rates of production, labor efficiency, value and cost of producing milk, and profitability can be observed. The range in every category of business performance is tremendous.

By comparing the farm's performance on the most appropriate business chart, a farm manager will be better able to evaluate his or her business performance. Farm managers should remember, however, that their competition is not limited to the other farms in their own barn type and herd size category. They should observe how their management performance compares with farms in other categories as well.

Comparisons by Business Organization: A comparison of profitability, business analysis factors, and financial situation by business organization is contained in Tables 54 and 55. Farms organized as a corporation are larger than partnership-operated farms and more than twice as large as proprietorship-operated farms. Profitability is also greater on corporation organized farms, followed by partnerships and then proprietorships.

Comparison by Milking System: Farms with herringbone parlors had the highest farm capital per worker and the highest cows per worker (Table 56). Farms with herringbone parlors were also larger and had the greatest profitability.

Other Comparisons: The 20 dairy-cash crop farms had about the same number of cows as the 414 specialized dairy farms, but had more crop acres and crop sales and were more profitable (Table 57). A.E. Ext. 86-34 contains detailed information on dairy-cash crop farms for the year 1985. A publication containing 1986 data is forthcoming.

Dairy-renter farms were smaller than the 414 owner-operated farms, and were less profitable than the average specialized dairy farm (Table 58). A.E. Ext. 86-30 contains detailed information on dairy-renters. A publication containing 1986 data is forthcoming.

Data for the top 10 percent of farms by net farm income without appreciation is presented in Table 59. Summary data for the 414 dairy farms is presented for the farm in Table 60 and on a per cow basis in Table 61.

Table 45.

FARM BUSINESS SUMMARY BY HERD SIZE
414 New York Dairy Farms, 1986

| Item | Farm Size: | Less than 40 Cows | 40 to 54 Cows | 55 to 69 Cows | 70 to 84 Cows | 85 to 99 Cows |
|---|------------|----------------------|------------------|------------------|------------------|------------------|
| Number of farms | | 32 | 87 | 76 | 60 | 46 |
| <u>ACCRUAL EXPENSES</u> | | | | | | |
| Hired labor | | \$ 2,783 | \$ 5,555 | \$ 9,003 | \$ 14,979 | \$ 16,565 |
| Dairy grain & concentrate | | 14,087 | 23,314 | 28,109 | 34,369 | 38,303 |
| Dairy roughage | | 948 | 1,261 | 1,229 | 1,062 | 1,191 |
| Other livestock feed | | 863 | 271 | 548 | 603 | 1,326 |
| Machine hire/rent/lease | | 739 | 948 | 1,326 | 1,419 | 2,711 |
| Machine repairs/parts | | 2,846 | 3,908 | 5,511 | 7,365 | 10,511 |
| Auto expense (farm share) | | 641 | 456 | 449 | 477 | 771 |
| Fuel, oil & grease | | 1,496 | 2,355 | 3,319 | 4,251 | 5,833 |
| Replacement livestock | | 1,061 | 1,279 | 1,143 | 812 | 1,946 |
| Breeding | | 1,077 | 1,372 | 2,053 | 2,303 | 2,303 |
| Veterinary & medicine | | 974 | 1,702 | 2,840 | 2,826 | 3,997 |
| Milk marketing | | 4,828 | 6,606 | 7,792 | 10,424 | 11,482 |
| Cattle lease/rent | | 48 | 16 | 43 | 2 | 10 |
| Other livestock expense | | 2,119 | 3,969 | 4,968 | 6,070 | 6,814 |
| Fertilizer & lime | | 1,456 | 3,135 | 4,782 | 6,506 | 7,355 |
| Seeds & plants | | 873 | 1,171 | 1,865 | 2,889 | 3,272 |
| Spray & other crop expense | | 533 | 898 | 1,710 | 2,448 | 2,683 |
| Land/building/fence repair | | 1,113 | 1,154 | 1,509 | 1,683 | 2,523 |
| Taxes & insurance | | 3,743 | 4,807 | 6,408 | 7,257 | 9,077 |
| Telephone & electricity | | 2,543 | 3,414 | 4,225 | 5,328 | 6,122 |
| Interest paid | | 6,487 | 10,078 | 10,104 | 13,570 | 17,334 |
| Misc. (including rent) | | 1,589 | 2,374 | 4,287 | 5,267 | 6,998 |
| Total Operating Expenses | | \$52,847 | \$80,043 | \$103,223 | \$131,910 | \$159,127 |
| Expansion livestock | | 456 | 283 | 664 | 474 | 985 |
| Machinery depreciation | | 4,657 | 7,458 | 10,906 | 13,388 | 16,449 |
| Building depreciation | | 2,570 | 3,740 | 5,019 | 6,469 | 8,182 |
| Total Accrual Expenses | | \$60,530 | \$91,524 | \$119,812 | \$152,241 | \$184,743 |
| <u>ACCRUAL RECEIPTS</u> | | | | | | |
| Milk sales | | \$58,125 | \$89,125 | \$121,096 | \$149,343 | \$180,096 |
| Dairy cattle | | 5,294 | 6,411 | 9,025 | 10,559 | 14,433 |
| Dairy calves | | 971 | 1,295 | 1,674 | 1,837 | 2,357 |
| Other livestock | | 454 | 200 | 317 | 235 | 156 |
| Crops | | 1,144 | 197 | 86 | 1,724 | 1,582 |
| Misc. receipts | | 1,387 | 1,940 | 3,778 | 4,143 | 5,480 |
| Total Accrual Receipts | | \$67,375 | \$99,168 | \$135,976 | \$167,841 | \$204,104 |
| <u>PROFITABILITY ANALYSIS</u> | | | | | | |
| Net farm income (w/o apprec.) | | \$6,845 | \$7,644 | \$16,164 | \$15,600 | \$19,361 |
| Net farm income (w/apprec.) | | \$14,484 | \$17,774 | \$25,724 | \$31,524 | \$40,888 |
| Labor & mgmt. income | | \$-2,533 | \$-2,450 | \$1,797 | \$-1,674 | \$518 |
| Number of operators | | 1.00 | 1.13 | 1.32 | 1.22 | 1.37 |
| Labor & mgmt. inc./oper. | | \$-2,533 | \$-2,168 | \$1,361 | \$-1,372 | \$378 |
| Rate of return on equity capital (w/o apprec.) | | -8.8% | -8.6% | -3.7% | -2.8% | -2.1% |
| Rate of return on equity capital (w/apprec.) | | -3.2% | -2.1% | 0.1% | 2.5% | 4.2% |

Table 45 (continued) FARM BUSINESS SUMMARY BY HERD SIZE
414 New York Dairy Farms, 1986

| Item | Farm Size: | 100 to 149 Cows | 150 to 199 Cows | 200 to 249 Cows | 250 or More Cows |
|---|------------|--------------------|--------------------|--------------------|---------------------|
| Number of farms | | 62 | 22 | 10 | 19 |
| <u>ACCRUAL EXPENSES</u> | | | | | |
| Hired labor | | \$ 23,213 | \$ 46,159 | \$ 68,294 | \$ 145,034 |
| Dairy grain & concentrate | | 53,781 | 77,088 | 122,806 | 224,158 |
| Dairy roughage | | 1,576 | 1,573 | 5,901 | 11,045 |
| Other livestock feed | | 1,066 | 1,162 | 1,900 | 754 |
| Machine hire/rent/lease | | 2,622 | 2,627 | 4,523 | 4,140 |
| Machine repairs/parts | | 13,261 | 15,449 | 27,760 | 41,273 |
| Auto expense (farm share) | | 558 | 550 | 262 | 1,383 |
| Fuel, oil & grease | | 6,944 | 11,345 | 12,368 | 18,665 |
| Replacement livestock | | 1,996 | 7,347 | 7,535 | 4,336 |
| Breeding | | 3,629 | 4,076 | 7,832 | 12,224 |
| Veterinary & medicine | | 4,985 | 6,909 | 12,373 | 23,522 |
| Milk marketing | | 16,715 | 22,704 | 28,678 | 56,326 |
| Cattle lease/rent | | 65 | 598 | 0 | 499 |
| Other livestock expense | | 10,053 | 13,968 | 18,995 | 37,792 |
| Fertilizer & lime | | 10,159 | 13,391 | 20,410 | 30,533 |
| Seeds & plants | | 4,438 | 6,510 | 7,633 | 13,922 |
| Spray & other crop expense | | 4,358 | 5,755 | 8,207 | 14,950 |
| Land/building/fence repair | | 2,954 | 2,912 | 5,095 | 12,813 |
| Taxes & insurance | | 10,320 | 14,487 | 20,465 | 25,083 |
| Telephone & electricity | | 7,271 | 9,442 | 12,178 | 20,281 |
| Interest paid | | 21,682 | 34,929 | 42,595 | 78,770 |
| Misc. (including rent) | | 6,999 | 10,459 | 22,781 | 29,228 |
| Total Operating Expenses | | \$208,645 | \$309,440 | \$458,591 | \$ 806,731 |
| Expansion livestock | | 582 | 2,139 | 2,297 | 12,572 |
| Machinery depreciation | | 20,893 | 26,190 | 37,063 | 52,995 |
| Building depreciation | | 9,226 | 15,992 | 20,451 | 36,105 |
| Total Accrual Expenses | | \$239,346 | \$353,761 | \$518,402 | \$ 908,403 |
| <u>ACCRUAL RECEIPTS</u> | | | | | |
| Milk sales | | \$245,627 | \$334,063 | \$474,437 | \$ 902,482 |
| Dairy cattle | | 18,626 | 28,784 | 42,300 | 77,186 |
| Dairy calves | | 3,038 | 3,468 | 4,742 | 9,618 |
| Other livestock | | 345 | 1,275 | 9,333 | 877 |
| Crops | | 3,668 | 5,490 | 4,850 | 16,858 |
| Misc. receipts | | 7,122 | 14,311 | 25,621 | 24,628 |
| Total Accrual Receipts | | \$278,426 | \$387,391 | \$561,283 | \$1,031,649 |
| <u>PROFITABILITY ANALYSIS</u> | | | | | |
| Net farm income (w/o apprec.) | | \$39,080 | \$33,630 | \$42,881 | \$123,246 |
| Net farm income (w/apprec.) | | \$65,839 | \$58,481 | \$65,595 | \$163,623 |
| Labor & mgmt. income | | \$14,011 | \$5,359 | \$7,205 | \$65,171 |
| Number of operators | | 1.56 | 1.45 | 1.50 | 1.54 |
| Labor & mgmt. inc./oper. | | \$8,981 | \$3,696 | \$4,803 | \$42,319 |
| Rate of return on equity capital (w/o apprec.) | | 1.5% | 0.7% | 1.8% | 7.1% |
| Rate of return on equity capital (w/apprec.) | | 7.3% | 5.3% | 5.1% | 10.6% |

Table 46. FARM FAMILY FINANCIAL SITUATION BY HERD SIZE
414 New York Dairy Farms, 1986

| Item | Farms with: <u>Less than 40 Cows</u> | | <u>40 to 54 Cows</u> | | <u>55 to 69 Cows</u> | |
|-----------------------------------|--------------------------------------|--------------------------|----------------------|----------------------|----------------------|----------------|
| | Jan. 1 | Dec. 31 | Jan. 1 | Dec. 31 | Jan. 1 | Dec. 31 |
| ASSETS | | | | | | |
| Farm cash/chkg./sav. \$ | 1,986 | \$ 2,198 | \$ 1,938 | \$ 2,701 | \$ 2,526 | \$ 3,408 |
| Accounts receivable | 4,661 | 4,646 | 7,038 | 7,400 | 10,126 | 10,700 |
| Feed & supplies | 10,565 | 11,503 | 16,819 | 16,887 | 25,547 | 25,019 |
| Livestock* | 35,537 | 37,823 | 50,999 | 54,104 | 72,821 | 74,528 |
| Machinery & equipment* | 40,675 | 41,786 | 54,251 | 54,042 | 76,061 | 76,061 |
| FLB & PCA stock | 893 | 874 | 1,522 | 1,645 | 1,584 | 1,560 |
| Coop stocks & cert. | 1,697 | 1,905 | 1,637 | 1,879 | 2,951 | 2,984 |
| Land & buildings* | <u>116,480</u> | <u>119,878</u> | <u>147,042</u> | <u>150,445</u> | <u>180,616</u> | <u>187,073</u> |
| Total Farm Assets | \$212,494 | \$220,613 | \$281,246 | \$289,103 | \$372,232 | \$381,333 |
| Pers. cash/chkg./sav. \$ | 7,733 | \$ 7,940 | \$ 5,478 | \$ 5,390 | \$ 4,292 | \$ 4,848 |
| Cash value of life ins. | 2,634 | 2,007 | 2,977 | 3,252 | 3,476 | 3,842 |
| Nonfarm real estate | 15,208 | 19,250 | 1,956 | 1,964 | 18,045 | 17,580 |
| Auto (personal share) | 1,866 | 1,923 | 2,398 | 2,906 | 2,870 | 3,669 |
| Stocks & bonds | 866 | 773 | 2,262 | 3,430 | 17,622 | 19,198 |
| Household furnishings | 8,083 | 8,167 | 8,936 | 9,139 | 6,732 | 7,755 |
| All other | <u>894</u> | <u>752</u> | <u>3,105</u> | <u>2,782</u> | <u>1,889</u> | <u>2,015</u> |
| Total Nonfarm Assets** | \$ 37,285 | \$ 40,812 | \$ 27,113 | \$ 28,865 | \$ 54,925 | \$ 58,908 |
| Total Farm & Nonfarm Assets | \$249,779 | \$261,425 | \$308,359 | \$317,968 | \$427,157 | \$440,241 |
| LIABILITIES | | | | | | |
| Accounts payable | \$ 2,287 | \$ 2,224 | \$ 3,367 | \$ 4,389 | \$ 3,650 | \$ 4,504 |
| Operating debt | 597 | 811 | 1,315 | 963 | 1,468 | 1,366 |
| Short term | 1,638 | 1,406 | 1,106 | 1,704 | 1,420 | 1,738 |
| Intermediate*** | 20,880 | 20,413 | 43,165 | 43,747 | 44,828 | 43,302 |
| Long term* | <u>56,147</u> | <u>53,569</u> | <u>80,763</u> | <u>78,938</u> | <u>77,843</u> | <u>77,741</u> |
| Total Farm Liab. | \$ 81,550 | \$ 78,423 | \$129,716 | \$129,741 | \$129,208 | \$128,651 |
| Tot. Nonfarm Liab.** | <u>1,354</u> | <u>981</u> | <u>1,046</u> | <u>1,083</u> | <u>1,917</u> | <u>2,034</u> |
| Total Farm & Nonfarm Liabilities | \$ 82,904 | \$ 79,404 | \$130,762 | \$130,824 | \$131,125 | \$130,685 |
| Farm Net Worth (Equity Capital) | \$130,944 | \$142,190 | \$151,530 | \$159,362 | \$243,024 | \$252,682 |
| Farm & Nonfarm Net Worth | \$166,875 | \$182,021 | \$177,597 | \$187,144 | \$296,032 | \$309,556 |
| FINANCIAL MEASURES | | | | | | |
| | | <u>Less than 40 Cows</u> | <u>40 to 54 Cows</u> | <u>55 to 69 Cows</u> | | |
| Percent equity | | 64% | 55% | 66% | | |
| Debt/asset ratio-long term | | 0.45 | 0.52 | 0.42 | | |
| Debt/asset ratio-inter. & current | | 0.25 | 0.37 | 0.26 | | |
| Change in net worth with apprec. | | \$11,246 | \$7,832 | \$9,658 | | |
| Total farm debt per cow | | \$2,376 | \$2,703 | \$2,075 | | |
| Debt payments made per cow | | \$600 | \$526 | \$446 | | |
| Debt payments as % of milk sales | | 33% | 28% | 22% | | |
| Amount avail. for debt service | | \$15,290 | \$22,426 | \$32,964 | | |
| Cash flow coverage ratio for 1986 | | 1.25 | 1.04 | 1.33 | | |

*Includes discounted lease payments.

**Average of farms reporting nonfarm assets and liabilities for 1986.

***Includes FLB/PCA stock and discounted lease payments for cattle and machinery.

Table 46 (cont'd) FARM FAMILY FINANCIAL SITUATION BY HERD SIZE
414 New York Dairy Farms, 1986

| Item | Farms with: | | 85 to 99 Cows | |
|-----------------------------------|----------------------|----------------|----------------------|----------------|
| | 70 to 84 Cows | | Jan. 1 | Dec. 31 |
| | Jan. 1 | Dec. 31 | Jan. 1 | Dec. 31 |
| <u>ASSETS</u> | | | | |
| Farm cash/chkg./savings | \$ 3,624 | \$ 4,311 | \$ 4,152 | \$ 4,674 |
| Accounts receivable | 13,182 | 13,731 | 15,052 | 16,928 |
| Feed & supplies | 32,473 | 33,003 | 41,277 | 41,802 |
| Livestock* | 86,471 | 91,004 | 104,001 | 109,208 |
| Machinery & equipment* | 92,371 | 93,896 | 116,081 | 117,533 |
| FLB & PCA stock | 3,140 | 3,362 | 3,246 | 2,959 |
| Coop stocks & cert. | 3,587 | 4,016 | 4,055 | 5,362 |
| Land & buildings* | <u>226,185</u> | <u>232,659</u> | <u>244,511</u> | <u>257,618</u> |
| Total Farm Assets | \$461,034 | \$475,981 | \$532,375 | \$556,084 |
| Pers. cash/chkg./savings | \$ 11,952 | \$ 12,071 | \$ 5,906 | \$ 6,958 |
| Cash value of life ins. | 4,330 | 4,257 | 3,120 | 3,430 |
| Nonfarm real estate | 8,671 | 8,474 | 3,577 | 3,423 |
| Auto (personal share) | 3,198 | 3,312 | 2,175 | 2,536 |
| Stocks & bonds | 4,062 | 4,383 | 3,912 | 4,181 |
| Household furnishings | 9,168 | 9,259 | 7,281 | 7,788 |
| All other | <u>4,362</u> | <u>3,032</u> | <u>4,423</u> | <u>5,554</u> |
| Total Nonfarm Assets** | \$ 45,745 | \$ 44,789 | \$ 30,394 | \$ 33,869 |
| Total Farm & Nonfarm Assets | \$506,779 | \$520,770 | \$562,769 | \$589,953 |
| <u>LIABILITIES</u> | | | | |
| Accounts payable | \$ 5,836 | \$ 6,211 | \$ 5,443 | \$ 5,899 |
| Operating debt | 1,932 | 1,840 | 3,774 | 3,883 |
| Short term | 1,955 | 2,047 | 827 | 1,540 |
| Intermediate*** | 55,996 | 57,039 | 78,119 | 80,681 |
| Long term* | <u>98,649</u> | <u>94,722</u> | <u>113,871</u> | <u>111,042</u> |
| Total Farm Liab. | \$164,368 | \$161,859 | \$202,034 | \$203,045 |
| Total Nonfarm Liab.** | <u>1,213</u> | <u>800</u> | <u>115</u> | <u>77</u> |
| Total Farm & Nonfarm Liabilities | \$165,581 | \$162,659 | \$202,149 | \$203,122 |
| Farm Net Worth (Equity Capital) | \$296,666 | \$314,122 | \$330,342 | \$353,039 |
| Farm & Nonfarm Net Worth | \$341,198 | \$358,111 | \$360,620 | \$386,831 |
| <u>FINANCIAL MEASURES</u> | | | | |
| | <u>70 to 84 Cows</u> | | <u>85 to 99 Cows</u> | |
| Percent equity | 66% | | 63% | |
| Debt/asset ratio-long term | 0.41 | | 0.43 | |
| Debt/asset ratio-inter. & current | 0.28 | | 0.31 | |
| Change in net worth with apprec. | \$17,456 | | \$22,698 | |
| Total farm debt per cow | \$2,102 | | \$2,207 | |
| Debt payments made per cow | \$484 | | \$465 | |
| Debt payments as % of milk sales | 24% | | 23% | |
| Amount avail. for debt service | \$34,979 | | \$42,858 | |
| Cash flow coverage ratio for 1986 | 1.12 | | 1.18 | |

*Includes discounted lease payments.

**Average of farms reporting nonfarm assets and liabilities for 1986.

***Includes FLB/PCA stock and discounted lease payments for cattle and machinery.

Table 46 (cont'd) FARM FAMILY FINANCIAL SITUATION BY HERD SIZE
414 New York Dairy Farms, 1986

| Item | Farms with: | | 150 to 199 Cows | |
|-----------------------------------|-----------------|----------------|-----------------|----------------|
| | 100 to 149 Cows | | Jan. 1 | Dec. 31 |
| | Jan. 1 | Dec. 31 | Jan. 1 | Dec. 31 |
| ASSETS | | | | |
| Farm cash/chkg./savings | \$ 5,440 | \$ 6,624 | \$ 3,576 | \$ 4,521 |
| Accounts receivable | 20,835 | 22,677 | 27,738 | 33,021 |
| Feed & supplies | 58,288 | 60,473 | 73,223 | 74,490 |
| Livestock* | 142,725 | 147,952 | 188,540 | 199,263 |
| Machinery & equipment* | 128,625 | 127,761 | 167,695 | 172,506 |
| FLB & PCA stock | 5,968 | 6,358 | 11,845 | 11,879 |
| Coop stocks & cert. | 9,312 | 9,610 | 9,224 | 10,601 |
| Land & buildings* | <u>322,502</u> | <u>343,761</u> | <u>417,368</u> | <u>427,326</u> |
| Total Farm Assets | \$693,695 | \$725,216 | \$899,209 | \$933,607 |
| Pers. cash/chkg./savings | \$ 4,272 | \$ 4,744 | \$ 7,433 | \$ 7,561 |
| Cash value of life ins. | 4,278 | 4,382 | 6,743 | 8,120 |
| Nonfarm real estate | 9,270 | 11,871 | 26,500 | 26,000 |
| Auto (personal share) | 2,762 | 3,248 | 4,370 | 4,780 |
| Stocks & bonds | 6,834 | 7,596 | 12,388 | 12,524 |
| Household furnishings | 8,716 | 8,689 | 14,790 | 14,850 |
| All other | <u>3,265</u> | <u>3,429</u> | <u>5,050</u> | <u>17,770</u> |
| Total Nonfarm Assets** | \$ 39,398 | \$ 43,960 | \$ 77,274 | \$ 91,605 |
| Total Farm & Nonfarm Assets | \$733,093 | \$769,176 | \$976,483 | \$1,025,212 |
| LIABILITIES | | | | |
| Accounts payable | \$ 5,090 | \$ 5,192 | \$ 13,306 | \$ 15,005 |
| Operating debt | 4,056 | 3,204 | 9,115 | 8,569 |
| Short term | 3,768 | 4,257 | 3,209 | 6,496 |
| Intermediate*** | 99,966 | 96,334 | 181,693 | 179,730 |
| Long term* | <u>137,951</u> | <u>132,876</u> | <u>161,152</u> | <u>168,331</u> |
| Total Farm Liab. | \$250,831 | \$241,863 | \$368,475 | \$ 378,130 |
| Total Nonfarm Liab.** | <u>1,546</u> | <u>2,545</u> | <u>11,759</u> | <u>10,833</u> |
| Total Farm & Nonfarm Liabilities | \$252,377 | \$244,408 | \$380,234 | \$ 388,963 |
| Farm Net Worth (Equity Capital) | \$442,864 | \$483,354 | \$530,734 | \$ 555,477 |
| Farm & Nonfarm Net Worth | \$480,716 | \$524,768 | \$596,249 | \$ 636,249 |
| FINANCIAL MEASURES | | | | |
| | 100 to 149 Cows | | 150 to 199 Cows | |
| Percent equity | 67% | | 59% | |
| Debt/asset ratio-long term | 0.39 | | 0.39 | |
| Debt/asset ratio-inter. & current | 0.29 | | 0.41 | |
| Change in net worth with apprec. | \$40,489 | | \$24,743 | |
| Total farm debt per cow | \$1,982 | | \$2,136 | |
| Debt payments made per cow | \$532 | | \$536 | |
| Debt payments as % of milk sales | 26% | | 28% | |
| Amount avail. for debt service | \$62,953 | | \$81,720 | |
| Cash flow coverage ratio for 1986 | 1.20 | | 1.04 | |

*Includes discounted lease payments.

**Average of farms reporting nonfarm assets and liabilities for 1986.

***Includes FLB/PCA stock and discounted lease payments for cattle and machinery.

Table 46 (cont'd) FARM FAMILY FINANCIAL SITUATION BY HERD SIZE
414 New York Dairy Farms, 1986

| Item | Farms with: | | More than 250 Cows | |
|-----------------------------------|-----------------|-------------|--------------------|-------------|
| | 200 to 249 Cows | | Jan. 1 | Dec. 31 |
| | Jan. 1 | Dec. 31 | Jan. 1 | Dec. 31 |
| <u>ASSETS</u> | | | | |
| Farm cash/chkg./savings | \$ 5,182 | \$ 5,285 | \$ 3,098 | \$ 5,509 |
| Accounts receivable | 47,222 | 48,353 | 77,139 | 88,644 |
| Feed & supplies | 110,301 | 112,044 | 197,236 | 207,932 |
| Livestock* | 272,218 | 280,550 | 442,895 | 466,645 |
| Machinery & equipment* | 203,740 | 207,527 | 265,465 | 274,285 |
| FLB & PCA stock | 14,501 | 14,456 | 15,298 | 14,356 |
| Coop stocks & cert. | 21,898 | 29,283 | 32,024 | 53,851 |
| Land & buildings* | 486,214 | 495,339 | 882,690 | 934,130 |
| Total Farm Assets | \$1,161,276 | \$1,192,837 | \$1,915,845 | \$2,045,352 |
| | | | | |
| Pers. cash/chkg./savings | \$ 7,629 | \$ 8,086 | \$ 1,741 | \$ 3,824 |
| Cash value of life ins. | 17,877 | 6,118 | 4,170 | 4,166 |
| Nonfarm real estate | 17,429 | 17,429 | 5,889 | 5,889 |
| Auto (personal share) | 5,429 | 7,357 | 1,046 | 1,889 |
| Stocks & bonds | 3,643 | 5,286 | 7,208 | 8,332 |
| Household furnishings | 6,714 | 7,714 | 4,000 | 4,000 |
| All other | 10,493 | 17,023 | 14,377 | 12,205 |
| Total Nonfarm Assets** | \$ 69,213 | \$ 69,012 | \$ 38,430 | \$ 40,305 |
| Total Farm & Nonfarm Assets | \$1,230,489 | \$1,261,849 | \$1,954,275 | \$2,085,657 |
| | | | | |
| <u>LIABILITIES</u> | | | | |
| Accounts payable | \$ 15,676 | \$ 9,132 | \$ 15,482 | \$ 23,393 |
| Operating debt | 6,258 | 5,947 | 27,204 | 50,242 |
| Short term | 2,925 | 7,172 | 12,870 | 13,488 |
| Intermediate*** | 215,166 | 243,542 | 364,772 | 349,232 |
| Long term* | 232,444 | 215,211 | 380,025 | 428,144 |
| Total Farm Liab. | \$ 472,468 | \$ 481,004 | \$ 800,354 | \$ 864,499 |
| Total Nonfarm Liab.** | 0 | 2,217 | 0 | 0 |
| Total Farm & Nonfarm Liabilities | \$ 472,468 | \$ 483,221 | \$ 800,354 | \$ 864,499 |
| Farm Net Worth (Equity Capital) | \$ 688,808 | \$ 711,833 | \$1,115,491 | \$1,180,853 |
| Farm & Nonfarm Net Worth | \$ 758,021 | \$ 778,628 | \$1,153,921 | \$1,221,158 |
| | | | | |
| <u>FINANCIAL MEASURES</u> | | | | |
| | 200 to 249 Cows | | More than 250 Cows | |
| Percent equity | 60% | | 58% | |
| Debt/asset ratio-long term | 0.43 | | 0.46 | |
| Debt/asset ratio-inter. & current | 0.38 | | 0.39 | |
| Change in net worth with apprec. | \$23,026 | | \$65,361 | |
| Total farm debt per cow | \$2,073 | | \$2,194 | |
| Debt payments made per cow | \$638 | | \$769 | |
| Debt payments as % of milk sales | 30% | | 33% | |
| Amount avail. for debt service | \$96,415 | | \$206,413 | |
| Cash flow coverage ratio for 1986 | 0.98 | | 1.25 | |

*Includes discounted lease payments.

**Average of farms reporting nonfarm assets and liabilities for 1986.

***Includes FLB/PCA stock and discounted lease payments for cattle and machinery.

Table 47. SELECTED BUSINESS FACTORS BY HERD SIZE
414 New York Dairy Farms, 1986

| Item | Farms with: 40 Cows | Less than 40 to 54 Cows | 40 to 55 to 69 Cows | 55 to 70 to 84 Cows | 70 to 85 to 99 Cows |
|--|------------------------|-------------------------------|---------------------------|---------------------------|---------------------------|
| Number of farms | 32 | 87 | 76 | 60 | 46 |
| <u>Cropping Program Analysis</u> | | | | | |
| Total Tillable acres | 117 | 162 | 198 | 266 | 301 |
| Tillable acres rented* | 28 | 58 | 62 | 91 | 114 |
| Hay crop acres* | 76 | 100 | 110 | 148 | 168 |
| Corn silage acres* | 14 | 30 | 38 | 48 | 56 |
| Hay crop, tons DM/acre | 2.1 | 2.2 | 2.6 | 2.6 | 2.7 |
| Corn silage, tons/acre | 11.8 | 12.3 | 13.1 | 13.6 | 13.7 |
| Oats, bushels/acre | 43.3 | 60.5 | 67.1 | 70.1 | 64.4 |
| Forage DM per cow, tons | 6.9 | 7.4 | 7.6 | 8.0 | 8.0 |
| Tillable acres/cow | 3.6 | 3.4 | 3.3 | 3.5 | 3.3 |
| Fert. & lime exp./til. acre | \$12.43 | \$19.38 | \$24.13 | \$24.42 | \$24.42 |
| Total machinery costs | \$12,414 | \$17,793 | \$25,291 | \$31,515 | \$42,081 |
| Machinery cost/tillable acre | \$106 | \$110 | \$128 | \$118 | \$140 |
| <u>Dairy Analysis</u> | | | | | |
| Number of cows | 32 | 47 | 61 | 76 | 90 |
| Number of heifers | 25 | 36 | 50 | 62 | 73 |
| Milk sold, lbs. | 470,234 | 716,437 | 966,374 | 1,185,995 | 1,430,399 |
| Milk sold/cow, lbs. | 14,525 | 15,180 | 15,825 | 15,605 | 15,840 |
| Operating cost of prod. milk/cwt. | \$9.27 | \$9.77 | \$9.14 | \$9.56 | \$9.45 |
| Total cost of prod. milk/cwt. | \$16.34 | \$15.40 | \$14.75 | \$14.57 | \$14.29 |
| Price/cwt. milk sold | \$12.36 | \$12.44 | \$12.53 | \$12.59 | \$12.59 |
| Purchased dairy feed/cow | \$464 | \$521 | \$480 | \$466 | \$437 |
| Purchased dairy feed/cwt. milk | \$3.20 | \$3.43 | \$3.04 | \$2.99 | \$2.76 |
| Purchased grain & conc. as % of milk receipts | 24% | 26% | 23% | 23% | 21% |
| Purchased feed & crop expense/cwt. milk | \$3.81 | \$4.16 | \$3.90 | \$3.99 | \$3.69 |
| <u>Capital Efficiency</u> | | | | | |
| Farm capital/worker | \$128,138 | \$141,878 | \$155,055 | \$163,243 | \$184,485 |
| Farm capital/cow | 6,689 | 6,042 | 6,170 | 6,165 | 6,027 |
| Farm capital/til. acre owned | 2,433 | 2,742 | 2,750 | 2,677 | 2,910 |
| Real estate/cow | 3,650 | 3,152 | 3,011 | 3,019 | 2,780 |
| Machinery investment/cow | 1,274 | 1,147 | 1,246 | 1,225 | 1,293 |
| Capital turnover, years | 2.89 | 2.61 | 2.59 | 2.55 | 2.41 |
| <u>Labor Efficiency</u> | | | | | |
| Worker equivalent | 1.69 | 2.01 | 2.43 | 2.87 | 2.95 |
| Operator/manager equivalent | 1.00 | 1.13 | 1.32 | 1.22 | 1.37 |
| Milk sold/worker, lbs. | 278,245 | 356,436 | 397,685 | 413,239 | 484,881 |
| Cows/worker | 20 | 23 | 25 | 26 | 31 |
| Work units/worker | 204 | 247 | 266 | 287 | 327 |
| Labor cost/cow | \$480 | \$411 | \$400 | \$388 | \$357 |
| Labor cost/tillable acre | \$133 | \$120 | \$123 | \$111 | \$107 |

*Average of all farms, not only those reporting data.

Table 47 (continued) SELECTED BUSINESS FACTORS BY HERD SIZE
414 New York Dairy Farms, 1986

| Item | Farms with: | 100 to 149 Cows | 150 to 199 Cows | 200 to 249 Cows | 250 or More Cows |
|--|-------------|--------------------|--------------------|--------------------|---------------------|
| Number of farms | | 62 | 22 | 10 | 19 |
| <u>Cropping Program Analysis</u> | | | | | |
| Total tillable acres | | 364 | 506 | 678 | 839 |
| Tillable acres rented* | | 126 | 202 | 277 | 267 |
| Hay crop acres* | | 180 | 228 | 268 | 310 |
| Corn silage acres* | | 81 | 129 | 158 | 351 |
| Hay crop, tons DM/acre | | 3.0 | 2.9 | 3.1 | 3.5 |
| Corn silage, tons/acre | | 14.5 | 13.8 | 15.5 | 16.1 |
| Oats, bushels/acre | | 67.4 | 55.4 | 50.0 | 57.5 |
| Forage DM per cow, tons | | 7.9 | 7.6 | 7.4 | 7.8 |
| Tillable acres/cow | | 3.1 | 3.0 | 3.0 | 2.2 |
| Fert. & lime exp./til. acre | | \$27.87 | \$26.45 | \$30.13 | \$36.38 |
| Total machinery costs | | \$50,654 | \$64,609 | \$92,196 | \$131,927 |
| Machinery cost/tillable acre | | \$139 | \$128 | \$136 | \$157 |
| <u>Dairy Analysis</u> | | | | | |
| Number of cows | | 119 | 172 | 226 | 382 |
| Number of heifers | | 102 | 139 | 176 | 314 |
| Milk sold, lbs. | | 1,917,759 | 2,608,778 | 3,744,053 | 7,104,584 |
| Milk sold/cow, lbs. | | 16,055 | 15,199 | 16,552 | 18,593 |
| Operating cost of prod. milk/cwt. | | \$9.17 | \$9.82 | \$9.93 | \$9.54 |
| Total cost of prod. milk/cwt. | | \$13.65 | \$13.71 | \$13.26 | \$12.37 |
| Price/cwt. milk sold | | \$12.81 | \$12.81 | \$12.67 | \$12.70 |
| Purchased dairy feed/cow | | \$463 | \$458 | \$569 | \$616 |
| Purchased dairy feed/cwt. milk | | \$2.89 | \$3.02 | \$3.44 | \$3.31 |
| Purchased grain & conc. as % of milk receipts | | 22% | 23% | 26% | 25% |
| Purchased feed & crop expense/cwt. milk | | \$3.87 | \$4.00 | \$4.41 | \$4.15 |
| <u>Capital Efficiency</u> | | | | | |
| Farm capital/worker | | \$198,727 | \$196,654 | \$201,206 | \$211,602 |
| Farm capital/cow | | 5,939 | 5,339 | 5,204 | 5,183 |
| Farm capital/til. acre owned | | 2,968 | 3,014 | 2,943 | 3,463 |
| Real estate/cow | | 2,789 | 2,461 | 2,170 | 2,377 |
| Machinery investment/cow | | 1,073 | 991 | 909 | 706 |
| Capital turnover, years | | 2.32 | 2.22 | 2.02 | 1.85 |
| <u>Labor Efficiency</u> | | | | | |
| Worker equivalent | | 3.57 | 4.66 | 5.85 | 9.36 |
| Operator/manager equivalent | | 1.56 | 1.45 | 1.50 | 1.54 |
| Milk sold/worker, lbs. | | 537,187 | 559,824 | 640,009 | 759,037 |
| Cows/worker | | 33 | 37 | 39 | 41 |
| Work units/worker | | 355 | 385 | 407 | 422 |
| Labor cost/cow | | \$343 | \$362 | \$372 | \$423 |
| Labor cost/tillable acre | | \$113 | \$123 | \$124 | \$192 |

*Average of all farms, not only those reporting data.

Table 48. COMPARISON OF FARM BUSINESS SUMMARIES FOR 1984,
1985, AND 1986
Same 229 New York Dairy Farms

| Item | 1984 | 1985 | 1986 |
|---|---------------|---------------|---------------|
| <u>ACCRUAL EXPENSES</u> | | | |
| Hired labor | \$ 21,670 | \$ 23,649 | \$ 25,484 |
| Feed | 52,490 | 50,173 | 55,947 |
| Machinery | 20,264 | 20,512 | 19,401 |
| Livestock | 32,921 | 30,887 | 33,805 |
| Crops | 16,391 | 18,179 | 15,476 |
| Real estate | 14,476 | 15,765 | 16,048 |
| Other | <u>28,614</u> | <u>29,244</u> | <u>29,447</u> |
| Total Operating | \$186,826 | \$188,409 | \$195,608 |
| Expansion livestock | 2,389 | 2,780 | 1,543 |
| Machinery depreciation | 17,206 | 17,111 | 16,915 |
| Building depreciation | <u>8,039</u> | <u>8,884</u> | <u>9,135</u> |
| Total Accrual Expenses | \$214,460 | \$217,184 | \$223,201 |
| <u>ACCRUAL RECEIPTS</u> | | | |
| Milk sales | \$206,003 | \$212,216 | \$221,104 |
| Livestock | 22,622 | 22,549 | 20,252 |
| Crops | 3,114 | 4,948 | 1,783 |
| All other | <u>6,710</u> | <u>7,337</u> | <u>7,261</u> |
| Total Accrual Receipts | \$238,449 | \$247,050 | \$250,400 |
| <u>PROFITABILITY ANALYSIS</u> | | | |
| Net farm income (without appreciation) | \$23,989 | \$29,866 | \$27,199 |
| Net farm income (with appreciation) | \$38,615 | \$28,322 | \$44,992 |
| Labor & management income | -\$262 | \$9,884 | \$6,213 |
| Number of operators | 1.33 | 1.32 | 1.31 |
| Labor & management income per operator | -\$197 | \$7,488 | \$4,743 |
| <u>BUSINESS FACTORS</u> | | | |
| Worker equivalent | 3.20 | 3.29 | 3.32 |
| Number of cows | 96 | 102 | 106 |
| Number of heifers | 83 | 84 | 86 |
| Acres of hay crops* | 141 | 145 | 153 |
| Acres of corn silage* | 75 | 79 | 77 |
| Total tillable acres | 288 | 299 | 305 |
| Pounds of milk sold | 1,526,978 | 1,637,695 | 1,740,826 |
| Pounds of milk sold per cow | 15,860 | 16,011 | 16,392 |
| Tons hay crop dry matter per acre | 2.9 | 2.9 | 2.8 |
| Tons corn silage per acre | 14 | 15 | 15 |
| Cows per worker | 30 | 31 | 32 |
| Pounds of milk sold per worker | 477,181 | 497,779 | 524,345 |
| Percent grain & conc. is of milk receipts | 24* | 22* | 24* |
| Feed & crop expense per cwt. milk | \$4.51 | \$4.11 | \$4.05 |
| Fertilizer & lime per crop acre | \$34.29 | \$35.73 | \$26.90 |
| Machinery cost per tillable acre | \$149 | \$144 | \$137 |
| Average price per cwt. milk | \$13.49 | \$12.96 | \$12.70 |

*Average of all farms, not only those reporting data.

Table 49. SELECTED BUSINESS FACTORS BY TYPE OF BARN
AND HERD SIZE
414 New York Dairy Farms, 1986

| Item | Farms with: | | Freestall | |
|---|--------------------------|-----------|-----------|-----------|
| | Conventional ≤60 Cows | >60 Cows | ≤120 Cows | >120 Cows |
| Number of farms | 146 | 124 | 71 | 73 |
| <u>Cropping Program Analysis</u> | | | | |
| Total Tillable acres | 157 | 274 | 273 | 588 |
| Tillable acres rented* | 51 | 97 | 99 | 205 |
| Hay crop acres* | 96 | 155 | 139 | 243 |
| Corn silage acres* | 27 | 48 | 62 | 181 |
| Hay crop, tons DM/acre | 2.3 | 2.7 | 2.8 | 3.2 |
| Corn silage, tons/acre | 12.3 | 13.7 | 14.0 | 15.2 |
| Oats, bushels/acre | 56.1 | 70.4 | 68.7 | 56.5 |
| Forage DM per cow, tons | 7.2 | 7.9 | 7.8 | 7.8 |
| Tillable acres/cow | 3.4 | 3.4 | 3.1 | 2.7 |
| Fert. & lime exp./til. acre | \$19.90 | \$22.75 | \$28.70 | \$31.11 |
| Total machinery costs | \$17,584 | \$33,257 | \$41,281 | \$83,046 |
| Machinery cost/tillable acre | \$112 | \$121 | \$151 | \$141 |
| <u>Dairy Analysis</u> | | | | |
| Number of cows | 46 | 81 | 88 | 222 |
| Number of heifers | 35 | 68 | 73 | 182 |
| Milk sold, lbs. | 698,200 | 1,286,440 | 1,388,642 | 3,787,019 |
| Milk sold/cow, lbs. | 15,171 | 15,802 | 15,866 | 17,093 |
| Operating cost of prod. milk/cwt. | \$9.51 | \$9.33 | \$9.36 | \$9.60 |
| Total cost of prod. milk/cwt. | \$15.38 | \$14.37 | \$14.22 | \$12.96 |
| Price/cwt. milk sold | \$12.47 | \$12.53 | \$12.84 | \$12.72 |
| Purchased dairy feed/cow | \$499 | \$459 | \$459 | \$548 |
| Purchased dairy feed/cwt. milk | \$3.29 | \$2.91 | \$2.89 | \$3.21 |
| Purc. grain & conc. as % milk rec. | 25% | 23% | 22% | 24% |
| Purc. feed & crop exp./cwt. milk | \$4.05 | \$3.79 | \$3.94 | \$4.12 |
| <u>Capital Efficiency</u> | | | | |
| Farm capital/worker | \$137,144 | \$173,780 | \$183,971 | \$204,899 |
| Farm capital/cow | 6,020 | 6,233 | 5,970 | 5,355 |
| Farm capital/til. acre owned | 2,614 | 2,867 | 2,986 | 3,098 |
| Real estate/cow | 3,109 | 3,066 | 2,749 | 2,424 |
| Machinery investment/cow | 1,147 | 1,223 | 1,214 | 869 |
| Capital turnover, years | 2.57 | 2.52 | 2.37 | 2.05 |
| <u>Labor Efficiency</u> | | | | |
| Worker equivalent | 2.02 | 2.92 | 2.84 | 5.79 |
| Operator/manager equivalent | 1.15 | 1.33 | 1.41 | 1.47 |
| Milk sold/worker, lbs. | 345,644 | 440,562 | 488,958 | 654,062 |
| Cows/worker | 23 | 28 | 31 | 38 |
| Work units/worker | 240 | 299 | 328 | 399 |
| Labor cost/cow | \$417 | \$381 | \$361 | \$385 |
| Labor cost/tillable acre | \$122 | \$113 | \$116 | \$145 |
| <u>Profitability & Balance Sheet Analysis</u> | | | | |
| Net farm income (w/o apprec.) | \$9,341 | \$19,138 | \$24,475 | \$60,243 |
| Labor & mgmt. income/operator | \$-999 | \$455 | \$4,275 | \$16,090 |
| Farm debt/cow | \$2,428 | \$2,090 | \$2,050 | \$2,145 |
| Percent equity | 59% | 66% | 65% | 60% |

*Average of all farms, not only those reporting data.

Table 50. FARM BUSINESS CHART FOR SMALL CONVENTIONAL STALL DAIRY FARMS
146 Conventional Stall Dairy Farms with 60 or Less Cows, New York, 1986

| Size of Business | | | Rates of Production | | | Labor Efficiency | |
|---------------------------|-------------------|------------------------|--------------------------------|-----------------------------|---------------------------------|-----------------------|-----------------------------------|
| Worker Equiv- alent | No. of Cows | Pounds Milk Sold | Pounds Milk Sold Per Cow | Tons Hay Crop DM/Acre | Tons Corn Silage Per Acre | Cows Per Worker | Pounds Milk Sold Per Worker |
| 3.1 | 58 | 1,007,751 | 18,878 | 4.1 | 20 | 34 | 544,485 |
| 2.6 | 55 | 873,140 | 17,368 | 3.3 | 17 | 30 | 459,871 |
| 2.3 | 54 | 832,613 | 16,639 | 2.9 | 16 | 27 | 428,718 |
| 2.2 | 51 | 787,319 | 16,037 | 2.6 | 15 | 26 | 404,025 |
| 2.0 | 49 | 740,807 | 15,438 | 2.4 | 14 | 25 | 375,361 |
| ----- | | | | | | | |
| 2.0 | 47 | 700,379 | 15,034 | 2.2 | 13 | 23 | 343,283 |
| 1.9 | 44 | 653,090 | 14,416 | 2.1 | 12 | 21 | 316,418 |
| 1.7 | 41 | 580,976 | 13,938 | 1.9 | 10 | 20 | 286,500 |
| 1.5 | 36 | 501,065 | 12,992 | 1.6 | 8 | 18 | 255,798 |
| 1.2 | 28 | 352,058 | 10,736 | 1.1 | 5 | 14 | 192,273 |

Cost Control

| Grain Bought Per Cow | % Feed is of Milk Receipts | Machinery Costs Per Cow | Labor & Machinery Costs Per Cow | Feed & Crop Expenses Per Cow | Feed & Crop Expenses Per Cwt. Milk |
|----------------------------|----------------------------------|-------------------------------|---------------------------------------|------------------------------------|--|
| \$189 | 11% | \$177 | \$520 | \$338 | \$2.51 |
| 320 | 17 | 249 | 611 | 455 | 3.15 |
| 386 | 22 | 285 | 666 | 503 | 3.44 |
| 422 | 24 | 323 | 734 | 535 | 3.70 |
| 459 | 25 | 365 | 785 | 580 | 3.86 |
| ----- | | | | | |
| 488 | 27 | 397 | 827 | 611 | 4.05 |
| 532 | 29 | 429 | 884 | 661 | 4.28 |
| 580 | 30 | 464 | 916 | 721 | 4.59 |
| 631 | 32 | 522 | 1,000 | 783 | 4.97 |
| 765 | 38 | 648 | 1,176 | 954 | 6.06 |

Value and Cost of Production

Profitability

| Milk Receipts Per Cow | Oper. Cost Milk Per Cwt. | Total Cost Production Per Cwt. | Net Farm Income | | | |
|-----------------------------|--------------------------------|--------------------------------------|-----------------|--------------------|---------------------------|---------------------|
| | | | With Apprec. | Without Apprec. | Labor & Mgmt. Per Farm | Income Per Oper. |
| \$2,709 | \$ 6.23 | \$11.98 | \$60,893 | \$35,087 | \$22,396 | \$17,562 |
| 2,425 | 7.49 | 13.42 | 35,933 | 24,247 | 12,646 | 10,953 |
| 2,294 | 8.11 | 13.84 | 29,970 | 18,994 | 7,722 | 6,887 |
| 2,188 | 8.67 | 14.32 | 25,464 | 14,971 | 4,609 | 4,089 |
| 2,101 | 9.26 | 15.16 | 20,230 | 11,729 | 1,702 | 1,658 |
| ----- | | | | | | |
| 2,000 | 9.87 | 15.63 | 16,582 | 8,614 | -1,464 | -1,401 |
| 1,937 | 10.47 | 16.12 | 12,687 | 5,490 | -5,240 | -4,394 |
| 1,853 | 10.92 | 17.10 | 7,202 | 814 | -8,463 | -8,524 |
| 1,740 | 11.50 | 18.57 | -257 | -3,988 | -15,131 | -14,528 |
| 1,403 | 13.36 | 21.95 | -12,299 | -18,796 | -28,918 | -26,431 |

Table 51. FARM BUSINESS CHART FOR LARGE CONVENTIONAL STALL DAIRY FARMS
124 Conventional Stall Dairy Farms with More Than 60 Cows, New York, 1986

| Size of Business | | | Rates of Production | | | Labor Efficiency | |
|---------------------------|-------------------|------------------------|--------------------------------|-----------------------------|---------------------------------|-----------------------|-----------------------------------|
| Worker Equiv- alent | No. of Cows | Pounds Milk Sold | Pounds Milk Sold Per Cow | Tons Hay Crop DM/Acre | Tons Corn Silage Per Acre | Cows Per Worker | Pounds Milk Sold Per Worker |
| 4.7 | 124 | 2,093,475 | 19,571 | 4.8 | 22 | 44 | 652,718 |
| 3.7 | 99 | 1,649,764 | 18,016 | 3.6 | 19 | 37 | 571,684 |
| 3.4 | 90 | 1,441,447 | 17,121 | 3.3 | 17 | 34 | 530,017 |
| 3.1 | 85 | 1,317,509 | 16,694 | 3.0 | 16 | 31 | 496,060 |
| 3.0 | 79 | 1,251,151 | 16,141 | 2.8 | 15 | 29 | 471,986 |
| ----- | | | | | | | |
| 2.8 | 76 | 1,206,039 | 15,667 | 2.6 | 14 | 28 | 446,181 |
| 2.5 | 72 | 1,147,970 | 15,233 | 2.4 | 13 | 26 | 425,808 |
| 2.4 | 68 | 1,074,750 | 14,662 | 2.2 | 12 | 25 | 396,893 |
| 2.1 | 65 | 967,717 | 13,618 | 2.0 | 10 | 22 | 346,946 |
| 1.8 | 62 | 810,022 | 11,546 | 1.5 | 6 | 18 | 256,917 |

Cost Control

| Grain Bought Per Cow | % Feed is of Milk Receipts | Machinery Costs Per Cow | Labor & Machinery Costs Per Cow | Feed & Crop Expenses Per Cow | Feed & Crop Expenses Per Cwt. Milk |
|----------------------------|----------------------------------|-------------------------------|---------------------------------------|------------------------------------|--|
| \$186 | 10% | \$191 | \$476 | \$342 | \$2.32 |
| 269 | 14 | 259 | 554 | 428 | 2.91 |
| 333 | 17 | 317 | 625 | 487 | 3.29 |
| 380 | 21 | 353 | 704 | 528 | 3.43 |
| 429 | 22 | 381 | 750 | 579 | 3.65 |
| ----- | | | | | |
| 473 | 24 | 409 | 800 | 624 | 3.95 |
| 512 | 26 | 456 | 877 | 671 | 4.21 |
| 557 | 27 | 504 | 950 | 713 | 4.41 |
| 624 | 30 | 556 | 1,050 | 773 | 4.65 |
| 761 | 37 | 713 | 1,219 | 897 | 5.52 |

| Value and Cost of Production | | | Profitability | | | |
|------------------------------|--------------------------------|--------------------------------------|-----------------|--------------------|----------------------|-----------|
| Milk Receipts Per Cow | Oper. Cost Milk Per Cwt. | Total Cost Production Per Cwt. | Net Farm Income | | Labor & Mgmt. Income | |
| | | | With Apprec. | Without Apprec. | Per Farm | Per Oper. |
| \$2,661 | \$6.53 | \$11.61 | \$137,617 | \$61,175 | \$40,774 | \$27,242 |
| 2,517 | 7.83 | 12.60 | 60,290 | 39,547 | 21,148 | 16,925 |
| 2,406 | 8.31 | 13.14 | 49,563 | 32,130 | 14,942 | 11,965 |
| 2,311 | 8.68 | 13.67 | 42,248 | 27,056 | 9,103 | 7,194 |
| 2,201 | 9.14 | 14.11 | 37,685 | 21,315 | 3,905 | 3,225 |
| ----- | | | | | | |
| 2,124 | 9.46 | 14.43 | 31,717 | 18,215 | 283 | 175 |
| 2,041 | 9.86 | 14.81 | 23,127 | 14,332 | -4,262 | -3,498 |
| 1,936 | 10.41 | 15.66 | 17,079 | 7,417 | -12,508 | -9,625 |
| 1,835 | 10.87 | 16.56 | 12,251 | -2,565 | -20,966 | -16,753 |
| 1,594 | 13.21 | 19.48 | -8,813 | -20,714 | -44,612 | -42,011 |

Table 52. FARM BUSINESS CHART FOR SMALL FREESTALL DAIRY FARMS
71 Freestall Barn Dairy Farms with 120 or Less Cows, New York, 1986

| Size of Business | | | Rates of Production | | | Labor Efficiency | |
|---------------------------|-------------------|------------------------|--------------------------------|-----------------------------|---------------------------------|-----------------------|-----------------------------------|
| Worker Equiv- alent | No. of Cows | Pounds Milk Sold | Pounds Milk Sold Per Cow | Tons Hay Crop DM/Acre | Tons Corn Silage Per Acre | Cows Per Worker | Pounds Milk Sold Per Worker |
| 4.3 | 117 | 1,964,379 | 19,630 | 4.5 | 21 | 52 | 746,199 |
| 3.5 | 110 | 1,842,322 | 18,599 | 3.9 | 19 | 40 | 621,768 |
| 3.3 | 105 | 1,711,514 | 17,868 | 3.5 | 17 | 36 | 565,788 |
| 3.0 | 97 | 1,588,855 | 16,927 | 3.0 | 16 | 33 | 530,646 |
| 2.8 | 91 | 1,453,928 | 16,098 | 2.7 | 15 | 31 | 506,808 |
| ----- | | | | | | | |
| 2.7 | 86 | 1,350,208 | 15,704 | 2.5 | 14 | 29 | 484,530 |
| 2.6 | 82 | 1,277,728 | 15,246 | 2.4 | 14 | 29 | 454,169 |
| 2.3 | 74 | 1,094,868 | 14,733 | 2.3 | 13 | 27 | 422,903 |
| 2.1 | 67 | 975,911 | 13,879 | 1.9 | 11 | 25 | 394,665 |
| 1.7 | 52 | 721,949 | 10,706 | 1.4 | 7 | 21 | 304,171 |

Cost Control

| Grain Bought Per Cow | % Feed is of Milk Receipts | Machinery Costs Per Cow | Labor & Machinery Costs Per Cow | Feed & Crop Expenses Per Cow | Feed & Crop Expenses Per Cwt. Milk |
|----------------------------|----------------------------------|-------------------------------|---------------------------------------|------------------------------------|--|
| \$183 | 9% | \$239 | \$546 | \$383 | \$2.40 |
| 291 | 14 | 309 | 653 | 449 | 2.85 |
| 321 | 17 | 354 | 682 | 509 | 3.35 |
| 377 | 19 | 393 | 712 | 577 | 3.69 |
| 423 | 22 | 422 | 759 | 607 | 3.90 |
| ----- | | | | | |
| 489 | 24 | 453 | 822 | 652 | 4.06 |
| 534 | 26 | 488 | 885 | 693 | 4.33 |
| 551 | 28 | 532 | 940 | 719 | 4.53 |
| 597 | 30 | 648 | 1,084 | 797 | 5.09 |
| 735 | 35 | 891 | 1,323 | 935 | 6.15 |

Value and Cost of Production

Profitability

| Milk Receipts Per Cow | Oper. Cost Milk Per Cwt. | Total Cost Production Per Cwt. | Net Farm Income | | | |
|-----------------------------|--------------------------------|--------------------------------------|-----------------|--------------------|-------------------------------------|---------------------|
| | | | With Apprec. | Without Apprec. | Labor & Mgmt. Income Per Farm | Income Per Oper. |
| \$2,763 | \$ 6.52 | \$11.16 | \$119,436 | \$85,723 | \$56,843 | \$31,786 |
| 2,517 | 7.84 | 12.33 | 75,141 | 51,430 | 29,843 | 19,619 |
| 2,456 | 8.22 | 13.18 | 58,064 | 39,357 | 19,804 | 14,086 |
| 2,349 | 8.83 | 13.70 | 45,183 | 34,141 | 14,167 | 9,502 |
| 2,247 | 9.26 | 14.00 | 40,801 | 25,936 | 7,804 | 6,962 |
| ----- | | | | | | |
| 2,179 | 9.55 | 14.48 | 34,830 | 20,431 | 2,896 | 2,591 |
| 2,113 | 10.11 | 14.97 | 27,277 | 14,804 | -1,786 | -1,478 |
| 2,041 | 10.62 | 15.79 | 19,458 | 8,785 | -5,399 | -4,633 |
| 1,932 | 11.55 | 16.77 | 11,308 | -531 | -16,982 | -13,373 |
| 1,494 | 13.08 | 19.53 | -6,377 | -27,829 | -46,468 | -39,164 |

Table 53. FARM BUSINESS CHART FOR LARGE FREESTALL DAIRY FARMS
73 Freestall Barn Dairy Farms with More Than 120 Cows, New York, 1986

| Size of Business | | | Rates of Production | | | Labor Efficiency | |
|-------------------|-------------|---------------------|--------------------------|-----------------------|---------------------------|------------------|-----------------------------|
| Worker Equivalent | No. of Cows | Pounds of Milk Sold | Pounds Milk Sold Per Cow | Tons Hay Crop DM/Acre | Tons Corn Silage Per Acre | Cows Per Worker | Pounds Milk Sold Per Worker |
| 13.3 | 540 | 10,200,698 | 20,554 | 5.1 | 20 | 59 | 926,835 |
| 7.6 | 311 | 5,862,327 | 19,208 | 4.0 | 18 | 46 | 821,108 |
| 6.7 | 254 | 4,456,278 | 17,921 | 3.7 | 17 | 43 | 728,084 |
| 6.0 | 226 | 3,713,183 | 17,284 | 3.4 | 16 | 40 | 678,995 |
| 5.3 | 194 | 3,138,231 | 16,825 | 3.3 | 16 | 39 | 644,490 |
| ----- | | | | | | | |
| 4.9 | 173 | 2,616,444 | 16,360 | 3.1 | 15 | 37 | 611,932 |
| 4.4 | 156 | 2,458,443 | 15,867 | 3.0 | 15 | 35 | 565,128 |
| 4.0 | 145 | 2,327,342 | 15,350 | 2.7 | 13 | 33 | 541,569 |
| 3.6 | 132 | 2,099,647 | 14,395 | 2.4 | 12 | 31 | 476,755 |
| 3.0 | 122 | 1,739,656 | 12,476 | 1.9 | 9 | 27 | 415,285 |

Cost Control

| Grain Bought Per Cow | % Feed is of Milk Receipts | Machinery Costs Per Cow | Labor & Machinery Costs Per Cow | Feed & Crop Expenses Per Cow | Feed & Crop Expenses Per Cwt. Milk |
|----------------------|----------------------------|-------------------------|---------------------------------|------------------------------|------------------------------------|
| \$216 | 12% | \$229 | \$500 | \$401 | \$2.71 |
| 322 | 16 | 284 | 627 | 505 | 3.15 |
| 389 | 19 | 338 | 683 | 564 | 3.47 |
| 425 | 20 | 380 | 715 | 609 | 3.73 |
| 463 | 23 | 397 | 747 | 658 | 4.04 |
| ----- | | | | | |
| 522 | 25 | 411 | 775 | 690 | 4.24 |
| 578 | 27 | 429 | 830 | 741 | 4.40 |
| 622 | 29 | 446 | 887 | 797 | 4.61 |
| 680 | 31 | 491 | 929 | 848 | 4.91 |
| 776 | 35 | 590 | 1,033 | 955 | 5.67 |

| Value and Cost of Production | | | Profitability | | | |
|------------------------------|--------------------------|--------------------------------|-----------------|-----------------|----------------------|-----------|
| Milk Receipts Per Cow | Oper. Cost Milk Per Cwt. | Total Cost Production Per Cwt. | Net Farm Income | | Labor & Mgmt. Income | |
| | | | With Apprec. | Without Apprec. | Per Farm | Per Oper. |
| \$2,900 | \$ 6.73 | \$10.94 | \$277,840 | \$227,537 | \$163,935 | \$122,334 |
| 2,631 | 8.21 | 11.91 | 144,680 | 122,770 | 71,851 | 48,890 |
| 2,554 | 9.03 | 12.38 | 111,557 | 89,415 | 47,475 | 35,630 |
| 2,424 | 9.30 | 12.81 | 94,081 | 67,102 | 36,270 | 23,042 |
| 2,350 | 9.47 | 13.21 | 79,443 | 55,090 | 21,997 | 16,870 |
| ----- | | | | | | |
| 2,257 | 9.79 | 13.53 | 70,133 | 44,237 | 13,125 | 10,248 |
| 2,169 | 10.13 | 13.78 | 54,017 | 27,750 | 122 | -210 |
| 2,104 | 10.55 | 14.18 | 40,369 | 20,173 | -11,512 | -8,932 |
| 1,977 | 11.16 | 15.16 | 26,284 | 5,277 | -30,939 | -20,499 |
| 1,756 | 12.73 | 16.90 | -15,577 | -30,415 | -60,131 | -57,094 |

Table 54. FARM BUSINESS SUMMARIES FOR SINGLE PROPRIETORSHIPS,
PARTNERSHIPS, AND CORPORATIONS
413 New York Dairy Farms, 1986

| Item | 295 Single Prop. | 100 Partnerships | 18 Corporations |
|---|---------------------|---------------------|--------------------|
| <u>ACCRUAL EXPENSES</u> | | | |
| Hired labor | \$ 18,450 | \$ 22,567 | \$ 61,266 |
| Feed | 40,574 | 64,260 | 88,925 |
| Machinery | 14,796 | 21,349 | 36,560 |
| Livestock | 25,526 | 38,230 | 61,807 |
| Crops | 11,087 | 18,286 | 34,632 |
| Real estate | 12,586 | 17,883 | 34,306 |
| Other | <u>23,343</u> | <u>31,662</u> | <u>51,279</u> |
| Total Operating Expenses | \$146,362 | \$214,237 | \$368,775 |
| Expansion livestock | 811 | 2,080 | 3,390 |
| Machinery depreciation | 12,837 | 20,037 | 35,592 |
| Building depreciation | <u>6,638</u> | <u>9,889</u> | <u>22,816</u> |
| Total Accrual Expenses | \$166,648 | \$246,243 | \$430,573 |
| <u>ACCRUAL RECEIPTS</u> | | | |
| Milk sales | \$161,109 | \$252,861 | \$419,034 |
| Livestock | 15,489 | 23,727 | 35,574 |
| Crops | 1,241 | 4,288 | 8,704 |
| All other | <u>5,201</u> | <u>6,182</u> | <u>18,009</u> |
| Total Accrual Receipts | \$183,040 | \$287,058 | \$481,321 |
| <u>PROFITABILITY ANALYSIS</u> | | | |
| Net farm income (without appreciation) | \$16,392 | \$40,815 | \$50,748 |
| Net farm income (with appreciation) | \$31,453 | \$59,560 | \$87,403 |
| Labor & management income | \$175 | \$17,942 | \$10,210 |
| Number of operators | 1.03 | 1.98 | 1.95 |
| Labor & management income per operator | \$170 | \$9,062 | \$5,236 |
| <u>BUSINESS FACTORS</u> | | | |
| Worker equivalent | 2.78 | 3.71 | 4.97 |
| Number of cows | 81 | 118 | 191 |
| Number of heifers | 66 | 95 | 159 |
| Acres of hay crops* | 138 | 156 | 241 |
| Acres of corn silage* | 56 | 84 | 140 |
| Total tillable acres | 254 | 335 | 589 |
| Pounds of milk sold | 1,276,719 | 1,992,631 | 3,289,405 |
| Pounds of milk sold per cow | 15,798 | 16,852 | 17,217 |
| Tons hay crop dry matter per acre | 2.6 | 2.8 | 3.3 |
| Tons corn silage per acre | 13.6 | 15.2 | 15.8 |
| Cows per worker | 29 | 32 | 38 |
| Pounds of milk sold per worker | 459,251 | 537,097 | 661,852 |
| Purc. grain & conc. as % of milk receipts | 24% | 24% | 20% |
| Feed & crop expense per cwt. milk | \$4.00 | \$4.09 | \$3.72 |
| Fertilizer & lime per crop acre | \$23.97 | \$29.83 | \$30.29 |
| Machinery cost per tillable acre | \$126 | \$142 | \$140 |
| Average price per cwt. milk | \$12.62 | \$12.69 | \$12.74 |

*Average of all farms, not only those reporting data.

Table 55. FARM FAMILY FINANCIAL SITUATION FOR SINGLE PROPRIETORSHIPS,
PARTNERSHIPS, AND CORPORATIONS
413 New York Dairy Farms, 1986

| Item | Farms with: 295 Single Prop. | | 100 Partnerships | | 18 Corporations | |
|-----------------------------------|------------------------------|----------------|------------------|----------------|-----------------|----------------|
| | Jan. 1 | Dec. 31 | Jan. 1 | Dec. 31 | Jan. 1 | Dec. 31 |
| ASSETS | | | | | | |
| Farm cash/chkg./sav. | \$ 2,884 | \$ 3,629 | \$ 3,981 | \$ 4,495 | \$ 6,135 | \$ 10,305 |
| Accounts receivable | 13,456 | 14,555 | 21,453 | 24,861 | 40,365 | 39,481 |
| Feed & supplies | 34,545 | 35,385 | 54,902 | 56,486 | 108,578 | 110,044 |
| Livestock* | 93,868 | 99,093 | 137,501 | 141,259 | 203,499 | 211,106 |
| Machinery & equip.* | 85,666 | 86,221 | 123,300 | 125,578 | 206,276 | 208,862 |
| FLB & PCA stock | 3,690 | 3,668 | 4,159 | 4,441 | 10,049 | 9,675 |
| Coop stocks & cert. | 5,083 | 5,660 | 6,474 | 10,523 | 15,751 | 20,097 |
| Land & buildings* | <u>223,313</u> | <u>230,865</u> | <u>296,150</u> | <u>316,439</u> | <u>565,468</u> | <u>578,581</u> |
| Total Farm Assets | \$462,505 | \$479,076 | \$647,921 | \$684,082 | \$1,156,121 | \$1,188,151 |
| Pers. cash/chkg./sav. | \$ 6,768 | \$ 7,203 | \$ 3,197 | \$ 3,255 | \$ 214 | \$ 214 |
| Cash value life ins. | 3,740 | 3,921 | 6,380 | 3,264 | 3,714 | 3,714 |
| Nonfarm real estate | 10,792 | 11,078 | 3,154 | 6,393 | 10,429 | 10,429 |
| Auto (personal share) | 2,600 | 3,117 | 3,944 | 3,981 | 1,043 | 2,825 |
| Stocks & bonds | 7,788 | 8,738 | 1,753 | 1,961 | 0 | 0 |
| Household furnishings | 8,856 | 9,261 | 4,885 | 4,885 | 1,143 | 1,143 |
| All other | <u>3,621</u> | <u>4,071</u> | <u>4,779</u> | <u>3,359</u> | <u>0</u> | <u>7,707</u> |
| Total Nonfarm Assets** | \$ 44,164 | \$ 47,389 | \$ 28,093 | \$ 27,098 | \$ 16,543 | \$ 26,031 |
| Total Farm & Nonfarm Assets | \$506,669 | \$526,465 | \$676,014 | \$711,180 | \$1,172,664 | \$1,214,182 |
| LIABILITIES | | | | | | |
| Accounts payable | \$ 5,988 | \$ 6,496 | \$ 4,597 | \$ 5,653 | \$ 3,617 | \$ 7,539 |
| Operating debt | 3,198 | 3,407 | 5,710 | 7,208 | 2,871 | 9,533 |
| Short term | 2,132 | 2,436 | 2,297 | 4,381 | 6,738 | 4,885 |
| Intermediate*** | 68,813 | 68,945 | 98,010 | 95,365 | 210,367 | 214,863 |
| Long term* | <u>112,720</u> | <u>110,910</u> | <u>114,747</u> | <u>122,556</u> | <u>147,621</u> | <u>132,382</u> |
| Total Farm Liab. | \$192,850 | \$192,194 | \$225,360 | \$235,163 | \$371,214 | \$369,202 |
| Total Nonfarm Liab.** | <u>1,550</u> | <u>1,553</u> | <u>2,488</u> | <u>3,481</u> | <u>0</u> | <u>0</u> |
| Total Farm & Nonfarm Liabilities | \$194,400 | \$193,747 | \$227,848 | \$238,644 | \$371,214 | \$369,202 |
| Farm Net Worth (Equity Capital) | \$269,654 | \$286,882 | \$422,561 | \$448,919 | \$784,907 | \$818,949 |
| Farm & Nonfarm Net Worth | \$312,269 | \$332,718 | \$448,166 | \$472,536 | \$801,450 | \$844,980 |
| FINANCIAL MEASURES | | | | | | |
| Percent equity | | | 60% | | 66% | 69% |
| Debt/asset ratio-long term | | | 0.48 | | 0.39 | 0.23 |
| Debt/asset ratio-inter. & current | | | 0.33 | | 0.31 | 0.39 |
| Change in net worth with apprec. | | | \$17,228 | | \$26,358 | \$34,042 |
| Total farm debt per cow | | | \$2,316 | | \$1,943 | \$1,893 |
| Debt payments made per cow | | | \$556 | | \$633 | \$462 |
| Debt payments as % of milk sales | | | 28% | | 29% | 21% |
| Amount avail. for debt service | | | \$42,698 | | \$63,468 | \$105,152 |
| Cash flow coverage ratio for 1986 | | | 1.11 | | 1.24 | 1.31 |

*Includes discounted lease payments. **Average of 234 single proprietorships reporting nonfarm assets and liabilities, 26 partnerships, and 7 corporations.
***Includes FLB/PCA stock and discounted lease payments for cattle and machinery.

Table 56. SELECTED BUSINESS FACTORS BY MILKING SYSTEMS
411 New York Dairy Farms, 1986

| Item | Dumping Station | Pipeline | Herringbone Parlor | Other Parlors |
|---|--------------------|-----------|-----------------------|------------------|
| Number of farms | 35 | 228 | 135 | 13 |
| Percent of farms | 8% | 55% | 33% | 3% |
| <u>Cropping Program Analysis</u> | | | | |
| Total Tillable acres | 179 | 214 | 441 | 322 |
| Tillable acres rented* | 64 | 73 | 154 | 120 |
| Hay crop acres* | 112 | 124 | 196 | 150 |
| Corn silage acres* | 22 | 39 | 124 | 77 |
| Hay crop, tons DM/acre | 2.1 | 2.6 | 3.0 | 2.7 |
| Corn silage, tons/acre | 11.7 | 13.4 | 14.8 | 16.5 |
| Oats, bushels/acre | 65.6 | 65.1 | 63.9 | 56.9 |
| Forage DM per cow, tons | 7.3 | 7.6 | 7.9 | 6.8 |
| Tillable acres/cow | 4.0 | 3.3 | 2.8 | 2.6 |
| Fert. & lime exp./til. acre | \$15.29 | \$22.85 | \$29.80 | \$31.08 |
| Total machinery costs | \$13,164 | \$26,435 | \$62,943 | \$51,161 |
| Machinery cost/tillable acre | \$74 | \$123 | \$143 | \$159 |
| <u>Dairy Analysis</u> | | | | |
| Number of cows | 45 | 66 | 156 | 123 |
| Number of heifers | 32 | 53 | 127 | 116 |
| Milk sold, lbs. | 637,819 | 1,030,101 | 2,601,688 | 2,062,019 |
| Milk sold/cow, lbs. | 14,129 | 15,723 | 16,730 | 16,806 |
| Oper. cost of prod. milk/cwt. | \$9.55 | \$9.37 | \$9.54 | \$9.67 |
| Total cost of prod. milk/cwt. | \$15.33 | \$14.63 | \$13.31 | \$13.97 |
| Price/cwt. milk sold | \$12.40 | \$12.53 | \$12.74 | \$12.85 |
| Purchased dairy feed/cow | \$472 | \$479 | \$517 | \$589 |
| Purchased dairy feed/cwt. milk | \$3.34 | \$3.04 | \$3.09 | \$3.51 |
| Purc. grain & conc. as % milk receipts | 26% | 23% | 23% | 24% |
| Purc. feed & crop expense/cwt. milk | \$4.05 | \$3.90 | \$4.04 | \$4.40 |
| <u>Capital Efficiency</u> | | | | |
| Farm capital/worker | \$115,217 | \$163,465 | \$201,089 | \$158,057 |
| Farm capital/cow | 5,334 | 6,188 | 5,586 | 5,217 |
| Farm capital/tillable acre owned | 2,094 | 2,875 | 3,027 | 3,169 |
| Real estate/cow | 2,683 | 3,098 | 2,553 | 2,280 |
| Machinery investment/cow | 1,033 | 1,189 | 986 | 918 |
| Capital turnover, years | 2.59 | 2.51 | 2.17 | 1.94 |
| <u>Labor Efficiency</u> | | | | |
| Worker equivalent | 2.09 | 2.48 | 4.32 | 4.05 |
| Operator/manager equivalent | 1.15 | 1.25 | 1.40 | 1.71 |
| Milk sold/worker, lbs. | 305,177 | 415,363 | 602,243 | 509,140 |
| Cows/worker | 22 | 27 | 36 | 30 |
| Work units/worker | 229 | 281 | 379 | 320 |
| Labor cost/cow | \$421 | \$388 | \$381 | \$379 |
| Labor cost/tillable acre | \$106 | \$119 | \$134 | \$144 |
| <u>Profitability & Balance Sheet Analysis</u> | | | | |
| Net farm income (w/o apprec.) | \$9,068 | \$15,450 | \$41,195 | \$33,276 |
| Labor & mgmt. income/operator | -\$679 | \$590 | \$9,396 | \$6,440 |
| Farm debt/cow | \$2,113 | \$2,295 | \$2,111 | \$1,884 |
| Percent equity | 58% | 63% | 62% | 65% |

*Average of all farms, not only those reporting data.

Table 57. FARM BUSINESS SUMMARY AND FARM FAMILY FINANCIAL SITUATION
20 New York Dairy-Cash Crop Farms,* 1986

| ACCRUAL EXPENSES | | ACCRUAL RECEIPTS | | | |
|---|-----------|---|----------------------|-----------|-----------|
| Labor: Hired | \$ 18,553 | Milk sales | \$159,150 | | |
| Feed: Dairy grain & conc. | 22,799 | Dairy cattle | \$12,873 | | |
| Dairy roughage | 521 | Dairy calves | 2,278 | | |
| Other livestock | 49 | Other livestock | 36 | | |
| Machinery:Mach. hire/rent/lease | 2,045 | Crops | 22,714 | | |
| Mach. repairs/parts | 11,604 | Government receipts | 5,494 | | |
| Auto expense (farm share) | 614 | Custom machine work | 1,318 | | |
| Fuel, oil, grease | 6,480 | Gas tax refund | 214 | | |
| Livestock: Replacement lvstk. | 2,541 | Other | 3,844 | | |
| Breeding | 2,601 | - Nonfarm noncash capital | 853 | | |
| Vet & medicine | 3,621 | TOTAL ACCRUAL RECEIPTS | \$207,068 | | |
| Milk marketing | 9,823 | <u>PROFITABILITY ANALYSIS</u> | | | |
| Cattle lease/rent | 0 | Net farm inc. (w/o apprec.) | \$29,471 | | |
| Other livestock expense | 7,656 | Net farm inc. (w/apprec.) | \$37,281 | | |
| Crops: Fertilizer & lime | 10,651 | Labor & mgt. income/farm | \$9,094 | | |
| Seeds & plants | 5,527 | Number of operators | 1.61 | | |
| Spray & other crop expense | 6,055 | Labor & mgt. income/oper. | \$5,648 | | |
| Real Estate: Land/building/ fence repair | 2,087 | Rate of return on equity capital including apprec. | 1.9% | | |
| Taxes | 4,377 | <u>BUSINESS FACTORS</u> | | | |
| Insurance | 3,503 | Number of cows | 77 | | |
| Rent & lease | 7,257 | Number of heifers | 59 | | |
| Other: | | Worker equivalent | 3.09 | | |
| Telephone (farm share) | 713 | Total tillable acres | 392 | | |
| Electricity (farm share) | 4,243 | Milk sold per cow, lbs. | 16,371 | | |
| Interest paid | 10,677 | Hay DM per acre, tons | 3.1 | | |
| Miscellaneous | 2,756 | Corn silage per acre, tons | 14.9 | | |
| TOTAL OPERATING EXPENSES | \$146,753 | Milk sold per worker, lbs. | 409,804 | | |
| Expansion livestock | 3,121 | Grain/conc. as % milk sales | 14% | | |
| Machinery depreciation | 21,276 | Feed & crop exp./cwt. milk | \$3.60 | | |
| Building depreciation | 6,447 | Labor & mach. costs/cow | \$1,084 | | |
| TOTAL ACCRUAL EXPENSES | \$177,597 | Average price/cwt. milk | \$12.57 | | |
| <hr/> | | | | | |
| <u>ASSETS</u> | | <u>LIABILITIES</u> | | | |
| | Jan. 1 | Dec. 31 | Jan. 1 | Dec. 31 | |
| Farm cash/chkg./sav. | \$ 6,974 | \$ 6,372 | Accounts payable | \$ 3,065 | \$ 2,582 |
| Accounts receivable | 14,051 | 15,261 | Operating debt | 2,078 | 175 |
| Feed & supplies | 56,760 | 51,417 | Short-term | 5,705 | 5,110 |
| Dairy cows** | 62,549 | 63,495 | Intermediate*** | 61,232 | 62,233 |
| Heifers | 22,739 | 24,623 | Long-term** | 64,209 | 57,063 |
| Bulls & other lvstk. | 331 | 260 | Total Farm Liab. | \$136,289 | \$127,162 |
| Machinery & equip.** | 119,805 | 125,868 | Nonfarm Liab.**** | 2,756 | 3,355 |
| FLB & PCA stock | 3,004 | 2,846 | Total Farm & Nonfarm | | |
| Coop stocks & cert. | 7,376 | 7,604 | Liabilities | \$139,045 | \$130,517 |
| Land & buildings** | 226,625 | 228,182 | Farm Net Worth | \$383,926 | \$398,767 |
| Total Farm Assets | \$520,214 | \$525,929 | Farm & Nonfarm | | |
| Nonfarm Assets**** | 91,355 | 104,470 | Net Worth | \$472,524 | \$499,882 |
| Total Farm & Nonfarm Assets | \$611,569 | \$630,399 | | | |

*A farm is classified as dairy-cash crop if cash crop sales amounted to 10 percent or more of accrual milk sales. **Includes discounted lease payments. ***Includes FLB/PCA stock and discounted lease payments for cattle and machinery. ****Average of 13 farms reporting nonfarm assets and liabilities.

Table 58. FARM BUSINESS SUMMARY AND FARM FAMILY FINANCIAL SITUATION
51 New York Dairy-Renter Farms,* 1986

| <u>ACCRUAL EXPENSES</u> | | <u>ACCRUAL RECEIPTS</u> | | | |
|---|---------------|---|----------------------|---------------|----------------|
| Labor: Hired | \$ 10,931 | Milk sales | \$148,398 | | |
| Feed: Dairy grain & conc. | 33,849 | Dairy cattle | 15,363 | | |
| Dairy roughage | 3,448 | Dairy calves | 1,954 | | |
| Other livestock | 225 | Other livestock | 111 | | |
| Machinery:Mach. hire/rent/lease | 1,829 | Crops | 4,603 | | |
| Mach. repairs/parts | 7,462 | Government receipts | 3,452 | | |
| Auto expense (farm share) | 406 | Custom machine work | 197 | | |
| Fuel, oil, grease | 4,677 | Gas tax refund | 101 | | |
| Livestock: Replacement lvstk. | 3,162 | Other | 1,161 | | |
| Breeding | 2,107 | - Nonfarm noncash capital | 19 | | |
| Vet & medicine | 2,809 | TOTAL ACCRUAL RECEIPTS | \$175,321 | | |
| Milk marketing | 10,691 | <u>PROFITABILITY ANALYSIS</u> | | | |
| Cattle lease/rent | 134 | Net farm inc. (w/o apprec.) | \$31,277 | | |
| Other livestock expense | 6,890 | Net farm inc. (w/apprec.) | \$35,562 | | |
| Crops: Fertilizer & lime | 5,558 | Labor & mgt. income/farm | \$22,792 | | |
| Seeds & plants | 2,543 | Number of operators | 1.42 | | |
| Spray & other crop expense | 2,273 | Labor & mgt. income/oper. | \$16,051 | | |
| Real Estate: Land/building/ fence repair | 1,954 | Rate of return on equity capital including apprec. | 6.8% | | |
| Taxes | 1,152 | <u>BUSINESS FACTORS</u> | | | |
| Insurance | 2,167 | Number of cows | 75 | | |
| Rent & lease | 12,776 | Number of heifers | 52 | | |
| Other: | | Worker equivalent | 2.64 | | |
| Telephone (farm share) | 555 | Total tillable acres | 236 | | |
| Electricity (farm share) | 3,865 | Milk sold per cow, lbs. | 15,575 | | |
| Interest paid | 5,723 | Hay DM per acre, tons | 2.6 | | |
| Miscellaneous | 1,858 | Corn silage per acre, tons | 12.7 | | |
| TOTAL OPERATING EXPENSES | \$129,044 | Milk sold per worker, lbs. | 440,149 | | |
| Expansion livestock | 3,492 | Grain/conc. as % milk sales | 23% | | |
| Machinery depreciation | 10,286 | Feed & crop exp./cwt. milk | \$4.10 | | |
| Building depreciation | 1,222 | Labor & mach. costs/cow | \$736 | | |
| TOTAL ACCRUAL EXPENSES | \$144,044 | Average price/cwt. milk | \$12.77 | | |
| ----- | | | | | |
| <u>ASSETS</u> | <u>Jan. 1</u> | <u>Dec. 31</u> | <u>LIABILITIES</u> | <u>Jan. 1</u> | <u>Dec. 31</u> |
| Farm cash/chkg./sav. | \$ 2,863 | \$ 3,819 | Accounts payable | \$ 2,902 | \$ 2,878 |
| Accounts receivable | 11,799 | 13,682 | Operating debt | 3,045 | 2,147 |
| Feed & supplies | 30,999 | 31,967 | Short-term | 2,220 | 3,069 |
| Dairy cows** | 52,348 | 58,440 | Intermediate*** | 47,190 | 49,317 |
| Heifers | 16,687 | 19,152 | Long-term** | 12,296 | 9,978 |
| Bulls & other lvstk. | 307 | 358 | Total Farm Liab. | \$ 67,653 | \$ 67,389 |
| Machinery & equip** | 66,708 | 69,093 | Nonfarm Liab.**** | 4,279 | 4,023 |
| FLB & PCA stock | 1,818 | 1,710 | Total Farm & Nonfarm | | |
| Coop stocks & cert. | 4,739 | 5,427 | Liabilities | \$ 71,932 | \$ 71,412 |
| Land & buildings** | 11,029 | 10,278 | | | |
| Total Farm Assets | \$199,297 | \$213,926 | Farm Net Worth | \$131,644 | \$146,537 |
| Nonfarm Assets**** | 24,721 | 25,500 | Farm & Nonfarm | | |
| Total Farm & Nonfarm | | | Net Worth | \$152,086 | \$168,014 |
| Assets | \$224,018 | \$239,426 | | | |

*A farm is classified as a renter if no farm real estate is owned at the end of the year or no tillable land is owned. **Includes discounted lease payments. ***Includes FLB/PCA stock and discounted lease payments for cattle and machinery. ****Average of 27 farms reporting nonfarm assets and liabilities.

Table 59. FARM BUSINESS SUMMARY AND FARM FAMILY FINANCIAL SITUATION
 Top 10 Percent of the Farms by Net Farm Income (without appreciation)
 41 New York Dairy Farms, 1986

| <u>ACCRUAL EXPENSES</u> | | <u>ACCRUAL RECEIPTS</u> | | | |
|---|---------------|---|----------------------|---------------|----------------|
| Labor: Hired | \$ 74,532 | Milk sales | \$539,217 | | |
| Feed: Dairy grain & conc. | 125,159 | Dairy cattle | 48,326 | | |
| Dairy roughage | 5,983 | Dairy calves | 5,703 | | |
| Other livestock | 444 | Other livestock | 788 | | |
| Machinery: Mach. hire/rent/lease | 3,524 | Crops | 16,421 | | |
| Mach. repairs/parts | 24,466 | Government receipts | 8,787 | | |
| Auto expense (farm share) | 749 | Custom machine work | 371 | | |
| Fuel, oil, grease | 11,788 | Gas tax refund | 323 | | |
| Livestock: Replacement lvstk. | 2,496 | Other | 6,846 | | |
| Breeding | 7,852 | - Nonfarm noncash capital | 0 | | |
| Vet & medicine | 12,797 | TOTAL ACCRUAL RECEIPTS | \$626,782 | | |
| Milk marketing | 33,781 | <u>PROFITABILITY ANALYSIS</u> | | | |
| Cattle lease/rent | 276 | Net farm inc. (w/o apprec.) | \$112,485 | | |
| Other livestock expense | 21,235 | Net farm inc. (w/apprec.) | \$131,024 | | |
| Crops: Fertilizer & lime | 19,899 | Labor & mgt. income/farm | \$71,251 | | |
| Seeds & plants | 8,854 | Number of operators | 1.79 | | |
| Spray & other crop expense | 9,137 | Labor & mgt. income/oper. | \$39,805 | | |
| Real Estate: Land/building/ fence repair | 6,429 | Rate of return on equity capital including apprec. | 11.1% | | |
| Taxes | 9,481 | <u>BUSINESS FACTORS</u> | | | |
| Insurance | 6,598 | Number of cows | 232 | | |
| Rent & lease | 8,598 | Number of heifers | 194 | | |
| Other: | | Worker equivalent | 6.0 | | |
| Telephone (farm share) | 2,031 | Total tillable acres | 609 | | |
| Electricity (farm share) | 10,787 | Milk sold per cow, lbs. | 18,209 | | |
| Interest paid | 41,203 | Hay DM per acre, tons | 3.1 | | |
| Miscellaneous | 7,142 | Corn silage per acre, tons | 16.1 | | |
| TOTAL OPERATING EXPENSES | \$455,241 | Milk sold per worker, lbs. | 705,028 | | |
| Expansion livestock | 5,955 | Grain/conc. as % milk sales | 23% | | |
| Machinery depreciation | 33,577 | Feed & crop exp./cwt. milk | \$4.00 | | |
| Building depreciation | 19,524 | Labor & mach. costs/cow | \$765 | | |
| TOTAL ACCRUAL EXPENSES | \$514,297 | Average price/cwt. milk | \$12.75 | | |
| ----- | | | | | |
| <u>ASSETS</u> | <u>Jan. 1</u> | <u>Dec. 31</u> | <u>LIABILITIES</u> | <u>Jan. 1</u> | <u>Dec. 31</u> |
| Farm cash/chkg./sav. | \$ 5,031 | \$ 9,030 | Accounts payable | \$ 7,853 | \$ 8,924 |
| Accounts receivable | 45,347 | 53,036 | Operating debt | 14,383 | 23,417 |
| Feed & supplies | 118,929 | 132,228 | Short-term | 6,571 | 8,622 |
| Dairy cows* | 191,386 | 201,808 | Intermediate** | 189,653 | 184,997 |
| Heifers | 79,848 | 84,464 | Long-term* | 206,330 | 225,259 |
| Bulls & other lvstk. | 1,167 | 1,443 | Total Farm Liab. | \$424,790 | \$451,219 |
| Machinery & equip* | 198,173 | 205,779 | Nonfarm Liab.*** | 0 | 1,386 |
| FLB & PCA stock | 9,006 | 9,154 | Total Farm & Nonfarm | | |
| Coop stocks & cert. | 19,906 | 30,106 | Liabilities | \$424,790 | \$452,605 |
| Land & buildings* | 537,065 | 564,391 | Farm Net Worth | \$781,068 | \$840,220 |
| Total Farm Assets | \$1,205,858 | \$1,291,439 | Farm & Nonfarm | | |
| Nonfarm Assets*** | 45,656 | 50,311 | Net Worth | \$826,724 | \$889,145 |
| Total Farm & Nonfarm | | | | | |
| Assets | \$1,251,514 | \$1,341,750 | | | |

*Includes discounted lease payments. **Includes FLB/PCA stock and discounted lease payments for cattle and machinery. ***Average of 13 farms reporting nonfarm assets and liabilities.

Table 60. FARM BUSINESS SUMMARY AND FARM FAMILY FINANCIAL SITUATION
Average of 414 New York Dairy Farms, 1986

| <u>ACCRUAL EXPENSES</u> | | <u>ACCRUAL RECEIPTS</u> | | | |
|---|---------------|---|----------------------|---------------|----------------|
| Labor: Hired | \$ 21,281 | Milk sales | \$194,522 | | |
| Feed: Dairy grain & conc. | 45,789 | Dairy cattle | 15,431 | | |
| Dairy roughage | 1,819 | Dairy calves | 2,378 | | |
| Other livestock | 760 | Other livestock | 573 | | |
| Machinery: Mach. hire/rent/lease | 1,838 | Crops | 2,303 | | |
| Mach. repairs/parts | 9,660 | Government receipts | 3,329 | | |
| Auto expense (farm share) | 565 | Custom machine work | 232 | | |
| Fuel, oil, grease | 5,282 | Gas tax refund | 152 | | |
| Livestock: Replacement lvstk. | 1,964 | Other | 2,471 | | |
| Breeding | 2,848 | - Nonfarm noncash capital | 190 | | |
| Vet & medicine | 4,300 | TOTAL ACCRUAL RECEIPTS | \$221,201 | | |
| Milk marketing | 12,966 | <u>PROFITABILITY ANALYSIS</u> | | | |
| Cattle lease/rent | 80 | Net farm inc. (w/o apprec.) | \$23,853 | | |
| Other livestock expense | 7,988 | Net farm inc. (w/apprec.) | \$40,756 | | |
| Crops: Fertilizer & lime | 7,536 | Labor & mgt. income/farm | \$4,988 | | |
| Seeds & plants | 3,272 | Number of operators | 1.3 | | |
| Spray & other crop expense | 3,040 | Labor & mgt. income/oper. | \$3,837 | | |
| Real Estate: Land/building/ fence repair | 2,438 | Rate of return on equity capital including apprec. | 4.3% | | |
| Taxes | 5,076 | <u>BUSINESS FACTORS</u> | | | |
| Insurance | 3,421 | Number of cows | 95 | | |
| Rent & lease | 3,894 | Number of heifers | 77 | | |
| Other: | | Worker equivalent | 3.09 | | |
| Telephone (farm share) | 770 | Total tillable acres | 288 | | |
| Electricity (farm share) | 5,187 | Milk sold per cow, lbs. | 16,237 | | |
| Interest paid | 18,114 | Hay DM per acre, tons | 2.7 | | |
| Miscellaneous | 2,552 | Corn silage per acre, tons | 14.3 | | |
| TOTAL OPERATING EXPENSES | \$172,440 | Milk sold per worker, lbs. | 497,555 | | |
| Expansion livestock | 1,228 | Grain/conc. as % milk sales | 24% | | |
| Machinery depreciation | 15,545 | Feed & crop exp./cwt. milk | \$4.00 | | |
| Building depreciation | 8,135 | Labor & mach. costs/cow | \$785 | | |
| TOTAL ACCRUAL EXPENSES | \$197,348 | Average price/cwt. milk | \$12.65 | | |
| <hr/> | | | | | |
| <u>ASSETS</u> | <u>Jan. 1</u> | <u>Dec. 31</u> | <u>LIABILITIES</u> | <u>Jan. 1</u> | <u>Dec. 31</u> |
| Farm cash/chkg./sav. | \$ 3,283 | \$ 4,120 | Accounts payable | \$ 5,563 | \$ 6,346 |
| Accounts receivable | 16,556 | 18,136 | Operating debt | 3,783 | 4,598 |
| Feed & supplies | 42,670 | 43,722 | Short-term | 2,391 | 3,028 |
| Dairy cows* | 76,909 | 80,370 | Intermediate** | 82,273 | 81,839 |
| Heifers | 31,276 | 32,817 | Long-term* | 114,830 | 114,758 |
| Bulls & other lvstk. | 1,028 | 1,050 | Total Farm Liab. | \$208,840 | \$210,570 |
| Machinery & equip.* | 100,070 | 101,118 | Nonfarm Liab.*** | 1,595 | 1,694 |
| FLB & PCA stock | 4,071 | 4,107 | Total Farm & Nonfarm | | |
| Coop stocks & cert. | 5,871 | 7,449 | Liabilities | \$210,435 | \$212,264 |
| Land & buildings* | 255,739 | 266,591 | Farm Net Worth | \$328,634 | \$348,909 |
| Total Farm Assets | \$537,474 | \$559,479 | Farm & Nonfarm | | |
| Nonfarm Assets*** | 41,843 | 44,814 | Net Worth | \$368,882 | \$392,029 |
| Total Farm & Nonfarm | | | | | |
| Assets | \$579,317 | \$604,293 | | | |

*Includes discounted lease payments. **Includes FLB/PCA stock and discounted lease payments for cattle and machinery. ***Average of 268 farms reporting nonfarm assets and liabilities.

Table 61. FARM BUSINESS SUMMARY AND FARM FAMILY FINANCIAL SITUATION
Average per Cow, 414 New York Dairy Farms, 1986

| <u>ACCRUAL EXPENSES</u> | | <u>ACCRUAL RECEIPTS</u> | | | |
|---|---------------|---|----------------------|---------------|----------------|
| Labor: Hired | \$ 225 | Milk sales | \$2,054 | | |
| Feed: Dairy grain & conc. | 484 | Dairy cattle | 163 | | |
| Dairy roughage | 19 | Dairy calves | 25 | | |
| Other livestock | 8 | Other livestock | 6 | | |
| Machinery: Mach. hire/rent/lease | 19 | Crops | 24 | | |
| Mach. repairs/parts | 102 | Government receipts | 35 | | |
| Auto expense (farm share) | 6 | Custom machine work | 3 | | |
| Fuel, oil, grease | 56 | Gas tax refund | 2 | | |
| Livestock: Replacement lvstk. | 21 | Other | 26 | | |
| Breeding | 30 | - Nonfarm noncash capital | 2 | | |
| Vet & medicine | 45 | TOTAL ACCRUAL RECEIPTS | \$2,336 | | |
| Milk marketing | 137 | | | | |
| Cattle lease/rent | 1 | | | | |
| Other livestock expense | 84 | <u>PROFITABILITY ANALYSIS</u> | | | |
| Crops: Fertilizer & lime | 80 | Net farm inc. (w/o apprec.) | \$252 | | |
| Seeds & plants | 34 | Net farm inc. (w/apprec.) | \$430 | | |
| Spray & other crop expense | 32 | Labor & mgt. income/farm | \$53 | | |
| Real Estate: Land/building/ fence repair | 26 | Number of operators | (1.30) | | |
| Taxes | 54 | Labor & mgt. income/oper. | \$41 | | |
| Insurance | 36 | Rate of return on equity capital including apprec. | 4.3% | | |
| Rent & lease | 41 | | | | |
| Other: | | <u>BUSINESS FACTORS</u> | | | |
| Telephone (farm share) | 8 | Number of cows | (95) | | |
| Electricity (farm share) | 55 | Number of heifers | 0.81 | | |
| Interest paid | 191 | Worker equivalent | 0.033 | | |
| Miscellaneous | 27 | Total tillable acres | 3.0 | | |
| TOTAL OPERATING EXPENSES | \$1,821 | Milk sold, lbs. | 16,237 | | |
| | | Hay DM, tons | 4.2 | | |
| Expansion livestock | 13 | Corn silage, tons | 10.0 | | |
| Machinery depreciation | 164 | Dairy feed & crop expense | \$649 | | |
| Building depreciation | 86 | Labor & mach. costs | \$785 | | |
| TOTAL ACCRUAL EXPENSES | \$2,084 | Total debt | \$2,171 | | |
| | | Debt payment | \$572 | | |
| | | | | | |
| <u>ASSETS</u> | <u>Jan. 1</u> | <u>Dec. 31</u> | <u>LIABILITIES</u> | <u>Jan. 1</u> | <u>Dec. 31</u> |
| Farm cash/chkg./sav. | \$ 35 | \$ 43 | Accounts payable | \$ 59 | \$ 67 |
| Accounts receivable | 175 | 192 | Operating debt | 40 | 49 |
| Feed & supplies | 450 | 462 | Short-term | 25 | 32 |
| Dairy cows* | 812 | 849 | Intermediate** | 869 | 864 |
| Heifers | 330 | 347 | Long-term* | 1,213 | 1,212 |
| Bulls & other lvstk. | 11 | 11 | Total Farm Liab. | \$2,206 | \$2,224 |
| Machinery & equip.* | 1,057 | 1,068 | Nonfarm Liab.*** | 17 | 18 |
| FLB & PCA stock | 43 | 43 | Total Farm & Nonfarm | | |
| Coop stocks & cert. | 62 | 79 | Liabilities | \$2,223 | \$2,242 |
| Land & buildings* | 2,701 | 2,815 | | | |
| Total Farm Assets | \$5,676 | \$5,909 | Farm Net Worth | \$3,470 | \$3,685 |
| Nonfarm Assets*** | 442 | 473 | Farm & Nonfarm | | |
| Total Farm & Nonfarm | | | Net Worth | \$3,895 | \$4,140 |
| Assets | \$6,118 | \$6,382 | | | |

*Includes discounted lease payments. **Includes FLB/PCA stock and discounted lease payments for cattle and machinery. ***Average of 268 farms reporting nonfarm assets and liabilities.

NOTES